



*Prepared for*

**Georgia Power Company**  
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# **2024 SEMIANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT**

## **PLANT HAMMOND ASH POND 4 (AP-4)**

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Project Number GW6581D

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### CERTIFICATION STATEMENT

This 2024 Semiannual Groundwater Monitoring and Corrective Action Report, Plant Hammond – Ash Pond 4 (AP-4) has been prepared in compliance with the Georgia Environmental Protection Division Rules for Solid Waste Management 391-3-4-.10 by a qualified groundwater scientist or engineer with Geosyntec Consultants, Inc. I hereby certify that I am a qualified groundwater scientist, in accordance with the Georgia Rules of Solid Waste Management 391-3-4-.01.



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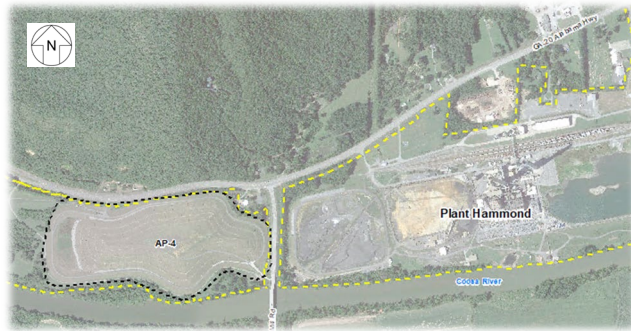
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## SUMMARY

This summary of the *2024 Semiannual Groundwater Monitoring and Corrective Action Report* provides the status of groundwater monitoring and corrective action program for the reporting period of July through December 2024 (referred herein as the “semiannual reporting period”) at the Georgia Power Company (Georgia Power) Plant Hammond Ash Pond 4 (AP-4) (the Site). This summary was prepared by Geosyntec Consultants, Inc. (Geosyntec) on behalf of Georgia Power to meet the requirements listed in Georgia Environmental Protection Division (GA EPD) Rules for Solid Waste Management 391-3-4-.10, and by reference, Part A, Section 6<sup>1</sup> of the United States Environmental Protection Agency (USEPA) Coal Combustion Residual Rule (federal CCR Rule) (40 Code of Federal Regulations [CFR] 257 Subpart D).

Plant Hammond is located at 5963 Alabama Highway SW, approximately 10 miles west of Rome in Floyd County, Georgia. 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 and 2012 in accordance with the



Plant Hammond and the Site

GA EPD regulations for landfill closures. The GA EPD monitoring requirements incorporates by reference the federal regulations on this matter. As such, the federal CCR Rule is referenced in lieu of the GA EPD CCR regulations when discussing aspects of the groundwater monitoring program established for the Site. The Site is located on the western portion of the Plant Hammond property. The GA EPD approved closure permit no. 057-025D(CCR) for AP-4 on January 27, 2021. Georgia Power plans to perform closure by removal of CCR from AP-4.

Groundwater at the Site is monitored using a comprehensive monitoring network that meets federal and state monitoring requirements. Groundwater monitoring-related activities have been performed at AP-4 since August 2016. During the semiannual reporting period, Geosyntec conducted one groundwater sampling events in August 2024. Groundwater samples were submitted to Pace Analytical Services, LLC, for analysis.

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

Groundwater data for the event were evaluated in accordance with the certified statistical methods. Statistically significant increases of Appendix III<sup>2</sup> constituents above background were observed in select monitoring wells following the August 2024 event, as summarized in the table below.

<i>Appendix III Constituent</i>	<i>August 2024</i>
Boron	HGWC-101, HGWC-102, HGWC-103, HGWC-105, HGWC-107, HGWC-109, HGWC-117A, HGWC-118
Calcium	HGWC-102, HGWC-103, HGWC-105, HGWC-118
Chloride	HGWC-102, HGWC-103, HGWC-105
pH	HGWC-101
Sulfate	HGWC-101, HGWC-102, HGWC-103, HGWC-105, HGWC-107, HGWC-117A, HGWC-118
Total Dissolved Solids	HGWC-102, HGWC-103, HGWC-105

No statistically significant levels (SSLs) were identified for Appendix IV groundwater data from the August 2024 event<sup>3</sup>.

Based on review of the Appendix III and Appendix IV statistical results completed for the semiannual 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.

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

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



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## LIST OF ACRONYMS AND ABBREVIATIONS

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 *2024 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 2024 through December 2024 (referred to herein as the “semiannual 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.

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 2024.

### 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. The Closure Plan submitted to GA EPD as part of the closure permit application package describes the closure activities and requirements in accordance with GA EPD rules 391-3-4-.10(7)(a)2. and 391-3-4.10(9)(c)8. Closure permit no. 057-025D(CCR) was approved by GA EPD on January 27, 2021.

## **1.2 Regional Geology and Hydrogeologic Setting**

The following section summarizes the geologic and hydrogeologic conditions at AP-4 as described in the *Hydrogeologic Assessment Report (Revision 01) – Ash Pond 4, Plant Hammond* (HAR Rev 01) submitted to GA EPD under separate cover in support of the AP-4 closure permit application (Geosyntec, 2020).

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

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

Based on subsurface investigations, the alluvial deposits generally grade from a silt and silty clay to a clayey sand and silty sand to a sand and gravelly sand at depth. The

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

### **1.2.2 Hydrogeologic Setting**

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

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

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

A network of piezometers has been installed at the Site that are used to gauge water levels to define groundwater flow direction and gradients. The locations of the detection monitoring well 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 semiannual 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**

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 2024, 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. No SSLs of Appendix IV constituents were identified during this semiannual reporting period. Groundwater at AP-4 will continue to be managed under the assessment monitoring program stipulated by § 257.95.

For the semiannual reporting period, one semiannual assessment monitoring event was conducted in August 2024. The AP-4 wells sampled during this event and the dates associated with them are summarized in **Table 2**. The laboratory reports associated with the August 2024 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.

### 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 semiannual 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 2024 assessment monitoring event and used to calculate the corresponding groundwater elevations, which are presented in **Table 3**. The August 2024 elevations reported are generally representative of the groundwater elevations reported for prior monitoring events.

A surface water elevation was recorded from the 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 2024 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 gradients within the uppermost aquifer beneath AP-4 were calculated using the groundwater elevation data from the August 2024 event. The horizontal hydraulic gradient is commonly calculated between two points along the groundwater flow path perpendicular to groundwater elevation contours. Ideally, this flow path originates and concludes with groundwater elevations reported for two wells, but this may not be feasible and still remain perpendicular to the contours. Given the surface area covered by AP-4, horizontal hydraulic gradients were calculated along the eastern, central, and western portions of the unit. The well pairs correlating to these flow areas are, respectively: GWA-14 and HGWC-118; HGWA-113 and HGWC-102; and HGWA-111 and HGWC-107. The supporting calculations are presented in **Table 4**. The general trajectory of the flow paths used in the calculations and associated potentiometric contour lines are shown on **Figure 3**. The presented hydraulic gradients



from the three portions were averaged for the semiannual 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).

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 0.16 ft/day for the semiannual 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 portable turbidity meter (i.e., LaMotte 2020we or similar). 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 2024 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 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 2024 sampling events are summarized in **Table 5**.

### **3.5 Quality Assurance and Quality Control Summary**

Quality assurance/quality control (QA/QC) samples were collected during the groundwater monitoring event in accordance with the Site's *Groundwater Monitoring Plan* (Geosyntec, 2023), and included the following: field duplicates, equipment blanks, and field blank samples. QA/QC samples were collected in appropriately preserved laboratory-provided containers and submitted under the same chain of custody as the primary samples for analysis of the same constituents by Pace Analytical.

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

## 4.0 STATISTICAL ANALYSIS

The following section summarizes the statistical analysis of Appendix III groundwater monitoring data performed pursuant to § 257.93. In addition, pursuant to § 257.95(d)(2), Georgia Power established GWPS for the Appendix IV monitoring constituents and completed statistical analyses of the Appendix IV groundwater monitoring data obtained during the semiannual reporting 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 semiannual reporting period were statistically analyzed in accordance with the Professional Engineer-certified (PE-certified) Statistical Analysis Method Certification (October 2017, revised January 2020). The Sanitas groundwater statistical software was used to perform the statistical analyses. Sanitas is a decision-support software package, which incorporates the statistical tests required of Subtitle C and D facilities by USEPA regulations and guidance as recommended in the USEPA document *Statistical Analysis of Groundwater Data at RCRA Facilities Unified Guidance* (Unified Guidance) (USEPA, 2009).

Appendix III statistical analysis was performed to determine if Appendix III constituents have returned to background levels. Appendix IV constituents were evaluated to determine if concentrations statistically exceeded the established GWPS. Detailed statistical methods used for Appendix III and Appendix IV constituents are discussed in statistical analysis packages provided in **Appendix 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 6**.

#### 4.1.1 Appendix III Statistical Methods

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

GWPS have been established for statistical comparison of Appendix IV constituents and are presented in **Table 6**.

#### **4.2 Statistical Analyses Results**

Based on review of the Appendix III statistical analyses presented in **Appendix C**, groundwater conditions have not returned to background and assessment monitoring should continue. No SSLs of Appendix IV constituents were identified following statistical analyses of the August 2024 data set.

## **5.0 MONITORING PROGRAM STATUS**

Based on the statistical evaluation results presented for the semiannual 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.

## 6.0 CONCLUSIONS AND FUTURE ACTIONS

This *2024 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 semiannual reporting period did not identify any SSLs of Appendix IV constituents and the site will remain in assessment monitoring.

The next routine semiannual assessment monitoring event for AP-4 is scheduled to begin in February 2025.

## 7.0 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**  
**Georgia Power Company**  
**Plant Hammond - Ash Pond 4**  
**Floyd County, GA**

Well ID	Well Designation	Hydraulic Location	Northing <sup>(1)</sup>	Easting <sup>(1)</sup>	Ground Surface Elevation <sup>(1)</sup> (feet)	Top of Casing Elevation <sup>(1)</sup> (feet)	Top of Screen Elevation <sup>(1)</sup> (feet)	Bottom of Screen Elevation <sup>(1)</sup> (feet)	Total Well Depth from (Feet Below Top of Casing) <sup>(2)</sup>	Groundwater Zone Screened	Installation Date
HGWA-47	Detection	Upgradient	1548990.96	1934171.84	577.39	580.33	546.84	536.84	43.74	Overburden/PWR	08/21/2020
HGWA-48D	Detection	Upgradient	1548989.39	1934178.15	577.29	580.26	517.54	507.54	72.97	Bedrock	08/20/2020
HGWC-101	Detection	Downgradient	1547725.50	1936369.58	575.91	578.85	551.31	541.31	37.94	Overburden	08/07/2012
HGWC-102	Detection	Downgradient	1547713.50	1936033.33	574.54	577.54	550.51	540.51	37.43	Overburden	08/07/2012
HGWC-103	Detection	Downgradient	1547848.88	1935732.96	577.76	580.79	553.51	543.51	37.68	Overburden	08/08/2012
HGWC-105	Detection	Downgradient	1547855.56	1935110.36	579.08	582.09	547.72	537.72	44.67	Overburden	08/08/2012
HGWC-107	Detection	Downgradient	1547909.99	1934442.24	576.43	579.31	551.51	541.51	38.2	Overburden	08/08/2012
HGWC-109	Detection	Downgradient	1548627.41	1934362.77	573.66	576.77	555.81	545.81	31.36	Overburden	08/15/2012
HGWA-111	Detection	Upgradient	1548834.26	1935222.81	588.79	591.75	558.48	548.48	43.67	Overburden	08/21/2012
HGWA-112	Detection	Upgradient	1548885.63	1935647.00	593.46	596.27	566.52	556.52	40.15	Overburden	08/21/2012
HGWA-113	Detection	Upgradient	1548944.62	1935990.09	592.07	594.58	568.87	558.87	36.11	Overburden	10/02/2012
HGWC-118	Detection	Downgradient	1547980.56	1936946.37	576.52	579.02	548.51	538.51	40.91	Overburden	10/01/2012
HGWC-117A	Detection	Downgradient	1548082.04	1937157.25	578.85	581.76	551.85	541.85	40.31	Overburden	07/21/2021
GWC-4	Piezometer	Downgradient	1547898.31	1935398.70	577.73	580.65	543.47	533.47	47.58	Overburden/Bedrock	08/08/2012
GWC-6	Piezometer	Downgradient	1547843.93	1934800.45	578.55	581.63	553.90	543.90	38.13	Overburden	08/13/2012
GWC-8	Piezometer	Downgradient	1548167.13	1934342.94	577.13	579.99	549.47	539.47	40.92	Overburden	08/09/2012
MW-12	Piezometer	Downgradient	1547853.78	1937525.46	580.59	583.27	555.84	545.84	37.83	Overburden	10/21/2014
GWA-14	Piezometer	Upgradient	1548982.59	1936642.58	589.70	592.14	561.40	551.40	41.14	Overburden	10/02/2012
GWA-15	Piezometer	Upgradient	1548766.17	1936808.47	588.37	591.56	571.44	561.44	30.52	Overburden	08/22/2012
GWA-16	Piezometer	Upgradient	1548592.74	1937210.99	579.58	582.55	569.94	559.94	23.01	Overburden	08/21/2012
GWC-19	Piezometer	Downgradient	1547892.89	1936572.97	576.90	579.83	554.04	544.04	36.19	Overburden	08/14/2012

Notes:

PWR = Partially weathered rock.

(1) Coordinates shown are in North American Datum (NAD) 1983, State Plane, Georgia-West, feet. Elevations shown are referenced to datum NAVD88, which indicates feet (ft) in elevation referenced to the North American Vertical Datum 1988.

Survey completed by GEL solutions dated May 10, 2020, September 10, 2020 (for HGWA-47 and HGWA-48D), and September 8, 2021 (for HGWA-117A).

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

Table 2  
Groundwater Sampling Event Summary  
Georgia Power Company  
Plant Hammond - Ash Pond 4  
Floyd County, GA

Well ID	Hydraulic Location	Well Designation	August 06 2024 August 10 2024
			Assessment Event
Georgia Power Company - Plant Hammond Ash Pond 4			
HGWA-47	Upgradient	Detection	X
HGWA-48D	Upgradient	Detection	X
HGWA-111	Upgradient	Detection	X
HGWA-112	Upgradient	Detection	X
HGWA-113	Upgradient	Detection	X
HGWC-101	Downgradient	Detection	X
HGWC-102	Downgradient	Detection	X
HGWC-103	Downgradient	Detection	X
HGWC-105	Downgradient	Detection	X
HGWC-107	Downgradient	Detection	X
HGWC-109	Downgradient	Detection	X
HGWC-118	Downgradient	Detection	X
HGWC-117A	Downgradient	Detection	X

**Notes:**

X - Indicates well sampled during event.

Assessment Event includes Appendix III and Appendix IV analytes.

**Table 3**  
**Summary of Groundwater and Surface Water Elevations**  
**Georgia Power Company**  
**Plant Hammond - Ash Pond 4**  
**Floyd County, GA**

Well ID	Top of Casing Elevation (feet)	August 2024	
		Depth to Water (feet)	Groundwater Elevation (feet)
HGWA-47	580.33	7.70	572.63
HGWA-48D	580.26	7.59	572.67
HGWC-101	578.85	13.42	565.43
HGWC-102	577.54	13.19	564.35
HGWC-103	580.79	13.82	566.97
HGWC-105	582.09	18.05	564.04
HGWC-107	579.31	15.24	564.07
HGWC-109	576.77	8.65	568.12
HGWA-111	591.75	12.37	579.38
HGWA-112	596.27	12.54	583.73
HGWA-113	594.58	12.15	582.43
HGWC-117A	581.76	17.17	564.59
HGWC-118	579.02	13.80	565.22
GWC-4	580.65	13.58	567.07
GWC-6	581.63	17.39	564.24
GWC-8	579.99	13.65	566.34
MW-12	583.27	19.01	564.26
GWA-14	592.14	8.47	583.67
GWA-15	591.56	9.68	581.88
GWA-16	582.55	5.88	576.67
GWC-19	579.83	13.20	566.63
Unnamed Creek	580.14	15.98	564.16

Notes:

Elevations shown are referenced to datum NAVD88, which indicates feet in elevation referenced to the North American Vertical Datum 1988.

**Table 4**  
**Horizontal Groundwater Gradient and Flow Velocity Calculations**  
**Georgia Power Company**  
**Plant Hammond Ash Pond 4**  
**Floyd County, GA**

Gauging Event	Well Pair	Groundwater Elevations in Well Pairs (ft)		Change in Elevation (ft)	Distance Between Well 1 and Well 2 (L) (ft)	Hydraulic Gradient (i) (ft/ft)	Average Hydraulic Conductivity (K <sub>h</sub> ) (ft/day)	Estimated Effective Porosity (n <sub>e</sub> )	Calculated Groundwater Flow Velocity (V) (ft/day)	Calculated Groundwater Flow Velocity (V) (ft/year)	Average Hydraulic Gradient (i) (ft/ft)	Average Groundwater Flow Velocity (V) (ft/day)
August 2024	GWA-14 to HGWC-118	583.67	565.22	18.45	1052.40	0.018	1.67	0.15	0.20	71.2	0.015	0.16
August 2024	HGWA-113 to HGWC-102	582.43	564.35	18.08	1235.00	0.015	1.67	0.15	0.16	59.5		
August 2024	HGWA-111 to HGWC-107	579.38	564.07	15.31	1258.00	0.012	1.67	0.15	0.14	49.5		

Notes:  
ft = feet  
ft/day = feet per day  
ft/ft = feet per foot  
ft/year = feet per year  
K<sub>h</sub> = Average horizontal hydraulic conductivity  
Average horizontal hydraulic conductivity (K<sub>h</sub>) of 1.67 feet per day (ft/day) was computed from slug test data derived from AP-4.  
n<sub>e</sub> = effective porosity  
V = groundwater flow velocity  
Groundwater flow velocity equation:  $V = (K \cdot i) / n_e$   
 $i = h_1 - h_2 / L$  = horizontal hydraulic gradient (h<sub>1</sub> and h<sub>2</sub> = groundwater elevation at location 1 and 2)  
L = distance between location 1 and 2 along the flow path. See Figure 3 for illustrated flow paths.  
Elevations shown are referenced to datum NAVD88, which indicates feet (ft) in elevation referenced to the North American Vertical Datum 1988.

Table 5  
Summary of Semiannual Groundwater Analytical Data  
Georgia Power Company  
Plant Hammond - Ash Pond 4  
Floyd County, GA

Sample Location		HGWA-47	HGWA-48D	HGWC-101	HGWC-102	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWA-111	HGWA-112	HGWA-113	HGWC-118	HGWC-117A
Sample Date		08/06/2024	08/06/2024	08/10/2024	08/09/2024	08/09/2024	08/10/2024	08/10/2024	08/10/2024	08/06/2024	08/09/2024	08/08/2024	08/09/2024	08/10/2024
ANALYTE	UNITS													
<b>APPENDIX III</b>														
Boron	mg/L	< 0.012	< 0.012	0.15	3.0	4.5	1.4	0.84	0.20	< 0.012	0.029 J	< 0.012	0.59	0.28
Calcium	mg/L	71.1	58.8	24.2	142	146	156	61.4	53.7	46.2	7.1	8.4	85.2	64.5
Chloride	mg/L	2.9	2.7	5.4	8.0	8.8	7.7	3.1	4.0	2.8	5.2	1.5	4.2	4.5
Fluoride	mg/L	0.094 J	0.10	0.068 J	0.067 J	0.077 J	0.066 J	0.069 J	0.13	0.089 J	0.075 J	0.17	0.11	0.10
pH, Field	SU	7.46	7.40	5.38	5.86	5.74	6.38	6.22	7.03	6.99	5.65	5.98	7.07	6.61
Sulfate	mg/L	2.3	2.7	104	359	393	258	114	19.7	1.3	0.76 J	4.6	66.5	72.6
TDS	mg/L	253	240	263	746	809	658	299	227	163	90.0	85.0	338	284
<b>APPENDIX IV</b>														
Antimony	mg/L	< 0.00054	< 0.00054	< 0.00054	< 0.00054	< 0.00054	< 0.00054	< 0.00054	< 0.00054	< 0.00054	< 0.00054	< 0.00054	< 0.00054	< 0.00054
Arsenic	mg/L	< 0.00084	< 0.00084	< 0.00084	0.0011 J	0.0015 J	< 0.00084	< 0.00084	0.00091 J	< 0.00084	< 0.00084	< 0.00084	< 0.00084	< 0.00084
Barium	mg/L	0.025	0.11	0.033	0.029	0.032	0.083	0.033	0.076	0.027	0.026	0.029	0.037	0.042
Beryllium	mg/L	< 0.000094	< 0.000094	< 0.000094	< 0.000094	< 0.000094	< 0.000094	< 0.000094	< 0.000094	< 0.000094	< 0.000094	< 0.000094	< 0.000094	< 0.000094
Cadmium	mg/L	< 0.00010	< 0.00010	0.00014 J	0.00043 J	0.00078	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010
Chromium	mg/L	< 0.0019	< 0.0019	< 0.0019	< 0.0019	< 0.0019	< 0.0019	< 0.0019	< 0.0019	< 0.0019	0.0029 J	< 0.0019	< 0.0019	< 0.0019
Cobalt	mg/L	< 0.00032	< 0.00032	0.0025 J	0.00094 J	0.0020 J	0.00052 J	< 0.00032	0.00050 J	< 0.00032	< 0.00032	< 0.00032	< 0.00032	0.00081 J
Lead	mg/L	< 0.00016	< 0.00016	< 0.00016	< 0.00016	< 0.00016	< 0.00016	< 0.00016	< 0.00016	< 0.00016	< 0.00016	< 0.00016	< 0.00016	< 0.00016
Lithium	mg/L	0.0026 J	0.0042 J	< 0.0016	< 0.0016	< 0.0016	0.0047 J	< 0.0016	< 0.0016	0.0019 J	< 0.0016	< 0.0016	0.0019 J	0.0041 J
Mercury	mg/L	< 0.00013	< 0.00013	< 0.00013	< 0.00013	< 0.00013	< 0.00013	< 0.00013	< 0.00013	< 0.00013	< 0.00013	< 0.00013	< 0.00013	< 0.00013
Molybdenum	mg/L	< 0.00062	0.00071 J	< 0.00062	< 0.00062	< 0.00062	< 0.00062	< 0.00062	< 0.00062	< 0.00062	< 0.00062	< 0.00062	< 0.00062	< 0.00062
Combined Radium 226 + 228	pCi/L	0.973	0.501 U	0.817 U	0.604 U	0.378 U	0.693 U	0.223 U	0.500 U	0.0994 U	0.976 U	0.181 U	0.421 U	0.723 U
Selenium	mg/L	< 0.00096	< 0.00096	< 0.00096	< 0.00096	< 0.00096	< 0.00096	< 0.00096	< 0.00096	< 0.00096	< 0.00096	0.0025 J	< 0.00096	< 0.00096
Thallium	mg/L	< 0.00038	< 0.00038	< 0.00038	< 0.00038	< 0.00038	< 0.00038	< 0.00038	< 0.00038	< 0.00038	< 0.00038	< 0.00038	< 0.00038	< 0.00038
Fluoride	mg/L	0.094 J	0.10	0.068 J	0.067 J	0.077 J	0.066 J	0.069 J	0.13	0.089 J	0.075 J	0.17	0.11	0.10

Notes:

mg/L - milligrams per liter

pCi/L - picocuries per liter

SU - Standard Units

TDS - Total Dissolved Solids

< indicates the substance was not detected above the method detection limit (MDL). The value displayed is the MDL.

J - The result is an estimated concentration. "J" qualifiers are applied by the laboratory when the concentration reported is above the method detection limit, but below the laboratory reporting limit.

Radium data are a combination of radium isotopes 226 and 228. When results are reported below the MDC (Minimum Detectable Concentration), data is displayed with an accompanying U. The MDC varies depending upon the sample amount and elapsed time of the measurement.

**Table 6**  
**Summary of Background Concentrations and Groundwater Protection Standards**  
**Georgia Power Company**  
**Plant Hammond Ash Pond 4**  
**Floyd County, GA**

Analyte	Units	EPA MCL	CCR-Rule Specified (1)	Background Limit	GWPS <sup>(2)</sup>
Antimony	mg/L	0.006	N/A	0.003	0.006
Arsenic	mg/L	0.01	N/A	0.005	0.01
Barium	mg/L	2	N/A	0.12	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
Combined Radium 226 + 228	pCi/L	5	N/A	1.29	5
Fluoride	mg/L	4	N/A	0.23	4
Lead	mg/L	N/A	0.015	0.0016	0.015
Lithium	mg/L	N/A	0.040	0.030	0.040
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

Notes:

CCR = Coal Combustion Residuals

EPA = Environmental Protection Agency

GWPS- Groundwater Protection Standard

MCL - Maximum Contaminant Level

mg/L = milligrams per liter

N/A = Not Applicable

pCi/L = picocuries per liter

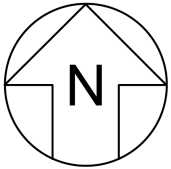
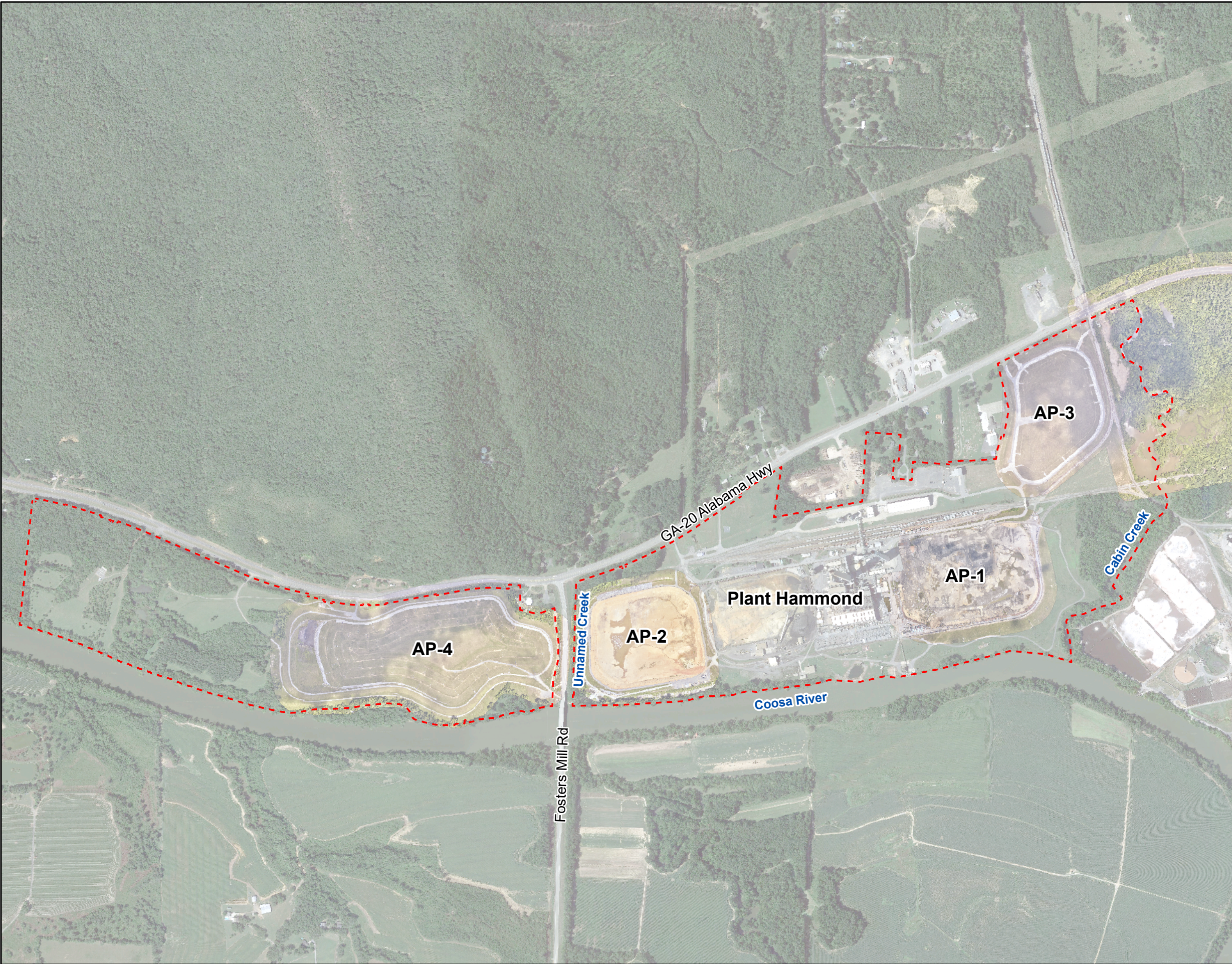
The background limits are used when determining the groundwater protection standard (GWPS) under 40 CFR § 257.95(h) and 391-3-4-.10(6)(a).

(1) On February 22, 2022, the Georgia Environmental Protection Division (GA EPD) adopted the federally promulgated GWPS for cobalt, lithium, lead, and molybdenum.

(2) Under 40 CFR 257.95(h)(1-3) the GWPS is: (i) the maximum contaminant level (MCL) established under §§141.62 and 141.66 of this title; (ii) where an MCL has not been established a rule-specific GWPS; or (iii) background levels for constituents where the background level is higher than the MCL or rule-specified GWPS.

# FIGURES

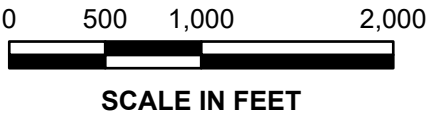




**LEGEND**  
[Red dashed line] Plant Hammond Property Boundary



Note:  
1. Aerial photograph source: Google Earth Pro August 2019 and Georgia Power Company, January and June 2024.



**SITE LOCATION MAP**

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

Prepared For:  **Georgia Power**

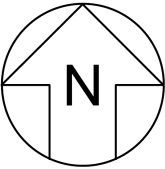
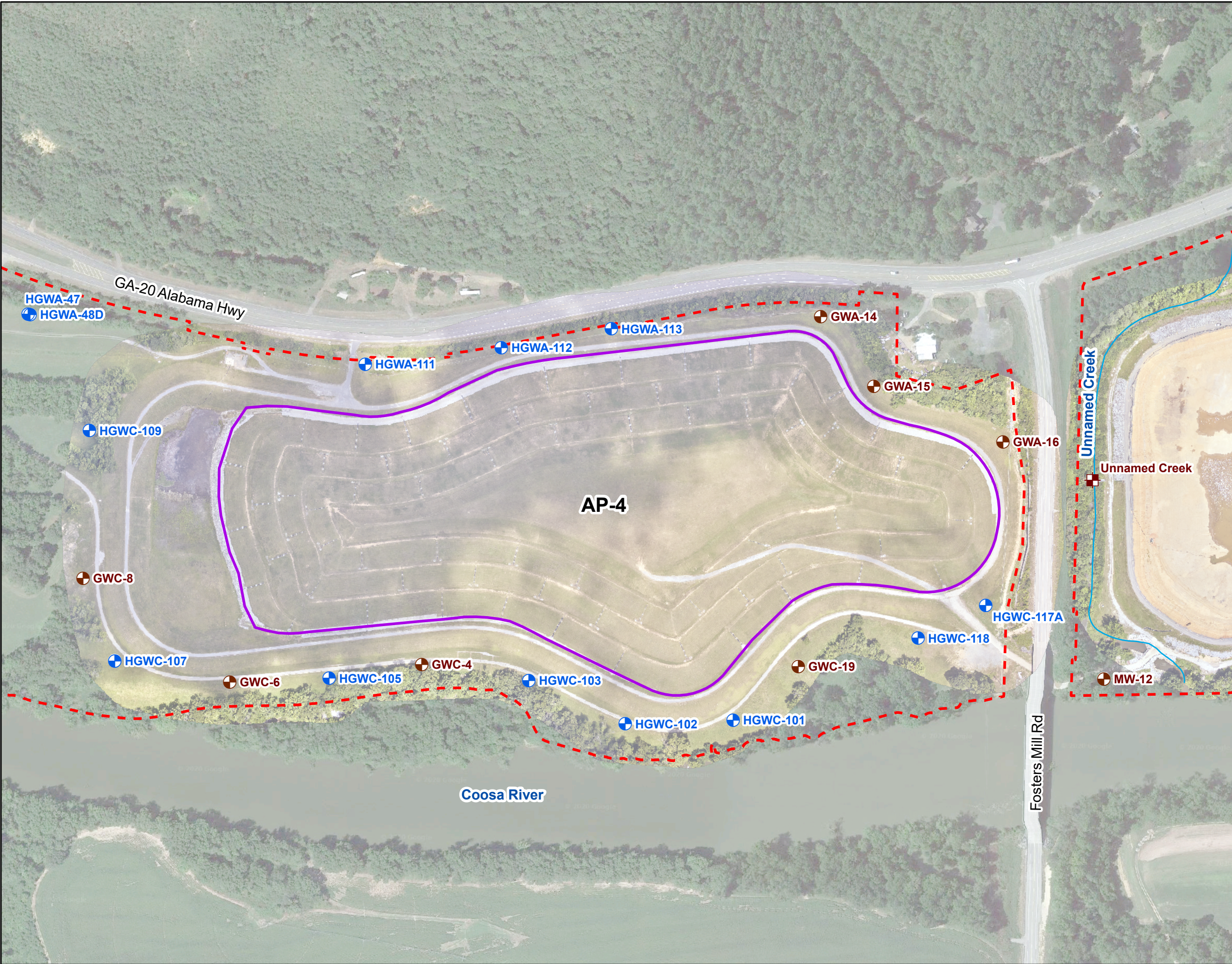
Prepared By: 

KENNESAW, GA

FEBRUARY 2025

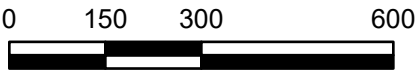
**FIGURE**  
**1**





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

Note:  
1. Aerial photograph source: Google Earth Pro August 2019 and Georgia Power Company, January and June 2024.



SCALE IN FEET

**MONITORING WELL AND SURFACE  
WATER GAUGE LOCATION NETWORK  
MAP**

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

Prepared For:  Georgia Power

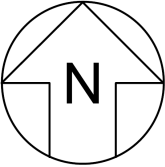
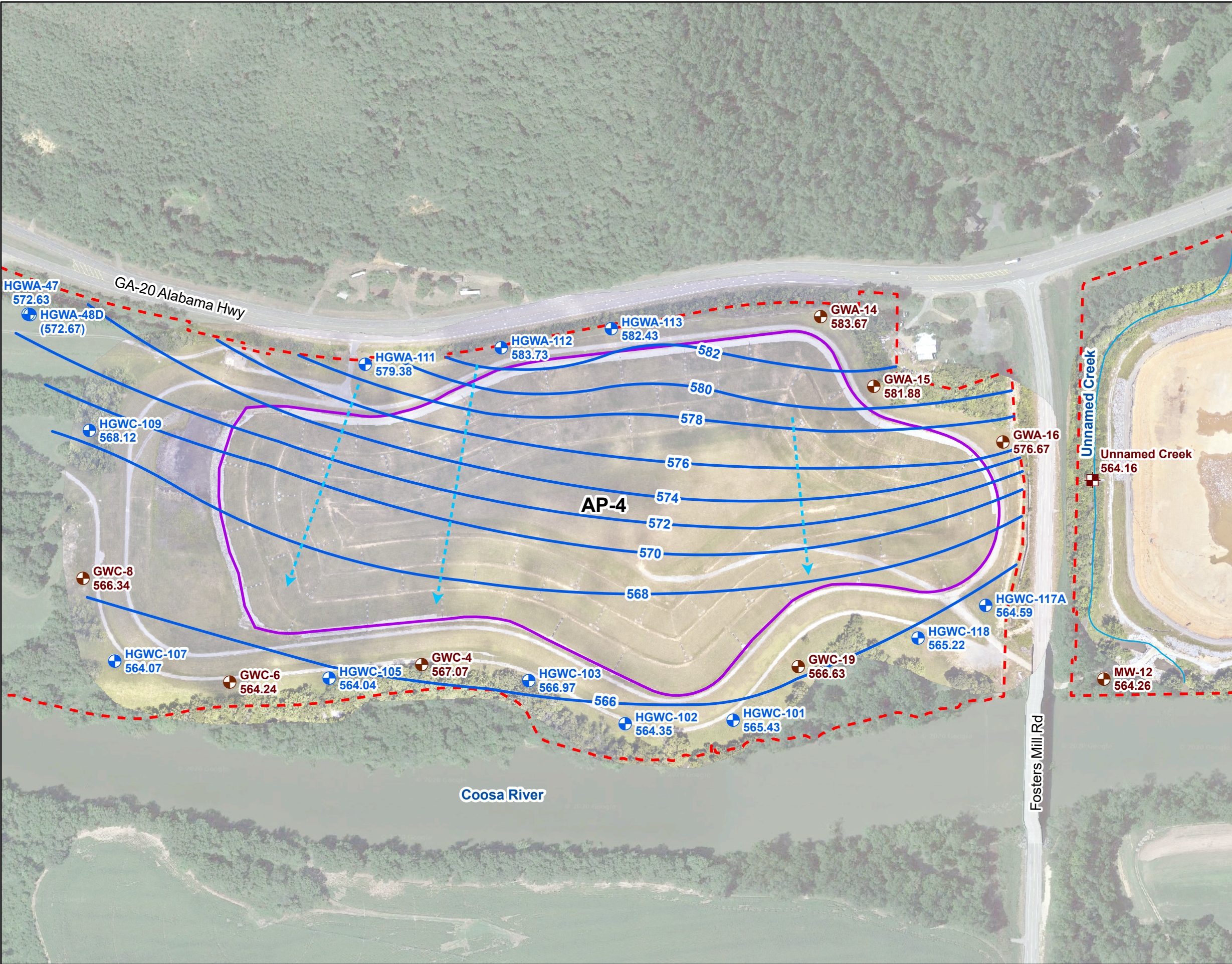
Prepared By:  Geosyntec  
consultants

KENNESAW, GA

FEBRUARY 2025

**FIGURE  
2**





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



Notes:  
1. Water level elevation recorded on August 5, 2024. Elevation provided in feet (ft) referenced to the North American Vertical Datum of 1988 (NAVD 88).  
2. Groundwater elevations in parentheses were not used to make the groundwater contours because these wells are screened at a different elevation in the formation/aquifer.  
3. Aerial photograph source: Google Earth Pro August 2019 and Georgia Power Company, January and June 2024.



**POTENTIOMETRIC SURFACE  
CONTOUR MAP - AUGUST 2024**

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

Prepared For: Georgia Power

Prepared By: Geosyntec  
consultants

KENNESAW, GA    FEBRUARY 2025

**FIGURE  
3**



# APPENDIX A

## Well Maintenance and Repair Documentation Memorandum

**MEMORANDUM**

**DATE:** December 10, 2024

**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 Ash Pond 4 (AP-4) during the August 2024 sampling event. All repairs and maintenance were completed in accordance with the Georgia Environmental Protection Division (GA EPD) guidance on routine visual inspections of groundwater monitoring wells. Documentation of the well inspections are provided as an attachment to this memorandum.

Georgia Power Site/Unit	Date Performed	Well ID	Maintenance/ Repair Performed
Hammond/AP-4	8/05/2024	All Wells	Checked and cleared weep holes of debris.

# Attachment

## Well Inspection Summary Table

## Well Inspection

Site Name: Plant Hammond AP-4

Date: 08/05/2024

Permit Number: 057-025D (CCR)

Field Conditions: Sunny, 80° F

	Location/Identification			
	Visible and accessible	Properly identified with correct well ID	Located in high traffic area; does the well require protection from traffic	Acceptable drainage around well (no standing water, not located in obvious drainage flow path)
<b>Well ID:</b>				
HGWA-47	Yes	Yes	No	Yes
HGWA-48D	Yes	Yes	No	Yes
HGWA-111	Yes	Yes	No	Yes
HGWA-112	Yes	Yes	No	Yes
HGWA-113	Yes	Yes	No	Yes
HGWC-101	Yes	Yes	No	Yes
HGWC-102	Yes	Yes	No	Yes
HGWC-103	Yes	Yes	No	Yes
HGWC-105	Yes	Yes	No	Yes
HGWC-107	Yes	Yes	No	Yes
HGWC-109	Yes	Yes	No	Yes
HGWC-117A	Yes	Yes	No	Yes
HGWC-118	Yes	Yes	No	Yes
GWC-4	Yes	Yes	No	Yes
GWC-6	Yes	Yes	No	Yes
GWC-8	Yes	Yes	No	Yes
GWA-14	Yes	Yes	No	Yes
GWA-15	Yes	Yes	No	Yes
GWC-16	Yes	Yes	No	Yes
GWC-19	Yes	Yes	No	Yes
MW-12	Yes	Yes	No	Yes

## Well Inspection

Site Name: Plant Hammond AP-4

Date: 08/05/2024

Permit Number: 057-025D (CCR)

Field Conditions: Sunny, 80° F

	Protective Casing				
	Free from apparent damage and able to be secured	No degradation or deterioration	Functioning weep hole	Annular space clear of debris and water, or filled with pea gravel/sand	Locked and is the lock in good condition
<b>Well ID:</b>					
HGWA-47	Yes	Yes	Yes	Yes	Yes
HGWA-48D	Yes	Yes	Yes	Yes	Yes
HGWA-111	Yes	Yes	Yes	Yes	Yes
HGWA-112	Yes	Yes	Yes	Yes	Yes
HGWA-113	Yes	Yes	Yes	Yes	Yes
HGWC-101	Yes	Yes	Yes	Yes	Yes
HGWC-102	Yes	Yes	Yes	Yes	Yes
HGWC-103	Yes	Yes	Yes	Yes	Yes
HGWC-105	Yes	Yes	Yes	Yes	Yes
HGWC-107	Yes	Yes	Yes	Yes	Yes
HGWC-109	Yes	Yes	Yes	Yes	Yes
HGWC-117A	Yes	Yes	Yes	Yes	Yes
HGWC-118	Yes	Yes	Yes	Yes	Yes
GWC-4	Yes	Yes	Yes	Yes	Yes
GWC-6	Yes	Yes	Yes	Yes	Yes
GWC-8	Yes	Yes	Yes	Yes	Yes
GWA-14	Yes	Yes	Yes	Yes	Yes
GWA-15	Yes	Yes	Yes	Yes	Yes
GWC-16	Yes	Yes	Yes	Yes	Yes
GWC-19	Yes	Yes	Yes	Yes	Yes
MW-12	Yes	Yes	Yes	Yes	Yes



## Well Inspection

Site Name: Plant Hammond AP-4

Date: 08/05/2024

Permit Number: 057-025D (CCR)

Field Conditions: Sunny, 80° F

	Surface Pad			Internal Casing		
	Good condition (not cracked/ broken)	Sloped away from the protective casing	In complete contact with the ground surface and stable	Cap prevents entry of foreign material into the well	Free of kinks/bends, or any obstructions from foreign objects (such as bailers)	Properly vented for equilibration of air pressure
<b>Well ID:</b>						
HGWA-47	Yes	Yes	Yes	Yes	Yes	Yes
HGWA-48D	Yes	Yes	Yes	Yes	Yes	Yes
HGWA-111	Yes	Yes	Yes	Yes	Yes	Yes
HGWA-112	Yes	Yes	Yes	Yes	Yes	Yes
HGWA-113	Yes	Yes	Yes	Yes	Yes	Yes
HGWC-101	Yes	Yes	Yes	Yes	Yes	Yes
HGWC-102	Yes	Yes	Yes	Yes	Yes	Yes
HGWC-103	Yes	Yes	Yes	Yes	Yes	Yes
HGWC-105	Yes	Yes	Yes	Yes	Yes	Yes
HGWC-107	Yes	Yes	Yes	Yes	Yes	Yes
HGWC-109	Yes	Yes	Yes	Yes	Yes	Yes
HGWC-117A	Yes	Yes	Yes	Yes	Yes	Yes
HGWC-118	Yes	Yes	Yes	Yes	Yes	Yes
GWC-4	Yes	Yes	Yes	Yes	Yes	Yes
GWC-6	Yes	Yes	Yes	Yes	Yes	Yes
GWC-8	Yes	Yes	Yes	Yes	Yes	Yes
GWA-14	Yes	Yes	Yes	Yes	Yes	Yes
GWA-15	Yes	Yes	Yes	Yes	Yes	Yes
GWC-16	Yes	Yes	Yes	Yes	Yes	Yes
GWC-19	Yes	Yes	Yes	Yes	Yes	Yes
MW-12	Yes	Yes	Yes	Yes	Yes	Yes

## Well Inspection

Site Name: Plant Hammond AP-4

Date: 08/05/2024

Permit Number: 057-025D (CCR)

Field Conditions: Sunny, 80° F

	Corrective actions as needed, by date:	
<b>Well ID:</b>		
HGWA-47		None
HGWA-48D		None
HGWA-111		None
HGWA-112		None
HGWA-113		None
HGWC-101		None
HGWC-102		None
HGWC-103		None
HGWC-105		None
HGWC-107		None
HGWC-109		None
HGWC-117A		None
HGWC-118		None
GWC-4		None
GWC-6		None
GWC-8		None
GWA-14		None
GWA-15		None
GWC-16		None
GWC-19		None
MW-12		None

## APPENDIX B

# Laboratory Analytical and Field Sampling Reports

# LABORATORY ANALYTICAL RESULTS



August 26, 2024

Kristen Jurinko  
Southern Company  
241 Ralph McGill Blvd NE  
Bin 10160  
Atlanta, GA 30308

RE: Project: Hammond AP-4  
Pace Project No.: 92746288

Dear Kristen Jurinko:

Enclosed are the analytical results for sample(s) received by the laboratory between August 07, 2024 and August 12, 2024. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

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

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

Sincerely,

Bonnie Vang  
bonnie.vang@pacelabs.com  
704-977-0968  
Project Manager

Enclosures

cc: Kip Gray, Geosyntec  
Christine Hug, Geosyntec Consultants, Inc.  
Thomas Kessler, Geosyntec Consultants  
Whitney Law, Geosyntec Consultants  
Laura Midkiff, Southern Company  
Caroline Nelson, Geosyntec Consultants, Inc  
Jamie Newsome, Geosyntec Consultants  
Zain Webb, Geosyntec Consultants



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: Hammond AP-4

Pace Project No.: 92746288

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### **Pace Analytical Services Asheville**

2225 Riverside Drive, Asheville, NC 28804

Florida/NELAP Certification #: E87648

North Carolina Drinking Water Certification #: 37712

North Carolina Wastewater Certification #: 40

South Carolina Laboratory ID: 99030

South Carolina Certification #: 99030001

Virginia/VELAP Certification #: 460222

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

110 Technology Pkwy, Peachtree Corners, GA 30092

Florida DOH Certification #: E87315

Georgia DW Inorganics Certification #: 812

North Carolina Certification #: 381

South Carolina Certification #: 98011001

Virginia Certification #: 460204

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: Hammond AP-4

Pace Project No.: 92746288

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92746288001	HAM-HGWA-47	Water	08/06/24 14:45	08/07/24 12:25
92746288002	HAM-HGWA-48D	Water	08/06/24 12:25	08/07/24 12:25
92746288003	HAM-HGWA-111	Water	08/06/24 17:05	08/07/24 12:25
92746288004	HAM-HGWA-113	Water	08/08/24 15:48	08/09/24 14:15
92746288005	HAM-HGWC-102	Water	08/09/24 13:27	08/12/24 12:10
92746288006	HAM-HGWC-103	Water	08/09/24 11:21	08/12/24 12:10
92746288007	HAM-HGWA-112	Water	08/09/24 09:36	08/12/24 12:10
92746288008	HAM-HGWC-118	Water	08/09/24 15:38	08/12/24 12:10
92746288009	HAM-AP4-FD-02	Water	08/09/24 00:00	08/12/24 12:10
92746288010	HAM-AP4-EB-01	Water	08/09/24 17:00	08/12/24 12:10
92746288011	HAM-AP4-FB-01	Water	08/09/24 16:55	08/12/24 12:10
92746288012	HAM-HGWC-101	Water	08/10/24 10:32	08/12/24 12:10
92746288013	HAM-HGWC-105	Water	08/10/24 11:44	08/12/24 12:10
92746288014	HAM-HGWC-107	Water	08/10/24 13:17	08/12/24 12:10
92746288015	HAM-HGWC-109	Water	08/10/24 11:10	08/12/24 12:10
92746288016	HAM-HGWC-117A	Water	08/10/24 14:25	08/12/24 12:10
92746288017	HAM-AP4-FD-01	Water	08/10/24 00:00	08/12/24 12:10
92746288018	HAM-AP4-EB-02	Water	08/10/24 12:35	08/12/24 12:10
92746288019	HAM-AP4-FB-02	Water	08/10/24 12:30	08/12/24 12:10

## REPORT OF LABORATORY ANALYSIS

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## SAMPLE ANALYTE COUNT

Project: Hammond AP-4

Pace Project No.: 92746288

Lab ID	Sample ID	Method	Analysts	Analytes Reported
92746288001	HAM-HGWA-47	EPA 6010D	MJS2	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2540C-2015	DL1	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92746288002	HAM-HGWA-48D	EPA 6010D	MJS2	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2540C-2015	DL1	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92746288003	HAM-HGWA-111	EPA 6010D	MJS2	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2540C-2015	DL1	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92746288004	HAM-HGWA-113	EPA 6010D	MT1	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2540C-2015	DL1	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92746288005	HAM-HGWC-102	EPA 6010D	AJM	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2540C-2015	DL1	1
		EPA 300.0 Rev 2.1 1993	JCM	3
92746288006	HAM-HGWC-103	EPA 6010D	AJM	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2540C-2015	DL1	1
		EPA 300.0 Rev 2.1 1993	JCM	3
92746288007	HAM-HGWA-112	EPA 6010D	AJM	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2540C-2015	DL1	1
		EPA 300.0 Rev 2.1 1993	JCM	3
92746288008	HAM-HGWC-118	EPA 6010D	AJM	1
		EPA 6020B	CW1	13

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## SAMPLE ANALYTE COUNT

Project: Hammond AP-4

Pace Project No.: 92746288

Lab ID	Sample ID	Method	Analysts	Analytes Reported
92746288009	HAM-AP4-FD-02	EPA 7470A	VB	1
		SM 2540C-2015	DL1	1
		EPA 300.0 Rev 2.1 1993	JCM	3
		EPA 6010D	AJM	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
92746288010	HAM-AP4-EB-01	SM 2540C-2015	DL1	1
		EPA 300.0 Rev 2.1 1993	JCM	3
		EPA 6010D	AJM	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2540C-2015	DL1	1
92746288011	HAM-AP4-FB-01	EPA 300.0 Rev 2.1 1993	JCM	3
		EPA 6010D	AJM	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2540C-2015	DL1	1
		EPA 300.0 Rev 2.1 1993	JCM	3
92746288012	HAM-HGWC-101	EPA 6010D	AJM	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2540C-2015	DL1	1
		EPA 300.0 Rev 2.1 1993	JCM	3
		EPA 6010D	AJM	1
92746288013	HAM-HGWC-105	EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2540C-2015	DL1	1
		EPA 300.0 Rev 2.1 1993	JCM	3
		EPA 6010D	AJM	1
		EPA 6020B	CW1	13
92746288014	HAM-HGWC-107	EPA 7470A	VB	1
		SM 2540C-2015	DL1	1
		EPA 300.0 Rev 2.1 1993	JCM	3
		EPA 6010D	AJM	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
92746288015	HAM-HGWC-109	SM 2540C-2015	DL1	1
		EPA 300.0 Rev 2.1 1993	JCM	3
		EPA 6010D	AJM	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2540C-2015	DL1	1

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## SAMPLE ANALYTE COUNT

Project: Hammond AP-4

Pace Project No.: 92746288

Lab ID	Sample ID	Method	Analysts	Analytes Reported
92746288016	HAM-HGWC-117A	EPA 300.0 Rev 2.1 1993	JCM	3
		EPA 6010D	AJM	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2540C-2015	DL1	1
92746288017	HAM-AP4-FD-01	EPA 300.0 Rev 2.1 1993	JCM	3
		EPA 6010D	AJM	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2540C-2015	DL1	1
92746288018	HAM-AP4-EB-02	EPA 300.0 Rev 2.1 1993	JCM	3
		EPA 6010D	AJM	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2540C-2015	DL1	1
92746288019	HAM-AP4-FB-02	EPA 300.0 Rev 2.1 1993	JCM	3
		EPA 6010D	AJM	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2540C-2015	DL1	1
		EPA 300.0 Rev 2.1 1993	JCM	3

PASI-A = Pace Analytical Services - Asheville

PASI-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.: 92746288

Lab Sample ID	Client Sample ID					
Method	Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>92746288001</b>	<b>HAM-HGWA-47</b>					
EPA 6010D	Calcium	71.1	mg/L	1.0	08/15/24 23:25	
EPA 6020B	Barium	0.025	mg/L	0.0050	08/09/24 18:57	
EPA 6020B	Lithium	0.0026J	mg/L	0.030	08/09/24 18:57	
SM 2540C-2015	Total Dissolved Solids	253	mg/L	25.0	08/09/24 11:42	
EPA 300.0 Rev 2.1 1993	Chloride	2.9	mg/L	1.0	08/09/24 04:22	
EPA 300.0 Rev 2.1 1993	Fluoride	0.094J	mg/L	0.10	08/09/24 04:22	
EPA 300.0 Rev 2.1 1993	Sulfate	2.3	mg/L	1.0	08/09/24 04:22	
<b>92746288002</b>	<b>HAM-HGWA-48D</b>					
EPA 6010D	Calcium	58.8	mg/L	1.0	08/15/24 23:29	
EPA 6020B	Barium	0.11	mg/L	0.0050	08/09/24 19:01	
EPA 6020B	Lithium	0.0042J	mg/L	0.030	08/09/24 19:01	
EPA 6020B	Molybdenum	0.00071J	mg/L	0.010	08/09/24 19:01	
SM 2540C-2015	Total Dissolved Solids	240	mg/L	25.0	08/09/24 11:43	
EPA 300.0 Rev 2.1 1993	Chloride	2.7	mg/L	1.0	08/09/24 04:36	
EPA 300.0 Rev 2.1 1993	Fluoride	0.10	mg/L	0.10	08/09/24 04:36	
EPA 300.0 Rev 2.1 1993	Sulfate	2.7	mg/L	1.0	08/09/24 04:36	
<b>92746288003</b>	<b>HAM-HGWA-111</b>					
EPA 6010D	Calcium	46.2	mg/L	1.0	08/15/24 23:33	
EPA 6020B	Barium	0.027	mg/L	0.0050	08/13/24 12:39	
EPA 6020B	Lithium	0.0019J	mg/L	0.030	08/13/24 12:39	
SM 2540C-2015	Total Dissolved Solids	163	mg/L	25.0	08/09/24 11:43	
EPA 300.0 Rev 2.1 1993	Chloride	2.8	mg/L	1.0	08/09/24 04:51	
EPA 300.0 Rev 2.1 1993	Fluoride	0.089J	mg/L	0.10	08/09/24 04:51	
EPA 300.0 Rev 2.1 1993	Sulfate	1.3	mg/L	1.0	08/09/24 04:51	
<b>92746288004</b>	<b>HAM-HGWA-113</b>					
EPA 6010D	Calcium	8.4	mg/L	1.0	08/16/24 17:19	
EPA 6020B	Barium	0.029	mg/L	0.0050	08/15/24 18:40	
EPA 6020B	Selenium	0.0025J	mg/L	0.0050	08/15/24 18:40	
SM 2540C-2015	Total Dissolved Solids	85.0	mg/L	25.0	08/14/24 12:07	
EPA 300.0 Rev 2.1 1993	Chloride	1.5	mg/L	1.0	08/13/24 20:25	
EPA 300.0 Rev 2.1 1993	Fluoride	0.17	mg/L	0.10	08/13/24 20:25	
EPA 300.0 Rev 2.1 1993	Sulfate	4.6	mg/L	1.0	08/13/24 20:25	
<b>92746288005</b>	<b>HAM-HGWC-102</b>					
EPA 6010D	Calcium	142	mg/L	1.0	08/18/24 18:41	M1
EPA 6020B	Arsenic	0.0011J	mg/L	0.0050	08/16/24 19:32	
EPA 6020B	Barium	0.029	mg/L	0.0050	08/16/24 19:32	
EPA 6020B	Boron	3.0	mg/L	0.040	08/16/24 19:32	
EPA 6020B	Cadmium	0.00043J	mg/L	0.00050	08/16/24 19:32	
EPA 6020B	Cobalt	0.00094J	mg/L	0.0050	08/16/24 19:32	
SM 2540C-2015	Total Dissolved Solids	746	mg/L	25.0	08/14/24 11:36	
EPA 300.0 Rev 2.1 1993	Chloride	8.0	mg/L	1.0	08/14/24 08:38	
EPA 300.0 Rev 2.1 1993	Fluoride	0.067J	mg/L	0.10	08/14/24 08:38	M1
EPA 300.0 Rev 2.1 1993	Sulfate	359	mg/L	8.0	08/14/24 20:04	M1

## REPORT OF LABORATORY ANALYSIS

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## SUMMARY OF DETECTION

Project: Hammond AP-4

Pace Project No.: 92746288

Lab Sample ID	Client Sample ID					
Method	Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>92746288006</b>	<b>HAM-HGWC-103</b>					
EPA 6010D	Calcium	146	mg/L	1.0	08/18/24 18:53	
EPA 6020B	Arsenic	0.0015J	mg/L	0.0050	08/16/24 19:36	
EPA 6020B	Barium	0.032	mg/L	0.0050	08/16/24 19:36	
EPA 6020B	Boron	4.5	mg/L	0.040	08/16/24 19:36	
EPA 6020B	Cadmium	0.00078	mg/L	0.00050	08/16/24 19:36	
EPA 6020B	Cobalt	0.0020J	mg/L	0.0050	08/16/24 19:36	
SM 2540C-2015	Total Dissolved Solids	809	mg/L	25.0	08/14/24 11:37	
EPA 300.0 Rev 2.1 1993	Chloride	8.8	mg/L	1.0	08/14/24 09:21	
EPA 300.0 Rev 2.1 1993	Fluoride	0.077J	mg/L	0.10	08/14/24 09:21	
EPA 300.0 Rev 2.1 1993	Sulfate	393	mg/L	9.0	08/14/24 20:46	
<b>92746288007</b>	<b>HAM-HGWA-112</b>					
EPA 6010D	Calcium	7.1	mg/L	1.0	08/18/24 18:56	
EPA 6020B	Barium	0.026	mg/L	0.0050	08/16/24 19:40	
EPA 6020B	Boron	0.029J	mg/L	0.040	08/16/24 19:40	
EPA 6020B	Chromium	0.0029J	mg/L	0.0050	08/16/24 19:40	
SM 2540C-2015	Total Dissolved Solids	90.0	mg/L	25.0	08/14/24 11:37	
EPA 300.0 Rev 2.1 1993	Chloride	5.2	mg/L	1.0	08/14/24 09:36	
EPA 300.0 Rev 2.1 1993	Fluoride	0.075J	mg/L	0.10	08/14/24 09:36	
EPA 300.0 Rev 2.1 1993	Sulfate	0.76J	mg/L	1.0	08/14/24 09:36	
<b>92746288008</b>	<b>HAM-HGWC-118</b>					
EPA 6010D	Calcium	85.2	mg/L	1.0	08/18/24 19:00	
EPA 6020B	Barium	0.037	mg/L	0.0050	08/16/24 19:43	
EPA 6020B	Boron	0.59	mg/L	0.040	08/16/24 19:43	
EPA 6020B	Lithium	0.0019J	mg/L	0.030	08/16/24 19:43	
SM 2540C-2015	Total Dissolved Solids	338	mg/L	25.0	08/14/24 11:37	
EPA 300.0 Rev 2.1 1993	Chloride	4.2	mg/L	1.0	08/14/24 09:50	
EPA 300.0 Rev 2.1 1993	Fluoride	0.11	mg/L	0.10	08/14/24 09:50	
EPA 300.0 Rev 2.1 1993	Sulfate	66.5	mg/L	1.0	08/14/24 09:50	
<b>92746288009</b>	<b>HAM-AP4-FD-02</b>					
EPA 6010D	Calcium	84.7	mg/L	1.0	08/18/24 19:04	
EPA 6020B	Barium	0.034	mg/L	0.0050	08/19/24 15:42	
EPA 6020B	Boron	0.59	mg/L	0.040	08/19/24 15:42	
EPA 6020B	Lithium	0.0021J	mg/L	0.030	08/19/24 15:42	
SM 2540C-2015	Total Dissolved Solids	330	mg/L	25.0	08/14/24 11:38	
EPA 300.0 Rev 2.1 1993	Chloride	4.2	mg/L	1.0	08/14/24 10:47	
EPA 300.0 Rev 2.1 1993	Fluoride	0.11	mg/L	0.10	08/14/24 10:47	
EPA 300.0 Rev 2.1 1993	Sulfate	67.2	mg/L	1.0	08/14/24 10:47	
<b>92746288010</b>	<b>HAM-AP4-EB-01</b>					
EPA 6020B	Antimony	0.00086J	mg/L	0.0030	08/19/24 15:57	
SM 2540C-2015	Total Dissolved Solids	107	mg/L	25.0	08/14/24 11:38	
<b>92746288011</b>	<b>HAM-AP4-FB-01</b>					
SM 2540C-2015	Total Dissolved Solids	59.0	mg/L	25.0	08/14/24 11:38	
<b>92746288012</b>	<b>HAM-HGWC-101</b>					
EPA 6010D	Calcium	24.2	mg/L	1.0	08/18/24 19:22	

## REPORT OF LABORATORY ANALYSIS

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## SUMMARY OF DETECTION

Project: Hammond AP-4

Pace Project No.: 92746288

Lab Sample ID	Client Sample ID					
Method	Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>92746288012</b>	<b>HAM-HGWC-101</b>					
EPA 6020B	Barium	0.033	mg/L	0.0050	08/19/24 16:04	
EPA 6020B	Boron	0.15	mg/L	0.040	08/19/24 16:04	
EPA 6020B	Cadmium	0.00014J	mg/L	0.00050	08/19/24 16:04	
EPA 6020B	Cobalt	0.0025J	mg/L	0.0050	08/19/24 16:04	
SM 2540C-2015	Total Dissolved Solids	263	mg/L	25.0	08/15/24 10:35	
EPA 300.0 Rev 2.1 1993	Chloride	5.4	mg/L	1.0	08/14/24 11:02	
EPA 300.0 Rev 2.1 1993	Fluoride	0.068J	mg/L	0.10	08/14/24 11:02	
EPA 300.0 Rev 2.1 1993	Sulfate	104	mg/L	2.0	08/14/24 21:01	
<b>92746288013</b>	<b>HAM-HGWC-105</b>					
EPA 6010D	Calcium	156	mg/L	1.0	08/18/24 19:26	
EPA 6020B	Barium	0.083	mg/L	0.0050	08/19/24 16:08	
EPA 6020B	Boron	1.4	mg/L	0.040	08/19/24 16:08	
EPA 6020B	Cobalt	0.00052J	mg/L	0.0050	08/19/24 16:08	
EPA 6020B	Lithium	0.0047J	mg/L	0.030	08/19/24 16:08	
SM 2540C-2015	Total Dissolved Solids	658	mg/L	25.0	08/15/24 10:35	
EPA 300.0 Rev 2.1 1993	Chloride	7.7	mg/L	1.0	08/14/24 11:16	
EPA 300.0 Rev 2.1 1993	Fluoride	0.066J	mg/L	0.10	08/14/24 11:16	
EPA 300.0 Rev 2.1 1993	Sulfate	258	mg/L	6.0	08/14/24 21:15	
<b>92746288014</b>	<b>HAM-HGWC-107</b>					
EPA 6010D	Calcium	61.4	mg/L	1.0	08/18/24 19:29	
EPA 6020B	Barium	0.033	mg/L	0.0050	08/19/24 16:34	
EPA 6020B	Boron	0.84	mg/L	0.040	08/19/24 16:34	
SM 2540C-2015	Total Dissolved Solids	299	mg/L	25.0	08/15/24 10:36	
EPA 300.0 Rev 2.1 1993	Chloride	3.1	mg/L	1.0	08/14/24 11:30	
EPA 300.0 Rev 2.1 1993	Fluoride	0.069J	mg/L	0.10	08/14/24 11:30	
EPA 300.0 Rev 2.1 1993	Sulfate	114	mg/L	3.0	08/14/24 21:29	
<b>92746288015</b>	<b>HAM-HGWC-109</b>					
EPA 6010D	Calcium	53.7	mg/L	1.0	08/18/24 19:33	
EPA 6020B	Arsenic	0.00091J	mg/L	0.0050	08/19/24 16:38	
EPA 6020B	Barium	0.076	mg/L	0.0050	08/19/24 16:38	
EPA 6020B	Boron	0.20	mg/L	0.040	08/19/24 16:38	
EPA 6020B	Cobalt	0.00050J	mg/L	0.0050	08/19/24 16:38	
SM 2540C-2015	Total Dissolved Solids	227	mg/L	25.0	08/15/24 10:36	
EPA 300.0 Rev 2.1 1993	Chloride	4.0	mg/L	1.0	08/14/24 11:45	
EPA 300.0 Rev 2.1 1993	Fluoride	0.13	mg/L	0.10	08/14/24 11:45	
EPA 300.0 Rev 2.1 1993	Sulfate	19.7	mg/L	1.0	08/14/24 11:45	
<b>92746288016</b>	<b>HAM-HGWC-117A</b>					
EPA 6010D	Calcium	64.5	mg/L	1.0	08/18/24 19:37	
EPA 6020B	Barium	0.042	mg/L	0.0050	08/19/24 16:42	
EPA 6020B	Boron	0.28	mg/L	0.040	08/19/24 16:42	
EPA 6020B	Cobalt	0.00081J	mg/L	0.0050	08/19/24 16:42	
EPA 6020B	Lithium	0.0041J	mg/L	0.030	08/19/24 16:42	
SM 2540C-2015	Total Dissolved Solids	284	mg/L	25.0	08/15/24 10:36	
EPA 300.0 Rev 2.1 1993	Chloride	4.5	mg/L	1.0	08/14/24 12:28	
EPA 300.0 Rev 2.1 1993	Fluoride	0.10	mg/L	0.10	08/14/24 12:28	

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## SUMMARY OF DETECTION

Project: Hammond AP-4

Pace Project No.: 92746288

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>92746288016</b>	<b>HAM-HGWC-117A</b>					
EPA 300.0 Rev 2.1 1993	Sulfate	72.6	mg/L	1.0	08/14/24 12:28	
<b>92746288017</b>	<b>HAM-AP4-FD-01</b>					
EPA 6010D	Calcium	60.3	mg/L	1.0	08/18/24 19:40	
EPA 6020B	Barium	0.032	mg/L	0.0050	08/19/24 16:45	
EPA 6020B	Boron	0.82	mg/L	0.040	08/19/24 16:45	
SM 2540C-2015	Total Dissolved Solids	321	mg/L	25.0	08/15/24 10:36	
EPA 300.0 Rev 2.1 1993	Chloride	3.1	mg/L	1.0	08/14/24 12:42	
EPA 300.0 Rev 2.1 1993	Fluoride	0.071J	mg/L	0.10	08/14/24 12:42	
EPA 300.0 Rev 2.1 1993	Sulfate	115	mg/L	3.0	08/14/24 21:44	
<b>92746288018</b>	<b>HAM-AP4-EB-02</b>					
SM 2540C-2015	Total Dissolved Solids	28.0	mg/L	25.0	08/15/24 10:36	

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## ANALYTICAL RESULTS

Project: Hammond AP-4

Pace Project No.: 92746288

Sample: HAM-HGWA-47		Lab ID: 92746288001		Collected: 08/06/24 14:45		Received: 08/07/24 12:25		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010D ATL ICP</b>		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA							
Calcium	71.1	mg/L	1.0	0.12	1	08/09/24 11:23	08/15/24 23:25	7440-70-2	
<b>6020 MET ICPMS</b>		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA							
Antimony	ND	mg/L	0.0030	0.00054	1	08/08/24 10:21	08/09/24 18:57	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00084	1	08/08/24 10:21	08/09/24 18:57	7440-38-2	
Barium	0.025	mg/L	0.0050	0.00047	1	08/08/24 10:21	08/09/24 18:57	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000094	1	08/08/24 10:21	08/09/24 18:57	7440-41-7	
Boron	ND	mg/L	0.040	0.012	1	08/08/24 10:21	08/09/24 18:57	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00010	1	08/08/24 10:21	08/09/24 18:57	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0019	1	08/08/24 10:21	08/09/24 18:57	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00032	1	08/08/24 10:21	08/09/24 18:57	7440-48-4	
Lead	ND	mg/L	0.0010	0.00016	1	08/08/24 10:21	08/09/24 18:57	7439-92-1	
Lithium	0.0026J	mg/L	0.030	0.0016	1	08/08/24 10:21	08/09/24 18:57	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00062	1	08/08/24 10:21	08/09/24 18:57	7439-98-7	
Selenium	ND	mg/L	0.0050	0.00096	1	08/08/24 10:21	08/09/24 18:57	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00038	1	08/08/24 10:21	08/09/24 18:57	7440-28-0	
<b>7470 Mercury</b>		Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA							
Mercury	ND	mg/L	0.00020	0.00013	1	08/20/24 08:00	08/20/24 12:23	7439-97-6	
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA							
Total Dissolved Solids	253	mg/L	25.0	25.0	1		08/09/24 11:42		
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville							
Chloride	2.9	mg/L	1.0	0.60	1		08/09/24 04:22	16887-00-6	
Fluoride	0.094J	mg/L	0.10	0.050	1		08/09/24 04:22	16984-48-8	
Sulfate	2.3	mg/L	1.0	0.50	1		08/09/24 04:22	14808-79-8	

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## ANALYTICAL RESULTS

Project: Hammond AP-4  
Pace Project No.: 92746288

Sample: HAM-HGWA-48D		Lab ID: 92746288002		Collected: 08/06/24 12:25		Received: 08/07/24 12:25		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010D ATL ICP</b>		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA							
Calcium	58.8	mg/L	1.0	0.12	1	08/09/24 11:23	08/15/24 23:29	7440-70-2	
<b>6020 MET ICPMS</b>		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA							
Antimony	ND	mg/L	0.0030	0.00054	1	08/08/24 10:21	08/09/24 19:01	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00084	1	08/08/24 10:21	08/09/24 19:01	7440-38-2	
Barium	0.11	mg/L	0.0050	0.00047	1	08/08/24 10:21	08/09/24 19:01	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000094	1	08/08/24 10:21	08/09/24 19:01	7440-41-7	
Boron	ND	mg/L	0.040	0.012	1	08/08/24 10:21	08/09/24 19:01	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00010	1	08/08/24 10:21	08/09/24 19:01	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0019	1	08/08/24 10:21	08/09/24 19:01	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00032	1	08/08/24 10:21	08/09/24 19:01	7440-48-4	
Lead	ND	mg/L	0.0010	0.00016	1	08/08/24 10:21	08/09/24 19:01	7439-92-1	
Lithium	0.0042J	mg/L	0.030	0.0016	1	08/08/24 10:21	08/09/24 19:01	7439-93-2	
Molybdenum	0.00071J	mg/L	0.010	0.00062	1	08/08/24 10:21	08/09/24 19:01	7439-98-7	
Selenium	ND	mg/L	0.0050	0.00096	1	08/08/24 10:21	08/09/24 19:01	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00038	1	08/08/24 10:21	08/09/24 19:01	7440-28-0	
<b>7470 Mercury</b>		Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA							
Mercury	ND	mg/L	0.00020	0.00013	1	08/20/24 08:00	08/20/24 12:33	7439-97-6	
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA							
Total Dissolved Solids	240	mg/L	25.0	25.0	1		08/09/24 11:43		
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville							
Chloride	2.7	mg/L	1.0	0.60	1		08/09/24 04:36	16887-00-6	
Fluoride	0.10	mg/L	0.10	0.050	1		08/09/24 04:36	16984-48-8	
Sulfate	2.7	mg/L	1.0	0.50	1		08/09/24 04:36	14808-79-8	

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## ANALYTICAL RESULTS

Project: Hammond AP-4

Pace Project No.: 92746288

Sample: HAM-HGWA-111		Lab ID: 92746288003		Collected: 08/06/24 17:05		Received: 08/07/24 12:25		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Calcium	46.2	mg/L	1.0	0.12	1	08/09/24 11:23	08/15/24 23:33	7440-70-2	
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00054	1	08/08/24 10:21	08/09/24 19:14	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00084	1	08/08/24 10:21	08/09/24 19:14	7440-38-2	
Barium	0.027	mg/L	0.0050	0.00047	1	08/08/24 10:21	08/13/24 12:39	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000094	1	08/08/24 10:21	08/13/24 12:39	7440-41-7	
Boron	ND	mg/L	0.040	0.012	1	08/08/24 10:21	08/13/24 12:39	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00010	1	08/08/24 10:21	08/09/24 19:14	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0019	1	08/08/24 10:21	08/09/24 19:14	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00032	1	08/08/24 10:21	08/09/24 19:14	7440-48-4	
Lead	ND	mg/L	0.0010	0.00016	1	08/08/24 10:21	08/09/24 19:14	7439-92-1	
Lithium	0.0019J	mg/L	0.030	0.0016	1	08/08/24 10:21	08/13/24 12:39	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00062	1	08/08/24 10:21	08/09/24 19:14	7439-98-7	
Selenium	ND	mg/L	0.0050	0.00096	1	08/08/24 10:21	08/09/24 19:14	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00038	1	08/08/24 10:21	08/13/24 12:39	7440-28-0	
<b>7470 Mercury</b>									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	08/20/24 08:00	08/20/24 12:36	7439-97-6	
<b>2540C Total Dissolved Solids</b>									
Analytical Method: SM 2540C-2015									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	163	mg/L	25.0	25.0	1		08/09/24 11:43		
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	2.8	mg/L	1.0	0.60	1		08/09/24 04:51	16887-00-6	
Fluoride	0.089J	mg/L	0.10	0.050	1		08/09/24 04:51	16984-48-8	
Sulfate	1.3	mg/L	1.0	0.50	1		08/09/24 04:51	14808-79-8	

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## ANALYTICAL RESULTS

Project: Hammond AP-4  
Pace Project No.: 92746288

Sample: HAM-HGWA-113		Lab ID: 92746288004		Collected: 08/08/24 15:48		Received: 08/09/24 14:15		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Calcium	8.4	mg/L	1.0	0.12	1	08/15/24 17:37	08/16/24 17:19	7440-70-2	
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00054	1	08/15/24 12:41	08/15/24 18:40	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00084	1	08/15/24 12:41	08/15/24 18:40	7440-38-2	
Barium	0.029	mg/L	0.0050	0.00047	1	08/15/24 12:41	08/15/24 18:40	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000094	1	08/15/24 12:41	08/15/24 18:40	7440-41-7	
Boron	ND	mg/L	0.040	0.012	1	08/15/24 12:41	08/15/24 18:40	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00010	1	08/15/24 12:41	08/15/24 18:40	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0019	1	08/15/24 12:41	08/15/24 18:40	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00032	1	08/15/24 12:41	08/15/24 18:40	7440-48-4	
Lead	ND	mg/L	0.0010	0.00016	1	08/15/24 12:41	08/15/24 18:40	7439-92-1	
Lithium	ND	mg/L	0.030	0.0016	1	08/15/24 12:41	08/15/24 18:40	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00062	1	08/15/24 12:41	08/15/24 18:40	7439-98-7	
Selenium	0.0025J	mg/L	0.0050	0.00096	1	08/15/24 12:41	08/15/24 18:40	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00038	1	08/15/24 12:41	08/15/24 18:40	7440-28-0	
<b>7470 Mercury</b>									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	08/20/24 08:00	08/20/24 12:38	7439-97-6	
<b>2540C Total Dissolved Solids</b>									
Analytical Method: SM 2540C-2015									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	85.0	mg/L	25.0	25.0	1		08/14/24 12:07		
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	1.5	mg/L	1.0	0.60	1		08/13/24 20:25	16887-00-6	
Fluoride	0.17	mg/L	0.10	0.050	1		08/13/24 20:25	16984-48-8	
Sulfate	4.6	mg/L	1.0	0.50	1		08/13/24 20:25	14808-79-8	

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## ANALYTICAL RESULTS

Project: Hammond AP-4

Pace Project No.: 92746288

Sample: HAM-HGWC-102		Lab ID: 92746288005		Collected: 08/09/24 13:27		Received: 08/12/24 12:10		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Calcium	142	mg/L	1.0	0.12	1	08/16/24 15:57	08/18/24 18:41	7440-70-2	M1
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00054	1	08/15/24 13:11	08/16/24 19:32	7440-36-0	
Arsenic	0.0011J	mg/L	0.0050	0.00084	1	08/15/24 13:11	08/16/24 19:32	7440-38-2	
Barium	0.029	mg/L	0.0050	0.00047	1	08/15/24 13:11	08/16/24 19:32	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000094	1	08/15/24 13:11	08/16/24 19:32	7440-41-7	
Boron	3.0	mg/L	0.040	0.012	1	08/15/24 13:11	08/16/24 19:32	7440-42-8	
Cadmium	0.00043J	mg/L	0.00050	0.00010	1	08/15/24 13:11	08/16/24 19:32	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0019	1	08/15/24 13:11	08/16/24 19:32	7440-47-3	
Cobalt	0.00094J	mg/L	0.0050	0.00032	1	08/15/24 13:11	08/16/24 19:32	7440-48-4	
Lead	ND	mg/L	0.0010	0.00016	1	08/15/24 13:11	08/16/24 19:32	7439-92-1	
Lithium	ND	mg/L	0.030	0.0016	1	08/15/24 13:11	08/16/24 19:32	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00062	1	08/15/24 13:11	08/16/24 19:32	7439-98-7	
Selenium	ND	mg/L	0.0050	0.00096	1	08/15/24 13:11	08/16/24 19:32	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00038	1	08/15/24 13:11	08/16/24 19:32	7440-28-0	
<b>7470 Mercury</b>									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	08/20/24 08:00	08/20/24 12:41	7439-97-6	
<b>2540C Total Dissolved Solids</b>									
Analytical Method: SM 2540C-2015									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	746	mg/L	25.0	25.0	1		08/14/24 11:36		
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	8.0	mg/L	1.0	0.60	1		08/14/24 08:38	16887-00-6	
Fluoride	0.067J	mg/L	0.10	0.050	1		08/14/24 08:38	16984-48-8	M1
Sulfate	359	mg/L	8.0	4.0	8		08/14/24 20:04	14808-79-8	M1

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## ANALYTICAL RESULTS

Project: Hammond AP-4  
Pace Project No.: 92746288

Sample: HAM-HGWC-103		Lab ID: 92746288006		Collected: 08/09/24 11:21		Received: 08/12/24 12:10		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010D ATL ICP</b>		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA							
Calcium	146	mg/L	1.0	0.12	1	08/16/24 15:57	08/18/24 18:53	7440-70-2	
<b>6020 MET ICPMS</b>		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA							
Antimony	ND	mg/L	0.0030	0.00054	1	08/15/24 13:11	08/16/24 19:36	7440-36-0	
Arsenic	0.0015J	mg/L	0.0050	0.00084	1	08/15/24 13:11	08/16/24 19:36	7440-38-2	
Barium	0.032	mg/L	0.0050	0.00047	1	08/15/24 13:11	08/16/24 19:36	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000094	1	08/15/24 13:11	08/16/24 19:36	7440-41-7	
Boron	4.5	mg/L	0.040	0.012	1	08/15/24 13:11	08/16/24 19:36	7440-42-8	
Cadmium	0.00078	mg/L	0.00050	0.00010	1	08/15/24 13:11	08/16/24 19:36	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0019	1	08/15/24 13:11	08/16/24 19:36	7440-47-3	
Cobalt	0.0020J	mg/L	0.0050	0.00032	1	08/15/24 13:11	08/16/24 19:36	7440-48-4	
Lead	ND	mg/L	0.0010	0.00016	1	08/15/24 13:11	08/16/24 19:36	7439-92-1	
Lithium	ND	mg/L	0.030	0.0016	1	08/15/24 13:11	08/16/24 19:36	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00062	1	08/15/24 13:11	08/16/24 19:36	7439-98-7	
Selenium	ND	mg/L	0.0050	0.00096	1	08/15/24 13:11	08/16/24 19:36	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00038	1	08/15/24 13:11	08/16/24 19:36	7440-28-0	
<b>7470 Mercury</b>		Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA							
Mercury	ND	mg/L	0.00020	0.00013	1	08/20/24 08:00	08/20/24 12:58	7439-97-6	
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA							
Total Dissolved Solids	809	mg/L	25.0	25.0	1		08/14/24 11:37		
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville							
Chloride	8.8	mg/L	1.0	0.60	1		08/14/24 09:21	16887-00-6	
Fluoride	0.077J	mg/L	0.10	0.050	1		08/14/24 09:21	16984-48-8	
Sulfate	393	mg/L	9.0	4.5	9		08/14/24 20:46	14808-79-8	

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## ANALYTICAL RESULTS

Project: Hammond AP-4  
Pace Project No.: 92746288

Sample: HAM-HGWA-112		Lab ID: 92746288007		Collected: 08/09/24 09:36		Received: 08/12/24 12:10		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	7.1	mg/L	1.0	0.12	1	08/16/24 15:57	08/18/24 18:56	7440-70-2	
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00054	1	08/15/24 13:11	08/16/24 19:40	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00084	1	08/15/24 13:11	08/16/24 19:40	7440-38-2	
Barium	0.026	mg/L	0.0050	0.00047	1	08/15/24 13:11	08/16/24 19:40	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000094	1	08/15/24 13:11	08/16/24 19:40	7440-41-7	
Boron	0.029J	mg/L	0.040	0.012	1	08/15/24 13:11	08/16/24 19:40	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00010	1	08/15/24 13:11	08/16/24 19:40	7440-43-9	
Chromium	0.0029J	mg/L	0.0050	0.0019	1	08/15/24 13:11	08/16/24 19:40	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00032	1	08/15/24 13:11	08/16/24 19:40	7440-48-4	
Lead	ND	mg/L	0.0010	0.00016	1	08/15/24 13:11	08/16/24 19:40	7439-92-1	
Lithium	ND	mg/L	0.030	0.0016	1	08/15/24 13:11	08/16/24 19:40	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00062	1	08/15/24 13:11	08/16/24 19:40	7439-98-7	
Selenium	ND	mg/L	0.0050	0.00096	1	08/15/24 13:11	08/16/24 19:40	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00038	1	08/15/24 13:11	08/16/24 19:40	7440-28-0	
<b>7470 Mercury</b>									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	08/20/24 08:00	08/20/24 13:00	7439-97-6	
<b>2540C Total Dissolved Solids</b>									
Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	90.0	mg/L	25.0	25.0	1		08/14/24 11:37		
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	5.2	mg/L	1.0	0.60	1		08/14/24 09:36	16887-00-6	
Fluoride	0.075J	mg/L	0.10	0.050	1		08/14/24 09:36	16984-48-8	
Sulfate	0.76J	mg/L	1.0	0.50	1		08/14/24 09:36	14808-79-8	

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## ANALYTICAL RESULTS

Project: Hammond AP-4  
Pace Project No.: 92746288

Sample: HAM-HGWC-118		Lab ID: 92746288008		Collected: 08/09/24 15:38		Received: 08/12/24 12:10		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Calcium	85.2	mg/L	1.0	0.12	1	08/16/24 15:57	08/18/24 19:00	7440-70-2	
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00054	1	08/15/24 13:11	08/16/24 19:43	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00084	1	08/15/24 13:11	08/16/24 19:43	7440-38-2	
Barium	0.037	mg/L	0.0050	0.00047	1	08/15/24 13:11	08/16/24 19:43	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000094	1	08/15/24 13:11	08/16/24 19:43	7440-41-7	
Boron	0.59	mg/L	0.040	0.012	1	08/15/24 13:11	08/16/24 19:43	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00010	1	08/15/24 13:11	08/16/24 19:43	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0019	1	08/15/24 13:11	08/16/24 19:43	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00032	1	08/15/24 13:11	08/16/24 19:43	7440-48-4	
Lead	ND	mg/L	0.0010	0.00016	1	08/15/24 13:11	08/16/24 19:43	7439-92-1	
Lithium	0.0019J	mg/L	0.030	0.0016	1	08/15/24 13:11	08/16/24 19:43	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00062	1	08/15/24 13:11	08/16/24 19:43	7439-98-7	
Selenium	ND	mg/L	0.0050	0.00096	1	08/15/24 13:11	08/16/24 19:43	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00038	1	08/15/24 13:11	08/16/24 19:43	7440-28-0	
<b>7470 Mercury</b>									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	08/20/24 08:00	08/20/24 13:03	7439-97-6	
<b>2540C Total Dissolved Solids</b>									
Analytical Method: SM 2540C-2015									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	338	mg/L	25.0	25.0	1		08/14/24 11:37		
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	4.2	mg/L	1.0	0.60	1		08/14/24 09:50	16887-00-6	
Fluoride	0.11	mg/L	0.10	0.050	1		08/14/24 09:50	16984-48-8	
Sulfate	66.5	mg/L	1.0	0.50	1		08/14/24 09:50	14808-79-8	

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## ANALYTICAL RESULTS

Project: Hammond AP-4

Pace Project No.: 92746288

Sample: HAM-AP4-FD-02		Lab ID: 92746288009		Collected: 08/09/24 00:00		Received: 08/12/24 12:10		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010D ATL ICP</b>		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA							
Calcium	84.7	mg/L	1.0	0.12	1	08/16/24 15:57	08/18/24 19:04	7440-70-2	
<b>6020 MET ICPMS</b>		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA							
Antimony	ND	mg/L	0.0030	0.00054	1	08/15/24 13:30	08/19/24 15:42	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00084	1	08/15/24 13:30	08/19/24 15:42	7440-38-2	
Barium	0.034	mg/L	0.0050	0.00047	1	08/15/24 13:30	08/19/24 15:42	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000094	1	08/15/24 13:30	08/19/24 15:42	7440-41-7	
Boron	0.59	mg/L	0.040	0.012	1	08/15/24 13:30	08/19/24 15:42	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00010	1	08/15/24 13:30	08/19/24 15:42	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0019	1	08/15/24 13:30	08/19/24 15:42	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00032	1	08/15/24 13:30	08/19/24 15:42	7440-48-4	
Lead	ND	mg/L	0.0010	0.00016	1	08/15/24 13:30	08/19/24 15:42	7439-92-1	
Lithium	0.0021J	mg/L	0.030	0.0016	1	08/15/24 13:30	08/19/24 15:42	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00062	1	08/15/24 13:30	08/19/24 15:42	7439-98-7	
Selenium	ND	mg/L	0.0050	0.00096	1	08/15/24 13:30	08/19/24 15:42	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00038	1	08/15/24 13:30	08/19/24 15:42	7440-28-0	
<b>7470 Mercury</b>		Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA							
Mercury	ND	mg/L	0.00020	0.00013	1	08/20/24 08:00	08/20/24 13:06	7439-97-6	
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA							
Total Dissolved Solids	330	mg/L	25.0	25.0	1		08/14/24 11:38		
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville							
Chloride	4.2	mg/L	1.0	0.60	1		08/14/24 10:47	16887-00-6	
Fluoride	0.11	mg/L	0.10	0.050	1		08/14/24 10:47	16984-48-8	
Sulfate	67.2	mg/L	1.0	0.50	1		08/14/24 10:47	14808-79-8	

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## ANALYTICAL RESULTS

Project: Hammond AP-4  
Pace Project No.: 92746288

Sample: HAM-AP4-EB-01		Lab ID: 92746288010		Collected: 08/09/24 17:00		Received: 08/12/24 12:10		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010D ATL ICP</b>		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA							
Calcium	ND	mg/L	1.0	0.12	1	08/16/24 15:57	08/18/24 19:08	7440-70-2	
<b>6020 MET ICPMS</b>		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA							
Antimony	0.00086J	mg/L	0.0030	0.00054	1	08/15/24 13:30	08/19/24 15:57	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00084	1	08/15/24 13:30	08/19/24 15:57	7440-38-2	
Barium	ND	mg/L	0.0050	0.00047	1	08/15/24 13:30	08/19/24 15:57	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000094	1	08/15/24 13:30	08/19/24 15:57	7440-41-7	
Boron	ND	mg/L	0.040	0.012	1	08/15/24 13:30	08/19/24 15:57	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00010	1	08/15/24 13:30	08/19/24 15:57	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0019	1	08/15/24 13:30	08/19/24 15:57	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00032	1	08/15/24 13:30	08/19/24 15:57	7440-48-4	
Lead	ND	mg/L	0.0010	0.00016	1	08/15/24 13:30	08/19/24 15:57	7439-92-1	
Lithium	ND	mg/L	0.030	0.0016	1	08/15/24 13:30	08/19/24 15:57	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00062	1	08/15/24 13:30	08/19/24 15:57	7439-98-7	
Selenium	ND	mg/L	0.0050	0.00096	1	08/15/24 13:30	08/19/24 15:57	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00038	1	08/15/24 13:30	08/19/24 15:57	7440-28-0	
<b>7470 Mercury</b>		Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA							
Mercury	ND	mg/L	0.00020	0.00013	1	08/20/24 08:00	08/20/24 13:08	7439-97-6	
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA							
Total Dissolved Solids	107	mg/L	25.0	25.0	1		08/14/24 11:38		
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville							
Chloride	ND	mg/L	1.0	0.60	1		08/14/24 00:07	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		08/14/24 00:07	16984-48-8	
Sulfate	ND	mg/L	1.0	0.50	1		08/14/24 00:07	14808-79-8	

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## ANALYTICAL RESULTS

Project: Hammond AP-4

Pace Project No.: 92746288

Sample: HAM-AP4-FB-01		Lab ID: 92746288011		Collected: 08/09/24 16:55		Received: 08/12/24 12:10		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010D ATL ICP</b>		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA							
Calcium	ND	mg/L	1.0	0.12	1	08/16/24 15:57	08/18/24 19:18	7440-70-2	
<b>6020 MET ICPMS</b>		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA							
Antimony	ND	mg/L	0.0030	0.00054	1	08/15/24 13:30	08/19/24 16:01	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00084	1	08/15/24 13:30	08/19/24 16:01	7440-38-2	
Barium	ND	mg/L	0.0050	0.00047	1	08/15/24 13:30	08/19/24 16:01	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000094	1	08/15/24 13:30	08/19/24 16:01	7440-41-7	
Boron	ND	mg/L	0.040	0.012	1	08/15/24 13:30	08/19/24 16:01	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00010	1	08/15/24 13:30	08/19/24 16:01	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0019	1	08/15/24 13:30	08/19/24 16:01	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00032	1	08/15/24 13:30	08/19/24 16:01	7440-48-4	
Lead	ND	mg/L	0.0010	0.00016	1	08/15/24 13:30	08/19/24 16:01	7439-92-1	
Lithium	ND	mg/L	0.030	0.0016	1	08/15/24 13:30	08/19/24 16:01	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00062	1	08/15/24 13:30	08/19/24 16:01	7439-98-7	
Selenium	ND	mg/L	0.0050	0.00096	1	08/15/24 13:30	08/19/24 16:01	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00038	1	08/15/24 13:30	08/19/24 16:01	7440-28-0	
<b>7470 Mercury</b>		Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA							
Mercury	ND	mg/L	0.00020	0.00013	1	08/20/24 08:00	08/20/24 13:11	7439-97-6	
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA							
Total Dissolved Solids	59.0	mg/L	25.0	25.0	1		08/14/24 11:38		
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville							
Chloride	ND	mg/L	1.0	0.60	1		08/14/24 00:21	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		08/14/24 00:21	16984-48-8	
Sulfate	ND	mg/L	1.0	0.50	1		08/14/24 00:21	14808-79-8	

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## ANALYTICAL RESULTS

Project: Hammond AP-4  
Pace Project No.: 92746288

Sample: HAM-HGWC-101		Lab ID: 92746288012		Collected: 08/10/24 10:32		Received: 08/12/24 12:10		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	24.2	mg/L	1.0	0.12	1	08/16/24 15:57	08/18/24 19:22	7440-70-2	
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00054	1	08/15/24 13:30	08/19/24 16:04	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00084	1	08/15/24 13:30	08/19/24 16:04	7440-38-2	
Barium	0.033	mg/L	0.0050	0.00047	1	08/15/24 13:30	08/19/24 16:04	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000094	1	08/15/24 13:30	08/19/24 16:04	7440-41-7	
Boron	0.15	mg/L	0.040	0.012	1	08/15/24 13:30	08/19/24 16:04	7440-42-8	
Cadmium	0.00014J	mg/L	0.00050	0.00010	1	08/15/24 13:30	08/19/24 16:04	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0019	1	08/15/24 13:30	08/19/24 16:04	7440-47-3	
Cobalt	0.0025J	mg/L	0.0050	0.00032	1	08/15/24 13:30	08/19/24 16:04	7440-48-4	
Lead	ND	mg/L	0.0010	0.00016	1	08/15/24 13:30	08/19/24 16:04	7439-92-1	
Lithium	ND	mg/L	0.030	0.0016	1	08/15/24 13:30	08/19/24 16:04	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00062	1	08/15/24 13:30	08/19/24 16:04	7439-98-7	
Selenium	ND	mg/L	0.0050	0.00096	1	08/15/24 13:30	08/19/24 16:04	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00038	1	08/15/24 13:30	08/19/24 16:04	7440-28-0	
<b>7470 Mercury</b>									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	08/20/24 08:00	08/20/24 13:13	7439-97-6	
<b>2540C Total Dissolved Solids</b>									
Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	263	mg/L	25.0	25.0	1		08/15/24 10:35		
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	5.4	mg/L	1.0	0.60	1		08/14/24 11:02	16887-00-6	
Fluoride	0.068J	mg/L	0.10	0.050	1		08/14/24 11:02	16984-48-8	
Sulfate	104	mg/L	2.0	1.0	2		08/14/24 21:01	14808-79-8	

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## ANALYTICAL RESULTS

Project: Hammond AP-4

Pace Project No.: 92746288

Sample: HAM-HGWC-105		Lab ID: 92746288013		Collected: 08/10/24 11:44		Received: 08/12/24 12:10		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Calcium	156	mg/L	1.0	0.12	1	08/16/24 15:57	08/18/24 19:26	7440-70-2	
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00054	1	08/15/24 13:30	08/19/24 16:08	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00084	1	08/15/24 13:30	08/19/24 16:08	7440-38-2	
Barium	0.083	mg/L	0.0050	0.00047	1	08/15/24 13:30	08/19/24 16:08	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000094	1	08/15/24 13:30	08/19/24 16:08	7440-41-7	
Boron	1.4	mg/L	0.040	0.012	1	08/15/24 13:30	08/19/24 16:08	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00010	1	08/15/24 13:30	08/19/24 16:08	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0019	1	08/15/24 13:30	08/19/24 16:08	7440-47-3	
Cobalt	0.00052J	mg/L	0.0050	0.00032	1	08/15/24 13:30	08/19/24 16:08	7440-48-4	
Lead	ND	mg/L	0.0010	0.00016	1	08/15/24 13:30	08/19/24 16:08	7439-92-1	
Lithium	0.0047J	mg/L	0.030	0.0016	1	08/15/24 13:30	08/19/24 16:08	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00062	1	08/15/24 13:30	08/19/24 16:08	7439-98-7	
Selenium	ND	mg/L	0.0050	0.00096	1	08/15/24 13:30	08/19/24 16:08	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00038	1	08/15/24 13:30	08/19/24 16:08	7440-28-0	
<b>7470 Mercury</b>									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	08/20/24 08:00	08/20/24 13:16	7439-97-6	
<b>2540C Total Dissolved Solids</b>									
Analytical Method: SM 2540C-2015									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	658	mg/L	25.0	25.0	1		08/15/24 10:35		
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	7.7	mg/L	1.0	0.60	1		08/14/24 11:16	16887-00-6	
Fluoride	0.066J	mg/L	0.10	0.050	1		08/14/24 11:16	16984-48-8	
Sulfate	258	mg/L	6.0	3.0	6		08/14/24 21:15	14808-79-8	

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## ANALYTICAL RESULTS

Project: Hammond AP-4  
Pace Project No.: 92746288

Sample: HAM-HGWC-107      Lab ID: 92746288014      Collected: 08/10/24 13:17      Received: 08/12/24 12:10      Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010D ATL ICP</b> Analytical Method: EPA 6010D      Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	61.4	mg/L	1.0	0.12	1	08/16/24 15:57	08/18/24 19:29	7440-70-2	
<b>6020 MET ICPMS</b> Analytical Method: EPA 6020B      Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00054	1	08/15/24 13:30	08/19/24 16:34	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00084	1	08/15/24 13:30	08/19/24 16:34	7440-38-2	
Barium	0.033	mg/L	0.0050	0.00047	1	08/15/24 13:30	08/19/24 16:34	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000094	1	08/15/24 13:30	08/19/24 16:34	7440-41-7	
Boron	0.84	mg/L	0.040	0.012	1	08/15/24 13:30	08/19/24 16:34	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00010	1	08/15/24 13:30	08/19/24 16:34	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0019	1	08/15/24 13:30	08/19/24 16:34	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00032	1	08/15/24 13:30	08/19/24 16:34	7440-48-4	
Lead	ND	mg/L	0.0010	0.00016	1	08/15/24 13:30	08/19/24 16:34	7439-92-1	
Lithium	ND	mg/L	0.030	0.0016	1	08/15/24 13:30	08/19/24 16:34	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00062	1	08/15/24 13:30	08/19/24 16:34	7439-98-7	
Selenium	ND	mg/L	0.0050	0.00096	1	08/15/24 13:30	08/19/24 16:34	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00038	1	08/15/24 13:30	08/19/24 16:34	7440-28-0	
<b>7470 Mercury</b> Analytical Method: EPA 7470A      Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	08/20/24 08:00	08/20/24 13:19	7439-97-6	
<b>2540C Total Dissolved Solids</b> Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	299	mg/L	25.0	25.0	1		08/15/24 10:36		
<b>300.0 IC Anions 28 Days</b> Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	3.1	mg/L	1.0	0.60	1		08/14/24 11:30	16887-00-6	
Fluoride	0.069J	mg/L	0.10	0.050	1		08/14/24 11:30	16984-48-8	
Sulfate	114	mg/L	3.0	1.5	3		08/14/24 21:29	14808-79-8	

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## ANALYTICAL RESULTS

Project: Hammond AP-4

Pace Project No.: 92746288

Sample: HAM-HGWC-109		Lab ID: 92746288015		Collected: 08/10/24 11:10		Received: 08/12/24 12:10		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010D ATL ICP</b>		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA							
Calcium	53.7	mg/L	1.0	0.12	1	08/16/24 15:57	08/18/24 19:33	7440-70-2	
<b>6020 MET ICPMS</b>		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA							
Antimony	ND	mg/L	0.0030	0.00054	1	08/15/24 13:30	08/19/24 16:38	7440-36-0	
Arsenic	0.00091J	mg/L	0.0050	0.00084	1	08/15/24 13:30	08/19/24 16:38	7440-38-2	
Barium	0.076	mg/L	0.0050	0.00047	1	08/15/24 13:30	08/19/24 16:38	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000094	1	08/15/24 13:30	08/19/24 16:38	7440-41-7	
Boron	0.20	mg/L	0.040	0.012	1	08/15/24 13:30	08/19/24 16:38	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00010	1	08/15/24 13:30	08/19/24 16:38	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0019	1	08/15/24 13:30	08/19/24 16:38	7440-47-3	
Cobalt	0.00050J	mg/L	0.0050	0.00032	1	08/15/24 13:30	08/19/24 16:38	7440-48-4	
Lead	ND	mg/L	0.0010	0.00016	1	08/15/24 13:30	08/19/24 16:38	7439-92-1	
Lithium	ND	mg/L	0.030	0.0016	1	08/15/24 13:30	08/19/24 16:38	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00062	1	08/15/24 13:30	08/19/24 16:38	7439-98-7	
Selenium	ND	mg/L	0.0050	0.00096	1	08/15/24 13:30	08/19/24 16:38	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00038	1	08/15/24 13:30	08/19/24 16:38	7440-28-0	
<b>7470 Mercury</b>		Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA							
Mercury	ND	mg/L	0.00020	0.00013	1	08/20/24 08:00	08/20/24 13:21	7439-97-6	
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA							
Total Dissolved Solids	227	mg/L	25.0	25.0	1		08/15/24 10:36		
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville							
Chloride	4.0	mg/L	1.0	0.60	1		08/14/24 11:45	16887-00-6	
Fluoride	0.13	mg/L	0.10	0.050	1		08/14/24 11:45	16984-48-8	
Sulfate	19.7	mg/L	1.0	0.50	1		08/14/24 11:45	14808-79-8	

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## ANALYTICAL RESULTS

Project: Hammond AP-4

Pace Project No.: 92746288

Sample: HAM-HGWC-117A		Lab ID: 92746288016		Collected: 08/10/24 14:25		Received: 08/12/24 12:10		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Calcium	64.5	mg/L	1.0	0.12	1	08/16/24 15:57	08/18/24 19:37	7440-70-2	
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00054	1	08/15/24 13:30	08/19/24 16:42	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00084	1	08/15/24 13:30	08/19/24 16:42	7440-38-2	
Barium	0.042	mg/L	0.0050	0.00047	1	08/15/24 13:30	08/19/24 16:42	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000094	1	08/15/24 13:30	08/19/24 16:42	7440-41-7	
Boron	0.28	mg/L	0.040	0.012	1	08/15/24 13:30	08/19/24 16:42	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00010	1	08/15/24 13:30	08/19/24 16:42	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0019	1	08/15/24 13:30	08/19/24 16:42	7440-47-3	
Cobalt	0.00081J	mg/L	0.0050	0.00032	1	08/15/24 13:30	08/19/24 16:42	7440-48-4	
Lead	ND	mg/L	0.0010	0.00016	1	08/15/24 13:30	08/19/24 16:42	7439-92-1	
Lithium	0.0041J	mg/L	0.030	0.0016	1	08/15/24 13:30	08/19/24 16:42	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00062	1	08/15/24 13:30	08/19/24 16:42	7439-98-7	
Selenium	ND	mg/L	0.0050	0.00096	1	08/15/24 13:30	08/19/24 16:42	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00038	1	08/15/24 13:30	08/19/24 16:42	7440-28-0	
<b>7470 Mercury</b>									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	08/20/24 08:00	08/20/24 13:29	7439-97-6	
<b>2540C Total Dissolved Solids</b>									
Analytical Method: SM 2540C-2015									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	284	mg/L	25.0	25.0	1		08/15/24 10:36		
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	4.5	mg/L	1.0	0.60	1		08/14/24 12:28	16887-00-6	
Fluoride	0.10	mg/L	0.10	0.050	1		08/14/24 12:28	16984-48-8	
Sulfate	72.6	mg/L	1.0	0.50	1		08/14/24 12:28	14808-79-8	

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## ANALYTICAL RESULTS

Project: Hammond AP-4

Pace Project No.: 92746288

Sample: HAM-AP4-FD-01		Lab ID: 92746288017		Collected: 08/10/24 00:00		Received: 08/12/24 12:10		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Calcium	60.3	mg/L	1.0	0.12	1	08/16/24 15:57	08/18/24 19:40	7440-70-2	
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00054	1	08/15/24 13:30	08/19/24 16:45	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00084	1	08/15/24 13:30	08/19/24 16:45	7440-38-2	
Barium	0.032	mg/L	0.0050	0.00047	1	08/15/24 13:30	08/19/24 16:45	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000094	1	08/15/24 13:30	08/19/24 16:45	7440-41-7	
Boron	0.82	mg/L	0.040	0.012	1	08/15/24 13:30	08/19/24 16:45	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00010	1	08/15/24 13:30	08/19/24 16:45	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0019	1	08/15/24 13:30	08/19/24 16:45	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00032	1	08/15/24 13:30	08/19/24 16:45	7440-48-4	
Lead	ND	mg/L	0.0010	0.00016	1	08/15/24 13:30	08/19/24 16:45	7439-92-1	
Lithium	ND	mg/L	0.030	0.0016	1	08/15/24 13:30	08/19/24 16:45	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00062	1	08/15/24 13:30	08/19/24 16:45	7439-98-7	
Selenium	ND	mg/L	0.0050	0.00096	1	08/15/24 13:30	08/19/24 16:45	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00038	1	08/15/24 13:30	08/19/24 16:45	7440-28-0	
<b>7470 Mercury</b>									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	08/20/24 08:00	08/20/24 13:32	7439-97-6	
<b>2540C Total Dissolved Solids</b>									
Analytical Method: SM 2540C-2015									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	321	mg/L	25.0	25.0	1		08/15/24 10:36		
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	3.1	mg/L	1.0	0.60	1		08/14/24 12:42	16887-00-6	
Fluoride	0.071J	mg/L	0.10	0.050	1		08/14/24 12:42	16984-48-8	
Sulfate	115	mg/L	3.0	1.5	3		08/14/24 21:44	14808-79-8	

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## ANALYTICAL RESULTS

Project: Hammond AP-4

Pace Project No.: 92746288

Sample: HAM-AP4-EB-02		Lab ID: 92746288018		Collected: 08/10/24 12:35		Received: 08/12/24 12:10		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010D ATL ICP</b>		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA							
Calcium	ND	mg/L	1.0	0.12	1	08/16/24 15:57	08/18/24 19:44	7440-70-2	
<b>6020 MET ICPMS</b>		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA							
Antimony	ND	mg/L	0.0030	0.00054	1	08/15/24 13:30	08/19/24 16:49	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00084	1	08/15/24 13:30	08/19/24 16:49	7440-38-2	
Barium	ND	mg/L	0.0050	0.00047	1	08/15/24 13:30	08/19/24 16:49	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000094	1	08/15/24 13:30	08/19/24 16:49	7440-41-7	
Boron	ND	mg/L	0.040	0.012	1	08/15/24 13:30	08/19/24 16:49	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00010	1	08/15/24 13:30	08/19/24 16:49	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0019	1	08/15/24 13:30	08/19/24 16:49	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00032	1	08/15/24 13:30	08/19/24 16:49	7440-48-4	
Lead	ND	mg/L	0.0010	0.00016	1	08/15/24 13:30	08/19/24 16:49	7439-92-1	
Lithium	ND	mg/L	0.030	0.0016	1	08/15/24 13:30	08/19/24 16:49	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00062	1	08/15/24 13:30	08/19/24 16:49	7439-98-7	
Selenium	ND	mg/L	0.0050	0.00096	1	08/15/24 13:30	08/19/24 16:49	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00038	1	08/15/24 13:30	08/19/24 16:49	7440-28-0	
<b>7470 Mercury</b>		Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA							
Mercury	ND	mg/L	0.00020	0.00013	1	08/20/24 08:00	08/20/24 13:34	7439-97-6	
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA							
Total Dissolved Solids	28.0	mg/L	25.0	25.0	1		08/15/24 10:36		
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville							
Chloride	ND	mg/L	1.0	0.60	1		08/14/24 01:18	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		08/14/24 01:18	16984-48-8	
Sulfate	ND	mg/L	1.0	0.50	1		08/14/24 01:18	14808-79-8	

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## ANALYTICAL RESULTS

Project: Hammond AP-4

Pace Project No.: 92746288

Sample: HAM-AP4-FB-02		Lab ID: 92746288019		Collected: 08/10/24 12:30		Received: 08/12/24 12:10		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010D ATL ICP</b>		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA							
Calcium	ND	mg/L	1.0	0.12	1	08/16/24 15:57	08/18/24 19:48	7440-70-2	
<b>6020 MET ICPMS</b>		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA							
Antimony	ND	mg/L	0.0030	0.00054	1	08/15/24 13:30	08/19/24 16:53	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00084	1	08/15/24 13:30	08/19/24 16:53	7440-38-2	
Barium	ND	mg/L	0.0050	0.00047	1	08/15/24 13:30	08/19/24 16:53	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000094	1	08/15/24 13:30	08/19/24 16:53	7440-41-7	
Boron	ND	mg/L	0.040	0.012	1	08/15/24 13:30	08/19/24 16:53	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00010	1	08/15/24 13:30	08/19/24 16:53	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0019	1	08/15/24 13:30	08/19/24 16:53	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00032	1	08/15/24 13:30	08/19/24 16:53	7440-48-4	
Lead	ND	mg/L	0.0010	0.00016	1	08/15/24 13:30	08/19/24 16:53	7439-92-1	
Lithium	ND	mg/L	0.030	0.0016	1	08/15/24 13:30	08/19/24 16:53	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00062	1	08/15/24 13:30	08/19/24 16:53	7439-98-7	
Selenium	ND	mg/L	0.0050	0.00096	1	08/15/24 13:30	08/19/24 16:53	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00038	1	08/15/24 13:30	08/19/24 16:53	7440-28-0	
<b>7470 Mercury</b>		Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA							
Mercury	ND	mg/L	0.00020	0.00013	1	08/20/24 08:00	08/20/24 13:37	7439-97-6	
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA							
Total Dissolved Solids	ND	mg/L	25.0	25.0	1		08/15/24 10:37		
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville							
Chloride	ND	mg/L	1.0	0.60	1		08/14/24 01:33	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		08/14/24 01:33	16984-48-8	
Sulfate	ND	mg/L	1.0	0.50	1		08/14/24 01:33	14808-79-8	

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## QUALITY CONTROL DATA

Project: Hammond AP-4

Pace Project No.: 92746288

QC Batch: 874538

Analysis Method: EPA 6010D

QC Batch Method: EPA 3010A

Analysis Description: 6010D ATL

Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92746288001, 92746288002, 92746288003

METHOD BLANK: 4505177

Matrix: Water

Associated Lab Samples: 92746288001, 92746288002, 92746288003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	0.12	08/15/24 21:56	

LABORATORY CONTROL SAMPLE: 4505178

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	mg/L	1	1.1	106	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4505179 4505180

Parameter	Units	92746435001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Calcium	mg/L	211000 ug/L	1	1	207	205	-381	-564	75-125	1	20	M1

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## QUALITY CONTROL DATA

Project: Hammond AP-4

Pace Project No.: 92746288

QC Batch: 875958

Analysis Method: EPA 6010D

QC Batch Method: EPA 3010A

Analysis Description: 6010D ATL

Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92746288004

METHOD BLANK: 4512108

Matrix: Water

Associated Lab Samples: 92746288004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	0.12	08/16/24 15:49	

LABORATORY CONTROL SAMPLE: 4512109

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	mg/L	1	0.98J	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4512110 4512111

Parameter	Units	92746891009 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Calcium	mg/L	124	1	1	127	119	231	-563	75-125	6	20	M1

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## QUALITY CONTROL DATA

Project: Hammond AP-4

Pace Project No.: 92746288

QC Batch: 876300

Analysis Method: EPA 6010D

QC Batch Method: EPA 3010A

Analysis Description: 6010D ATL

Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92746288005, 92746288006, 92746288007, 92746288008, 92746288009, 92746288010, 92746288011, 92746288012, 92746288013, 92746288014, 92746288015, 92746288016, 92746288017, 92746288018, 92746288019

METHOD BLANK: 4514148

Matrix: Water

Associated Lab Samples: 92746288005, 92746288006, 92746288007, 92746288008, 92746288009, 92746288010, 92746288011, 92746288012, 92746288013, 92746288014, 92746288015, 92746288016, 92746288017, 92746288018, 92746288019

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	0.12	08/18/24 18:19	

LABORATORY CONTROL SAMPLE: 4514149

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	mg/L	1	1.0	105	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4514150 4514151

Parameter	Units	92746288005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Calcium	mg/L	142	1	1	140	148	-213	560	75-125	5	20	M1

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## QUALITY CONTROL DATA

Project: Hammond AP-4  
Pace Project No.: 92746288

QC Batch: 874205 Analysis Method: EPA 6020B  
QC Batch Method: EPA 3005A Analysis Description: 6020 MET  
Laboratory: Pace Analytical Services - Peachtree Corners, GA  
Associated Lab Samples: 92746288001, 92746288002, 92746288003

METHOD BLANK: 4503459 Matrix: Water  
Associated Lab Samples: 92746288001, 92746288002, 92746288003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00054	08/09/24 18:24	
Arsenic	mg/L	ND	0.0050	0.00084	08/09/24 18:24	
Barium	mg/L	ND	0.0050	0.00047	08/09/24 18:24	
Beryllium	mg/L	ND	0.00050	0.000094	08/09/24 18:24	
Boron	mg/L	ND	0.040	0.012	08/09/24 18:24	
Cadmium	mg/L	ND	0.00050	0.00010	08/09/24 18:24	
Chromium	mg/L	ND	0.0050	0.0019	08/09/24 18:24	
Cobalt	mg/L	ND	0.0050	0.00032	08/09/24 18:24	
Lead	mg/L	ND	0.0010	0.00016	08/09/24 18:24	
Lithium	mg/L	ND	0.030	0.0016	08/09/24 18:24	
Molybdenum	mg/L	ND	0.010	0.00062	08/09/24 18:24	
Selenium	mg/L	ND	0.0050	0.00096	08/09/24 18:24	
Thallium	mg/L	ND	0.0010	0.00038	08/09/24 18:24	

LABORATORY CONTROL SAMPLE: 4503460

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.094	94	80-120	
Arsenic	mg/L	0.1	0.10	104	80-120	
Barium	mg/L	0.1	0.093	93	80-120	
Beryllium	mg/L	0.1	0.11	106	80-120	
Boron	mg/L	1	1.1	105	80-120	
Cadmium	mg/L	0.1	0.10	100	80-120	
Chromium	mg/L	0.1	0.096	96	80-120	
Cobalt	mg/L	0.1	0.099	99	80-120	
Lead	mg/L	0.1	0.096	96	80-120	
Lithium	mg/L	0.1	0.10	104	80-120	
Molybdenum	mg/L	0.1	0.093	93	80-120	
Selenium	mg/L	0.1	0.10	103	80-120	
Thallium	mg/L	0.1	0.087	87	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4503461 4503462

Parameter	Units	92746286001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	mg/L	ND	0.1	0.1	0.099	0.096	99	96	75-125	2	20	
Arsenic	mg/L	ND	0.1	0.1	0.10	0.10	102	103	75-125	1	20	

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## QUALITY CONTROL DATA

Project: Hammond AP-4

Pace Project No.: 92746288

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4503461 4503462													
Parameter	Units	92746286001	MS	MSD	MS	MSD	MS	MSD	% Rec	Limits	RPD	Max	Qual
		Result	Spike	Spike									
Barium	mg/L	0.50	0.1	0.1	0.62	0.63	120	128	75-125		1	20	M1
Beryllium	mg/L	ND	0.1	0.1	0.099	0.096	99	96	75-125		3	20	
Boron	mg/L	0.16	1	1	1.2	1.1	100	99	75-125		1	20	
Cadmium	mg/L	ND	0.1	0.1	0.10	0.10	100	100	75-125		0	20	
Chromium	mg/L	ND	0.1	0.1	0.10	0.099	100	99	75-125		1	20	
Cobalt	mg/L	ND	0.1	0.1	0.10	0.10	101	101	75-125		0	20	
Lead	mg/L	ND	0.1	0.1	0.093	0.093	93	93	75-125		0	20	
Lithium	mg/L	0.0048J	0.1	0.1	0.10	0.11	98	100	75-125		2	20	
Molybdenum	mg/L	ND	0.1	0.1	0.10	0.098	99	97	75-125		2	20	
Selenium	mg/L	ND	0.1	0.1	0.099	0.099	99	99	75-125		0	20	
Thallium	mg/L	ND	0.1	0.1	0.088	0.086	88	86	75-125		2	20	

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## QUALITY CONTROL DATA

Project: Hammond AP-4

Pace Project No.: 92746288

QC Batch: 875890

Analysis Method: EPA 6020B

QC Batch Method: EPA 3005A

Analysis Description: 6020 MET

Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92746288004

METHOD BLANK: 4511665

Matrix: Water

Associated Lab Samples: 92746288004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00054	08/15/24 17:33	
Arsenic	mg/L	ND	0.0050	0.00084	08/15/24 17:33	
Barium	mg/L	ND	0.0050	0.00047	08/15/24 17:33	
Beryllium	mg/L	ND	0.00050	0.000094	08/15/24 17:33	
Boron	mg/L	ND	0.040	0.012	08/15/24 17:33	
Cadmium	mg/L	ND	0.00050	0.00010	08/15/24 17:33	
Chromium	mg/L	ND	0.0050	0.0019	08/15/24 17:33	
Cobalt	mg/L	ND	0.0050	0.00032	08/15/24 17:33	
Lead	mg/L	ND	0.0010	0.00016	08/15/24 17:33	
Lithium	mg/L	ND	0.030	0.0016	08/15/24 17:33	
Molybdenum	mg/L	ND	0.010	0.00062	08/15/24 17:33	
Selenium	mg/L	ND	0.0050	0.00096	08/15/24 17:33	
Thallium	mg/L	ND	0.0010	0.00038	08/15/24 17:33	

LABORATORY CONTROL SAMPLE: 4511666

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.10	102	80-120	
Arsenic	mg/L	0.1	0.098	98	80-120	
Barium	mg/L	0.1	0.095	95	80-120	
Beryllium	mg/L	0.1	0.10	100	80-120	
Boron	mg/L	1	0.95	95	80-120	
Cadmium	mg/L	0.1	0.10	100	80-120	
Chromium	mg/L	0.1	0.099	99	80-120	
Cobalt	mg/L	0.1	0.099	99	80-120	
Lead	mg/L	0.1	0.10	102	80-120	
Lithium	mg/L	0.1	0.10	103	80-120	
Molybdenum	mg/L	0.1	0.10	100	80-120	
Selenium	mg/L	0.1	0.099	99	80-120	
Thallium	mg/L	0.1	0.10	102	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4511667

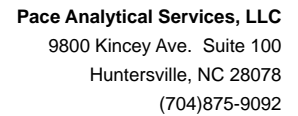
4511668

Parameter	Units	92746891014 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	mg/L	ND	0.1	0.1	0.10	0.10	100	100	75-125	0	20	
Arsenic	mg/L	ND	0.1	0.1	0.098	0.10	98	100	75-125	2	20	

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Project: Hammond AP-4  
Pace Project No.: 92746288

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## QUALITY CONTROL DATA

Project: Hammond AP-4  
Pace Project No.: 92746288

QC Batch: 875891 Analysis Method: EPA 6020B  
QC Batch Method: EPA 3005A Analysis Description: 6020 MET  
Laboratory: Pace Analytical Services - Peachtree Corners, GA  
Associated Lab Samples: 92746288005, 92746288006, 92746288007, 92746288008

METHOD BLANK: 4511669 Matrix: Water  
Associated Lab Samples: 92746288005, 92746288006, 92746288007, 92746288008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00054	08/16/24 18:00	
Arsenic	mg/L	ND	0.0050	0.00084	08/16/24 18:00	
Barium	mg/L	ND	0.0050	0.00047	08/16/24 18:00	
Beryllium	mg/L	ND	0.00050	0.000094	08/16/24 18:00	
Boron	mg/L	ND	0.040	0.012	08/16/24 18:00	
Cadmium	mg/L	ND	0.00050	0.00010	08/16/24 18:00	
Chromium	mg/L	ND	0.0050	0.0019	08/16/24 18:00	
Cobalt	mg/L	ND	0.0050	0.00032	08/16/24 18:00	
Lead	mg/L	ND	0.0010	0.00016	08/16/24 18:00	
Lithium	mg/L	ND	0.030	0.0016	08/16/24 18:00	
Molybdenum	mg/L	ND	0.010	0.00062	08/16/24 18:00	
Selenium	mg/L	ND	0.0050	0.00096	08/16/24 18:00	
Thallium	mg/L	ND	0.0010	0.00038	08/16/24 18:00	

LABORATORY CONTROL SAMPLE: 4511670

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.099	99	80-120	
Arsenic	mg/L	0.1	0.096	96	80-120	
Barium	mg/L	0.1	0.095	95	80-120	
Beryllium	mg/L	0.1	0.099	99	80-120	
Boron	mg/L	1	0.94	94	80-120	
Cadmium	mg/L	0.1	0.098	98	80-120	
Chromium	mg/L	0.1	0.099	99	80-120	
Cobalt	mg/L	0.1	0.099	99	80-120	
Lead	mg/L	0.1	0.097	97	80-120	
Lithium	mg/L	0.1	0.10	100	80-120	
Molybdenum	mg/L	0.1	0.10	100	80-120	
Selenium	mg/L	0.1	0.097	97	80-120	
Thallium	mg/L	0.1	0.098	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4511671 4511672

Parameter	Units	92746285008 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	mg/L	ND	0.1	0.1	0.099	0.097	99	97	75-125	2	20	
Arsenic	mg/L	0.00092J	0.1	0.1	0.10	0.10	104	101	75-125	3	20	

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## QUALITY CONTROL DATA

Project: Hammond AP-4

Pace Project No.: 92746288

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4511671 4511672												
Parameter	Units	92746285008	MS	MSD	MS	MSD	MS	MSD	% Rec	RPD	Max	Qual
		Result	Spike Conc.	Spike Conc.								
Barium	mg/L	0.021	0.1	0.1	0.12	0.12	95	94	75-125	1	20	
Beryllium	mg/L	0.0021	0.1	0.1	0.10	0.096	97	94	75-125	3	20	
Boron	mg/L	4.2	1	1	5.2	5.2	95	94	75-125	0	20	
Cadmium	mg/L	0.00096	0.1	0.1	0.10	0.099	100	98	75-125	2	20	
Chromium	mg/L	ND	0.1	0.1	0.10	0.098	102	98	75-125	4	20	
Cobalt	mg/L	0.091	0.1	0.1	0.19	0.19	104	98	75-125	3	20	
Lead	mg/L	0.00070J	0.1	0.1	0.093	0.092	92	91	75-125	1	20	
Lithium	mg/L	0.011J	0.1	0.1	0.11	0.11	97	97	75-125	1	20	
Molybdenum	mg/L	ND	0.1	0.1	0.10	0.10	102	100	75-125	2	20	
Selenium	mg/L	0.0022J	0.1	0.1	0.10	0.10	103	102	75-125	1	20	
Thallium	mg/L	ND	0.1	0.1	0.094	0.093	93	93	75-125	0	20	

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## QUALITY CONTROL DATA

Project: Hammond AP-4  
Pace Project No.: 92746288

QC Batch: 875892 Analysis Method: EPA 6020B  
QC Batch Method: EPA 3005A Analysis Description: 6020 MET  
Laboratory: Pace Analytical Services - Peachtree Corners, GA  
Associated Lab Samples: 92746288009, 92746288010, 92746288011, 92746288012, 92746288013, 92746288014, 92746288015, 92746288016, 92746288017, 92746288018, 92746288019

METHOD BLANK: 4511675 Matrix: Water  
Associated Lab Samples: 92746288009, 92746288010, 92746288011, 92746288012, 92746288013, 92746288014, 92746288015, 92746288016, 92746288017, 92746288018, 92746288019

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00054	08/19/24 15:35	
Arsenic	mg/L	ND	0.0050	0.00084	08/19/24 15:35	
Barium	mg/L	ND	0.0050	0.00047	08/19/24 15:35	
Beryllium	mg/L	ND	0.00050	0.000094	08/19/24 15:35	
Boron	mg/L	ND	0.040	0.012	08/19/24 15:35	
Cadmium	mg/L	ND	0.00050	0.00010	08/19/24 15:35	
Chromium	mg/L	ND	0.0050	0.0019	08/19/24 15:35	
Cobalt	mg/L	ND	0.0050	0.00032	08/19/24 15:35	
Lead	mg/L	ND	0.0010	0.00016	08/19/24 15:35	
Lithium	mg/L	ND	0.030	0.0016	08/19/24 15:35	
Molybdenum	mg/L	ND	0.010	0.00062	08/19/24 15:35	
Selenium	mg/L	ND	0.0050	0.00096	08/19/24 15:35	
Thallium	mg/L	ND	0.0010	0.00038	08/19/24 15:35	

LABORATORY CONTROL SAMPLE: 4511676

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.10	102	80-120	
Arsenic	mg/L	0.1	0.099	99	80-120	
Barium	mg/L	0.1	0.096	96	80-120	
Beryllium	mg/L	0.1	0.10	101	80-120	
Boron	mg/L	1	0.96	96	80-120	
Cadmium	mg/L	0.1	0.10	102	80-120	
Chromium	mg/L	0.1	0.10	101	80-120	
Cobalt	mg/L	0.1	0.10	100	80-120	
Lead	mg/L	0.1	0.099	99	80-120	
Lithium	mg/L	0.1	0.10	102	80-120	
Molybdenum	mg/L	0.1	0.10	103	80-120	
Selenium	mg/L	0.1	0.099	99	80-120	
Thallium	mg/L	0.1	0.099	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4511677 4511678

Parameter	Units	92746288009 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	mg/L	ND	0.1	0.1	0.10	0.10	103	103	75-125	0	20	

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## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: Hammond AP-4

Pace Project No.: 92746288

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4511677 4511678											
Parameter	Units	92746288009		MS		MSD		MS		MSD	
		Result	Conc.	Spike	Conc.	Result	Conc.	% Rec	% Rec	% Rec	Max
								Limits	RPD	RPD	Qual
Arsenic	mg/L	ND	0.1	0.1	0.10	0.10	101	103	75-125	2	20
Barium	mg/L	0.034	0.1	0.1	0.13	0.14	100	101	75-125	0	20
Beryllium	mg/L	ND	0.1	0.1	0.098	0.10	98	101	75-125	2	20
Boron	mg/L	0.59	1	1	1.6	1.6	101	105	75-125	2	20
Cadmium	mg/L	ND	0.1	0.1	0.10	0.10	101	101	75-125	1	20
Chromium	mg/L	ND	0.1	0.1	0.097	0.10	97	101	75-125	4	20
Cobalt	mg/L	ND	0.1	0.1	0.096	0.099	96	99	75-125	3	20
Lead	mg/L	ND	0.1	0.1	0.095	0.097	95	97	75-125	2	20
Lithium	mg/L	0.0021J	0.1	0.1	0.10	0.10	98	100	75-125	2	20
Molybdenum	mg/L	ND	0.1	0.1	0.10	0.10	104	102	75-125	1	20
Selenium	mg/L	ND	0.1	0.1	0.099	0.10	98	101	75-125	3	20
Thallium	mg/L	ND	0.1	0.1	0.095	0.097	95	97	75-125	2	20

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## QUALITY CONTROL DATA

Project: Hammond AP-4  
Pace Project No.: 92746288

QC Batch: 876671 Analysis Method: EPA 7470A  
QC Batch Method: EPA 7470A Analysis Description: 7470 Mercury  
Laboratory: Pace Analytical Services - Peachtree Corners, GA  
Associated Lab Samples: 92746288001, 92746288002, 92746288003, 92746288004, 92746288005, 92746288006, 92746288007, 92746288008, 92746288009, 92746288010, 92746288011, 92746288012, 92746288013, 92746288014, 92746288015, 92746288016, 92746288017, 92746288018, 92746288019

METHOD BLANK: 4515798 Matrix: Water  
Associated Lab Samples: 92746288001, 92746288002, 92746288003, 92746288004, 92746288005, 92746288006, 92746288007, 92746288008, 92746288009, 92746288010, 92746288011, 92746288012, 92746288013, 92746288014, 92746288015, 92746288016, 92746288017, 92746288018, 92746288019

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00020	0.00013	08/20/24 12:17	

LABORATORY CONTROL SAMPLE: 4515799

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	0.0025	0.0023	91	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4515800 4515801

Parameter	Units	92746288001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	mg/L	ND	0.0025	0.0025	0.0022	0.0022	86	86	75-125	0	20	

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## QUALITY CONTROL DATA

Project: Hammond AP-4

Pace Project No.: 92746288

QC Batch: 874243

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: 92746288001, 92746288002, 92746288003

METHOD BLANK: 4503653

Matrix: Water

Associated Lab Samples: 92746288001, 92746288002, 92746288003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	25.0	25.0	08/09/24 11:40	

LABORATORY CONTROL SAMPLE: 4503654

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	418	104	80-120	

SAMPLE DUPLICATE: 4503655

Parameter	Units	92746285004 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	191	191	0	10	

SAMPLE DUPLICATE: 4503656

Parameter	Units	92746292004 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	41.0	36.0	13	10 D6	

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## QUALITY CONTROL DATA

Project: Hammond AP-4

Pace Project No.: 92746288

QC Batch: 875540

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: 92746288004

METHOD BLANK: 4509816

Matrix: Water

Associated Lab Samples: 92746288004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	25.0	25.0	08/14/24 12:00	

LABORATORY CONTROL SAMPLE: 4509817

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

SAMPLE DUPLICATE: 4509818

Parameter	Units	92746285006 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	768	769	0	10	

SAMPLE DUPLICATE: 4509819

Parameter	Units	92746891021 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	52.0	102	65	10 D6	

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## QUALITY CONTROL DATA

Project: Hammond AP-4

Pace Project No.: 92746288

QC Batch: 875545

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: 92746288005, 92746288006, 92746288007, 92746288008, 92746288009, 92746288010, 92746288011

METHOD BLANK: 4509836

Matrix: Water

Associated Lab Samples: 92746288005, 92746288006, 92746288007, 92746288008, 92746288009, 92746288010, 92746288011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	25.0	25.0	08/14/24 11:33	

LABORATORY CONTROL SAMPLE: 4509837

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	412	103	80-120	

SAMPLE DUPLICATE: 4509838

Parameter	Units	92746285011 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	1670	1680	1	10	

SAMPLE DUPLICATE: 4509839

Parameter	Units	92746288009 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	330	337	2	10	

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## QUALITY CONTROL DATA

Project: Hammond AP-4

Pace Project No.: 92746288

QC Batch: 875847 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: 92746288012, 92746288013, 92746288014, 92746288015, 92746288016, 92746288017, 92746288018, 92746288019

METHOD BLANK: 4511518 Matrix: Water  
Associated Lab Samples: 92746288012, 92746288013, 92746288014, 92746288015, 92746288016, 92746288017, 92746288018, 92746288019

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	25.0	25.0	08/15/24 10:34	

LABORATORY CONTROL SAMPLE: 4511519

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	396	99	80-120	

SAMPLE DUPLICATE: 4511520

Parameter	Units	92746288012 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	263	263	0	10	

SAMPLE DUPLICATE: 4511521

Parameter	Units	92747047003 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	419	418	0	10	

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## QUALITY CONTROL DATA

Project: Hammond AP-4

Pace Project No.: 92746288

QC Batch: 874380 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: 92746288001, 92746288002, 92746288003

METHOD BLANK: 4504473 Matrix: Water

Associated Lab Samples: 92746288001, 92746288002, 92746288003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	08/08/24 21:45	
Fluoride	mg/L	ND	0.10	0.050	08/08/24 21:45	
Sulfate	mg/L	ND	1.0	0.50	08/08/24 21:45	

LABORATORY CONTROL SAMPLE: 4504474

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	51.4	103	90-110	
Fluoride	mg/L	2.5	2.7	106	90-110	
Sulfate	mg/L	50	51.3	103	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4504475 4504476

Parameter	Units	92746012001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	5.1	50	50	55.2	56.8	100	103	90-110	3	10	
Fluoride	mg/L	0.54	2.5	2.5	3.6	3.7	123	125	90-110	2	10	M1
Sulfate	mg/L	4.5	50	50	54.6	56.4	100	104	90-110	3	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4504477 4504478

Parameter	Units	92746286002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	11.6	50	50	61.5	62.9	100	103	90-110	2	10	
Fluoride	mg/L	0.20	2.5	2.5	2.7	2.8	102	105	90-110	3	10	
Sulfate	mg/L	127	50	50	170	173	87	93	90-110	2	10	M1

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## QUALITY CONTROL DATA

Project: Hammond AP-4

Pace Project No.: 92746288

QC Batch: 875049

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: 92746288004

METHOD BLANK: 4507403

Matrix: Water

Associated Lab Samples: 92746288004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	08/13/24 16:42	
Fluoride	mg/L	ND	0.10	0.050	08/13/24 16:42	
Sulfate	mg/L	ND	1.0	0.50	08/13/24 16:42	

LABORATORY CONTROL SAMPLE: 4507404

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	52.5	105	90-110	
Fluoride	mg/L	2.5	2.7	108	90-110	
Sulfate	mg/L	50	53.1	106	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4507405 4507406

Parameter	Units	92746891011 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	12.4	50	50	63.3	64.6	102	104	90-110	2	10	
Fluoride	mg/L	0.079J	2.5	2.5	2.5	2.6	98	101	90-110	3	10	
Sulfate	mg/L	112	50	50	155	155	84	86	90-110	1	10 M1	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4507407 4507408

Parameter	Units	92746891021 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	ND	50	50	51.7	50.4	103	101	90-110	3	10	
Fluoride	mg/L	ND	2.5	2.5	2.5	2.4	100	97	90-110	3	10	
Sulfate	mg/L	ND	50	50	51.7	50.4	103	101	90-110	2	10	

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## QUALITY CONTROL DATA

Project: Hammond AP-4

Pace Project No.: 92746288

QC Batch: 875381

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: 92746288005, 92746288006, 92746288007, 92746288008, 92746288009, 92746288010, 92746288011, 92746288012, 92746288013, 92746288014, 92746288015, 92746288016, 92746288017, 92746288018, 92746288019

METHOD BLANK: 4509356

Matrix: Water

Associated Lab Samples: 92746288005, 92746288006, 92746288007, 92746288008, 92746288009, 92746288010, 92746288011, 92746288012, 92746288013, 92746288014, 92746288015, 92746288016, 92746288017, 92746288018, 92746288019

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	08/13/24 22:40	
Fluoride	mg/L	ND	0.10	0.050	08/13/24 22:40	
Sulfate	mg/L	ND	1.0	0.50	08/13/24 22:40	

LABORATORY CONTROL SAMPLE: 4509357

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	51.1	102	90-110	
Fluoride	mg/L	2.5	2.6	104	90-110	
Sulfate	mg/L	50	51.1	102	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4509358 4509359

Parameter	Units	92746288005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	8.0	50	50	59.1	59.2	102	102	90-110	0	10	
Fluoride	mg/L	0.067J	2.5	2.5	2.9	2.9	113	114	90-110	0	10	M1
Sulfate	mg/L	359	50	50	392	393	67	68	90-110	0	10	M1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4509360 4509361

Parameter	Units	92746288015 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	4.0	50	50	54.3	55.1	101	102	90-110	2	10	
Fluoride	mg/L	0.13	2.5	2.5	2.6	2.7	100	103	90-110	3	10	
Sulfate	mg/L	19.7	50	50	70.6	71.3	102	103	90-110	1	10	

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## QUALIFIERS

Project: Hammond AP-4  
Pace Project No.: 92746288

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.  
ND - Not Detected at or above adjusted reporting limit.  
TNTC - Too Numerous To Count  
J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.  
MDL - Adjusted Method Detection Limit.  
PQL - Practical Quantitation Limit.  
RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.  
S - Surrogate  
1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.  
Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.  
LCS(D) - Laboratory Control Sample (Duplicate)  
MS(D) - Matrix Spike (Duplicate)  
DUP - Sample Duplicate  
RPD - Relative Percent Difference  
NC - Not Calculable.  
SG - Silica Gel - Clean-Up  
U - Indicates the compound was analyzed for, but not detected.  
Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.  
A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.  
N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.  
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

D6 The precision between the sample and sample duplicate exceeded laboratory control limits.  
M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

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## QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Hammond AP-4

Pace Project No.: 92746288

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92746288001	HAM-HGWA-47	EPA 3010A	874538	EPA 6010D	874645
92746288002	HAM-HGWA-48D	EPA 3010A	874538	EPA 6010D	874645
92746288003	HAM-HGWA-111	EPA 3010A	874538	EPA 6010D	874645
92746288004	HAM-HGWA-113	EPA 3010A	875958	EPA 6010D	876036
92746288005	HAM-HGWC-102	EPA 3010A	876300	EPA 6010D	876355
92746288006	HAM-HGWC-103	EPA 3010A	876300	EPA 6010D	876355
92746288007	HAM-HGWA-112	EPA 3010A	876300	EPA 6010D	876355
92746288008	HAM-HGWC-118	EPA 3010A	876300	EPA 6010D	876355
92746288009	HAM-AP4-FD-02	EPA 3010A	876300	EPA 6010D	876355
92746288010	HAM-AP4-EB-01	EPA 3010A	876300	EPA 6010D	876355
92746288011	HAM-AP4-FB-01	EPA 3010A	876300	EPA 6010D	876355
92746288012	HAM-HGWC-101	EPA 3010A	876300	EPA 6010D	876355
92746288013	HAM-HGWC-105	EPA 3010A	876300	EPA 6010D	876355
92746288014	HAM-HGWC-107	EPA 3010A	876300	EPA 6010D	876355
92746288015	HAM-HGWC-109	EPA 3010A	876300	EPA 6010D	876355
92746288016	HAM-HGWC-117A	EPA 3010A	876300	EPA 6010D	876355
92746288017	HAM-AP4-FD-01	EPA 3010A	876300	EPA 6010D	876355
92746288018	HAM-AP4-EB-02	EPA 3010A	876300	EPA 6010D	876355
92746288019	HAM-AP4-FB-02	EPA 3010A	876300	EPA 6010D	876355
92746288001	HAM-HGWA-47	EPA 3005A	874205	EPA 6020B	874325
92746288002	HAM-HGWA-48D	EPA 3005A	874205	EPA 6020B	874325
92746288003	HAM-HGWA-111	EPA 3005A	874205	EPA 6020B	874325
92746288004	HAM-HGWA-113	EPA 3005A	875890	EPA 6020B	876009
92746288005	HAM-HGWC-102	EPA 3005A	875891	EPA 6020B	876018
92746288006	HAM-HGWC-103	EPA 3005A	875891	EPA 6020B	876018
92746288007	HAM-HGWA-112	EPA 3005A	875891	EPA 6020B	876018
92746288008	HAM-HGWC-118	EPA 3005A	875891	EPA 6020B	876018
92746288009	HAM-AP4-FD-02	EPA 3005A	875892	EPA 6020B	876017
92746288010	HAM-AP4-EB-01	EPA 3005A	875892	EPA 6020B	876017
92746288011	HAM-AP4-FB-01	EPA 3005A	875892	EPA 6020B	876017
92746288012	HAM-HGWC-101	EPA 3005A	875892	EPA 6020B	876017
92746288013	HAM-HGWC-105	EPA 3005A	875892	EPA 6020B	876017
92746288014	HAM-HGWC-107	EPA 3005A	875892	EPA 6020B	876017
92746288015	HAM-HGWC-109	EPA 3005A	875892	EPA 6020B	876017
92746288016	HAM-HGWC-117A	EPA 3005A	875892	EPA 6020B	876017
92746288017	HAM-AP4-FD-01	EPA 3005A	875892	EPA 6020B	876017
92746288018	HAM-AP4-EB-02	EPA 3005A	875892	EPA 6020B	876017
92746288019	HAM-AP4-FB-02	EPA 3005A	875892	EPA 6020B	876017
92746288001	HAM-HGWA-47	EPA 7470A	876671	EPA 7470A	876771
92746288002	HAM-HGWA-48D	EPA 7470A	876671	EPA 7470A	876771
92746288003	HAM-HGWA-111	EPA 7470A	876671	EPA 7470A	876771
92746288004	HAM-HGWA-113	EPA 7470A	876671	EPA 7470A	876771
92746288005	HAM-HGWC-102	EPA 7470A	876671	EPA 7470A	876771
92746288006	HAM-HGWC-103	EPA 7470A	876671	EPA 7470A	876771
92746288007	HAM-HGWA-112	EPA 7470A	876671	EPA 7470A	876771

## 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

Pace Project No.: 92746288

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92746288008	HAM-HGWC-118	EPA 7470A	876671	EPA 7470A	876771
92746288009	HAM-AP4-FD-02	EPA 7470A	876671	EPA 7470A	876771
92746288010	HAM-AP4-EB-01	EPA 7470A	876671	EPA 7470A	876771
92746288011	HAM-AP4-FB-01	EPA 7470A	876671	EPA 7470A	876771
92746288012	HAM-HGWC-101	EPA 7470A	876671	EPA 7470A	876771
92746288013	HAM-HGWC-105	EPA 7470A	876671	EPA 7470A	876771
92746288014	HAM-HGWC-107	EPA 7470A	876671	EPA 7470A	876771
92746288015	HAM-HGWC-109	EPA 7470A	876671	EPA 7470A	876771
92746288016	HAM-HGWC-117A	EPA 7470A	876671	EPA 7470A	876771
92746288017	HAM-AP4-FD-01	EPA 7470A	876671	EPA 7470A	876771
92746288018	HAM-AP4-EB-02	EPA 7470A	876671	EPA 7470A	876771
92746288019	HAM-AP4-FB-02	EPA 7470A	876671	EPA 7470A	876771
92746288001	HAM-HGWA-47	SM 2540C-2015	874243		
92746288002	HAM-HGWA-48D	SM 2540C-2015	874243		
92746288003	HAM-HGWA-111	SM 2540C-2015	874243		
92746288004	HAM-HGWA-113	SM 2540C-2015	875540		
92746288005	HAM-HGWC-102	SM 2540C-2015	875545		
92746288006	HAM-HGWC-103	SM 2540C-2015	875545		
92746288007	HAM-HGWA-112	SM 2540C-2015	875545		
92746288008	HAM-HGWC-118	SM 2540C-2015	875545		
92746288009	HAM-AP4-FD-02	SM 2540C-2015	875545		
92746288010	HAM-AP4-EB-01	SM 2540C-2015	875545		
92746288011	HAM-AP4-FB-01	SM 2540C-2015	875545		
92746288012	HAM-HGWC-101	SM 2540C-2015	875847		
92746288013	HAM-HGWC-105	SM 2540C-2015	875847		
92746288014	HAM-HGWC-107	SM 2540C-2015	875847		
92746288015	HAM-HGWC-109	SM 2540C-2015	875847		
92746288016	HAM-HGWC-117A	SM 2540C-2015	875847		
92746288017	HAM-AP4-FD-01	SM 2540C-2015	875847		
92746288018	HAM-AP4-EB-02	SM 2540C-2015	875847		
92746288019	HAM-AP4-FB-02	SM 2540C-2015	875847		
92746288001	HAM-HGWA-47	EPA 300.0 Rev 2.1 1993	874380		
92746288002	HAM-HGWA-48D	EPA 300.0 Rev 2.1 1993	874380		
92746288003	HAM-HGWA-111	EPA 300.0 Rev 2.1 1993	874380		
92746288004	HAM-HGWA-113	EPA 300.0 Rev 2.1 1993	875049		
92746288005	HAM-HGWC-102	EPA 300.0 Rev 2.1 1993	875381		
92746288006	HAM-HGWC-103	EPA 300.0 Rev 2.1 1993	875381		
92746288007	HAM-HGWA-112	EPA 300.0 Rev 2.1 1993	875381		
92746288008	HAM-HGWC-118	EPA 300.0 Rev 2.1 1993	875381		
92746288009	HAM-AP4-FD-02	EPA 300.0 Rev 2.1 1993	875381		
92746288010	HAM-AP4-EB-01	EPA 300.0 Rev 2.1 1993	875381		
92746288011	HAM-AP4-FB-01	EPA 300.0 Rev 2.1 1993	875381		
92746288012	HAM-HGWC-101	EPA 300.0 Rev 2.1 1993	875381		
92746288013	HAM-HGWC-105	EPA 300.0 Rev 2.1 1993	875381		
92746288014	HAM-HGWC-107	EPA 300.0 Rev 2.1 1993	875381		

## REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Hammond AP-4  
Pace Project No.: 92746288

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92746288015	HAM-HGWC-109	EPA 300.0 Rev 2.1 1993	875381		
92746288016	HAM-HGWC-117A	EPA 300.0 Rev 2.1 1993	875381		
92746288017	HAM-AP4-FD-01	EPA 300.0 Rev 2.1 1993	875381		
92746288018	HAM-AP4-EB-02	EPA 300.0 Rev 2.1 1993	875381		
92746288019	HAM-AP4-FB-02	EPA 300.0 Rev 2.1 1993	875381		

REPORT OF LABORATORY ANALYSIS



DC#\_TITLE: ENV-FRM-HUNT-0083 V05\_Sample Condition Upon Receipt

Effective Date: 05/24/2024

## Laboratory receiving samples:

Asheville ☐ Eden ☐ Greenwood ☐ Huntersville ☐ Raleigh ☐ Mechanicsville ☐ Atlanta ☒ Kernersville ☐Sample Condition  
Upon Receipt

Client Name:

GA Power

Project #:

WO#: 92746288



Courier:

☐ Commercial☐ Fed Ex☐ UPS☐ USPS☐ Client☒ Pace☐ Other: \_\_\_\_\_

Custody Seal Present?

☐ Yes☒ No

Seals Intact?

☐ Yes☐ No☒ N/A

Date/Initials Person Examining Contents:

8/17/24  
CS4

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:

2.3

Correction Factor:

Add/Subtract (°C)

2.3

Temp should be above freezing to 6°C

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

Cooler Temp Corrected (°C):

2.3

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 ☐ NoDid 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	

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 v05\_Sample Condition Upon Receipt

Effective Date: 05/24/2024

\*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#: 92746288

PM: BV

Due Date: 08/21/24

CLIENT: 92- GP-HAM

Laboratory Receiving Location: Asheville ☐ Eden ☐ Greenwood ☐ Huntersville ☐ Raleigh ☐ Mechanicsville ☐ Atlanta ☐ Kernersville ☐

Client \_\_\_\_\_ Profile/EZ (Circle one) \_\_\_\_\_ Notes \_\_\_\_\_

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-)	WGFW-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	DG94-40 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unpreserved (N/A)	DG9V-40 mL VOA H3PO4 (N/A)	KP7U-50 mL Plastic Unpreserved (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A – lab)	SP2T-250 mL Sterile Plastic (N/A – lab)		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)	
CC																														
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## pH Adjustment Log for Preserved Samples

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

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

The original document is a legal document. All relevant fields must be completed accurately.

Page: 1 of 1

92746268

**Pace Project No./ Lab I.D.**

Important Note: By signing this form you are accepting PECO's full and sole responsibility for the safe and proper use of the equipment. It is your responsibility to read and understand the instructions and safety warnings on the equipment and to use the equipment in accordance with the instructions and safety warnings.

0028-0844-74-00070-0-1764



DC#\_Title: ENV-FRM-HUN1-0083 v05\_Sample Condition Upon Receipt

Effective Date: 05/24/2024

## Laboratory receiving samples:

Asheville ☐ Eden ☐ Greenwood ☐ Huntersville ☐ Raleigh ☐ Mechanicsville ☐ Atlanta ☐ Kernersville ☐Sample Condition  
Upon Receipt

Client Name:

GA Power

Project #:

92746288

Courier:

☐ Commercial☐ Fed Ex☐ UPS☐ USPS☐ Client☒ Pace☐ Other:

Custody Seal Present?

☐ Yes☒ No

Seals Intact?

☐ Yes☐ No☒ N/A

Date/Initials Person Examining Contents:

8/9/24  
Cout

Packing Material:

☐ Bubble Wrap☐ Bubble Bags☒ None☐ Other

Thermometer:

☒ IR Gun ID:

230

Type of Ice:

☒ Wet☐ Blue☐ None

Cooler Temp:

2.1

Correction Factor:

Add/Subtract (°C)

0.0

Temp should be above freezing to 6°C

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

Cooler Temp Corrected (°C):

2.1

USDA Regulated Soil ( ☐ N/A, water sample)Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)? ☐ Yes ☐ NoDid 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		

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 v05\_Sample Condition Upon Receipt

Effective Date: 05/24/2024

\*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 #

Laboratory Receiving Location: Asheville ☐ Eden ☐ Greenwood ☐ Huntersville ☐ Raleigh ☐ Mechanicsville ☐ Atlanta ☐ Kernersville ☐

Client \_\_\_\_\_ Profile/EZ (Circle one) \_\_\_\_\_ Notes \_\_\_\_\_

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 2N Acetate & NaOH (x9)	BP4B-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass Jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	DG94-40 mL Amber N-HCl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unpreserved (N/A)	DG9V-40 mL VOA H3PO4 (N/A)	KP7U-50 mL Plastic Unpreserved (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)	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)	
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## pH Adjustment Log for Preserved Samples

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

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina 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.

Page 1 of 1

<b>Section A</b> Required Client Information: Company: <b>GA Power</b> Address: <b>Atlanta, GA</b> Email To: <b>SCS Contacts</b> Phone: _____ Requested Due Date/TAT: _____		<b>Section B</b> Required Project Information: Report To: <b>SCS Contacts</b> City To: <b>Geosyntec Contacts</b> Purchase Order No.: _____ Project Name: <b>Hammond AP-4</b> Project Number: <b>GW6581D</b>		<b>Section C</b> Analytical Information: Attention: <b>Southern Co.</b> Company Name: _____ Address: _____ City/State: _____ Zip: _____ Project Location: <b>Bonnie Vong</b> State: <b>GA</b> Site Location: _____ Project ID: <b>10839</b>	
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ITEM #	Valid Matrix Codes WATER WASTE WATER WASTEWATER SLUDGE SOLID GAS AIR OTHER TODUR	MATRIX CODE (See valid codes in body)	COLLECTED		SAMPLE TYPE (G=GRAB, C=COMP)	DATE	TIME	DATE	TIME	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
			ECARVONITE	COMPOSITE											
1		W/G			G	08/08/2024	1548	08/08/2024	1415	08/08/2024	1415	<b>Ryan William / PACE</b>	08/08/2024	1415	
2															
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6															
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9															
10															
11															
12															

<b>Section D</b> Required Client Information: Company: <b>GA Power</b> Address: <b>Atlanta, GA</b> Email To: <b>SCS Contacts</b> Phone: _____ Requested Due Date/TAT: _____		<b>Section E</b> Required Project Information: Report To: <b>SCS Contacts</b> City To: <b>Geosyntec Contacts</b> Purchase Order No.: _____ Project Name: <b>Hammond AP-4</b> Project Number: <b>GW6581D</b>		<b>Section F</b> Analytical Information: Attention: <b>Southern Co.</b> Company Name: _____ Address: _____ City/State: _____ Zip: _____ Project Location: <b>Bonnie Vong</b> State: <b>GA</b> Site Location: _____ Project ID: <b>10839</b>	
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<b>Section G</b> Required Client Information: Company: <b>GA Power</b> Address: <b>Atlanta, GA</b> Email To: <b>SCS Contacts</b> Phone: _____ Requested Due Date/TAT: _____		<b>Section H</b> Required Project Information: Report To: <b>SCS Contacts</b> City To: <b>Geosyntec Contacts</b> Purchase Order No.: _____ Project Name: <b>Hammond AP-4</b> Project Number: <b>GW6581D</b>		<b>Section I</b> Analytical Information: Attention: <b>Southern Co.</b> Company Name: _____ Address: _____ City/State: _____ Zip: _____ Project Location: <b>Bonnie Vong</b> State: <b>GA</b> Site Location: _____ Project ID: <b>10839</b>	
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DC#\_Title: ENV-FRM-HUN1-0083 v05\_Sample Condition Upon Receipt

Effective Date: 05/24/2024

## Laboratory receiving samples:

Asheville ☐ Eden ☐ Greenwood ☐ Huntersville ☐ Raleigh ☐ Mechanicsville ☐ Atlanta ☒Sample Condition  
Upon Receipt

Client Name:

Project #:

WO#: 92746288

PM: BV

Due Date: 08/21/24

CLIENT: 92- GP-HAM

Courier:

☐ Commercial☐ Fed Ex☒ Pace☐ UPS☐ USPS☐ Other:☐ Client

Custody Seal Present?

☐ Yes☐ No

Seals Intact?

☐ Yes☐ No☒ N/A

Date/Initials Person Examining Contents:

8/17/24  
CAG

Packing Material:

☐ Bubble Wrap☐ Bubble Bags☒ None☐ Other

Biological Tissue Frozen?

☐ Yes☐ No☐ N/A

Thermometer:

☐ IR Gun ID:

230

Type of Ice:

☒ Wet☐ Blue☐ None

Cooler Temp:

2.1

Correction Factor:

Add/Subtract (°C)

0.0

Temp should be above freezing to 6°C

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

Cooler Temp Corrected (°C):

2.1

USDA Regulated Soil ( ☐ N/A, water sample)Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)? ☐ Yes ☐ NoDid 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	7.
Containers Intact?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Dissolved analysis: Samples Field Filtered?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	9.
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

Person contacted:

Date/Time:

Project Manager SCURF Review:

Date:

Project Manager SRF Review:

Date:



DC#\_Title: ENV-FRM-HUN1-0083 v05\_Sample Condition Upon Receipt

Effective Date: 05/24/2024

\*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 #

W0#: 92746288

PM: BV

Due Date: 08/21/24

CLIENT: 92- GP-HAM

Laboratory Receiving Location: Asheville ☐ Eden ☐ Greenwood ☐ Huntersville ☐ Raleigh ☐ Mechanicsville ☐ Atlanta ☐ Kernersville ☐

Client \_\_\_\_\_ Profile/EZ (Circle one) \_\_\_\_\_ Notes \_\_\_\_\_

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)		BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)	BP4B-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass Jar - Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	DG94-40 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unpreserved (N/A)	DG9V-40 mL VOA H3PO4 (N/A)	KPTU-50 mL Plastic Unpreserved (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)	BP3R-250 mL Plastic (NH4)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)	
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## pH Adjustment Log for Preserved Samples

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

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

## Section C

Company: GA Power		Report To: SCS Contacts		Invoice Information:		Page: 1 of 1	
Address: Atlanta, GA		Copy To: Geosynlec Contacts		Attention: Southern Co.			
				Company Name:			
Email To: SCS Contacts		Purchase Order No.:		Address:			
Phone:		Fax:		Facs Duple			
Requested Due Date/TAT: 10 Day		Project Name: Hammond AP-4		Reference:			
		Project Number: GW6581D		Facs Project Manager:		Bonnie Vang	
				Pack Profile #:		10839	
<b>REGULATORY AGENCY</b>							
<input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> LIST <input type="checkbox"/> RCRA <input checked="" type="checkbox"/> OTHER CCR							
<b>Site Location</b>				<b>STATE:</b> GA			

[illegible]

<sup>a</sup>Important Note: By applying the last variable we are using Pseudo R<sup>2</sup> and it is only a rough estimate and only a rough estimate of the proportion of variance explained in the dependent variable.

5-ALC-02-020452-17, 15-F-033-210



DC#\_Title: ENV-FRM-HUN1-0083 v05\_Sample Condition Upon Receipt

Effective Date: 05/24/2024

## Laboratory receiving samples:

Asheville ☐ Eden ☐ Greenwood ☐ Huntersville ☐ Raleigh ☐ Mechanicsville ☐ Atlanta ☒ Kernersville ☐Sample Condition  
Upon Receipt

Client Name:

Project #:

WO#: 92746288

PM: BV

Due Date: 08/21/24

CLIENT: 92- GP-HAM

Courier:

☐ Commercial☐ Fed-Ex☐ UPS☐ USPS☐ Client☒ Pace☐ Other:

Custody Seal Present?

☐ Yes☐ No

Seals Intact?

☐ Yes☐ No☒ N/A

Date/Initials Person Examining Contents:

Packing Material:

☐ Bubble Wrap☐ Bubble Bags☒ None☐ Other

Biological Tissue Frozen?

☐ Yes☐ No☐ N/A

Thermometer:

☐ IR Gun ID:

230

Type of Ice:

☒ Wet☐ Blue☐ None

Cooler Temp:

2.1

Correction Factor:

Add/Subtract (°C)

0.0

Temp should be above freezing to 6°C

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

Cooler Temp Corrected (°C):

2.1

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

Did samples originate in a quarantine zone within the United States: CA, NY, or SC

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

Comments/Discrepancy:

Chain of Custody Present?

☒ Yes☐ No☐ N/A

1.

Samples Arrived within Hold Time?

☒ Yes☐ No☐ N/A

2.

Short Hold Time Analysis (&lt;72 hr.)?

☐ Yes☒ No☐ N/A

3.

Rush Turn Around Time Requested?

☐ Yes☒ No☐ N/A

4.

Sufficient Volume?

☒ Yes☐ No☐ N/A

5.

Correct Containers Used?

☒ Yes☐ No☐ N/A

6.

-Pace Containers Used?

☒ Yes☐ No☐ N/A

Containers Intact?

☒ Yes☐ No☐ N/A

7.

Dissolved analysis: Samples Field Filtered?

☐ Yes☐ No☒ N/A

8.

Sample Labels Match COC?

☒ Yes☐ No☐ N/A

9.

-Includes Date/Time/ID/Analysis Matrix:

W

Headspace in VOA Vials (&gt;5-6mm)?

☐ Yes☐ No☒ N/A

10.

Trip Blank Present?

☐ Yes☐ No☒ N/A

11.

Trip Blank Custody Seals Present?

☐ Yes☐ No☒ N/A

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? ☐ Yes ☐ No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted:

Date/Time:

Project Manager SCURF Review:

Date:

Project Manager SRF Review:

Date:





DC#\_Title: ENV-FRM-HUN1-0083 v05\_Sample Condition Upon Receipt

Effective Date: 05/24/2024

WO#: 92746288

Project #

PM: BV

Due Date: 08/21/24

CLIENT: 92- GP-HAM

\*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

Laboratory Receiving Location: Asheville ☐ Eden ☐ Greenwood ☐ Huntersville ☐ Raleigh ☐ Mechanicsville ☐ Atlanta ☐ Kernersville ☐

Client \_\_\_\_\_ Profile/EZ (Circle one) \_\_\_\_\_ Notes \_\_\_\_\_

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic Zn Acetate & NaOH (>9)	BP4B-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass Jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	DG9A-40 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unpreserved (N/A)	DG9V-40 mL VOA H3PO4 (N/A)	KP7U-50 mL Plastic Unpreserved (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)	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)	
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## pH Adjustment Log for Preserved Samples

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

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

the following conditions:

Page: 1 of 1

**SAMPLER NAME AND SIGNATURE**

Collier / Carr / GenSystec Consultants Inc

DATE SIGNED  
(MM/DD/YY)  
6/26/80

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



September 10, 2024

Kristen Jurinko  
Southern Company  
241 Ralph McGill Blvd NE  
Bin 10160  
Atlanta, GA 30308

RE: Project: Hammond AP-4- RADs  
Pace Project No.: 92746296

Dear Kristen Jurinko:

Enclosed are the analytical results for sample(s) received by the laboratory between August 07, 2024 and August 12, 2024. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

- Pace Analytical Services - Greensburg

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

Sincerely,

Bonnie Vang  
bonnie.vang@pacelabs.com  
704-977-0968  
Project Manager

Enclosures

cc: Kip Gray, Geosyntec  
Christine Hug, Geosyntec Consultants, Inc.  
Thomas Kessler, Geosyntec Consultants  
Whitney Law, Geosyntec Consultants  
Laura Midkiff, Southern Company  
Caroline Nelson, Geosyntec Consultants, Inc  
Jamie Newsome, Geosyntec Consultants  
Zain Webb, Geosyntec Consultants



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: Hammond AP-4- RADs

Pace Project No.: 92746296

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### **Pace Analytical Services Pennsylvania**

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601

ANAB DOD-ELAP Rad Accreditation #: L2417

ANABISO/IEC 17025:2017 Rad Cert#: L24170

Alabama Certification #: 41590

Arizona Certification #: AZ0734

Arkansas Certification

California Certification #: 2950

Colorado Certification #: PA01547

Connecticut Certification #: PH-0694

EPA Region 4 DW Rad

Florida/TNI Certification #: E87683

Georgia Certification #: C040

Guam Certification

Hawaii Certification

Idaho Certification

Illinois Certification

Indiana Certification

Iowa Certification #: 391

Kansas Certification #: E-10358

Kentucky Certification #: KY90133

KY WW Permit #: KY0098221

KY WW Permit #: KY0000221

Louisiana DHH/TNI Certification #: LA010

Louisiana DEQ/TNI Certification #: 04086

Maine Certification #: 2023021

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 #: PA014572023-03

New Hampshire/TNI Certification #: 297622

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 #: PA200002-015

Pennsylvania/TNI Certification #: 65-00282

Puerto Rico Certification #: PA01457

Rhode Island Certification #: 65-00282

South Dakota Certification

Tennessee Certification #: TN02867

Texas/TNI Certification #: T104704188-22-18

Utah/TNI Certification #: PA014572223-14

USDA Soil Permit #: 525-23-67-77263

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

## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: Hammond AP-4- RADs

Pace Project No.: 92746296

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92746296001	HAM-HGWA-47	Water	08/06/24 14:45	08/07/24 12:25
92746296002	HAM-HGWA-48D	Water	08/06/24 12:25	08/07/24 12:25
92746296003	HAM-HGWA-111	Water	08/06/24 17:05	08/07/24 12:25
92746296004	HAM-HGWA-113	Water	08/08/24 15:48	08/09/24 14:15
92746296005	HAM-HGWC-102	Water	08/09/24 13:27	08/12/24 12:10
92746296006	HAM-HGWC-103	Water	08/09/24 11:21	08/12/24 12:10
92746296007	HAM-HGWA-112	Water	08/09/24 09:36	08/12/24 12:10
92746296008	HAM-HGWC-118	Water	08/09/24 15:38	08/12/24 12:10
92746296009	HAM-AP4-FD-02	Water	08/09/24 00:00	08/12/24 12:10
92746296010	HAM-AP4-EB-01	Water	08/09/24 17:00	08/12/24 12:10
92746296011	HAM-AP4-FB-01	Water	08/09/24 16:55	08/12/24 12:10
92746296012	HAM-HGWC-101	Water	08/10/24 10:32	08/12/24 12:10
92746296013	HAM-HGWC-105	Water	08/10/24 11:44	08/12/24 12:10
92746296014	HAM-HGWC-107	Water	08/10/24 13:17	08/12/24 12:10
92746296015	HAM-HGWC-109	Water	08/10/24 11:10	08/12/24 12:10
92746296016	HAM-HGWC-117A	Water	08/10/24 14:25	08/12/24 12:10
92746296017	HAM-AP4-FD-01	Water	08/10/24 00:00	08/12/24 12:10
92746296018	HAM-AP4-EB-02	Water	08/10/24 12:35	08/12/24 12:10
92746296019	HAM-AP4-FB-02	Water	08/10/24 12:30	08/12/24 12:10

## REPORT OF LABORATORY ANALYSIS

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## SAMPLE ANALYTE COUNT

Project: Hammond AP-4- RADs

Pace Project No.: 92746296

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92746296001	HAM-HGWA-47	EPA 9315	SLC	1	PASI-PA
		EPA 9320	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92746296002	HAM-HGWA-48D	EPA 9315	SLC	1	PASI-PA
		EPA 9320	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92746296003	HAM-HGWA-111	EPA 9315	SLC	1	PASI-PA
		EPA 9320	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92746296004	HAM-HGWA-113	EPA 9315	SLC	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92746296005	HAM-HGWC-102	EPA 9315	SLC	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92746296006	HAM-HGWC-103	EPA 9315	SLC	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92746296007	HAM-HGWA-112	EPA 9315	SLC	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92746296008	HAM-HGWC-118	EPA 9315	SLC	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92746296009	HAM-AP4-FD-02	EPA 9315	SLC	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92746296010	HAM-AP4-EB-01	EPA 9315	SLC	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92746296011	HAM-AP4-FB-01	EPA 9315	SLC	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92746296012	HAM-HGWC-101	EPA 9315	SLC	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92746296013	HAM-HGWC-105	EPA 9315	SLC	1	PASI-PA

## REPORT OF LABORATORY ANALYSIS

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## SAMPLE ANALYTE COUNT

Project: Hammond AP-4- RADs

Pace Project No.: 92746296

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92746296014	HAM-HGWC-107	EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		EPA 9315	SLC	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
92746296015	HAM-HGWC-109	Total Radium Calculation	JAL	1	PASI-PA
		EPA 9315	SLC	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92746296016	HAM-HGWC-117A	EPA 9315	SLC	1	PASI-PA
		EPA 9320	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		EPA 9315	SLC	1	PASI-PA
92746296017	HAM-AP4-FD-01	EPA 9320	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		EPA 9315	SLC	1	PASI-PA
		EPA 9320	JJS1	1	PASI-PA
92746296018	HAM-AP4-EB-02	Total Radium Calculation	JAL	1	PASI-PA
		EPA 9315	SLC	1	PASI-PA
		EPA 9320	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92746296019	HAM-AP4-FB-02	EPA 9315	SLC	1	PASI-PA
		EPA 9320	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		EPA 9315	SLC	1	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg

## REPORT OF LABORATORY ANALYSIS

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## SUMMARY OF DETECTION

Project: Hammond AP-4- RADs

Pace Project No.: 92746296

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>92746296001</b>	<b>HAM-HGWA-47</b>					
EPA 9315	Radium-226	0.0870U ± 0.139 (0.307) C:93% T:NA	pCi/L		08/29/24 10:15	
EPA 9320	Radium-228	0.886 ± 0.406 (0.659) C:79% T:87%	pCi/L		08/26/24 11:36	
Total Radium Calculation	Total Radium	0.973 ± 0.545 (0.966)	pCi/L		08/30/24 12:32	
<b>92746296002</b>	<b>HAM-HGWA-48D</b>					
EPA 9315	Radium-226	0.182U ± 0.188 (0.374) C:97% T:NA	pCi/L		08/29/24 08:41	
EPA 9320	Radium-228	0.319U ± 0.326 (0.669) C:75% T:84%	pCi/L		08/26/24 11:35	
Total Radium Calculation	Total Radium	0.501U ± 0.514 (1.04)	pCi/L		08/30/24 12:32	
<b>92746296003</b>	<b>HAM-HGWA-111</b>					
EPA 9315	Radium-226	0.0420U ± 0.135 (0.336) C:93% T:NA	pCi/L		08/29/24 08:42	
EPA 9320	Radium-228	0.0574U ± 0.319 (0.729) C:80% T:87%	pCi/L		08/26/24 11:35	
Total Radium Calculation	Total Radium	0.0994U ± 0.454 (1.07)	pCi/L		08/30/24 12:32	
<b>92746296004</b>	<b>HAM-HGWA-113</b>					
EPA 9315	Radium-226	0.113U ± 0.144 (0.310) C:94% T:NA	pCi/L		09/03/24 08:24	
EPA 9320	Radium-228	0.0683U ± 0.350 (0.796) C:84% T:87%	pCi/L		08/27/24 15:41	
Total Radium Calculation	Total Radium	0.181U ± 0.494 (1.11)	pCi/L		09/03/24 16:40	

## REPORT OF LABORATORY ANALYSIS

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## SUMMARY OF DETECTION

Project: Hammond AP-4- RADs

Pace Project No.: 92746296

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>92746296005</b>	<b>HAM-HGWC-102</b>					
EPA 9315	Radium-226	-0.0417U ± 0.114 (0.390) C:79% T:NA	pCi/L		09/04/24 09:14	
EPA 9320	Radium-228	0.604U ± 0.373 (0.688) C:84% T:84%	pCi/L		08/28/24 14:37	
Total Radium Calculation	Total Radium	0.604U ± 0.487 (1.08)	pCi/L		09/05/24 15:42	
<b>92746296006</b>	<b>HAM-HGWC-103</b>					
EPA 9315	Radium-226	0.0404U ± 0.152 (0.391) C:84% T:NA	pCi/L		09/04/24 09:14	
EPA 9320	Radium-228	0.338U ± 0.340 (0.701) C:81% T:91%	pCi/L		08/28/24 14:37	
Total Radium Calculation	Total Radium	0.378U ± 0.492 (1.09)	pCi/L		09/05/24 15:42	
<b>92746296007</b>	<b>HAM-HGWA-112</b>					
EPA 9315	Radium-226	0.0715U ± 0.242 (0.589) C:92% T:NA	pCi/L		09/04/24 08:16	
EPA 9320	Radium-228	0.904 ± 0.387 (0.616) C:83% T:87%	pCi/L		08/28/24 12:26	
Total Radium Calculation	Total Radium	0.976U ± 0.629 (1.21)	pCi/L		09/05/24 15:42	
<b>92746296008</b>	<b>HAM-HGWC-118</b>					
EPA 9315	Radium-226	0.0850U ± 0.243 (0.587) C:84% T:NA	pCi/L		09/04/24 08:16	
EPA 9320	Radium-228	0.336U ± 0.294 (0.586) C:79% T:88%	pCi/L		08/28/24 12:26	
Total Radium Calculation	Total Radium	0.421U ± 0.537 (1.17)	pCi/L		09/05/24 15:42	

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## SUMMARY OF DETECTION

Project: Hammond AP-4- RADs  
Pace Project No.: 92746296

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>92746296009</b>	<b>HAM-AP4-FD-02</b>					
EPA 9315	Radium-226	0.182U ± 0.276 (0.609) C:81% T:NA	pCi/L		09/04/24 08:16	
EPA 9320	Radium-228	0.297U ± 0.284 (0.579) C:82% T:88%	pCi/L		08/28/24 12:26	
Total Radium Calculation	Total Radium	0.479U ± 0.560 (1.19)	pCi/L		09/05/24 15:42	
<b>92746296010</b>	<b>HAM-AP4-EB-01</b>					
EPA 9315	Radium-226	-0.000339U ± 0.286 (0.741) C:79% T:NA	pCi/L		09/04/24 08:16	
EPA 9320	Radium-228	0.820 ± 0.376 (0.622) C:81% T:88%	pCi/L		08/28/24 12:26	
Total Radium Calculation	Total Radium	0.820U ± 0.662 (1.36)	pCi/L		09/05/24 15:42	
<b>92746296011</b>	<b>HAM-AP4-FB-01</b>					
EPA 9315	Radium-226	0.125U ± 0.238 (0.546) C:85% T:NA	pCi/L		09/04/24 08:19	
EPA 9320	Radium-228	0.392U ± 0.370 (0.762) C:83% T:88%	pCi/L		08/28/24 12:27	
Total Radium Calculation	Total Radium	0.517U ± 0.608 (1.31)	pCi/L		09/05/24 15:42	
<b>92746296012</b>	<b>HAM-HGWC-101</b>					
EPA 9315	Radium-226	0.0371U ± 0.286 (0.725) C:80% T:NA	pCi/L		09/04/24 09:52	
EPA 9320	Radium-228	0.780 ± 0.406 (0.726) C:83% T:90%	pCi/L		08/28/24 12:27	
Total Radium Calculation	Total Radium	0.817U ± 0.692 (1.45)	pCi/L		09/05/24 15:42	

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## SUMMARY OF DETECTION

Project: Hammond AP-4- RADs

Pace Project No.: 92746296

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>92746296013</b>	<b>HAM-HGWC-105</b>					
EPA 9315	Radium-226	0.551 ± 0.339 (0.536) C:83% T:NA	pCi/L		09/04/24 09:52	
EPA 9320	Radium-228	0.142U ± 0.314 (0.696) C:90% T:85%	pCi/L		08/28/24 15:37	
Total Radium Calculation	Total Radium	0.693U ± 0.653 (1.23)	pCi/L		09/05/24 15:42	
<b>92746296014</b>	<b>HAM-HGWC-107</b>					
EPA 9315	Radium-226	0.0939U ± 0.283 (0.684) C:85% T:NA	pCi/L		09/04/24 09:52	
EPA 9320	Radium-228	0.129U ± 0.260 (0.576) C:91% T:85%	pCi/L		08/28/24 15:37	
Total Radium Calculation	Total Radium	0.223U ± 0.543 (1.26)	pCi/L		09/05/24 15:42	
<b>92746296015</b>	<b>HAM-HGWC-109</b>					
EPA 9315	Radium-226	0.444U ± 0.349 (0.659) C:85% T:NA	pCi/L		09/04/24 09:53	
EPA 9320	Radium-228	0.0564U ± 0.245 (0.564) C:87% T:88%	pCi/L		08/28/24 15:37	
Total Radium Calculation	Total Radium	0.500U ± 0.594 (1.22)	pCi/L		09/05/24 15:42	
<b>92746296016</b>	<b>HAM-HGWC-117A</b>					
EPA 9315	Radium-226	0.250U ± 0.296 (0.621) C:77% T:NA	pCi/L		09/04/24 09:53	
EPA 9320	Radium-228	0.473U ± 0.308 (0.572) C:86% T:89%	pCi/L		08/28/24 15:37	
Total Radium Calculation	Total Radium	0.723U ± 0.604 (1.19)	pCi/L		09/05/24 15:39	

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## SUMMARY OF DETECTION

Project: Hammond AP-4- RADs

Pace Project No.: 92746296

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>92746296017</b>	<b>HAM-AP4-FD-01</b>					
EPA 9315	Radium-226	0.293U ± 0.338 (0.714) C:81% T:NA	pCi/L		09/04/24 09:53	
EPA 9320	Radium-228	0.402U ± 0.341 (0.678) C:84% T:80%	pCi/L		08/28/24 15:37	
Total Radium Calculation	Total Radium	0.695U ± 0.679 (1.39)	pCi/L		09/05/24 15:39	
<b>92746296018</b>	<b>HAM-AP4-EB-02</b>					
EPA 9315	Radium-226	0.181U ± 0.247 (0.533) C:91% T:NA	pCi/L		09/04/24 09:55	
EPA 9320	Radium-228	0.565U ± 0.345 (0.637) C:82% T:92%	pCi/L		08/28/24 15:37	
Total Radium Calculation	Total Radium	0.746U ± 0.592 (1.17)	pCi/L		09/05/24 15:39	
<b>92746296019</b>	<b>HAM-AP4-FB-02</b>					
EPA 9315	Radium-226	0.0256U ± 0.166 (0.435) C:94% T:NA	pCi/L		09/04/24 09:58	
EPA 9320	Radium-228	0.715U ± 0.452 (0.859) C:82% T:84%	pCi/L		08/28/24 15:37	
Total Radium Calculation	Total Radium	0.741U ± 0.618 (1.29)	pCi/L		09/05/24 15:39	

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## ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Hammond AP-4- RADs

Pace Project No.: 92746296

Sample: HAM-HGWA-47 Lab ID: 92746296001 Collected: 08/06/24 14:45 Received: 08/07/24 12:25 Matrix: Water

PWS: Site ID: Sample Type:

Comments: • The sampler's name and signature were not listed on the COC.

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	<b>0.0870U ± 0.139 (0.307)</b> <b>C:93% T:NA</b>	pCi/L	08/29/24 10:15	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>0.886 ± 0.406 (0.659)</b> <b>C:79% T:87%</b>	pCi/L	08/26/24 11:36	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>0.973 ± 0.545 (0.966)</b>	pCi/L	08/30/24 12:32	7440-14-4	

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## ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Hammond AP-4- RADs

Pace Project No.: 92746296

Sample: HAM-HGWA-48D		Lab ID: 92746296002	Collected: 08/06/24 12:25	Received: 08/07/24 12:25	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	0.182U ± 0.188 (0.374) C:97% T:NA		pCi/L	08/29/24 08:41	13982-63-3	
Pace Analytical Services - Greensburg							
Radium-228	EPA 9320	0.319U ± 0.326 (0.669) C:75% T:84%		pCi/L	08/26/24 11:35	15262-20-1	
Pace Analytical Services - Greensburg							
Total Radium	Total Radium Calculation	0.501U ± 0.514 (1.04)		pCi/L	08/30/24 12:32	7440-14-4	

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## ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Hammond AP-4- RADs

Pace Project No.: 92746296

Sample: HAM-HGWA-111		Lab ID: 92746296003	Collected: 08/06/24 17:05	Received: 08/07/24 12:25	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	0.0420U ± 0.135 (0.336) C:93% T:NA		pCi/L	08/29/24 08:42	13982-63-3	
Pace Analytical Services - Greensburg							
Radium-228	EPA 9320	0.0574U ± 0.319 (0.729) C:80% T:87%		pCi/L	08/26/24 11:35	15262-20-1	
Pace Analytical Services - Greensburg							
Total Radium	Total Radium Calculation	0.0994U ± 0.454 (1.07)		pCi/L	08/30/24 12:32	7440-14-4	

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## ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Hammond AP-4- RADs

Pace Project No.: 92746296

Sample: HAM-HGWA-113		Lab ID: 92746296004	Collected: 08/08/24 15:48	Received: 08/09/24 14:15	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC) Carr Trac		Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg							
Radium-226	EPA 9315	0.113U ± 0.144 (0.310) C:94% T:NA		pCi/L	09/03/24 08:24	13982-63-3	
Pace Analytical Services - Greensburg							
Radium-228	EPA 9320	0.0683U ± 0.350 (0.796) C:84% T:87%		pCi/L	08/27/24 15:41	15262-20-1	
Pace Analytical Services - Greensburg							
Total Radium	Total Radium Calculation	0.181U ± 0.494 (1.11)		pCi/L	09/03/24 16:40	7440-14-4	

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## ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Hammond AP-4- RADs

Pace Project No.: 92746296

Sample: HAM-HGWC-102		Lab ID: 92746296005	Collected: 08/09/24 13:27	Received: 08/12/24 12:10	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC) Carr Trac		Units	Analyzed	CAS No.	Qual
Radium-226	Pace Analytical Services - Greensburg			pCi/L	09/04/24 09:14	13982-63-3	
	EPA 9315	-0.0417U ± 0.114 (0.390) C:79% T:NA					
Radium-228	Pace Analytical Services - Greensburg			pCi/L	08/28/24 14:37	15262-20-1	
	EPA 9320	0.604U ± 0.373 (0.688) C:84% T:84%					
Total Radium	Pace Analytical Services - Greensburg			pCi/L	09/05/24 15:42	7440-14-4	
	Total Radium Calculation	0.604U ± 0.487 (1.08)					

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## ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Hammond AP-4- RADs

Pace Project No.: 92746296

Sample: HAM-HGWC-103		Lab ID: 92746296006	Collected: 08/09/24 11:21	Received: 08/12/24 12:10	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	0.0404U ± 0.152 (0.391) C:84% T:NA		pCi/L	09/04/24 09:14	13982-63-3	
Pace Analytical Services - Greensburg							
Radium-228	EPA 9320	0.338U ± 0.340 (0.701) C:81% T:91%		pCi/L	08/28/24 14:37	15262-20-1	
Pace Analytical Services - Greensburg							
Total Radium	Total Radium Calculation	0.378U ± 0.492 (1.09)		pCi/L	09/05/24 15:42	7440-14-4	

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## ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Hammond AP-4- RADs

Pace Project No.: 92746296

Sample: HAM-HGWA-112		Lab ID: 92746296007	Collected: 08/09/24 09:36	Received: 08/12/24 12:10	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC) Carr Trac		Units	Analyzed	CAS No.	Qual
Radium-226	Pace Analytical Services - Greensburg			pCi/L	09/04/24 08:16	13982-63-3	
	EPA 9315	0.0715U ± 0.242 (0.589) C:92% T:NA					
Radium-228	Pace Analytical Services - Greensburg			pCi/L	08/28/24 12:26	15262-20-1	
	EPA 9320	0.904 ± 0.387 (0.616) C:83% T:87%					
Total Radium	Pace Analytical Services - Greensburg			pCi/L	09/05/24 15:42	7440-14-4	
	Total Radium Calculation	0.976U ± 0.629 (1.21)					

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## ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Hammond AP-4- RADs

Pace Project No.: 92746296

Sample: HAM-HGWC-118		Lab ID: 92746296008	Collected: 08/09/24 15:38	Received: 08/12/24 12:10	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	0.0850U ± 0.243 (0.587) C:84% T:NA		pCi/L	09/04/24 08:16	13982-63-3	
Pace Analytical Services - Greensburg							
Radium-228	EPA 9320	0.336U ± 0.294 (0.586) C:79% T:88%		pCi/L	08/28/24 12:26	15262-20-1	
Pace Analytical Services - Greensburg							
Total Radium	Total Radium Calculation	0.421U ± 0.537 (1.17)		pCi/L	09/05/24 15:42	7440-14-4	

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## ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Hammond AP-4- RADs

Pace Project No.: 92746296

Sample: HAM-AP4-FD-02		Lab ID: 92746296009	Collected: 08/09/24 00:00	Received: 08/12/24 12:10	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	0.182U ± 0.276 (0.609) C:81% T:NA		pCi/L	09/04/24 08:16	13982-63-3	
Pace Analytical Services - Greensburg							
Radium-228	EPA 9320	0.297U ± 0.284 (0.579) C:82% T:88%		pCi/L	08/28/24 12:26	15262-20-1	
Pace Analytical Services - Greensburg							
Total Radium	Total Radium Calculation	0.479U ± 0.560 (1.19)		pCi/L	09/05/24 15:42	7440-14-4	

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## ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Hammond AP-4- RADs

Pace Project No.: 92746296

Sample: HAM-AP4-EB-01		Lab ID: 92746296010	Collected: 08/09/24 17:00	Received: 08/12/24 12:10	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC) Carr Trac		Units	Analyzed	CAS No.	Qual
Radium-226	Pace Analytical Services - Greensburg			pCi/L	09/04/24 08:16	13982-63-3	
	EPA 9315	-0.000339U ± 0.286 (0.741) C:79% T:NA					
Radium-228	Pace Analytical Services - Greensburg			pCi/L	08/28/24 12:26	15262-20-1	
	EPA 9320	0.820 ± 0.376 (0.622) C:81% T:88%					
Total Radium	Pace Analytical Services - Greensburg			pCi/L	09/05/24 15:42	7440-14-4	
	Total Radium Calculation	0.820U ± 0.662 (1.36)					

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## ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Hammond AP-4- RADs

Pace Project No.: 92746296

Sample: HAM-AP4-FB-01		Lab ID: 92746296011	Collected: 08/09/24 16:55	Received: 08/12/24 12:10	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	0.125U ± 0.238 (0.546) C:85% T:NA		pCi/L	09/04/24 08:19	13982-63-3	
Pace Analytical Services - Greensburg							
Radium-228	EPA 9320	0.392U ± 0.370 (0.762) C:83% T:88%		pCi/L	08/28/24 12:27	15262-20-1	
Pace Analytical Services - Greensburg							
Total Radium	Total Radium Calculation	0.517U ± 0.608 (1.31)		pCi/L	09/05/24 15:42	7440-14-4	

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## ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Hammond AP-4- RADs

Pace Project No.: 92746296

Sample: HAM-HGWC-101		Lab ID: 92746296012	Collected: 08/10/24 10:32	Received: 08/12/24 12:10	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	0.0371U ± 0.286 (0.725) C:80% T:NA		pCi/L	09/04/24 09:52	13982-63-3	
Pace Analytical Services - Greensburg							
Radium-228	EPA 9320	0.780 ± 0.406 (0.726) C:83% T:90%		pCi/L	08/28/24 12:27	15262-20-1	
Pace Analytical Services - Greensburg							
Total Radium	Total Radium Calculation	0.817U ± 0.692 (1.45)		pCi/L	09/05/24 15:42	7440-14-4	

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## ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Hammond AP-4- RADs

Pace Project No.: 92746296

Sample: HAM-HGWC-105		Lab ID: 92746296013	Collected: 08/10/24 11:44	Received: 08/12/24 12:10	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC) Carr Trac		Units	Analyzed	CAS No.	Qual
Radium-226	Pace Analytical Services - Greensburg			pCi/L	09/04/24 09:52	13982-63-3	
	EPA 9315	0.551 ± 0.339 (0.536) C:83% T:NA					
Radium-228	Pace Analytical Services - Greensburg			pCi/L	08/28/24 15:37	15262-20-1	
	EPA 9320	0.142U ± 0.314 (0.696) C:90% T:85%					
Total Radium	Pace Analytical Services - Greensburg			pCi/L	09/05/24 15:42	7440-14-4	
	Total Radium Calculation	0.693U ± 0.653 (1.23)					

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## ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Hammond AP-4- RADs

Pace Project No.: 92746296

Sample: HAM-HGWC-107		Lab ID: 92746296014	Collected: 08/10/24 13:17	Received: 08/12/24 12:10	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	0.0939U ± 0.283 (0.684) C:85% T:NA		pCi/L	09/04/24 09:52	13982-63-3	
Pace Analytical Services - Greensburg							
Radium-228	EPA 9320	0.129U ± 0.260 (0.576) C:91% T:85%		pCi/L	08/28/24 15:37	15262-20-1	
Pace Analytical Services - Greensburg							
Total Radium	Total Radium Calculation	0.223U ± 0.543 (1.26)		pCi/L	09/05/24 15:42	7440-14-4	

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## ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Hammond AP-4- RADs

Pace Project No.: 92746296

Sample: HAM-HGWC-109		Lab ID: 92746296015	Collected: 08/10/24 11:10	Received: 08/12/24 12:10	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	0.444U ± 0.349 (0.659) C:85% T:NA		pCi/L	09/04/24 09:53	13982-63-3	
Pace Analytical Services - Greensburg							
Radium-228	EPA 9320	0.0564U ± 0.245 (0.564) C:87% T:88%		pCi/L	08/28/24 15:37	15262-20-1	
Pace Analytical Services - Greensburg							
Total Radium	Total Radium Calculation	0.500U ± 0.594 (1.22)		pCi/L	09/05/24 15:42	7440-14-4	

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## ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Hammond AP-4- RADs

Pace Project No.: 92746296

Sample: HAM-HGWC-117A		Lab ID: 92746296016	Collected: 08/10/24 14:25	Received: 08/12/24 12:10	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC) Carr Trac		Units	Analyzed	CAS No.	Qual
Radium-226	Pace Analytical Services - Greensburg			pCi/L	09/04/24 09:53	13982-63-3	
	EPA 9315	0.250U ± 0.296 (0.621) C:77% T:NA					
Radium-228	Pace Analytical Services - Greensburg			pCi/L	08/28/24 15:37	15262-20-1	
	EPA 9320	0.473U ± 0.308 (0.572) C:86% T:89%					
Total Radium	Pace Analytical Services - Greensburg			pCi/L	09/05/24 15:39	7440-14-4	
	Total Radium Calculation	0.723U ± 0.604 (1.19)					

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Hammond AP-4- RADs

Pace Project No.: 92746296

Sample: HAM-AP4-FD-01		Lab ID: 92746296017	Collected: 08/10/24 00:00	Received: 08/12/24 12:10	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	0.293U ± 0.338 (0.714) C:81% T:NA		pCi/L	09/04/24 09:53	13982-63-3	
Pace Analytical Services - Greensburg							
Radium-228	EPA 9320	0.402U ± 0.341 (0.678) C:84% T:80%		pCi/L	08/28/24 15:37	15262-20-1	
Pace Analytical Services - Greensburg							
Total Radium	Total Radium Calculation	0.695U ± 0.679 (1.39)		pCi/L	09/05/24 15:39	7440-14-4	

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## ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Hammond AP-4- RADs

Pace Project No.: 92746296

Sample: HAM-AP4-EB-02		Lab ID: 92746296018	Collected: 08/10/24 12:35	Received: 08/12/24 12:10	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	0.181U ± 0.247 (0.533) C:91% T:NA		pCi/L	09/04/24 09:55	13982-63-3	
Pace Analytical Services - Greensburg							
Radium-228	EPA 9320	0.565U ± 0.345 (0.637) C:82% T:92%		pCi/L	08/28/24 15:37	15262-20-1	
Pace Analytical Services - Greensburg							
Total Radium	Total Radium Calculation	0.746U ± 0.592 (1.17)		pCi/L	09/05/24 15:39	7440-14-4	

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## ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Hammond AP-4- RADs

Pace Project No.: 92746296

Sample: HAM-AP4-FB-02		Lab ID: 92746296019	Collected: 08/10/24 12:30	Received: 08/12/24 12:10	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC) Carr Trac		Units	Analyzed	CAS No.	Qual
Radium-226	Pace Analytical Services - Greensburg			pCi/L	09/04/24 09:58	13982-63-3	
	EPA 9315	0.0256U ± 0.166 (0.435) C:94% T:NA					
Radium-228	Pace Analytical Services - Greensburg			pCi/L	08/28/24 15:37	15262-20-1	
	EPA 9320	0.715U ± 0.452 (0.859) C:82% T:84%					
Total Radium	Pace Analytical Services - Greensburg			pCi/L	09/05/24 15:39	7440-14-4	
	Total Radium Calculation	0.741U ± 0.618 (1.29)					

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## QUALITY CONTROL - RADIOCHEMISTRY

Project: Hammond AP-4- RADs

Pace Project No.: 92746296

QC Batch:	690237	Analysis Method:	EPA 9315
QC Batch Method:	EPA 9315	Analysis Description:	9315 Total Radium
		Laboratory:	Pace Analytical Services - Greensburg
Associated Lab Samples:	92746296001, 92746296002, 92746296003		

METHOD BLANK: 3361203 Matrix: Water

Associated Lab Samples: 92746296001, 92746296002, 92746296003

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	-0.0537 ± 0.120 (0.379) C:96% T:NA	pCi/L	08/29/24 08:40	

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## QUALITY CONTROL - RADIOCHEMISTRY

Project: Hammond AP-4- RADs

Pace Project No.: 92746296

QC Batch:	690241	Analysis Method:	EPA 9315
QC Batch Method:	EPA 9315	Analysis Description:	9315 Total Radium
		Laboratory:	Pace Analytical Services - Greensburg
Associated Lab Samples:	92746296005, 92746296006, 92746296007, 92746296008, 92746296009, 92746296010, 92746296011, 92746296012, 92746296013, 92746296014, 92746296015		

METHOD BLANK: 3361208 Matrix: Water

Associated Lab Samples: 92746296005, 92746296006, 92746296007, 92746296008, 92746296009, 92746296010, 92746296011, 92746296012, 92746296013, 92746296014, 92746296015

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.159 ± 0.232 (0.507) C:86% T:NA	pCi/L	09/04/24 09:12	

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## QUALITY CONTROL - RADIOCHEMISTRY

Project: Hammond AP-4- RADs

Pace Project No.: 92746296

QC Batch:	690810	Analysis Method:	EPA 9320
QC Batch Method:	EPA 9320	Analysis Description:	9320 Radium 228
		Laboratory:	Pace Analytical Services - Greensburg
Associated Lab Samples:	92746296016, 92746296017, 92746296018, 92746296019		

METHOD BLANK: 3363812 Matrix: Water

Associated Lab Samples: 92746296016, 92746296017, 92746296018, 92746296019

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.480 ± 0.328 (0.623) C:86% T:90%	pCi/L	08/28/24 15:37	

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## QUALITY CONTROL - RADIOCHEMISTRY

Project: Hammond AP-4- RADs

Pace Project No.: 92746296

QC Batch: 689874

Analysis Method: EPA 9320

QC Batch Method: EPA 9320

Analysis Description: 9320 Radium 228

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92746296004

METHOD BLANK: 3359344

Matrix: Water

Associated Lab Samples: 92746296004

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.277 ± 0.305 (0.635) C:86% T:88%	pCi/L	08/27/24 15:38	

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## QUALITY CONTROL - RADIOCHEMISTRY

Project: Hammond AP-4- RADs

Pace Project No.: 92746296

QC Batch:	689870	Analysis Method:	EPA 9320
QC Batch Method:	EPA 9320	Analysis Description:	9320 Radium 228
		Laboratory:	Pace Analytical Services - Greensburg
Associated Lab Samples:	92746296001, 92746296002, 92746296003		

METHOD BLANK: 3359338 Matrix: Water

Associated Lab Samples: 92746296001, 92746296002, 92746296003

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.622 ± 0.413 (0.764) C:58% T:84%	pCi/L	08/26/24 11:33	

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## QUALITY CONTROL - RADIOCHEMISTRY

Project: Hammond AP-4- RADs

Pace Project No.: 92746296

QC Batch: 690239

Analysis Method: EPA 9315

QC Batch Method: EPA 9315

Analysis Description: 9315 Total Radium

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92746296004

METHOD BLANK: 3361205

Matrix: Water

Associated Lab Samples: 92746296004

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0785 ± 0.121 (0.267) C:85% T:NA	pCi/L	09/02/24 14:39	

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## QUALITY CONTROL - RADIOCHEMISTRY

Project: Hammond AP-4- RADs

Pace Project No.: 92746296

QC Batch:	690583	Analysis Method:	EPA 9320
QC Batch Method:	EPA 9320	Analysis Description:	9320 Radium 228
		Laboratory:	Pace Analytical Services - Greensburg
Associated Lab Samples:	92746296005, 92746296006, 92746296007, 92746296008, 92746296009, 92746296010, 92746296011, 92746296012, 92746296013, 92746296014, 92746296015		

METHOD BLANK: 3362585 Matrix: Water

Associated Lab Samples: 92746296005, 92746296006, 92746296007, 92746296008, 92746296009, 92746296010, 92746296011, 92746296012, 92746296013, 92746296014, 92746296015

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.164 ± 0.321 (0.708) C:85% T:89%	pCi/L	08/28/24 14:36	

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## QUALITY CONTROL - RADIOCHEMISTRY

Project: Hammond AP-4- RADs

Pace Project No.: 92746296

QC Batch:	690694	Analysis Method:	EPA 9315
QC Batch Method:	EPA 9315	Analysis Description:	9315 Total Radium
		Laboratory:	Pace Analytical Services - Greensburg
Associated Lab Samples:	92746296016, 92746296017, 92746296018, 92746296019		

METHOD BLANK: 3363058 Matrix: Water

Associated Lab Samples: 92746296016, 92746296017, 92746296018, 92746296019

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.108 ± 0.233 (0.544) C:90% T:NA	pCi/L	09/04/24 09:53	

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## QUALIFIERS

Project: Hammond AP-4- RADs  
Pace Project No.: 92746296

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.  
ND - Not Detected at or above adjusted reporting limit.  
TNTC - Too Numerous To Count  
J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.  
MDL - Adjusted Method Detection Limit.  
PQL - Practical Quantitation Limit.  
RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.  
S - Surrogate  
1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.  
Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.  
LCS(D) - Laboratory Control Sample (Duplicate)  
MS(D) - Matrix Spike (Duplicate)  
DUP - Sample Duplicate  
RPD - Relative Percent Difference  
NC - Not Calculable.  
SG - Silica Gel - Clean-Up  
U - Indicates the compound was analyzed for, but not detected.  
Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.  
A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.  
N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.  
Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.  
Act - Activity  
Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval).  
Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)  
(MDC) - Minimum Detectable Concentration  
Trac - Tracer Recovery (%)  
Carr - Carrier Recovery (%)  
Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.  
TNI - The NELAC Institute.

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## QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Hammond AP-4- RADs

Pace Project No.: 92746296

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92746296001	HAM-HGWA-47	EPA 9315	690237		
92746296002	HAM-HGWA-48D	EPA 9315	690237		
92746296003	HAM-HGWA-111	EPA 9315	690237		
92746296004	HAM-HGWA-113	EPA 9315	690239		
92746296005	HAM-HGWC-102	EPA 9315	690241		
92746296006	HAM-HGWC-103	EPA 9315	690241		
92746296007	HAM-HGWA-112	EPA 9315	690241		
92746296008	HAM-HGWC-118	EPA 9315	690241		
92746296009	HAM-AP4-FD-02	EPA 9315	690241		
92746296010	HAM-AP4-EB-01	EPA 9315	690241		
92746296011	HAM-AP4-FB-01	EPA 9315	690241		
92746296012	HAM-HGWC-101	EPA 9315	690241		
92746296013	HAM-HGWC-105	EPA 9315	690241		
92746296014	HAM-HGWC-107	EPA 9315	690241		
92746296015	HAM-HGWC-109	EPA 9315	690241		
92746296016	HAM-HGWC-117A	EPA 9315	690694		
92746296017	HAM-AP4-FD-01	EPA 9315	690694		
92746296018	HAM-AP4-EB-02	EPA 9315	690694		
92746296019	HAM-AP4-FB-02	EPA 9315	690694		
92746296001	HAM-HGWA-47	EPA 9320	689870		
92746296002	HAM-HGWA-48D	EPA 9320	689870		
92746296003	HAM-HGWA-111	EPA 9320	689870		
92746296004	HAM-HGWA-113	EPA 9320	689874		
92746296005	HAM-HGWC-102	EPA 9320	690583		
92746296006	HAM-HGWC-103	EPA 9320	690583		
92746296007	HAM-HGWA-112	EPA 9320	690583		
92746296008	HAM-HGWC-118	EPA 9320	690583		
92746296009	HAM-AP4-FD-02	EPA 9320	690583		
92746296010	HAM-AP4-EB-01	EPA 9320	690583		
92746296011	HAM-AP4-FB-01	EPA 9320	690583		
92746296012	HAM-HGWC-101	EPA 9320	690583		
92746296013	HAM-HGWC-105	EPA 9320	690583		
92746296014	HAM-HGWC-107	EPA 9320	690583		
92746296015	HAM-HGWC-109	EPA 9320	690583		
92746296016	HAM-HGWC-117A	EPA 9320	690810		
92746296017	HAM-AP4-FD-01	EPA 9320	690810		
92746296018	HAM-AP4-EB-02	EPA 9320	690810		
92746296019	HAM-AP4-FB-02	EPA 9320	690810		
92746296001	HAM-HGWA-47	Total Radium Calculation	693014		
92746296002	HAM-HGWA-48D	Total Radium Calculation	693014		
92746296003	HAM-HGWA-111	Total Radium Calculation	693014		
92746296004	HAM-HGWA-113	Total Radium Calculation	693459		
92746296005	HAM-HGWC-102	Total Radium Calculation	694076		
92746296006	HAM-HGWC-103	Total Radium Calculation	694076		

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## QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Hammond AP-4- RADs

Pace Project No.: 92746296

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92746296007	HAM-HGWA-112	Total Radium Calculation	694076		
92746296008	HAM-HGWC-118	Total Radium Calculation	694076		
92746296009	HAM-AP4-FD-02	Total Radium Calculation	694076		
92746296010	HAM-AP4-EB-01	Total Radium Calculation	694076		
92746296011	HAM-AP4-FB-01	Total Radium Calculation	694076		
92746296012	HAM-HGWC-101	Total Radium Calculation	694076		
92746296013	HAM-HGWC-105	Total Radium Calculation	694076		
92746296014	HAM-HGWC-107	Total Radium Calculation	694076		
92746296015	HAM-HGWC-109	Total Radium Calculation	694076		
92746296016	HAM-HGWC-117A	Total Radium Calculation	694073		
92746296017	HAM-AP4-FD-01	Total Radium Calculation	694073		
92746296018	HAM-AP4-EB-02	Total Radium Calculation	694073		
92746296019	HAM-AP4-FB-02	Total Radium Calculation	694073		

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DC# Title: ENV-FRM-HUNT-0083 V05 Sample Condition Upon Receipt

Effective Date: 05/24/2024

## Laboratory receiving samples:

Asheville ☐ Eden ☐ Greenwood ☐ Huntersville ☐ Raleigh ☐ Mechanicsville ☐ Atlanta ☒ Kernersville ☐Sample Condition  
Upon Receipt

Client Name:

GA Power

Project #:

WO#: 92746296

Courier:  
☐ Commercial☐ FedEx  
☒ Pace☐ UPS☐ USPS☐ Other:☐ ClientCustody Seal Present? ☐ Yes ☒ No Seals Intact? ☐ Yes ☐ No ☒ N/A

Date/Initials Person Examining Contents: 8/17/24 CSY

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☒ None ☐ OtherBiological Tissue Frozen?  
☐ Yes ☐ No ☒ N/A

Thermometer:

☐ IR Gun ID:

230

Type of Ice: ☒ Wet ☐ Blue ☐ None

Cooler Temp:

2.3

Correction Factor:

Add/Subtract (°C)

2.3

Temp should be above freezing to 6°C

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

Cooler Temp Corrected (°C):

2.3

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 ☐ NoDid 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 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

Person contacted: Date/Time:

Project Manager SCURF Review:

Date:

Project Manager SRF Review:

Date:



DC#\_Title: ENV-FRM-HUN1-0083 v05\_Sample Condition Upon Receipt

Effective Date: 05/24/2024

\*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 #

W0#: 92746296

PM: BV

Due Date: 08/28/24

CLIENT: 92- GP-HAM

Laboratory Receiving Location: Asheville ☐ Eden ☐ Greenwood ☐ Huntersville ☐ Raleigh ☐ Mechanicsville ☐ Atlanta ☐ Kernersville ☐

Client \_\_\_\_\_ Profile/EZ (Circle one) \_\_\_\_\_ Notes \_\_\_\_\_

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)		BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)	BP4B-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	DG94-40 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unpreserved (N/A)	DG9V-40 mL VOA H3PO4 (N/A)	KP7U-50 mL Plastic Unpreserved (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)		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)	
CC																														
1		1	1		2	2	2	1																						
2		1	1		2	2	2	1																						
3		1	1		2	2	2	1																						
4																														
5																														
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## pH Adjustment Log for Preserved Samples

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

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina 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.

<b>Section A</b> Required Client Information:		<b>Section B</b> Required Project Information:		<b>Section C</b> Invoice Information:		Page: 1 of 1	
Company: GA Power		Report To: SCS Contacts		Attention: Southern Co.		<b>REGULATORY AGENCY</b> <input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> USI <input type="checkbox"/> RCRA <input checked="" type="checkbox"/> OTHER <input type="checkbox"/> GER	
Address: Atlanta, GA		Copy To: Geosyntec Contacts		Company Name:			
Email To: SCS Contacts		Purchase Order No.:		Address:		Site Location	
Phone: Fax:		Project Name: Hammond AP-4		Pace Quote Reference:		STATE: GA	
Requested Due Date/TAT: 10 Day		Project Number: GW6581D		Pace Project Manager: Bonnie Vang			
				Pace Profile #: 10839			

ITEM #	Section D Required Client Information	Valid Matrix Codes MATRIX CODE DRINKING WATER (DW) WATER (W) WASTE WATER (WW) PRODUCT (P) SOIL/SOLID (S) OIL (O) WIPE (WI) AIR (A) OTHER (OT) TISSUE (T)	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 I.D.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
					COMPOSITE		COMPOSITE				Unpreserved	H <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>	HCl	NaOH	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>	Methanol	Other		Chloride, Fluoride, Sulfate	Full App. III and IV metals	RAD 226/228	TDS																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														

ADDITIONAL COMMENTS		RELINQUISHED BY / AFFILIATION		DATE	TIME	ACCEPTED BY / AFFILIATION		DATE	TIME	SAMPLE CONDITIONS	
Task Code: HAM-CCR-ASSMT-2024S2		Jacob Wang / Geosyntec		08/06/2024	2000	Thomas Kessler / Geosyntec		08/07/2024	1225		
		Thomas Kessler / Geosyntec		08/07/2024	1225	Ryan Williams / Pace		8/7/2024	1505		
		Ryan Williams / Pace		8/7/2024	1505	Charles Harker		8/7/24	1505		

<b>SAMPLER NAME AND SIGNATURE</b>		Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
PRINT Name of SAMPLER: J. Wang					
SIGNATURE of SAMPLER: [Signature]					
DATE Signed (MM/DD/YY): 08/06/24					

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. Any invoices not paid within 30 days.

FORM-002-REV 07, 15-FEB-2007



DC#\_Title: ENV-FRM-HUN1-0083 v05\_Sample Condition Upon Receipt

Effective Date: 05/24/2024

## Laboratory receiving samples:

Asheville ☐ Eden ☐ Greenwood ☐ Huntersville ☐ Raleigh ☐ Mechanicsville ☐ Atlanta ☒ Kernersville ☐Sample Condition  
Upon Receipt

Client Name:

GA Power

Project #:

92749296

Courier:

☐ Commercial☐ Fed Ex☒ Pace☐ UPS☐ USPS☐ Other: \_\_\_\_\_☐ Client

Custody Seal Present?

☐ Yes☒ No

Seals Intact?

☐ Yes☐ No☒ N/A

Date/Initials Person Examining Contents:

9/9/24  
Cout

Packing Material:

☐ Bubble Wrap☐ Bubble Bags☒ None☐ Other

Thermometer:

☒ IR Gun ID:

230

Type of Ice:

☒ Wet☐ Blue☐ None

Cooler Temp:

21

Correction Factor:

Add/Subtract (°C)

0.0

Temp should be above freezing to 6°C

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

Cooler Temp Corrected (°C):

2.1

USDA Regulated Soil ( ☐ N/A, water sample)Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)? ☐ Yes ☐ NoDid 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 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 type="checkbox"/> N/A	11.
Trip Blank Custody Seals Present?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A	

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? ☐ Yes ☐ No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: \_\_\_\_\_

Date/Time: \_\_\_\_\_

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

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

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

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

Qualtrax ID: 69614

Page 1 of 2





DC#\_Title: ENV-FRM-HUN1-0083 v05\_Sample Condition Upon Receipt

Effective Date: 05/24/2024

\*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 #

Laboratory Receiving Location: Asheville ☐ Eden ☐ Greenwood ☐ Huntersville ☐ Raleigh ☐ Mechanicsville ☐ Atlanta ☐ Kernersville ☐

Client \_\_\_\_\_ Profile/EZ (Circle one) \_\_\_\_\_ Notes \_\_\_\_\_

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 2N 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)	DG9H-40 mL Amber NH4Cl (N/A) (Cl-)	DG9H-40 mL VOA HC (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unpreserved (N/A)	DG9V-40 mL VOA H3PO4 (N/A)	KP7U-50 mL Plastic Unpreserved (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)	BP3R-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG8U-100 mL Amber Unpreserved (N/A) (Cl-)	VSGU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)	
CC																												
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## pH Adjustment Log for Preserved Samples

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

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

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

Figure 1: *Sketch of the geometry of the problem. The domain is a rectangular box of size  $L_x \times L_y \times L_z$ . The bottom surface is at  $z=0$  and the top surface is at  $z=L_z$ . The side surfaces are at  $x=0, x=L_x, y=0, y=L_y$ . The domain is divided into two regions by a horizontal plane at  $z=L_z/2$ . The bottom region is labeled "Bottom" and the top region is labeled "Top". The bottom region is further divided into two sub-regions by a vertical plane at  $x=L_x/2$ . The left sub-region is labeled "Left" and the right sub-region is labeled "Right". The top region is further divided into two sub-regions by a vertical plane at  $x=L_x/2$ . The left sub-region is labeled "Left" and the right sub-region is labeled "Right". The domain is further divided into four sub-regions by a vertical plane at  $x=L_x/2$  and a horizontal plane at  $z=L_z/2$ . The sub-regions are labeled "Bottom Left", "Bottom Right", "Top Left", and "Top Right". The domain is further divided into eight sub-regions by a vertical plane at  $x=L_x/2$ , a horizontal plane at  $z=L_z/2$ , and a vertical plane at  $y=L_y/2$ . The sub-regions are labeled "Bottom Left", "Bottom Right", "Top Left", "Top Right", "Bottom Left", "Bottom Right", "Top Left", and "Top Right". The domain is further divided into sixteen sub-regions by a vertical plane at  $x=L_x/2$ , a horizontal plane at  $z=L_z/2$ , a vertical plane at  $y=L_y/2$ , and a vertical plane at  $x=L_x/2$ . The sub-regions are labeled "Bottom Left", "Bottom Right", "Top Left", "Top Right", "Bottom Left", "Bottom Right", "Top Left", "Top Right", "Bottom Left", "Bottom Right", "Top Left", "Top Right", "Bottom Left", and "Bottom Right".*



DC#\_Title: ENV-FRM-HUN1-0083 v05\_Sample Condition Upon Receipt

Effective Date: 05/24/2024

## Laboratory receiving samples:

Asheville ☐ Eden ☐ Greenwood ☐ Huntersville ☐ Raleigh ☐ Mechanicsville ☐ Atlanta ☒Sample Condition  
Upon Receipt

Client Name:

Georgia Power

Project #:

WO#: 92746296

PM: BV

Due Date: 08/28/24

CLIENT: 92- GP-HAM

Courier:

☐ Commercial☐ FedEx☒ Pace☐ UPS☐ USPS☐ Other:☐ Client

Custody Seal Present?

☐ Yes☒ No

Seals Intact?

☐ Yes☐ No☒ N/ADate/Initials Person Examining Contents: 8/17/24  
cdg

Packing Material:

☐ Bubble Wrap☐ Bubble Bags☒ None☐ Other

Biological Tissue Frozen?

☐ Yes☐ No☐ N/A

Thermometer:

☐ IR Gun ID:230

Type of Ice:

☒ Wet☐ Blue☐ None

Cooler Temp:

2.1

Correction Factor:

Add/Subtract (°C)

0.0

Temp should be above freezing to 6°C

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

Cooler Temp Corrected (°C):

2.1USDA Regulated Soil ( ☐ N/A, water sample)Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)? ☐ Yes ☐ NoDid 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 type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Short Hold Time Analysis (<72 hr.)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	3.
Rush Turn Around Time Requested?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	4.
Sufficient Volume?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Correct Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6.
-Pace Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	7.
Dissolved analysis: Samples Field Filtered?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	8.
Sample Labels Match COC?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Includes Date/Time/ID/Analysis Matrix:	<u>W</u>	
Headspace in VOA Vials (>5-6mm)?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	10.
Trip Blank Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Trip Blank Custody Seals Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? ☐ Yes ☐ No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted:

Date/Time:

Project Manager SCURF Review:

Date:

Project Manager SRF Review:

Date:



DC#\_Title: ENV-FRM-HUN1-0083 v05\_Sample Condition Upon Receipt

Effective Date: 05/24/2024

WO#: 92746296

Project #

PM: BV

Due Date: 08/28/24

CLIENT: 92- GP-HAM

\*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

Laboratory Receiving Location: Asheville ☐ Eden ☐ Greenwood ☐ Huntersville ☐ Raleigh ☐ Mechanicsville ☐ Atlanta ☐ Kernersville ☐

Client \_\_\_\_\_ Profile/EZ (Circle one) \_\_\_\_\_ Notes \_\_\_\_\_

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)		BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)	BP4B-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	DG94-40 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unpreserved (N/A)	DG9V-40 mL VOA H3PO4 (N/A)	KP7U-50 mL Plastic Unpreserved (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)	BP3R-250 mL Plastic (NH2)2SC4 (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)	
CC																													
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## pH Adjustment Log for Preserved Samples

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

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina 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:   
Fax:   
Requested Due Date/TAT: 10 Day

## Section B

Required Project Information:

Report To: SCS Contacts  
Copy To: Geosyntec Contacts  
Purchase Order No.:   
Project Name: Hammond AP-4  
Project Number: GW6581D

## Section C

Invoice Information:

Attention: Southern Co.  
Company Name:   
Address:   
Pace Quote Reference:   
Pace Project Manager: Bonnie Vang  
Pace Profile #: 10839

Page: 1 of 1

## REGULATORY AGENCY

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

Site Location

GA

STATE:

ITEM #	Section D Required Client Information		Valid Matrix Codes MATRIX CODE DRINKING WATER DW WATER WT WASTE WATER WW PRODUCT P SOIL/SOLID S OIL OI WIPE WI AIR AR OTHER OT TISSUE 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 I.D.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
							COMPOSITE START		COMPOSITE END/GRAB				Unpreserved	H <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>	HCl	NaOH	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>	Methanol	Other		N	N	N	N	N	N	N	N	N	N	N	N			N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N

ADDITIONAL COMMENTS		RELINQUISHED BY / AFFILIATION		DATE	TIME	ACCEPTED BY / AFFILIATION		DATE	TIME	SAMPLE CONDITIONS	
Task Code: HAM-CCR-ASSMT-2024S2		Thomas Kessler/Geosyntec		08/09/24	0715	Jacob Tracy/Geosyntec		08/12/24	0745		
		Helen Jacobson/Geosyntec		08/12/24	12:10	Lyan Williams/Pace		08/12/24	12:10		
		Lyan Williams/Pace		8/12/2024	1352	Charles Fink		8/12/24	1352		

## SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER:

SIGNATURE of SAMPLER:

DATE Signed

(MM/DD/YY): 08/09/24

Temp in °C

Received on Ice (Y/N)

Custody Sealed Cooler (Y/N)

Samples Intact (Y/N)

Important Note: By signing this form you are accepting Pace's RLT 30 day payment terms, and agreeing to late charges at 1.5% per month for any amount due past within 30 days.

FALL-041,0405 (07, 15-F-B-2(01))



DC#\_Title: ENV-FRM-HUN1-0083 v05\_Sample Condition Upon Receipt

Effective Date: 05/24/2024

## Laboratory receiving samples:

Asheville ☐ Eden ☐ Greenwood ☐ Huntersville ☐ Raleigh ☐ Mechanicsville ☐ Atlanta ☒ Kernersville ☐Sample Condition  
Upon Receipt

Client Name:

*George Power*

Project #:

WO#: 92746296

Courier:

☐ Commercial☐ Fed-Ex☐ UPS☐ USPS☐ Client☒ Pace☐ Other: \_\_\_\_\_

PM: BV

Due Date: 08/28/24

CLIENT: 92- GP-HAM

Custody Seal Present?

☐ Yes☒ No

Seals Intact?

☐ Yes☐ No☒ N/ADate/Initials Person Examining Contents: *8/13/24*  
*CAJ*

Packing Material:

☐ Bubble Wrap☐ Bubble Bags☒ None☐ Other

Biological Tissue Frozen?

☐ Yes☐ No☐ N/A

Thermometer:

☐ IR Gun ID:*230*

Type of Ice:

☒ Wet☐ Blue☐ None

Cooler Temp:

*2.1*

Correction Factor:

Add/Subtract (°C)

*0.0*

Temp should be above freezing to 6°C

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

Cooler Temp Corrected (°C):

*2.1*USDA Regulated Soil ( ☐ N/A, water sample)Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)? ☐ Yes ☐ NoDid 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: <i>W</i>			
Headspace in VOA Vials (>5-6mm)?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	10.	
Trip Blank Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.	
Trip Blank Custody Seals Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A		

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? ☐ Yes ☐ No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: \_\_\_\_\_

Date/Time: \_\_\_\_\_

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

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

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

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



DC#\_Title: ENV-FRM-HUN1-0083 v05\_Sample Condition Upon Receipt

Effective Date: 05/24/2024

\*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#: 92746296

PM: BV

Due Date: 08/28/24

CLIENT: 92- GP-HAM

Laboratory Receiving Location: Asheville ☐ Eden ☐ Greenwood ☐ Huntersville ☐ Raleigh ☐ Mechanicsville ☐ Atlanta ☐ Kernersville ☐

Client \_\_\_\_\_ Profile/EZ (Circle one) \_\_\_\_\_ Notes \_\_\_\_\_

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)	BP4B-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass Jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	DG94-40 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unpreserved (N/A)	DG9V-40 mL VOA H3PO4 (N/A)	KP7U-50 mL Plastic Unpreserved (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)	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)	
CC																												
1	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
2	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
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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  
Phone:   
Fax:   
Requested Due Date/TAT: 10 Day

## Section B Required Project Information:

Report To: SCS Contacts  
Copy To: Geosyntec Contacts  
Purchase Order No.:   
Project Name: Hammond AP-4  
Project Number: GW6581D

## Section C Invoice Information:

Attention: Southern Co.  
Company Name:   
Address:   
Pace Quote Reference:   
Pace Project Manager: Bonnie Vang  
Pace Profile #: 10839

Page: 1 of 1

## REGULATORY AGENCY

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

## Site Location

STATE: GA

ITEM #	Section D Required Client Information	Valid Matrix Codes MATRIX CODE DRINKING WATER (DW) WATER (WT) WASTE WATER (WW) PRODUCT (P) SOIL/SOLID (S) OIL (OI) WIPE (WI) AIR (AI) OTHER (OT) TISSUE (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 I.D.
					COMPOSITE START		COMPOSITE END/GRAB				Unpreserved	H <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>	HCl	NaOH	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>	Methanol	Other	Chloride, Fluoride, Sulfate	Full App. III and IV metals		RAD 226/228	TDS										
					DATE	TIME	DATE	TIME																									
1	HAM-HGWC-101		WG	G	08/10/2024	1032			21	5	2	3							X	X	X	X						N	012				
2	HAM-HGWC-105		WG	G	08/10/2024	1144			20	5	2	3						X	X	X	X						N	013					
3	HAM-HGWC-107		WG	G	08/10/2024	1317			22	5	2	3						X	X	X	X						N	014					
4	HAM-HGWC-109		WG	G	08/10/2024	1110			21	5	2	3						X	X	X	X						N	015					
5	HAM-HGWC-117A		WG	G	08/10/2024	1425			23	5	2	3						X	X	X	X						N	016					
6	HAM-AP4-FD-01		WG	G	08/10/2024	0000			22	5	2	3						X	X	X	X						N	017					
7	HAM-AP4-EB-02		WG	G	08/10/2024	1235			22	5	2	3						X	X	X	X						N	018					
8	HAM-AP4-FB-02		WG	G	08/10/2024	1230			22	5	2	3						X	X	X	X						N	019 last sample					
9																																	
10																																	
11																																	
12																																	

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
Task Code: HAM-CCR-ASSMT-2024S2	Thomas Messler / Geosyntec	08/10/2024	0745	Jacob Tracy / Geosyntec	08/12/2024	0745	
	Jacob Tracy / Geosyntec	08/12/2024	12:10	Ryan Williams / Pace	08/12/2024	12:10	
	Ryan Williams / Pace	8/12/2024	1352	Charles Andrews	8/12/24	1352	

SAMPLER NAME AND SIGNATURE		Temp in °C	Received on box (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
PRINT Name of SAMPLER:	Thomas Messler / Connor Carn / Geosyntec Consultants, Inc.				
SIGNATURE of SAMPLER:	DATE Signed (MM/DD/YY): 08/10/24				



# Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-228  
Analyst: VAL  
Date: 8/21/2024  
Worklist: 80821  
Matrix: WT

<b>Method Blank Assessment</b>	
MB Sample ID	3359344
MB concentration:	0.277
M/B 2 Sigma CSU:	0.305
MB MDC:	0.635
MB Numerical Performance Indicator:	1.78
MB Status vs Numerical Indicator:	Pass
MB Status vs. MDC:	Pass

<b>Laboratory Control Sample Assessment</b>	
Count Date:	8/27/2024
Spike ID:	23-043
Decay Corrected Spike Concentration (pCi/mL):	35.504
Volume Used (mL):	0.10
Aliquot Volume (L, g, F):	0.819
Target Conc. (pCi/L, g, F):	4.352
Uncertainty (Calculated):	0.213
Result (pCi/L, g, F):	2.977
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	0.725
Numerical Performance Indicator:	-3.57
Percent Recovery:	68.41%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass
Upper % Recovery Limits:	135%
Lower % Recovery Limits:	60%

<b>Duplicate Sample Assessment</b>	
Sample ID:	LCS80821
Duplicate Sample ID:	LCS80821
Sample Result (pCi/L, g, F):	2.977
Sample Duplicate Result (pCi/L, g, F):	0.725
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	3.745
Are sample and/or duplicate results below RL?	NO
Duplicate Numerical Performance Indicator:	-1.330
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	23.28%
Duplicate Status vs Numerical Indicator:	Pass
Duplicate Status vs RPD:	Pass
% RPD Limit:	36%

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

Comments:

VAL  
8/28/24  
67  
8-29-24

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

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



Quality Control Sample Performance Assessment

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-228  
Analyst: VAL  
Date: 8/26/2024  
Worklist: 80863  
Matrix: W/T

Method Blank Assessment	
MB Sample ID	3362585
MB concentration:	0.164
M/B 2 Sigma CSU:	0.321
MB MDC:	0.708
MB Numerical Performance Indicator:	1.00
MB Status vs Numerical Indicator:	Pass
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	
LCSID (Y or N)?	Y
LCS80863	LCS80863
Count Date:	8/28/2024
Spike I.D.:	23-043
Decay Corrected Spike Concentration (pCi/mL):	35.493
Volume Used (mL):	0.10
Aliquot Volume (L, g, F):	0.817
Target Conc. (pCi/L, g, F):	4.347
Uncertainty (Calculated):	0.213
Result (pCi/L, g, F):	3.718
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	0.866
Numerical Performance Indicator:	-1.38
Percent Recovery:	85.52%
Status vs Numerical Indicator:	N/A
Upper % Recovery Limits:	Pass
Lower % Recovery Limits:	135%
	60%

Duplicate Sample Assessment	
Sample I.D.:	LCS80863
Duplicate Sample I.D.:	LCS80863
Sample Result (pCi/L, g, F):	3.718
Sample Duplicate Result (pCi/L, g, F):	0.866
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	2.992
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	0.722
Are sample and/or duplicate results below RL?	NO
Duplicate Numerical Performance Indicator:	1.261
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	21.55%
Duplicate Status vs Numerical Indicator:	Pass
Duplicate Status vs RPD:	Pass
% RPD Limit:	36%

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

Comments:

VAL  
8/29/24

# Quality Control Sample Performance Assessment



Test: Ra-228  
Analyst: JJS1  
Date: 8/26/2024  
Worklist: 80889  
Matrix: WT

Method Blank Assessment	
MB Sample ID	3363812
MB concentration:	0.480
MB 2 Sigma CSU:	0.328
MB MDC:	0.623
MB Numerical Performance Indicator:	2.87
MB Status vs Numerical Indicator:	Warning
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	
LCS (Y or N)?	
LCS80889	
Count Date:	8/28/2024
Spike I.D.:	23-043
Decay Corrected Spike Concentration (pCi/mL):	35.492
Volume Used (mL):	0.10
Aliquot Volume (L, g, F):	0.815
Target Conc. (pCi/L, g, F):	4.353
Uncertainty (Calculated):	0.213
Result (pCi/L, g, F):	3.493
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	0.808
Numerical Performance Indicator:	-2.02
Percent Recovery:	80.23%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass
Upper % Recovery Limits:	135%
Lower % Recovery Limits:	60%

Duplicate Sample Assessment	
Sample I.D.:	
Duplicate Sample I.D.:	
Sample Result (pCi/L, g, F):	
Sample Result 2 Sigma CSU (pCi/L, g, F):	
Sample Duplicate Result (pCi/L, g, F):	
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	
Are sample and/or duplicate results below RL?	
Duplicate Numerical Performance Indicator:	
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	
Duplicate Status vs Numerical Indicator:	
Duplicate Status vs RPD:	
% RPD Limit:	

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

Comments:

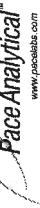
VAC  
8/29/24

Analyst Must Manually Enter All Fields Highlighted in Yellow.

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

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

## Quality Control Sample Performance Assessment



Test: Ra-226  
Analyst: SLC  
Date: 1/7/1900  
Worklist: 80838  
Matrix: W

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

<b>Method Blank Assessment</b>	
MB Sample ID	3361203
MB concentration:	-0.054
MB 2 Sigma CSU:	0.120
MB MDC:	0.379
MB Numerical Performance Indicator:	-0.88
MB Status vs Numerical Indicator:	Pass
MB Status vs. MDC:	N/A

<b>Laboratory Control Sample Assessment</b>	
LCSID (Y or N)?	Y
LCS80838	LCS80838
Count Date:	8/29/2024
Spike ID:	23-014
Decay Corrected Spike Concentration (pCi/mL):	25.020
Volume Used (mL):	0.10
Aliquot Volume (L, g, F):	0.510
Target Conc. (pCi/L, g, F):	4.923
Uncertainty (Calculated):	0.231
Result (pCi/L, g, F):	4.245
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	0.897
Numerical Performance Indicator:	-1.44
Percent Recovery:	86.22%
Status vs Numerical Indicator:	Pass
Status vs Recovery:	N/A
Upper % Recovery Limits:	125%
Lower % Recovery Limits:	75%

<b>Duplicate Sample Assessment</b>	
Sample ID:	92746901002
Duplicate Sample ID:	92746901002DUP
Sample Result (pCi/L, g, F):	0.164
Sample Duplicate Result (pCi/L, g, F):	0.200
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	0.244
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	0.199
Are sample and/or duplicate results below RL?	See Below #
Duplicate Numerical Performance Indicator:	-0.556
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	39.19%
Duplicate Status vs Numerical Indicator:	Pass
Duplicate Status vs RPD:	N/A
% RPD Limit:	25%

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

Comments:

AM 8/30/24

## Quality Control Sample Performance Assessment



www.paceanalytical.com

Test: Ra-226  
Analyst: SLC  
Date: 8/27/2024  
Worklist: 80840  
Matrix: W

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

<b>Method Blank Assessment</b>	
MB Sample ID	3361205
MB Concentration:	0.078
MB 2 Sigma CSU:	0.121
MB MDC:	0.267
MB Numerical Performance Indicator:	1.27
MB Status vs Numerical Indicator:	Pass
MB Status vs. MDC:	N/A

<b>Laboratory Control Sample Assessment</b>	
Count Date: 9/2/2024	
Spike I.D.:	LCSD80840
Decay Corrected Spike Concentration (pCi/mL):	23-014
Volume Used (mL):	25.020
Aliquot Volume (L, g, F):	0.10
Target Conc. (pCi/L, g, F):	0.503
Uncertainty (Calculated):	4.977
Result (pCi/L, g, F):	0.234
LCSD/LCSD 2 Sigma CSU (pCi/L, g, F):	4.300
Numerical Performance Indicator:	0.822
Percent Recovery:	0.914
Status vs Numerical Indicator:	100.57%
Status vs Recovery:	Pass
Upper % Recovery Limits:	N/A
Lower % Recovery Limits:	125%
	75%

<b>Duplicate Sample Assessment</b>	
Sample I.D.:	92746293013
Duplicate Sample I.D.:	92746293013DUP
Sample Result (pCi/L, g, F):	0.038
Sample Result 2 Sigma CSU (pCi/L, g, F):	0.117
Sample Duplicate Result (pCi/L, g, F):	0.096
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	0.130
Are sample and/or duplicate results below RL?	See Below #
Duplicate Numerical Performance Indicator:	-0.658
(Based on the LCSD/LCSD Percent Recoveries) Duplicate RPD:	87.10%
Duplicate Status vs Numerical Indicator:	Pass
Duplicate Status vs RPD:	N/A
% RPD Limit:	25%

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

Comments:

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

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

9-3-24

9-3-24

## Quality Control Sample Performance Assessment



Test: Ra-226  
Analyst: SLC  
Date: 9/3/2024  
Worklist: 80842  
Matrix: W

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

<b>Method Blank Assessment</b>	
MB Sample ID	3361208
MB concentration:	0.159
MB 2 Sigma CSU:	0.232
MB MDC:	0.507
MB Numerical Performance Indicator:	1.34
MB Status vs Numerical Indicator:	Pass
MB Status vs. MDC:	N/A

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

<b>Duplicate Sample Assessment</b>	
Sample I.D.:	
Duplicate Sample I.D.:	
Sample Result (pCi/L, g, F):	
Sample Duplicate Result (pCi/L, g, F):	
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	
Are sample and/or duplicate results below RL?	
Duplicate Numerical Performance Indicator:	
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	
Duplicate Status vs Numerical Indicator:	
Duplicate Status vs RPD:	
% RPD Limit:	

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

Comments:

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

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

WMA 9/15/24

NDA  
9-5-24

# Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-226  
Analyst: SLC  
Date: 9/3/2024  
Worklist: 80879  
Matrix: WT

Method Blank Assessment

MB Sample ID

3363088

MB concentration:

0.108

MB 2 Sigma CSU:

0.233

MB MDC:

0.544

MB Numerical Performance Indicator:

0.91

MB Status vs Numerical Indicator:

Pass

MB Status vs. MDC:

N/A

Laboratory Control Sample Assessment		LCSD (Y or N)?	Y
		LCSD80879	LCSD80879
Count Date:		9/4/2024	9/4/2024
Spike I.D.:		23-014	23-014
Decay Corrected Spike Concentration (pCi/mL):		25.020	25.020
Volume Used (mL):		0.10	0.10
Aliquot Volume (L, g, F):		0.509	0.503
Target Conc. (pCi/L, g, F):		4.914	4.971
Uncertainty (Calculated):		0.231	0.234
Result (pCi/L, g, F):		5.088	4.885
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):		1.042	1.033
Numerical Performance Indicator:		0.32	-0.16
Percent Recovery:		103.55%	98.28%
Status vs Numerical Indicator:		Pass	Pass
Upper % Recovery Limits:		N/A	N/A
Lower % Recovery Limits:		125%	75%

Duplicate Sample Assessment		LCSD80879	92747805004
		LCSD80879	92747805004DUP
Sample I.D.:		5.088	0.344
Duplicate Sample I.D.:		1.042	0.245
Sample Result (pCi/L, g, F):		4.885	0.347
Sample Duplicate Result (pCi/L, g, F):		1.033	0.248
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):		NO	See Below ##
Are sample and/or duplicate results below RL?		0.272	-0.014
Duplicate Numerical Performance Indicator:		5.22%	0.72%
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:		Pass	Pass
Duplicate Status vs Numerical Indicator:		N/A	N/A
Duplicate Status vs RPD:		25%	25%
% RPD Limit:			

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

Comments:

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

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



# Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-228  
Analyst: JJS1  
Date: 8/21/2024  
Worklist: 80819  
Matrix: WT

<b>Method Blank Assessment</b>	
MB Sample ID	3359338
MB Concentration:	0.622
M/B 2 Sigma CSU:	0.413
MB MDC:	0.764
MB Numerical Performance Indicator:	2.95
MB Status vs. Numerical Indicator:	Warning
MB Status vs. MDC:	Pass

<b>Laboratory Control Sample Assessment</b>	
LCSID (Y or N)?	Y
LCS80819	LCS80819
Count Date:	8/26/2024
Spike ID:	23-043
Decay Corrected Spike Concentration (pCi/mL):	35.518
Volume Used (mL):	0.10
Aliquot Volume (L, g, F):	0.822
Target Conc. (pCi/L, g, F):	4.321
Uncertainty (Calculated):	0.212
Result (pCi/L, g, F):	3.208
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	0.810
Numerical Performance Indicator:	-2.61
Percent Recovery:	74.25%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass
Upper % Recovery Limits:	135%
Lower % Recovery Limits:	60%

<b>Duplicate Sample Assessment</b>	
Sample ID:	LCS80819
Duplicate Sample ID:	LCS80819
Sample Result (pCi/L, g, F):	3.208
Sample Duplicate Result (pCi/L, g, F):	0.810
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	3.585
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	0.863
Are sample and/or duplicate results below RL?	NO
Duplicate Numerical Performance Indicator:	-0.624
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	10.43%
Duplicate Status vs Numerical Indicator:	Pass
Duplicate Status vs RPD:	Pass
% RPD Limit:	36%

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

Comments:

VAL  
8/27/24

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

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

# VALIDATION REPORTS

## **Memorandum**

Date: 6 December 2024  
To: Caroline Nelson  
Christine Hug  
From: Ashley Wilson  
CC: Kristoffer Henderson  
Subject: **Stage 2A Data Validation - Level II Data Deliverable – Pace Analytical Project Services, Project Number: 92746288**

**SITE: Plant Hammond AP-4**

### **INTRODUCTION**

This report summarizes the findings of the Stage 2A data validation of thirteen aqueous samples, two field duplicates, two field blanks and two equipment blanks, collected 6 and 8-10 August 2024, as part of the Plant Hammond sampling event.

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

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

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

- Anions (chloride, fluoride and sulfate) by US EPA Method 300.0 Rev 2.1 1993

### **EXECUTIVE SUMMARY**

Overall, based on this Stage 2A data validation covering the quality control (QC) parameters listed below and based on the information provided, the data as qualified are usable for supporting project objectives. The qualified data should be used within the limitations of the qualifications. If there are results with two or more different qualifications due to multiple QC

failures, the final qualification is reconciled in the electronic data deliverable (EDD) with qualifications.

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

- US EPA Region IV Data Validation Standard Operating Procedures (US EPA Region IV, September 2011);
- USEPA National Functional Guidelines for Inorganic Superfund Methods Data Review, November 2020 (EPA 542-R-20-006); and
- American National Standard, Verification and Validation of Radiological Data for use in Waste Management and Environmental Remediation, February 15, 2012 (ANSI/ANS- 41.5-2012).

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

Laboratory IDs	Client IDs
92746288001	HAM-HGWA-47
92746288002	HAM-HGWA-48D
92746288003	HAM-HGWA-111
92746288004	HAM-HGWA-113
92746288005	HAM-HGWC-102
92746288006	HAM-HGWC-103
92746288007	HAM-HGWA-112
92746288008	HAM-HGWC-118
92746288009	HAM-AP4-FD-02
92746288010	HAM-AP4-EB-01

Laboratory IDs	Client IDs
92746288011	HAM-AP4-FB-01
92746288012	HAM-HGWC-101
92746288013	HAM-HGWC-105
92746288014	HAM-HGWC-107
92746288015	HAM-HGWC-109
92746288016	HAM-HGWC-117A
92746288017	HAM-AP4-FD-01
92746288018	HAM-AP4-EB-02
92746288019	HAM-AP4-FB-02

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

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 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). The 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 HAM-HGWC-102 and HAM-AP4-FD-02. The recovery and relative percent difference (RPD) results were within the laboratory specified acceptance criteria, with the following exceptions.

The recoveries of calcium in the MS/MSD pair using sample HAM-HGWC-102 were low and high and outside of laboratory specified acceptance criteria. Since the calcium concentration in sample HAM-HGWC-102 was greater than four times the spiked concentration, no qualifications were applied to the data based on the MS/MSD recovery results.

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

### **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**

Two equipment blanks were collected with the sample set, HAM-AP4-EB-01 and HAM-AP4-EB-02. Metals were not detected in the equipment blanks at or above the MDLs, with the following exceptions.

Antimony (0.00086 mg/L) was detected at an estimated concentration greater than the MDL and less than the RL in HAM-AP4-EB-01. Since the antimony was not detected in the associated samples, no additional qualifications were applied to the data.

### **1.7 Field Blank**

Two field blanks were collected with the sample set, HAM-AP4-FB-01 and HAM-AP4-FB-02. Metals were not detected in the field blanks at or above the MDLs.

### **1.8 Field Duplicate**

Two field duplicate samples were collected with the sample set, HAM-AP4-FD-01 and HAM-AP4-FD-02. Acceptable precision (RPD < 30%) was demonstrated between the field duplicate and the original samples, HAM-HGWC-107 and HAM-HGWC-118, respectively.

### **1.9 Sensitivity**

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

### **1.10 Electronic Data Deliverable Review**

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

## **2.0 MERCURY**

The samples were analyzed for mercury by 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 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). Mercury was not detected in the method blank at or above the MDL.

## **2.4 Matrix Spike/Matrix Spike Duplicate**

MS/MSDs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples).

One sample set specific MS/MSD pair was reported, using sample HAM-HGWA-47. The recovery and RPD results were within laboratory specified acceptance criteria.



## **2.5     Laboratory Control Sample**

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

## **2.6     Equipment Blank**

Two equipment blanks were collected with the sample set, HAM-AP4-EB-01 and HAM-AP4-EB-02. Mercury was not detected in the equipment blanks at or above the MDLs.

## **2.7     Field Blank**

Two field blanks were collected with the sample set, HAM-AP4-FB-01 and HAM-AP4-FB-02. Mercury not detected in the field blanks at or above the MDLs.

## **2.8     Field Duplicate**

Two field duplicate samples were collected with the sample set, HAM-AP4-FD-01 and HAM-AP4-FD-02. Acceptable precision ( $RPD < 30\%$ ) was demonstrated between the field duplicate and the original samples, HAM-HGWC-107 and HAM-HGWC-118, respectively.

## **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  $\text{CaCO}_3$  (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 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). 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). Two sample set specific MS/MSD pairs were reported for chloride, fluoride and sulfate using samples HAM-HGWC-102 and HAM-HGWC-109. The recovery and RPD results were within the laboratory specified acceptance criteria, with the following exceptions.

The recoveries of fluoride in the MS/MSD pair using sample HAM-HGWC-102 were high and outside of laboratory specified acceptance criteria. Therefore, the concentration of fluoride in sample HAM-HGWC-102 was J+ qualified as estimated with a high bias. Since the fluoride concentration for sample HAM-HGWC-102 was estimated greater than the MDL and less than the RL, the final concentration was J qualified as estimated.

The recoveries of sulfate in the MS/MSD pair using sample HAM-HGWC-102 were low and outside of laboratory specified acceptance criteria. Since the sulfate concentration in sample HAM-HGWC-102 was greater than four times the spiked concentration, no qualifications were applied to the data based on the MS/MSD recovery results.

Sample ID	Compound	Laboratory Result (mg/L)	Laboratory Flag	Validation Result (mg/L)	Validation Qualifier*	Reason Code**
HAM-HGWC-102	Fluoride	0.067	J,M1	0.067	J	MS1

mg/L- milligram per liter

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

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

### 3.5 **Laboratory Control Sample**

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

### 3.6 **Laboratory Duplicate**

Two laboratory duplicates were reported for TDS using samples HAM-AP4-FD-02 and HAM-HGWC-101. The RPD results were within the laboratory specified acceptance criteria.

### 3.7 **Equipment Blank**

Two equipment blanks were collected with the sample set, HAM-AP4-EB-01 and HAM-AP4-EB-02. The wet chemistry parameters were not detected in the equipment blank at or above the MDLs, with the following exceptions.

TDS (107 mg/L and 28.0 mg/L) was detected in HAM-AP4-EB-01 and HAM-AP4-EB-02, respectively, at concentrations greater than the RL. Therefore, the concentrations of TDS greater than the equipment blank concentration and less than ten times the equipment blank concentration in samples HAM-AP4-FD-01, HAM-AP4-FD-02, HAM-HGWA-111, HAM-HGWA-47, HAM-HGWA-48D, HAM-HGWC-101, HAM-HGWC-102, HAM-HGWC-103, HAM-HGWC-105,

HAM-HGWC-107, HAM-HGWC-109, HAM-HGWC-117A and HAM-HGWC-118 were J+ qualified as estimated with high bias and the TDS concentrations for samples HAM-HGWA-112 and HAM-HGWA-113 were U qualified as not detected above the reported concentration.

Sample ID	Compound	Laboratory Result (mg/L)	Laboratory Flag	Validation Result (mg/L)	Validation Qualifier	Reason Code
HAM-AP4-FD-01	TDS	321	NA	321	J+	BEH
HAM-AP4-FD-02	TDS	330	NA	330	J+	BEH
HAM-HGWA-111	TDS	163	NA	163	J+	BEH
HAM-HGWA-112	TDS	90.0	NA	90.0	U	BEH
HAM-HGWA-113	TDS	85.0	NA	85.0	U	BEH
HAM-HGWA-47	TDS	253	NA	253	J+	BEH
HAM-HGWA-48D	TDS	240	NA	240	J+	BEH
HAM-HGWC-101	TDS	263	NA	263	J+	BEH
HAM-HGWC-102	TDS	746	NA	746	J+	BEH
HAM-HGWC-103	TDS	809	NA	809	J+	BEH
HAM-HGWC-105	TDS	658	NA	658	J+	BEH
HAM-HGWC-107	TDS	299	NA	299	J+	BEH
HAM-HGWC-109	TDS	227	NA	227	J+	BEH
HAM-HGWC-117A	TDS	284	NA	284	J+	BEH
HAM-HGWC-118	TDS	338	NA	338	J+	BEH

mg/L- milligram per liter

NA-not applicable

### 3.8 Field Blank

Two field blanks were collected with the sample set, HAM-AP4-FB-01 and HAM-AP4-FB-02. The wet chemistry parameters were not detected in the field blank at or above the MDLs, with the following exception.

TDS (59.0 mg/L) was detected in HAM-AP4-FB-01 at a concentration greater than the RL. Since the concentration of TDS in the associated samples were previously qualified due to equipment blank contamination, and based on technical and professional judgment, no additional qualifications were applied to the data.

### 3.9 Field Duplicate

Two field duplicate samples were collected with the sample set, HAM-AP4-FD-01 and HAM-AP4-FD-02. Acceptable precision (RPD < 30%) was demonstrated between the field duplicate and the original samples, HAM-HGWC-107 and HAM-HGWC-118, respectively.

### **3.10   Sensitivity**

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

### **3.11   Electronic Data Deliverable Review**

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

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

**DATA QUALIFIER DEFINITIONS**

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

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

<b>DQM Reason Code</b>	<b>Description</b>
AB1	> Samples in batch
AB2	QC sample missing
AB3	Batch analysis time exceeded
BAH	Contamination detected in the Ambient Blank greater than or equal to the Quantitation Limit.
BAL	Contamination detected in the Ambient Blank less than the Quantitation Limit.
BC	Calibration blank contamination
BC1	assoc. result < RL
BC2	assoc. result > RL < mult.
BC3	assoc. result > RL > mult.
BEH	Contamination detected in the Equipment Blank greater than or equal to the Quantitation Limit.
BEL	Contamination detected in the Equipment Blank less than the Quantitation Limit.
BF	Field blank contamination
BF1	assoc. result < RL
BF2	assoc. result > RL < mult.
BF3	assoc. result > RL > mult.
BFH	Contamination detected in the Field Blank greater than or equal to the Quantitation Limit.
BFL	Contamination detected in the Field Blank less than the Quantitation Limit.
BL	Laboratory blank contamination
BL1	assoc. result < RL
BL2	assoc. result > RL < mult.
BL3	assoc. result > RL > mult.
BLH	Contamination detected in the Lab Blank greater than or equal to the Quantitation Limit.
BLL	Contamination detected in the Lab Blank less than the Quantitation Limit.
BT	Trip blank contamination
BT1	assoc. result < RL
BT2	assoc. result > RL < mult.
BT3	assoc. result > RL > mult.
BTH	Contamination detected in the Trip Blank greater than or equal to the Quantitation Limit.
BTL	Contamination detected in the Trip Blank less than the Quantitation Limit.
CA1	Column difference
CC1	CCV %D
CC2	CCV %R
CC3	CCV RRF
CI1	IC RSD
CI2	IC RRF
CR1	Calibration range

<b>DQM Reason Code</b>	<b>Description</b>
CV1	ICV or CCV %D
CV2	ICV or CCV %R
CV3	ICV CCV RRF
DF1	Dilution Factor > 1
DL	Dilution Factor > 1
DVT1	The Dissolved Result > Total Result and the absolute difference > the AD MULTIPLIER CL * Detection Limit
DVT2	The Dissolved Result > Total Result and the absolute difference > AD MULTIPLIER UCO * Detection Limit
DVT3	The Dissolved Result > Total Result and the relative percent difference (RPD) > RPD CL
DVT4	The Dissolved Result > Total Result and the relative percent difference (RPD) > RPD UCO
ER1	MDL=<RESULT<RL (INORGANIC)
ER2	MDL=<RESULT<RL (ORGANIC)
FBC1	BLANK CONTAMINATION
FBC2	RESULT < BLANK * MULTIPLIER
FBC3	RESULT > BLANK * MULTIPLIER
FD1	Field duplicate RPD
FD2	Field duplicate abs. diff.
GHT1	GROSS QUALIFIER HIT
GHT2	GROSS QUALIFIER NON DETECT
HP1	Hydrocarbon pattern
HT1	Holding time samp. to preservation
HT2	Holding time samp. to analysis
HT3	Holding time gros. samp. to pres.
HT4	Holding time gros. samp. to analysis
IS1	Internal standard
LBC1	BLANK CONTAMINATION
LBC2	RESULT < BLANK * MULTIPLIER
LBC3	RESULT > BLANK * MULTIPLIER
LD1	Lab duplicate RPD
LD2	Lab duplicate abs. diff.
LS1	LS %R
LS2	LS RPD
MS1	MS %R
MS2	MS RPD
MS3	Parent >4x spike
MS4	Spike diluted out



<b>DQM Reason Code</b>	<b>Description</b>
NP1	Non-Preferred Result
NR1	NUMERIC RESULTS
OT1	Other quality issue
PS1	BETWEEN CONTROL AND WARNING LIMITS
PS2	INVALID
PS3	LESS THAN LOWER CONTROL LIMIT
PS4	LESS THAN LOWER WARNING LIMIT
PT1	The preservative for this test id does not match the required preservative in RT_HOLDING_TIME.
RDL1	EXCEEDS REQUIRED DETECTION LIMIT
RL1	ND > project limit
RO1	Other rad. issue
RPD1	LCS/LCSD
RPD2	LCS/LCSD_NON_DETECT
RPD3	MS/MSD
RPD4	MS/MSD_NON_DETECT
RPD5	Orig/Dup
RPD6	Orig/Dup_NON_DETECT
RPDF1	FIELD DUPLICATE
RPDF2	FIELD DUPLICATE_NON_DETECT
RQ1	Rad. quantitation issue
RR1	Repeated result same method
RR2	Repeated result diff. method
RSD1	RSD exceeds CL for LCS sample
RSD2	RSD exceeds CL for MS sample
RSD3	RSD exceeds CL for Lab sample
RSD4	RSD exceeds CL for Field sample
RY1	Tracer or carrier
SD1	Serial dilution
SO1	High moisture
SO2	Wet weight
SP1	Preservation, temp
SP2	Preservation, pH
SP3	Preservation, headspace
SPR1	BLANK SPIKE > UCL
SPR10	EarthSoft.DQM.SpikeRecovery2
SPR11	EarthSoft.DQM.SpikeRecovery2
SPR12	EarthSoft.DQM.SpikeRecovery2
SPR2	INORGANIC SPIKE > UCL

<b>DQM Reason Code</b>	<b>Description</b>
SPR3	ORGANIC SPIKE > UCL
SPR4	LCL > BLANK > LOW_CUTOFF
SPR5	LCL > INORG > LOW_CUTOFF
SPR6	LCL > ORG > LOW_CUTOFF
SPR7	BLANK SPIKE < LOW_CUTOFF
SPR8	INORGANIC SPIKE < LOW_CUTOFF
SPR9	ORGANIC SPIKE < LOW_CUTOFF
SU	Surrogate outlier
SU1	Surrogate
SU2	Surrogate diluted out
SURR1	ASSO. DETECTS OF LCL > REC > LOW_CUTOFF
SURR10	EarthSoft.DQM.SurrogateRecovery
SURR11	EarthSoft.DQM.SurrogateRecovery
SURR12	EarthSoft.DQM.SurrogateRecovery
SURR2	ASSO. DETECTS OF REC < LOW_CUTOFF
SURR3	ASSO. DETECTS OF REC > UCL
SURR4	ASSO. NDS OF LCL > REC > LOW_CUTOFF
SURR5	ASSO. NDS OF REC < LOW_CUTOFF
SURR6	ASSO. NDS OF REC > UCL
SURR7	LCL > REC > LOW_CUTOFF
SURR8	REC < LOW_CUTOFF
SURR9	REC > UCL
TBC1	BLANK CONTAMINATION
TBC2	RESULT < BLANK * MULTIPLIER
TBC3	RESULT > BLANK * MULTIPLIER
TR	Trace Detection
TR1	Trace detection
TRA1	Tracer is outside of UCL or LCL
TRA2	Associated result of a tracer less than the LCL
TRA3	Associated detect result of a tracer greater than the UCL
VC1	Canister vacuum
VC2	Canister contamination
VSU1	INVALID SAMPLE UNIT TYPE
VSU2	MISSING SAMPLE UNIT TYPE
VSU3	NON-DEFAULT RESULT UNIT

## **Memorandum**

Date: 13 December 2024  
To: Whitney Law  
From: Ashley Wilson  
CC: Kristoffer Henderson  
Subject: **Stage 2A Data Validation - Level II Data Deliverable – Pace Analytical Services, LLC Project Number 92746296**

**SITE: Plant Hammond AP-4**

### **INTRODUCTION**

This report summarizes the findings of the Stage 2A data validation of thirteen aqueous samples, two field duplicate samples, two field blanks, and two equipment blanks, collected 6 and 8-10 August 2024, as part of the Plant Hammond AP on-site sampling event.

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

- Radium-226 by United States (US) Environmental Protection Agency (EPA) Method 9315
- Radium-228 by US EPA Method 9320
- Total Radium by Calculation

### **EXECUTIVE SUMMARY**

Overall, based on this Stage 2A data validation covering the quality control (QC) parameters listed below and based on the information provided, the data as qualified are usable for supporting project objectives. The qualified data should be used within the limitations of the qualifications. If there are results with two or more different qualifications due to multiple QC failures, the final qualification is reconciled in the electronic data deliverable (EDD) with qualifications.

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

- US EPA Region IV Data Validation Standard Operating Procedures (US EPA Region IV, September 2011);
- USEPA National Functional Guidelines for Inorganic Superfund Methods Data Review, November 2020 (EPA 542-R-20-006); and

- American National Standard, Verification and Validation of Radiological Data for use in Waste Management and Environmental Remediation, February 15, 2012 (ANSI/ANS-41.5-2012).

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

Laboratory IDs	Client IDs
92746296001	HAM-HGWA-47
92746296002	HAM-HGWA-48D
92746296003	HAM-HGWA-111
92746296004	HAM-HGWA-113
92746296005	HAM-HGWC-102
92746296006	HAM-HGWC-103
92746296007	HAM-HGWA-112
92746296008	HAM-HGWC-118
92746296009	HAM-AP4-FD-02
92746296010	HAM-AP4-EB-01
92746296011	HAM-AP4-FB-01
92746296012	HAM-HGWC-101
92746296013	HAM-HGWC-105
92746296014	HAM-HGWC-107
92746296015	HAM-HGWC-109
92746296016	HAM-HGWC-117A
92746296017	HAM-AP4-FD-01
92746296018	HAM-AP4-EB-02
92746296019	HAM-AP4-FB-02

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

## 1.0 RADIOCHEMISTRY

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

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

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

### 1.1 Overall Assessment

The radium-226 and radium-228 data reported in this data set are considered usable for supporting project objectives. The results are considered valid; the analytical completeness defined as the ratio of the number of valid analytical results (valid analytical results include values qualified as estimated) to the total number of analytical results requested on samples submitted for this analysis, for this data set is 100%.

#### 1.1.1 Analysis Anomaly

**92746297:** Total radium was reported at the minimum detectable concentration (MDC) for combined radium-226 and radium-228. Radium-226 was detected greater than the MDC in sample HAM-HGWC-105 and radium-228 was detected greater than the MDC in samples HAM-AP4-EB-01, HAM-HGWA-112 and HAM-HGWC-101. Since total radium is calculated from radium-

226 and radium-228, and based on professional and technical judgment, the MDC reported total radium concentrations for these samples were reported with no qualifications.

Sample	Analyte	Laboratory Result (pCi/L)	Laboratory Flag	Validation Result (pCi/L)	Validation Qualifier*	Reason Code**
HAM-AP4-EB-01	Combined Radium 226 + 228	0.820	U	0.820	NA	RO1
HAM-HGWA-112	Combined Radium 226 + 228	0.976	U	0.976	NA	RO1
HAM-HGWC-101	Combined Radium 226 + 228	0.817	U	0.817	NA	RO1
HAM-HGWC-105	Combined Radium 226 + 228	0.693	U	0.693	NA	RO1

pCi/L-picocuries per liter

U-not detected at or above the MDC

\* 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

## 1.2 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). Method blanks were reported for the radium-228 and radium-226 data. Radium-226 and radium-228 were not detected in the method blanks at or above the MDCs.

## 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). The recovery and replicate error ratio (RER) [1 sigma ( $1\sigma$ )] results were within the laboratory specified acceptance criteria.

## 1.6 Laboratory Duplicate

One sample set specific laboratory duplicate was reported for radium-226 using sample HAM-HGWC-109. The RERs were within the laboratory specified acceptance criteria.

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

## 1.7 Tracers and Carriers

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

## 1.8 Equipment Blank

Two equipment blanks, HAM-AP4-EB-01 and HAM-AP4-EB-02, were collected with the sample set. Radium-226 and radium-228 were not detected in the equipment blanks at or above the MDCs, with the following exception.

Radium-228 was detected at a concentration greater than the MDC in HAM-AP4-EB-01. Since the mean difference (MD) between the samples and the blank results were less than 2 and the samples were less than ten times the blank concentration, the detected concentrations of radium-228 and combined radium 226 + 228 in sample HAM-HGWA-47 were UJ qualified as sample not distinguishable from the blank. Since the combined radium 226 + 228 in samples HAM-HGWA-112 and HAM-HGWC-101 were previously qualified in section 1.1.1, only the radium-228 concentrations were UJ qualified as estimated in those samples.

Sample	Analyte	Laboratory Result (pCi/L)	Laboratory Flag	Validation Result (pCi/L)	Validation Qualifier	Reason Code
HAM-HGWA-112	Radium 228	0.904	NA	0.904	UJ	BEH
HAM-HGWA-112	Combined Radium 226 + 228	0.976	U	0.976	UJ	BEH
HAM-HGWA-47	Radium 228	0.886	NA	0.886	UJ	BEH
HAM-HGWA-47	Combined Radium 226 + 228	0.973	NA	0.973	UJ	BEH
HAM-HGWC-101	Radium 228	0.780	NA	0.780	UJ	BEH
HAM-HGWC-101	Combined Radium 226 + 228	0.817	U	0.817	UJ	BEH

pCi/L-picocuries per liter

U-not detected at or above the MDC

NA-not applicable

### **1.9 Field Blank**

Two field blank, HAM-AP4-FB-01 and HAM-AP4-FB-02, were collected with the sample set. Radium-226 and radium-228 were not detected in the field blanks at or above the MDCs.

### **1.10 Field Duplicate**

Two field duplicate samples were collected with the sample set, HAM-AP4-FD-01 and HAM-AP4-FD-02. Acceptable precision ( $RER (1\sigma) < 3$ ) was demonstrated between the field duplicates and the original samples, HAM-HGWC-102 and HAM-HGWC-117A, respectively.

### **1.11 Sensitivity**

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

### **1.12 Electronic Data Deliverable Review**

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

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

**DATA QUALIFIER DEFINITIONS**

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

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

<b>DQM Reason Code</b>	<b>Description</b>
AB1	> Samples in batch
AB2	QC sample missing
AB3	Batch analysis time exceeded
BAH	Contamination detected in the Ambient Blank greater than or equal to the Quantitation Limit.
BAL	Contamination detected in the Ambient Blank less than the Quantitation Limit.
BC	Calibration blank contamination
BC1	assoc. result < RL
BC2	assoc. result > RL < mult.
BC3	assoc. result > RL > mult.
BEH	Contamination detected in the Equipment Blank greater than or equal to the Quantitation Limit.
BEL	Contamination detected in the Equipment Blank less than the Quantitation Limit.
BF	Field blank contamination
BF1	assoc. result < RL
BF2	assoc. result > RL < mult.
BF3	assoc. result > RL > mult.
BFH	Contamination detected in the Field Blank greater than or equal to the Quantitation Limit.
BFL	Contamination detected in the Field Blank less than the Quantitation Limit.
BL	Laboratory blank contamination
BL1	assoc. result < RL
BL2	assoc. result > RL < mult.

<b>DQM Reason Code</b>	<b>Description</b>
BL3	assoc. result > RL > mult.
BLH	Contamination detected in the Lab Blank greater than or equal to the Quantitation Limit.
BLL	Contamination detected in the Lab Blank less than the Quantitation Limit.
BT	Trip blank contamination
BT1	assoc. result < RL
BT2	assoc. result > RL < mult.
BT3	assoc. result > RL > mult.
BTH	Contamination detected in the Trip Blank greater than or equal to the Quantitation Limit.
BTL	Contamination detected in the Trip Blank less than the Quantitation Limit.
CA1	Column difference
CC1	CCV %D
CC2	CCV %R
CC3	CCV RRF
CI1	IC RSD
CI2	IC RRF
CR1	Calibration range
CV1	ICV or CCV %D
CV2	ICV or CCV %R
CV3	ICV CCV RRF
DF1	Dilution Factor > 1
DL	Dilution Factor > 1

<b>DQM Reason Code</b>	<b>Description</b>
DVT1	The Dissolved Result > Total Result and the absolute difference > the AD_MULTIPLIER_CL * Detection Limit
DVT2	The Dissolved Result > Total Result and the absolute difference > AD_MULTIPLIER_UCO * Detection Limit
DVT3	The Dissolved Result > Total Result and the relative percent difference (RPD) > RPD_CL
DVT4	The Dissolved Result > Total Result and the relative percent difference (RPD) > RPD_UCO
ER1	MDL=<RESULT<RL (INORGANIC)
ER2	MDL=<RESULT<RL (ORGANIC)
FBC1	BLANK CONTAMINATION
FBC2	RESULT < BLANK * MULTIPLIER
FBC3	RESULT > BLANK * MULTIPLIER
FD1	Field duplicate RPD
FD2	Field duplicate abs. diff.
GHT1	GROSS_QUALIFIER_HIT
GHT2	GROSS_QUALIFIER_NON_DETECT
HP1	Hydrocarbon pattern
HT1	Holding time samp. to preservation
HT2	Holding time samp. to analysis
HT3	Holding time gros. samp. to pres.
HT4	Holding time gros. samp. to analysis
IS1	Internal standard
LBC1	BLANK CONTAMINATION

<b>DQM Reason Code</b>	<b>Description</b>
LBC2	RESULT < BLANK * MULTIPLIER
LBC3	RESULT > BLANK * MULTIPLIER
LD1	Lab duplicate RPD
LD2	Lab duplicate abs. diff.
LS1	LS %R
LS2	LS RPD
MS1	MS %R
MS2	MS RPD
MS3	Parent >4x spike
MS4	Spike diluted out
NP1	Non-Preferred Result
NR1	NUMERIC RESULTS
OT1	Other quality issue
PS1	BETWEEN CONTROL AND WARNING LIMITS
PS2	INVALID
PS3	LESS THAN LOWER CONTROL LIMIT
PS4	LESS THAN LOWER WARNING LIMIT
PT1	The preservative for this test id does not match the required preservative in RT_HOLDING_TIME.
RDL1	EXCEEDS REQUIRED DETECTION LIMIT
RL1	ND > project limit
RO1	Other rad. issue
RPD1	LCS/LCSD
RPD2	LCS/LCSD_NON_DETECT
RPD3	MS/MSD
RPD4	MS/MSD_NON_DETECT

<b>DQM Reason Code</b>	<b>Description</b>
RPD5	Orig/Dup
RPD6	Orig/Dup_NON_DETECT
RPDF1	FIELD DUPLICATE
RPDF2	FIELD DUPLICATE NON_DETECT
RQ1	Rad. quantitation issue
RR1	Repeated result same method
RR2	Repeated result diff. method
RSD1	RSD exceeds CL for LCS sample
RSD2	RSD exceeds CL for MS sample
RSD3	RSD exceeds CL for Lab sample
RSD4	RSD exceeds CL for Field sample
RY1	Tracer or carrier
SD1	Serial dilution
SO1	High moisture
SO2	Wet weight
SP1	Preservation, temp
SP2	Preservation, pH
SP3	Preservation, headspace
SPR1	BLANK SPIKE > UCL
SPR10	EarthSoft.DQM.SpikeRecovery2
SPR11	EarthSoft.DQM.SpikeRecovery2
SPR12	EarthSoft.DQM.SpikeRecovery2
SPR2	INORGANIC SPIKE > UCL
SPR3	ORGANIC SPIKE > UCL
SPR4	LCL > BLANK > LOW_CUTOFF
SPR5	LCL > INORG > LOW_CUTOFF
SPR6	LCL > ORG > LOW_CUTOFF
SPR7	BLANK SPIKE < LOW_CUTOFF

<b>DQM Reason Code</b>	<b>Description</b>
SPR8	INORGANIC SPIKE < LOW_CUTOFF
SPR9	ORGANIC SPIKE < LOW_CUTOFF
SU	Surrogate outlier
SU1	Surrogate
SU2	Surrogate diluted out
SURR1	ASSO. DETECTS OF LCL > REC > LOW_CUTOFF
SURR10	EarthSoft.DQM.SurrogateRecovery
SURR11	EarthSoft.DQM.SurrogateRecovery
SURR12	EarthSoft.DQM.SurrogateRecovery
SURR2	ASSO. DETECTS OF REC < LOW_CUTOFF
SURR3	ASSO. DETECTS OF REC > UCL
SURR4	ASSO. NDS OF LCL > REC > LOW_CUTOFF
SURR5	ASSO. NDS OF REC < LOW_CUTOFF
SURR6	ASSO. NDS OF REC > UCL
SURR7	LCL > REC > LOW_CUTOFF
SURR8	REC < LOW_CUTOFF
SURR9	REC > UCL
TBC1	BLANK CONTAMINATION
TBC2	RESULT < BLANK * MULTIPLIER
TBC3	RESULT > BLANK * MULTIPLIER
TR	Trace Detection
TR1	Trace detection
TRA1	Tracer is outside of UCL or LCL
TRA2	Associated result of a tracer less than the LCL
TRA3	Associated detect result of a tracer greater than the UCL
VC1	Canister vacuum
VC2	Canister contamination

<b>DQM Reason Code</b>	<b>Description</b>
VSU1	INVALID SAMPLE UNIT TYPE
VSU2	MISSING SAMPLE UNIT TYPE
VSU3	NON-DEFAULT RESULT UNIT

AD-Absolute Difference  
CCV-Continuous Calibration Verification  
CL-Control Limit  
%D-Percent Difference  
IC-Initial Calibration  
ICV-Initial Calibration Verification  
INORG-Inorganic  
LCL-Lower Control Limit  
LCS-Laboratory Control Spike  
LCSD-Laboratory Control Spike Duplicate  
LS-Laboratory Spike  
MDL-Method Detection Limit  
MS-Matrix Spike  
MSD-Matrix Spike Duplicate  
ND-Not Detected  
ORG-Organic  
QC-Quality Control  
%R-Percent Recovery  
REC-Recovery  
RL-Reporting Limit  
RPD-Relative Percent Difference  
RRF-Relative Response Factor  
RSD-Relative Standard Deviation  
UCL-Upper Control Limit  
UCO-Upper Cut Off

# FIELD SAMPLING REPORTS

# Low-Flow Test Report:

Test Date / Time: 8/6/2024 2:19:36 PM  
Project: GP-Plant Hammond  
Operator Name: J. Tracy

Location Name: HGWA-47 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 33.74 ft Total Depth: 43.74 ft Initial Depth to Water: 7.86 ft	Pump Type: Bladder Tubing Type: Poly Pump Intake From TOC: 38.74 ft Estimated Total Volume Pumped: 6 liter Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 0.04 ft	Instrument Used: Aqua TROLL 400 Serial Number: 883530
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Test Notes:  
5 bottles; full app. III and IV.

Weather Conditions:  
Sunny, 95 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	
8/6/2024 2:19 PM	00:00	7.43 pH	23.26 °C	373.92 µS/cm	0.32 mg/L	0.01 NTU	451.3 mV	7.89 ft	200.00 ml/min
8/6/2024 2:24 PM	05:00	7.43 pH	23.18 °C	370.91 µS/cm	0.29 mg/L	0.00 NTU	861.3 mV	7.89 ft	200.00 ml/min
8/6/2024 2:28 PM	09:04	7.44 pH	22.99 °C	370.13 µS/cm	0.26 mg/L	0.00 NTU	726.4 mV	7.89 ft	200.00 ml/min
8/6/2024 2:33 PM	14:04	7.44 pH	22.80 °C	367.60 µS/cm	0.24 mg/L	0.01 NTU	858.0 mV	7.89 ft	200.00 ml/min
8/6/2024 2:38 PM	19:04	7.44 pH	22.56 °C	366.71 µS/cm	0.23 mg/L	0.00 NTU	1,031.2 mV	7.90 ft	200.00 ml/min
8/6/2024 2:43 PM	24:04	7.46 pH	22.58 °C	363.58 µS/cm	0.22 mg/L	0.00 NTU	982.9 mV	7.90 ft	200.00 ml/min

## Samples

Sample ID:	Description:
HGWA-47	Grab.



# Low-Flow Test Report:

Test Date / Time: 8/6/2024 12:00:06 PM  
Project: GP-Plant Hammond  
Operator Name: J. Tracy

Location Name: HGWA-48D Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 62.97 ft Total Depth: 72.97 ft Initial Depth to Water: 7.01 ft	Pump Type: Bladder Tubing Type: Poly Pump Intake From TOC: 67.96 ft Estimated Total Volume Pumped: 8 liter Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 5.51 ft	Instrument Used: Aqua TROLL 400 Serial Number: 883530
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Test Notes:  
5 bottles; Full app. III and IV.

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	+/- 5	
8/6/2024 12:00 PM	00:00	7.35 pH	21.69 °C	397.19 µS/cm	0.64 mg/L	2.46 NTU	147.5 mV	10.84 ft	200.00 ml/min
8/6/2024 12:05 PM	05:00	7.37 pH	21.68 °C	391.55 µS/cm	0.61 mg/L	1.34 NTU	500.3 mV	11.69 ft	200.00 ml/min
8/6/2024 12:10 PM	10:00	7.37 pH	21.56 °C	390.56 µS/cm	0.72 mg/L	1.01 NTU	660.5 mV	11.85 ft	200.00 ml/min
8/6/2024 12:15 PM	15:00	7.39 pH	21.52 °C	388.98 µS/cm	0.69 mg/L	0.96 NTU	677.9 mV	12.19 ft	200.00 ml/min
8/6/2024 12:20 PM	20:00	7.38 pH	21.56 °C	388.06 µS/cm	0.74 mg/L	3.24 NTU	824.6 mV	12.35 ft	200.00 ml/min
8/6/2024 12:25 PM	25:00	7.40 pH	21.50 °C	386.59 µS/cm	0.70 mg/L	3.16 NTU	888.9 mV	12.52 ft	200.00 ml/min

## Samples

Sample ID:	Description:
HGWA-48D	Grab.

# Low-Flow Test Report:

Test Date / Time: 8/6/2024 4:06:59 PM  
Project: GP-Plant Hammond  
Operator Name: J. Tracy

Location Name: HGWA-111 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 33.67 ft Total Depth: 43.67 ft Initial Depth to Water: 12.41 ft	Pump Type: Peri Tubing Type: Poly Pump Intake From TOC: 38.67 ft Estimated Total Volume Pumped: 13 liter Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 1.04 ft	Instrument Used: Aqua TROLL 400 Serial Number: 883530
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Test Notes:  
5 bottles; Full app. III and IV.

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	
8/6/2024 4:06 PM	00:00	5.64 pH	22.67 °C	106.45 µS/cm	4.19 mg/L	0.00 NTU	497.1 mV	13.21 ft	200.00 ml/min
8/6/2024 4:11 PM	05:00	6.31 pH	22.38 °C	103.89 µS/cm	4.17 mg/L	0.25 NTU	868.0 mV	13.29 ft	200.00 ml/min
8/6/2024 4:16 PM	10:00	6.29 pH	22.45 °C	107.35 µS/cm	4.13 mg/L	0.20 NTU	818.6 mV	13.31 ft	200.00 ml/min
8/6/2024 4:21 PM	15:00	6.31 pH	22.23 °C	106.50 µS/cm	4.15 mg/L	0.40 NTU	921.3 mV	13.36 ft	200.00 ml/min
8/6/2024 4:26 PM	20:00	6.34 pH	22.06 °C	115.31 µS/cm	4.15 mg/L	0.00 NTU	1,029.2 mV	13.39 ft	200.00 ml/min
8/6/2024 4:31 PM	25:00	6.51 pH	22.05 °C	173.13 µS/cm	4.10 mg/L	0.33 NTU	1,021.2 mV	13.41 ft	200.00 ml/min
8/6/2024 4:36 PM	30:00	6.70 pH	22.09 °C	185.59 µS/cm	3.97 mg/L	0.22 NTU	880.3 mV	13.42 ft	200.00 ml/min
8/6/2024 4:41 PM	35:00	6.76 pH	22.09 °C	191.81 µS/cm	3.90 mg/L	0.17 NTU	926.0 mV	13.42 ft	200.00 ml/min
8/6/2024 4:46 PM	40:00	6.82 pH	21.94 °C	204.30 µS/cm	3.85 mg/L	0.22 NTU	885.2 mV	13.45 ft	200.00 ml/min
8/6/2024 4:51 PM	45:00	6.86 pH	21.82 °C	215.25 µS/cm	3.81 mg/L	0.00 NTU	920.9 mV	13.45 ft	200.00 ml/min
8/6/2024 4:56 PM	50:00	6.92 pH	21.93 °C	229.88 µS/cm	3.78 mg/L	0.12 NTU	891.9 mV	13.45 ft	200.00 ml/min
8/6/2024 5:01 PM	55:00	6.97 pH	21.91 °C	232.71 µS/cm	3.76 mg/L	0.00 NTU	859.7 mV	13.45 ft	200.00 ml/min
8/6/2024 5:06 PM	01:00:00	6.99 pH	21.92 °C	239.68 µS/cm	3.75 mg/L	0.11 NTU	925.9 mV	13.45 ft	200.00 ml/min

Samples

Sample ID:	Description:
HGWA-111	Grab.

# Low-Flow Test Report:

Test Date / Time: 8/9/2024 9:01:31 AM  
Project: GP-Plant Hammond  
Operator Name: T. Kessler

Location Name: HGWA-112 Well Diameter: 2 in Casing type: PVC Screen Length: 10 ft Top of Screen: 30.15 ft Total Depth: 40.15 ft Initial Depth to Water: 12.47 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: 1.33 ft	Instrument Used: Aqua TROLL 400 Serial Number: 884189
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Test Notes:  
5 bottles; Full app. III and IV.

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	
8/9/2024 9:01 AM	00:00	6.04 pH	22.36 °C	73.05 µS/cm	1.23 mg/L	6.50 NTU	146.7 mV	13.35 ft	200.00 ml/min
8/9/2024 9:06 AM	05:00	5.77 pH	21.82 °C	71.49 µS/cm	0.99 mg/L	6.49 NTU	165.2 mV	13.55 ft	200.00 ml/min
8/9/2024 9:11 AM	10:00	5.70 pH	21.69 °C	71.15 µS/cm	0.81 mg/L	5.95 NTU	157.4 mV	13.70 ft	200.00 ml/min
8/9/2024 9:16 AM	15:00	5.67 pH	21.71 °C	71.02 µS/cm	0.72 mg/L	5.74 NTU	149.6 mV	13.75 ft	200.00 ml/min
8/9/2024 9:21 AM	20:00	5.66 pH	21.69 °C	70.84 µS/cm	0.66 mg/L	4.81 NTU	143.0 mV	13.80 ft	200.00 ml/min
8/9/2024 9:26 AM	25:00	5.65 pH	21.84 °C	70.63 µS/cm	0.65 mg/L	4.39 NTU	108.6 mV	13.80 ft	200.00 ml/min
8/9/2024 9:31 AM	30:00	5.65 pH	21.90 °C	70.77 µS/cm	0.65 mg/L	4.76 NTU	134.9 mV	13.80 ft	200.00 ml/min

## Samples

Sample ID:	Description:
HAM-HGWA-112	Grab.

# Low-Flow Test Report:

Test Date / Time: 8/8/2024 1:43:09 PM  
Project: GP-Plant Hammond  
Operator Name: T. Kessler

Location Name: HGWA-113 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 26.11 ft Total Depth: 36.11 ft Initial Depth to Water: 12.34 ft	Pump Type: Peristaltic Tubing Type: Poly Pump Intake From TOC: 31.11 ft Estimated Total Volume Pumped: 12.5 liter Flow Cell Volume: 90 ml Final Flow Rate: 100 ml/min Final Draw Down: 8.71 ft	Instrument Used: Aqua TROLL 400 Serial Number: 884189
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Test Notes:  
5 bottles; Full app. III and IV.

Weather Conditions:  
Sunny, 92 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	
8/8/2024 1:43 PM	00:00	6.43 pH	27.99 °C	90.94 µS/cm	0.61 mg/L	1.23 NTU	108.8 mV	13.80 ft	200.00 ml/min
8/8/2024 1:48 PM	05:00	6.27 pH	27.83 °C	90.63 µS/cm	0.52 mg/L	0.66 NTU	97.6 mV	14.40 ft	200.00 ml/min
8/8/2024 1:53 PM	10:00	6.15 pH	26.61 °C	90.79 µS/cm	0.47 mg/L	0.59 NTU	118.9 mV	14.85 ft	200.00 ml/min
8/8/2024 1:58 PM	15:00	6.12 pH	26.57 °C	91.86 µS/cm	0.49 mg/L	0.93 NTU	115.7 mV	15.50 ft	200.00 ml/min
8/8/2024 2:03 PM	20:00	6.09 pH	27.25 °C	91.44 µS/cm	0.42 mg/L	0.15 NTU	113.2 mV	16.10 ft	200.00 ml/min
8/8/2024 2:08 PM	25:00	6.09 pH	27.94 °C	88.97 µS/cm	0.45 mg/L	1.25 NTU	110.1 mV	16.48 ft	200.00 ml/min
8/8/2024 2:13 PM	30:00	6.05 pH	27.80 °C	92.43 µS/cm	0.48 mg/L	1.04 NTU	108.5 mV	16.94 ft	200.00 ml/min
8/8/2024 2:18 PM	35:00	6.04 pH	28.45 °C	94.07 µS/cm	0.56 mg/L	1.81 NTU	107.9 mV	17.35 ft	200.00 ml/min
8/8/2024 2:23 PM	40:00	6.05 pH	28.50 °C	92.83 µS/cm	0.60 mg/L	1.72 NTU	106.0 mV	17.72 ft	200.00 ml/min
8/8/2024 2:28 PM	45:00	6.05 pH	27.76 °C	93.56 µS/cm	0.59 mg/L	1.33 NTU	102.7 mV	18.05 ft	200.00 ml/min
8/8/2024 2:33 PM	50:00	6.02 pH	28.21 °C	94.72 µS/cm	0.60 mg/L	1.55 NTU	102.5 mV	18.40 ft	200.00 ml/min
8/8/2024 2:38 PM	55:00	6.01 pH	27.07 °C	95.98 µS/cm	0.64 mg/L	1.14 NTU	99.2 mV	18.72 ft	200.00 ml/min
8/8/2024 2:43 PM	01:00:00	6.01 pH	27.73 °C	96.25 µS/cm	0.63 mg/L	1.37 NTU	80.0 mV	19.02 ft	200.00 ml/min

8/8/2024 2:48 PM	01:05:00	6.02 pH	28.64 °C	95.65 µS/cm	0.64 mg/L	0.87 NTU	95.3 mV	19.35 ft	200.00 ml/min
8/8/2024 2:53 PM	01:10:00	6.02 pH	28.06 °C	95.58 µS/cm	0.65 mg/L	0.79 NTU	94.4 mV	19.50 ft	200.00 ml/min
8/8/2024 2:58 PM	01:15:00	6.02 pH	27.53 °C	97.43 µS/cm	0.68 mg/L	2.15 NTU	93.4 mV	19.75 ft	200.00 ml/min
8/8/2024 3:03 PM	01:20:00	6.04 pH	28.35 °C	96.08 µS/cm	0.66 mg/L	1.49 NTU	91.3 mV	20.00 ft	200.00 ml/min
8/8/2024 3:08 PM	01:25:00	6.04 pH	29.36 °C	98.08 µS/cm	0.72 mg/L	0.95 NTU	75.3 mV	20.27 ft	200.00 ml/min
8/8/2024 3:13 PM	01:30:00	6.03 pH	28.21 °C	97.80 µS/cm	0.66 mg/L	0.83 NTU	87.8 mV	20.40 ft	200.00 ml/min
8/8/2024 3:18 PM	01:35:00	6.01 pH	28.68 °C	98.93 µS/cm	0.64 mg/L	0.99 NTU	88.9 mV	20.60 ft	200.00 ml/min
8/8/2024 3:23 PM	01:40:00	6.04 pH	28.29 °C	97.67 µS/cm	0.70 mg/L	1.35 NTU	86.7 mV	20.75 ft	200.00 ml/min
8/8/2024 3:28 PM	01:45:00	6.00 pH	26.96 °C	97.99 µS/cm	0.65 mg/L	2.87 NTU	86.9 mV	20.90 ft	200.00 ml/min
8/8/2024 3:33 PM	01:50:00	6.03 pH	26.21 °C	99.00 µS/cm	0.57 mg/L	1.82 NTU	86.9 mV	21.05 ft	200.00 ml/min
8/8/2024 3:38 PM	01:55:00	5.98 pH	25.11 °C	98.27 µS/cm	0.63 mg/L	1.61 NTU	87.8 mV	21.05 ft	200.00 ml/min

Samples

Sample ID:	Description:
HAM-HGWA-113	Grab.

# Low-Flow Test Report:

**Test Date / Time:** 8/10/2024 9:26:59 AM  
**Project:** GP-Plant Hammond  
**Operator Name:** T. Kessler

<b>Location Name:</b> HGWC-101 <b>Well Diameter:</b> 2 in <b>Casing Type:</b> PVC <b>Screen Length:</b> 10 ft <b>Top of Screen:</b> 27.94 ft <b>Total Depth:</b> 37.94 ft <b>Initial Depth to Water:</b> 13.4 ft	<b>Pump Type:</b> Bladder <b>Tubing Type:</b> Poly <b>Pump Intake From TOC:</b> 32.94 ft <b>Estimated Total Volume Pumped:</b> 13 liter <b>Flow Cell Volume:</b> 90 ml <b>Final Flow Rate:</b> 200 ml/min <b>Final Draw Down:</b> 5.89 ft	<b>Instrument Used:</b> Aqua TROLL 400 <b>Serial Number:</b> 884189
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**Test Notes:**  
5 bottles; Full app. III and IV.

**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	
8/10/2024 9:26 AM	00:00	5.71 pH	21.09 °C	254.71 µS/cm	0.77 mg/L	0.75 NTU	117.7 mV	15.35 ft	200.00 ml/min
8/10/2024 9:31 AM	05:00	5.45 pH	20.84 °C	254.10 µS/cm	0.81 mg/L	0.60 NTU	134.3 mV	16.05 ft	200.00 ml/min
8/10/2024 9:36 AM	10:00	5.36 pH	20.93 °C	257.79 µS/cm	0.81 mg/L	0.52 NTU	101.1 mV	16.70 ft	200.00 ml/min
8/10/2024 9:41 AM	15:00	5.32 pH	20.84 °C	272.57 µS/cm	0.68 mg/L	0.74 NTU	105.0 mV	17.25 ft	200.00 ml/min
8/10/2024 9:46 AM	20:00	5.35 pH	20.93 °C	281.98 µS/cm	0.62 mg/L	0.47 NTU	98.3 mV	17.60 ft	200.00 ml/min
8/10/2024 9:51 AM	25:00	5.34 pH	20.94 °C	287.28 µS/cm	0.56 mg/L	0.20 NTU	77.7 mV	17.90 ft	200.00 ml/min
8/10/2024 9:56 AM	30:00	5.33 pH	21.04 °C	292.25 µS/cm	0.50 mg/L	0.36 NTU	75.3 mV	18.20 ft	200.00 ml/min
8/10/2024 10:01 AM	35:00	5.36 pH	20.98 °C	294.84 µS/cm	0.47 mg/L	0.89 NTU	72.2 mV	18.45 ft	200.00 ml/min
8/10/2024 10:06 AM	40:00	5.37 pH	21.13 °C	296.78 µS/cm	0.45 mg/L	0.61 NTU	72.5 mV	18.65 ft	200.00 ml/min
8/10/2024 10:11 AM	45:00	5.37 pH	21.06 °C	298.24 µS/cm	0.43 mg/L	0.31 NTU	85.1 mV	18.85 ft	200.00 ml/min
8/10/2024 10:16 AM	50:00	5.37 pH	21.11 °C	296.38 µS/cm	0.42 mg/L	1.09 NTU	72.0 mV	19.00 ft	200.00 ml/min
8/10/2024 10:21 AM	55:00	5.37 pH	21.11 °C	295.01 µS/cm	0.46 mg/L	0.64 NTU	71.2 mV	19.15 ft	200.00 ml/min
8/10/2024 10:26 AM	01:00:00	5.38 pH	21.12 °C	296.23 µS/cm	0.47 mg/L	1.07 NTU	69.6 mV	19.29 ft	200.00 ml/min

Samples

Sample ID:	Description:
HAM-HGWC-101	Grab.



# Low-Flow Test Report:

Test Date / Time: 8/9/2024 12:51:50 PM  
Project: GP-Plant Hammond  
Operator Name: T. Kessler

Location Name: HGWC-102 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 27.43 ft Total Depth: 37.43 ft Initial Depth to Water: 13.1 ft	Pump Type: Peristaltic Tubing Type: Poly Pump Intake From TOC: 32.43 ft Estimated Total Volume Pumped: 7 liter Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 0.25 ft	Instrument Used: Aqua TROLL 400 Serial Number: 884189
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Test Notes:  
5 bottles; Full app. III and IV.

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	
8/9/2024 12:51 PM	00:00	5.76 pH	24.15 °C	585.97 µS/cm	1.11 mg/L	2.25 NTU	134.5 mV	13.35 ft	200.00 ml/min
8/9/2024 12:56 PM	05:00	5.70 pH	22.18 °C	575.74 µS/cm	0.66 mg/L	1.92 NTU	107.6 mV	13.35 ft	200.00 ml/min
8/9/2024 1:01 PM	10:00	5.75 pH	22.13 °C	813.15 µS/cm	0.42 mg/L	3.76 NTU	53.7 mV	13.35 ft	200.00 ml/min
8/9/2024 1:06 PM	15:00	5.84 pH	22.14 °C	842.35 µS/cm	0.52 mg/L	2.15 NTU	47.2 mV	13.35 ft	200.00 ml/min
8/9/2024 1:11 PM	20:00	5.85 pH	21.99 °C	843.11 µS/cm	0.49 mg/L	1.80 NTU	49.9 mV	13.35 ft	200.00 ml/min
8/9/2024 1:16 PM	25:00	5.85 pH	21.91 °C	855.00 µS/cm	0.33 mg/L	1.15 NTU	50.7 mV	13.35 ft	200.00 ml/min
8/9/2024 1:21 PM	30:00	5.86 pH	21.92 °C	847.08 µS/cm	0.43 mg/L	1.05 NTU	51.3 mV	13.35 ft	200.00 ml/min

## Samples

Sample ID:	Description:
HAM-HGWC-102	Grab.

# Low-Flow Test Report:

Test Date / Time: 8/9/2024 10:46:29 AM  
Project: GP-Plant Hammond  
Operator Name: T. Kessler

Location Name: HGWC-103 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 27.68 ft Total Depth: 37.68 ft Initial Depth to Water: 13.8 ft	Pump Type: Bladder Tubing Type: Poly Pump Intake From TOC: 32.68 ft Estimated Total Volume Pumped: 7 liter Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 0.2 ft	Instrument Used: Aqua TROLL 400 Serial Number: 884189
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Test Notes:  
5 bottles; Full app. III and IV.

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	
8/9/2024 10:46 AM	00:00	5.75 pH	20.73 °C	989.85 µS/cm	0.18 mg/L	10.40 NTU	100.0 mV	14.00 ft	200.00 ml/min
8/9/2024 10:51 AM	05:00	5.76 pH	20.66 °C	946.29 µS/cm	0.17 mg/L	6.72 NTU	131.5 mV	14.00 ft	200.00 ml/min
8/9/2024 10:56 AM	10:00	5.76 pH	20.54 °C	936.22 µS/cm	0.14 mg/L	5.12 NTU	132.3 mV	14.00 ft	200.00 ml/min
8/9/2024 11:01 AM	15:00	5.76 pH	20.42 °C	936.08 µS/cm	0.12 mg/L	5.11 NTU	105.8 mV	14.00 ft	200.00 ml/min
8/9/2024 11:06 AM	20:00	5.76 pH	20.60 °C	937.46 µS/cm	0.12 mg/L	4.57 NTU	107.4 mV	14.00 ft	200.00 ml/min
8/9/2024 11:11 AM	25:00	5.76 pH	20.40 °C	936.62 µS/cm	0.10 mg/L	4.21 NTU	107.6 mV	14.00 ft	200.00 ml/min
8/9/2024 11:16 AM	30:00	5.74 pH	20.30 °C	933.33 µS/cm	0.12 mg/L	3.89 NTU	111.2 mV	14.00 ft	200.00 ml/min

## Samples

Sample ID:	Description:
HAM-HGWC-103	Grab.

# Low-Flow Test Report:

Test Date / Time: 8/10/2024 11:09:21 AM  
Project: GP-Plant Hammond  
Operator Name: T. Kessler

Location Name: HGWC-105 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 34.67 ft Total Depth: 44.67 ft Initial Depth to Water: 18 ft	Pump Type: Bladder Tubing Type: Poly Pump Intake From TOC: 39.67 ft Estimated Total Volume Pumped: 7 liter Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 0.30 ft	Instrument Used: Aqua TROLL 400 Serial Number: 884189
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Test Notes:  
5 bottles; Full app. III and IV.

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	
8/10/2024 11:09 AM	00:00	6.37 pH	20.22 °C	801.53 µS/cm	0.89 mg/L	22.60 NTU	9.4 mV	18.25 ft	200.00 ml/min
8/10/2024 11:14 AM	05:00	6.38 pH	20.04 °C	816.80 µS/cm	0.55 mg/L	9.62 NTU	1.1 mV	18.30 ft	200.00 ml/min
8/10/2024 11:19 AM	10:00	6.38 pH	19.86 °C	818.38 µS/cm	0.39 mg/L	6.52 NTU	4.7 mV	18.30 ft	200.00 ml/min
8/10/2024 11:24 AM	15:00	6.37 pH	20.04 °C	819.52 µS/cm	0.28 mg/L	4.06 NTU	2.5 mV	18.30 ft	200.00 ml/min
8/10/2024 11:29 AM	20:00	6.38 pH	19.97 °C	813.05 µS/cm	0.23 mg/L	3.02 NTU	0.9 mV	18.30 ft	200.00 ml/min
8/10/2024 11:34 AM	25:00	6.38 pH	20.00 °C	809.95 µS/cm	0.20 mg/L	2.95 NTU	-0.2 mV	18.30 ft	200.00 ml/min
8/10/2024 11:39 AM	30:00	6.38 pH	20.03 °C	803.99 µS/cm	0.19 mg/L	2.16 NTU	-0.7 mV	18.30 ft	200.00 ml/min

## Samples

Sample ID:	Description:
HAM-HGWC-105	Grab.

# Low-Flow Test Report:

Test Date / Time: 8/10/2024 12:41:19 PM  
Project: GP-Plant Hammond  
Operator Name: T. Kessler

Location Name: HGWC-107 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 28.2 ft Total Depth: 38.2 ft Initial Depth to Water: 15.20 ft	Pump Type: Bladder Tubing Type: Poly Pump Intake From TOC: 33.20 ft Estimated Total Volume Pumped: 7 liter Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 0.00 ft	Instrument Used: Aqua TROLL 400 Serial Number: 884189
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Test Notes:  
5 bottles; Full app. III and IV.

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	
8/10/2024 12:41 PM	00:00	6.46 pH	22.37 °C	384.63 µS/cm	1.06 mg/L	2.18 NTU	104.5 mV	15.20 ft	200.00 ml/min
8/10/2024 12:46 PM	05:00	6.30 pH	21.82 °C	384.78 µS/cm	0.63 mg/L	3.01 NTU	94.3 mV	15.20 ft	200.00 ml/min
8/10/2024 12:51 PM	10:00	6.26 pH	21.77 °C	381.97 µS/cm	0.29 mg/L	2.66 NTU	113.3 mV	15.20 ft	200.00 ml/min
8/10/2024 12:56 PM	15:00	6.24 pH	21.69 °C	380.74 µS/cm	0.18 mg/L	2.91 NTU	87.4 mV	15.20 ft	200.00 ml/min
8/10/2024 1:01 PM	20:00	6.23 pH	21.67 °C	379.61 µS/cm	0.15 mg/L	2.73 NTU	84.4 mV	15.20 ft	200.00 ml/min
8/10/2024 1:06 PM	25:00	6.22 pH	21.74 °C	380.58 µS/cm	0.13 mg/L	2.89 NTU	83.2 mV	15.20 ft	200.00 ml/min
8/10/2024 1:11 PM	30:00	6.22 pH	21.73 °C	379.28 µS/cm	0.14 mg/L	2.28 NTU	81.6 mV	15.20 ft	200.00 ml/min

## Samples

Sample ID:	Description:
HAM-HGWC-107	Grab.
HAM-AP4-FD-01	Grab.

# Low-Flow Test Report:

Test Date / Time: 8/10/2024 10:00:08 AM  
Project: HGWC-109  
Operator Name: C. Cain

Location Name: HGWC-109 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 21.36 ft Total Depth: 31.36 ft Initial Depth to Water: 8.48 ft	Pump Type: Bladder Tubing Type: Poly Pump Intake From TOC: 26.36 ft Estimated Total Volume Pumped: 14 liter Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 0.00 ft	Instrument Used: Aqua TROLL 400 Serial Number: 1080293
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Test Notes:  
5 bottles; Full app. III and IV.

Weather Conditions:  
Sunny, 78 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	
8/10/2024 10:00 AM	00:00	7.08 pH	21.46 °C	352.68 µS/cm	0.56 mg/L	999.00 NTU	-91.2 mV	8.48 ft	200.00 ml/min
8/10/2024 10:05 AM	05:00	7.03 pH	20.40 °C	353.31 µS/cm	0.30 mg/L	102.50 NTU	-101.2 mV	8.48 ft	200.00 ml/min
8/10/2024 10:10 AM	10:00	7.04 pH	20.30 °C	354.18 µS/cm	0.23 mg/L	65.50 NTU	-98.9 mV	8.48 ft	200.00 ml/min
8/10/2024 10:15 AM	15:00	7.04 pH	20.21 °C	352.97 µS/cm	0.21 mg/L	43.10 NTU	-98.7 mV	8.48 ft	200.00 ml/min
8/10/2024 10:20 AM	20:00	7.04 pH	20.29 °C	353.21 µS/cm	0.19 mg/L	31.00 NTU	-98.8 mV	8.48 ft	200.00 ml/min
8/10/2024 10:25 AM	25:00	7.04 pH	20.34 °C	351.98 µS/cm	0.19 mg/L	24.10 NTU	-98.0 mV	8.48 ft	200.00 ml/min
8/10/2024 10:30 AM	30:00	7.05 pH	20.26 °C	352.04 µS/cm	0.19 mg/L	20.70 NTU	-97.6 mV	8.48 ft	200.00 ml/min
8/10/2024 10:35 AM	35:00	7.04 pH	20.31 °C	351.72 µS/cm	0.18 mg/L	16.90 NTU	-96.8 mV	8.48 ft	200.00 ml/min
8/10/2024 10:40 AM	40:00	7.04 pH	20.32 °C	351.82 µS/cm	0.18 mg/L	14.70 NTU	-96.0 mV	8.48 ft	200.00 ml/min
8/10/2024 10:45 AM	45:00	7.04 pH	20.31 °C	351.61 µS/cm	0.18 mg/L	11.80 NTU	-95.5 mV	8.48 ft	200.00 ml/min
8/10/2024 10:50 AM	50:00	7.04 pH	20.48 °C	351.20 µS/cm	0.18 mg/L	10.80 NTU	-94.7 mV	8.48 ft	200.00 ml/min
8/10/2024 10:55 AM	55:00	7.04 pH	20.54 °C	351.47 µS/cm	0.19 mg/L	10.04 NTU	-94.2 mV	8.48 ft	200.00 ml/min
8/10/2024 11:00 AM	01:00:00	7.03 pH	20.68 °C	350.22 µS/cm	0.19 mg/L	6.28 NTU	-93.2 mV	8.48 ft	200.00 ml/min

8/10/2024 11:05 AM	01:05:00	7.03 pH	20.67 °C	350.20 µS/cm	0.19 mg/L	4.23 NTU	-92.5 mV	8.48 ft	200.00 ml/min
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Samples

Sample ID:	Description:
HAM-HGWC-109	Grab.

# Low-Flow Test Report:

Test Date / Time: 8/10/2024 1:25:04 PM  
Project: HGWC-117A  
Operator Name: C. Cain

Location Name: HGWC-117A Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 30.31 ft Total Depth: 40.31 ft Initial Depth to Water: 17.16 ft	Pump Type: Bladder Tubing Type: Poly Pump Intake From TOC: 35.31 ft Estimated Total Volume Pumped: 11 liter Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 0.00 ft	Instrument Used: Aqua TROLL 400 Serial Number: 1080293
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Test Notes:  
5 bottles; Full app. III and IV.

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	
8/10/2024 1:25 PM	00:00	5.65 pH	25.36 °C	225.65 µS/cm	0.38 mg/L	1.14 NTU	137.5 mV	17.16 ft	200.00 ml/min
8/10/2024 1:30 PM	05:00	5.58 pH	22.75 °C	235.17 µS/cm	0.21 mg/L	0.66 NTU	138.9 mV	17.16 ft	200.00 ml/min
8/10/2024 1:35 PM	10:00	5.59 pH	22.49 °C	237.25 µS/cm	0.19 mg/L	0.12 NTU	136.5 mV	17.16 ft	200.00 ml/min
8/10/2024 1:40 PM	15:00	5.64 pH	22.45 °C	240.37 µS/cm	0.19 mg/L	0.09 NTU	155.1 mV	17.16 ft	200.00 ml/min
8/10/2024 1:45 PM	20:00	5.79 pH	22.46 °C	251.80 µS/cm	0.18 mg/L	0.14 NTU	119.3 mV	17.16 ft	200.00 ml/min
8/10/2024 1:50 PM	25:00	5.99 pH	22.50 °C	270.89 µS/cm	0.14 mg/L	0.04 NTU	116.6 mV	17.16 ft	200.00 ml/min
8/10/2024 1:55 PM	30:00	6.19 pH	22.47 °C	297.31 µS/cm	0.14 mg/L	0.06 NTU	85.4 mV	17.16 ft	200.00 ml/min
8/10/2024 2:00 PM	35:00	6.32 pH	22.53 °C	322.50 µS/cm	0.12 mg/L	0.08 NTU	72.0 mV	17.16 ft	200.00 ml/min
8/10/2024 2:05 PM	40:00	6.43 pH	22.58 °C	336.06 µS/cm	0.10 mg/L	0.09 NTU	64.0 mV	17.16 ft	200.00 ml/min
8/10/2024 2:10 PM	45:00	6.51 pH	22.53 °C	348.88 µS/cm	0.09 mg/L	0.03 NTU	56.6 mV	17.16 ft	200.00 ml/min
8/10/2024 2:15 PM	50:00	6.57 pH	22.55 °C	357.12 µS/cm	0.09 mg/L	0.07 NTU	53.6 mV	17.16 ft	200.00 ml/min
8/10/2024 2:20 PM	55:00	6.61 pH	22.55 °C	363.98 µS/cm	0.08 mg/L	0.04 NTU	51.4 mV	17.16 ft	200.00 ml/min

Samples

Sample ID:	Description:
HAM-HGWC-117A	Grab.



# Low-Flow Test Report:

Test Date / Time: 8/9/2024 3:03:28 PM  
Project: GP-Plant Hammond  
Operator Name: T. Kessler

Location Name: HGWC-118 Well Diameter: 2 in Casing Type: PVC Screen Length: 1010 ft Top of Screen: 30.91 ft Total Depth: 40.91 ft Initial Depth to Water: 13.45 ft	Pump Type: Peristaltic Tubing Type: Poly Pump Intake From TOC: 35.91 ft Estimated Total Volume Pumped: 7 liter Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 0.35 ft	Instrument Used: Aqua TROLL 400 Serial Number: 884189
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Test Notes:  
5 bottles; Full app. III and IV.

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	
8/9/2024 3:03 PM	00:00	7.14 pH	24.38 °C	470.37 µS/cm	0.68 mg/L	1.56 NTU	46.4 mV	13.80 ft	200.00 ml/min
8/9/2024 3:08 PM	05:00	7.13 pH	23.79 °C	465.71 µS/cm	0.63 mg/L	2.34 NTU	39.8 mV	13.80 ft	200.00 ml/min
8/9/2024 3:13 PM	10:00	7.12 pH	23.52 °C	464.16 µS/cm	0.61 mg/L	1.09 NTU	38.9 mV	13.80 ft	200.00 ml/min
8/9/2024 3:18 PM	15:00	7.11 pH	23.01 °C	461.83 µS/cm	0.53 mg/L	1.22 NTU	37.7 mV	13.80 ft	200.00 ml/min
8/9/2024 3:23 PM	20:00	7.10 pH	23.27 °C	463.25 µS/cm	0.48 mg/L	0.97 NTU	37.4 mV	13.80 ft	200.00 ml/min
8/9/2024 3:28 PM	25:00	7.09 pH	23.06 °C	463.06 µS/cm	0.39 mg/L	1.21 NTU	37.4 mV	13.80 ft	200.00 ml/min
8/9/2024 3:33 PM	30:00	7.07 pH	22.94 °C	463.02 µS/cm	0.34 mg/L	0.87 NTU	37.1 mV	13.80 ft	200.00 ml/min

## Samples

Sample ID:	Description:
HAM-HGWC-118	Grab.
HAM-AP4-FD-02	Grab.

# CALIBRATION REPORTS

Site Name: Hammond  
 Calibrated By: JNT

Field Instrumentation Calibration Form

Date: 08/06/24  
 Field Conditions: Sunny, Clear

Instrument	Manufacturer/ Model	Serial Number
Water Quality Meter	<u>EN-5.7.1</u>	<u>883530</u>
Turbidity Meter	<u>Hammer</u>	<u>9123-268</u>

Calibration Standard Information				
Parameter	Standard	Lot #	Date of Expiration	Brand
Specific Conductance (µS/cm)	4.490	<u>24005513</u>	<u>11/24</u>	<u>AER</u>
pH (SU)	4.00	<u>24004517</u>	<u>12/24</u>	<u>↓</u>
pH (SU)	7.00	<u>24000083</u>	<u>12/24</u>	<u>↓</u>
pH (SU)	10.00	<u>24000083</u>	<u>12/24</u>	<u>↓</u>
D.O. (%)	N/A			
ORP (mV)	228.0	<u>24006903</u>	<u>12/24</u>	

Calibration <u>7:55 (P)</u>					
Time Start	Time Finish				
Parameter	Standard	Calibration Value	Calibration Solution Temperature (°C)	Acceptance Criteria	Reference
Specific Conductance (µS/cm)	4.490	<u>4490</u>	<u>27.57</u>	± 10% of standard	EPA 2023
pH (SU)	4.00	<u>4.0</u>	<u>27.57</u>	± 0.1	GWMP
pH (SU)	7.00	<u>7.00</u>	<u>28.52</u>	± 0.1	GWMP
pH (SU)	10.00	<u>10.00</u>	<u>28.52</u>	± 0.1	GWMP
D.O. (%)	N/A	<u>101.93</u>	<u>25.31</u>	± 10%	NA
ORP (mV)	228.0	<u>228</u>	<u>28.32</u>	± 10	EPA 2023

Turbidity (NTU)	Standard	Calibration Value	Acceptance Criteria	Reference
	<u>0</u>	<u>0</u>	± 10% of standard	EPA 2023
	<u>10</u>	<u>0.92</u>		
	<u>10</u>	<u>9.24</u>		

Calibration Check					
Time Start	Time Finish				
Parameter	Standard	Calibration Value	Calibration Solution Temperature (°C)	Acceptance Criteria	Reference
Specific Conductance (µS/cm)	4.490	<u>4400</u>	<u>27.50</u>	± 10% of standard	EPA 2023
pH (SU)	4.00	<u>3.47</u>	<u>27.72</u>	± 0.1	GWMP
pH (SU)	7.00	<u>7.02</u>	<u>27.81</u>	± 0.1	GWMP
pH (SU)	10.00	<u>9.96</u>	<u>27.81</u>	± 0.1	GWMP

Turbidity (NTU)	Standard	Calibration Value	Acceptance Criteria	Reference
	<u>0</u>	<u>0</u>	± 10% of standard	EPA 2023
	<u>1</u>	<u>0.48</u>		
	<u>10</u>	<u>9.46</u>		

Notes:

Site Name: Plant Hammond

## Field Instrumentation Calibration Form

Date: 8/8/2024Calibrated By: T. KesslerField Conditions: Clear 80°

Instrument	Manufacturer/ Model	Serial Number
Water Quality Meter	<u>Hanna HI9142</u>	<u>8821189</u>
Turbidity Meter	<u>Hanna HI9142</u>	<u>3123</u>

Calibration Standard Information				
Parameter	Standard	Lot #	Date of Expiration	Brand
Specific Conductance (µS/cm)	4,490	<u>24005593</u>	<u>11/24</u>	<u>ingity</u>
pH (SU)	4.00	<u>4</u>	<u>4</u>	
pH (SU)	7.00	<u>24005517</u>	<u>12/24</u>	
pH (SU)	10.00	<u>24005593</u>	<u>12/24</u>	
D.O. (%)	N/A			
ORP (mV)	228.0	<u>24006903</u>	<u>12/24</u>	

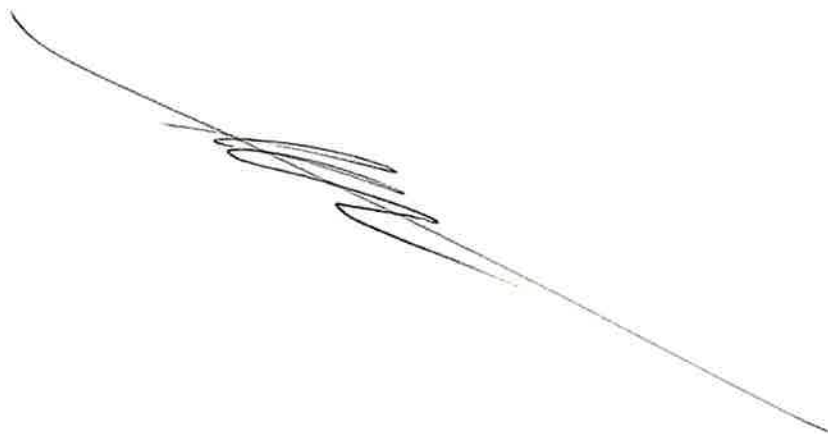
Calibration					
Time Start	<u>07:15</u>	Time Finish	<u>08:10</u>		
Parameter	Standard	Calibration Value	Calibration Solution Temperature (°C)	Acceptance Criteria	Reference
Specific Conductance (µS/cm)	4,490	<u>4490</u>	<u>27.53</u>	± 10% of standard	EPA 2023
pH (SU)	4.00	<u>4.0</u>	<u>27.57</u>	± 0.1	GWMP
pH (SU)	7.00	<u>7.0</u>	<u>27.57</u>	± 0.1	GWMP
pH (SU)	10.00	<u>10.00</u>	<u>27.53</u>	± 0.1	GWMP
D.O. (%)	N/A	<u>100</u>	<u>26.66</u>	± 10%	NA
ORP (mV)	228.0	<u>228</u>	<u>27.47</u>	± 10	EPA 2023

Turbidity (NTU)	Standard	Calibration Value	Acceptance Criteria	Reference
	<u>0</u>	<u>0</u>	± 10% of standard	EPA 2023
	<u>1</u>	<u>1.03</u>		
	<u>10</u>	<u>10.07</u>		

Calibration Check					
Time Start	<u>12:10</u>	Time Finish	<u>12:15</u>		
Parameter	Standard	Calibration Value	Calibration Solution Temperature (°C)	Acceptance Criteria	Reference
Specific Conductance (µS/cm)	4,490	<u>4490</u>	<u>29.51</u>	± 10% of standard	EPA 2023
pH (SU)	4.00	<u>4</u>	<u>29.31</u>	± 0.1	GWMP
pH (SU)	7.00	<u>7</u>	<u>29.22</u>	± 0.1	GWMP
pH (SU)	10.00	<u>10</u>	<u>28.99</u>	± 0.1	GWMP

Turbidity (NTU)	Standard	Calibration Value	Acceptance Criteria	Reference
	<u>0</u>	<u>0</u>	± 10% of standard	EPA 2023
	<u>1</u>	<u>1.03</u>		
	<u>10</u>	<u>9.92</u>		

Notes:



## Field Instrumentation Calibration Form

Site Name: Plant Hill, MinnesotaDate: 8/9/2024Calibrated By: L. KesslerField Conditions: clear, 80°F

Instrument	Manufacturer/ Model	Serial Number
Water Quality Meter	<u>insitu</u>	<u>854159</u>
Turbidity Meter	<u>lumetta</u>	<u>3123</u>

Calibration Standard Information				
Parameter	Standard	Lot #	Date of Expiration	Brand
Specific Conductance ( $\mu\text{S}/\text{cm}$ )	4.490	<u>2405593</u>	<u>11/24</u>	<u>insitu</u>
pH (SU)	4.00	<u>24004517</u>	<u>11/24</u>	
pH (SU)	7.00	<u>2400085</u>	<u>12/24</u>	
pH (SU)	10.00			
D.O. (%)	N/A			
ORP (mV)	228.0	<u>2400903</u>	<u>12/24</u>	

Calibration					
Time Start <u>0745</u>		Time Finish <u>0810</u>			
Parameter	Standard	Calibration Value	Calibration Solution Temperature ( $^{\circ}\text{C}$ )	Acceptance Criteria	Reference
Specific Conductance ( $\mu\text{S}/\text{cm}$ )	4.490	<u>4.190</u>	<u>25.79</u>	$\pm 10\%$ of standard	EPA 2023
pH (SU)	4.00	<u>4</u>	<u>25.78</u>	$\pm 0.1$	GWMP
pH (SU)	7.00	<u>7</u>	<u>25.97</u>	$\pm 0.1$	GWMP
pH (SU)	10.00	<u>10</u>	<u>26.38</u>	$\pm 0.1$	GWMP
D.O. (%)	N/A	<u>100</u>	<u>25.91</u>	$\pm 10\%$	NA
ORP (mV)	228.0	<u>228</u>	<u>26.57</u>	$\pm 10$	EPA 2023

Turbidity (NTU)	Standard	Calibration Value	Acceptance Criteria	Reference
	<u>0</u>	<u>0</u>	$\pm 10\%$ of standard	EPA 2023
	<u>1</u>	<u>1</u>		
	<u>10</u>	<u>9.99</u>		

Calibration Check					
Time Start <u>14:35 (JT)</u>		Time Finish <u>14:50 (JT)</u>			
Parameter	Standard	Calibration Value	Calibration Solution Temperature ( $^{\circ}\text{C}$ )	Acceptance Criteria	Reference
Specific Conductance ( $\mu\text{S}/\text{cm}$ )	4.490	<u>4.190</u>	<u>29.51</u>	$\pm 10\%$ of standard	EPA 2023
pH (SU)	4.00	<u>4.0</u>	<u>29.31</u>	$\pm 0.1$	GWMP
pH (SU)	7.00	<u>7.0</u>	<u>29.27</u>	$\pm 0.1$	GWMP
pH (SU)	10.00	<u>10.0</u>	<u>30.01</u>	$\pm 0.1$	GWMP

Turbidity (NTU)	Standard	Calibration Value	Acceptance Criteria	Reference
	<u>0</u>	<u>0</u>	$\pm 10\%$ of standard	EPA 2023
	<u>1</u>	<u>1</u>		
	<u>10</u>	<u>9.95</u>		

Notes:

Site Name: Plant Hammond

## Field Instrumentation Calibration Form

Date: 8/10/24Calibrated By: T. KesslerField Conditions: Sunny, 80°

Instrument	Manufacturer/ Model	Serial Number
Water Quality Meter	Aqua Troll 400	884109
Turbidity Meter	RaMette	3123

Calibration Standard Information				
Parameter	Standard	Lot #	Date of Expiration	Brand
Specific Conductance ( $\mu\text{S}/\text{cm}$ )	4,490	241605593	7/1/24	T.H. Smith
pH (SU)	4.00	↓	↓	
pH (SU)	7.00	24004517	12/24	
pH (SU)	10.00	24000085	12/24	
D.O. (%)	N/A	—	—	
ORP (mV)	228.0	24000903	12/24	J

Calibration					
Time Start <u>8</u>		Time Finish <u>6:30</u>			
Parameter	Standard	Calibration Value	Calibration Solution Temperature ( $^{\circ}\text{C}$ )	Acceptance Criteria	Reference
Specific Conductance ( $\mu\text{S}/\text{cm}$ )	4,490	4490	26.69	$\pm 10\%$ of standard	EPA 2023
pH (SU)	4.00	4.0	26.77	$\pm 0.1$	GWMP
pH (SU)	7.00	7.0	27.02	$\pm 0.1$	GWMP
pH (SU)	10.00	10	27.15	$\pm 0.1$	GWMP
D.O. (%)	N/A	100	27.04	$\pm 10\%$	NA
ORP (mV)	228.0	228	27.60	$\pm 10$	EPA 2023

Turbidity (NTU)	Standard	Calibration Value	Acceptance Criteria	Reference
	0	0	$\pm 10\%$ of standard	EPA 2023
	1	0.95		
	10	9.32		

Calibration Check					
Time Start <u>1400</u>		Time Finish <u>1410</u>			
Parameter	Standard	Calibration Value	Calibration Solution Temperature ( $^{\circ}\text{C}$ )	Acceptance Criteria	Reference
Specific Conductance ( $\mu\text{S}/\text{cm}$ )	4,490	4480	30.01	$\pm 10\%$ of standard	EPA 2023
pH (SU)	4.00	4.09	29.75	$\pm 0.1$	GWMP
pH (SU)	7.00	7.02	29.63	$\pm 0.1$	GWMP
pH (SU)	10.00	9.93	29.91	$\pm 0.1$	GWMP

Turbidity (NTU)	Standard	Calibration Value	Acceptance Criteria	Reference
	0	0	$\pm 10\%$ of standard	EPA 2023
	1	1		
	10	9.93		

Notes

Site Name: Plant Hammer

## Field Instrumentation Calibration Form

Date: 8/1/24Calibrated By: C. CHINField Conditions: Sunny 73°F

Instrument	Manufacturer/ Model	Serial Number
Water Quality Meter	<u>Agua Troll 400</u>	<u>883530</u>
Turbidity Meter	<u>Lamotte 2020t</u>	<u>4123-2623</u>

Calibration Standard Information				
Parameter	Standard	Lot #	Date of Expiration	Brand
Specific Conductance ( $\mu\text{S}/\text{cm}$ )	4.490	<u>24025173</u>	<u>12/24</u>	<u>In Site</u> ↓
pH (SU)	4.00	↓	↓	
pH (SU)	7.00	<u>24024517</u>	<u>12/24</u>	
pH (SU)	10.00	<u>24024517</u>	<u>12/24</u>	
D.O. (%)	N/A	↓	↓	
ORP (mV)	228.0	<u>24024517</u>	<u>12/24</u>	↓

Calibration					
Time Start <u>0830</u>		Time Finish <u>0910</u>			
Parameter	Standard	Calibration Value	Calibration Solution Temperature ( $^{\circ}\text{C}$ )	Acceptance Criteria	Reference
Specific Conductance ( $\mu\text{S}/\text{cm}$ )	4.490	<u>4490</u>	<u>26.24</u>	$\pm 10\%$ of standard	EPA 2023
pH (SU)	4.00	<u>4.6</u>	<u>26.00</u>	$\pm 0.1$	GWMP
pH (SU)	7.00	<u>7.0</u>	<u>26.54</u>	$\pm 0.1$	GWMP
pH (SU)	10.00	<u>10.00</u>	<u>26.91</u>	$\pm 0.1$	GWMP
D.O. (%)	N/A	<u>100%</u>	<u>26.74</u>	$\pm 10\%$	NA
ORP (mV)	228.0	<u>228</u>	<u>26.65</u>	$\pm 10$	EPA 2023

Turbidity (NTU)	Standard	Calibration Value	Acceptance Criteria	Reference
	<u>0</u>	<u>0.02</u>	$\pm 10\%$ of standard	EPA 2023
	<u>1</u>	<u>0.94</u>		
	<u>10</u>	<u>9.94</u>		

Calibration Check					
Time Start <u>14:35</u> <u>JD</u>		Time Finish <u>14:50</u> <u>JD</u>			
Parameter	Standard	Calibration Value	Calibration Solution Temperature ( $^{\circ}\text{C}$ )	Acceptance Criteria	Reference
Specific Conductance ( $\mu\text{S}/\text{cm}$ )	4.490	<u>4490</u>	<u>34.38</u>	$\pm 10\%$ of standard	EPA 2023
pH (SU)	4.00	<u>3.94</u>	<u>34.40</u>	$\pm 0.1$	GWMP
pH (SU)	7.00	<u>7.03</u>	<u>34.62</u>	$\pm 0.1$	GWMP
pH (SU)	10.00	<u>9.94</u>	<u>33.98</u>	$\pm 0.1$	GWMP

Turbidity (NTU)	Standard	Calibration Value	Acceptance Criteria	Reference
	<u>0</u>	<u>0.02</u>	$\pm 10\%$ of standard	EPA 2023
	<u>1</u>	<u>1.03</u>		
	<u>10</u>	<u>10.04</u>		

Notes:

# APPENDIX C

## Statistical Analyses Report



## GROUNDWATER STATS CONSULTING

February 28, 2025

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 2024 Semi-Annual Statistical Analysis

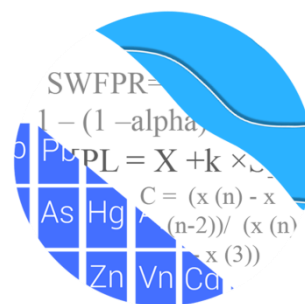
Dear Ms. Jurinko,

Groundwater Stats Consulting, formerly the statistical consulting division of Sanitas Technologies, is pleased to provide the August 2024 Semi-Annual Groundwater Detection and Assessment Monitoring Statistical summary of groundwater data for Georgia Power Company's Plant Hammond AP-4. The analysis complies with the federal rule for the Disposal of Coal Combustion Residuals from Electric Utilities (CCR Rule, 2015), the Georgia Environmental Protection Division (EPD) Rules for Solid Waste Management Chapter 391-3-4-.10 and follows the United States Environmental Protection Agency (USEPA) Unified Guidance (2009).

Sampling began for Hammond AP-4 in 2016, and at least 8 background samples have been collected at each of the groundwater monitoring wells analyzed in this report. The monitoring well network, as provided by Southern Company Services, consists of the following:

- **Upgradient well:** HGWA-47, HGWA-48D, HGWA-111, HGWA-112, and HGWA-113
- **Downgradient wells:** HGWC-101, HGWC-102, HGWC-103, HGWC-105, HGWC-107, HGWC-109, HGWC-117A, and HGWC-118

Note that downgradient well HGWC-102 was first sampled in October 2019 and has at least 8 samples; therefore, data from this well are evaluated in this analysis. Upgradient wells HGWA-47 and HGWA-48D were first sampled in September 2020 and also have at



least 8 samples. Upgradient well data are included in construction of interwell prediction limits and upper tolerance limits when a minimum of 2 samples are available. Downgradient wells are evaluated with prediction limits for Appendix III constituents once the wells have a minimum of 8 samples, and with confidence intervals once a minimum of 8 samples is available.

Piezometer HGWC-117A was reclassified as a downgradient well and was first sampled in February 2021 and is evaluated in this analysis for Appendix III and IV constituents.

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. In the case of lithium, historical reporting limits vary among the wells. Therefore, the reporting limits of 0.030 mg/L, respectively, were substituted across all wells, which is the most recent reporting limit provided by the laboratory. Note that due to elevated historic reporting limits, the current reporting limit for arsenic of 0.005 mg/L was substituted across all wells in order to maintain statistical limits that are conservative from a regulatory perspective.

Time series plots for Appendix III and IV parameters at all wells are provided for the purpose of screening data at these wells (Figure A). Additionally, a separate section of box plots is included for all constituents at upgradient and downgradient wells (Figure B). The time series plots are used to initially screen for suspected outliers and trends, while the box plots provide visual representation of variation within individual wells and between all wells. Values in background which have been flagged as outliers may be seen in a

lighter font and as a disconnected symbol on the graphs. A summary of flagged outliers follows this report (Figure C).

Data at all wells were initially evaluated during the background screening described below for the following: 1) outliers; 2) trends; 3) most appropriate statistical method for Appendix III parameters based on site characteristics of groundwater data upgradient of the facility; and 4) eligibility of downgradient wells when intrawell statistical methods are recommended. Power curves were provided with the screening and demonstrated that the selected statistical methods for Appendix III parameters comply with the USEPA Unified Guidance. The EPA suggests the selected statistical method should provide at least 55% power at 3 standard deviations or at least 80% power at 4 standard deviations.

### **Statistical Methods – Appendix III Parameters**

Appendix III parameters are evaluated using interwell prediction limits combined with a 1-of-2 resample plan for all constituents: boron, calcium, chloride, fluoride, pH, sulfate, and TDS.

Parametric prediction limits are utilized when the screened historical data follow a normal or transformed-normal distribution. When data cannot be normalized or the majority of data are non-detects, a nonparametric test is utilized. While the false positive rate associated with the parametric limits is based on an annual 10% (5% per semi-annual event) as recommended by the EPA Unified Guidance (2009), the false positive rate associated with the nonparametric limits is dependent upon the available background sample size, number of future comparisons, and verification resample plan. The distribution of data is tested using the Shapiro-Wilk/Shapiro-Francia test for normality. After testing for normality and performing any adjustments as discussed below (US EPA, 2009), data are analyzed using either parametric or non-parametric prediction limits.

- No statistical analyses are required on wells and analytes containing 100% non-detects (USEPA Unified Guidance, 2009, Chapter 6).
- When data contain <15% non-detects, simple substitution of one-half the reporting limit is utilized in the statistical analysis. The reporting limit utilized for non-detects is the most recent practical quantification limit (PQL) as reported by the laboratory.
- When data contain between 15-50% non-detects, the Kaplan-Meier non-detect adjustment is applied to the background data for parametric limits. 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 2024

All Appendix III parameters were analyzed using interwell prediction limits. Background (upgradient) well data were reassessed 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 additional 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 2024 (Figure D). Interwell prediction limits pool upgradient well data to establish a background limit for an individual constituent. The August 2024 sample from each downgradient well is compared to the background limit to determine whether initial exceedances are present.

In the event of an initial exceedance of compliance well data, the 1-of-2 resample plan allows for collection of one additional sample to determine whether the initial exceedance is confirmed. When a resample confirms the initial exceedance, a statistically significant increase is identified and further research would be required to identify the cause of the exceedance (i.e., impact from the site, natural variation, or an off-site source). If the resample falls within the statistical limit, the initial exceedance is considered to be a false positive result and, therefore, no exceedance is noted and no further action is necessary. If no resample is collected, the original result is considered a confirmed exceedance. A summary table of the interwell prediction limits follows this letter. Exceedances were identified for the following well/constituent pairs:

- Boron: HGWC-101, HGWC-102, HGWC-103, HGWC-105, HGWC-107, HGWC-109, HGWC-117A, and HGWC-118
- Calcium: HGWC-102, HGWC-103, HGWC-105, and HGWC-118
- Chloride: HGWC-102, HGWC-103, and HGWC-105
- pH: HGWC-101 (lower limit)
- Sulfate: HGWC-101, HGWC-102, HGWC-103, HGWC-105, HGWC-107, HGWC-117A, and HGWC-118
- TDS: HGWC-102, HGWC-103, and HGWC-105

### Trend Test Evaluation – Appendix III

When prediction limit exceedances are identified in downgradient wells, data are further evaluated using the Sen's Slope/Mann Kendall trend test to determine whether concentrations are statistically increasing, decreasing, or stable at the 99% confidence

level (Figure E). Upgradient wells are included in the trend analyses for all parameters found to exceed their prediction limit in downgradient wells to identify whether similar patterns exist upgradient of the site. When trends are present in upgradient trends, it is an indication of variability in groundwater unrelated to practices at the site. A summary of the trend test results follows this letter. Statistically significant trends were noted for the following well/constituent pairs:

Increasing trends:

- Boron: HGWC-101 and HGWC-103
- Calcium: HGWA-113 (upgradient), HGWC-103, and HGWC-105
- Chloride: HGWC-103 and HGWC-105
- TDS: HGWC-105

Decreasing trends:

- Boron: HGWC-109
- Sulfate: HGWA-113, HGWA-48D (both upgradient), and HGWC-118

## **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 Levels (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 2024**

For Appendix IV parameters, confidence intervals for each downgradient well/constituent pair were compared against corresponding Groundwater Protection Standards (GWPS). GWPS were developed as described below. Well/constituent pairs containing 100% non-detects do not require analysis. Data from upgradient wells for Appendix IV parameters are reassessed for outliers during each analysis. No additional values were flagged and a summary of previously flagged outliers follows this report (Figure C).

### Interwell Upper Tolerance Limits

Interwell upper tolerance limits were used to calculate site-specific background limits from all available pooled upgradient well data through August 2024 for Appendix IV



constituents (Figure F). Parametric tolerance limits are calculated, with a target of 95% confidence and 95% coverage, 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 constructed. As mentioned above, reporting limits of 0.005 mg/L and 0.030 mg/L were substituted across all wells for arsenic and lithium, respectively.

### Groundwater Protection Standards

The background limits were then used when determining the groundwater protection standard (GWPS) under 40 CFR §257.95(h) and Georgia EPD Rule 391-3-4-.10(6)(a). On July 30, 2018, US EPA revised the Federal CCR rule updating GWPS for cobalt, lead, lithium, and molybdenum as described above in 40 CFR §257.95(h)(2). Effective on February 22, 2022, Georgia EPD incorporated the updated GWPS into the current Georgia EPD Rules for Solid Waste Management 391-3-4-.10(6)(a). In accordance with the updated Rules, the GWPS is:

- The maximum contaminant level (MCL) established under §141.62 and §141.66 of this title
- Where an MCL has not been established for a constituent, Federal and State CCR Rules specify levels for cobalt (0.006 mg/L), lead (0.015 mg/L), lithium (0.040 mg/L), and molybdenum (0.100 mg/L)
- The respective background level for a constituent when the background level is higher than the MCL or Federal CCR Rule identified GWPS

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

### Confidence Intervals

To complete the statistical comparison to GWPS, confidence intervals were constructed for the Appendix IV constituents in each downgradient well (Figure H). As mentioned above, well/constituent pairs with 100% non-detects did not require statistics, which includes all downgradient wells for molybdenum.

The Sanitas software was used to calculate the confidence intervals. These intervals were constructed as either parametric or nonparametric confidence intervals depending on the data distribution and percentage of non-detects. When data followed a normal or transformed-normal distribution, parametric confidence intervals were used for Appendix IV parameters. Nonparametric confidence intervals, which use the appropriate order



statistics, depending on the sample size, as interval limits, were constructed when data did not follow a normal or transformed-normal distribution or when there were greater than 50% non-detects. The lower confidence limit, which is constructed with 99% confidence for parametric confidence intervals, is compared to the GWPS prepared as described above. The achievable confidence level associated with nonparametric confidence intervals is dependent upon the number samples available.

Only when the entire confidence interval is above a GWPS is the downgradient well/constituent pair considered to exceed its respective standard. If there is an exceedance of the GWPS, a statistically significant level (SSL) exceedance is identified. A summary of the confidence intervals follows this letter. When the entire records were evaluated, no exceedances were identified.

#### Trend Test Evaluation – Appendix IV

Data at wells with confidence interval exceedances are further evaluated using the Sen's Slope/Mann Kendall trend test at the 95% confidence level to determine whether concentrations are statistically increasing, decreasing, or stable. Although the trend tests for Assessment monitoring pairs were previously evaluated using 99% confidence, the 95% confidence level more rapidly identifies statistically significant trends. Additionally, the 95% confidence level is recommended in cases with limited sample sizes and, particularly, for new assessment wells. Upgradient wells are included in the trend analyses to identify whether similar patterns exist upgradient of the site for the same constituents. When trends are present in upgradient wells, it is an indication of variability in groundwater quality unrelated to practices at the site. Since no confidence interval exceedances were identified, no trend tests were required.

Thank you for the opportunity to assist you in the statistical analysis of groundwater quality for Hammond AP-4. If you have any questions or comments, please feel free to contact us.

For Groundwater Stats Consulting,



Abdul Diane  
Groundwater Analyst



Andrew T. Collins  
Project Manager

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## Summary Tables

# 100% Non-Detects: Appendix IV Downgradient

Analysis Run 10/16/2024 3:10 PM    View: Confidence Intervals  
Plant Hammond    Client: Southern Company    Data: Hammond AP-4

---

## Antimony (mg/L)

HGWC-101, HGWC-105, HGWC-109, HGWC-117A, HGWC-118

## Arsenic (mg/L)

HGWC-105, HGWC-107, HGWC-117A

## Beryllium (mg/L)

HGWC-102, HGWC-105, HGWC-107, HGWC-109, HGWC-117A

## Cadmium (mg/L)

HGWC-105, HGWC-109, HGWC-118

## Chromium (mg/L)

HGWC-117A

## Cobalt (mg/L)

HGWC-107

## Lead (mg/L)

HGWC-117A

## Lithium (mg/L)

HGWC-101

## Molybdenum (mg/L)

HGWC-101, HGWC-102, HGWC-103, HGWC-105, HGWC-107, HGWC-109, HGWC-117A, HGWC-118

## Selenium (mg/L)

HGWC-101, HGWC-103, HGWC-105, HGWC-107, HGWC-109, HGWC-117A, HGWC-118

## Thallium (mg/L)

HGWC-101, HGWC-103, HGWC-105, HGWC-107, HGWC-109, HGWC-117A, HGWC-118

# Appendix III - Interwell Prediction Limits - Significant Results

Plant Hammond Client: Southern Company Data: Hammond AP-4 Printed 10/17/2024, 12:50 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Boron, total (mg/L)	HGWC-101	0.04	n/a	8/10/2024	0.15	Yes	84	n/a	n/a	36.9	n/a	n/a	0.0002738	NP Inter (normality) 1 of 2
Boron, total (mg/L)	HGWC-102	0.04	n/a	8/9/2024	3	Yes	84	n/a	n/a	36.9	n/a	n/a	0.0002738	NP Inter (normality) 1 of 2
Boron, total (mg/L)	HGWC-103	0.04	n/a	8/9/2024	4.5	Yes	84	n/a	n/a	36.9	n/a	n/a	0.0002738	NP Inter (normality) 1 of 2
Boron, total (mg/L)	HGWC-105	0.04	n/a	8/10/2024	1.4	Yes	84	n/a	n/a	36.9	n/a	n/a	0.0002738	NP Inter (normality) 1 of 2
Boron, total (mg/L)	HGWC-107	0.04	n/a	8/10/2024	0.84	Yes	84	n/a	n/a	36.9	n/a	n/a	0.0002738	NP Inter (normality) 1 of 2
Boron, total (mg/L)	HGWC-109	0.04	n/a	8/10/2024	0.2	Yes	84	n/a	n/a	36.9	n/a	n/a	0.0002738	NP Inter (normality) 1 of 2
Boron, total (mg/L)	HGWC-117A	0.04	n/a	8/10/2024	0.28	Yes	84	n/a	n/a	36.9	n/a	n/a	0.0002738	NP Inter (normality) 1 of 2
Boron, total (mg/L)	HGWC-118	0.04	n/a	8/9/2024	0.59	Yes	84	n/a	n/a	36.9	n/a	n/a	0.0002738	NP Inter (normality) 1 of 2
Calcium, total (mg/L)	HGWC-102	73.8	n/a	8/9/2024	142	Yes	84	n/a	n/a	0	n/a	n/a	0.0002738	NP Inter (normality) 1 of 2
Calcium, total (mg/L)	HGWC-103	73.8	n/a	8/9/2024	146	Yes	84	n/a	n/a	0	n/a	n/a	0.0002738	NP Inter (normality) 1 of 2
Calcium, total (mg/L)	HGWC-105	73.8	n/a	8/10/2024	156	Yes	84	n/a	n/a	0	n/a	n/a	0.0002738	NP Inter (normality) 1 of 2
Calcium, total (mg/L)	HGWC-118	73.8	n/a	8/9/2024	85.2	Yes	84	n/a	n/a	0	n/a	n/a	0.0002738	NP Inter (normality) 1 of 2
Chloride, Total (mg/L)	HGWC-102	5.7	n/a	8/9/2024	8	Yes	84	n/a	n/a	0	n/a	n/a	0.0002738	NP Inter (normality) 1 of 2
Chloride, Total (mg/L)	HGWC-103	5.7	n/a	8/9/2024	8.8	Yes	84	n/a	n/a	0	n/a	n/a	0.0002738	NP Inter (normality) 1 of 2
Chloride, Total (mg/L)	HGWC-105	5.7	n/a	8/10/2024	7.7	Yes	84	n/a	n/a	0	n/a	n/a	0.0002738	NP Inter (normality) 1 of 2
pH, Field (s.u.)	HGWC-101	7.93	5.43	8/10/2024	5.38	Yes	90	n/a	n/a	0	n/a	n/a	0.0004742	NP Inter (normality) 1 of 2
Sulfate as SO4 (mg/L)	HGWC-101	19.7	n/a	8/10/2024	104	Yes	84	n/a	n/a	4.762	n/a	n/a	0.0002738	NP Inter (normality) 1 of 2
Sulfate as SO4 (mg/L)	HGWC-102	19.7	n/a	8/9/2024	359	Yes	84	n/a	n/a	4.762	n/a	n/a	0.0002738	NP Inter (normality) 1 of 2
Sulfate as SO4 (mg/L)	HGWC-103	19.7	n/a	8/9/2024	393	Yes	84	n/a	n/a	4.762	n/a	n/a	0.0002738	NP Inter (normality) 1 of 2
Sulfate as SO4 (mg/L)	HGWC-105	19.7	n/a	8/10/2024	258	Yes	84	n/a	n/a	4.762	n/a	n/a	0.0002738	NP Inter (normality) 1 of 2
Sulfate as SO4 (mg/L)	HGWC-107	19.7	n/a	8/10/2024	114	Yes	84	n/a	n/a	4.762	n/a	n/a	0.0002738	NP Inter (normality) 1 of 2
Sulfate as SO4 (mg/L)	HGWC-117A	19.7	n/a	8/10/2024	72.6	Yes	84	n/a	n/a	4.762	n/a	n/a	0.0002738	NP Inter (normality) 1 of 2
Sulfate as SO4 (mg/L)	HGWC-118	19.7	n/a	8/9/2024	66.5	Yes	84	n/a	n/a	4.762	n/a	n/a	0.0002738	NP Inter (normality) 1 of 2
Total Dissolved Solids [TDS] (mg/L)	HGWC-102	345	n/a	8/9/2024	746	Yes	83	n/a	n/a	0	n/a	n/a	0.00028	NP Inter (normality) 1 of 2
Total Dissolved Solids [TDS] (mg/L)	HGWC-103	345	n/a	8/9/2024	809	Yes	83	n/a	n/a	0	n/a	n/a	0.00028	NP Inter (normality) 1 of 2
Total Dissolved Solids [TDS] (mg/L)	HGWC-105	345	n/a	8/10/2024	658	Yes	83	n/a	n/a	0	n/a	n/a	0.00028	NP Inter (normality) 1 of 2

# Appendix III - Interwell Prediction Limits - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-4 Printed 10/17/2024, 12:50 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Boron, total (mg/L)	HGWC-101	0.04	n/a	8/10/2024	0.15	Yes	84	n/a	n/a	36.9	n/a	n/a	0.0002738	NP Inter (normality) 1 of 2
Boron, total (mg/L)	HGWC-102	0.04	n/a	8/9/2024	3	Yes	84	n/a	n/a	36.9	n/a	n/a	0.0002738	NP Inter (normality) 1 of 2
Boron, total (mg/L)	HGWC-103	0.04	n/a	8/9/2024	4.5	Yes	84	n/a	n/a	36.9	n/a	n/a	0.0002738	NP Inter (normality) 1 of 2
Boron, total (mg/L)	HGWC-105	0.04	n/a	8/10/2024	1.4	Yes	84	n/a	n/a	36.9	n/a	n/a	0.0002738	NP Inter (normality) 1 of 2
Boron, total (mg/L)	HGWC-107	0.04	n/a	8/10/2024	0.84	Yes	84	n/a	n/a	36.9	n/a	n/a	0.0002738	NP Inter (normality) 1 of 2
Boron, total (mg/L)	HGWC-109	0.04	n/a	8/10/2024	0.2	Yes	84	n/a	n/a	36.9	n/a	n/a	0.0002738	NP Inter (normality) 1 of 2
Boron, total (mg/L)	HGWC-117A	0.04	n/a	8/10/2024	0.28	Yes	84	n/a	n/a	36.9	n/a	n/a	0.0002738	NP Inter (normality) 1 of 2
Boron, total (mg/L)	HGWC-118	0.04	n/a	8/9/2024	0.59	Yes	84	n/a	n/a	36.9	n/a	n/a	0.0002738	NP Inter (normality) 1 of 2
Calcium, total (mg/L)	HGWC-101	73.8	n/a	8/10/2024	24.2	No	84	n/a	n/a	0	n/a	n/a	0.0002738	NP Inter (normality) 1 of 2
Calcium, total (mg/L)	HGWC-102	73.8	n/a	8/9/2024	142	Yes	84	n/a	n/a	0	n/a	n/a	0.0002738	NP Inter (normality) 1 of 2
Calcium, total (mg/L)	HGWC-103	73.8	n/a	8/9/2024	146	Yes	84	n/a	n/a	0	n/a	n/a	0.0002738	NP Inter (normality) 1 of 2
Calcium, total (mg/L)	HGWC-105	73.8	n/a	8/10/2024	156	Yes	84	n/a	n/a	0	n/a	n/a	0.0002738	NP Inter (normality) 1 of 2
Calcium, total (mg/L)	HGWC-107	73.8	n/a	8/10/2024	61.4	No	84	n/a	n/a	0	n/a	n/a	0.0002738	NP Inter (normality) 1 of 2
Calcium, total (mg/L)	HGWC-109	73.8	n/a	8/10/2024	53.7	No	84	n/a	n/a	0	n/a	n/a	0.0002738	NP Inter (normality) 1 of 2
Calcium, total (mg/L)	HGWC-117A	73.8	n/a	8/10/2024	64.5	No	84	n/a	n/a	0	n/a	n/a	0.0002738	NP Inter (normality) 1 of 2
Calcium, total (mg/L)	HGWC-118	73.8	n/a	8/9/2024	85.2	Yes	84	n/a	n/a	0	n/a	n/a	0.0002738	NP Inter (normality) 1 of 2
Chloride, Total (mg/L)	HGWC-101	5.7	n/a	8/10/2024	5.4	No	84	n/a	n/a	0	n/a	n/a	0.0002738	NP Inter (normality) 1 of 2
Chloride, Total (mg/L)	HGWC-102	5.7	n/a	8/9/2024	8	Yes	84	n/a	n/a	0	n/a	n/a	0.0002738	NP Inter (normality) 1 of 2
Chloride, Total (mg/L)	HGWC-103	5.7	n/a	8/9/2024	8.8	Yes	84	n/a	n/a	0	n/a	n/a	0.0002738	NP Inter (normality) 1 of 2
Chloride, Total (mg/L)	HGWC-105	5.7	n/a	8/10/2024	7.7	Yes	84	n/a	n/a	0	n/a	n/a	0.0002738	NP Inter (normality) 1 of 2
Chloride, Total (mg/L)	HGWC-107	5.7	n/a	8/10/2024	3.1	No	84	n/a	n/a	0	n/a	n/a	0.0002738	NP Inter (normality) 1 of 2
Chloride, Total (mg/L)	HGWC-109	5.7	n/a	8/10/2024	4	No	84	n/a	n/a	0	n/a	n/a	0.0002738	NP Inter (normality) 1 of 2
Chloride, Total (mg/L)	HGWC-117A	5.7	n/a	8/10/2024	4.5	No	84	n/a	n/a	0	n/a	n/a	0.0002738	NP Inter (normality) 1 of 2
Chloride, Total (mg/L)	HGWC-118	5.7	n/a	8/9/2024	4.2	No	84	n/a	n/a	0	n/a	n/a	0.0002738	NP Inter (normality) 1 of 2
Fluoride, total (mg/L)	HGWC-101	0.23	n/a	8/10/2024	0.068J	No	90	n/a	n/a	20	n/a	n/a	0.0002371	NP Inter (normality) 1 of 2
Fluoride, total (mg/L)	HGWC-102	0.23	n/a	8/9/2024	0.067J	No	90	n/a	n/a	20	n/a	n/a	0.0002371	NP Inter (normality) 1 of 2
Fluoride, total (mg/L)	HGWC-103	0.23	n/a	8/9/2024	0.077J	No	90	n/a	n/a	20	n/a	n/a	0.0002371	NP Inter (normality) 1 of 2
Fluoride, total (mg/L)	HGWC-105	0.23	n/a	8/10/2024	0.066J	No	90	n/a	n/a	20	n/a	n/a	0.0002371	NP Inter (normality) 1 of 2
Fluoride, total (mg/L)	HGWC-107	0.23	n/a	8/10/2024	0.069J	No	90	n/a	n/a	20	n/a	n/a	0.0002371	NP Inter (normality) 1 of 2
Fluoride, total (mg/L)	HGWC-109	0.23	n/a	8/10/2024	0.13	No	90	n/a	n/a	20	n/a	n/a	0.0002371	NP Inter (normality) 1 of 2
Fluoride, total (mg/L)	HGWC-117A	0.23	n/a	8/10/2024	0.1	No	90	n/a	n/a	20	n/a	n/a	0.0002371	NP Inter (normality) 1 of 2
Fluoride, total (mg/L)	HGWC-118	0.23	n/a	8/9/2024	0.11	No	90	n/a	n/a	20	n/a	n/a	0.0002371	NP Inter (normality) 1 of 2
pH, Field (s.u.)	HGWC-101	7.93	5.43	8/10/2024	5.38	Yes	90	n/a	n/a	0	n/a	n/a	0.0004742	NP Inter (normality) 1 of 2
pH, Field (s.u.)	HGWC-102	7.93	5.43	8/9/2024	5.86	No	90	n/a	n/a	0	n/a	n/a	0.0004742	NP Inter (normality) 1 of 2
pH, Field (s.u.)	HGWC-103	7.93	5.43	8/9/2024	5.74	No	90	n/a	n/a	0	n/a	n/a	0.0004742	NP Inter (normality) 1 of 2
pH, Field (s.u.)	HGWC-105	7.93	5.43	8/10/2024	6.38	No	90	n/a	n/a	0	n/a	n/a	0.0004742	NP Inter (normality) 1 of 2
pH, Field (s.u.)	HGWC-107	7.93	5.43	8/10/2024	6.22	No	90	n/a	n/a	0	n/a	n/a	0.0004742	NP Inter (normality) 1 of 2
pH, Field (s.u.)	HGWC-109	7.93	5.43	8/10/2024	7.03	No	90	n/a	n/a	0	n/a	n/a	0.0004742	NP Inter (normality) 1 of 2
pH, Field (s.u.)	HGWC-117A	7.93	5.43	8/10/2024	6.61	No	90	n/a	n/a	0	n/a	n/a	0.0004742	NP Inter (normality) 1 of 2
pH, Field (s.u.)	HGWC-118	7.93	5.43	8/9/2024	7.07	No	90	n/a	n/a	0	n/a	n/a	0.0004742	NP Inter (normality) 1 of 2
Sulfate as SO4 (mg/L)	HGWC-101	19.7	n/a	8/10/2024	104	Yes	84	n/a	n/a	4.762	n/a	n/a	0.0002738	NP Inter (normality) 1 of 2
Sulfate as SO4 (mg/L)	HGWC-102	19.7	n/a	8/9/2024	359	Yes	84	n/a	n/a	4.762	n/a	n/a	0.0002738	NP Inter (normality) 1 of 2
Sulfate as SO4 (mg/L)	HGWC-103	19.7	n/a	8/9/2024	393	Yes	84	n/a	n/a	4.762	n/a	n/a	0.0002738	NP Inter (normality) 1 of 2
Sulfate as SO4 (mg/L)	HGWC-105	19.7	n/a	8/10/2024	258	Yes	84	n/a	n/a	4.762	n/a	n/a	0.0002738	NP Inter (normality) 1 of 2
Sulfate as SO4 (mg/L)	HGWC-107	19.7	n/a	8/10/2024	114	Yes	84	n/a	n/a	4.762	n/a	n/a	0.0002738	NP Inter (normality) 1 of 2
Sulfate as SO4 (mg/L)	HGWC-109	19.7	n/a	8/10/2024	19.7	No	84	n/a	n/a	4.762	n/a	n/a	0.0002738	NP Inter (normality) 1 of 2
Sulfate as SO4 (mg/L)	HGWC-117A	19.7	n/a	8/10/2024	72.6	Yes	84	n/a	n/a	4.762	n/a	n/a	0.0002738	NP Inter (normality) 1 of 2
Sulfate as SO4 (mg/L)	HGWC-118	19.7	n/a	8/9/2024	66.5	Yes	84	n/a	n/a	4.762	n/a	n/a	0.0002738	NP Inter (normality) 1 of 2
Total Dissolved Solids [TDS] (mg/L)	HGWC-101	345	n/a	8/10/2024	263	No	83	n/a	n/a	0	n/a	n/a	0.00028	NP Inter (normality) 1 of 2
Total Dissolved Solids [TDS] (mg/L)	HGWC-102	345	n/a	8/9/2024	746	Yes	83	n/a	n/a	0	n/a	n/a	0.00028	NP Inter (normality) 1 of 2
Total Dissolved Solids [TDS] (mg/L)	HGWC-103	345	n/a	8/9/2024	809	Yes	83	n/a	n/a	0	n/a	n/a	0.00028	NP Inter (normality) 1 of 2
Total Dissolved Solids [TDS] (mg/L)	HGWC-105	345	n/a	8/10/2024	658	Yes	83	n/a	n/a	0	n/a	n/a	0.00028	NP Inter (normality) 1 of 2
Total Dissolved Solids [TDS] (mg/L)	HGWC-107	345	n/a	8/10/2024	299	No	83	n/a	n/a	0	n/a	n/a	0.00028	NP Inter (normality) 1 of 2
Total Dissolved Solids [TDS] (mg/L)	HGWC-109	345	n/a	8/10/2024	227	No	83	n/a	n/a	0	n/a	n/a	0.00028	NP Inter (normality) 1 of 2
Total Dissolved Solids [TDS] (mg/L)	HGWC-117A	345	n/a	8/10/2024	284	No	83	n/a	n/a	0	n/a	n/a	0.00028	NP Inter (normality) 1 of 2
Total Dissolved Solids [TDS] (mg/L)	HGWC-118	345	n/a	8/9/2024	338	No	83	n/a	n/a	0	n/a	n/a	0.00028	NP Inter (normality) 1 of 2

## Appendix III - Trend Test Summary - Significant Results

Plant Hammond Client: Southern Company Data: Hammond AP-4 Printed 10/17/2024, 12:55 PM

<u>Constituent</u>	<u>Well</u>	<u>Slope</u>	<u>Calc.</u>	<u>Critical</u>	<u>Sig.</u>	<u>N</u>	<u>%NDs</u>	<u>Normality</u>	<u>Xform</u>	<u>Alpha</u>	<u>Method</u>
Boron, total (mg/L)	HGWC-101	0.009487	115	81	Yes	20	0	n/a	n/a	0.01	NP
Boron, total (mg/L)	HGWC-103	0.1618	117	87	Yes	21	0	n/a	n/a	0.01	NP
Boron, total (mg/L)	HGWC-109	-0.02867	-156	-87	Yes	21	0	n/a	n/a	0.01	NP
Calcium, total (mg/L)	HGWA-113 (bg)	0.2301	100	81	Yes	20	0	n/a	n/a	0.01	NP
Calcium, total (mg/L)	HGWC-103	6.694	132	87	Yes	21	0	n/a	n/a	0.01	NP
Calcium, total (mg/L)	HGWC-105	7.864	176	87	Yes	21	0	n/a	n/a	0.01	NP
Chloride, Total (mg/L)	HGWC-103	0.4	128	87	Yes	21	0	n/a	n/a	0.01	NP
Chloride, Total (mg/L)	HGWC-105	0.4372	139	81	Yes	20	0	n/a	n/a	0.01	NP
Sulfate as SO4 (mg/L)	HGWA-113 (bg)	-0.9378	-133	-81	Yes	20	0	n/a	n/a	0.01	NP
Sulfate as SO4 (mg/L)	HGWA-48D (bg)	-0.5856	-45	-38	Yes	12	0	n/a	n/a	0.01	NP
Sulfate as SO4 (mg/L)	HGWC-118	-2.164	-103	-87	Yes	21	0	n/a	n/a	0.01	NP
Total Dissolved Solids [TDS] (mg/L)	HGWC-105	32.02	138	87	Yes	21	0	n/a	n/a	0.01	NP

# Appendix III - Trend Test Summary - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-4 Printed 10/17/2024, 12:55 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Boron, total (mg/L)	HGWA-111 (bg)	0.0006873	57	81	No	20	40	n/a	n/a	0.01	NP
Boron, total (mg/L)	HGWA-112 (bg)	0.0003233	26	81	No	20	35	n/a	n/a	0.01	NP
Boron, total (mg/L)	HGWA-113 (bg)	0.0007673	51	81	No	20	25	n/a	n/a	0.01	NP
Boron, total (mg/L)	HGWA-47 (bg)	0.0009372	23	38	No	12	58.33	n/a	n/a	0.01	NP
Boron, total (mg/L)	HGWA-48D (bg)	0.006696	19	38	No	12	33.33	n/a	n/a	0.01	NP
<b>Boron, total (mg/L)</b>	<b>HGWC-101</b>	<b>0.009487</b>	<b>115</b>	<b>81</b>	<b>Yes</b>	<b>20</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Boron, total (mg/L)	HGWC-102	-0.08338	-24	-58	No	16	0	n/a	n/a	0.01	NP
<b>Boron, total (mg/L)</b>	<b>HGWC-103</b>	<b>0.1618</b>	<b>117</b>	<b>87</b>	<b>Yes</b>	<b>21</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Boron, total (mg/L)	HGWC-105	0.004582	40	81	No	20	0	n/a	n/a	0.01	NP
Boron, total (mg/L)	HGWC-107	0.01327	62	87	No	21	0	n/a	n/a	0.01	NP
<b>Boron, total (mg/L)</b>	<b>HGWC-109</b>	<b>-0.02867</b>	<b>-156</b>	<b>-87</b>	<b>Yes</b>	<b>21</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Boron, total (mg/L)	HGWC-117A	-0.01989	-12	-21	No	8	0	n/a	n/a	0.01	NP
Boron, total (mg/L)	HGWC-118	-0.005415	-25	-81	No	20	0	n/a	n/a	0.01	NP
Calcium, total (mg/L)	HGWA-111 (bg)	1.37	36	81	No	20	0	n/a	n/a	0.01	NP
Calcium, total (mg/L)	HGWA-112 (bg)	0.05327	51	81	No	20	0	n/a	n/a	0.01	NP
<b>Calcium, total (mg/L)</b>	<b>HGWA-113 (bg)</b>	<b>0.2301</b>	<b>100</b>	<b>81</b>	<b>Yes</b>	<b>20</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Calcium, total (mg/L)	HGWA-47 (bg)	-1.009	-16	-38	No	12	0	n/a	n/a	0.01	NP
Calcium, total (mg/L)	HGWA-48D (bg)	-0.4558	-9	-38	No	12	0	n/a	n/a	0.01	NP
Calcium, total (mg/L)	HGWC-102	3.183	26	58	No	16	0	n/a	n/a	0.01	NP
<b>Calcium, total (mg/L)</b>	<b>HGWC-103</b>	<b>6.694</b>	<b>132</b>	<b>87</b>	<b>Yes</b>	<b>21</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
<b>Calcium, total (mg/L)</b>	<b>HGWC-105</b>	<b>7.864</b>	<b>176</b>	<b>87</b>	<b>Yes</b>	<b>21</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Calcium, total (mg/L)	HGWC-118	0.754	72	87	No	21	0	n/a	n/a	0.01	NP
Chloride, Total (mg/L)	HGWA-111 (bg)	0	-5	-81	No	20	0	n/a	n/a	0.01	NP
Chloride, Total (mg/L)	HGWA-112 (bg)	-0.01551	-26	-81	No	20	0	n/a	n/a	0.01	NP
Chloride, Total (mg/L)	HGWA-113 (bg)	-0.03553	-76	-81	No	20	0	n/a	n/a	0.01	NP
Chloride, Total (mg/L)	HGWA-47 (bg)	0	0	38	No	12	0	n/a	n/a	0.01	NP
Chloride, Total (mg/L)	HGWA-48D (bg)	0	6	38	No	12	0	n/a	n/a	0.01	NP
Chloride, Total (mg/L)	HGWC-102	0.114	27	58	No	16	0	n/a	n/a	0.01	NP
<b>Chloride, Total (mg/L)</b>	<b>HGWC-103</b>	<b>0.4</b>	<b>128</b>	<b>87</b>	<b>Yes</b>	<b>21</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
<b>Chloride, Total (mg/L)</b>	<b>HGWC-105</b>	<b>0.4372</b>	<b>139</b>	<b>81</b>	<b>Yes</b>	<b>20</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
pH, Field (s.u.)	HGWA-111 (bg)	0.04142	50	92	No	22	0	n/a	n/a	0.01	NP
pH, Field (s.u.)	HGWA-112 (bg)	-0.007213	-22	-92	No	22	0	n/a	n/a	0.01	NP
pH, Field (s.u.)	HGWA-113 (bg)	0.02137	82	92	No	22	0	n/a	n/a	0.01	NP
pH, Field (s.u.)	HGWA-47 (bg)	0.01559	7	38	No	12	0	n/a	n/a	0.01	NP
pH, Field (s.u.)	HGWA-48D (bg)	0	1	38	No	12	0	n/a	n/a	0.01	NP
pH, Field (s.u.)	HGWC-101	0.01346	78	98	No	23	0	n/a	n/a	0.01	NP
Sulfate as SO4 (mg/L)	HGWA-111 (bg)	-0.01755	-34	-81	No	20	0	n/a	n/a	0.01	NP
Sulfate as SO4 (mg/L)	HGWA-112 (bg)	0.01239	18	81	No	20	20	n/a	n/a	0.01	NP
<b>Sulfate as SO4 (mg/L)</b>	<b>HGWA-113 (bg)</b>	<b>-0.9378</b>	<b>-133</b>	<b>-81</b>	<b>Yes</b>	<b>20</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Sulfate as SO4 (mg/L)	HGWA-47 (bg)	-0.06495	-5	-38	No	12	0	n/a	n/a	0.01	NP
<b>Sulfate as SO4 (mg/L)</b>	<b>HGWA-48D (bg)</b>	<b>-0.5856</b>	<b>-45</b>	<b>-38</b>	<b>Yes</b>	<b>12</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Sulfate as SO4 (mg/L)	HGWC-101	-0.7577	-32	-87	No	21	0	n/a	n/a	0.01	NP
Sulfate as SO4 (mg/L)	HGWC-102	-2.338	-5	-58	No	16	6.25	n/a	n/a	0.01	NP
Sulfate as SO4 (mg/L)	HGWC-103	7.824	69	87	No	21	0	n/a	n/a	0.01	NP
Sulfate as SO4 (mg/L)	HGWC-105	6.385	53	87	No	21	0	n/a	n/a	0.01	NP
Sulfate as SO4 (mg/L)	HGWC-107	-1.685	-84	-87	No	21	0	n/a	n/a	0.01	NP
Sulfate as SO4 (mg/L)	HGWC-117A	1.132	3	21	No	8	0	n/a	n/a	0.01	NP
<b>Sulfate as SO4 (mg/L)</b>	<b>HGWC-118</b>	<b>-2.164</b>	<b>-103</b>	<b>-87</b>	<b>Yes</b>	<b>21</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Total Dissolved Solids [TDS] (mg/L)	HGWA-111 (bg)	3.783	30	81	No	20	0	n/a	n/a	0.01	NP
Total Dissolved Solids [TDS] (mg/L)	HGWA-112 (bg)	0.7485	10	74	No	19	0	n/a	n/a	0.01	NP
Total Dissolved Solids [TDS] (mg/L)	HGWA-113 (bg)	0	-2	-81	No	20	0	n/a	n/a	0.01	NP
Total Dissolved Solids [TDS] (mg/L)	HGWA-47 (bg)	3.784	8	38	No	12	0	n/a	n/a	0.01	NP
Total Dissolved Solids [TDS] (mg/L)	HGWA-48D (bg)	2.281	15	38	No	12	0	n/a	n/a	0.01	NP
Total Dissolved Solids [TDS] (mg/L)	HGWC-102	6.292	11	58	No	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids [TDS] (mg/L)	HGWC-103	24.37	86	87	No	21	0	n/a	n/a	0.01	NP
<b>Total Dissolved Solids [TDS] (mg/L)</b>	<b>HGWC-105</b>	<b>32.02</b>	<b>138</b>	<b>87</b>	<b>Yes</b>	<b>21</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>



# Upper Tolerance Limits Summary Table

Plant Hammond    Client: Southern Company    Data: Hammond AP-4    Printed 10/16/2024, 2:59 PM

<u>Constituent</u>	<u>Upper Lim.</u>	<u>Lower Lim.</u>	<u>Date</u>	<u>Observ.</u>	<u>Sig.</u>	<u>Bg N</u>	<u>%NDs</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Antimony (mg/L)	0.003	n/a	n/a	n/a	n/a	73	94.52	n/a	0.02365	NP Inter(NDs)
Arsenic (mg/L)	0.005	n/a	n/a	n/a	n/a	87	94.25	n/a	0.01153	NP Inter(NDs)
Barium (mg/L)	0.12	n/a	n/a	n/a	n/a	87	0	n/a	0.01153	NP Inter(normality)
Beryllium (mg/L)	0.0019	n/a	n/a	n/a	n/a	87	91.95	n/a	0.01153	NP Inter(NDs)
Cadmium (mg/L)	0.0005	n/a	n/a	n/a	n/a	87	100	n/a	0.01153	NP Inter(NDs)
Chromium (mg/L)	0.0061	n/a	n/a	n/a	n/a	87	42.53	n/a	0.01153	NP Inter(normality)
Cobalt (mg/L)	0.005	n/a	n/a	n/a	n/a	87	90.8	n/a	0.01153	NP Inter(NDs)
Combined Radium 226 & 228 (pCi/L)	1.29	n/a	n/a	n/a	n/a	87	0	No	0.05	Inter
Fluoride, total (mg/L)	0.23	n/a	n/a	n/a	n/a	90	20	n/a	0.009888	NP Inter(normality)
Lead (mg/L)	0.0016	n/a	n/a	n/a	n/a	87	74.71	n/a	0.01153	NP Inter(NDs)
Lithium (mg/L)	0.03	n/a	n/a	n/a	n/a	87	37.93	n/a	0.01153	NP Inter(normality)
Mercury (mg/L)	0.0002	n/a	n/a	n/a	n/a	73	83.56	n/a	0.02365	NP Inter(NDs)
Molybdenum (mg/L)	0.01	n/a	n/a	n/a	n/a	73	82.19	n/a	0.02365	NP Inter(NDs)
Selenium (mg/L)	0.005	n/a	n/a	n/a	n/a	73	79.45	n/a	0.02365	NP Inter(NDs)
Thallium (mg/L)	0.001	n/a	n/a	n/a	n/a	73	100	n/a	0.02365	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		0.12	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		1.29	5
Fluoride, Total (mg/L)	4		0.23	4
Lead, Total (mg/L)	n/a	0.015	0.0016	0.015
Lithium, Total (mg/L)	n/a	0.040	0.030	0.040
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 Summary Table - All Results (No Significant)

Plant Hammond    Client: Southern Company    Data: Hammond AP-4    Printed 10/16/2024, 3:12 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Antimony (mg/L)	HGWC-102	0.003	0.003	0.006	No	15	0.0005784	86.67	None	No	0.01	NP (NDs)
Antimony (mg/L)	HGWC-103	0.003	0.0022	0.006	No	17	0.000194	94.12	None	No	0.01	NP (NDs)
Antimony (mg/L)	HGWC-107	0.003	0.0011	0.006	No	17	0.0004608	94.12	None	No	0.01	NP (NDs)
Arsenic (mg/L)	HGWC-101	0.005	0.00039	0.01	No	21	0.001006	95.24	None	No	0.01	NP (NDs)
Arsenic (mg/L)	HGWC-102	0.005	0.00083	0.01	No	16	0.002029	68.75	None	No	0.01	NP (NDs)
Arsenic (mg/L)	HGWC-103	0.005	0.0015	0.01	No	21	0.0007638	95.24	None	No	0.01	NP (NDs)
Arsenic (mg/L)	HGWC-109	0.002537	0.001578	0.01	No	21	0.0008697	14.29	None	No	0.01	Param.
Arsenic (mg/L)	HGWC-118	0.005	0.001	0.01	No	21	0.0008729	95.24	None	No	0.01	NP (NDs)
Barium (mg/L)	HGWC-101	0.04409	0.03785	2	No	21	0.005658	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-102	0.03172	0.02716	2	No	16	0.003502	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-103	0.03924	0.03444	2	No	21	0.004352	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-105	0.085	0.0668	2	No	21	0.009941	0	None	No	0.01	NP (normality)
Barium (mg/L)	HGWC-107	0.03841	0.03535	2	No	21	0.002778	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-109	0.08611	0.07993	2	No	21	0.005601	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-117A	0.0658	0.042	2	No	8	0.01188	0	None	sqrt(x)	0.01	Param.
Barium (mg/L)	HGWC-118	0.05922	0.04855	2	No	21	0.00967	0	None	No	0.01	Param.
Beryllium (mg/L)	HGWC-101	0.0005	0.000062	0.004	No	21	0.0002238	52.38	None	No	0.01	NP (NDs)
Beryllium (mg/L)	HGWC-103	0.0005	0.000088	0.004	No	21	0.0001735	80.95	None	No	0.01	NP (NDs)
Beryllium (mg/L)	HGWC-118	0.0005	0.000093	0.004	No	21	0.00008881	95.24	None	No	0.01	NP (NDs)
Cadmium (mg/L)	HGWC-101	0.0002048	0.0001433	0.005	No	21	0.00005571	14.29	None	No	0.01	Param.
Cadmium (mg/L)	HGWC-102	0.0006287	0.0003438	0.005	No	16	0.000219	0	None	No	0.01	Param.
Cadmium (mg/L)	HGWC-103	0.0007812	0.0006883	0.005	No	21	0.00008424	0	None	No	0.01	Param.
Cadmium (mg/L)	HGWC-107	0.0005	0.00011	0.005	No	21	0.0001933	66.67	None	No	0.01	NP (NDs)
Cadmium (mg/L)	HGWC-117A	0.0005	0.00016	0.005	No	8	0.0001202	87.5	None	No	0.004	NP (NDs)
Chromium (mg/L)	HGWC-101	0.005	0.00098	0.1	No	21	0.001714	80.95	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-102	0.005	0.00063	0.1	No	16	0.001513	87.5	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-103	0.005	0.0013	0.1	No	21	0.001899	66.67	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-105	0.005	0.0013	0.1	No	21	0.001725	80.95	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-107	0.005	0.00074	0.1	No	21	0.0009296	95.24	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-109	0.005	0.0014	0.1	No	21	0.001206	90.48	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-118	0.005	0.0021	0.1	No	21	0.00166	76.19	None	No	0.01	NP (NDs)
Cobalt (mg/L)	HGWC-101	0.002738	0.002186	0.006	No	21	0.0005005	4.762	None	No	0.01	Param.
Cobalt (mg/L)	HGWC-102	0.0019	0.00098	0.006	No	16	0.0007443	0	None	No	0.01	NP (normality)
Cobalt (mg/L)	HGWC-103	0.002225	0.001842	0.006	No	21	0.0003469	0	None	No	0.01	Param.
Cobalt (mg/L)	HGWC-105	0.005	0.00047	0.006	No	21	0.002036	28.57	None	No	0.01	NP (normality)
Cobalt (mg/L)	HGWC-109	0.001919	0.001161	0.006	No	21	0.0006876	0	None	No	0.01	Param.
Cobalt (mg/L)	HGWC-117A	0.00155	0.0003807	0.006	No	8	0.0006479	0	None	sqrt(x)	0.01	Param.
Cobalt (mg/L)	HGWC-118	0.005	0.00045	0.006	No	21	0.002296	52.38	None	No	0.01	NP (NDs)
Combined Radium 226 & 228 (pCi/L)	HGWC-101	0.8314	0.4516	5	No	21	0.3443	0	None	No	0.01	Param.
Combined Radium 226 & 228 (pCi/L)	HGWC-102	1.088	0.5756	5	No	15	0.3784	0	None	No	0.01	Param.
Combined Radium 226 & 228 (pCi/L)	HGWC-103	0.8483	0.4709	5	No	21	0.3421	0	None	No	0.01	Param.
Combined Radium 226 & 228 (pCi/L)	HGWC-105	0.8398	0.5035	5	No	21	0.3048	0	None	No	0.01	Param.
Combined Radium 226 & 228 (pCi/L)	HGWC-107	0.9837	0.4954	5	No	21	0.4426	0	None	No	0.01	Param.
Combined Radium 226 & 228 (pCi/L)	HGWC-109	0.7311	0.4294	5	No	21	0.2735	0	None	No	0.01	Param.
Combined Radium 226 & 228 (pCi/L)	HGWC-117A	0.9243	0.1862	5	No	8	0.3482	0	None	No	0.01	Param.
Combined Radium 226 & 228 (pCi/L)	HGWC-118	1.037	0.4568	5	No	20	0.5107	0	None	No	0.01	Param.
Fluoride, total (mg/L)	HGWC-101	0.1	0.068	4	No	22	0.01959	81.82	None	No	0.01	NP (NDs)
Fluoride, total (mg/L)	HGWC-102	0.22	0.076	4	No	16	0.03247	81.25	None	No	0.01	NP (NDs)
Fluoride, total (mg/L)	HGWC-103	0.13	0.077	4	No	22	0.02128	72.73	None	No	0.01	NP (NDs)
Fluoride, total (mg/L)	HGWC-105	0.1	0.074	4	No	22	0.02809	54.55	None	No	0.01	NP (NDs)
Fluoride, total (mg/L)	HGWC-107	0.1	0.069	4	No	22	0.0331	54.55	None	No	0.01	NP (NDs)
Fluoride, total (mg/L)	HGWC-109	0.1245	0.08585	4	No	22	0.03602	9.091	None	No	0.01	Param.
Fluoride, total (mg/L)	HGWC-117A	0.102	0.05154	4	No	8	0.02513	25	Kaplan-Meier	No	0.01	Param.
Fluoride, total (mg/L)	HGWC-118	0.14	0.072	4	No	23	0.178	0	None	No	0.01	NP (normality)
Lead (mg/L)	HGWC-101	0.001	0.0009	0.015	No	21	0.00002182	95.24	None	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-102	0.001	0.00011	0.015	No	16	0.0002225	93.75	None	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-103	0.001	0.00028	0.015	No	21	0.0003539	71.43	None	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-105	0.001	0.000085	0.015	No	21	0.0003763	80.95	None	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-107	0.001	0.00034	0.015	No	21	0.0003333	80.95	None	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-109	0.001	0.000058	0.015	No	21	0.0002839	90.48	None	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-118	0.001	0.00088	0.015	No	21	0.0003099	76.19	None	No	0.01	NP (NDs)
Lithium (mg/L)	HGWC-102	0.015	0.0011	0.04	No	16	0.004724	12.5	None	No	0.01	NP (normality)
Lithium (mg/L)	HGWC-103	0.002	0.0015	0.04	No	21	0.0124	23.81	None	No	0.01	NP (normality)
Lithium (mg/L)	HGWC-105	0.004236	0.003897	0.04	No	21	0.0003071	0	None	No	0.01	Param.
Lithium (mg/L)	HGWC-107	0.03	0.00091	0.04	No	21	0.01488	47.62	None	No	0.01	NP (normality)
Lithium (mg/L)	HGWC-109	0.03	0.0009	0.04	No	21	0.01483	52.38	None	No	0.01	NP (NDs)
Lithium (mg/L)	HGWC-117A	0.0051	0.0035	0.04	No	8	0.0005069	0	None	No	0.004	NP (normality)
Lithium (mg/L)	HGWC-118	0.03	0.0017	0.04	No	21	0.01357	33.33	None	No	0.01	NP (normality)

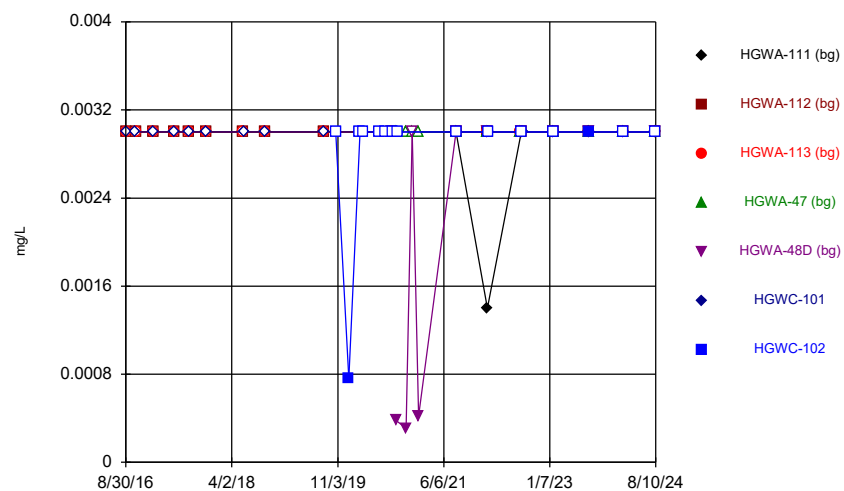
# Confidence Intervals Summary Table - All Results (No Significant) <sup>Page 2</sup>

Plant Hammond Client: Southern Company Data: Hammond AP-4 Printed 10/16/2024, 3:12 PM

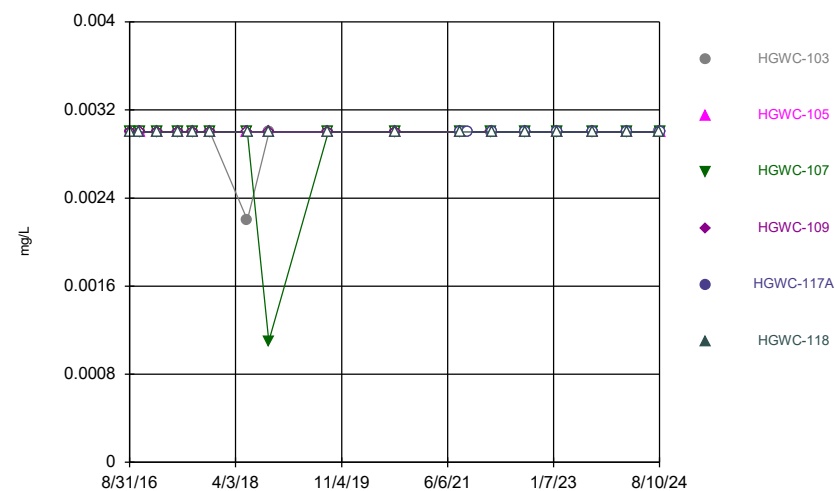
Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Mercury (mg/L)	HGWC-101	0.0002	0.000099	0.002	No	17	0.00003456	88.24	None	No	0.01	NP (NDs)
Mercury (mg/L)	HGWC-102	0.0002	0.0001	0.002	No	15	0.00002582	93.33	None	No	0.01	NP (NDs)
Mercury (mg/L)	HGWC-103	0.00025	0.00017	0.002	No	17	0.00003762	76.47	None	No	0.01	NP (NDs)
Mercury (mg/L)	HGWC-105	0.00022	0.0002	0.002	No	17	0.000004851	94.12	None	No	0.01	NP (NDs)
Mercury (mg/L)	HGWC-107	0.0002	0.000084	0.002	No	17	0.00002813	94.12	None	No	0.01	NP (NDs)
Mercury (mg/L)	HGWC-109	0.0002	0.00008	0.002	No	17	0.00003985	88.24	None	No	0.01	NP (NDs)
Mercury (mg/L)	HGWC-117A	0.0002	0.000094	0.002	No	8	0.00003748	87.5	None	No	0.004	NP (NDs)
Mercury (mg/L)	HGWC-118	0.0002	0.00009	0.002	No	17	0.00003806	88.24	None	No	0.01	NP (NDs)
Selenium (mg/L)	HGWC-102	0.005	0.0015	0.05	No	15	0.0009037	93.33	None	No	0.01	NP (NDs)
Thallium (mg/L)	HGWC-102	0.001	0.00008	0.002	No	15	0.0002375	93.33	None	No	0.01	NP (NDs)

FIGURE A.

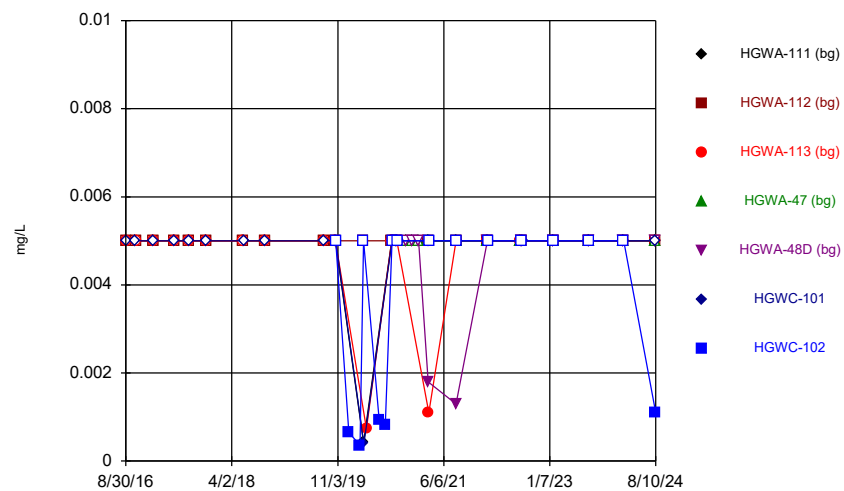
Time Series



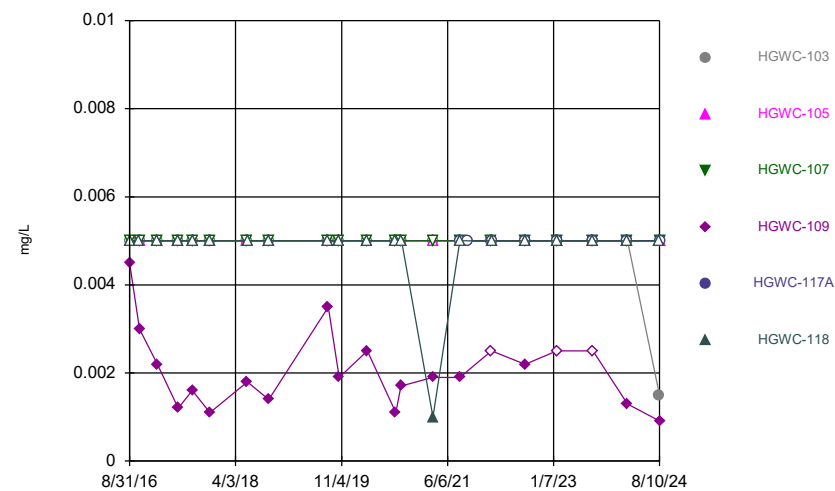
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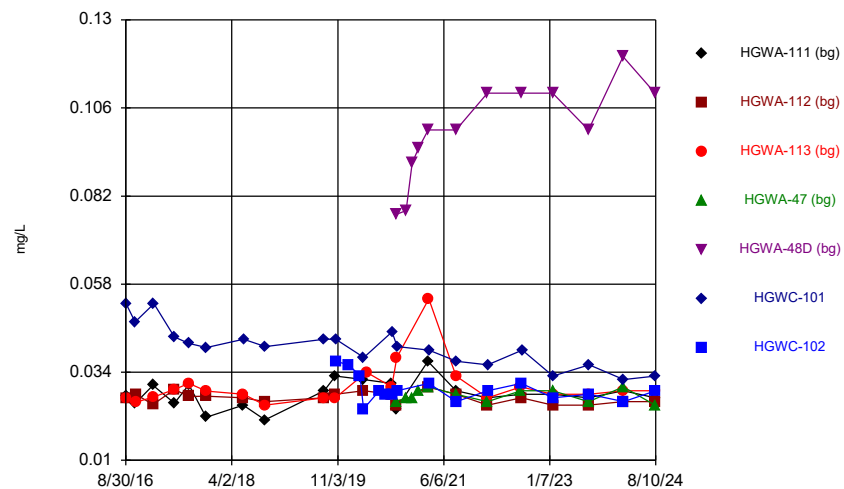
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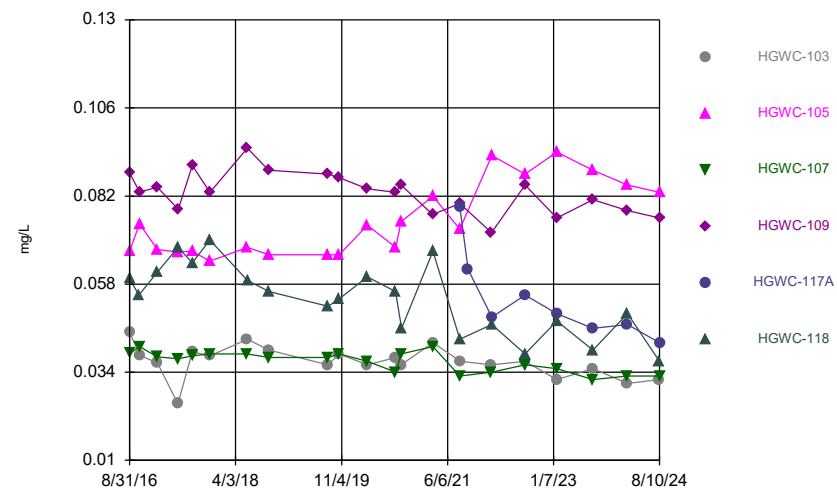
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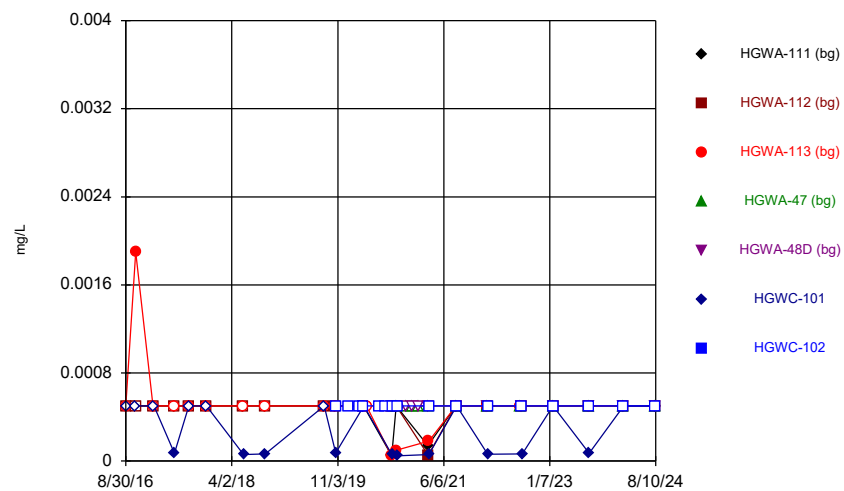
## Time Series



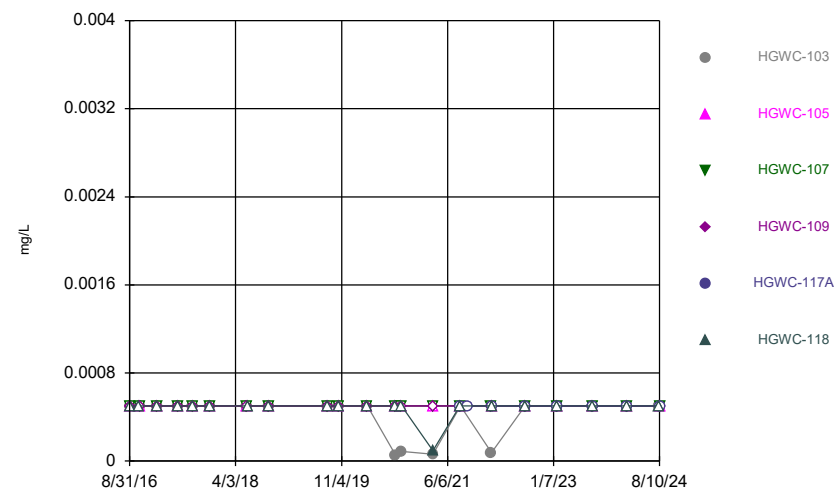
## Time Series



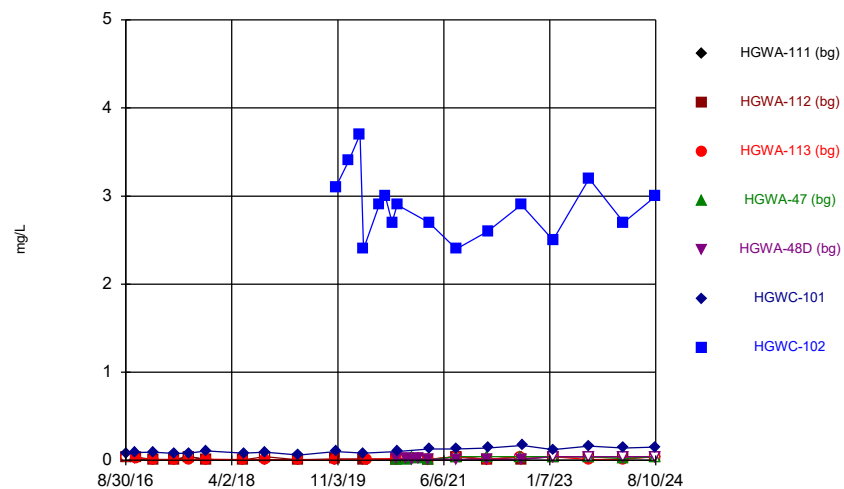
## Time Series



## Time Series

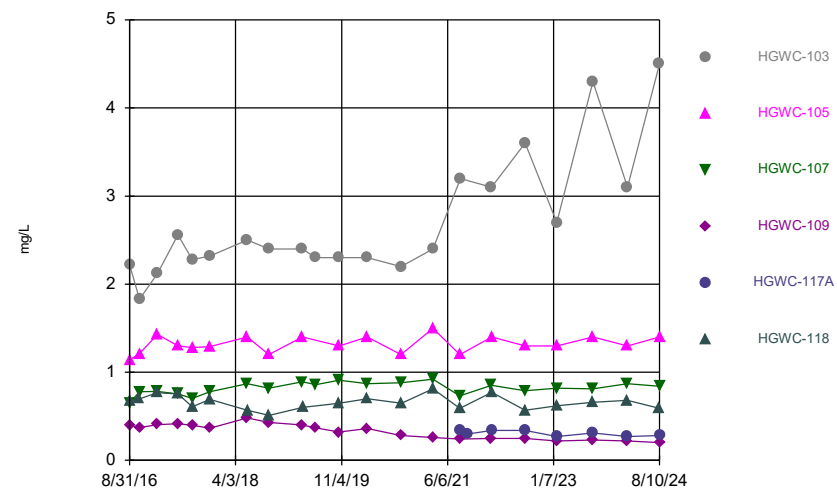


Time Series



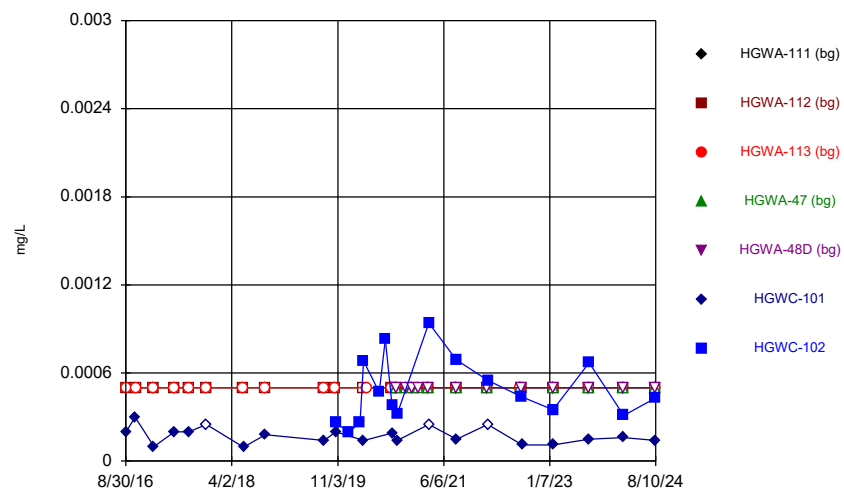
Constituent: Boron, total Analysis Run 10/16/2024 2:27 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-4

Time Series



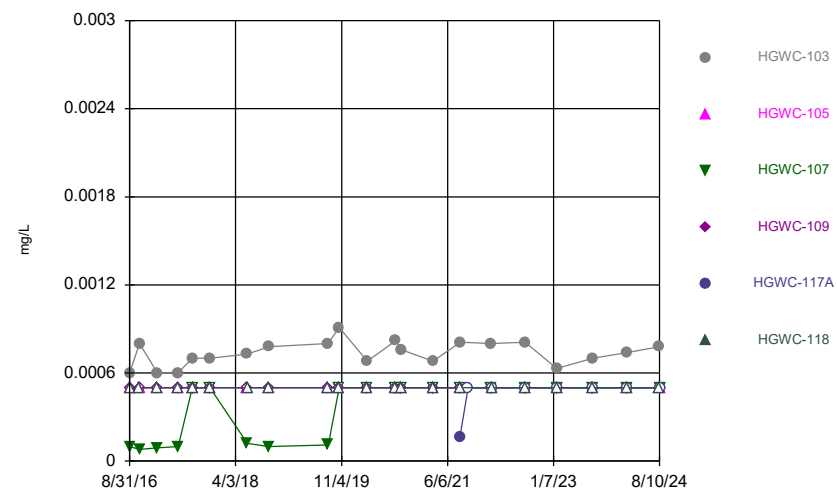
Constituent: Boron, total Analysis Run 10/16/2024 2:27 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-4

Time Series



Constituent: Cadmium Analysis Run 10/16/2024 2:27 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-4

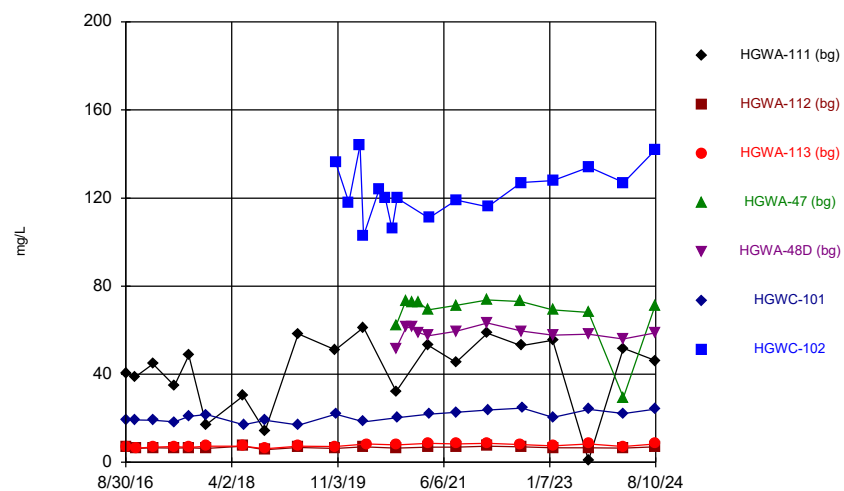
Time Series



Constituent: Cadmium Analysis Run 10/16/2024 2:27 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-4

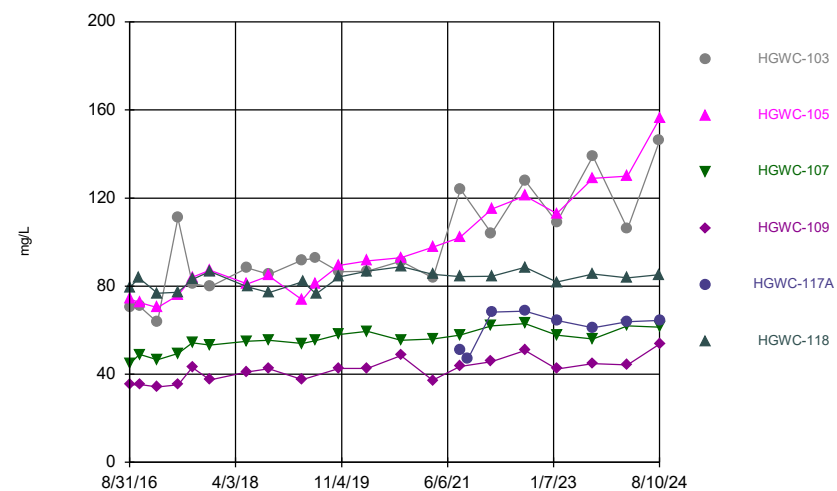


## Time Series



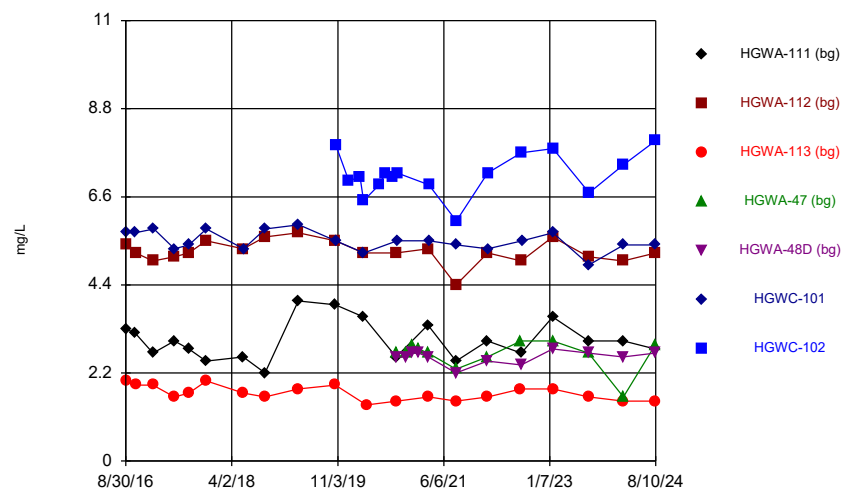
Constituent: Calcium, total Analysis Run 10/16/2024 2:27 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-4

## Time Series



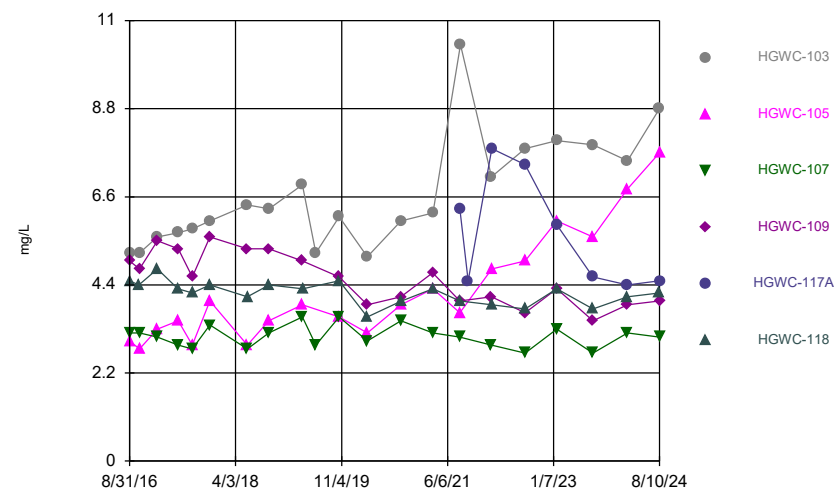
Constituent: Calcium, total Analysis Run 10/16/2024 2:27 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-4

## Time Series



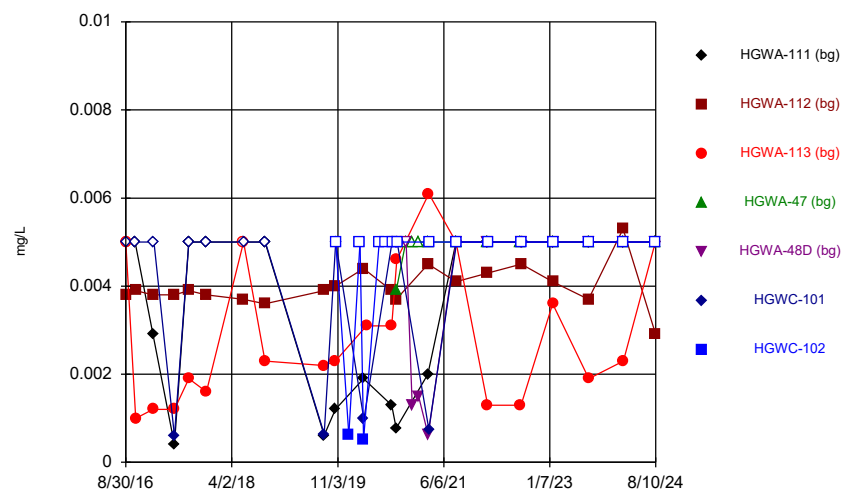
Constituent: Chloride, Total Analysis Run 10/16/2024 2:27 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-4

## Time Series



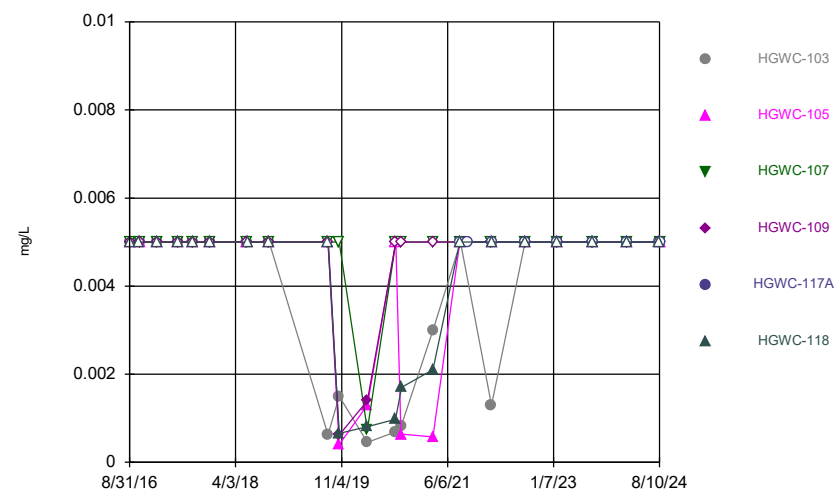
Constituent: Chloride, Total Analysis Run 10/16/2024 2:27 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-4

### Time Series



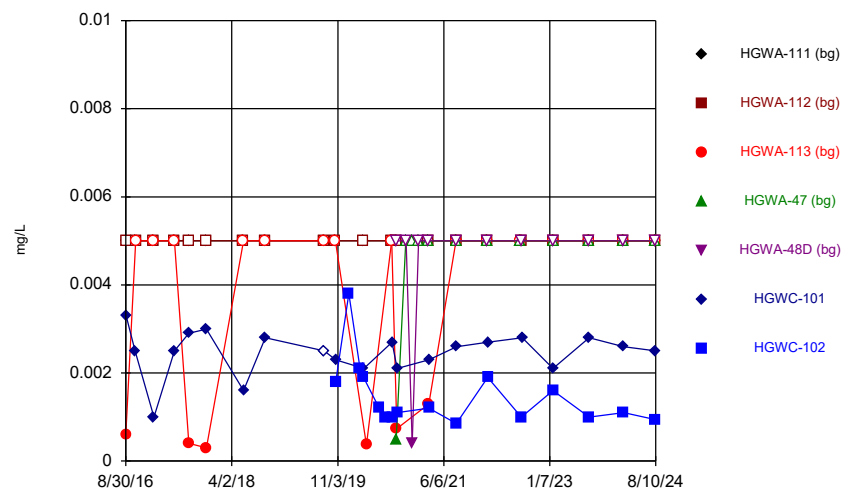
Constituent: Chromium Analysis Run 10/16/2024 2:27 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-4

### Time Series



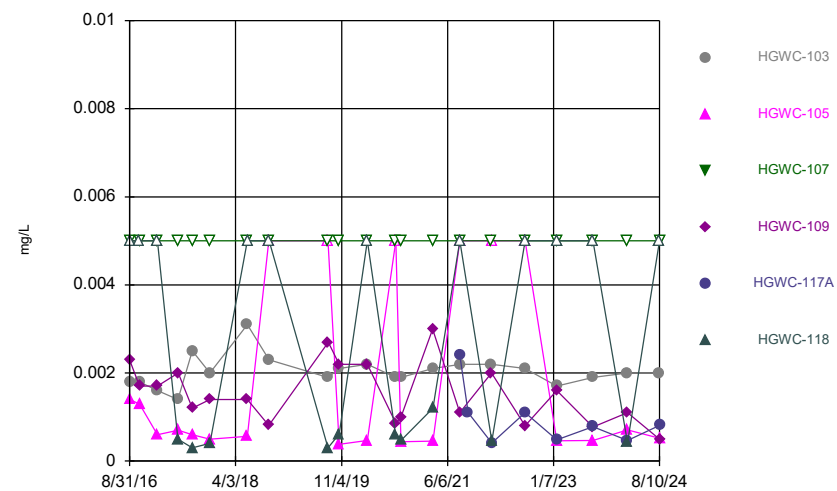
Constituent: Chromium Analysis Run 10/16/2024 2:27 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-4

### Time Series



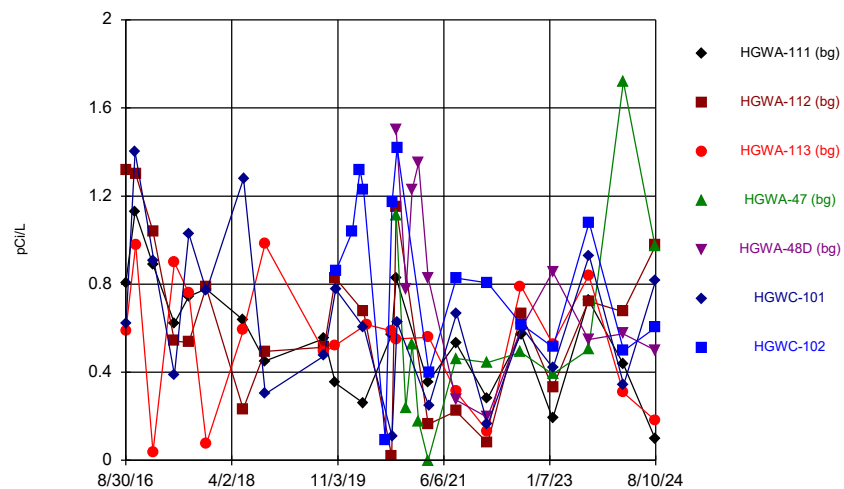
Constituent: Cobalt Analysis Run 10/16/2024 2:27 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-4

### Time Series



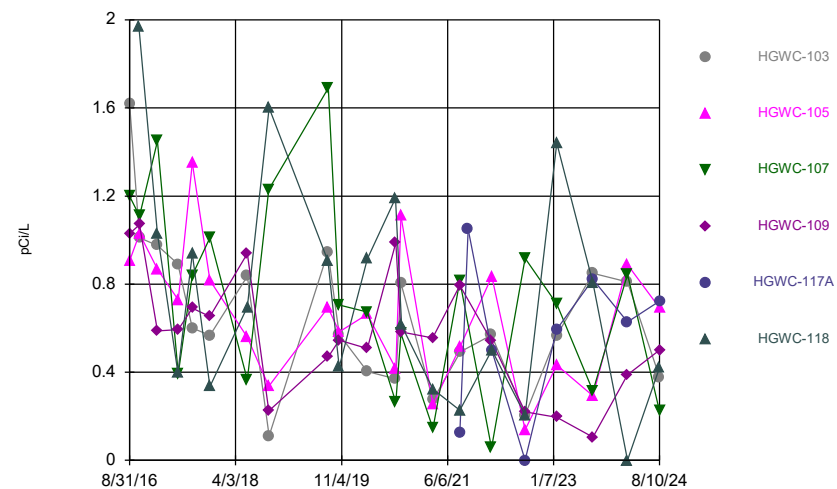
Constituent: Cobalt Analysis Run 10/16/2024 2:27 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-4

## Time Series



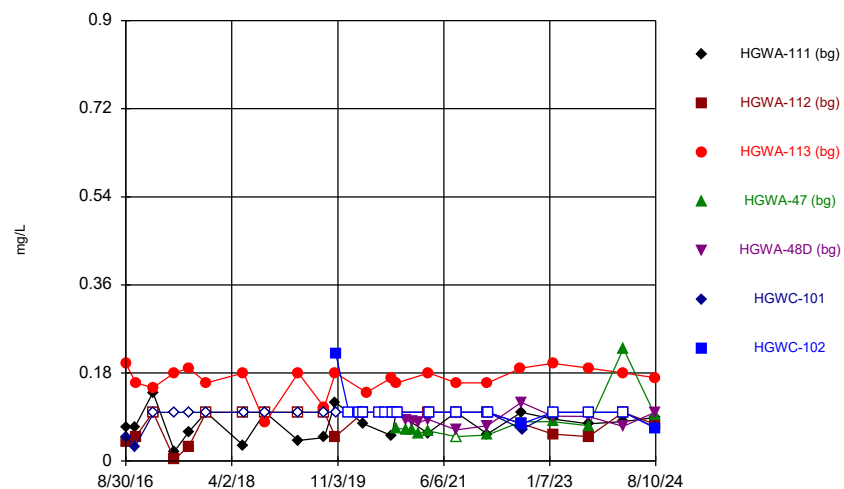
Constituent: Combined Radium 226 & 228 Analysis Run 10/16/2024 2:27 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-4

## Time Series



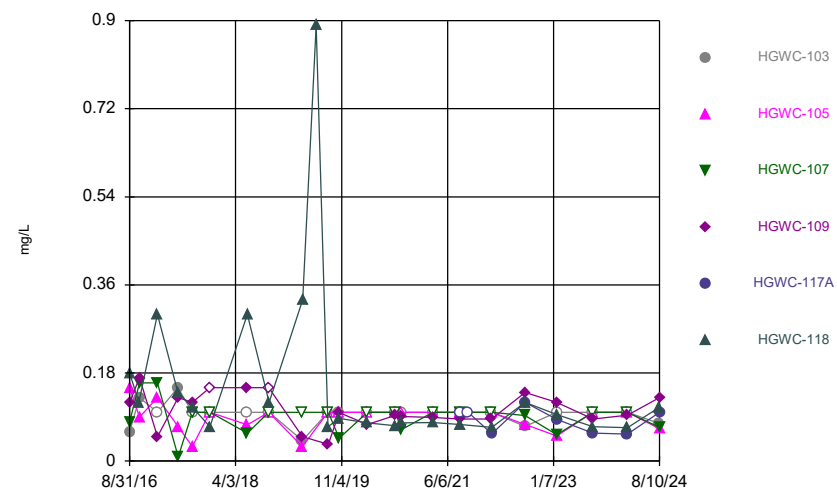
Constituent: Combined Radium 226 & 228 Analysis Run 10/16/2024 2:27 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-4

## Time Series



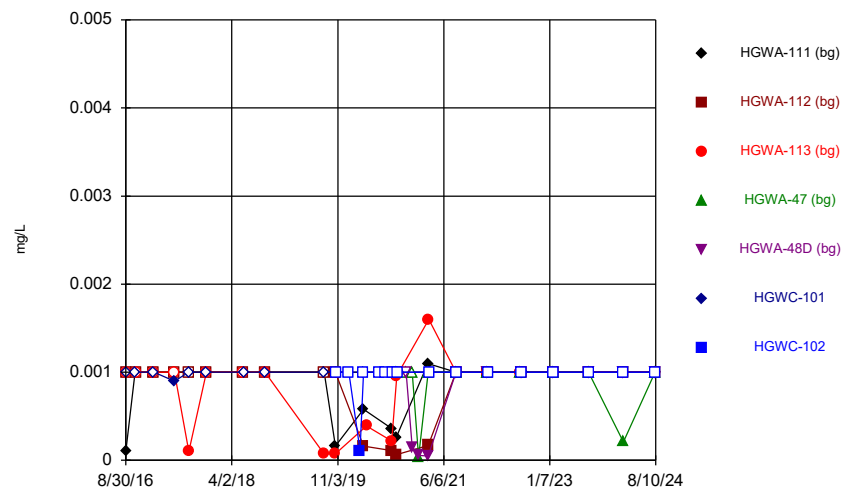
Constituent: Fluoride, total Analysis Run 10/16/2024 2:27 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-4

## Time Series

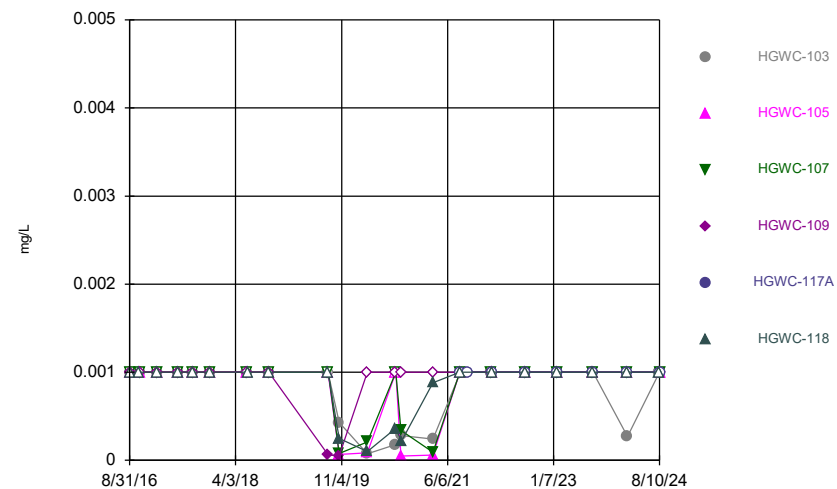


Constituent: Fluoride, total Analysis Run 10/16/2024 2:27 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-4

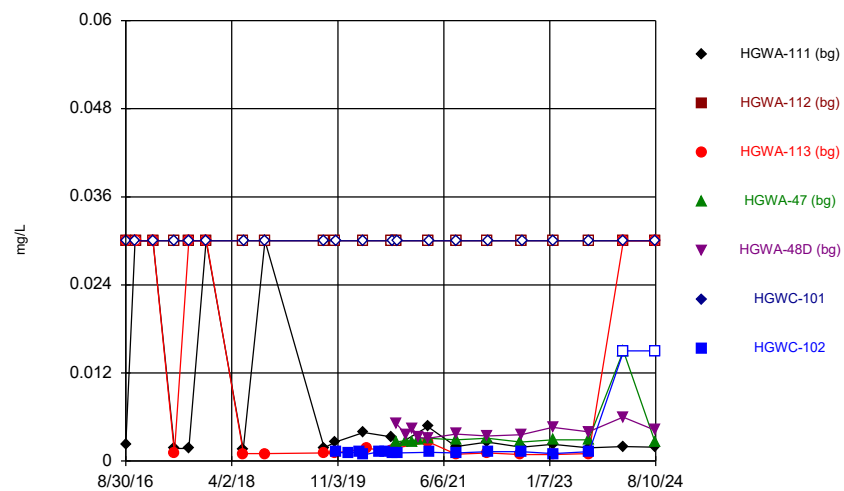
Time Series



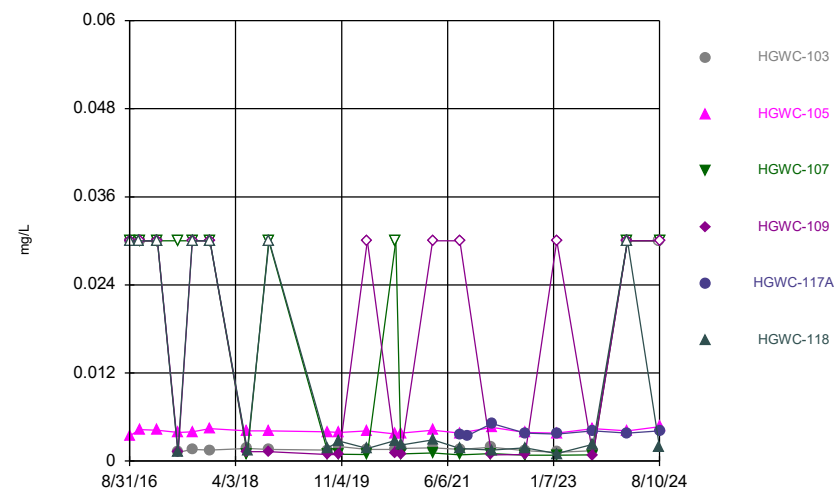
Time Series



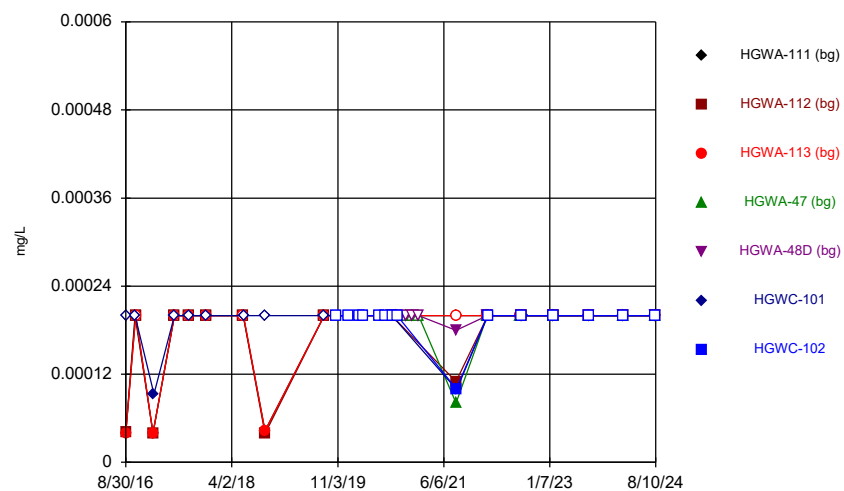
Time Series



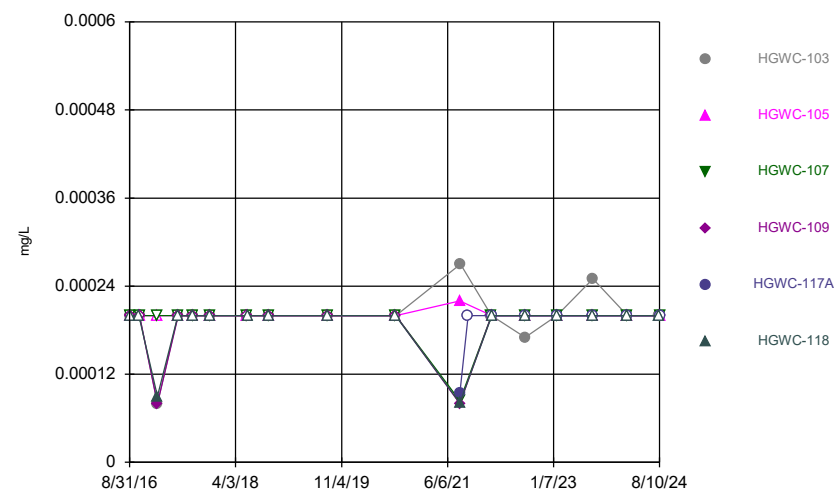
Time Series



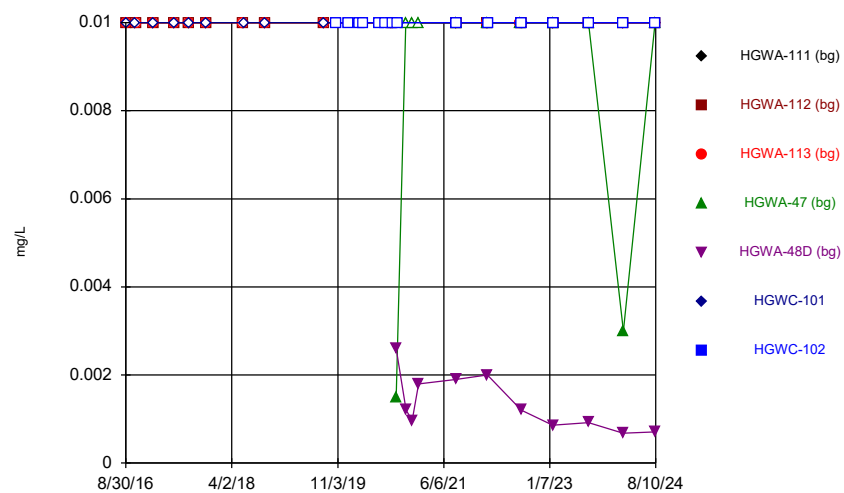
### Time Series



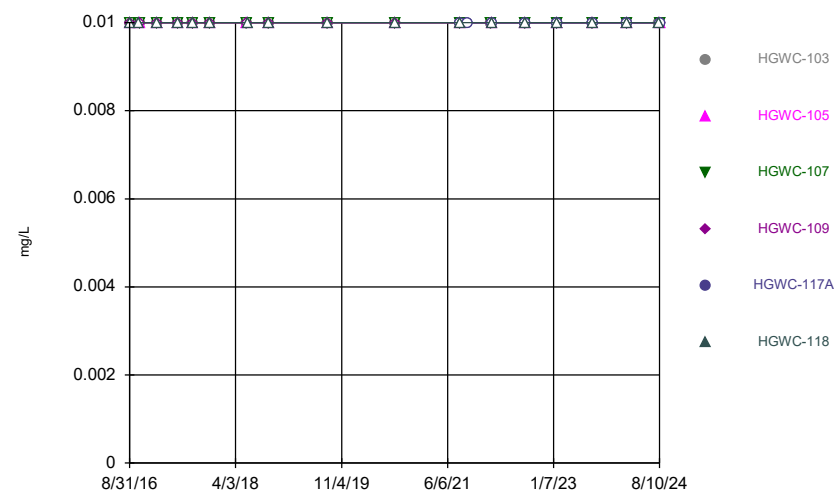
### Time Series



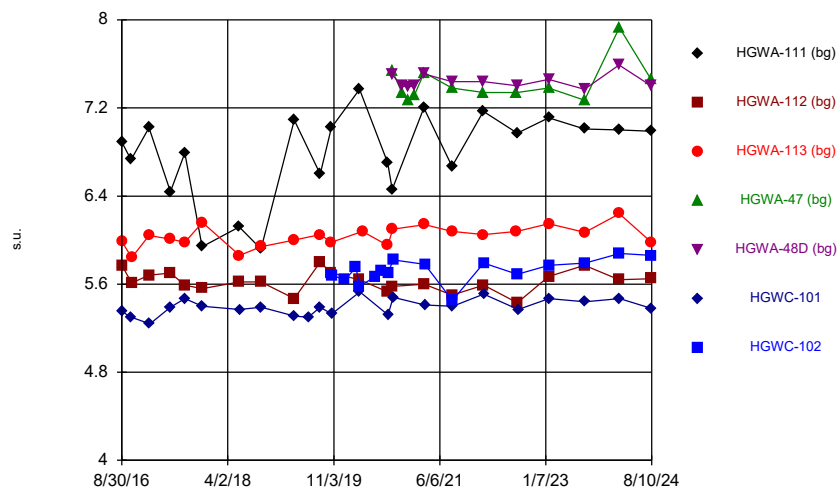
### Time Series



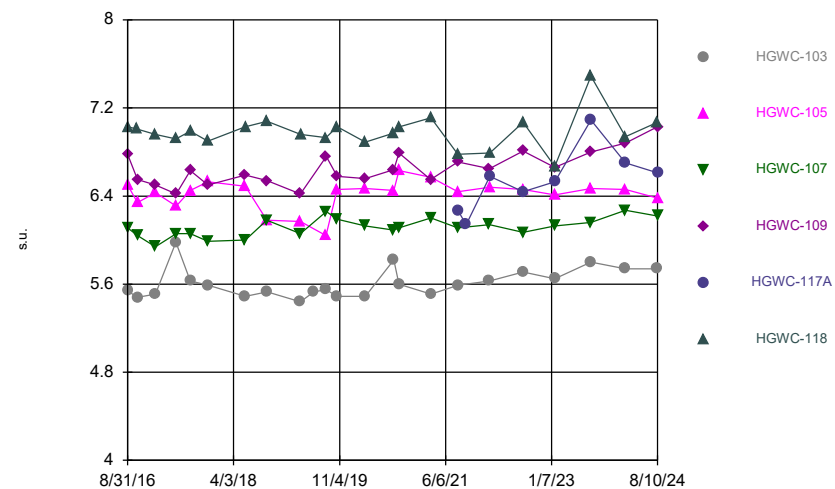
### Time Series



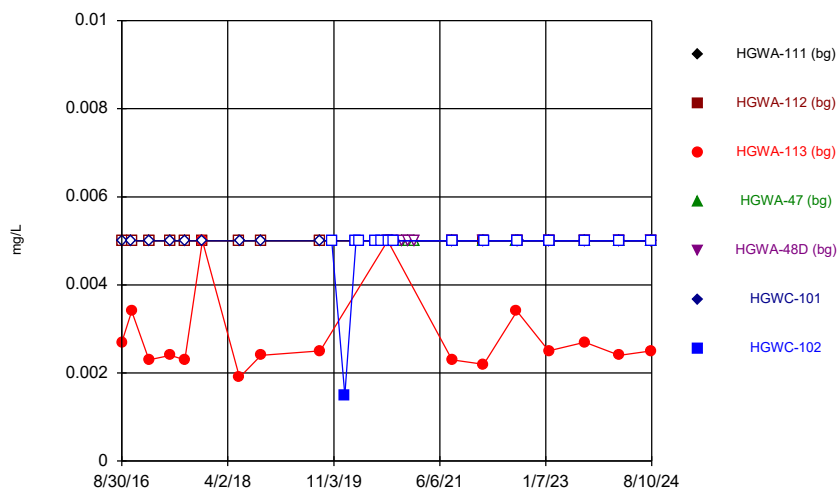
## Time Series



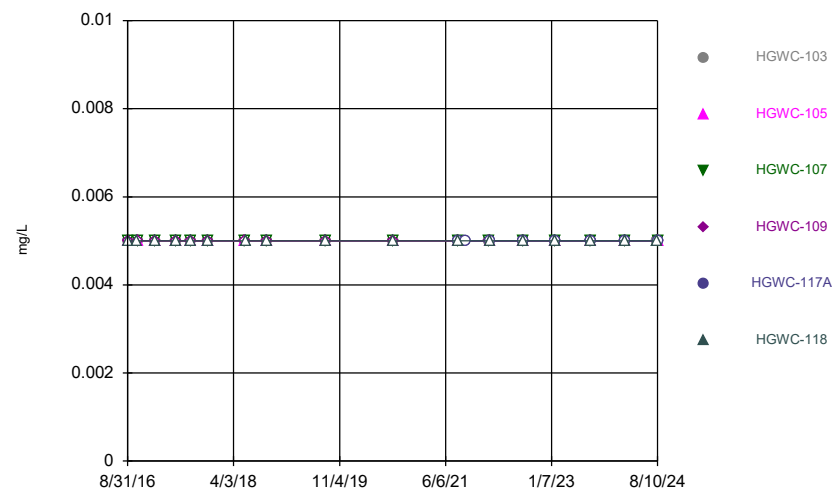
## Time Series



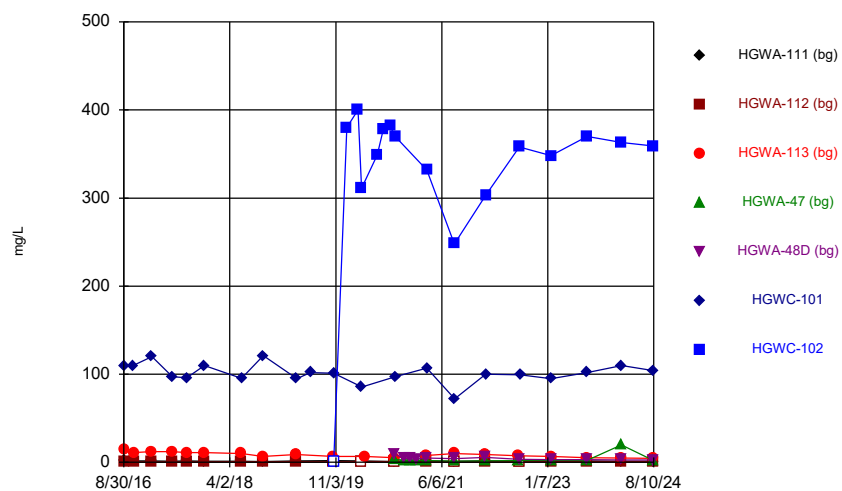
## Time Series



## Time Series

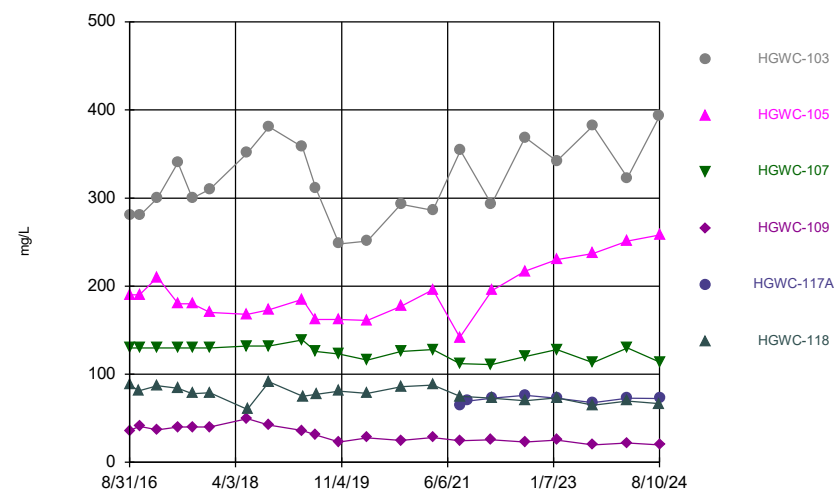


Time Series



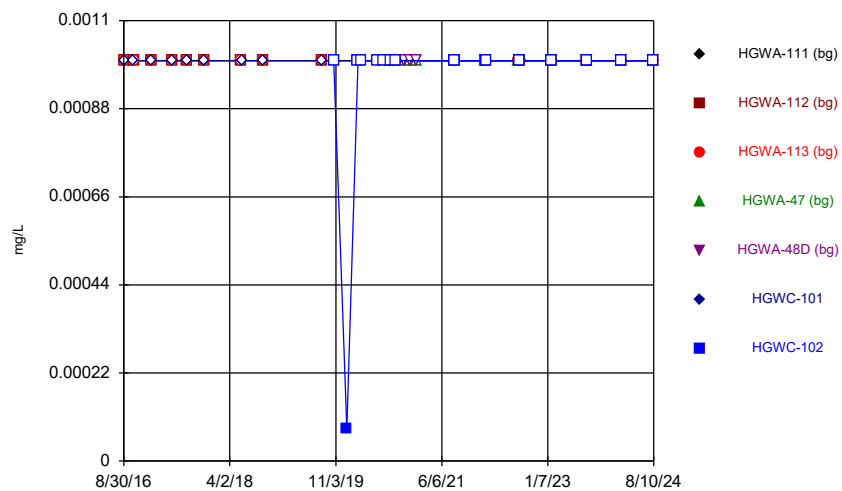
Constituent: Sulfate as SO4 Analysis Run 10/16/2024 2:27 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-4

Time Series



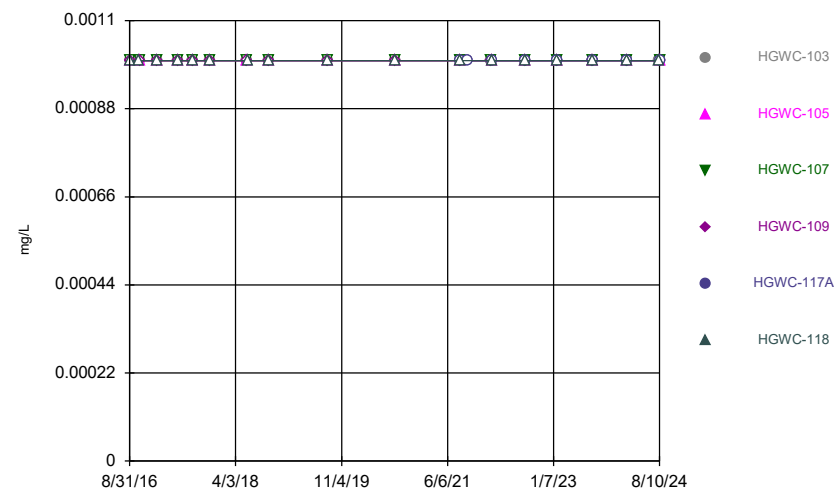
Constituent: Sulfate as SO4 Analysis Run 10/16/2024 2:27 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-4

Time Series



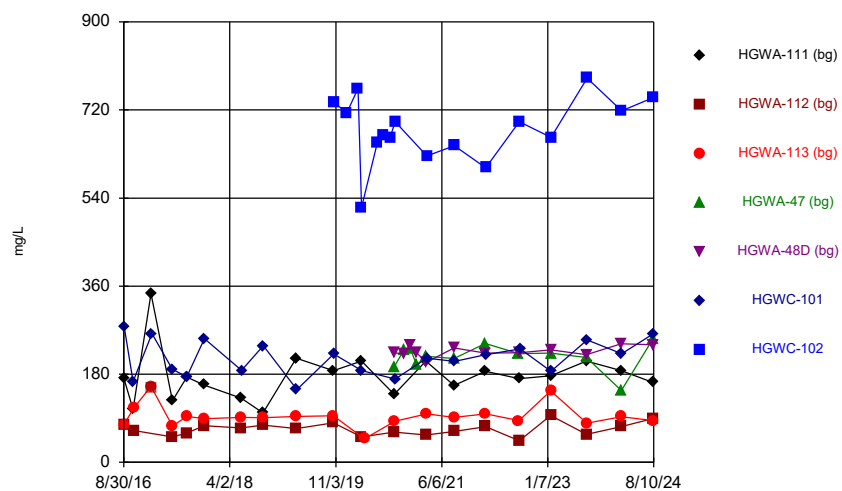
Constituent: Thallium Analysis Run 10/16/2024 2:28 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-4

Time Series



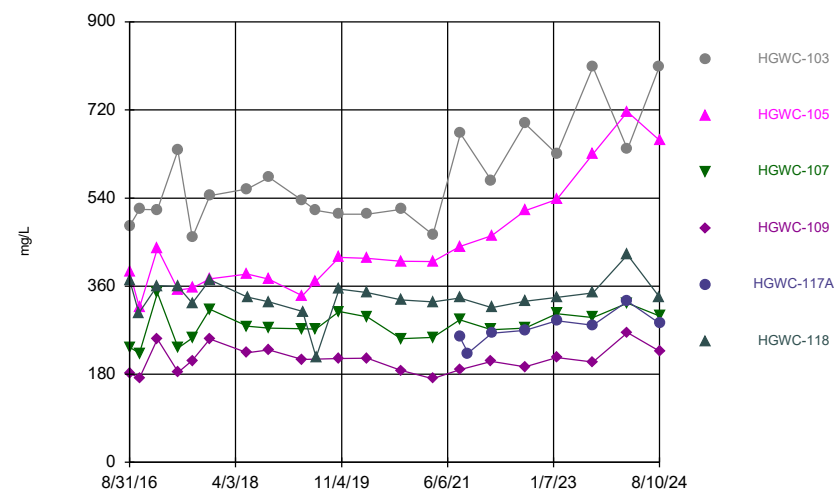
Constituent: Thallium Analysis Run 10/16/2024 2:28 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-4

## Time Series



Constituent: Total Dissolved Solids [TDS] Analysis Run 10/16/2024 2:28 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-4

## Time Series



Constituent: Total Dissolved Solids [TDS] Analysis Run 10/16/2024 2:28 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-4



# Time Series

Constituent: Antimony (mg/L)    Analysis Run 10/16/2024 2:31 PM  
Plant Hammond    Client: Southern Company    Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/30/2016	<0.003	<0.003	<0.003				
8/31/2016						<0.003	
10/20/2016	<0.003					<0.003	
10/24/2016		<0.003	<0.003				
1/25/2017	<0.003	<0.003	<0.003				
1/31/2017						<0.003	
5/23/2017		<0.003	<0.003			<0.003	
5/24/2017	<0.003						
8/10/2017	<0.003	<0.003	<0.003			<0.003	
11/13/2017	<0.003	<0.003					
11/14/2017			<0.003			<0.003	
6/4/2018	<0.003	<0.003					
6/5/2018			<0.003				
6/6/2018						<0.003	
10/1/2018	<0.003	<0.003	<0.003				
10/3/2018						<0.003	
8/21/2019	<0.003	<0.003	<0.003				
8/22/2019						<0.003	
10/23/2019							<0.003
1/3/2020							0.00076 (J)
3/4/2020							<0.003
3/24/2020							<0.003
6/18/2020							<0.003
7/21/2020							<0.003
8/25/2020	<0.003	<0.003	<0.003				
8/27/2020						<0.003	<0.003
9/18/2020				<0.003	0.00038 (J)		
9/24/2020							<0.003
11/10/2020				<0.003			
11/11/2020					0.00031 (J)		
12/15/2020				<0.003	<0.003		
1/19/2021				<0.003	0.00042 (J)		
8/12/2021	<0.003	<0.003	<0.003	<0.003	<0.003		
8/13/2021							<0.003
8/16/2021						<0.003	
1/31/2022	0.0014 (J)			<0.003	<0.003		
2/1/2022		<0.003	<0.003				
2/2/2022						<0.003	<0.003
8/2/2022			<0.003	<0.003			
8/5/2022	<0.003	<0.003			<0.003		<0.003
8/10/2022						<0.003	
1/24/2023	<0.003	<0.003	<0.003	<0.003	<0.003		
1/25/2023						<0.003	<0.003
8/8/2023	<0.003	<0.003		<0.003	<0.003		
8/10/2023			<0.003				
8/11/2023						<0.003	0.003
2/13/2024		<0.003			<0.003		
2/14/2024	<0.003		<0.003	<0.003			
2/16/2024						<0.003	<0.003
8/6/2024	<0.003			<0.003	<0.003		
8/8/2024			<0.003				
8/9/2024		<0.003					<0.003

# Time Series

Constituent: Antimony (mg/L)    Analysis Run 10/16/2024 2:31 PM  
Plant Hammond    Client: Southern Company    Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/10/2024						<0.003	

# Time Series

Constituent: Antimony (mg/L)   Analysis Run 10/16/2024 2:31 PM  
Plant Hammond   Client: Southern Company   Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117A	HGWC-118
8/31/2016	<0.003	<0.003	<0.003	<0.003		<0.003
10/20/2016						<0.003
10/24/2016	<0.003					
10/25/2016		<0.003	<0.003	<0.003		
1/31/2017	<0.003	<0.003	<0.003	<0.003		<0.003
5/23/2017	<0.003					<0.003
5/24/2017		<0.003	<0.003	<0.003		
8/10/2017	<0.003	<0.003	<0.003	<0.003		<0.003
11/14/2017	<0.003	<0.003	<0.003	<0.003		<0.003
6/6/2018	0.0022 (J)	<0.003	<0.003	<0.003		
6/7/2018						<0.003
10/2/2018		<0.003	0.0011 (J)	<0.003		
10/3/2018	<0.003					<0.003
8/22/2019	<0.003	<0.003				<0.003
8/23/2019			<0.003	<0.003		
8/26/2020						<0.003
8/27/2020	<0.003	<0.003	<0.003	<0.003		
8/12/2021					<0.003	
8/13/2021		<0.003	<0.003	<0.003		<0.003
8/16/2021	<0.003					
9/27/2021					<0.003	
2/2/2022	<0.003		<0.003	<0.003		
2/3/2022		<0.003			<0.003	<0.003
8/5/2022	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
1/25/2023	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
8/11/2023	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
2/16/2024	<0.003		<0.003			
2/17/2024		<0.003		<0.003	<0.003	<0.003
8/9/2024	<0.003					<0.003
8/10/2024		<0.003	<0.003	<0.003	<0.003	

# Time Series

Constituent: Arsenic (mg/L) Analysis Run 10/16/2024 2:31 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/30/2016	<0.005	<0.005	<0.005				
8/31/2016						<0.005	
10/20/2016	<0.005					<0.005	
10/24/2016		<0.005	<0.005				
1/25/2017	<0.005	<0.005	<0.005				
1/31/2017						<0.005	
5/23/2017		<0.005	<0.005			<0.005	
5/24/2017	<0.005						
8/10/2017	<0.005	<0.005	<0.005			<0.005	
11/13/2017	<0.005	<0.005					
11/14/2017			<0.005			<0.005	
6/4/2018	<0.005	<0.005					
6/5/2018			<0.005				
6/6/2018						<0.005	
10/1/2018	<0.005	<0.005	<0.005				
10/3/2018						<0.005	
8/21/2019	<0.005	<0.005	<0.005				
8/22/2019						<0.005	
10/21/2019	<0.005						
10/22/2019		<0.005	<0.005				
10/23/2019						<0.005	<0.005
1/3/2020							0.00065 (J)
3/4/2020							0.00036 (J)
3/24/2020	0.00042 (J)	<0.005					<0.005
3/25/2020						0.00039 (J)	
4/9/2020			0.00074 (J)				
6/18/2020							0.00092 (J)
7/21/2020							0.00083 (J)
8/25/2020	<0.005	<0.005	<0.005				
8/27/2020						<0.005	<0.005
9/18/2020	<0.005	<0.005		<0.005	<0.005		
9/22/2020			<0.005				
9/24/2020						<0.005	<0.005
11/10/2020				<0.005			
11/11/2020					<0.005		
12/15/2020				<0.005	<0.005		
1/19/2021				<0.005	<0.005		
3/11/2021	<0.005						
3/12/2021		<0.005		<0.005	0.0018 (J)		
3/16/2021			0.0011 (J)				
3/17/2021						<0.005	<0.005
8/12/2021	<0.005	<0.005	<0.005	<0.005	0.0013 (J)		
8/13/2021							<0.005
8/16/2021						<0.005	
1/31/2022	<0.005			<0.005	<0.005		
2/1/2022		<0.005	<0.005				
2/2/2022						<0.005	<0.005
8/2/2022			<0.005	<0.005			
8/5/2022	<0.005	<0.005			<0.005		<0.005
8/10/2022						<0.005	
1/24/2023	<0.005	<0.005	<0.005	<0.005	<0.005		
1/25/2023						<0.005	<0.005

Time Series

Constituent: Arsenic (mg/L)    Analysis Run 10/16/2024 2:31 PM  
Plant Hammond    Client: Southern Company    Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/8/2023	<0.005	<0.005		<0.005	<0.005		
8/10/2023			<0.005				
8/11/2023						<0.005	<0.005
2/13/2024		<0.005			<0.005		
2/14/2024	<0.005		<0.005	<0.005			
2/16/2024						<0.005	<0.005
8/6/2024	<0.005			<0.005	<0.005		
8/8/2024			<0.005				
8/9/2024		<0.005					0.0011 (J)
8/10/2024						<0.005	

# Time Series

Constituent: Arsenic (mg/L) Analysis Run 10/16/2024 2:31 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117A	HGWC-118
8/31/2016	<0.005	<0.005	<0.005	0.0045 (J)		<0.005
10/20/2016						<0.005
10/24/2016	<0.005					
10/25/2016		<0.005	<0.005	0.003 (J)		
1/31/2017	<0.005	<0.005	<0.005	0.0022 (J)		<0.005
5/23/2017	<0.005					<0.005
5/24/2017		<0.005	<0.005	0.0012 (J)		
8/10/2017	<0.005	<0.005	<0.005	0.0016 (J)		<0.005
11/14/2017	<0.005	<0.005	<0.005	0.0011 (J)		<0.005
6/6/2018	<0.005	<0.005	<0.005	0.0018 (J)		
6/7/2018						<0.005
10/2/2018		<0.005	<0.005	0.0014 (J)		
10/3/2018	<0.005					<0.005
8/22/2019	<0.005	<0.005				<0.005
8/23/2019			<0.005	0.0035 (J)		
10/22/2019			<0.005	0.0019 (J)		<0.005
10/23/2019	<0.005	<0.005				
3/25/2020	<0.005	<0.005	<0.005	0.0025 (J)		<0.005
8/26/2020						<0.005
8/27/2020	<0.005	<0.005	<0.005	0.0011 (J)		
9/24/2020	<0.005	<0.005	<0.005			
9/25/2020				0.0017 (J)		
9/28/2020						<0.005
3/17/2021				0.0019 (J)		
3/18/2021	<0.005	<0.005	<0.005			0.001 (J)
8/12/2021					<0.005	
8/13/2021		<0.005	<0.005	0.0019 (J)		<0.005
8/16/2021	<0.005					
9/27/2021					<0.005	
2/2/2022	<0.005		<0.005	<0.005		
2/3/2022		<0.005			<0.005	<0.005
8/5/2022	<0.005	<0.005	<0.005	0.0022 (J)	<0.005	<0.005
1/25/2023	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
8/11/2023	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
2/16/2024	<0.005		<0.005			
2/17/2024		<0.005		0.0013 (J)	<0.005	<0.005
8/9/2024	0.0015 (J)					<0.005
8/10/2024		<0.005	<0.005	0.00091 (J)	<0.005	

# Time Series

Constituent: Barium (mg/L)    Analysis Run 10/16/2024 2:31 PM  
Plant Hammond    Client: Southern Company    Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/30/2016	0.0275	0.0269	0.0269				
8/31/2016						0.0527	
10/20/2016	0.0255					0.0477	
10/24/2016		0.028	0.0258				
1/25/2017	0.0304	0.0252	0.0272				
1/31/2017						0.0527	
5/23/2017		0.0293	0.0293			0.0436	
5/24/2017	0.0256						
8/10/2017	0.0306	0.0274	0.031			0.0419	
11/13/2017	0.0217	0.0275					
11/14/2017			0.0289			0.0407	
6/4/2018	0.025	0.027					
6/5/2018			0.028				
6/6/2018						0.043	
10/1/2018	0.021	0.026	0.025				
10/3/2018						0.041	
8/21/2019	0.029	0.027	0.027				
8/22/2019						0.043	
10/21/2019	0.033						
10/22/2019		0.028	0.027				
10/23/2019						0.043	0.037
1/3/2020							0.036
3/4/2020							0.033
3/24/2020	0.032	0.029					0.024
3/25/2020						0.038	
4/9/2020			0.034				
6/18/2020							0.029
7/21/2020							0.028
8/25/2020	0.031	0.028	0.03				
8/27/2020						0.045	0.028
9/18/2020	0.024	0.025		0.026	0.077		
9/22/2020			0.038				
9/24/2020						0.041	0.029
11/10/2020				0.027			
11/11/2020					0.078		
12/15/2020				0.027	0.091		
1/19/2021				0.029	0.095		
3/11/2021	0.037						
3/12/2021		0.03		0.03	0.1		
3/16/2021			0.054				
3/17/2021						0.04	0.031
8/12/2021	0.029	0.028	0.033	0.028	0.1		
8/13/2021							0.026
8/16/2021						0.037	
1/31/2022	0.027			0.026	0.11		
2/1/2022		0.025	0.027				
2/2/2022						0.036	0.029
8/2/2022			0.03	0.029			
8/5/2022	0.028	0.027			0.11		0.031
8/10/2022						0.04	
1/24/2023	0.028	0.025	0.028	0.029	0.11		
1/25/2023						0.033	0.027

# Time Series

Constituent: Barium (mg/L)    Analysis Run 10/16/2024 2:31 PM  
Plant Hammond    Client: Southern Company    Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/8/2023	0.027	0.025		0.026	0.1		
8/10/2023			0.028				
8/11/2023						0.036	0.028
2/13/2024		0.026			0.12		
2/14/2024	0.029		0.029	0.03			
2/16/2024						0.032	0.026
8/6/2024	0.027			0.025	0.11		
8/8/2024			0.029				
8/9/2024		0.026					0.029
8/10/2024						0.033	



# Time Series

Constituent: Barium (mg/L)    Analysis Run 10/16/2024 2:31 PM  
Plant Hammond    Client: Southern Company    Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117A	HGWC-118
8/31/2016	0.045	0.067	0.0391	0.0883		0.0595
10/20/2016						0.055
10/24/2016	0.0386					
10/25/2016		0.0745	0.041	0.0831		
1/31/2017	0.0365	0.0674	0.0382	0.0844		0.0613
5/23/2017	0.0254					0.068
5/24/2017		0.0668	0.0377	0.0784		
8/10/2017	0.0396	0.067	0.0385	0.0903		0.0638
11/14/2017	0.0385	0.0643	0.039	0.083		0.07
6/6/2018	0.043	0.068	0.039	0.095		
6/7/2018						0.059
10/2/2018		0.066	0.038	0.089		
10/3/2018	0.04					0.056
8/22/2019	0.036	0.066				0.052
8/23/2019			0.038	0.088		
10/22/2019			0.039	0.087		0.054
10/23/2019	0.039	0.066				
3/25/2020	0.036	0.074	0.037	0.084		0.06
8/26/2020						0.056
8/27/2020	0.038	0.068	0.034	0.083		
9/24/2020	0.036	0.075	0.039			
9/25/2020				0.085		
9/28/2020						0.046
3/17/2021				0.077		
3/18/2021	0.042	0.082	0.041			0.067
8/12/2021					0.079	
8/13/2021		0.073	0.033	0.08		0.043
8/16/2021	0.037					
9/27/2021					0.062	
2/2/2022	0.036		0.034	0.072		
2/3/2022		0.093			0.049	0.047
8/5/2022	0.037	0.088	0.036	0.085	0.055	0.039
1/25/2023	0.032	0.094	0.035	0.076	0.05	0.048
8/11/2023	0.035	0.089	0.032	0.081	0.046	0.04
2/16/2024	0.031		0.033			
2/17/2024		0.085		0.078	0.047	0.05
8/9/2024	0.032					0.037
8/10/2024		0.083	0.033	0.076	0.042	

# Time Series

Constituent: Beryllium (mg/L)    Analysis Run 10/16/2024 2:31 PM  
Plant Hammond    Client: Southern Company    Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/30/2016	<0.0005	<0.0005	<0.0005				
8/31/2016						<0.0005	
10/20/2016	<0.0005					<0.0005	
10/24/2016		<0.0005	0.0019 (J)				
1/25/2017	<0.0005	<0.0005	<0.0005				
1/31/2017						<0.0005	
5/23/2017		<0.0005	<0.0005			7E-05 (J)	
5/24/2017	<0.0005						
8/10/2017	<0.0005	<0.0005	<0.0005			<0.0005	
11/13/2017	<0.0005	<0.0005					
11/14/2017			<0.0005			<0.0005	
6/4/2018	<0.0005	<0.0005					
6/5/2018			<0.0005				
6/6/2018						5.9E-05 (J)	
10/1/2018	<0.0005	<0.0005	<0.0005				
10/3/2018						6.5E-05 (J)	
8/21/2019	<0.0005	<0.0005	<0.0005				
8/22/2019						<0.0005	
10/21/2019	<0.0005						
10/22/2019		<0.0005	<0.0005				
10/23/2019						7.5E-05 (J)	<0.0005
1/3/2020							<0.0005
3/4/2020							<0.0005
3/24/2020	<0.0005	<0.0005					<0.0005
3/25/2020						<0.0005	
4/9/2020			<0.0005				
6/18/2020							<0.0005
7/21/2020							<0.0005
8/25/2020	4.7E-05 (J)	<0.0005	4.6E-05 (J)				
8/27/2020						5.7E-05 (J)	<0.0005
9/18/2020	<0.0005	<0.0005		<0.0005	<0.0005		
9/22/2020			9.9E-05 (J)				
9/24/2020						4.8E-05 (J)	<0.0005
11/10/2020				<0.0005			
11/11/2020					<0.0005		
12/15/2020				<0.0005	<0.0005		
1/19/2021				<0.0005	<0.0005		
3/11/2021	0.00014 (J)						
3/12/2021		5.4E-05 (J)		<0.0005	<0.0005		
3/16/2021			0.00018 (J)				
3/17/2021						5.9E-05 (J)	<0.0005
8/12/2021	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005		
8/13/2021							<0.0005
8/16/2021						<0.0005	
1/31/2022	<0.0005			<0.0005	<0.0005		
2/1/2022		<0.0005	<0.0005				
2/2/2022						6.2E-05 (J)	<0.0005
8/2/2022			<0.0005	<0.0005			
8/5/2022	<0.0005	<0.0005			<0.0005		<0.0005
8/10/2022						6.4E-05 (J)	
1/24/2023	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005		
1/25/2023						<0.0005	<0.0005

Time Series

Constituent: Beryllium (mg/L)    Analysis Run 10/16/2024 2:31 PM  
Plant Hammond    Client: Southern Company    Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/8/2023	<0.0005	<0.0005		<0.0005	<0.0005		
8/10/2023			<0.0005				
8/11/2023						7E-05 (J)	<0.0005
2/13/2024		<0.0005			<0.0005		
2/14/2024	<0.0005		<0.0005	<0.0005			
2/16/2024						<0.0005	<0.0005
8/6/2024	<0.0005			<0.0005	<0.0005		
8/8/2024			<0.0005				
8/9/2024		<0.0005					<0.0005
8/10/2024						<0.0005	

# Time Series

Constituent: Beryllium (mg/L)    Analysis Run 10/16/2024 2:31 PM  
Plant Hammond    Client: Southern Company    Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117A	HGWC-118
8/31/2016	<0.0005	<0.0005	<0.0005	<0.0005		<0.0005
10/20/2016						<0.0005
10/24/2016	<0.0005					
10/25/2016		<0.0005	<0.0005	<0.0005		
1/31/2017	<0.0005	<0.0005	<0.0005	<0.0005		<0.0005
5/23/2017	<0.0005					<0.0005
5/24/2017		<0.0005	<0.0005	<0.0005		
8/10/2017	<0.0005	<0.0005	<0.0005	<0.0005		<0.0005
11/14/2017	<0.0005	<0.0005	<0.0005	<0.0005		<0.0005
6/6/2018	<0.0005	<0.0005	<0.0005	<0.0005		
6/7/2018						<0.0005
10/2/2018		<0.0005	<0.0005	<0.0005		
10/3/2018	<0.0005					<0.0005
8/22/2019	<0.0005	<0.0005				<0.0005
8/23/2019			<0.0005	<0.0005		
10/22/2019			<0.0005	<0.0005		<0.0005
10/23/2019	<0.0005	<0.0005				
3/25/2020	<0.0005	<0.0005	<0.0005	<0.0005		<0.0005
8/26/2020						<0.0005
8/27/2020	5E-05 (J)	<0.0005	<0.0005	<0.0005		
9/24/2020	8.8E-05 (J)	<0.0005	<0.0005			
9/25/2020				<0.0005		
9/28/2020						<0.0005
3/17/2021				<0.0005		
3/18/2021	6.1E-05 (J)	<0.0005	<0.0005			9.3E-05 (J)
8/12/2021					<0.0005	
8/13/2021		<0.0005	<0.0005	<0.0005		<0.0005
8/16/2021	<0.0005					
9/27/2021					<0.0005	
2/2/2022	7.7E-05 (J)		<0.0005	<0.0005		
2/3/2022		<0.0005			<0.0005	<0.0005
8/5/2022	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
1/25/2023	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
8/11/2023	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
2/16/2024	<0.0005		<0.0005			
2/17/2024		<0.0005		<0.0005	<0.0005	<0.0005
8/9/2024	<0.0005					<0.0005
8/10/2024		<0.0005	<0.0005	<0.0005	<0.0005	

# Time Series

Constituent: Boron, total (mg/L)    Analysis Run 10/16/2024 2:31 PM  
 Plant Hammond    Client: Southern Company    Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/30/2016	<0.04	<0.04	<0.04				
8/31/2016						0.0724 (J)	
10/20/2016	0.016 (J)					0.0877 (J)	
10/24/2016		0.0367 (J)	0.0226 (J)				
1/25/2017	0.0095 (J)	0.0075 (J)	0.009 (J)				
1/31/2017						0.0928	
5/23/2017		0.0073 (J)	0.0082 (J)			0.0795	
5/24/2017	0.0094 (J)						
8/10/2017	<0.04	<0.04	0.0061 (J)			0.0814	
11/13/2017	0.0103 (J)	0.0089 (J)					
11/14/2017			0.012 (J)			0.108	
6/4/2018	0.0065 (J)	0.007 (J)					
6/5/2018			0.0085 (J)				
6/6/2018						0.081	
10/1/2018	0.0054 (J)	<0.04	0.0042 (J)				
10/3/2018						0.092	
4/1/2019	0.0076 (J)						
4/2/2019		0.0043 (J)	0.0059 (J)				
4/4/2019						0.06 (X)	
10/21/2019	0.0097 (J)						
10/22/2019		0.016 (J)	0.01 (J)				
10/23/2019						0.1	3.1
1/3/2020							3.4
3/4/2020							3.7
3/24/2020	0.011 (J)	0.012 (J)					2.4
3/25/2020						0.08 (J)	
4/9/2020			0.012 (J)				
6/18/2020							2.9
7/21/2020							3
8/27/2020							2.7
9/18/2020	0.011 (J)	0.008 (J)		0.0082 (J)	0.015 (J)		
9/22/2020			0.021 (J)				
9/24/2020						0.1	2.9
11/10/2020				0.0064 (J)			
11/11/2020					0.014 (J)		
12/15/2020				<0.04	0.0083 (J)		
1/19/2021				0.015 (J)	0.015 (J)		
3/11/2021	0.01 (J)						
3/12/2021		0.0061 (J)		0.0067 (J)	0.012 (J)		
3/16/2021			0.011 (J)				
3/17/2021						0.13	2.7
8/12/2021	<0.04	<0.04	<0.04	<0.04	0.012 (J)		
8/13/2021							2.4
8/16/2021						0.13	
1/31/2022	0.0099 (J)			<0.04	0.011 (J)		
2/1/2022		0.011 (J)	0.012 (J)				
2/2/2022						0.14	2.6
8/2/2022			<0.04	<0.04			
8/5/2022	<0.04	0.012 (J)			0.011 (J)		2.9
8/10/2022						0.17	
1/24/2023	<0.04	<0.04	<0.04	<0.04	<0.04		
1/25/2023						0.12	2.5

Time Series

Constituent: Boron, total (mg/L)    Analysis Run 10/16/2024 2:31 PM  
Plant Hammond    Client: Southern Company    Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/8/2023	<0.04	<0.04		<0.04	<0.04		
8/10/2023			0.0091 (J)				
8/11/2023						0.16	3.2
2/13/2024		<0.04			<0.04		
2/14/2024	<0.04		0.013 (J)	0.018 (J)			
2/16/2024						0.14	2.7
8/6/2024	<0.04			<0.04	<0.04		
8/8/2024			<0.04				
8/9/2024		0.029 (J)					3
8/10/2024						0.15	

# Time Series

Constituent: Boron, total (mg/L)    Analysis Run 10/16/2024 2:31 PM  
Plant Hammond    Client: Southern Company    Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117A	HGWC-118
8/31/2016	2.22	1.14	0.651	0.402		0.681
10/20/2016						0.697
10/24/2016	1.83					
10/25/2016		1.21	0.778	0.372		
1/31/2017	2.12	1.43	0.782	0.404		0.768
5/23/2017	2.56					0.754
5/24/2017		1.3	0.753	0.415		
8/10/2017	2.28	1.28	0.702	0.397		0.608
11/14/2017	2.32	1.29	0.78	0.366		0.691
6/6/2018	2.5	1.4	0.87	0.48		
6/7/2018						0.57
10/2/2018		1.2	0.82	0.43		
10/3/2018	2.4					0.51
4/3/2019			0.89	0.4		
4/4/2019	2.4	1.4 (X)				
4/5/2019						0.6 (X)
6/17/2019	2.3		0.86	0.37		
10/22/2019			0.91	0.32		0.65
10/23/2019	2.3	1.3				
3/25/2020	2.3	1.4	0.87	0.36		0.7
9/24/2020	2.2	1.2	0.88			
9/25/2020				0.28		
9/28/2020						0.65
3/17/2021				0.26		
3/18/2021	2.4	1.5	0.92			0.81
8/12/2021					0.34	
8/13/2021		1.2	0.73	0.24		0.59
8/16/2021	3.2					
9/27/2021					0.3	
2/2/2022	3.1		0.85	0.25		
2/3/2022		1.4			0.34	0.77
8/5/2022	3.6	1.3	0.79	0.25	0.34	0.57
1/25/2023	2.7	1.3	0.82	0.22	0.27	0.62
8/11/2023	4.3	1.4	0.81	0.23	0.31	0.66
2/16/2024	3.1		0.87			
2/17/2024		1.3		0.22	0.27	0.68
8/9/2024	4.5					0.59
8/10/2024		1.4	0.84	0.2	0.28	

# Time Series

Constituent: Cadmium (mg/L)    Analysis Run 10/16/2024 2:31 PM  
Plant Hammond    Client: Southern Company    Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/30/2016	<0.0005	<0.0005	<0.0005				
8/31/2016						0.0002 (J)	
10/20/2016	<0.0005					0.0003 (J)	
10/24/2016		<0.0005	<0.0005				
1/25/2017	<0.0005	<0.0005	<0.0005				
1/31/2017						0.0001 (J)	
5/23/2017		<0.0005	<0.0005			0.0002 (J)	
5/24/2017	<0.0005						
8/10/2017	<0.0005	<0.0005	<0.0005			0.0002 (J)	
11/13/2017	<0.0005	<0.0005					
11/14/2017			<0.0005			<0.0005	
6/4/2018	<0.0005	<0.0005					
6/5/2018			<0.0005				
6/6/2018						9.5E-05 (J)	
10/1/2018	<0.0005	<0.0005	<0.0005				
10/3/2018						0.00018 (J)	
8/21/2019	<0.0005	<0.0005	<0.0005				
8/22/2019						0.00014 (J)	
10/21/2019	<0.0005						
10/22/2019		<0.0005	<0.0005				
10/23/2019						0.0002 (J)	0.00026 (J)
1/3/2020							0.0002 (J)
3/4/2020							0.00026 (J)
3/24/2020	<0.0005	<0.0005					0.00068 (J)
3/25/2020						0.00014 (J)	
4/9/2020			<0.0005				
6/18/2020							0.00047 (J)
7/21/2020							0.00083 (J)
8/25/2020	<0.0005	<0.0005	<0.0005				
8/27/2020						0.00019 (J)	0.00038 (J)
9/18/2020	<0.0005	<0.0005		<0.0005	<0.0005		
9/22/2020			<0.0005				
9/24/2020						0.00014 (J)	0.00032 (J)
11/10/2020				<0.0005			
11/11/2020					<0.0005		
12/15/2020				<0.0005	<0.0005		
1/19/2021				<0.0005	<0.0005		
3/11/2021	<0.0005						
3/12/2021		<0.0005		<0.0005	<0.0005		
3/16/2021			<0.0005				
3/17/2021						<0.0005	0.00094
8/12/2021	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005		
8/13/2021							0.00069
8/16/2021						0.00015 (J)	
1/31/2022	<0.0005			<0.0005	<0.0005		
2/1/2022		<0.0005	<0.0005				
2/2/2022						<0.0005	0.00055
8/2/2022			<0.0005	<0.0005			
8/5/2022	<0.0005	<0.0005			<0.0005		0.00044 (J)
8/10/2022						0.00011 (J)	
1/24/2023	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005		
1/25/2023						0.00011 (J)	0.00035 (J)



Time Series

Constituent: Cadmium (mg/L)    Analysis Run 10/16/2024 2:31 PM  
Plant Hammond    Client: Southern Company    Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/8/2023	<0.0005	<0.0005		<0.0005	<0.0005		
8/10/2023			<0.0005				
8/11/2023						0.00015 (J)	0.00067
2/13/2024		<0.0005			<0.0005		
2/14/2024	<0.0005		<0.0005	<0.0005			
2/16/2024						0.00016 (J)	0.00031 (J)
8/6/2024	<0.0005			<0.0005	<0.0005		
8/8/2024			<0.0005				
8/9/2024		<0.0005					0.00043 (J)
8/10/2024						0.00014 (J)	

# Time Series

Constituent: Cadmium (mg/L)   Analysis Run 10/16/2024 2:31 PM  
Plant Hammond   Client: Southern Company   Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117A	HGWC-118
8/31/2016	0.0006 (J)	<0.0005	0.0001 (J)	<0.0005		<0.0005
10/20/2016						<0.0005
10/24/2016	0.0008 (J)					
10/25/2016		<0.0005	8E-05 (J)	<0.0005		
1/31/2017	0.0006 (J)	<0.0005	9E-05 (J)	<0.0005		<0.0005
5/23/2017	0.0006 (J)					<0.0005
5/24/2017		<0.0005	0.0001 (J)	<0.0005		
8/10/2017	0.0007 (J)	<0.0005	<0.0005	<0.0005		<0.0005
11/14/2017	0.0007 (J)	<0.0005	<0.0005	<0.0005		<0.0005
6/6/2018	0.00073 (J)	<0.0005	0.00012 (J)	<0.0005		
6/7/2018						<0.0005
10/2/2018		<0.0005	0.0001 (J)	<0.0005		
10/3/2018	0.00078 (J)					<0.0005
8/22/2019	0.0008 (J)	<0.0005				<0.0005
8/23/2019			0.00011 (J)	<0.0005		
10/22/2019			<0.0005	<0.0005		<0.0005
10/23/2019	0.00091 (J)	<0.0005				
3/25/2020	0.00068 (J)	<0.0005	<0.0005	<0.0005		<0.0005
8/26/2020						<0.0005
8/27/2020	0.00082 (J)	<0.0005	<0.0005	<0.0005		
9/24/2020	0.00076 (J)	<0.0005	<0.0005			
9/25/2020				<0.0005		
9/28/2020						<0.0005
3/17/2021				<0.0005		
3/18/2021	0.00068	<0.0005	<0.0005			<0.0005
8/12/2021					0.00016 (J)	
8/13/2021		<0.0005	<0.0005	<0.0005		<0.0005
8/16/2021	0.00081					
9/27/2021					<0.0005	
2/2/2022	0.0008		<0.0005	<0.0005		
2/3/2022		<0.0005			<0.0005	<0.0005
8/5/2022	0.00081	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
1/25/2023	0.00063	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
8/11/2023	0.0007	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
2/16/2024	0.00074		<0.0005			
2/17/2024		<0.0005		<0.0005	<0.0005	<0.0005
8/9/2024	0.00078					<0.0005
8/10/2024		<0.0005	<0.0005	<0.0005	<0.0005	

Time Series

Constituent: Calcium, total (mg/L)    Analysis Run 10/16/2024 2:31 PM  
Plant Hammond    Client: Southern Company    Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/30/2016	40.3	6.69	6.72				
8/31/2016						19.4	
10/20/2016	38.7					19.3	
10/24/2016		6.25	6.4				
1/25/2017	44.6	6.58	6.87				
1/31/2017						19.1	
5/23/2017		6.4	7.13			18.3	
5/24/2017	34.8						
8/10/2017	48.6	6.54	6.71			20.9	
11/13/2017	17.1	6.26					
11/14/2017			7.4			21.7	
6/4/2018	30.1	7.4					
6/5/2018			7.4				
6/6/2018						17	
10/1/2018	14.2 (J)	5.8	6.2				
10/3/2018						19.1 (J)	
4/1/2019	58.4						
4/2/2019		6.7	7.4				
4/4/2019						16.9	
10/21/2019	51						
10/22/2019		6.3	7.2				
10/23/2019						21.9	136
1/3/2020							118
3/4/2020							144
3/24/2020	61.2	7					103
3/25/2020						18.4	
4/9/2020			8.3				
6/18/2020							124
7/21/2020							120
8/27/2020							106
9/18/2020	32.2	6.5		62.2	51.8		
9/22/2020			7.9				
9/24/2020						20.3	120
11/10/2020				73.3			
11/11/2020					61.3		
12/15/2020				72.5	61.3		
1/19/2021				72.5	58.9		
3/11/2021	53.2						
3/12/2021		6.9		69.2	57.5		
3/16/2021			8.6				
3/17/2021						21.8	111
8/12/2021	45.4	6.9	8.4	71.2	59.5		
8/13/2021							119
8/16/2021						22.8	
1/31/2022	58.6			73.8	63.2		
2/1/2022		7.4	8.6				
2/2/2022						23.8	116
8/2/2022			8	73			
8/5/2022	53	7.1			59.6		127
8/10/2022						24.6	
1/24/2023	55.4	6.6	7.5	69.2	57.8		
1/25/2023						20.4	128

# Time Series

Constituent: Calcium, total (mg/L)    Analysis Run 10/16/2024 2:31 PM  
Plant Hammond    Client: Southern Company    Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/8/2023	0.94 (J)	6.6		68	58.2		
8/10/2023			8.4				
8/11/2023						24.1	134
2/13/2024		6.5			56		
2/14/2024	51.8		7.2	29.4			
2/16/2024						22.2	127
8/6/2024	46.2			71.1	58.8		
8/8/2024			8.4				
8/9/2024		7.1					142
8/10/2024						24.2	

# Time Series

Constituent: Calcium, total (mg/L)    Analysis Run 10/16/2024 2:31 PM  
Plant Hammond    Client: Southern Company    Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117A	HGWC-118
8/31/2016	70.4	74.2	44.7	35.1		79.3
10/20/2016						83.7
10/24/2016	70.9					
10/25/2016		72.5	49	35.4		
1/31/2017	63.6	70.3	46.6	34.2		76.8
5/23/2017	111					77.2
5/24/2017		75.9	49.5	35.3		
8/10/2017	81.2	84	54.2	43.1		83.1
11/14/2017	79.7	87.2	53.2	37.4		86.7
6/6/2018	88.3	81	55	41.1		
6/7/2018						79.7
10/2/2018		84.7	55.4	42.5		
10/3/2018	85.3					77.1
4/3/2019			54	37.5		
4/4/2019	91.9	73.8				
4/5/2019						82
6/17/2019	92.6	81.2	55.3			
6/18/2019						76.5
10/22/2019			58.1	42.6		84.2
10/23/2019	86.5	89.4				
3/25/2020	86.8	91.4	59.5	42.6		86.8
9/24/2020	91.3	92.9	55.4			
9/25/2020				48.5		
9/28/2020						88.9
3/17/2021				37.3		
3/18/2021	83.7	97.7	56			85.4
8/12/2021					50.7	
8/13/2021		102	57.8	43.5		84.3
8/16/2021	124					
9/27/2021					47.2	
2/2/2022	104		62	45.7		
2/3/2022		115			68.2	84.5
8/5/2022	128	121	63	50.8	68.6	88.5
1/25/2023	109	113	57.8	42.4	64.5	81.8
8/11/2023	139	129	56	44.8	61.1	85.5
2/16/2024	106		61.9			
2/17/2024		130		44.3	63.9	83.8
8/9/2024	146					85.2
8/10/2024		156	61.4	53.7	64.5	

# Time Series

Constituent: Chloride, Total (mg/L)    Analysis Run 10/16/2024 2:31 PM

Plant Hammond    Client: Southern Company    Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/30/2016	3.3	5.4	2				
8/31/2016						5.7	
10/20/2016	3.2					5.7	
10/24/2016		5.2	1.9				
1/25/2017	2.7	5	1.9				
1/31/2017						5.8	
5/23/2017		5.1	1.6			5.3	
5/24/2017	3						
8/10/2017	2.8	5.2	1.7			5.4	
11/13/2017	2.5	5.5					
11/14/2017			2			5.8	
6/4/2018	2.6	5.3					
6/5/2018			1.7				
6/6/2018						5.3	
10/1/2018	2.2	5.6	1.6				
10/3/2018						5.8	
4/1/2019	4						
4/2/2019		5.7	1.8				
4/4/2019						5.9	
10/21/2019	3.9						
10/22/2019		5.5	1.9				
10/23/2019						5.5	7.9
1/3/2020							7
3/4/2020							7.1
3/24/2020	3.6	5.2					6.5
3/25/2020						5.2	
4/9/2020			1.4				
6/18/2020							6.9
7/21/2020							7.2
8/27/2020							7.1
9/18/2020	2.6	5.2		2.7	2.6		
9/22/2020			1.5				
9/24/2020						5.5	7.2
11/10/2020				2.7			
11/11/2020					2.6		
12/15/2020				2.9	2.7		
1/19/2021				2.8	2.7		
3/11/2021	3.4						
3/12/2021		5.3		2.7	2.6		
3/16/2021			1.6				
3/17/2021						5.5	6.9
8/12/2021	2.5	4.4	1.5	2.3	2.2		
8/13/2021							6
8/16/2021						5.4	
1/31/2022	3			2.6	2.5		
2/1/2022		5.2	1.6				
2/2/2022						5.3	7.2
8/2/2022			1.8	3			
8/5/2022	2.7	5			2.4		7.7
8/10/2022						5.5	
1/24/2023	3.6	5.6	1.8	3	2.8		
1/25/2023						5.7	7.8

# Time Series

Constituent: Chloride, Total (mg/L)    Analysis Run 10/16/2024 2:31 PM  
Plant Hammond    Client: Southern Company    Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/8/2023	3	5.1		2.7	2.7		
8/10/2023			1.6				
8/11/2023						4.9	6.7
2/13/2024		5			2.6		
2/14/2024	3		1.5	1.6			
2/16/2024						5.4	7.4
8/6/2024	2.8			2.9	2.7		
8/8/2024			1.5				
8/9/2024		5.2					8
8/10/2024						5.4	

# Time Series

Constituent: Chloride, Total (mg/L)    Analysis Run 10/16/2024 2:31 PM  
Plant Hammond    Client: Southern Company    Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117A	HGWC-118
8/31/2016	5.2	3	3.2	5		4.5
10/20/2016						4.4
10/24/2016	5.2					
10/25/2016		2.8	3.2	4.8		
1/31/2017	5.6	3.3	3.1	5.5		4.8
5/23/2017	5.7					4.3
5/24/2017		3.5	2.9	5.3		
8/10/2017	5.8	2.9	2.8	4.6		4.2
11/14/2017	6	4	3.4	5.6		4.4
6/6/2018	6.4	2.9	2.8	5.3		
6/7/2018						4.1
10/2/2018		3.5	3.2	5.3		
10/3/2018	6.3					4.4
4/3/2019			3.6	5		
4/4/2019	6.9	3.9				
4/5/2019						4.3
6/17/2019	5.2		2.9			
10/22/2019			3.6	4.6		4.5
10/23/2019	6.1	3.6				
3/25/2020	5.1	3.2	3	3.9		3.6
9/24/2020	6	3.9	3.5			
9/25/2020				4.1		
9/28/2020						4
3/17/2021				4.7		
3/18/2021	6.2	4.3	3.2			4.3
8/12/2021					6.3	
8/13/2021		3.7	3.1	4		4
8/16/2021	10.4					
9/27/2021					4.5	
2/2/2022	7.1		2.9	4.1		
2/3/2022		4.8			7.8	3.9
8/5/2022	7.8	5	2.7	3.7	7.4	3.8
1/25/2023	8	6	3.3	4.3	5.9	4.3
8/11/2023	7.9	5.6	2.7	3.5	4.6	3.8
2/16/2024	7.5		3.2			
2/17/2024		6.8		3.9	4.4	4.1
8/9/2024	8.8					4.2
8/10/2024		7.7	3.1	4	4.5	



# Time Series

Constituent: Chromium (mg/L)    Analysis Run 10/16/2024 2:31 PM  
Plant Hammond    Client: Southern Company    Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/30/2016	<0.005	0.0038 (J)	<0.005				
8/31/2016						<0.005	
10/20/2016	<0.005					<0.005	
10/24/2016		0.0039 (J)	0.001 (J)				
1/25/2017	0.0029 (J)	0.0038 (J)	0.0012 (J)				
1/31/2017						<0.005	
5/23/2017		0.0038 (J)	0.0012 (J)			0.0006 (J)	
5/24/2017	0.0004 (J)						
8/10/2017	<0.005	0.0039 (J)	0.0019 (J)			<0.005	
11/13/2017	<0.005	0.0038 (J)					
11/14/2017			0.0016 (J)			<0.005	
6/4/2018	<0.005	0.0037 (J)					
6/5/2018			<0.005				
6/6/2018						<0.005	
10/1/2018	<0.005	0.0036 (J)	0.0023 (J)				
10/3/2018						<0.005	
8/21/2019	0.00061 (J)	0.0039 (J)	0.0022 (J)				
8/22/2019						0.00064 (J)	
10/21/2019	0.0012 (J)						
10/22/2019		0.004 (J)	0.0023 (J)				
10/23/2019						<0.005	<0.005
1/3/2020							0.00063 (J)
3/4/2020							<0.005
3/24/2020	0.0019 (J)	0.0044 (J)					0.00051 (J)
3/25/2020						0.00098 (J)	
4/9/2020			0.0031 (J)				
6/18/2020							<0.005
7/21/2020							<0.005
8/25/2020	0.0013 (J)	0.0039 (J)	0.0031 (J)				
8/27/2020						<0.005	<0.005
9/18/2020	0.00077 (J)	0.0037 (J)		0.0039 (J)	<0.005		
9/22/2020			0.0046 (J)				
9/24/2020						<0.005	<0.005
11/10/2020				<0.005			
11/11/2020					<0.005		
12/15/2020				<0.005	0.0013 (J)		
1/19/2021				<0.005	0.0015 (J)		
3/11/2021	0.002 (J)						
3/12/2021		0.0045 (J)		<0.005	0.00062 (J)		
3/16/2021			0.0061				
3/17/2021						0.00075 (J)	<0.005
8/12/2021	<0.005	0.0041 (J)	<0.005	<0.005	<0.005		
8/13/2021							<0.005
8/16/2021						<0.005	
1/31/2022	<0.005			<0.005	<0.005		
2/1/2022		0.0043 (J)	0.0013 (J)				
2/2/2022						<0.005	<0.005
8/2/2022			0.0013 (J)	<0.005			
8/5/2022	<0.005	0.0045 (J)			<0.005		<0.005
8/10/2022						<0.005	
1/24/2023	<0.005	0.0041 (J)	0.0036 (J)	<0.005	<0.005		
1/25/2023						<0.005	<0.005

Time Series

Constituent: Chromium (mg/L)    Analysis Run 10/16/2024 2:31 PM  
Plant Hammond    Client: Southern Company    Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/8/2023	<0.005	0.0037 (J)		<0.005	<0.005		
8/10/2023			0.0019 (J)				
8/11/2023						<0.005	<0.005
2/13/2024		0.0053			<0.005		
2/14/2024	<0.005		0.0023 (J)	<0.005			
2/16/2024						<0.005	<0.005
8/6/2024	<0.005			<0.005	<0.005		
8/8/2024			<0.005				
8/9/2024		0.0029 (J)					<0.005
8/10/2024						<0.005	

# Time Series

Constituent: Chromium (mg/L)    Analysis Run 10/16/2024 2:31 PM  
Plant Hammond    Client: Southern Company    Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117A	HGWC-118
8/31/2016	<0.005	<0.005	<0.005	<0.005		<0.005
10/20/2016						<0.005
10/24/2016	<0.005					
10/25/2016		<0.005	<0.005	<0.005		
1/31/2017	<0.005	<0.005	<0.005	<0.005		<0.005
5/23/2017	<0.005					<0.005
5/24/2017		<0.005	<0.005	<0.005		
8/10/2017	<0.005	<0.005	<0.005	<0.005		<0.005
11/14/2017	<0.005	<0.005	<0.005	<0.005		<0.005
6/6/2018	<0.005	<0.005	<0.005	<0.005		
6/7/2018						<0.005
10/2/2018		<0.005	<0.005	<0.005		
10/3/2018	<0.005					<0.005
8/22/2019	0.00063 (J)	<0.005				<0.005
8/23/2019			<0.005	<0.005		
10/22/2019			<0.005	0.00062 (J)		0.00066 (J)
10/23/2019	0.0015 (J)	0.0004 (J)				
3/25/2020	0.00045 (J)	0.0013 (J)	0.00074 (J)	0.0014 (J)		0.00081 (J)
8/26/2020						0.00098 (J)
8/27/2020	0.00069 (J)	<0.005	<0.005	<0.005		
9/24/2020	0.00081 (J)	0.00064 (J)	<0.005			
9/25/2020				<0.005		
9/28/2020						0.0017 (J)
3/17/2021				<0.005		
3/18/2021	0.003 (J)	0.00058 (J)	<0.005			0.0021 (J)
8/12/2021					<0.005	
8/13/2021		<0.005	<0.005	<0.005		<0.005
8/16/2021	<0.005					
9/27/2021					<0.005	
2/2/2022	0.0013 (J)		<0.005	<0.005		
2/3/2022		<0.005			<0.005	<0.005
8/5/2022	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
1/25/2023	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
8/11/2023	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
2/16/2024	<0.005		<0.005			
2/17/2024		<0.005		<0.005	<0.005	<0.005
8/9/2024	<0.005					<0.005
8/10/2024		<0.005	<0.005	<0.005	<0.005	

# Time Series

Constituent: Cobalt (mg/L) Analysis Run 10/16/2024 2:31 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/30/2016	<0.005	<0.005	0.0006 (J)				
8/31/2016						0.0033 (J)	
10/20/2016	<0.005					0.0025 (J)	
10/24/2016		<0.005	<0.005				
1/25/2017	<0.005	<0.005	<0.005				
1/31/2017						0.001 (J)	
5/23/2017		<0.005	<0.005			0.0025 (J)	
5/24/2017	<0.005						
8/10/2017	<0.005	<0.005	0.0004 (J)			0.0029 (J)	
11/13/2017	<0.005	<0.005					
11/14/2017			0.0003 (J)			0.003 (J)	
6/4/2018	<0.005	<0.005					
6/5/2018			<0.005				
6/6/2018						0.0016 (J)	
10/1/2018	<0.005	<0.005	<0.005				
10/3/2018						0.0028 (J)	
8/21/2019	<0.005	<0.005	<0.005				
8/22/2019						<0.005	
10/21/2019	<0.005						
10/22/2019		<0.005	<0.005				
10/23/2019						0.0023 (J)	0.0018 (J)
1/3/2020							0.0038 (J)
3/4/2020							0.0021 (J)
3/24/2020	<0.005	<0.005					0.0019 (J)
3/25/2020						0.0021 (J)	
4/9/2020			0.00037 (J)				
6/18/2020							0.0012 (J)
7/21/2020							0.00098 (J)
8/25/2020	<0.005	<0.005	<0.005				
8/27/2020						0.0027 (J)	0.001 (J)
9/18/2020	<0.005	<0.005		0.00049 (J)	<0.005		
9/22/2020			0.00074 (J)				
9/24/2020						0.0021 (J)	0.0011 (J)
11/10/2020				<0.005			
11/11/2020					<0.005		
12/15/2020				<0.005	0.00039 (J)		
1/19/2021				<0.005	<0.005		
3/11/2021	<0.005						
3/12/2021		<0.005		<0.005	<0.005		
3/16/2021			0.0013 (J)				
3/17/2021						0.0023 (J)	0.0012 (J)
8/12/2021	<0.005	<0.005	<0.005	<0.005	<0.005		
8/13/2021							0.00085 (J)
8/16/2021						0.0026 (J)	
1/31/2022	<0.005			<0.005	<0.005		
2/1/2022		<0.005	<0.005				
2/2/2022						0.0027 (J)	0.0019 (J)
8/2/2022			<0.005	<0.005			
8/5/2022	<0.005	<0.005			<0.005		0.001 (J)
8/10/2022						0.0028 (J)	
1/24/2023	<0.005	<0.005	<0.005	<0.005	<0.005		
1/25/2023						0.0021 (J)	0.0016 (J)

Time Series

Constituent: Cobalt (mg/L)    Analysis Run 10/16/2024 2:31 PM  
Plant Hammond    Client: Southern Company    Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/8/2023	<0.005	<0.005		<0.005	<0.005		
8/10/2023			<0.005				
8/11/2023						0.0028 (J)	0.001 (J)
2/13/2024		<0.005			<0.005		
2/14/2024	<0.005		<0.005	<0.005			
2/16/2024						0.0026 (J)	0.0011 (J)
8/6/2024	<0.005			<0.005	<0.005		
8/8/2024			<0.005				
8/9/2024		<0.005					0.00094 (J)
8/10/2024						0.0025 (J)	

# Time Series

Constituent: Cobalt (mg/L)    Analysis Run 10/16/2024 2:31 PM  
Plant Hammond    Client: Southern Company    Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117A	HGWC-118
8/31/2016	0.0018 (J)	0.0014 (J)	<0.005	0.0023 (J)		<0.005
10/20/2016						<0.005
10/24/2016	0.0018 (J)					
10/25/2016		0.0013 (J)	<0.005	0.0017 (J)		
1/31/2017	0.0016 (J)	0.0006 (J)	<0.005	0.0017 (J)		<0.005
5/23/2017	0.0014 (J)					0.0005 (J)
5/24/2017		0.0007 (J)	<0.005	0.002 (J)		
8/10/2017	0.0025 (J)	0.0006 (J)	<0.005	0.0012 (J)		0.0003 (J)
11/14/2017	0.002 (J)	0.0005 (J)	<0.005	0.0014 (J)		0.0004 (J)
6/6/2018	0.0031 (J)	0.00056 (J)	<0.005	0.0014 (J)		
6/7/2018						<0.005
10/2/2018		<0.005	<0.005	0.00081 (J)		
10/3/2018	0.0023 (J)					<0.005
8/22/2019	0.0019 (J)	<0.005				0.0003 (J)
8/23/2019			<0.005	0.0027 (J)		
10/22/2019			<0.005	0.0022 (J)		0.00061 (J)
10/23/2019	0.0021 (J)	0.00038 (J)				
3/25/2020	0.0022 (J)	0.00047 (J)	<0.005	0.0022 (J)		<0.005
8/26/2020						0.00061 (J)
8/27/2020	0.0019 (J)	<0.005	<0.005	0.00086 (J)		
9/24/2020	0.0019 (J)	0.00044 (J)	<0.005			
9/25/2020				0.001 (J)		
9/28/2020						0.00048 (J)
3/17/2021				0.003 (J)		
3/18/2021	0.0021 (J)	0.00045 (J)	<0.005			0.0012 (J)
8/12/2021					0.0024 (J)	
8/13/2021		<0.005	<0.005	0.0011 (J)		<0.005
8/16/2021	0.0022 (J)					
9/27/2021					0.0011 (J)	
2/2/2022	0.0022 (J)		<0.005	0.002 (J)		
2/3/2022		<0.005			0.00041 (J)	0.00045 (J)
8/5/2022	0.0021 (J)	<0.005	<0.005	0.0008 (J)	0.0011 (J)	<0.005
1/25/2023	0.0017 (J)	0.00046 (J)	<0.005	0.0016 (J)	0.00048 (J)	<0.005
8/11/2023	0.0019 (J)	0.00047 (J)	<0.005	0.00077 (J)	0.00078 (J)	<0.005
2/16/2024	0.002 (J)		<0.005			
2/17/2024		0.00071 (J)		0.0011 (J)	0.00047 (J)	0.00042 (J)
8/9/2024	0.002 (J)					<0.005
8/10/2024		0.00052 (J)	<0.005	0.0005 (J)	0.00081 (J)	

# Time Series

Constituent: Combined Radium 226 & 228 (pCi/L) Analysis Run 10/16/2024 2:31 PM

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/30/2016	0.804 (U)	1.32 (U)	0.587 (U)				
8/31/2016						0.621 (U)	
10/20/2016	1.13 (U)					1.4	
10/24/2016		1.3 (U)	0.979 (U)				
1/25/2017	0.888 (U)	1.04 (U)	0.038 (U)				
1/31/2017						0.906 (U)	
5/23/2017		0.541 (U)	0.898 (U)			0.388 (U)	
5/24/2017	0.622 (U)						
8/10/2017	0.745 (U)	0.536 (U)	0.759 (U)			1.03 (U)	
11/13/2017	0.778 (U)	0.786 (U)					
11/14/2017			0.0762 (U)			0.769 (U)	
6/4/2018	0.637 (U)	0.233 (U)					
6/5/2018			0.594 (U)				
6/6/2018						1.28 (U)	
10/1/2018	0.451 (U)	0.494 (U)	0.982				
10/3/2018						0.302 (U)	
8/21/2019	0.553 (U)	0.514 (U)	0.492 (U)				
8/22/2019						0.474 (U)	
10/21/2019	0.351 (U)						
10/22/2019		0.828 (U)	0.523 (U)				
10/23/2019						0.776 (U)	0.858 (U)
1/22/2020							1.04 (U)
3/4/2020							1.32
3/24/2020	0.26 (U)	0.677 (U)					1.23 (U)
3/25/2020						0.603 (U)	
4/9/2020			0.617 (U)				
7/21/2020							0.0938 (U)
8/25/2020	0.57 (U)	0.0182 (U)	0.587 (U)				
8/27/2020						0.109 (U)	1.17 (U)
9/18/2020	0.828 (U)	1.15 (U)		1.11 (U)	1.5 (U)		
9/22/2020			0.551 (U)				
9/24/2020						0.625 (U)	1.42
11/10/2020				0.234 (U)			
11/11/2020					0.776 (U)		
12/15/2020				0.529 (U)	1.23 (U)		
1/19/2021				0.176 (U)	1.35 (U)		
3/11/2021	0.354 (U)						
3/12/2021		0.164 (U)		0 (U)	0.829 (U)		
3/16/2021			0.559 (U)				
3/17/2021						0.248 (U)	0.401 (U)
8/12/2021	0.532 (U)	0.223 (U)	0.312 (U)	0.462 (U)	0.274 (U)		
8/13/2021							0.828 (U)
8/16/2021						0.667 (U)	
1/31/2022	0.279 (U)			0.444 (U)	0.196 (U)		
2/1/2022		0.0793 (U)	0.132 (U)			0.162 (U)	0.806 (U)
8/2/2022			0.791 (U)	0.491 (U)			
8/5/2022	0.573 (U)	0.665 (U)			0.599 (U)		0.618 (U)
8/10/2022						0.601 (U)	
1/24/2023	0.19 (U)	0.331 (U)	0.529 (U)	0.391 (U)	0.856		
1/25/2023						0.419 (U)	0.513 (U)
8/8/2023	0.728 (U)	0.723 (U)		0.502 (U)	0.549 (U)		
8/10/2023			0.841 (U)				

# Time Series

Constituent: Combined Radium 226 & 228 (pCi/L)    Analysis Run 10/16/2024 2:31 PM  
Plant Hammond    Client: Southern Company    Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/11/2023						0.93 (U)	1.08
2/13/2024		0.675 (U)			0.575 (U)		
2/14/2024	0.436 (U)		0.307 (U)	1.72			
2/16/2024						0.344 (U)	0.498 (U)
8/6/2024	0.0994 (U)			0.973	0.501 (U)		
8/8/2024			0.181 (U)				
8/9/2024		0.976 (U)					0.604 (U)
8/10/2024						0.817 (U)	



# Time Series

Constituent: Combined Radium 226 & 228 (pCi/L)    Analysis Run 10/16/2024 2:31 PM

Plant Hammond    Client: Southern Company    Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117A	HGWC-118
8/31/2016	1.62	0.906 (U)	1.2	1.03		
10/20/2016						1.97
10/24/2016	1.01 (U)					
10/25/2016		1.03	1.11 (U)	1.07		
1/31/2017	0.976 (U)	0.868 (U)	1.45	0.588 (U)		1.03
5/23/2017	0.891 (U)					0.398 (U)
5/24/2017		0.728 (U)	0.393 (U)	0.593 (U)		
8/10/2017	0.601 (U)	1.35	0.84 (U)	0.691 (U)		0.938 (U)
11/14/2017	0.567 (U)	0.817 (U)	1.01 (U)	0.653 (U)		0.335 (U)
6/6/2018	0.836 (U)	0.559 (U)	0.365 (U)	0.939 (U)		
6/7/2018						0.696 (U)
10/2/2018		0.336 (U)	1.23	0.225 (U)		
10/3/2018	0.111 (U)					1.6 (U)
8/22/2019	0.946 (U)	0.694 (U)				0.904 (U)
8/23/2019			1.69	0.47 (U)		
10/22/2019			0.705 (U)	0.545 (U)		0.424 (U)
10/23/2019	0.571 (U)	0.584 (U)				
3/25/2020	0.403 (U)	0.663 (U)	0.673 (U)	0.508 (U)		0.915 (U)
8/26/2020						1.19
8/27/2020	0.37 (U)	0.416 (U)	0.264 (U)	0.989 (U)		
9/24/2020	0.804 (U)	1.11 (U)	0.576 (U)			
9/25/2020				0.584 (U)		
9/28/2020						0.613 (U)
3/17/2021				0.556 (U)		
3/18/2021	0.274 (U)	0.252 (U)	0.145 (U)			0.323 (U)
8/12/2021					0.124 (U)	
8/13/2021		0.513 (U)	0.815 (U)	0.794 (U)		0.228 (U)
8/16/2021	0.493 (U)					
9/27/2021					1.05 (U)	
2/1/2022	0.569 (U)		0.0564 (U)	0.542 (U)		
2/3/2022		0.835			0.499 (U)	0.5 (U)
8/5/2022	0.205 (U)	0.139 (U)	0.917 (U)	0.22 (U)	0 (U)	0.206 (U)
1/25/2023	0.568 (U)	0.432 (U)	0.71 (U)	0.195 (U)	0.595 (U)	1.44
8/11/2023	0.849 (U)	0.292 (U)	0.314 (U)	0.105 (U)	0.822 (U)	0.806 (U)
2/16/2024	0.81 (U)		0.845 (U)			
2/17/2024		0.888 (U)		0.388 (U)	0.629 (U)	0 (U)
8/9/2024	0.378 (U)					0.421 (U)
8/10/2024		0.693 (U)	0.223 (U)	0.5 (U)	0.723 (U)	

# Time Series

Constituent: Fluoride, total (mg/L) Analysis Run 10/16/2024 2:31 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/30/2016	0.07 (J)	0.04 (J)	0.2 (J)				
8/31/2016						0.05 (J)	
10/20/2016	0.07 (J)					0.03 (J)	
10/24/2016		0.05 (J)	0.16 (J)				
1/25/2017	0.14 (J)	<0.1	0.15 (J)				
1/31/2017						<0.1	
5/23/2017		0.004 (J)	0.18 (J)			<0.1	
5/24/2017	0.02 (J)						
8/10/2017	0.06 (J)	0.03 (J)	0.19 (J)			<0.1	
11/13/2017	<0.1	<0.1					
11/14/2017			0.16 (J)			<0.1	
6/4/2018	0.032 (J)	<0.1					
6/5/2018			0.18 (J)				
6/6/2018						<0.1	
10/1/2018	<0.1	<0.1	0.078 (J)				
10/3/2018						<0.1	
4/1/2019	0.042 (J)						
4/2/2019		<0.1	0.18 (J)				
4/4/2019						<0.1	
8/21/2019	0.048 (J)	<0.1	0.11 (J)				
8/22/2019						<0.1	
10/21/2019	0.12 (J)						
10/22/2019		0.05 (J)	0.18 (J)				
10/23/2019						<0.1	0.22 (J)
1/3/2020							<0.1
3/4/2020							<0.1
3/24/2020	0.076 (J)	<0.1					<0.1
3/25/2020						<0.1	
4/9/2020			0.14 (J)				
6/18/2020							<0.1
7/21/2020							<0.1
8/25/2020	0.052 (J)	<0.1	0.17				
8/27/2020						<0.1	<0.1
9/18/2020	<0.1	<0.1		0.067 (J)	0.098 (J)		
9/22/2020			0.16				
9/24/2020						<0.1	<0.1
11/10/2020				0.065 (J)			
11/11/2020					0.083 (J)		
12/15/2020				0.064 (J)	0.081 (J)		
1/19/2021				0.057 (J)	0.079 (J)		
3/11/2021	0.057 (J)						
3/12/2021		<0.1		0.062 (J)	0.085 (J)		
3/16/2021			0.18				
3/17/2021						<0.1	<0.1
8/12/2021	<0.1	<0.1	0.16	<0.1	0.064 (J)		
8/13/2021							<0.1
8/16/2021						<0.1	
1/31/2022	0.055 (J)			0.053 (J)	0.072 (J)		
2/1/2022		<0.1	0.16				
2/2/2022						<0.1	<0.1
8/2/2022			0.19	0.08 (J)			
8/5/2022	0.1	0.077 (J)			0.12		0.076 (J)

# Time Series

Constituent: Fluoride, total (mg/L) Analysis Run 10/16/2024 2:31 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/10/2022						0.065 (J)	
1/24/2023	0.086 (J)	0.055 (J)	0.2	0.081 (J)	0.092 (J)		
1/25/2023						<0.1	<0.1
8/8/2023	0.076 (J)	0.05 (J)		0.072 (J)	0.091 (J)		
8/10/2023			0.19				
8/11/2023						<0.1	<0.1
2/13/2024		<0.1			0.071 (J)		
2/14/2024	0.081 (J)		0.18	0.23			
2/16/2024						<0.1	<0.1
8/6/2024	0.089 (J)			0.094 (J)	0.1		
8/8/2024			0.17				
8/9/2024		0.075 (J)					0.067 (J)
8/10/2024						0.068 (J)	

# Time Series

Constituent: Fluoride, total (mg/L)    Analysis Run 10/16/2024 2:31 PM  
Plant Hammond    Client: Southern Company    Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117A	HGWC-118
8/31/2016	0.06 (J)	0.15 (J)	0.08 (J)	0.12 (J)		0.18 (J)
10/20/2016						0.12 (J)
10/24/2016	0.13 (J)					
10/25/2016		0.09 (J)	0.16 (J)	0.17 (J)		
1/31/2017	<0.1	0.13 (J)	0.16 (J)	0.05 (J)		0.3
5/23/2017	0.15 (J)					0.14 (J)
5/24/2017		0.07 (J)	0.009 (J)	0.13 (J)		
8/10/2017	<0.1	0.03 (J)	<0.1	0.12 (J)		0.11 (J)
11/14/2017	<0.1	<0.1	<0.1	<0.3		0.07 (J)
6/6/2018	<0.1	0.074 (J)	0.057 (J)	0.15 (J)		
6/7/2018						0.3
10/2/2018		<0.1	<0.1	<0.3		
10/3/2018	<0.1					0.12 (J)
4/3/2019			<0.1	0.05 (J)		
4/4/2019	0.042 (J)	0.03 (J)				
4/5/2019						0.33
6/18/2019						0.89
8/22/2019	<0.1	<0.1				0.07 (J)
8/23/2019			<0.1	0.034 (J)		
10/22/2019			0.047 (J)	0.099 (J)		0.087 (J)
10/23/2019	<0.1	<0.1				
3/25/2020	<0.1	<0.1	<0.1	0.075 (J)		0.078 (J)
8/26/2020						0.072 (J)
8/27/2020	<0.1	<0.1	<0.1	0.094 (J)		
9/24/2020	<0.1	<0.1	0.064 (J)			
9/25/2020				0.091 (J)		
9/28/2020						0.078 (J)
3/17/2021				0.089 (J)		
3/18/2021	<0.1	<0.1	<0.1			0.079 (J)
8/12/2021					<0.1	
8/13/2021		<0.1	<0.1	0.086 (J)		0.075 (J)
8/16/2021	<0.1					
9/27/2021					<0.1	
2/2/2022	<0.1		<0.1	0.086 (J)		
2/3/2022		<0.1			0.056 (J)	0.069 (J)
8/5/2022	0.071 (J)	0.075 (J)	0.093 (J)	0.14	0.12	0.12
1/25/2023	<0.1	0.051 (J)	0.054 (J)	0.12	0.085 (J)	0.095 (J)
8/11/2023	<0.1	<0.1	<0.1	0.086 (J)	0.057 (J)	0.07 (J)
2/16/2024	<0.1		<0.1			
2/17/2024		<0.1		0.094 (J)	0.055 (J)	0.068 (J)
8/9/2024	0.077 (J)					0.11
8/10/2024		0.066 (J)	0.069 (J)	0.13	0.1	

# Time Series

Constituent: Lead (mg/L)    Analysis Run 10/16/2024 2:31 PM  
Plant Hammond    Client: Southern Company    Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/30/2016	0.0001 (J)	<0.001	<0.001				
8/31/2016						<0.001	
10/20/2016	<0.001					<0.001	
10/24/2016		<0.001	<0.001				
1/25/2017	<0.001	<0.001	<0.001				
1/31/2017						<0.001	
5/23/2017		<0.001	<0.001			0.0009 (J)	
5/24/2017	<0.001						
8/10/2017	<0.001	<0.001	0.0001 (J)			<0.001	
11/13/2017	<0.001	<0.001					
11/14/2017			<0.001			<0.001	
6/4/2018	<0.001	<0.001					
6/5/2018			<0.001				
6/6/2018						<0.001	
10/1/2018	<0.001	<0.001	<0.001				
10/3/2018						<0.001	
8/21/2019	<0.001	<0.001	7.1E-05 (J)				
8/22/2019						<0.001	
10/21/2019	0.00016 (J)						
10/22/2019		<0.001	7.3E-05 (J)				
10/23/2019						<0.001	<0.001
1/3/2020							<0.001
3/4/2020							0.00011 (J)
3/24/2020	0.00058 (J)	0.00016 (J)					<0.001
3/25/2020						<0.001	
4/9/2020			0.00039 (J)				
6/18/2020							<0.001
7/21/2020							<0.001
8/25/2020	0.00036 (J)	0.00011 (J)	0.00022 (J)				
8/27/2020						<0.001	<0.001
9/18/2020	0.00026 (J)	6.5E-05 (J)		<0.001	<0.001		
9/22/2020			0.00096 (J)				
9/24/2020						<0.001	<0.001
11/10/2020				<0.001			
11/11/2020					<0.001		
12/15/2020				<0.001	0.00015 (J)		
1/19/2021				3.8E-05 (J)	5.6E-05 (J)		
3/11/2021	0.0011						
3/12/2021		0.00017 (J)		<0.001	4.8E-05 (J)		
3/16/2021			0.0016				
3/17/2021						<0.001	<0.001
8/12/2021	<0.001	<0.001	<0.001	<0.001	<0.001		
8/13/2021							<0.001
8/16/2021						<0.001	
1/31/2022	<0.001			<0.001	<0.001		
2/1/2022		<0.001	<0.001				
2/2/2022						<0.001	<0.001
8/2/2022			<0.001	<0.001			
8/5/2022	<0.001	<0.001			<0.001		<0.001
8/10/2022						<0.001	
1/24/2023	<0.001	<0.001	<0.001	<0.001	<0.001		
1/25/2023						<0.001	<0.001

Time Series

Constituent: Lead (mg/L)    Analysis Run 10/16/2024 2:31 PM  
Plant Hammond    Client: Southern Company    Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/8/2023	<0.001	<0.001		<0.001	<0.001		
8/10/2023			<0.001				
8/11/2023						<0.001	<0.001
2/13/2024		<0.001			<0.001		
2/14/2024	<0.001		<0.001	0.00021 (J)			
2/16/2024						<0.001	<0.001
8/6/2024	<0.001			<0.001	<0.001		
8/8/2024			<0.001				
8/9/2024		<0.001					<0.001
8/10/2024						<0.001	

# Time Series

Constituent: Lead (mg/L)    Analysis Run 10/16/2024 2:31 PM  
Plant Hammond    Client: Southern Company    Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117A	HGWC-118
8/31/2016	<0.001	<0.001	<0.001	<0.001		<0.001
10/20/2016						<0.001
10/24/2016	<0.001					
10/25/2016		<0.001	<0.001	<0.001		
1/31/2017	<0.001	<0.001	<0.001	<0.001		<0.001
5/23/2017	<0.001					<0.001
5/24/2017		<0.001	<0.001	<0.001		
8/10/2017	<0.001	<0.001	<0.001	<0.001		<0.001
11/14/2017	<0.001	<0.001	<0.001	<0.001		<0.001
6/6/2018	<0.001	<0.001	<0.001	<0.001		
6/7/2018						<0.001
10/2/2018		<0.001	<0.001	<0.001		
10/3/2018	<0.001					<0.001
8/22/2019	<0.001	<0.001				<0.001
8/23/2019			<0.001	5.8E-05 (J)		
10/22/2019			7.9E-05 (J)	5.4E-05 (J)		0.00025 (J)
10/23/2019	0.00043 (J)	6.8E-05 (J)				
3/25/2020	7.6E-05 (J)	8.5E-05 (J)	0.00021 (J)	<0.001		0.0001 (J)
8/26/2020						0.00036 (J)
8/27/2020	0.00018 (J)	<0.001	<0.001	<0.001		
9/24/2020	0.00028 (J)	4.9E-05 (J)	0.00034 (J)			
9/25/2020				<0.001		
9/28/2020						0.00022 (J)
3/17/2021				<0.001		
3/18/2021	0.00024 (J)	5.8E-05 (J)	9.1E-05 (J)			0.00088 (J)
8/12/2021					<0.001	
8/13/2021		<0.001	<0.001	<0.001		<0.001
8/16/2021	<0.001					
9/27/2021					<0.001	
2/2/2022	<0.001		<0.001	<0.001		
2/3/2022		<0.001			<0.001	<0.001
8/5/2022	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
1/25/2023	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
8/11/2023	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
2/16/2024	0.00027 (J)		<0.001			
2/17/2024		<0.001		<0.001	<0.001	<0.001
8/9/2024	<0.001					<0.001
8/10/2024		<0.001	<0.001	<0.001	<0.001	

# Time Series

Constituent: Lithium (mg/L) Analysis Run 10/16/2024 2:31 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/30/2016	0.0022 (J)	<0.03	<0.03				
8/31/2016						<0.03	
10/20/2016	<0.03					<0.03	
10/24/2016		<0.03	<0.03				
1/25/2017	<0.03	<0.03	<0.03				
1/31/2017						<0.03	
5/23/2017		<0.03	0.0011 (J)			<0.03	
5/24/2017	0.0017 (J)						
8/10/2017	0.0017 (J)	<0.03	<0.03			<0.03	
11/13/2017	<0.03	<0.03					
11/14/2017			<0.03			<0.03	
6/4/2018	0.0016 (J)	<0.03					
6/5/2018			0.001 (J)				
6/6/2018						<0.03	
10/1/2018	<0.03	<0.03	0.001 (J)				
10/3/2018						<0.03	
8/21/2019	0.0018 (J)	<0.03	0.0011 (J)				
8/22/2019						<0.03	
10/21/2019	0.0026 (J)						
10/22/2019		<0.03	0.0011 (J)				
10/23/2019						<0.03	0.0012 (J)
1/3/2020							0.0011 (J)
3/4/2020							0.0013 (J)
3/24/2020	0.0039 (J)	<0.03					0.00084 (J)
3/25/2020						<0.03	
4/9/2020			0.0017 (J)				
6/18/2020							0.0013 (J)
7/21/2020							0.0013 (J)
8/25/2020	0.0033 (J)	<0.03	0.0014 (J)				
8/27/2020						<0.03	0.0011 (J)
9/18/2020	0.0021 (J)	<0.03		0.0026 (J)	0.0051 (J)		
9/22/2020			0.0018 (J)				
9/24/2020						<0.03	0.0011 (J)
11/10/2020				0.0028 (J)			
11/11/2020					0.0036 (J)		
12/15/2020				0.0026 (J)	0.0045 (J)		
1/19/2021				0.003 (J)	0.0032 (J)		
3/11/2021	0.0047 (J)						
3/12/2021		<0.03		0.0031 (J)	0.0031 (J)		
3/16/2021			0.0026 (J)				
3/17/2021						<0.03	0.0012 (J)
8/12/2021	0.002 (J)	<0.03	0.00094 (J)	0.0029 (J)	0.0037 (J)		
8/13/2021							0.0011 (J)
8/16/2021						<0.03	
1/31/2022	0.0026 (J)			0.0031 (J)	0.0034 (J)		
2/1/2022		<0.03	0.0011 (J)				
2/2/2022						<0.03	0.0013 (J)
8/2/2022			0.00089 (J)	0.0026 (J)			
8/5/2022	0.0019 (J)	<0.03			0.0036 (J)		0.0013 (J)
8/10/2022						<0.03	
1/24/2023	0.0023 (J)	<0.03	0.00091 (J)	0.0029 (J)	0.0046 (J)		
1/25/2023						<0.03	0.001 (J)



Time Series

Constituent: Lithium (mg/L)    Analysis Run 10/16/2024 2:31 PM  
Plant Hammond    Client: Southern Company    Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/8/2023	0.0018 (J)	<0.03		0.0029 (J)	0.004 (J)		
8/10/2023			0.001 (J)				
8/11/2023						<0.03	0.0013 (J)
2/13/2024		<0.03			0.006 (J)		
2/14/2024	0.002 (J)		<0.03	<0.03			
2/16/2024						<0.03	<0.03
8/6/2024	0.0019 (J)			0.0026 (J)	0.0042 (J)		
8/8/2024			<0.03				
8/9/2024		<0.03					<0.03
8/10/2024						<0.03	

# Time Series

Constituent: Lithium (mg/L) Analysis Run 10/16/2024 2:31 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117A	HGWC-118
8/31/2016	<0.03	0.0034 (J)	<0.03	<0.03		<0.03
10/20/2016						<0.03
10/24/2016	<0.03					
10/25/2016		0.0043 (J)	<0.03	<0.03		
1/31/2017	<0.03	0.0042 (J)	<0.03	<0.03		<0.03
5/23/2017	0.0012 (J)					0.0012 (J)
5/24/2017		0.0039 (J)	<0.03	0.0012 (J)		
8/10/2017	0.0016 (J)	0.004 (J)	<0.03	<0.03		<0.03
11/14/2017	0.0015 (J)	0.0044 (J)	<0.03	<0.03		<0.03
6/6/2018	0.0017 (J)	0.0041 (J)	0.00099 (J)	0.0013 (J)		
6/7/2018						0.0015 (J)
10/2/2018		0.0041 (J)	<0.03	0.0013 (J)		
10/3/2018	0.0016 (J)					<0.03
8/22/2019	0.0015 (J)	0.004 (J)				0.0018 (J)
8/23/2019			0.00092 (J)	0.0009 (J)		
10/22/2019			0.00094 (J)	0.00088 (J)		0.0027 (J)
10/23/2019	0.002 (J)	0.0039 (J)				
3/25/2020	0.0016 (J)	0.0041 (J)	0.00091 (J)	<0.03		0.0017 (J)
8/26/2020						0.0028 (J)
8/27/2020	0.0016 (J)	0.0037 (J)	<0.03	0.0011 (J)		
9/24/2020	0.0017 (J)	0.0038 (J)	0.00098 (J)			
9/25/2020				0.001 (J)		
9/28/2020						0.0022 (J)
3/17/2021				<0.03		
3/18/2021	0.0018 (J)	0.0042 (J)	0.0011 (J)			0.0029 (J)
8/12/2021					0.0036 (J)	
8/13/2021		0.0038 (J)	0.00084 (J)	<0.03		0.0017 (J)
8/16/2021	0.0016 (J)					
9/27/2021					0.0035 (J)	
2/2/2022	0.0019 (J)		0.001 (J)	0.00084 (J)		
2/3/2022		0.0046 (J)			0.0051 (J)	0.0015 (J)
8/5/2022	0.0014 (J)	0.0039 (J)	0.00082 (J)	0.00087 (J)	0.0038 (J)	0.0018 (J)
1/25/2023	0.0012 (J)	0.0038 (J)	0.00081 (J)	<0.03	0.0037 (J)	0.001 (J)
8/11/2023	0.0014 (J)	0.0044 (J)	0.00083 (J)	0.00076 (J)	0.0041 (J)	0.0023 (J)
2/16/2024	<0.03		<0.03			
2/17/2024		0.0041 (J)		<0.03	0.0038 (J)	<0.03
8/9/2024	<0.03					0.0019 (J)
8/10/2024		0.0047 (J)	<0.03	<0.03	0.0041 (J)	

# Time Series

Constituent: Mercury (mg/L)    Analysis Run 10/16/2024 2:31 PM  
Plant Hammond    Client: Southern Company    Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/30/2016	4E-05 (J)	4.1E-05 (J)	4E-05 (J)				
8/31/2016						<0.0002	
10/20/2016	<0.0002					<0.0002	
10/24/2016		<0.0002	<0.0002				
1/25/2017	4E-05 (J)	4E-05 (J)	4E-05 (J)				
1/31/2017						9.3E-05 (J)	
5/23/2017		<0.0002	<0.0002			<0.0002	
5/24/2017	<0.0002						
8/10/2017	<0.0002	<0.0002	<0.0002			<0.0002	
11/13/2017	<0.0002	<0.0002					
11/14/2017			<0.0002			<0.0002	
6/4/2018	<0.0002	<0.0002					
6/5/2018			<0.0002				
6/6/2018						<0.0002	
10/1/2018	4.3E-05 (J)	3.9E-05 (J)	4.3E-05 (J)				
10/3/2018						<0.0002	
8/21/2019	<0.0002	<0.0002	<0.0002				
8/22/2019						<0.0002	
10/23/2019							<0.0002
1/3/2020							<0.0002
3/4/2020							<0.0002
3/24/2020							<0.0002
6/18/2020							<0.0002
7/21/2020							<0.0002
8/25/2020	<0.0002	<0.0002	<0.0002				
8/27/2020						<0.0002	<0.0002
9/18/2020				<0.0002	<0.0002		
9/24/2020							<0.0002
11/10/2020				<0.0002			
11/11/2020					<0.0002		
12/15/2020				<0.0002	<0.0002		
1/19/2021				<0.0002	<0.0002		
8/12/2021	<0.0002	0.00011 (J)	<0.0002	8.1E-05 (J)	0.00018 (J)		
8/13/2021							0.0001 (J)
8/16/2021						9.9E-05 (J)	
1/31/2022	<0.0002			<0.0002	<0.0002		
2/1/2022		<0.0002	<0.0002				
2/2/2022						<0.0002	<0.0002
8/2/2022			<0.0002	<0.0002			
8/5/2022	<0.0002	<0.0002			<0.0002		<0.0002
8/10/2022						<0.0002	
1/24/2023	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002		
1/25/2023						<0.0002	<0.0002
8/8/2023	<0.0002	<0.0002		<0.0002	<0.0002		
8/10/2023			<0.0002				
8/11/2023						<0.0002	<0.0002
2/13/2024		<0.0002			<0.0002		
2/14/2024	<0.0002		<0.0002	<0.0002			
2/16/2024						<0.0002	<0.0002
8/6/2024	<0.0002			<0.0002	<0.0002		
8/8/2024			<0.0002				
8/9/2024		<0.0002					<0.0002

# Time Series

Constituent: Mercury (mg/L)    Analysis Run 10/16/2024 2:31 PM  
Plant Hammond    Client: Southern Company    Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/10/2024						<0.0002	

# Time Series

Constituent: Mercury (mg/L)    Analysis Run 10/16/2024 2:31 PM  
Plant Hammond    Client: Southern Company    Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117A	HGWC-118
8/31/2016	<0.0002	<0.0002	<0.0002	<0.0002		<0.0002
10/20/2016						<0.0002
10/24/2016	<0.0002					
10/25/2016		<0.0002	<0.0002	<0.0002		
1/31/2017	8E-05 (J)	<0.0002	<0.0002	8E-05 (J)		9E-05 (J)
5/23/2017	<0.0002					<0.0002
5/24/2017		<0.0002	<0.0002	<0.0002		
8/10/2017	<0.0002	<0.0002	<0.0002	<0.0002		<0.0002
11/14/2017	<0.0002	<0.0002	<0.0002	<0.0002		<0.0002
6/6/2018	<0.0002	<0.0002	<0.0002	<0.0002		
6/7/2018						<0.0002
10/2/2018		<0.0002	<0.0002	<0.0002		
10/3/2018	<0.0002					<0.0002
8/22/2019	<0.0002	<0.0002				<0.0002
8/23/2019			<0.0002	<0.0002		
8/26/2020						<0.0002
8/27/2020	<0.0002	<0.0002	<0.0002	<0.0002		
8/12/2021					9.4E-05 (J)	
8/13/2021		0.00022	8.4E-05 (J)	8E-05 (J)		8.1E-05 (J)
8/16/2021	0.00027					
9/27/2021					<0.0002	
2/2/2022	<0.0002		<0.0002	<0.0002		
2/3/2022		<0.0002			<0.0002	<0.0002
8/5/2022	0.00017 (J)	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
1/25/2023	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
8/11/2023	0.00025	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
2/16/2024	<0.0002		<0.0002			
2/17/2024		<0.0002		<0.0002	<0.0002	<0.0002
8/9/2024	<0.0002					<0.0002
8/10/2024		<0.0002	<0.0002	<0.0002	<0.0002	

# Time Series

Constituent: Molybdenum (mg/L)    Analysis Run 10/16/2024 2:31 PM  
Plant Hammond    Client: Southern Company    Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/30/2016	<0.01	<0.01	<0.01				
8/31/2016						<0.01	
10/20/2016	<0.01					<0.01	
10/24/2016		<0.01	<0.01				
1/25/2017	<0.01	<0.01	<0.01				
1/31/2017						<0.01	
5/23/2017		<0.01	<0.01			<0.01	
5/24/2017	<0.01						
8/10/2017	<0.01	<0.01	<0.01			<0.01	
11/13/2017	<0.01	<0.01					
11/14/2017			<0.01			<0.01	
6/4/2018	<0.01	<0.01					
6/5/2018			<0.01				
6/6/2018						<0.01	
10/1/2018	<0.01	<0.01	<0.01				
10/3/2018						<0.01	
8/21/2019	<0.01	<0.01	<0.01				
8/22/2019						<0.01	
10/23/2019							<0.01
1/3/2020							<0.01
3/4/2020							<0.01
3/24/2020							<0.01
6/18/2020							<0.01
7/21/2020							<0.01
8/25/2020	<0.01	<0.01	<0.01				
8/27/2020						<0.01	<0.01
9/18/2020				0.0015 (J)	0.0026 (J)		
9/24/2020							<0.01
11/10/2020				<0.01			
11/11/2020					0.0012 (J)		
12/15/2020				<0.01	0.00097 (J)		
1/19/2021				<0.01	0.0018 (J)		
8/12/2021	<0.01	<0.01	<0.01	<0.01	0.0019 (J)		
8/13/2021							<0.01
8/16/2021						<0.01	
1/31/2022	<0.01			<0.01	0.002 (J)		
2/1/2022		<0.01	<0.01				
2/2/2022						<0.01	<0.01
8/2/2022			<0.01	<0.01			
8/5/2022	<0.01	<0.01			0.0012 (J)		<0.01
8/10/2022						<0.01	
1/24/2023	<0.01	<0.01	<0.01	<0.01	0.00086 (J)		
1/25/2023						<0.01	<0.01
8/8/2023	<0.01	<0.01		<0.01	0.00092 (J)		
8/10/2023			<0.01				
8/11/2023						<0.01	<0.01
2/13/2024		<0.01			0.00068 (J)		
2/14/2024	<0.01		<0.01	0.003 (J)			
2/16/2024						<0.01	<0.01
8/6/2024	<0.01			<0.01	0.00071 (J)		
8/8/2024			<0.01				
8/9/2024		<0.01					<0.01

# Time Series

Constituent: Molybdenum (mg/L)    Analysis Run 10/16/2024 2:31 PM  
Plant Hammond    Client: Southern Company    Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/10/2024						<0.01	

# Time Series

Constituent: Molybdenum (mg/L) Analysis Run 10/16/2024 2:31 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117A	HGWC-118
8/31/2016	<0.01	<0.01	<0.01	<0.01		<0.01
10/20/2016						<0.01
10/24/2016	<0.01					
10/25/2016		<0.01	<0.01	<0.01		
1/31/2017	<0.01	<0.01	<0.01	<0.01		<0.01
5/23/2017	<0.01					<0.01
5/24/2017		<0.01	<0.01	<0.01		
8/10/2017	<0.01	<0.01	<0.01	<0.01		<0.01
11/14/2017	<0.01	<0.01	<0.01	<0.01		<0.01
6/6/2018	<0.01	<0.01	<0.01	<0.01		
6/7/2018						<0.01
10/2/2018		<0.01	<0.01	<0.01		
10/3/2018	<0.01					<0.01
8/22/2019	<0.01	<0.01				<0.01
8/23/2019			<0.01	<0.01		
8/26/2020						<0.01
8/27/2020	<0.01	<0.01	<0.01	<0.01		
8/12/2021					<0.01	
8/13/2021		<0.01	<0.01	<0.01		<0.01
8/16/2021	<0.01					
9/27/2021					<0.01	
2/2/2022	<0.01		<0.01	<0.01		
2/3/2022		<0.01			<0.01	<0.01
8/5/2022	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
1/25/2023	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
8/11/2023	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
2/16/2024	<0.01		<0.01			
2/17/2024		<0.01		<0.01	<0.01	<0.01
8/9/2024	<0.01					<0.01
8/10/2024		<0.01	<0.01	<0.01	<0.01	



# Time Series

Constituent: pH, Field (s.u.)    Analysis Run 10/16/2024 2:31 PM  
Plant Hammond    Client: Southern Company    Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/30/2016	6.89	5.77	5.99				
8/31/2016						5.35	
10/20/2016	6.73					5.3	
10/24/2016		5.61	5.84				
1/25/2017	7.02	5.68	6.04				
1/31/2017						5.24	
5/23/2017		5.7	6.01			5.39	
5/24/2017	6.44						
8/10/2017	6.79	5.59	5.98			5.47	
11/13/2017	5.94	5.56					
11/14/2017			6.16			5.4	
6/4/2018	6.12	5.62					
6/5/2018			5.86				
6/6/2018						5.37	
10/1/2018	5.92	5.62	5.94				
10/3/2018						5.39	
4/1/2019	7.09						
4/2/2019		5.47	6				
4/4/2019						5.31	
6/18/2019						5.3	
8/21/2019	6.6	5.8	6.05				
8/22/2019						5.39	
10/21/2019	7.02						
10/22/2019		5.7	5.98				
10/23/2019						5.33	5.68
1/3/2020							5.64
3/4/2020							5.75
3/24/2020	7.37	5.64					5.58
3/25/2020						5.53	
4/9/2020			6.08				
6/18/2020							5.67
7/21/2020							5.72
8/25/2020	6.7	5.53	5.95				
8/27/2020						5.32	5.7
9/18/2020	6.46	5.58		7.54	7.5		
9/22/2020			6.1				
9/24/2020						5.48	5.82
11/10/2020				7.34			
11/11/2020					7.4		
12/15/2020				7.27	7.39		
1/19/2021				7.32	7.4		
3/11/2021	7.2						
3/12/2021		5.6		7.52	7.51		
3/16/2021			6.14				
3/17/2021						5.41	5.78
8/12/2021	6.67	5.5	6.08	7.38	7.44		
8/13/2021							5.45
8/16/2021						5.4	
1/31/2022	7.17			7.34	7.44		
2/1/2022		5.59	6.05				
2/2/2022						5.51	5.79
8/2/2022			6.08	7.34			

# Time Series

Constituent: pH, Field (s.u.)    Analysis Run 10/16/2024 2:31 PM  
Plant Hammond    Client: Southern Company    Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/5/2022	6.97	5.43			7.4		5.69
8/10/2022						5.37	
1/24/2023	7.11	5.67	6.15	7.38	7.46		
1/25/2023						5.47	5.77
8/8/2023	7.01	5.77		7.27	7.37		
8/10/2023			6.07				
8/11/2023						5.44	5.79
2/13/2024		5.64			7.59		
2/14/2024	7		6.24	7.93			
2/16/2024						5.47	5.88
8/6/2024	6.99	5.65		7.46	7.4		
8/8/2024			5.98				
8/9/2024							5.86
8/10/2024						5.38	

# Time Series

Constituent: pH, Field (s.u.)    Analysis Run 10/16/2024 2:31 PM  
Plant Hammond    Client: Southern Company    Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117A	HGWC-118
8/31/2016	5.54	6.5	6.11	6.78		7.03
10/20/2016						7.01
10/24/2016	5.48					
10/25/2016		6.34	6.04	6.55		
1/31/2017	5.51	6.43	5.94	6.5		6.96
5/23/2017	5.98					6.92
5/24/2017		6.31	6.06	6.42		
8/10/2017	5.63	6.45	6.06	6.63		6.99
11/14/2017	5.59	6.53	5.99	6.5		6.9
6/6/2018	5.49	6.49	6	6.59		
6/7/2018						7.03
10/2/2018		6.18	6.18	6.54		
10/3/2018	5.53					7.08
4/3/2019			6.06	6.42		
4/4/2019	5.44	6.17				
4/5/2019						6.96
6/17/2019	5.53					
8/22/2019	5.55	6.04				6.93
8/23/2019			6.26	6.76		
10/22/2019			6.19	6.58		7.03
10/23/2019	5.49	6.46				
3/25/2020	5.49	6.47	6.13	6.56		6.89
8/26/2020						6.97
8/27/2020	5.82	6.45	6.09	6.64		
9/24/2020	5.6	6.63	6.11			
9/25/2020				6.79		
9/28/2020						7.03
3/17/2021				6.55		
3/18/2021	5.51	6.57	6.2			7.11
8/12/2021					6.27	
8/13/2021		6.44	6.11	6.71		6.78
8/16/2021	5.59					
9/27/2021					6.14	
2/2/2022	5.63		6.14	6.65		
2/3/2022		6.48			6.58	6.79
8/5/2022	5.71	6.46	6.07	6.81	6.44	7.07
1/25/2023	5.65	6.41	6.13	6.66	6.53	6.67
8/11/2023	5.8	6.47	6.16	6.8	7.09	7.49
2/16/2024	5.74		6.27			
2/17/2024		6.46		6.88	6.7	6.94
8/9/2024	5.74					7.07
8/10/2024		6.38	6.22	7.03	6.61	

Time Series

Constituent: Selenium (mg/L)    Analysis Run 10/16/2024 2:31 PM  
Plant Hammond    Client: Southern Company    Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/30/2016	<0.005	<0.005	0.0027 (J)				
8/31/2016						<0.005	
10/20/2016	<0.005					<0.005	
10/24/2016		<0.005	0.0034 (J)				
1/25/2017	<0.005	<0.005	0.0023 (J)				
1/31/2017						<0.005	
5/23/2017		<0.005	0.0024 (J)			<0.005	
5/24/2017	<0.005						
8/10/2017	<0.005	<0.005	0.0023 (J)			<0.005	
11/13/2017	<0.005	<0.005					
11/14/2017			<0.01			<0.005	
6/4/2018	<0.005	<0.005					
6/5/2018			0.0019 (J)				
6/6/2018						<0.005	
10/1/2018	<0.005	<0.005	0.0024 (J)				
10/3/2018						<0.005	
8/21/2019	<0.005	<0.005	0.0025 (J)				
8/22/2019						<0.005	
10/23/2019							<0.005
1/3/2020							0.0015 (J)
3/4/2020							<0.005
3/24/2020							<0.005
6/18/2020							<0.005
7/21/2020							<0.005
8/25/2020	<0.005	<0.005	<0.01				
8/27/2020						<0.005	<0.005
9/18/2020				<0.005	<0.005		
9/24/2020							<0.005
11/10/2020				<0.005			
11/11/2020					<0.005		
12/15/2020				<0.005	<0.005		
1/19/2021				<0.005	<0.005		
8/12/2021	<0.005	<0.005	0.0023 (J)	<0.005	<0.005		
8/13/2021							<0.005
8/16/2021						<0.005	
1/31/2022	<0.005			<0.005	<0.005		
2/1/2022		<0.005	0.0022 (J)				
2/2/2022						<0.005	<0.005
8/2/2022			0.0034 (J)	<0.005			
8/5/2022	<0.005	<0.005			<0.005		<0.005
8/10/2022						<0.005	
1/24/2023	<0.005	<0.005	0.0025 (J)	<0.005	<0.005		
1/25/2023						<0.005	<0.005
8/8/2023	<0.005	<0.005		<0.005	<0.005		
8/10/2023			0.0027 (J)				
8/11/2023						<0.005	<0.005
2/13/2024		<0.005			<0.005		
2/14/2024	<0.005		0.0024 (J)	<0.005			
2/16/2024						<0.005	<0.005
8/6/2024	<0.005			<0.005	<0.005		
8/8/2024			0.0025 (J)				
8/9/2024		<0.005					<0.005

# Time Series

Constituent: Selenium (mg/L)    Analysis Run 10/16/2024 2:31 PM  
Plant Hammond    Client: Southern Company    Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/10/2024						<0.005	

# Time Series

Constituent: Selenium (mg/L)    Analysis Run 10/16/2024 2:31 PM  
Plant Hammond    Client: Southern Company    Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117A	HGWC-118
8/31/2016	<0.005	<0.005	<0.005	<0.005		<0.005
10/20/2016						<0.005
10/24/2016	<0.005					
10/25/2016		<0.005	<0.005	<0.005		
1/31/2017	<0.005	<0.005	<0.005	<0.005		<0.005
5/23/2017	<0.005					<0.005
5/24/2017		<0.005	<0.005	<0.005		
8/10/2017	<0.005	<0.005	<0.005	<0.005		<0.005
11/14/2017	<0.005	<0.005	<0.005	<0.005		<0.005
6/6/2018	<0.005	<0.005	<0.005	<0.005		
6/7/2018						<0.005
10/2/2018		<0.005	<0.005	<0.005		
10/3/2018	<0.005					<0.005
8/22/2019	<0.005	<0.005				<0.005
8/23/2019			<0.005	<0.005		
8/26/2020						<0.005
8/27/2020	<0.005	<0.005	<0.005	<0.005		
8/12/2021					<0.005	
8/13/2021		<0.005	<0.005	<0.005		<0.005
8/16/2021	<0.005					
9/27/2021					<0.005	
2/2/2022	<0.005		<0.005	<0.005		
2/3/2022		<0.005			<0.005	<0.005
8/5/2022	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
1/25/2023	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
8/11/2023	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
2/16/2024	<0.005		<0.005			
2/17/2024		<0.005		<0.005	<0.005	<0.005
8/9/2024	<0.005					<0.005
8/10/2024		<0.005	<0.005	<0.005	<0.005	

# Time Series

Constituent: Sulfate as SO4 (mg/L) Analysis Run 10/16/2024 2:31 PM

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/30/2016	1.6	0.63 (J)	14				
8/31/2016						110	
10/20/2016	1.6					110	
10/24/2016		0.62 (J)	11				
1/25/2017	1.6	0.62 (J)	12				
1/31/2017						120	
5/23/2017		0.55 (J)	12			97	
5/24/2017	1.4						
8/10/2017	1.6	0.66 (J)	11			96	
11/13/2017	1.3	0.61 (J)					
11/14/2017			11			110	
6/4/2018	1.4	0.73 (J)					
6/5/2018			9.9				
6/6/2018						95.5	
10/1/2018	1	0.52 (J)	6.7				
10/3/2018						121	
4/1/2019	1.7						
4/2/2019		0.78 (J)	8.7				
4/4/2019						95.1	
6/18/2019						102	
10/21/2019	1.8						
10/22/2019		0.6 (J)	6.8				
10/23/2019						101	<1
1/3/2020							380
3/4/2020							400
3/24/2020	1.6	<1					311
3/25/2020						85.5	
4/9/2020			6.6				
6/18/2020							349
7/21/2020							378
8/27/2020							382
9/18/2020	1	<1		3.5	9.5		
9/22/2020			5.3				
9/24/2020						97	370
11/10/2020				2.3			
11/11/2020					4.5		
12/15/2020				2.4	4.2		
1/19/2021				2.6	3.9		
3/11/2021	1.5						
3/12/2021		0.52 (J)		1.9	4.7		
3/16/2021			7.7				
3/17/2021						107	332
8/12/2021	1.3	<1	10	1.4	4.3		
8/13/2021							248
8/16/2021						72.1	
1/31/2022	1.5			1.7	5.6		
2/1/2022		0.5 (J)	8.9				
2/2/2022						100	303
8/2/2022			7.5	2.1			
8/5/2022	1.4	<1			3.4		358
8/10/2022						99.5	
1/24/2023	1.9	0.81 (J)	6.6	2.2	2.9		

Time Series

Constituent: Sulfate as SO4 (mg/L)    Analysis Run 10/16/2024 2:31 PM  
Plant Hammond    Client: Southern Company    Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
1/25/2023						95	348
8/8/2023	1.5	0.71 (J)		2	2.9		
8/10/2023			5.1				
8/11/2023						102	370
2/13/2024		0.51 (J)			2.8		
2/14/2024	1.2		4.9	19.7			
2/16/2024						110	363
8/6/2024	1.3			2.3	2.7		
8/8/2024			4.6				
8/9/2024		0.76 (J)					359
8/10/2024						104	



# Time Series

Constituent: Sulfate as SO4 (mg/L)    Analysis Run 10/16/2024 2:31 PM

Plant Hammond    Client: Southern Company    Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117A	HGWC-118
8/31/2016	280	190	130	36		88
10/20/2016						81
10/24/2016	280					
10/25/2016		190	130	41		
1/31/2017	300	210	130	37		87
5/23/2017	340					84
5/24/2017		180	130	40		
8/10/2017	300	180	130	40		78
11/14/2017	310	170	130	40		79
6/6/2018	351	168	132	49.7		
6/7/2018						60.1
10/2/2018		173	132	42.3		
10/3/2018	381					91.5
4/3/2019			139	36		
4/4/2019	358	185				
4/5/2019						75.1
6/17/2019	311	162	126	30.9		
6/18/2019						77
10/22/2019			123	23.2		80.9
10/23/2019	248	162				
3/25/2020	251	161	116	27.9		78.4
9/24/2020	293	177	126			
9/25/2020				24.7		
9/28/2020						86
3/17/2021				28.3		
3/18/2021	286	196	128			87.8
8/12/2021					64.6	
8/13/2021		142	112	24.4		75.1
8/16/2021	354					
9/27/2021					69.7	
2/2/2022	293		111	25.5		
2/3/2022		195			72.9	72.7
8/5/2022	369	217	120	23	76.1	69.8
1/25/2023	342	230	128	25.4	72.9	73
8/11/2023	382	237	113	19.8	67.7	64.9
2/16/2024	323		130			
2/17/2024		251		22	72.7	69.7
8/9/2024	393					66.5
8/10/2024		258	114	19.7	72.6	

# Time Series

Constituent: Thallium (mg/L)    Analysis Run 10/16/2024 2:31 PM  
Plant Hammond    Client: Southern Company    Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/30/2016	<0.001	<0.001	<0.001				
8/31/2016						<0.001	
10/20/2016	<0.001					<0.001	
10/24/2016		<0.001	<0.001				
1/25/2017	<0.001	<0.001	<0.001				
1/31/2017						<0.001	
5/23/2017		<0.001	<0.001			<0.001	
5/24/2017	<0.001						
8/10/2017	<0.001	<0.001	<0.001			<0.001	
11/13/2017	<0.001	<0.001					
11/14/2017			<0.001			<0.001	
6/4/2018	<0.001	<0.001					
6/5/2018			<0.001				
6/6/2018						<0.001	
10/1/2018	<0.001	<0.001	<0.001				
10/3/2018						<0.001	
8/21/2019	<0.001	<0.001	<0.001				
8/22/2019						<0.001	
10/23/2019							<0.001
1/3/2020							8E-05 (J)
3/4/2020							<0.001
3/24/2020							<0.001
6/18/2020							<0.001
7/21/2020							<0.001
8/25/2020	<0.001	<0.001	<0.001				
8/27/2020						<0.001	<0.001
9/18/2020				<0.001	<0.001		
9/24/2020							<0.001
11/10/2020				<0.001			
11/11/2020					<0.001		
12/15/2020				<0.001	<0.001		
1/19/2021				<0.001	<0.001		
8/12/2021	<0.001	<0.001	<0.001	<0.001	<0.001		
8/13/2021							<0.001
8/16/2021						<0.001	
1/31/2022	<0.001			<0.001	<0.001		
2/1/2022		<0.001	<0.001				
2/2/2022						<0.001	<0.001
8/2/2022			<0.001	<0.001			
8/5/2022	<0.001	<0.001			<0.001		<0.001
8/10/2022						<0.001	
1/24/2023	<0.001	<0.001	<0.001	<0.001	<0.001		
1/25/2023						<0.001	<0.001
8/8/2023	<0.001	<0.001		<0.001	<0.001		
8/10/2023			<0.001				
8/11/2023						<0.001	<0.001
2/13/2024		<0.001			<0.001		
2/14/2024	<0.001		<0.001	<0.001			
2/16/2024						<0.001	<0.001
8/6/2024	<0.001			<0.001	<0.001		
8/8/2024			<0.001				
8/9/2024		<0.001					<0.001

Time Series

Constituent: Thallium (mg/L)    Analysis Run 10/16/2024 2:31 PM  
Plant Hammond    Client: Southern Company    Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/10/2024						<0.001	

# Time Series

Constituent: Thallium (mg/L)    Analysis Run 10/16/2024 2:31 PM  
Plant Hammond    Client: Southern Company    Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117A	HGWC-118
8/31/2016	<0.001	<0.001	<0.001	<0.001		<0.001
10/20/2016						<0.001
10/24/2016	<0.001					
10/25/2016		<0.001	<0.001	<0.001		
1/31/2017	<0.001	<0.001	<0.001	<0.001		<0.001
5/23/2017	<0.001					<0.001
5/24/2017		<0.001	<0.001	<0.001		
8/10/2017	<0.001	<0.001	<0.001	<0.001		<0.001
11/14/2017	<0.001	<0.001	<0.001	<0.001		<0.001
6/6/2018	<0.001	<0.001	<0.001	<0.001		
6/7/2018						<0.001
10/2/2018		<0.001	<0.001	<0.001		
10/3/2018	<0.001					<0.001
8/22/2019	<0.001	<0.001				<0.001
8/23/2019			<0.001	<0.001		
8/26/2020						<0.001
8/27/2020	<0.001	<0.001	<0.001	<0.001		
8/12/2021					<0.001	
8/13/2021		<0.001	<0.001	<0.001		<0.001
8/16/2021	<0.001					
9/27/2021					<0.001	
2/2/2022	<0.001		<0.001	<0.001		
2/3/2022		<0.001			<0.001	<0.001
8/5/2022	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
1/25/2023	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
8/11/2023	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
2/16/2024	<0.001		<0.001			
2/17/2024		<0.001		<0.001	<0.001	<0.001
8/9/2024	<0.001					<0.001
8/10/2024		<0.001	<0.001	<0.001	<0.001	

# Time Series

Constituent: Total Dissolved Solids [TDS] (mg/L)    Analysis Run 10/16/2024 2:31 PM

Plant Hammond    Client: Southern Company    Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/30/2016	172	76	77				
8/31/2016						278	
10/20/2016	108					165	
10/24/2016		65	111				
1/25/2017	345	152 (O)	155				
1/31/2017						263	
5/23/2017		52	74			190	
5/24/2017	126						
8/10/2017	174	60	94			175	
11/13/2017	158	75					
11/14/2017			89			253	
6/4/2018	131	70					
6/5/2018			92				
6/6/2018						188	
10/1/2018	101	76	91				
10/3/2018						238	
4/1/2019	213						
4/2/2019		69	94				
4/4/2019						149	
10/21/2019	187						
10/22/2019		81	95				
10/23/2019						221	736
1/3/2020							714
3/4/2020							764
3/24/2020	207	52					521
3/25/2020						187	
4/9/2020			48				
6/18/2020							652
7/21/2020							669
8/27/2020							663
9/18/2020	139	62		195	224		
9/22/2020			84				
9/24/2020						170	696
11/10/2020				229			
11/11/2020					221		
12/15/2020				233	239		
1/19/2021				199	224		
3/11/2021	207						
3/12/2021		56		217	204		
3/16/2021			99				
3/17/2021						213	626
8/12/2021	157	63	92	212	234		
8/13/2021							647
8/16/2021						206	
1/31/2022	186			243	223		
2/1/2022		73	99				
2/2/2022						220	602
8/2/2022			85	222			
8/5/2022	171	44			224		696
8/10/2022						232	
1/24/2023	177	96	146	223	230		
1/25/2023						186	664

# Time Series

Constituent: Total Dissolved Solids [TDS] (mg/L)    Analysis Run 10/16/2024 2:31 PM  
Plant Hammond    Client: Southern Company    Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/8/2023	207	57		214	220		
8/10/2023			80				
8/11/2023						250	785
2/13/2024		73			242		
2/14/2024	187		93	147			
2/16/2024						222	718
8/6/2024	163			253	240		
8/8/2024			85				
8/9/2024		90					746
8/10/2024						263	

# Time Series

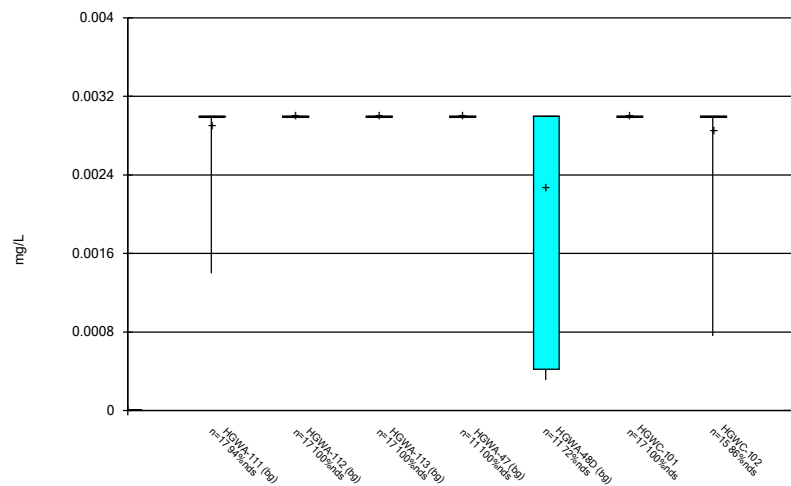
Constituent: Total Dissolved Solids [TDS] (mg/L)    Analysis Run 10/16/2024 2:31 PM  
Plant Hammond    Client: Southern Company    Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117A	HGWC-118
8/31/2016	483	389	235	182		373
10/20/2016						305
10/24/2016	517					
10/25/2016		316	223	172		
1/31/2017	516	437	346	252		361
5/23/2017	637					359
5/24/2017		352	234	184		
8/10/2017	459	356	254	208		325
11/14/2017	545	375	313	252		373
6/6/2018	559	385	278	224		
6/7/2018						338
10/2/2018		374	274	230		
10/3/2018	582					328
4/3/2019			273	210		
4/4/2019	535	340				
4/5/2019						308
6/17/2019	515	370	272			
6/18/2019						215
10/22/2019			308	212		354
10/23/2019	507	419				
3/25/2020	507	417	297	213		347
9/24/2020	517	411	253			
9/25/2020				188		
9/28/2020						332
3/17/2021				171		
3/18/2021	465	410	255			328
8/12/2021					256	
8/13/2021		441	291	189		336
8/16/2021	672					
9/27/2021					223	
2/2/2022	576		271	206		
2/3/2022		463			264	316
8/5/2022	692	514	274	195	270	329
1/25/2023	630	537	304	214	289	337
8/11/2023	808	630	296	205	280	346
2/16/2024	640		325			
2/17/2024		716		265	329	424
8/9/2024	809					338
8/10/2024		658	299	227	284	

FIGURE B.

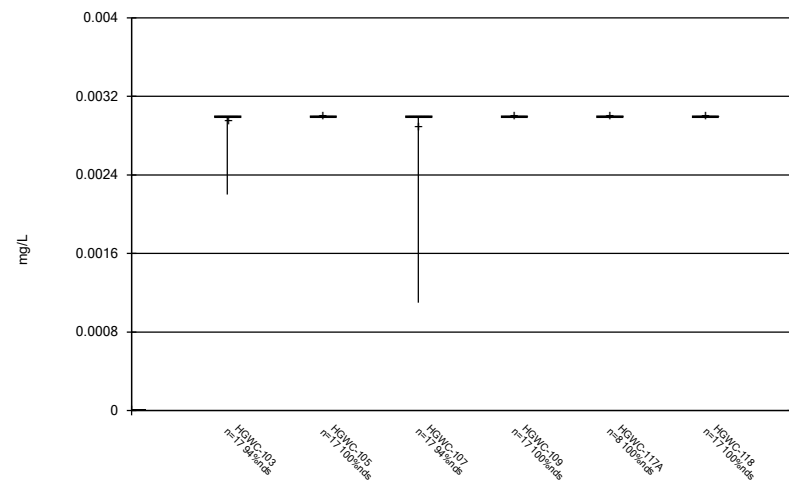


Box &amp; Whiskers Plot



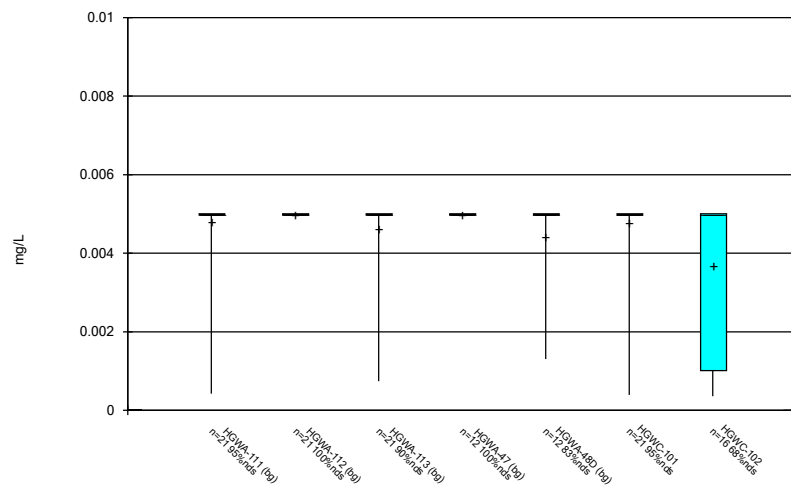
Constituent: Antimony Analysis Run 10/16/2024 2:32 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-4

Box &amp; Whiskers Plot



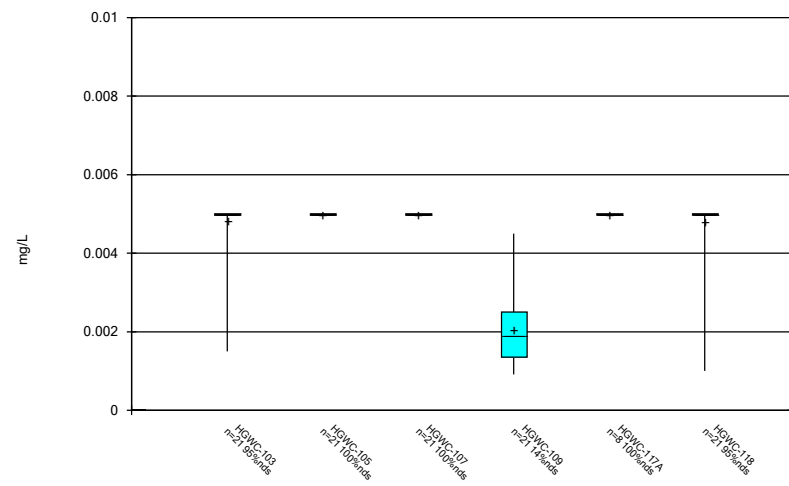
Constituent: Antimony Analysis Run 10/16/2024 2:32 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-4

Box &amp; Whiskers Plot



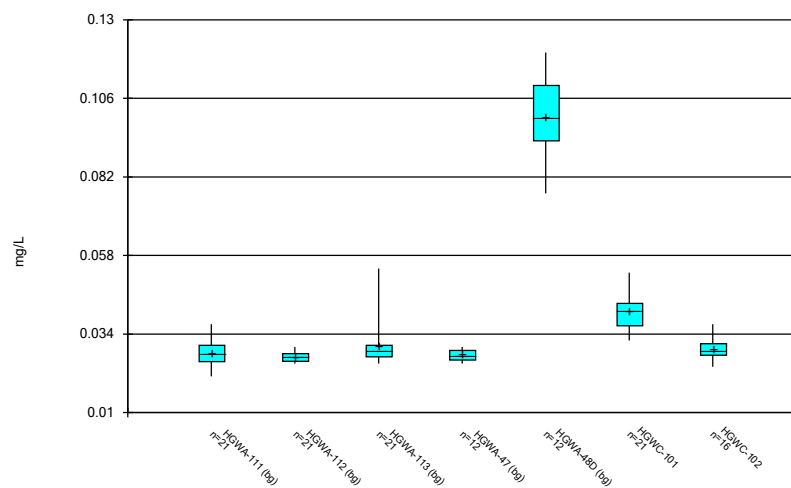
Constituent: Arsenic Analysis Run 10/16/2024 2:32 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-4

Box &amp; Whiskers Plot



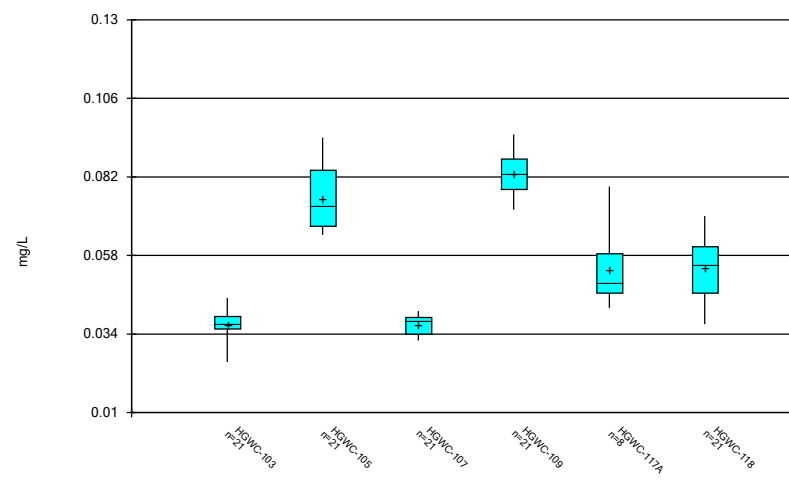
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Plant Hammond Client: Southern Company Data: Hammond AP-4

Box &amp; Whiskers Plot



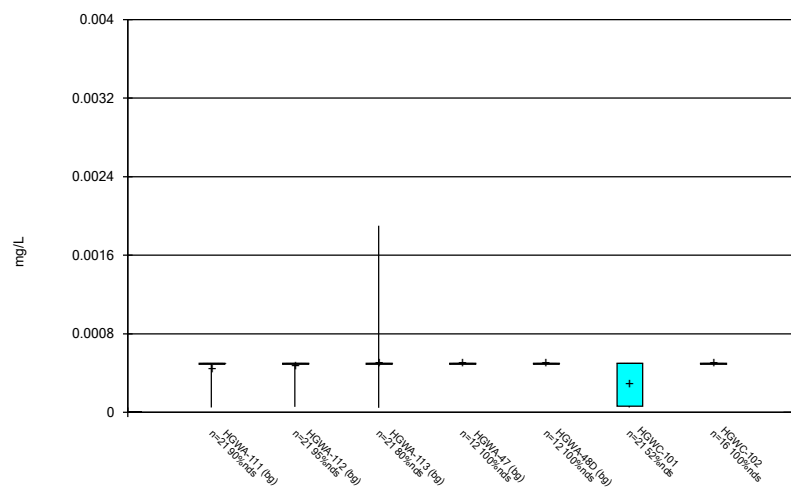
Constituent: Barium Analysis Run 10/16/2024 2:32 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-4

Box &amp; Whiskers Plot



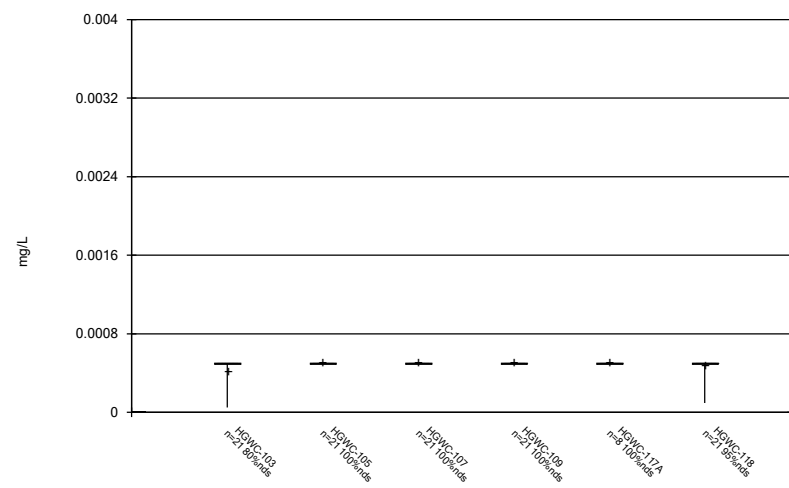
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Plant Hammond Client: Southern Company Data: Hammond AP-4

Box &amp; Whiskers Plot



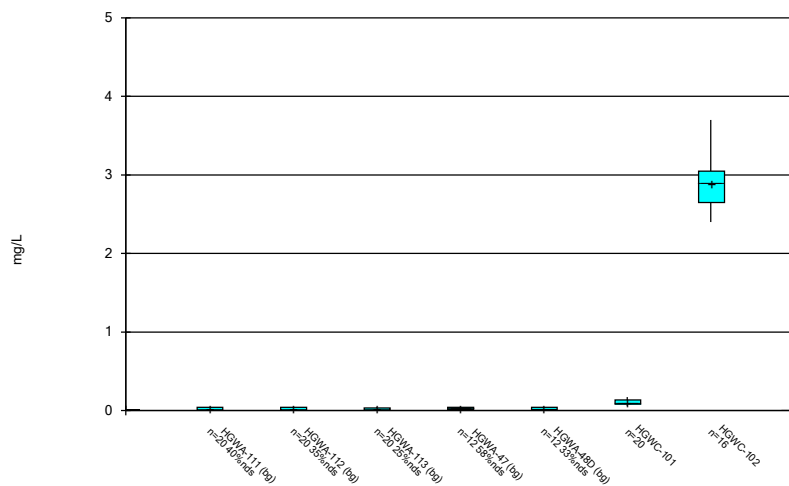
Constituent: Beryllium Analysis Run 10/16/2024 2:32 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-4

Box &amp; Whiskers Plot



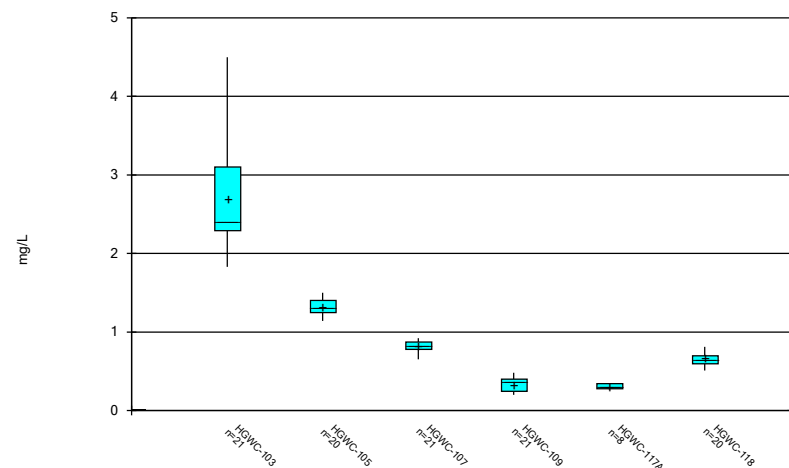
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Plant Hammond Client: Southern Company Data: Hammond AP-4

Box &amp; Whiskers Plot



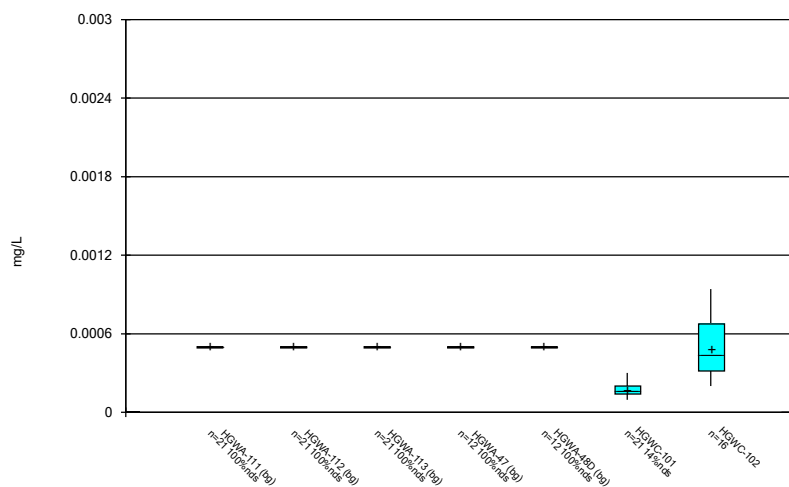
Constituent: Boron, total Analysis Run 10/16/2024 2:32 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-4

Box &amp; Whiskers Plot



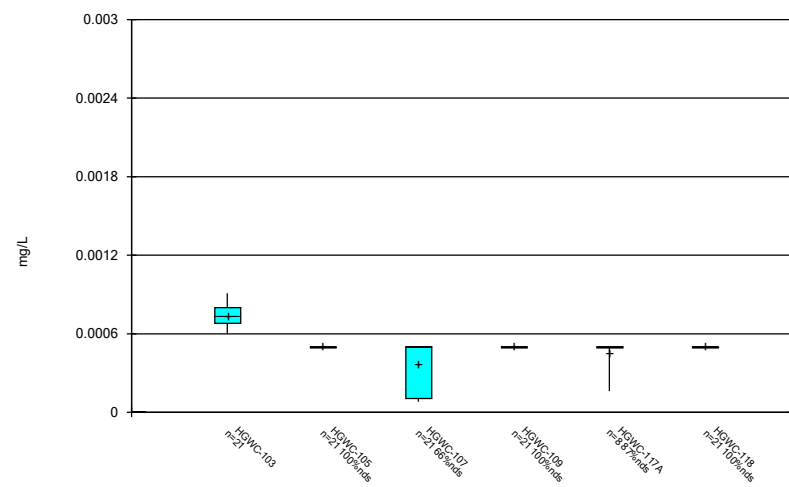
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Plant Hammond Client: Southern Company Data: Hammond AP-4

Box &amp; Whiskers Plot



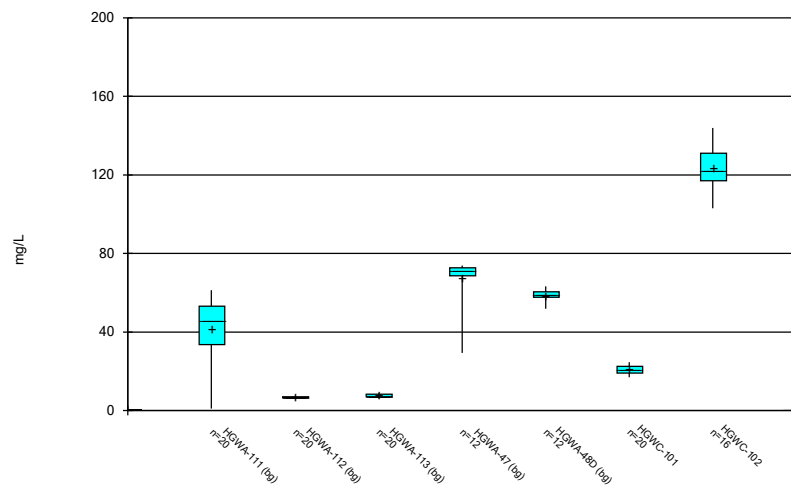
Constituent: Cadmium Analysis Run 10/16/2024 2:32 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-4

Box &amp; Whiskers Plot



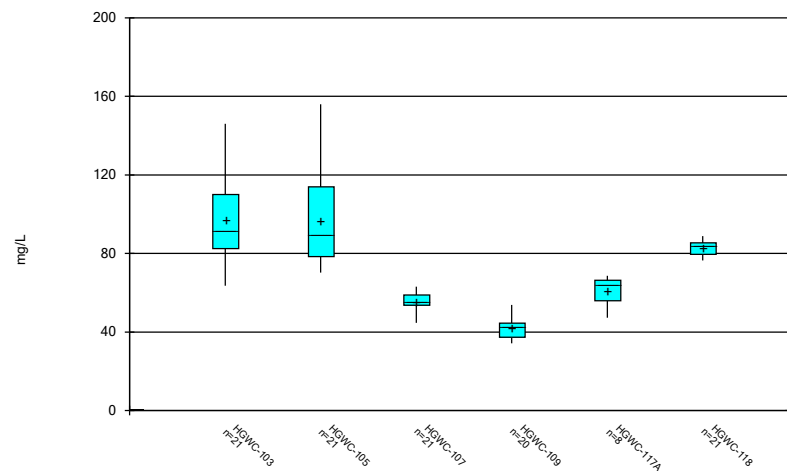
Constituent: Cadmium Analysis Run 10/16/2024 2:32 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-4

Box &amp; Whiskers Plot



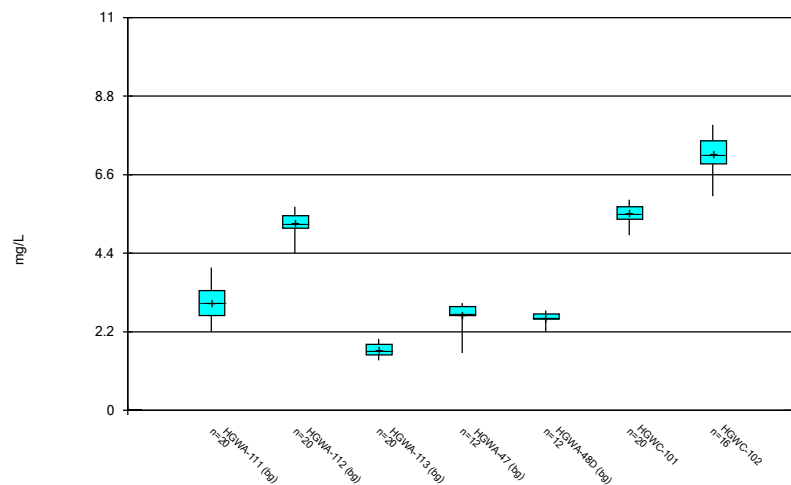
Constituent: Calcium, total Analysis Run 10/16/2024 2:32 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-4

Box &amp; Whiskers Plot



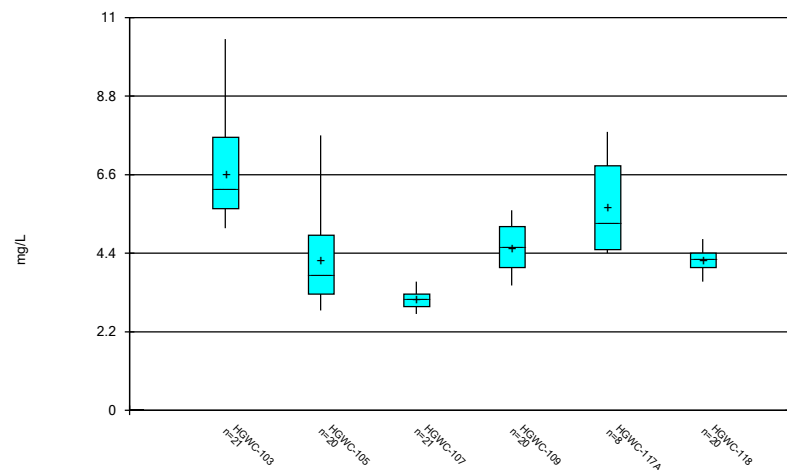
Constituent: Calcium, total Analysis Run 10/16/2024 2:32 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-4

Box &amp; Whiskers Plot



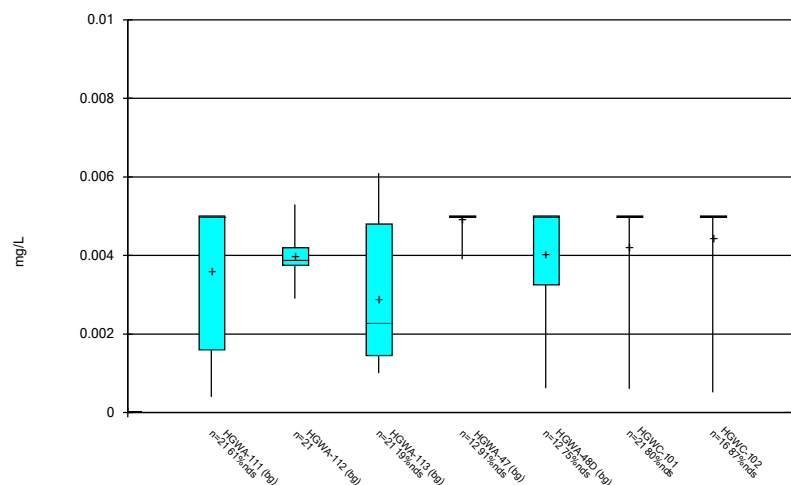
Constituent: Chloride, Total Analysis Run 10/16/2024 2:32 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-4

Box &amp; Whiskers Plot



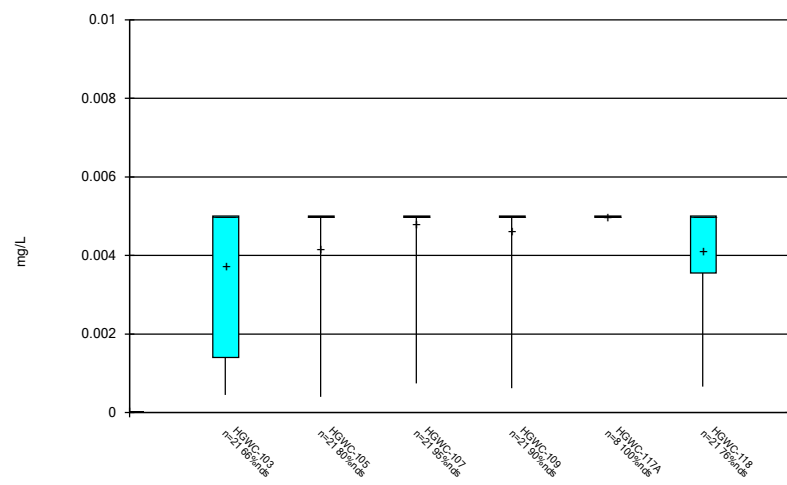
Constituent: Chloride, Total Analysis Run 10/16/2024 2:32 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-4

Box &amp; Whiskers Plot



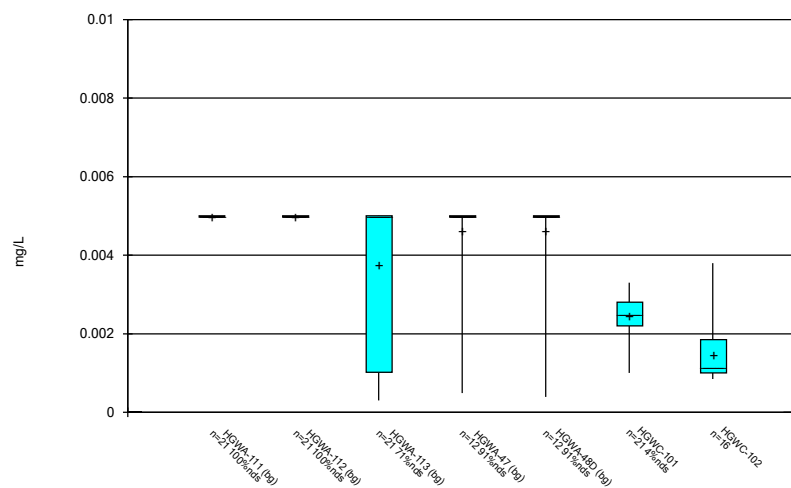
Constituent: Chromium Analysis Run 10/16/2024 2:32 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-4

Box &amp; Whiskers Plot



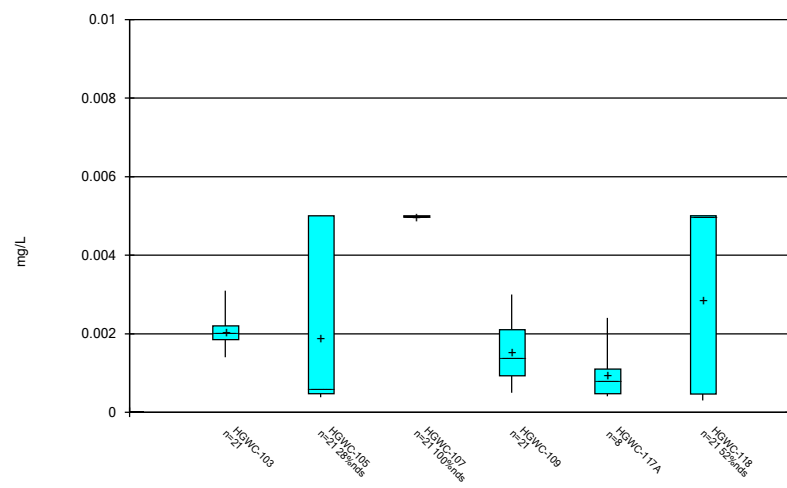
Constituent: Chromium Analysis Run 10/16/2024 2:32 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-4

Box &amp; Whiskers Plot



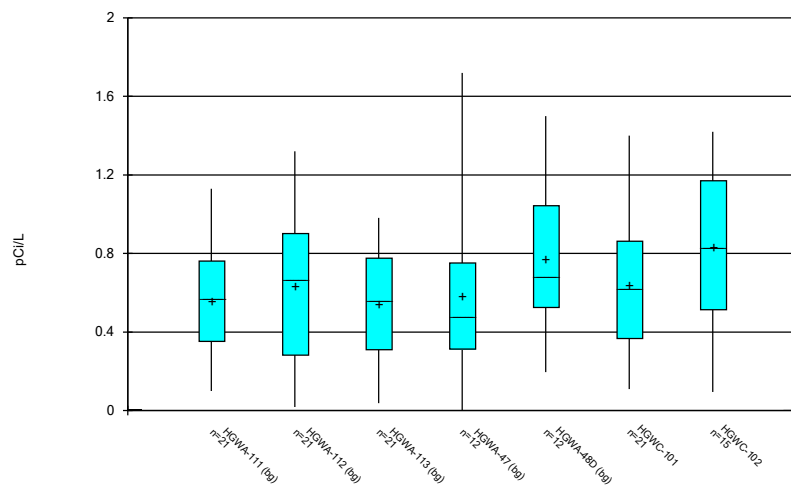
Constituent: Cobalt Analysis Run 10/16/2024 2:32 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-4

Box &amp; Whiskers Plot



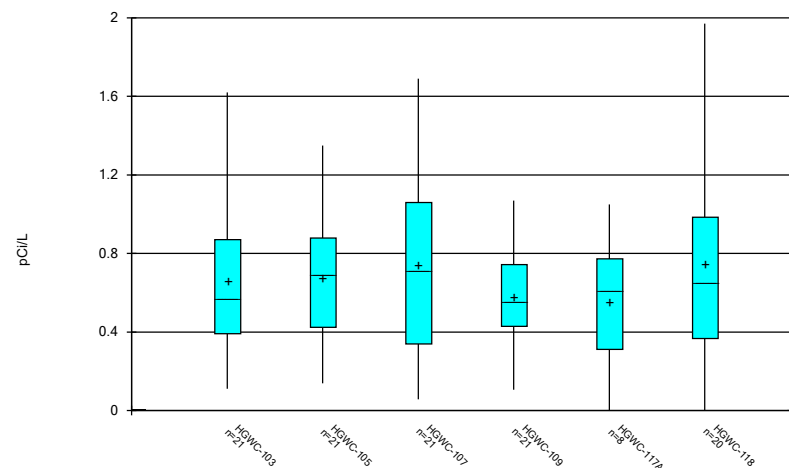
Constituent: Cobalt Analysis Run 10/16/2024 2:32 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-4

Box &amp; Whiskers Plot



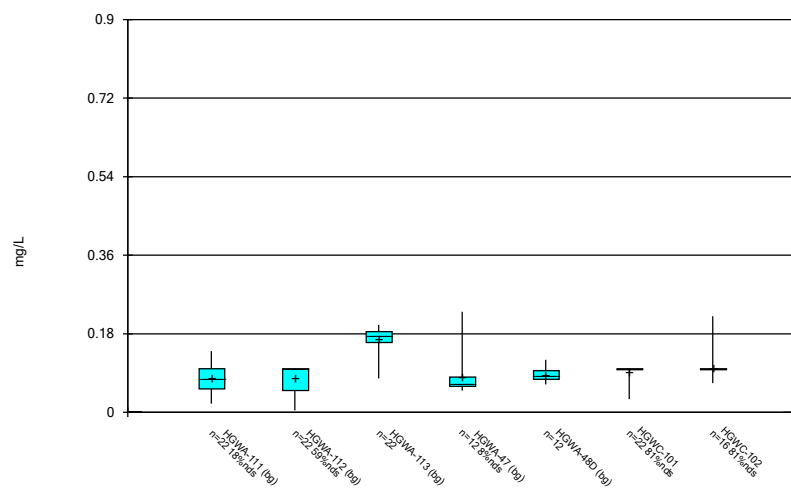
Constituent: Combined Radium 226 & 228 Analysis Run 10/16/2024 2:32 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-4

Box &amp; Whiskers Plot



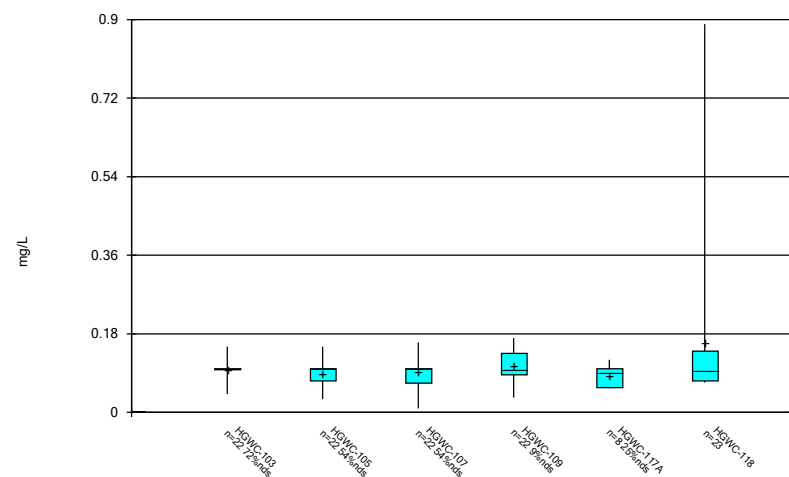
Constituent: Combined Radium 226 & 228 Analysis Run 10/16/2024 2:32 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-4

Box &amp; Whiskers Plot



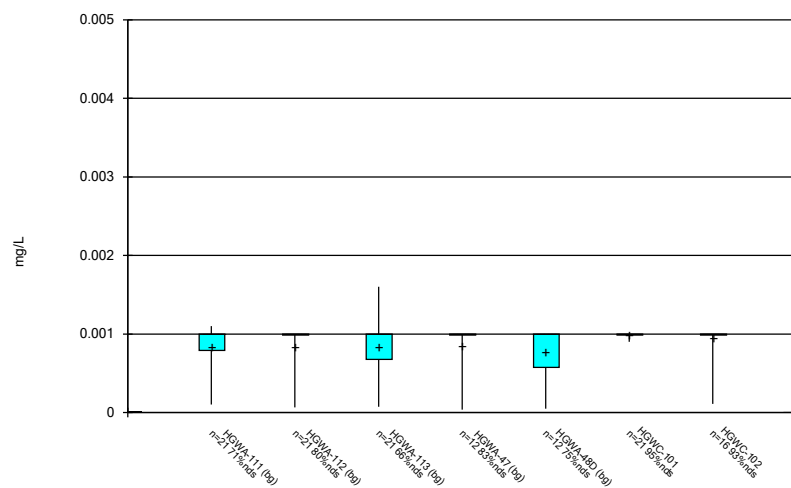
Constituent: Fluoride, total Analysis Run 10/16/2024 2:32 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-4

Box &amp; Whiskers Plot



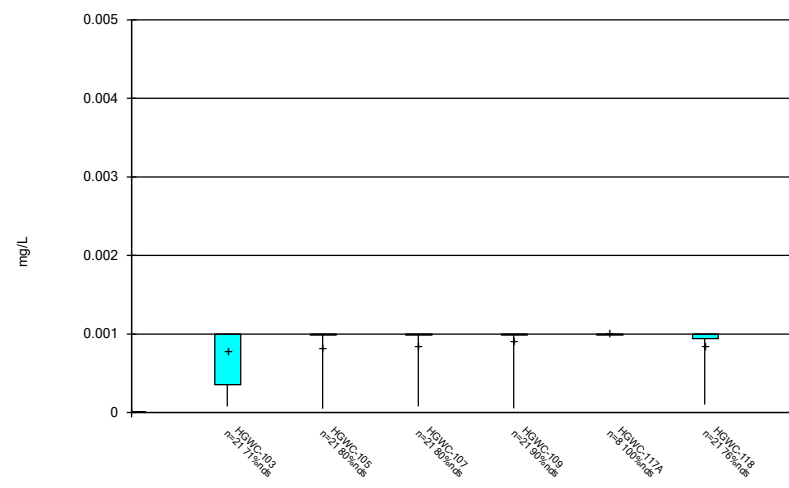
Constituent: Fluoride, total Analysis Run 10/16/2024 2:32 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-4

Box &amp; Whiskers Plot



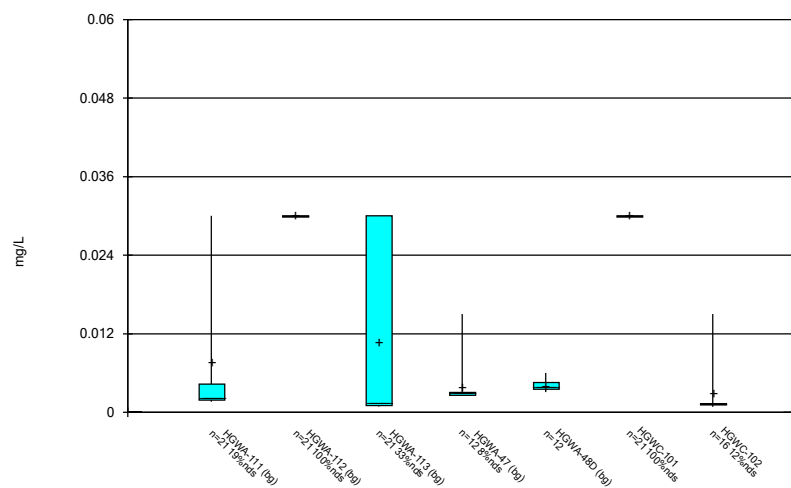
Constituent: Lead Analysis Run 10/16/2024 2:32 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-4

Box &amp; Whiskers Plot



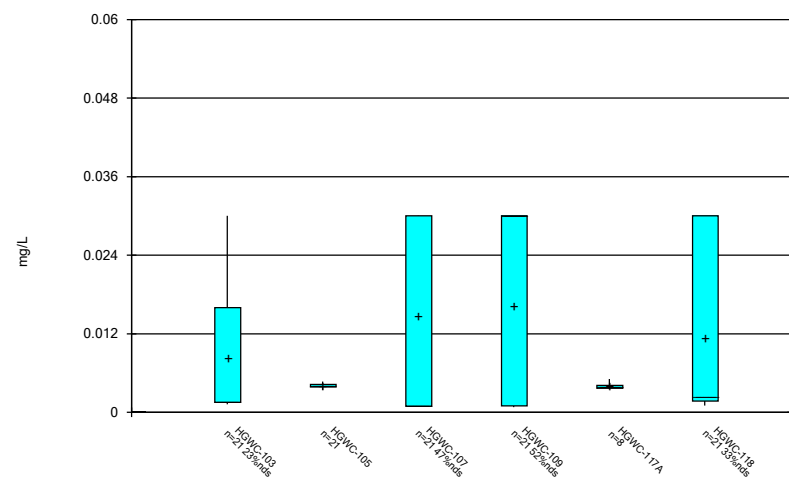
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Plant Hammond Client: Southern Company Data: Hammond AP-4

Box &amp; Whiskers Plot



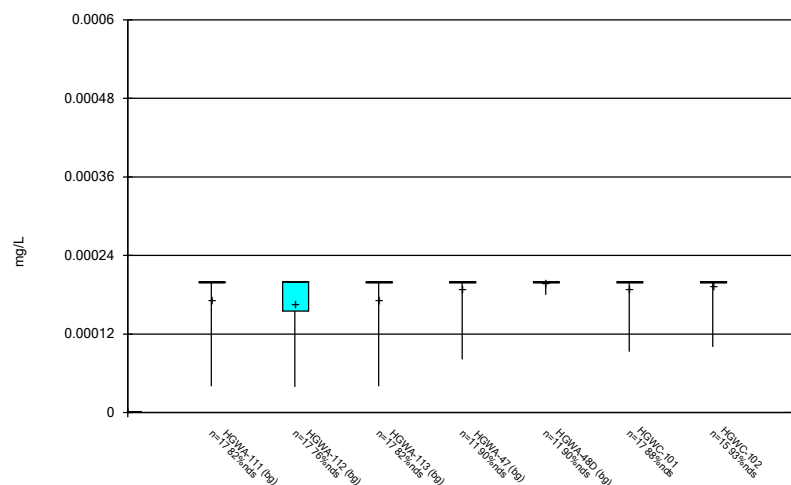
Constituent: Lithium Analysis Run 10/16/2024 2:32 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-4

Box &amp; Whiskers Plot



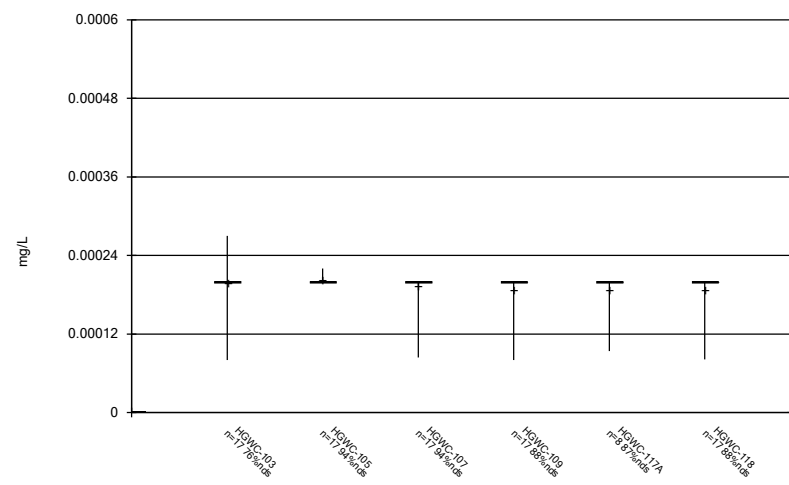
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Plant Hammond Client: Southern Company Data: Hammond AP-4

Box &amp; Whiskers Plot



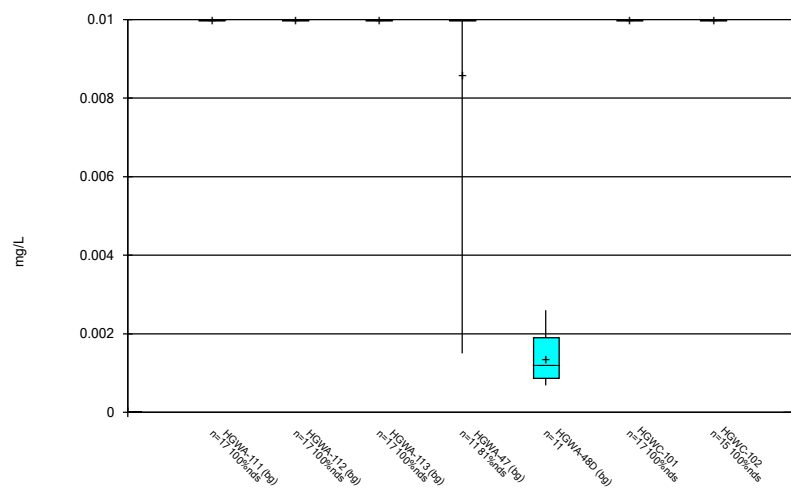
Constituent: Mercury Analysis Run 10/16/2024 2:32 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-4

Box &amp; Whiskers Plot



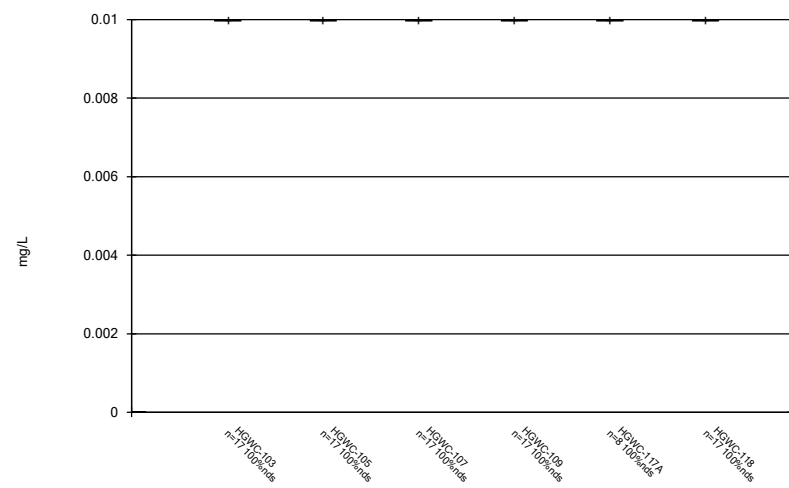
Constituent: Mercury Analysis Run 10/16/2024 2:32 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-4

Box &amp; Whiskers Plot



Constituent: Molybdenum Analysis Run 10/16/2024 2:32 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-4

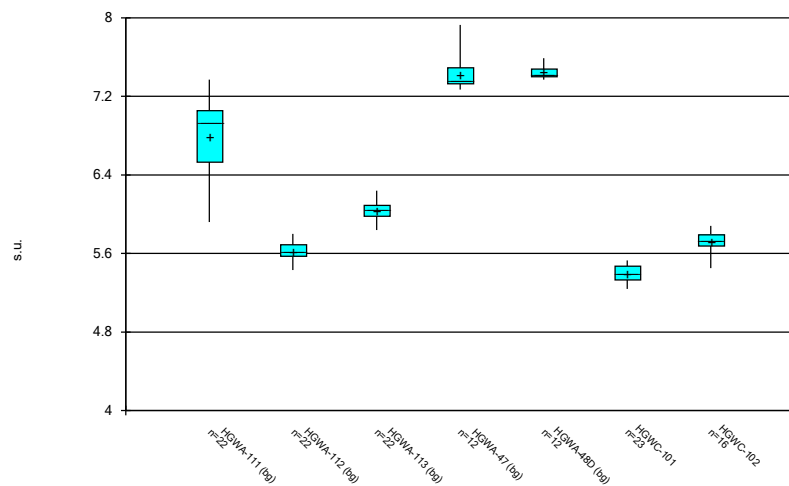
Box &amp; Whiskers Plot



Constituent: Molybdenum Analysis Run 10/16/2024 2:32 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-4

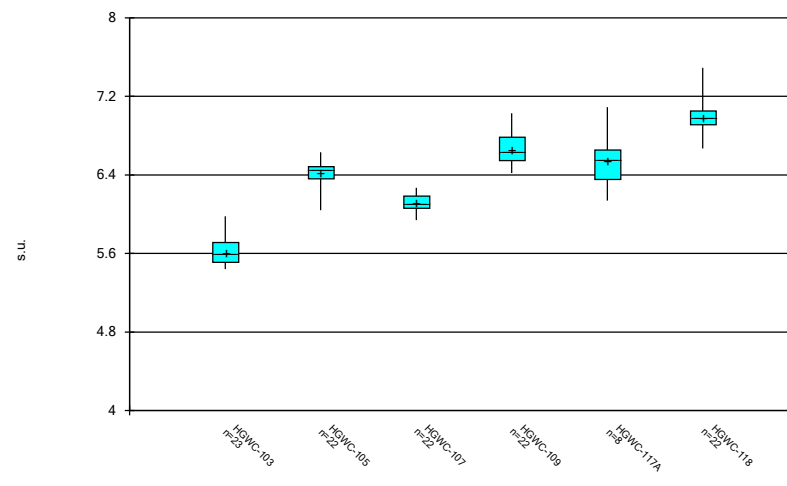


Box &amp; Whiskers Plot



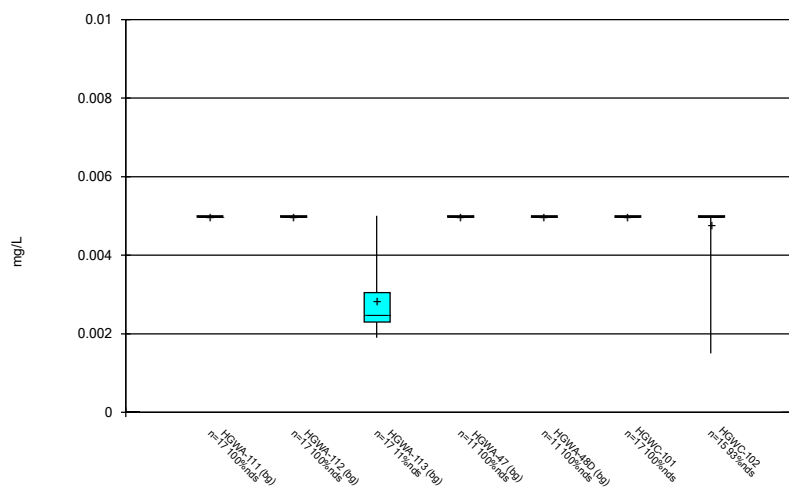
Constituent: pH, Field Analysis Run 10/16/2024 2:32 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-4

Box &amp; Whiskers Plot



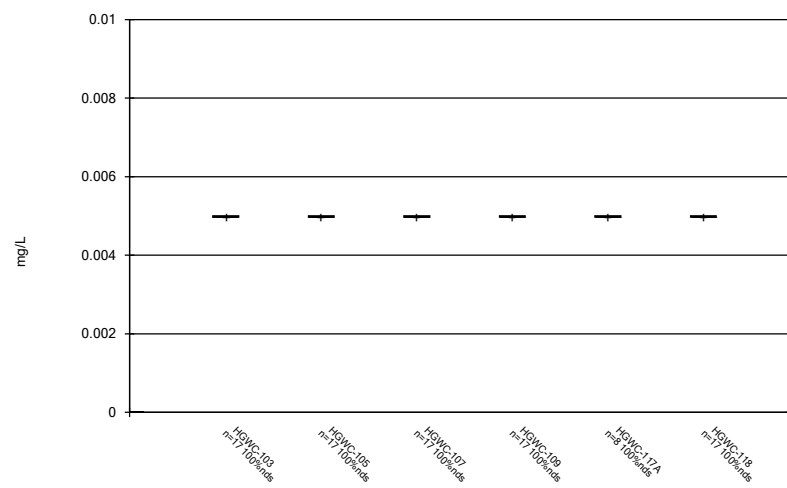
Constituent: pH, Field Analysis Run 10/16/2024 2:32 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-4

Box &amp; Whiskers Plot



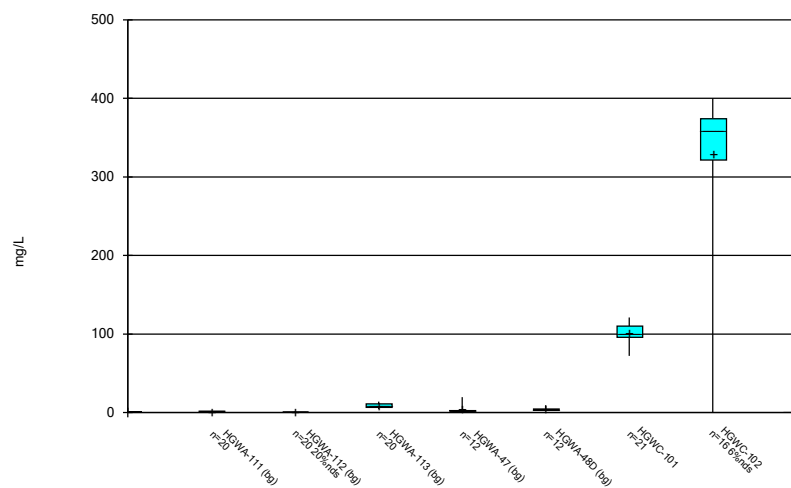
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Plant Hammond Client: Southern Company Data: Hammond AP-4

Box &amp; Whiskers Plot



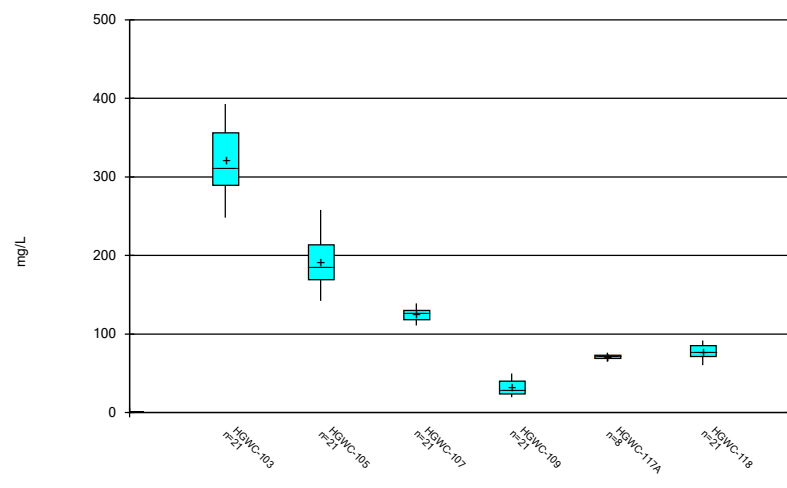
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Plant Hammond Client: Southern Company Data: Hammond AP-4

Box &amp; Whiskers Plot



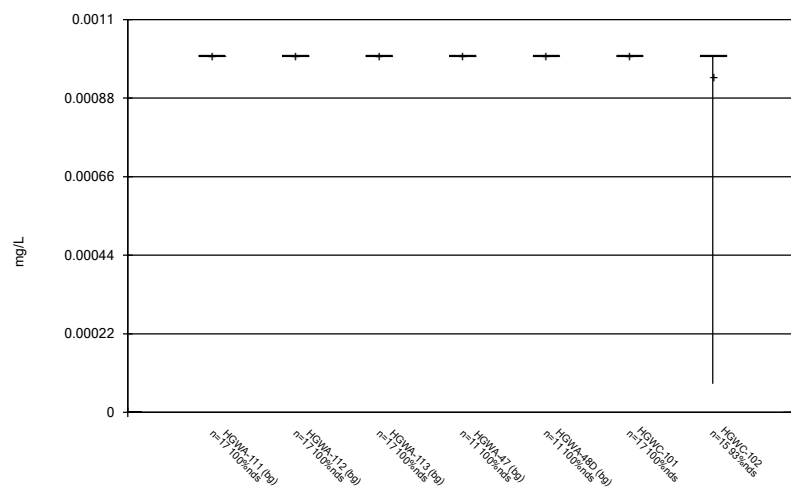
Constituent: Sulfate as SO4 Analysis Run 10/16/2024 2:32 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-4

Box &amp; Whiskers Plot



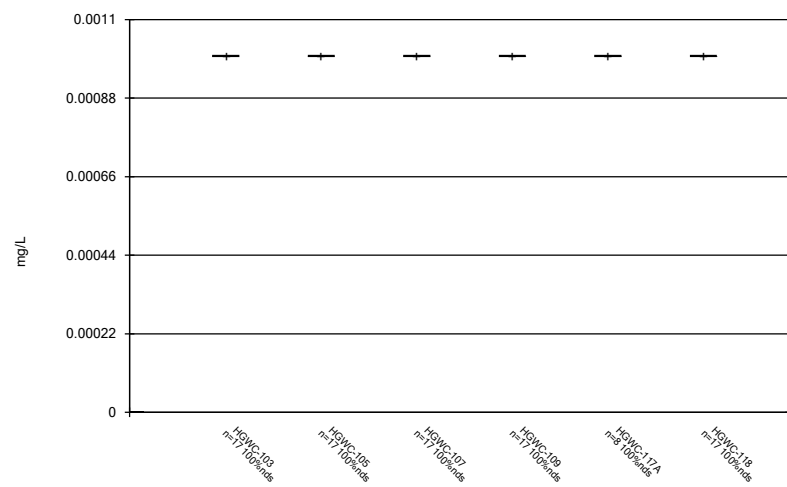
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Plant Hammond Client: Southern Company Data: Hammond AP-4

Box &amp; Whiskers Plot



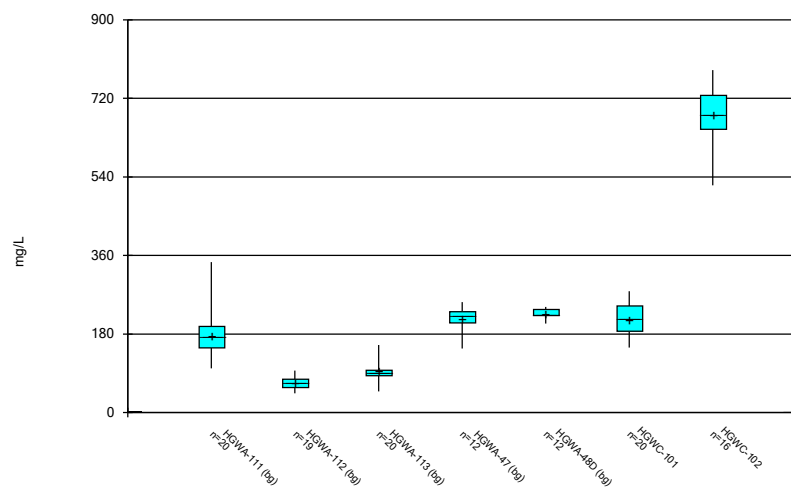
Constituent: Thallium Analysis Run 10/16/2024 2:32 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-4

Box &amp; Whiskers Plot



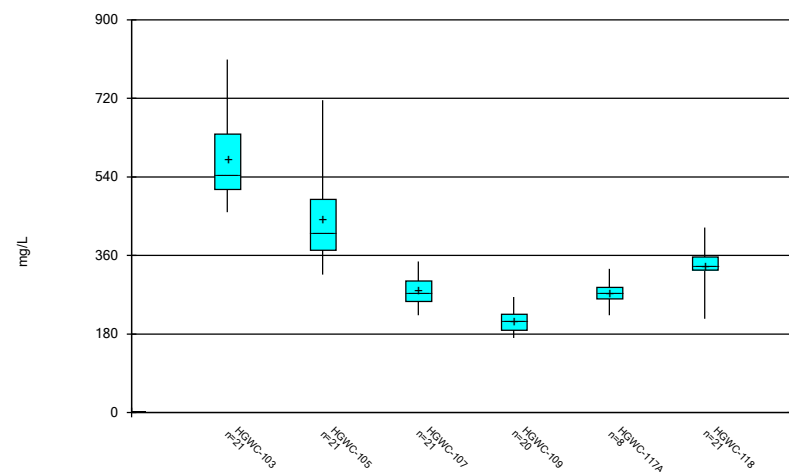
Constituent: Thallium Analysis Run 10/16/2024 2:32 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-4

Box & Whiskers Plot



Constituent: Total Dissolved Solids [TDS] Analysis Run 10/16/2024 2:32 PM  
 Plant Hammond Client: Southern Company Data: Hammond AP-4

Box & Whiskers Plot



Constituent: Total Dissolved Solids [TDS] Analysis Run 10/16/2024 2:32 PM  
 Plant Hammond Client: Southern Company Data: Hammond AP-4

FIGURE C.

# Outlier Summary

Plant Hammond    Client: Southern Company    Data: Hammond AP-4    Printed 10/16/2024, 2:33 PM

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HGWA-112 Total Dissolved Solids [TDS] (mg/L)

1/25/2017    152 (O)

FIGURE D.

# Appendix III - Interwell Prediction Limits - Significant Results

Plant Hammond Client: Southern Company Data: Hammond AP-4 Printed 10/17/2024, 12:50 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Boron, total (mg/L)	HGWC-101	0.04	n/a	8/10/2024	0.15	Yes	84	n/a	n/a	36.9	n/a	n/a	0.0002738	NP Inter (normality) 1 of 2
Boron, total (mg/L)	HGWC-102	0.04	n/a	8/9/2024	3	Yes	84	n/a	n/a	36.9	n/a	n/a	0.0002738	NP Inter (normality) 1 of 2
Boron, total (mg/L)	HGWC-103	0.04	n/a	8/9/2024	4.5	Yes	84	n/a	n/a	36.9	n/a	n/a	0.0002738	NP Inter (normality) 1 of 2
Boron, total (mg/L)	HGWC-105	0.04	n/a	8/10/2024	1.4	Yes	84	n/a	n/a	36.9	n/a	n/a	0.0002738	NP Inter (normality) 1 of 2
Boron, total (mg/L)	HGWC-107	0.04	n/a	8/10/2024	0.84	Yes	84	n/a	n/a	36.9	n/a	n/a	0.0002738	NP Inter (normality) 1 of 2
Boron, total (mg/L)	HGWC-109	0.04	n/a	8/10/2024	0.2	Yes	84	n/a	n/a	36.9	n/a	n/a	0.0002738	NP Inter (normality) 1 of 2
Boron, total (mg/L)	HGWC-117A	0.04	n/a	8/10/2024	0.28	Yes	84	n/a	n/a	36.9	n/a	n/a	0.0002738	NP Inter (normality) 1 of 2
Boron, total (mg/L)	HGWC-118	0.04	n/a	8/9/2024	0.59	Yes	84	n/a	n/a	36.9	n/a	n/a	0.0002738	NP Inter (normality) 1 of 2
Calcium, total (mg/L)	HGWC-102	73.8	n/a	8/9/2024	142	Yes	84	n/a	n/a	0	n/a	n/a	0.0002738	NP Inter (normality) 1 of 2
Calcium, total (mg/L)	HGWC-103	73.8	n/a	8/9/2024	146	Yes	84	n/a	n/a	0	n/a	n/a	0.0002738	NP Inter (normality) 1 of 2
Calcium, total (mg/L)	HGWC-105	73.8	n/a	8/10/2024	156	Yes	84	n/a	n/a	0	n/a	n/a	0.0002738	NP Inter (normality) 1 of 2
Calcium, total (mg/L)	HGWC-118	73.8	n/a	8/9/2024	85.2	Yes	84	n/a	n/a	0	n/a	n/a	0.0002738	NP Inter (normality) 1 of 2
Chloride, Total (mg/L)	HGWC-102	5.7	n/a	8/9/2024	8	Yes	84	n/a	n/a	0	n/a	n/a	0.0002738	NP Inter (normality) 1 of 2
Chloride, Total (mg/L)	HGWC-103	5.7	n/a	8/9/2024	8.8	Yes	84	n/a	n/a	0	n/a	n/a	0.0002738	NP Inter (normality) 1 of 2
Chloride, Total (mg/L)	HGWC-105	5.7	n/a	8/10/2024	7.7	Yes	84	n/a	n/a	0	n/a	n/a	0.0002738	NP Inter (normality) 1 of 2
pH, Field (s.u.)	HGWC-101	7.93	5.43	8/10/2024	5.38	Yes	90	n/a	n/a	0	n/a	n/a	0.0004742	NP Inter (normality) 1 of 2
Sulfate as SO4 (mg/L)	HGWC-101	19.7	n/a	8/10/2024	104	Yes	84	n/a	n/a	4.762	n/a	n/a	0.0002738	NP Inter (normality) 1 of 2
Sulfate as SO4 (mg/L)	HGWC-102	19.7	n/a	8/9/2024	359	Yes	84	n/a	n/a	4.762	n/a	n/a	0.0002738	NP Inter (normality) 1 of 2
Sulfate as SO4 (mg/L)	HGWC-103	19.7	n/a	8/9/2024	393	Yes	84	n/a	n/a	4.762	n/a	n/a	0.0002738	NP Inter (normality) 1 of 2
Sulfate as SO4 (mg/L)	HGWC-105	19.7	n/a	8/10/2024	258	Yes	84	n/a	n/a	4.762	n/a	n/a	0.0002738	NP Inter (normality) 1 of 2
Sulfate as SO4 (mg/L)	HGWC-107	19.7	n/a	8/10/2024	114	Yes	84	n/a	n/a	4.762	n/a	n/a	0.0002738	NP Inter (normality) 1 of 2
Sulfate as SO4 (mg/L)	HGWC-117A	19.7	n/a	8/10/2024	72.6	Yes	84	n/a	n/a	4.762	n/a	n/a	0.0002738	NP Inter (normality) 1 of 2
Sulfate as SO4 (mg/L)	HGWC-118	19.7	n/a	8/9/2024	66.5	Yes	84	n/a	n/a	4.762	n/a	n/a	0.0002738	NP Inter (normality) 1 of 2
Total Dissolved Solids [TDS] (mg/L)	HGWC-102	345	n/a	8/9/2024	746	Yes	83	n/a	n/a	0	n/a	n/a	0.00028	NP Inter (normality) 1 of 2
Total Dissolved Solids [TDS] (mg/L)	HGWC-103	345	n/a	8/9/2024	809	Yes	83	n/a	n/a	0	n/a	n/a	0.00028	NP Inter (normality) 1 of 2
Total Dissolved Solids [TDS] (mg/L)	HGWC-105	345	n/a	8/10/2024	658	Yes	83	n/a	n/a	0	n/a	n/a	0.00028	NP Inter (normality) 1 of 2

# Appendix III - Interwell Prediction Limits - All Results

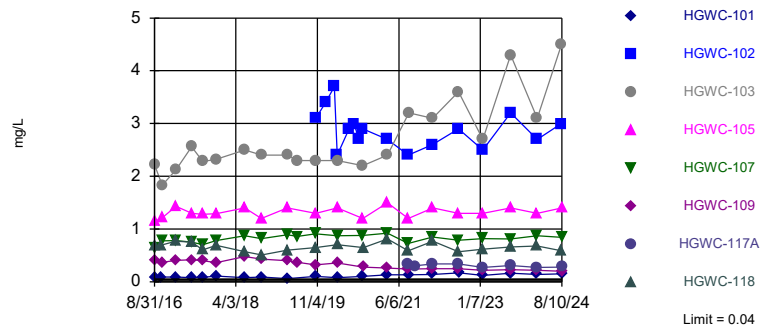
Plant Hammond Client: Southern Company Data: Hammond AP-4 Printed 10/17/2024, 12:50 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Boron, total (mg/L)	HGWC-101	0.04	n/a	8/10/2024	0.15	Yes	84	n/a	n/a	36.9	n/a	n/a	0.0002738	NP Inter (normality) 1 of 2
Boron, total (mg/L)	HGWC-102	0.04	n/a	8/9/2024	3	Yes	84	n/a	n/a	36.9	n/a	n/a	0.0002738	NP Inter (normality) 1 of 2
Boron, total (mg/L)	HGWC-103	0.04	n/a	8/9/2024	4.5	Yes	84	n/a	n/a	36.9	n/a	n/a	0.0002738	NP Inter (normality) 1 of 2
Boron, total (mg/L)	HGWC-105	0.04	n/a	8/10/2024	1.4	Yes	84	n/a	n/a	36.9	n/a	n/a	0.0002738	NP Inter (normality) 1 of 2
Boron, total (mg/L)	HGWC-107	0.04	n/a	8/10/2024	0.84	Yes	84	n/a	n/a	36.9	n/a	n/a	0.0002738	NP Inter (normality) 1 of 2
Boron, total (mg/L)	HGWC-109	0.04	n/a	8/10/2024	0.2	Yes	84	n/a	n/a	36.9	n/a	n/a	0.0002738	NP Inter (normality) 1 of 2
Boron, total (mg/L)	HGWC-117A	0.04	n/a	8/10/2024	0.28	Yes	84	n/a	n/a	36.9	n/a	n/a	0.0002738	NP Inter (normality) 1 of 2
Boron, total (mg/L)	HGWC-118	0.04	n/a	8/9/2024	0.59	Yes	84	n/a	n/a	36.9	n/a	n/a	0.0002738	NP Inter (normality) 1 of 2
Calcium, total (mg/L)	HGWC-101	73.8	n/a	8/10/2024	24.2	No	84	n/a	n/a	0	n/a	n/a	0.0002738	NP Inter (normality) 1 of 2
Calcium, total (mg/L)	HGWC-102	73.8	n/a	8/9/2024	142	Yes	84	n/a	n/a	0	n/a	n/a	0.0002738	NP Inter (normality) 1 of 2
Calcium, total (mg/L)	HGWC-103	73.8	n/a	8/9/2024	146	Yes	84	n/a	n/a	0	n/a	n/a	0.0002738	NP Inter (normality) 1 of 2
Calcium, total (mg/L)	HGWC-105	73.8	n/a	8/10/2024	156	Yes	84	n/a	n/a	0	n/a	n/a	0.0002738	NP Inter (normality) 1 of 2
Calcium, total (mg/L)	HGWC-107	73.8	n/a	8/10/2024	61.4	No	84	n/a	n/a	0	n/a	n/a	0.0002738	NP Inter (normality) 1 of 2
Calcium, total (mg/L)	HGWC-109	73.8	n/a	8/10/2024	53.7	No	84	n/a	n/a	0	n/a	n/a	0.0002738	NP Inter (normality) 1 of 2
Calcium, total (mg/L)	HGWC-117A	73.8	n/a	8/10/2024	64.5	No	84	n/a	n/a	0	n/a	n/a	0.0002738	NP Inter (normality) 1 of 2
Calcium, total (mg/L)	HGWC-118	73.8	n/a	8/9/2024	85.2	Yes	84	n/a	n/a	0	n/a	n/a	0.0002738	NP Inter (normality) 1 of 2
Chloride, Total (mg/L)	HGWC-101	5.7	n/a	8/10/2024	5.4	No	84	n/a	n/a	0	n/a	n/a	0.0002738	NP Inter (normality) 1 of 2
Chloride, Total (mg/L)	HGWC-102	5.7	n/a	8/9/2024	8	Yes	84	n/a	n/a	0	n/a	n/a	0.0002738	NP Inter (normality) 1 of 2
Chloride, Total (mg/L)	HGWC-103	5.7	n/a	8/9/2024	8.8	Yes	84	n/a	n/a	0	n/a	n/a	0.0002738	NP Inter (normality) 1 of 2
Chloride, Total (mg/L)	HGWC-105	5.7	n/a	8/10/2024	7.7	Yes	84	n/a	n/a	0	n/a	n/a	0.0002738	NP Inter (normality) 1 of 2
Chloride, Total (mg/L)	HGWC-107	5.7	n/a	8/10/2024	3.1	No	84	n/a	n/a	0	n/a	n/a	0.0002738	NP Inter (normality) 1 of 2
Chloride, Total (mg/L)	HGWC-109	5.7	n/a	8/10/2024	4	No	84	n/a	n/a	0	n/a	n/a	0.0002738	NP Inter (normality) 1 of 2
Chloride, Total (mg/L)	HGWC-117A	5.7	n/a	8/10/2024	4.5	No	84	n/a	n/a	0	n/a	n/a	0.0002738	NP Inter (normality) 1 of 2
Chloride, Total (mg/L)	HGWC-118	5.7	n/a	8/9/2024	4.2	No	84	n/a	n/a	0	n/a	n/a	0.0002738	NP Inter (normality) 1 of 2
Fluoride, total (mg/L)	HGWC-101	0.23	n/a	8/10/2024	0.068J	No	90	n/a	n/a	20	n/a	n/a	0.0002371	NP Inter (normality) 1 of 2
Fluoride, total (mg/L)	HGWC-102	0.23	n/a	8/9/2024	0.067J	No	90	n/a	n/a	20	n/a	n/a	0.0002371	NP Inter (normality) 1 of 2
Fluoride, total (mg/L)	HGWC-103	0.23	n/a	8/9/2024	0.077J	No	90	n/a	n/a	20	n/a	n/a	0.0002371	NP Inter (normality) 1 of 2
Fluoride, total (mg/L)	HGWC-105	0.23	n/a	8/10/2024	0.066J	No	90	n/a	n/a	20	n/a	n/a	0.0002371	NP Inter (normality) 1 of 2
Fluoride, total (mg/L)	HGWC-107	0.23	n/a	8/10/2024	0.069J	No	90	n/a	n/a	20	n/a	n/a	0.0002371	NP Inter (normality) 1 of 2
Fluoride, total (mg/L)	HGWC-109	0.23	n/a	8/10/2024	0.13	No	90	n/a	n/a	20	n/a	n/a	0.0002371	NP Inter (normality) 1 of 2
Fluoride, total (mg/L)	HGWC-117A	0.23	n/a	8/10/2024	0.1	No	90	n/a	n/a	20	n/a	n/a	0.0002371	NP Inter (normality) 1 of 2
Fluoride, total (mg/L)	HGWC-118	0.23	n/a	8/9/2024	0.11	No	90	n/a	n/a	20	n/a	n/a	0.0002371	NP Inter (normality) 1 of 2
pH, Field (s.u.)	HGWC-101	7.93	5.43	8/10/2024	5.38	Yes	90	n/a	n/a	0	n/a	n/a	0.0004742	NP Inter (normality) 1 of 2
pH, Field (s.u.)	HGWC-102	7.93	5.43	8/9/2024	5.86	No	90	n/a	n/a	0	n/a	n/a	0.0004742	NP Inter (normality) 1 of 2
pH, Field (s.u.)	HGWC-103	7.93	5.43	8/9/2024	5.74	No	90	n/a	n/a	0	n/a	n/a	0.0004742	NP Inter (normality) 1 of 2
pH, Field (s.u.)	HGWC-105	7.93	5.43	8/10/2024	6.38	No	90	n/a	n/a	0	n/a	n/a	0.0004742	NP Inter (normality) 1 of 2
pH, Field (s.u.)	HGWC-107	7.93	5.43	8/10/2024	6.22	No	90	n/a	n/a	0	n/a	n/a	0.0004742	NP Inter (normality) 1 of 2
pH, Field (s.u.)	HGWC-109	7.93	5.43	8/10/2024	7.03	No	90	n/a	n/a	0	n/a	n/a	0.0004742	NP Inter (normality) 1 of 2
pH, Field (s.u.)	HGWC-117A	7.93	5.43	8/10/2024	6.61	No	90	n/a	n/a	0	n/a	n/a	0.0004742	NP Inter (normality) 1 of 2
pH, Field (s.u.)	HGWC-118	7.93	5.43	8/9/2024	7.07	No	90	n/a	n/a	0	n/a	n/a	0.0004742	NP Inter (normality) 1 of 2
Sulfate as SO4 (mg/L)	HGWC-101	19.7	n/a	8/10/2024	104	Yes	84	n/a	n/a	4.762	n/a	n/a	0.0002738	NP Inter (normality) 1 of 2
Sulfate as SO4 (mg/L)	HGWC-102	19.7	n/a	8/9/2024	359	Yes	84	n/a	n/a	4.762	n/a	n/a	0.0002738	NP Inter (normality) 1 of 2
Sulfate as SO4 (mg/L)	HGWC-103	19.7	n/a	8/9/2024	393	Yes	84	n/a	n/a	4.762	n/a	n/a	0.0002738	NP Inter (normality) 1 of 2
Sulfate as SO4 (mg/L)	HGWC-105	19.7	n/a	8/10/2024	258	Yes	84	n/a	n/a	4.762	n/a	n/a	0.0002738	NP Inter (normality) 1 of 2
Sulfate as SO4 (mg/L)	HGWC-107	19.7	n/a	8/10/2024	114	Yes	84	n/a	n/a	4.762	n/a	n/a	0.0002738	NP Inter (normality) 1 of 2
Sulfate as SO4 (mg/L)	HGWC-109	19.7	n/a	8/10/2024	19.7	No	84	n/a	n/a	4.762	n/a	n/a	0.0002738	NP Inter (normality) 1 of 2
Sulfate as SO4 (mg/L)	HGWC-117A	19.7	n/a	8/10/2024	72.6	Yes	84	n/a	n/a	4.762	n/a	n/a	0.0002738	NP Inter (normality) 1 of 2
Sulfate as SO4 (mg/L)	HGWC-118	19.7	n/a	8/9/2024	66.5	Yes	84	n/a	n/a	4.762	n/a	n/a	0.0002738	NP Inter (normality) 1 of 2
Total Dissolved Solids [TDS] (mg/L)	HGWC-101	345	n/a	8/10/2024	263	No	83	n/a	n/a	0	n/a	n/a	0.00028	NP Inter (normality) 1 of 2
Total Dissolved Solids [TDS] (mg/L)	HGWC-102	345	n/a	8/9/2024	746	Yes	83	n/a	n/a	0	n/a	n/a	0.00028	NP Inter (normality) 1 of 2
Total Dissolved Solids [TDS] (mg/L)	HGWC-103	345	n/a	8/9/2024	809	Yes	83	n/a	n/a	0	n/a	n/a	0.00028	NP Inter (normality) 1 of 2
Total Dissolved Solids [TDS] (mg/L)	HGWC-105	345	n/a	8/10/2024	658	Yes	83	n/a	n/a	0	n/a	n/a	0.00028	NP Inter (normality) 1 of 2
Total Dissolved Solids [TDS] (mg/L)	HGWC-107	345	n/a	8/10/2024	299	No	83	n/a	n/a	0	n/a	n/a	0.00028	NP Inter (normality) 1 of 2
Total Dissolved Solids [TDS] (mg/L)	HGWC-109	345	n/a	8/10/2024	227	No	83	n/a	n/a	0	n/a	n/a	0.00028	NP Inter (normality) 1 of 2
Total Dissolved Solids [TDS] (mg/L)	HGWC-117A	345	n/a	8/10/2024	284	No	83	n/a	n/a	0	n/a	n/a	0.00028	NP Inter (normality) 1 of 2
Total Dissolved Solids [TDS] (mg/L)	HGWC-118	345	n/a	8/9/2024	338	No	83	n/a	n/a	0	n/a	n/a	0.00028	NP Inter (normality) 1 of 2



Exceeds Limit: HGWC-101, HGWC-102,  
HGWC-103, HGWC-105, HGWC-107,  
HGWC-109, HGWC-117A, HGWC-118

### Prediction Limit Interwell Non-parametric

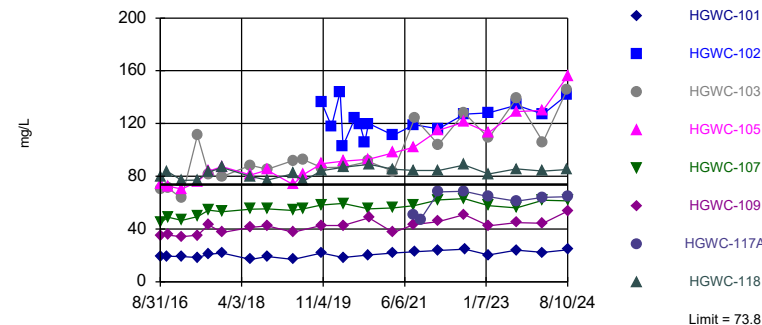


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level after cube root transformation. Limit is highest of 84 background values. 36.9% NDs. Annual per-constituent alpha = 0.003827. Individual comparison alpha = 0.0002738 (1 of 2). Comparing 8 points to limit.

Constituent: Boron, total Analysis Run 10/17/2024 12:49 PM View: Interwell PLs  
Plant Hammond Client: Southern Company Data: Hammond AP-4

Exceeds Limit: HGWC-102, HGWC-103,  
HGWC-105, HGWC-118

### Prediction Limit Interwell Non-parametric

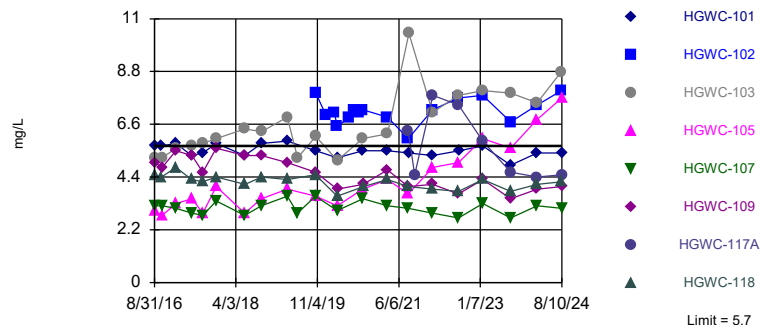


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level after cube root transformation. Limit is highest of 84 background values. Annual per-constituent alpha = 0.003827. Individual comparison alpha = 0.0002738 (1 of 2). Comparing 8 points to limit.

Constituent: Calcium, total Analysis Run 10/17/2024 12:49 PM View: Interwell PLs  
Plant Hammond Client: Southern Company Data: Hammond AP-4

Exceeds Limit: HGWC-102, HGWC-103,  
HGWC-105

### Prediction Limit Interwell Non-parametric



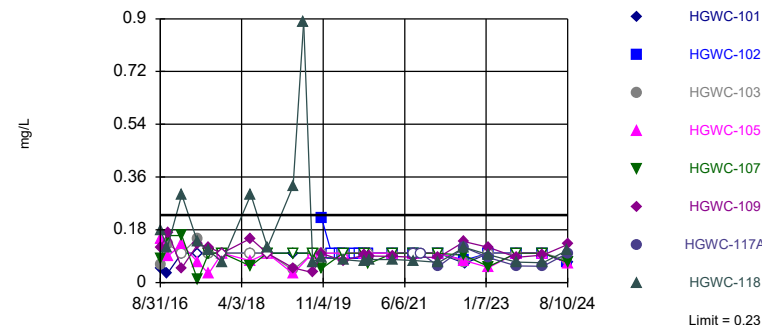
Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level after cube root transformation. Limit is highest of 84 background values. Annual per-constituent alpha = 0.003827. Individual comparison alpha = 0.0002738 (1 of 2). Comparing 8 points to limit.

Constituent: Chloride, Total Analysis Run 10/17/2024 12:49 PM View: Interwell PLs  
Plant Hammond Client: Southern Company Data: Hammond AP-4

Hollow symbols indicate censored values.

Within Limit

### Prediction Limit Interwell Non-parametric



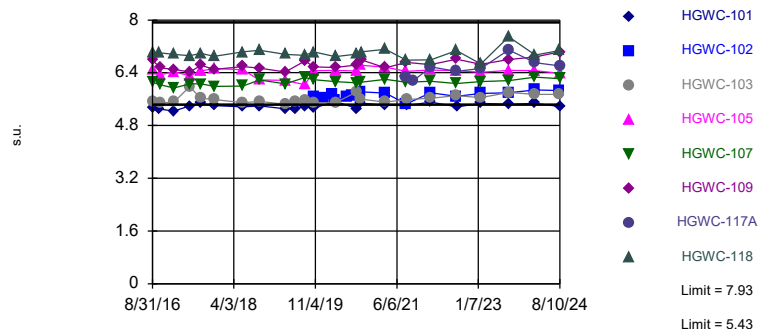
Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level after cube root transformation. Limit is highest of 90 background values. 20% NDs. Annual per-constituent alpha = 0.003314. Individual comparison alpha = 0.0002371 (1 of 2). Comparing 8 points to limit.

Constituent: Fluoride, total Analysis Run 10/17/2024 12:49 PM View: Interwell PLs  
Plant Hammond Client: Southern Company Data: Hammond AP-4

Exceeds Limits: HGWC-101

## Prediction Limit

Interwell Non-parametric



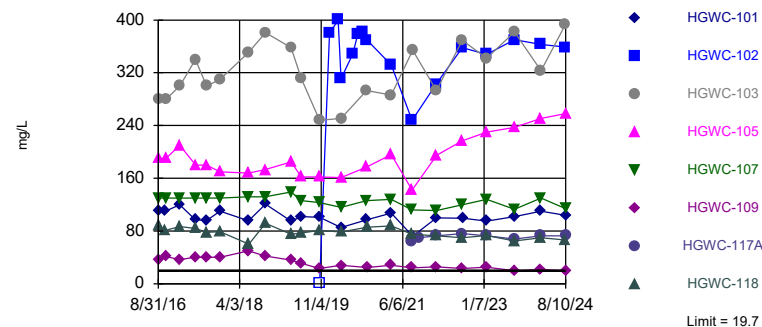
Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level after cube root transformation. Limits are highest and lowest of 90 background values. Annual per-constituent alpha = 0.006629. Individual comparison alpha = 0.0004742 (1 of 2). Comparing 8 points to limit.

Constituent: pH, Field Analysis Run 10/17/2024 12:49 PM View: Interwell PLs  
Plant Hammond Client: Southern Company Data: Hammond AP-4

Exceeds Limit: HGWC-101, HGWC-102,  
HGWC-103, HGWC-105, HGWC-107,  
HGWC-117A, HGWC-118

## Prediction Limit

Interwell Non-parametric



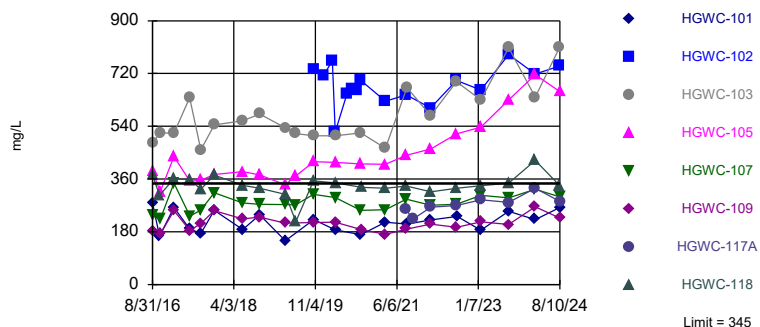
Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level after cube root transformation. Limit is highest of 84 background values. 4.762% NDs. Annual per-constituent alpha = 0.003827. Individual comparison alpha = 0.0002738 (1 of 2). Comparing 8 points to limit.

Constituent: Sulfate as SO4 Analysis Run 10/17/2024 12:49 PM View: Interwell PLs  
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 after cube root transformation. Limit is highest of 83 background values. Annual per-constituent alpha = 0.003912. Individual comparison alpha = 0.00028 (1 of 2). Comparing 8 points to limit.

Constituent: Total Dissolved Solids [TDS] Analysis Run 10/17/2024 12:49 PM View: Interwell PLs  
Plant Hammond Client: Southern Company Data: Hammond AP-4

# Prediction Limit

Constituent: Boron, total (mg/L)    Analysis Run 10/17/2024 12:50 PM    View: Interwell PLs

Plant Hammond    Client: Southern Company    Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-113 (bg)	HGWA-112 (bg)	HGWC-107	HGWC-105	HGWC-109	HGWC-103	HGWC-101	HGWC-118
8/30/2016	<0.04	<0.04	<0.04						
8/31/2016				0.651	1.14	0.402	2.22	0.0724 (J)	0.681
10/20/2016	0.016 (J)							0.0877 (J)	0.697
10/24/2016		0.0226 (J)	0.0367 (J)				1.83		
10/25/2016				0.778	1.21	0.372			
1/25/2017	0.0095 (J)	0.009 (J)	0.0075 (J)						
1/31/2017				0.782	1.43	0.404	2.12	0.0928	0.768
5/23/2017		0.0082 (J)	0.0073 (J)				2.56	0.0795	0.754
5/24/2017	0.0094 (J)			0.753	1.3	0.415			
8/10/2017	<0.04	0.0061 (J)	<0.04	0.702	1.28	0.397	2.28	0.0814	0.608
11/13/2017	0.0103 (J)		0.0089 (J)						
11/14/2017		0.012 (J)		0.78	1.29	0.366	2.32	0.108	0.691
6/4/2018	0.0065 (J)		0.007 (J)						
6/5/2018		0.0085 (J)							
6/6/2018				0.87	1.4	0.48	2.5	0.081	
6/7/2018									0.57
10/1/2018	0.0054 (J)	0.0042 (J)	<0.04						
10/2/2018				0.82	1.2	0.43			
10/3/2018							2.4	0.092	0.51
4/1/2019	0.0076 (J)								
4/2/2019		0.0059 (J)	0.0043 (J)						
4/3/2019				0.89		0.4			
4/4/2019					1.4 (X)		2.4	0.06 (X)	
4/5/2019									0.6 (X)
6/17/2019				0.86		0.37	2.3		
10/21/2019	0.0097 (J)								
10/22/2019		0.01 (J)	0.016 (J)	0.91		0.32			0.65
10/23/2019					1.3		2.3	0.1	
1/3/2020									
3/4/2020									
3/24/2020	0.011 (J)		0.012 (J)						
3/25/2020				0.87	1.4	0.36	2.3	0.08 (J)	0.7
4/9/2020		0.012 (J)							
6/18/2020									
7/21/2020									
8/27/2020									
9/18/2020	0.011 (J)		0.008 (J)						
9/22/2020		0.021 (J)							
9/24/2020				0.88	1.2		2.2	0.1	
9/25/2020						0.28			
9/28/2020									0.65
11/10/2020									
11/11/2020									
12/15/2020									
1/19/2021									
3/11/2021	0.01 (J)								
3/12/2021			0.0061 (J)						
3/16/2021		0.011 (J)							
3/17/2021						0.26		0.13	
3/18/2021				0.92	1.5		2.4		0.81
8/12/2021	<0.04	<0.04	<0.04						
8/13/2021				0.73	1.2	0.24			0.59

# Prediction Limit

Page 2

Constituent: Boron, total (mg/L) Analysis Run 10/17/2024 12:50 PM View: Interwell PLs  
Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-113 (bg)	HGWA-112 (bg)	HGWC-107	HGWC-105	HGWC-109	HGWC-103	HGWC-101	HGWC-118
8/16/2021							3.2	0.13	
9/27/2021									
1/31/2022	0.0099 (J)								
2/1/2022		0.012 (J)	0.011 (J)						
2/2/2022				0.85		0.25	3.1	0.14	
2/3/2022					1.4				0.77
8/2/2022		<0.04							
8/5/2022	<0.04		0.012 (J)	0.79	1.3	0.25	3.6		0.57
8/10/2022								0.17	
1/24/2023	<0.04	<0.04	<0.04						
1/25/2023				0.82	1.3	0.22	2.7	0.12	0.62
8/8/2023	<0.04		<0.04						
8/10/2023		0.0091 (J)							
8/11/2023				0.81	1.4	0.23	4.3	0.16	0.66
2/13/2024			<0.04						
2/14/2024	<0.04	0.013 (J)							
2/16/2024				0.87			3.1	0.14	
2/17/2024					1.3	0.22			0.68
8/6/2024	<0.04								
8/8/2024		<0.04							
8/9/2024			0.029 (J)				4.5		0.59
8/10/2024				0.84	1.4	0.2		0.15	

# Prediction Limit

Constituent: Boron, total (mg/L) Analysis Run 10/17/2024 12:50 PM View: Interwell PLs  
Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-102	HGWA-48D (bg)	HGWA-47 (bg)	HGWC-117A
8/30/2016				
8/31/2016				
10/20/2016				
10/24/2016				
10/25/2016				
1/25/2017				
1/31/2017				
5/23/2017				
5/24/2017				
8/10/2017				
11/13/2017				
11/14/2017				
6/4/2018				
6/5/2018				
6/6/2018				
6/7/2018				
10/1/2018				
10/2/2018				
10/3/2018				
4/1/2019				
4/2/2019				
4/3/2019				
4/4/2019				
4/5/2019				
6/17/2019				
10/21/2019				
10/22/2019				
10/23/2019	3.1			
1/3/2020	3.4			
3/4/2020	3.7			
3/24/2020	2.4			
3/25/2020				
4/9/2020				
6/18/2020	2.9			
7/21/2020	3			
8/27/2020	2.7			
9/18/2020		0.015 (J)	0.0082 (J)	
9/22/2020				
9/24/2020	2.9			
9/25/2020				
9/28/2020				
11/10/2020			0.0064 (J)	
11/11/2020		0.014 (J)		
12/15/2020		0.0083 (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	2.7			
3/18/2021				
8/12/2021		0.012 (J)	<0.04	0.34
8/13/2021	2.4			

# Prediction Limit

Page 4

Constituent: Boron, total (mg/L) Analysis Run 10/17/2024 12:50 PM View: Interwell PLs  
Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-102	HGWA-48D (bg)	HGWA-47 (bg)	HGWC-117A
8/16/2021				
9/27/2021				0.3
1/31/2022		0.011 (J)	<0.04	
2/1/2022				
2/2/2022	2.6			
2/3/2022				0.34
8/2/2022			<0.04	
8/5/2022	2.9	0.011 (J)		0.34
8/10/2022				
1/24/2023		<0.04	<0.04	
1/25/2023	2.5			0.27
8/8/2023		<0.04	<0.04	
8/10/2023				
8/11/2023	3.2			0.31
2/13/2024		<0.04		
2/14/2024			0.018 (J)	
2/16/2024	2.7			
2/17/2024				0.27
8/6/2024		<0.04	<0.04	
8/8/2024				
8/9/2024	3			
8/10/2024				0.28

Prediction Limit

Constituent: Calcium, total (mg/L)    Analysis Run 10/17/2024 12:50 PM    View: Interwell PLs  
Plant Hammond    Client: Southern Company    Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWC-103	HGWC-107	HGWC-118	HGWC-101	HGWC-105	HGWC-109
8/30/2016	40.3	6.69	6.72						
8/31/2016				70.4	44.7	79.3	19.4	74.2	35.1
10/20/2016	38.7					83.7	19.3		
10/24/2016		6.25	6.4	70.9					
10/25/2016					49			72.5	35.4
1/25/2017	44.6	6.58	6.87						
1/31/2017				63.6	46.6	76.8	19.1	70.3	34.2
5/23/2017		6.4	7.13	111		77.2	18.3		
5/24/2017	34.8				49.5			75.9	35.3
8/10/2017	48.6	6.54	6.71	81.2	54.2	83.1	20.9	84	43.1
11/13/2017	17.1	6.26							
11/14/2017			7.4	79.7	53.2	86.7	21.7	87.2	37.4
6/4/2018	30.1	7.4							
6/5/2018			7.4						
6/6/2018				88.3	55		17	81	41.1
6/7/2018						79.7			
10/1/2018	14.2 (J)	5.8	6.2						
10/2/2018					55.4			84.7	42.5
10/3/2018				85.3		77.1	19.1 (J)		
4/1/2019	58.4								
4/2/2019		6.7	7.4						
4/3/2019					54				37.5
4/4/2019				91.9			16.9	73.8	
4/5/2019						82			
6/17/2019				92.6	55.3			81.2	
6/18/2019						76.5			
10/21/2019	51								
10/22/2019		6.3	7.2		58.1	84.2			42.6
10/23/2019				86.5			21.9	89.4	
1/3/2020									
3/4/2020									
3/24/2020	61.2	7							
3/25/2020				86.8	59.5	86.8	18.4	91.4	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	55.4		20.3	92.9	
9/25/2020									48.5
9/28/2020						88.9			
11/10/2020									
11/11/2020									
12/15/2020									
1/19/2021									
3/11/2021	53.2								
3/12/2021		6.9							
3/16/2021			8.6						
3/17/2021							21.8		37.3
3/18/2021				83.7	56	85.4		97.7	
8/12/2021	45.4	6.9	8.4						

# Prediction Limit

Page 2

Constituent: Calcium, total (mg/L) Analysis Run 10/17/2024 12:50 PM View: Interwell PLs  
Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWC-103	HGWC-107	HGWC-118	HGWC-101	HGWC-105	HGWC-109
8/13/2021					57.8	84.3		102	43.5
8/16/2021				124			22.8		
9/27/2021									
1/31/2022	58.6								
2/1/2022		7.4	8.6						
2/2/2022				104	62		23.8		45.7
2/3/2022						84.5		115	
8/2/2022			8						
8/5/2022	53	7.1		128	63	88.5		121	50.8
8/10/2022							24.6		
1/24/2023	55.4	6.6	7.5						
1/25/2023				109	57.8	81.8	20.4	113	42.4
8/8/2023	0.94 (J)	6.6							
8/10/2023			8.4						
8/11/2023				139	56	85.5	24.1	129	44.8
2/13/2024		6.5							
2/14/2024	51.8		7.2						
2/16/2024				106	61.9		22.2		
2/17/2024						83.8		130	44.3
8/6/2024	46.2								
8/8/2024			8.4						
8/9/2024		7.1		146		85.2			
8/10/2024					61.4		24.2	156	53.7



# Prediction Limit

Page 3

Constituent: Calcium, total (mg/L)   Analysis Run 10/17/2024 12:50 PM   View: Interwell PLs  
Plant Hammond   Client: Southern Company   Data: Hammond AP-4

	HGWC-102	HGWA-48D (bg)	HGWA-47 (bg)	HGWC-117A
8/30/2016				
8/31/2016				
10/20/2016				
10/24/2016				
10/25/2016				
1/25/2017				
1/31/2017				
5/23/2017				
5/24/2017				
8/10/2017				
11/13/2017				
11/14/2017				
6/4/2018				
6/5/2018				
6/6/2018				
6/7/2018				
10/1/2018				
10/2/2018				
10/3/2018				
4/1/2019				
4/2/2019				
4/3/2019				
4/4/2019				
4/5/2019				
6/17/2019				
6/18/2019				
10/21/2019				
10/22/2019				
10/23/2019	136			
1/3/2020	118			
3/4/2020	144			
3/24/2020	103			
3/25/2020				
4/9/2020				
6/18/2020	124			
7/21/2020	120			
8/27/2020	106			
9/18/2020		51.8	62.2	
9/22/2020				
9/24/2020	120			
9/25/2020				
9/28/2020				
11/10/2020			73.3	
11/11/2020		61.3		
12/15/2020		61.3	72.5	
1/19/2021		58.9	72.5	
3/11/2021				
3/12/2021		57.5	69.2	
3/16/2021				
3/17/2021	111			
3/18/2021				
8/12/2021		59.5	71.2	50.7

# Prediction Limit

Page 4

Constituent: Calcium, total (mg/L)   Analysis Run 10/17/2024 12:50 PM   View: Interwell PLs  
Plant Hammond   Client: Southern Company   Data: Hammond AP-4

	HGWC-102	HGWA-48D (bg)	HGWA-47 (bg)	HGWC-117A
8/13/2021	119			
8/16/2021				
9/27/2021				47.2
1/31/2022		63.2	73.8	
2/1/2022				
2/2/2022	116			
2/3/2022				68.2
8/2/2022			73	
8/5/2022	127	59.6		68.6
8/10/2022				
1/24/2023		57.8	69.2	
1/25/2023	128			64.5
8/8/2023		58.2	68	
8/10/2023				
8/11/2023	134			61.1
2/13/2024		56		
2/14/2024			29.4	
2/16/2024	127			
2/17/2024				63.9
8/6/2024		58.8	71.1	
8/8/2024				
8/9/2024	142			
8/10/2024				64.5

Prediction Limit

Constituent: Chloride, Total (mg/L)    Analysis Run 10/17/2024 12:50 PM    View: Interwell PLs  
Plant Hammond    Client: Southern Company    Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-113 (bg)	HGWA-112 (bg)	HGWC-105	HGWC-103	HGWC-109	HGWC-101	HGWC-118	HGWC-107
8/30/2016	3.3	2	5.4						
8/31/2016				3	5.2	5	5.7	4.5	3.2
10/20/2016	3.2						5.7	4.4	
10/24/2016		1.9	5.2		5.2				
10/25/2016				2.8		4.8			3.2
1/25/2017	2.7	1.9	5						
1/31/2017				3.3	5.6	5.5	5.8	4.8	3.1
5/23/2017		1.6	5.1		5.7		5.3	4.3	
5/24/2017	3			3.5		5.3			2.9
8/10/2017	2.8	1.7	5.2	2.9	5.8	4.6	5.4	4.2	2.8
11/13/2017	2.5		5.5						
11/14/2017		2		4	6	5.6	5.8	4.4	3.4
6/4/2018	2.6		5.3						
6/5/2018		1.7							
6/6/2018				2.9	6.4	5.3	5.3		2.8
6/7/2018								4.1	
10/1/2018	2.2	1.6	5.6						
10/2/2018				3.5		5.3			3.2
10/3/2018					6.3		5.8	4.4	
4/1/2019	4								
4/2/2019		1.8	5.7						
4/3/2019						5			3.6
4/4/2019				3.9	6.9		5.9		
4/5/2019								4.3	
6/17/2019					5.2				2.9
10/21/2019	3.9								
10/22/2019		1.9	5.5			4.6		4.5	3.6
10/23/2019				3.6	6.1		5.5		
1/3/2020									
3/4/2020									
3/24/2020	3.6		5.2						
3/25/2020				3.2	5.1	3.9	5.2	3.6	3
4/9/2020		1.4							
6/18/2020									
7/21/2020									
8/27/2020									
9/18/2020	2.6		5.2						
9/22/2020		1.5							
9/24/2020				3.9	6		5.5		3.5
9/25/2020						4.1			
9/28/2020								4	
11/10/2020									
11/11/2020									
12/15/2020									
1/19/2021									
3/11/2021	3.4								
3/12/2021			5.3						
3/16/2021		1.6							
3/17/2021						4.7	5.5		
3/18/2021				4.3	6.2			4.3	3.2
8/12/2021	2.5	1.5	4.4						
8/13/2021				3.7		4		4	3.1

# Prediction Limit

Page 2

Constituent: Chloride, Total (mg/L)   Analysis Run 10/17/2024 12:50 PM   View: Interwell PLs  
Plant Hammond   Client: Southern Company   Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-113 (bg)	HGWA-112 (bg)	HGWC-105	HGWC-103	HGWC-109	HGWC-101	HGWC-118	HGWC-107
8/16/2021					10.4		5.4		
9/27/2021									
1/31/2022	3								
2/1/2022		1.6	5.2						
2/2/2022					7.1	4.1	5.3		2.9
2/3/2022				4.8				3.9	
8/2/2022		1.8							
8/5/2022	2.7		5	5	7.8	3.7		3.8	2.7
8/10/2022							5.5		
1/24/2023	3.6	1.8	5.6						
1/25/2023				6	8	4.3	5.7	4.3	3.3
8/8/2023	3		5.1						
8/10/2023		1.6							
8/11/2023				5.6	7.9	3.5	4.9	3.8	2.7
2/13/2024			5						
2/14/2024	3	1.5							
2/16/2024					7.5		5.4		3.2
2/17/2024				6.8		3.9		4.1	
8/6/2024	2.8								
8/8/2024		1.5							
8/9/2024			5.2		8.8			4.2	
8/10/2024				7.7		4	5.4		3.1

# Prediction Limit

Page 3

Constituent: Chloride, Total (mg/L) Analysis Run 10/17/2024 12:50 PM View: Interwell PLs

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-102	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-117A
8/30/2016				
8/31/2016				
10/20/2016				
10/24/2016				
10/25/2016				
1/25/2017				
1/31/2017				
5/23/2017				
5/24/2017				
8/10/2017				
11/13/2017				
11/14/2017				
6/4/2018				
6/5/2018				
6/6/2018				
6/7/2018				
10/1/2018				
10/2/2018				
10/3/2018				
4/1/2019				
4/2/2019				
4/3/2019				
4/4/2019				
4/5/2019				
6/17/2019				
10/21/2019				
10/22/2019				
10/23/2019	7.9			
1/3/2020	7			
3/4/2020	7.1			
3/24/2020	6.5			
3/25/2020				
4/9/2020				
6/18/2020	6.9			
7/21/2020	7.2			
8/27/2020	7.1			
9/18/2020		2.7	2.6	
9/22/2020				
9/24/2020	7.2			
9/25/2020				
9/28/2020				
11/10/2020		2.7		
11/11/2020			2.6	
12/15/2020		2.9	2.7	
1/19/2021		2.8	2.7	
3/11/2021				
3/12/2021		2.7	2.6	
3/16/2021				
3/17/2021	6.9			
3/18/2021				
8/12/2021		2.3	2.2	6.3
8/13/2021	6			

# Prediction Limit

Page 4

Constituent: Chloride, Total (mg/L)   Analysis Run 10/17/2024 12:50 PM   View: Interwell PLs  
Plant Hammond   Client: Southern Company   Data: Hammond AP-4

	HGWC-102	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-117A
8/16/2021				
9/27/2021				4.5
1/31/2022		2.6	2.5	
2/1/2022				
2/2/2022	7.2			
2/3/2022				7.8
8/2/2022		3		
8/5/2022	7.7		2.4	7.4
8/10/2022				
1/24/2023		3	2.8	
1/25/2023	7.8			5.9
8/8/2023		2.7	2.7	
8/10/2023				
8/11/2023	6.7			4.6
2/13/2024			2.6	
2/14/2024		1.6		
2/16/2024	7.4			
2/17/2024				4.4
8/6/2024		2.9	2.7	
8/8/2024				
8/9/2024	8			
8/10/2024				4.5

# Prediction Limit

Constituent: Fluoride, total (mg/L) Analysis Run 10/17/2024 12:50 PM View: Interwell PLs

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWC-105	HGWC-101	HGWC-107	HGWC-109	HGWC-103	HGWC-118
8/30/2016	0.07 (J)	0.04 (J)	0.2 (J)						
8/31/2016				0.15 (J)	0.05 (J)	0.08 (J)	0.12 (J)	0.06 (J)	0.18 (J)
10/20/2016	0.07 (J)				0.03 (J)				0.12 (J)
10/24/2016		0.05 (J)	0.16 (J)					0.13 (J)	
10/25/2016				0.09 (J)		0.16 (J)	0.17 (J)		
1/25/2017	0.14 (J)	<0.1	0.15 (J)						
1/31/2017				0.13 (J)	<0.1	0.16 (J)	0.05 (J)	<0.1	0.3
5/23/2017		0.004 (J)	0.18 (J)		<0.1			0.15 (J)	0.14 (J)
5/24/2017	0.02 (J)			0.07 (J)		0.009 (J)	0.13 (J)		
8/10/2017	0.06 (J)	0.03 (J)	0.19 (J)	0.03 (J)	<0.1	<0.1	0.12 (J)	<0.1	0.11 (J)
11/13/2017	<0.1	<0.1							
11/14/2017			0.16 (J)	<0.1	<0.1	<0.1	<0.1	<0.1	0.07 (J)
6/4/2018	0.032 (J)	<0.1							
6/5/2018			0.18 (J)						
6/6/2018				0.074 (J)	<0.1	0.057 (J)	0.15 (J)	<0.1	
6/7/2018									0.3
10/1/2018	<0.1	<0.1	0.078 (J)						
10/2/2018				<0.1		<0.1	<0.1		
10/3/2018					<0.1			<0.1	0.12 (J)
4/1/2019	0.042 (J)								
4/2/2019		<0.1	0.18 (J)						
4/3/2019						<0.1	0.05 (J)		
4/4/2019				0.03 (J)	<0.1			0.042 (J)	
4/5/2019									0.33
6/18/2019									0.89
8/21/2019	0.048 (J)	<0.1	0.11 (J)						
8/22/2019				<0.1	<0.1			<0.1	0.07 (J)
8/23/2019						<0.1	0.034 (J)		
10/21/2019	0.12 (J)								
10/22/2019		0.05 (J)	0.18 (J)			0.047 (J)	0.099 (J)		0.087 (J)
10/23/2019				<0.1	<0.1			<0.1	
1/3/2020									
3/4/2020									
3/24/2020	0.076 (J)	<0.1							
3/25/2020				<0.1	<0.1	<0.1	0.075 (J)	<0.1	0.078 (J)
4/9/2020			0.14 (J)						
6/18/2020									
7/21/2020									
8/25/2020	0.052 (J)	<0.1	0.17						
8/26/2020									0.072 (J)
8/27/2020				<0.1	<0.1	<0.1	0.094 (J)	<0.1	
9/18/2020	<0.1	<0.1							
9/22/2020			0.16						
9/24/2020				<0.1	<0.1	0.064 (J)		<0.1	
9/25/2020							0.091 (J)		
9/28/2020									0.078 (J)
11/10/2020									
11/11/2020									
12/15/2020									
1/19/2021									
3/11/2021	0.057 (J)								
3/12/2021		<0.1							

# Prediction Limit

Page 2

Constituent: Fluoride, total (mg/L) Analysis Run 10/17/2024 12:50 PM View: Interwell PLs  
Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWC-105	HGWC-101	HGWC-107	HGWC-109	HGWC-103	HGWC-118
3/16/2021			0.18						
3/17/2021					<0.1		0.089 (J)		
3/18/2021				<0.1		<0.1		<0.1	0.079 (J)
8/12/2021	<0.1	<0.1	0.16						
8/13/2021				<0.1		<0.1	0.086 (J)		0.075 (J)
8/16/2021					<0.1			<0.1	
9/27/2021									
1/31/2022	0.055 (J)								
2/1/2022		<0.1	0.16						
2/2/2022					<0.1	<0.1	0.086 (J)	<0.1	
2/3/2022				<0.1					0.069 (J)
8/2/2022			0.19						
8/5/2022	0.1	0.077 (J)		0.075 (J)		0.093 (J)	0.14	0.071 (J)	0.12
8/10/2022					0.065 (J)				
1/24/2023	0.086 (J)	0.055 (J)	0.2						
1/25/2023				0.051 (J)	<0.1	0.054 (J)	0.12	<0.1	0.095 (J)
8/8/2023	0.076 (J)	0.05 (J)							
8/10/2023			0.19						
8/11/2023				<0.1	<0.1	<0.1	0.086 (J)	<0.1	0.07 (J)
2/13/2024		<0.1							
2/14/2024	0.081 (J)		0.18						
2/16/2024					<0.1	<0.1		<0.1	
2/17/2024				<0.1			0.094 (J)		0.068 (J)
8/6/2024	0.089 (J)								
8/8/2024			0.17						
8/9/2024		0.075 (J)						0.077 (J)	0.11
8/10/2024				0.066 (J)	0.068 (J)	0.069 (J)	0.13		



# Prediction Limit

Constituent: Fluoride, total (mg/L) Analysis Run 10/17/2024 12:50 PM View: Interwell PLs  
Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-102	HGWA-48D (bg)	HGWA-47 (bg)	HGWC-117A
8/30/2016				
8/31/2016				
10/20/2016				
10/24/2016				
10/25/2016				
1/25/2017				
1/31/2017				
5/23/2017				
5/24/2017				
8/10/2017				
11/13/2017				
11/14/2017				
6/4/2018				
6/5/2018				
6/6/2018				
6/7/2018				
10/1/2018				
10/2/2018				
10/3/2018				
4/1/2019				
4/2/2019				
4/3/2019				
4/4/2019				
4/5/2019				
6/18/2019				
8/21/2019				
8/22/2019				
8/23/2019				
10/21/2019				
10/22/2019				
10/23/2019	0.22 (J)			
1/3/2020	<0.1			
3/4/2020	<0.1			
3/24/2020	<0.1			
3/25/2020				
4/9/2020				
6/18/2020	<0.1			
7/21/2020	<0.1			
8/25/2020				
8/26/2020				
8/27/2020	<0.1			
9/18/2020		0.098 (J)	0.067 (J)	
9/22/2020				
9/24/2020	<0.1			
9/25/2020				
9/28/2020				
11/10/2020			0.065 (J)	
11/11/2020		0.083 (J)		
12/15/2020		0.081 (J)	0.064 (J)	
1/19/2021		0.079 (J)	0.057 (J)	
3/11/2021				
3/12/2021		0.085 (J)	0.062 (J)	

# Prediction Limit

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Constituent: Fluoride, total (mg/L) Analysis Run 10/17/2024 12:50 PM View: Interwell PLs  
Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-102	HGWA-48D (bg)	HGWA-47 (bg)	HGWC-117A
3/16/2021				
3/17/2021	<0.1			
3/18/2021				
8/12/2021		0.064 (J)	<0.1	<0.1
8/13/2021	<0.1			
8/16/2021				
9/27/2021				<0.1
1/31/2022		0.072 (J)	0.053 (J)	
2/1/2022				
2/2/2022	<0.1			
2/3/2022				0.056 (J)
8/2/2022			0.08 (J)	
8/5/2022	0.076 (J)	0.12		0.12
8/10/2022				
1/24/2023		0.092 (J)	0.081 (J)	
1/25/2023	<0.1			0.085 (J)
8/8/2023		0.091 (J)	0.072 (J)	
8/10/2023				
8/11/2023	<0.1			0.057 (J)
2/13/2024		0.071 (J)		
2/14/2024			0.23	
2/16/2024	<0.1			
2/17/2024				0.055 (J)
8/6/2024		0.1	0.094 (J)	
8/8/2024				
8/9/2024	0.067 (J)			
8/10/2024				0.1

Prediction Limit

Constituent: pH, Field (s.u.)    Analysis Run 10/17/2024 12:50 PM    View: Interwell PLs  
Plant Hammond    Client: Southern Company    Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWC-107	HGWC-105	HGWC-118	HGWC-101	HGWC-103	HGWC-109
8/30/2016	6.89	5.77	5.99						
8/31/2016				6.11	6.5	7.03	5.35	5.54	6.78
10/20/2016	6.73					7.01	5.3		
10/24/2016		5.61	5.84					5.48	
10/25/2016				6.04	6.34				6.55
1/25/2017	7.02	5.68	6.04						
1/31/2017				5.94	6.43	6.96	5.24	5.51	6.5
5/23/2017		5.7	6.01			6.92	5.39	5.98	
5/24/2017	6.44			6.06	6.31				6.42
8/10/2017	6.79	5.59	5.98	6.06	6.45	6.99	5.47	5.63	6.63
11/13/2017	5.94	5.56							
11/14/2017			6.16	5.99	6.53	6.9	5.4	5.59	6.5
6/4/2018	6.12	5.62							
6/5/2018			5.86						
6/6/2018				6	6.49		5.37	5.49	6.59
6/7/2018						7.03			
10/1/2018	5.92	5.62	5.94						
10/2/2018				6.18	6.18				6.54
10/3/2018						7.08	5.39	5.53	
4/1/2019	7.09								
4/2/2019		5.47	6						
4/3/2019				6.06					6.42
4/4/2019					6.17		5.31	5.44	
4/5/2019						6.96			
6/17/2019								5.53	
6/18/2019							5.3		
8/21/2019	6.6	5.8	6.05						
8/22/2019					6.04	6.93	5.39	5.55	
8/23/2019				6.26					6.76
10/21/2019	7.02								
10/22/2019		5.7	5.98	6.19		7.03			6.58
10/23/2019					6.46		5.33	5.49	
1/3/2020									
3/4/2020									
3/24/2020	7.37	5.64							
3/25/2020				6.13	6.47	6.89	5.53	5.49	6.56
4/9/2020			6.08						
6/18/2020									
7/21/2020									
8/25/2020	6.7	5.53	5.95						
8/26/2020						6.97			
8/27/2020				6.09	6.45		5.32	5.82	6.64
9/18/2020	6.46	5.58							
9/22/2020			6.1						
9/24/2020				6.11	6.63		5.48	5.6	
9/25/2020									6.79
9/28/2020						7.03			
11/10/2020									
11/11/2020									
12/15/2020									
1/19/2021									
3/11/2021	7.2								

# Prediction Limit

Page 2

Constituent: pH, Field (s.u.) Analysis Run 10/17/2024 12:50 PM View: Interwell PLs  
Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWC-107	HGWC-105	HGWC-118	HGWC-101	HGWC-103	HGWC-109
3/12/2021		5.6							
3/16/2021			6.14						
3/17/2021							5.41		6.55
3/18/2021				6.2	6.57	7.11		5.51	
8/12/2021	6.67	5.5	6.08						
8/13/2021				6.11	6.44	6.78			6.71
8/16/2021							5.4	5.59	
9/27/2021									
1/31/2022	7.17								
2/1/2022		5.59	6.05						
2/2/2022				6.14			5.51	5.63	6.65
2/3/2022					6.48	6.79			
8/2/2022			6.08						
8/5/2022	6.97	5.43		6.07	6.46	7.07		5.71	6.81
8/10/2022							5.37		
1/24/2023	7.11	5.67	6.15						
1/25/2023				6.13	6.41	6.67	5.47	5.65	6.66
8/8/2023	7.01	5.77							
8/10/2023			6.07						
8/11/2023				6.16	6.47	7.49	5.44	5.8	6.8
2/13/2024		5.64							
2/14/2024	7		6.24						
2/16/2024				6.27			5.47	5.74	
2/17/2024					6.46	6.94			6.88
8/6/2024	6.99	5.65							
8/8/2024			5.98						
8/9/2024						7.07		5.74	
8/10/2024				6.22	6.38		5.38		7.03

# Prediction Limit

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Constituent: pH, Field (s.u.) Analysis Run 10/17/2024 12:50 PM View: Interwell PLs

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-102	HGWA-48D (bg)	HGWA-47 (bg)	HGWC-117A
8/30/2016				
8/31/2016				
10/20/2016				
10/24/2016				
10/25/2016				
1/25/2017				
1/31/2017				
5/23/2017				
5/24/2017				
8/10/2017				
11/13/2017				
11/14/2017				
6/4/2018				
6/5/2018				
6/6/2018				
6/7/2018				
10/1/2018				
10/2/2018				
10/3/2018				
4/1/2019				
4/2/2019				
4/3/2019				
4/4/2019				
4/5/2019				
6/17/2019				
6/18/2019				
8/21/2019				
8/22/2019				
8/23/2019				
10/21/2019				
10/22/2019				
10/23/2019	5.68			
1/3/2020	5.64			
3/4/2020	5.75			
3/24/2020	5.58			
3/25/2020				
4/9/2020				
6/18/2020	5.67			
7/21/2020	5.72			
8/25/2020				
8/26/2020				
8/27/2020	5.7			
9/18/2020		7.5	7.54	
9/22/2020				
9/24/2020	5.82			
9/25/2020				
9/28/2020				
11/10/2020			7.34	
11/11/2020		7.4		
12/15/2020		7.39	7.27	
1/19/2021		7.4	7.32	
3/11/2021				

# Prediction Limit

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Constituent: pH, Field (s.u.) Analysis Run 10/17/2024 12:50 PM View: Interwell PLs  
Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-102	HGWA-48D (bg)	HGWA-47 (bg)	HGWC-117A
3/12/2021		7.51	7.52	
3/16/2021				
3/17/2021	5.78			
3/18/2021				
8/12/2021		7.44	7.38	6.27
8/13/2021	5.45			
8/16/2021				
9/27/2021				6.14
1/31/2022		7.44	7.34	
2/1/2022				
2/2/2022	5.79			
2/3/2022				6.58
8/2/2022			7.34	
8/5/2022	5.69	7.4		6.44
8/10/2022				
1/24/2023		7.46	7.38	
1/25/2023	5.77			6.53
8/8/2023		7.37	7.27	
8/10/2023				
8/11/2023	5.79			7.09
2/13/2024		7.59		
2/14/2024			7.93	
2/16/2024	5.88			
2/17/2024				6.7
8/6/2024		7.4	7.46	
8/8/2024				
8/9/2024	5.86			
8/10/2024				6.61

# Prediction Limit

Constituent: Sulfate as SO4 (mg/L) Analysis Run 10/17/2024 12:50 PM View: Interwell PLs

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWC-118	HGWC-107	HGWC-101	HGWC-105	HGWC-109	HGWC-103
8/30/2016	1.6	0.63 (J)	14						
8/31/2016				88	130	110	190	36	280
10/20/2016	1.6			81		110			
10/24/2016		0.62 (J)	11						280
10/25/2016					130		190	41	
1/25/2017	1.6	0.62 (J)	12						
1/31/2017				87	130	120	210	37	300
5/23/2017		0.55 (J)	12	84		97			340
5/24/2017	1.4				130		180	40	
8/10/2017	1.6	0.66 (J)	11	78	130	96	180	40	300
11/13/2017	1.3	0.61 (J)							
11/14/2017			11	79	130	110	170	40	310
6/4/2018	1.4	0.73 (J)							
6/5/2018			9.9						
6/6/2018					132	95.5	168	49.7	351
6/7/2018				60.1					
10/1/2018	1	0.52 (J)	6.7						
10/2/2018					132		173	42.3	
10/3/2018				91.5		121			381
4/1/2019	1.7								
4/2/2019		0.78 (J)	8.7						
4/3/2019					139			36	
4/4/2019						95.1	185		358
4/5/2019				75.1					
6/17/2019					126		162	30.9	311
6/18/2019				77		102			
10/21/2019	1.8								
10/22/2019		0.6 (J)	6.8	80.9	123			23.2	
10/23/2019						101	162		248
1/3/2020									
3/4/2020									
3/24/2020	1.6	<1							
3/25/2020				78.4	116	85.5	161	27.9	251
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					126	97	177		293
9/25/2020								24.7	
9/28/2020				86					
11/10/2020									
11/11/2020									
12/15/2020									
1/19/2021									
3/11/2021	1.5								
3/12/2021		0.52 (J)							
3/16/2021			7.7						
3/17/2021						107		28.3	
3/18/2021				87.8	128		196		286
8/12/2021	1.3	<1	10						

# Prediction Limit

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Constituent: Sulfate as SO4 (mg/L) Analysis Run 10/17/2024 12:50 PM View: Interwell PLs  
Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWC-118	HGWC-107	HGWC-101	HGWC-105	HGWC-109	HGWC-103
8/13/2021				75.1	112		142	24.4	
8/16/2021						72.1			354
9/27/2021									
1/31/2022	1.5								
2/1/2022		0.5 (J)	8.9						
2/2/2022					111	100		25.5	293
2/3/2022				72.7			195		
8/2/2022			7.5						
8/5/2022	1.4	<1		69.8	120		217	23	369
8/10/2022						99.5			
1/24/2023	1.9	0.81 (J)	6.6						
1/25/2023				73	128	95	230	25.4	342
8/8/2023	1.5	0.71 (J)							
8/10/2023			5.1						
8/11/2023				64.9	113	102	237	19.8	382
2/13/2024		0.51 (J)							
2/14/2024	1.2		4.9						
2/16/2024					130	110			323
2/17/2024				69.7			251	22	
8/6/2024	1.3								
8/8/2024			4.6						
8/9/2024		0.76 (J)		66.5					393
8/10/2024					114	104	258	19.7	



# Prediction Limit

Constituent: Sulfate as SO4 (mg/L) Analysis Run 10/17/2024 12:50 PM View: Interwell PLs  
Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-102	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-117A
8/30/2016				
8/31/2016				
10/20/2016				
10/24/2016				
10/25/2016				
1/25/2017				
1/31/2017				
5/23/2017				
5/24/2017				
8/10/2017				
11/13/2017				
11/14/2017				
6/4/2018				
6/5/2018				
6/6/2018				
6/7/2018				
10/1/2018				
10/2/2018				
10/3/2018				
4/1/2019				
4/2/2019				
4/3/2019				
4/4/2019				
4/5/2019				
6/17/2019				
6/18/2019				
10/21/2019				
10/22/2019				
10/23/2019	<1			
1/3/2020	380			
3/4/2020	400			
3/24/2020	311			
3/25/2020				
4/9/2020				
6/18/2020	349			
7/21/2020	378			
8/27/2020	382			
9/18/2020		3.5	9.5	
9/22/2020				
9/24/2020	370			
9/25/2020				
9/28/2020				
11/10/2020		2.3		
11/11/2020			4.5	
12/15/2020		2.4	4.2	
1/19/2021		2.6	3.9	
3/11/2021				
3/12/2021		1.9	4.7	
3/16/2021				
3/17/2021	332			
3/18/2021				
8/12/2021		1.4	4.3	64.6

# Prediction Limit

Page 4

Constituent: Sulfate as SO4 (mg/L) Analysis Run 10/17/2024 12:50 PM View: Interwell PLs  
Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-102	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-117A
8/13/2021	248			
8/16/2021				
9/27/2021				69.7
1/31/2022		1.7	5.6	
2/1/2022				
2/2/2022	303			
2/3/2022				72.9
8/2/2022		2.1		
8/5/2022	358		3.4	76.1
8/10/2022				
1/24/2023		2.2	2.9	
1/25/2023	348			72.9
8/8/2023		2	2.9	
8/10/2023				
8/11/2023	370			67.7
2/13/2024			2.8	
2/14/2024		19.7		
2/16/2024	363			
2/17/2024				72.7
8/6/2024		2.3	2.7	
8/8/2024				
8/9/2024	359			
8/10/2024				72.6

# Prediction Limit

Constituent: Total Dissolved Solids [TDS] (mg/L)    Analysis Run 10/17/2024 12:50 PM    View: Interwell PLs

Plant Hammond    Client: Southern Company    Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-113 (bg)	HGWA-112 (bg)	HGWC-101	HGWC-109	HGWC-118	HGWC-103	HGWC-107	HGWC-105
8/30/2016	172	77	76						
8/31/2016				278	182	373	483	235	389
10/20/2016	108			165		305			
10/24/2016		111	65				517		
10/25/2016					172			223	316
1/25/2017	345	155	152 (O)						
1/31/2017				263	252	361	516	346	437
5/23/2017		74	52	190		359	637		
5/24/2017	126				184			234	352
8/10/2017	174	94	60	175	208	325	459	254	356
11/13/2017	158		75						
11/14/2017		89		253	252	373	545	313	375
6/4/2018	131		70						
6/5/2018		92							
6/6/2018				188	224		559	278	385
6/7/2018						338			
10/1/2018	101	91	76						
10/2/2018					230			274	374
10/3/2018				238		328	582		
4/1/2019	213								
4/2/2019		94	69						
4/3/2019					210			273	
4/4/2019				149			535		340
4/5/2019						308			
6/17/2019							515	272	370
6/18/2019						215			
10/21/2019	187								
10/22/2019		95	81		212	354		308	
10/23/2019				221			507		419
1/3/2020									
3/4/2020									
3/24/2020	207		52						
3/25/2020				187	213	347	507	297	417
4/9/2020		48							
6/18/2020									
7/21/2020									
8/27/2020									
9/18/2020	139		62						
9/22/2020		84							
9/24/2020				170			517	253	411
9/25/2020					188				
9/28/2020						332			
11/10/2020									
11/11/2020									
12/15/2020									
1/19/2021									
3/11/2021	207								
3/12/2021			56						
3/16/2021		99							
3/17/2021				213	171				
3/18/2021						328	465	255	410
8/12/2021	157	92	63						

# Prediction Limit

Page 2

Constituent: Total Dissolved Solids [TDS] (mg/L)    Analysis Run 10/17/2024 12:50 PM    View: Interwell PLs  
 Plant Hammond    Client: Southern Company    Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-113 (bg)	HGWA-112 (bg)	HGWC-101	HGWC-109	HGWC-118	HGWC-103	HGWC-107	HGWC-105
8/13/2021					189	336		291	441
8/16/2021				206			672		
9/27/2021									
1/31/2022	186								
2/1/2022		99	73						
2/2/2022				220	206		576	271	
2/3/2022						316			463
8/2/2022		85							
8/5/2022	171		44		195	329	692	274	514
8/10/2022				232					
1/24/2023	177	146	96						
1/25/2023				186	214	337	630	304	537
8/8/2023	207		57						
8/10/2023		80							
8/11/2023				250	205	346	808	296	630
2/13/2024			73						
2/14/2024	187	93							
2/16/2024				222			640	325	
2/17/2024					265	424			716
8/6/2024	163								
8/8/2024		85							
8/9/2024			90			338	809		
8/10/2024				263	227			299	658

# Prediction Limit

Page 3

Constituent: Total Dissolved Solids [TDS] (mg/L)    Analysis Run 10/17/2024 12:50 PM    View: Interwell PLs  
Plant Hammond    Client: Southern Company    Data: Hammond AP-4

	HGWC-102	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-117A
8/30/2016				
8/31/2016				
10/20/2016				
10/24/2016				
10/25/2016				
1/25/2017				
1/31/2017				
5/23/2017				
5/24/2017				
8/10/2017				
11/13/2017				
11/14/2017				
6/4/2018				
6/5/2018				
6/6/2018				
6/7/2018				
10/1/2018				
10/2/2018				
10/3/2018				
4/1/2019				
4/2/2019				
4/3/2019				
4/4/2019				
4/5/2019				
6/17/2019				
6/18/2019				
10/21/2019				
10/22/2019				
10/23/2019	736			
1/3/2020	714			
3/4/2020	764			
3/24/2020	521			
3/25/2020				
4/9/2020				
6/18/2020	652			
7/21/2020	669			
8/27/2020	663			
9/18/2020		195	224	
9/22/2020				
9/24/2020	696			
9/25/2020				
9/28/2020				
11/10/2020		229		
11/11/2020			221	
12/15/2020		233	239	
1/19/2021		199	224	
3/11/2021				
3/12/2021		217	204	
3/16/2021				
3/17/2021	626			
3/18/2021				
8/12/2021		212	234	256

# Prediction Limit

Page 4

Constituent: Total Dissolved Solids [TDS] (mg/L)   Analysis Run 10/17/2024 12:50 PM   View: Interwell PLs  
Plant Hammond   Client: Southern Company   Data: Hammond AP-4

	HGWC-102	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-117A
8/13/2021	647			
8/16/2021				
9/27/2021				223
1/31/2022		243	223	
2/1/2022				
2/2/2022	602			
2/3/2022				264
8/2/2022		222		
8/5/2022	696		224	270
8/10/2022				
1/24/2023		223	230	
1/25/2023	664			289
8/8/2023		214	220	
8/10/2023				
8/11/2023	785			280
2/13/2024			242	
2/14/2024		147		
2/16/2024	718			
2/17/2024				329
8/6/2024		253	240	
8/8/2024				
8/9/2024	746			
8/10/2024				284

FIGURE E.

# Appendix III - Trend Test Summary - Significant Results

Plant Hammond    Client: Southern Company    Data: Hammond AP-4    Printed 10/17/2024, 12:55 PM

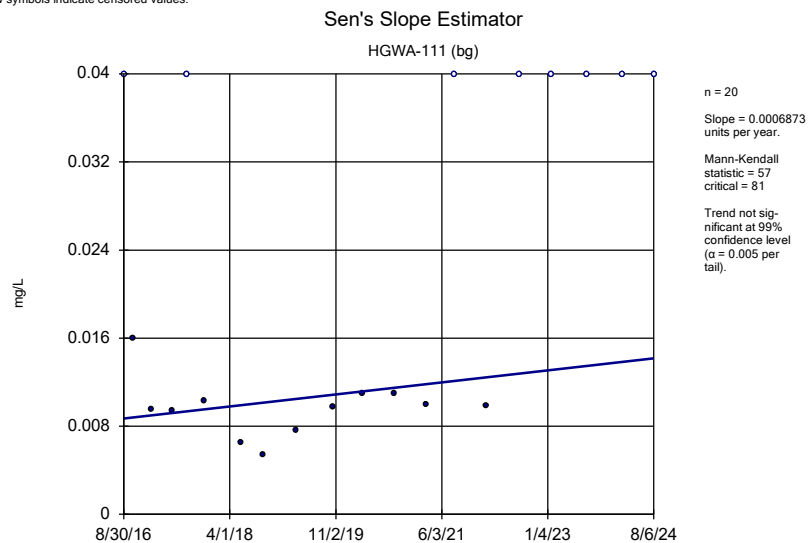
<u>Constituent</u>	<u>Well</u>	<u>Slope</u>	<u>Calc.</u>	<u>Critical</u>	<u>Sig.</u>	<u>N</u>	<u>%NDs</u>	<u>Normality</u>	<u>Xform</u>	<u>Alpha</u>	<u>Method</u>
Boron, total (mg/L)	HGWC-101	0.009487	115	81	Yes	20	0	n/a	n/a	0.01	NP
Boron, total (mg/L)	HGWC-103	0.1618	117	87	Yes	21	0	n/a	n/a	0.01	NP
Boron, total (mg/L)	HGWC-109	-0.02867	-156	-87	Yes	21	0	n/a	n/a	0.01	NP
Calcium, total (mg/L)	HGWA-113 (bg)	0.2301	100	81	Yes	20	0	n/a	n/a	0.01	NP
Calcium, total (mg/L)	HGWC-103	6.694	132	87	Yes	21	0	n/a	n/a	0.01	NP
Calcium, total (mg/L)	HGWC-105	7.864	176	87	Yes	21	0	n/a	n/a	0.01	NP
Chloride, Total (mg/L)	HGWC-103	0.4	128	87	Yes	21	0	n/a	n/a	0.01	NP
Chloride, Total (mg/L)	HGWC-105	0.4372	139	81	Yes	20	0	n/a	n/a	0.01	NP
Sulfate as SO4 (mg/L)	HGWA-113 (bg)	-0.9378	-133	-81	Yes	20	0	n/a	n/a	0.01	NP
Sulfate as SO4 (mg/L)	HGWA-48D (bg)	-0.5856	-45	-38	Yes	12	0	n/a	n/a	0.01	NP
Sulfate as SO4 (mg/L)	HGWC-118	-2.164	-103	-87	Yes	21	0	n/a	n/a	0.01	NP
Total Dissolved Solids [TDS] (mg/L)	HGWC-105	32.02	138	87	Yes	21	0	n/a	n/a	0.01	NP



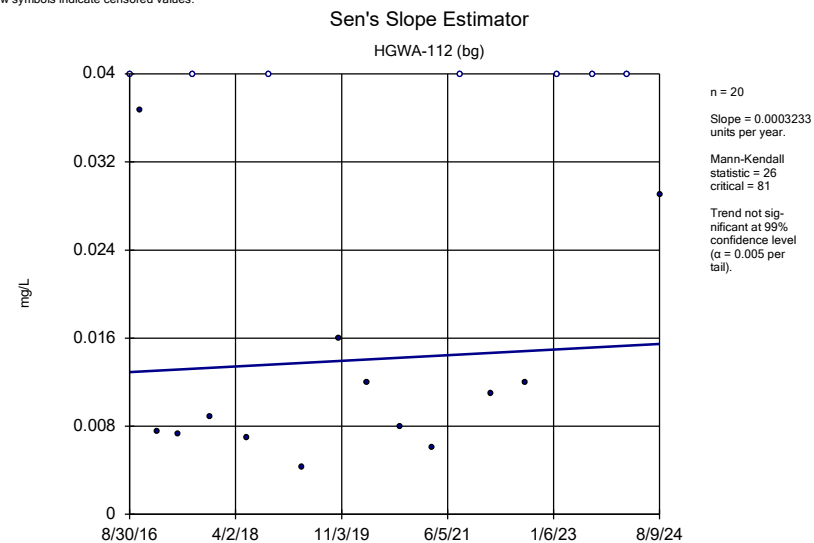
# Appendix III - Trend Test Summary - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-4 Printed 10/17/2024, 12:55 PM

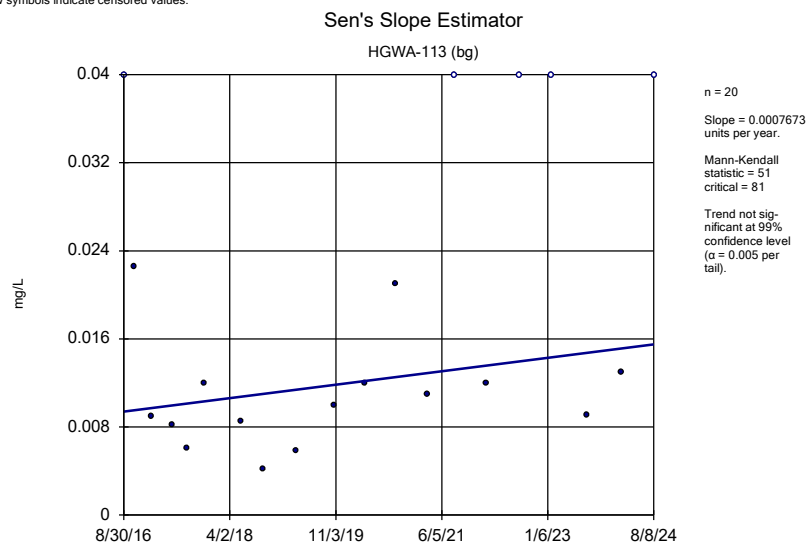
Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Boron, total (mg/L)	HGWA-111 (bg)	0.0006873	57	81	No	20	40	n/a	n/a	0.01	NP
Boron, total (mg/L)	HGWA-112 (bg)	0.0003233	26	81	No	20	35	n/a	n/a	0.01	NP
Boron, total (mg/L)	HGWA-113 (bg)	0.0007673	51	81	No	20	25	n/a	n/a	0.01	NP
Boron, total (mg/L)	HGWA-47 (bg)	0.0009372	23	38	No	12	58.33	n/a	n/a	0.01	NP
Boron, total (mg/L)	HGWA-48D (bg)	0.006696	19	38	No	12	33.33	n/a	n/a	0.01	NP
<b>Boron, total (mg/L)</b>	<b>HGWC-101</b>	<b>0.009487</b>	<b>115</b>	<b>81</b>	<b>Yes</b>	<b>20</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Boron, total (mg/L)	HGWC-102	-0.08338	-24	-58	No	16	0	n/a	n/a	0.01	NP
<b>Boron, total (mg/L)</b>	<b>HGWC-103</b>	<b>0.1618</b>	<b>117</b>	<b>87</b>	<b>Yes</b>	<b>21</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Boron, total (mg/L)	HGWC-105	0.004582	40	81	No	20	0	n/a	n/a	0.01	NP
Boron, total (mg/L)	HGWC-107	0.01327	62	87	No	21	0	n/a	n/a	0.01	NP
<b>Boron, total (mg/L)</b>	<b>HGWC-109</b>	<b>-0.02867</b>	<b>-156</b>	<b>-87</b>	<b>Yes</b>	<b>21</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Boron, total (mg/L)	HGWC-117A	-0.01989	-12	-21	No	8	0	n/a	n/a	0.01	NP
Boron, total (mg/L)	HGWC-118	-0.005415	-25	-81	No	20	0	n/a	n/a	0.01	NP
Calcium, total (mg/L)	HGWA-111 (bg)	1.37	36	81	No	20	0	n/a	n/a	0.01	NP
Calcium, total (mg/L)	HGWA-112 (bg)	0.05327	51	81	No	20	0	n/a	n/a	0.01	NP
<b>Calcium, total (mg/L)</b>	<b>HGWA-113 (bg)</b>	<b>0.2301</b>	<b>100</b>	<b>81</b>	<b>Yes</b>	<b>20</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Calcium, total (mg/L)	HGWA-47 (bg)	-1.009	-16	-38	No	12	0	n/a	n/a	0.01	NP
Calcium, total (mg/L)	HGWA-48D (bg)	-0.4558	-9	-38	No	12	0	n/a	n/a	0.01	NP
Calcium, total (mg/L)	HGWC-102	3.183	26	58	No	16	0	n/a	n/a	0.01	NP
<b>Calcium, total (mg/L)</b>	<b>HGWC-103</b>	<b>6.694</b>	<b>132</b>	<b>87</b>	<b>Yes</b>	<b>21</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
<b>Calcium, total (mg/L)</b>	<b>HGWC-105</b>	<b>7.864</b>	<b>176</b>	<b>87</b>	<b>Yes</b>	<b>21</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Calcium, total (mg/L)	HGWC-118	0.754	72	87	No	21	0	n/a	n/a	0.01	NP
Chloride, Total (mg/L)	HGWA-111 (bg)	0	-5	-81	No	20	0	n/a	n/a	0.01	NP
Chloride, Total (mg/L)	HGWA-112 (bg)	-0.01551	-26	-81	No	20	0	n/a	n/a	0.01	NP
Chloride, Total (mg/L)	HGWA-113 (bg)	-0.03553	-76	-81	No	20	0	n/a	n/a	0.01	NP
Chloride, Total (mg/L)	HGWA-47 (bg)	0	0	38	No	12	0	n/a	n/a	0.01	NP
Chloride, Total (mg/L)	HGWA-48D (bg)	0	6	38	No	12	0	n/a	n/a	0.01	NP
Chloride, Total (mg/L)	HGWC-102	0.114	27	58	No	16	0	n/a	n/a	0.01	NP
<b>Chloride, Total (mg/L)</b>	<b>HGWC-103</b>	<b>0.4</b>	<b>128</b>	<b>87</b>	<b>Yes</b>	<b>21</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
<b>Chloride, Total (mg/L)</b>	<b>HGWC-105</b>	<b>0.4372</b>	<b>139</b>	<b>81</b>	<b>Yes</b>	<b>20</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
pH, Field (s.u.)	HGWA-111 (bg)	0.04142	50	92	No	22	0	n/a	n/a	0.01	NP
pH, Field (s.u.)	HGWA-112 (bg)	-0.007213	-22	-92	No	22	0	n/a	n/a	0.01	NP
pH, Field (s.u.)	HGWA-113 (bg)	0.02137	82	92	No	22	0	n/a	n/a	0.01	NP
pH, Field (s.u.)	HGWA-47 (bg)	0.01559	7	38	No	12	0	n/a	n/a	0.01	NP
pH, Field (s.u.)	HGWA-48D (bg)	0	1	38	No	12	0	n/a	n/a	0.01	NP
pH, Field (s.u.)	HGWC-101	0.01346	78	98	No	23	0	n/a	n/a	0.01	NP
Sulfate as SO4 (mg/L)	HGWA-111 (bg)	-0.01755	-34	-81	No	20	0	n/a	n/a	0.01	NP
Sulfate as SO4 (mg/L)	HGWA-112 (bg)	0.01239	18	81	No	20	20	n/a	n/a	0.01	NP
<b>Sulfate as SO4 (mg/L)</b>	<b>HGWA-113 (bg)</b>	<b>-0.9378</b>	<b>-133</b>	<b>-81</b>	<b>Yes</b>	<b>20</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Sulfate as SO4 (mg/L)	HGWA-47 (bg)	-0.06495	-5	-38	No	12	0	n/a	n/a	0.01	NP
<b>Sulfate as SO4 (mg/L)</b>	<b>HGWA-48D (bg)</b>	<b>-0.5856</b>	<b>-45</b>	<b>-38</b>	<b>Yes</b>	<b>12</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Sulfate as SO4 (mg/L)	HGWC-101	-0.7577	-32	-87	No	21	0	n/a	n/a	0.01	NP
Sulfate as SO4 (mg/L)	HGWC-102	-2.338	-5	-58	No	16	6.25	n/a	n/a	0.01	NP
Sulfate as SO4 (mg/L)	HGWC-103	7.824	69	87	No	21	0	n/a	n/a	0.01	NP
Sulfate as SO4 (mg/L)	HGWC-105	6.385	53	87	No	21	0	n/a	n/a	0.01	NP
Sulfate as SO4 (mg/L)	HGWC-107	-1.685	-84	-87	No	21	0	n/a	n/a	0.01	NP
Sulfate as SO4 (mg/L)	HGWC-117A	1.132	3	21	No	8	0	n/a	n/a	0.01	NP
<b>Sulfate as SO4 (mg/L)</b>	<b>HGWC-118</b>	<b>-2.164</b>	<b>-103</b>	<b>-87</b>	<b>Yes</b>	<b>21</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Total Dissolved Solids [TDS] (mg/L)	HGWA-111 (bg)	3.783	30	81	No	20	0	n/a	n/a	0.01	NP
Total Dissolved Solids [TDS] (mg/L)	HGWA-112 (bg)	0.7485	10	74	No	19	0	n/a	n/a	0.01	NP
Total Dissolved Solids [TDS] (mg/L)	HGWA-113 (bg)	0	-2	-81	No	20	0	n/a	n/a	0.01	NP
Total Dissolved Solids [TDS] (mg/L)	HGWA-47 (bg)	3.784	8	38	No	12	0	n/a	n/a	0.01	NP
Total Dissolved Solids [TDS] (mg/L)	HGWA-48D (bg)	2.281	15	38	No	12	0	n/a	n/a	0.01	NP
Total Dissolved Solids [TDS] (mg/L)	HGWC-102	6.292	11	58	No	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids [TDS] (mg/L)	HGWC-103	24.37	86	87	No	21	0	n/a	n/a	0.01	NP
<b>Total Dissolved Solids [TDS] (mg/L)</b>	<b>HGWC-105</b>	<b>32.02</b>	<b>138</b>	<b>87</b>	<b>Yes</b>	<b>21</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>



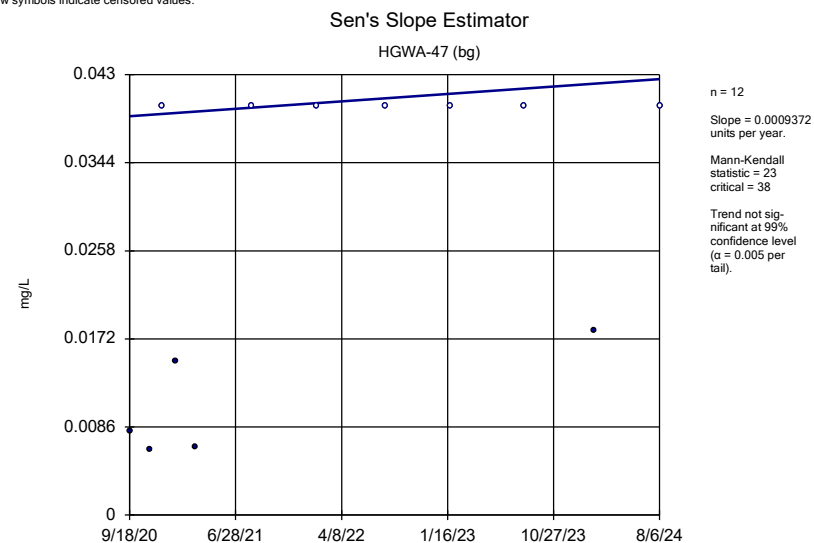
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Plant Hammond Client: Southern Company Data: Hammond AP-4



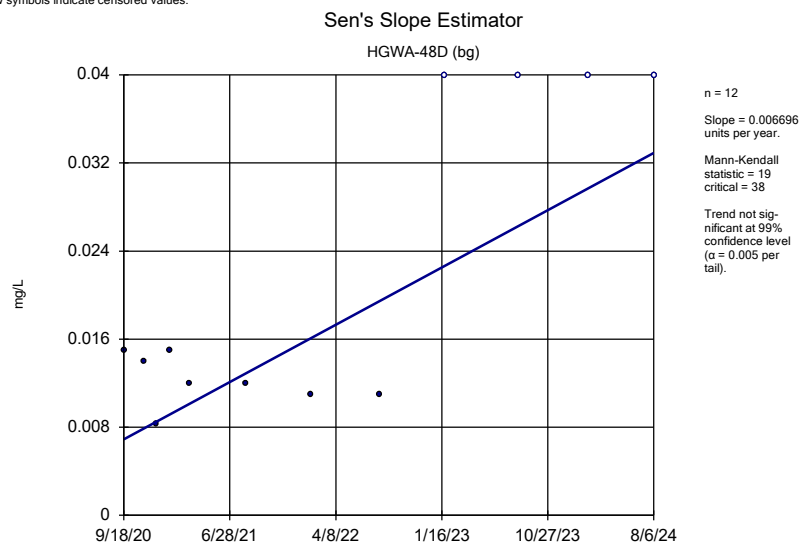
Constituent: Boron, total Analysis Run 10/17/2024 12:51 PM View: Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-4



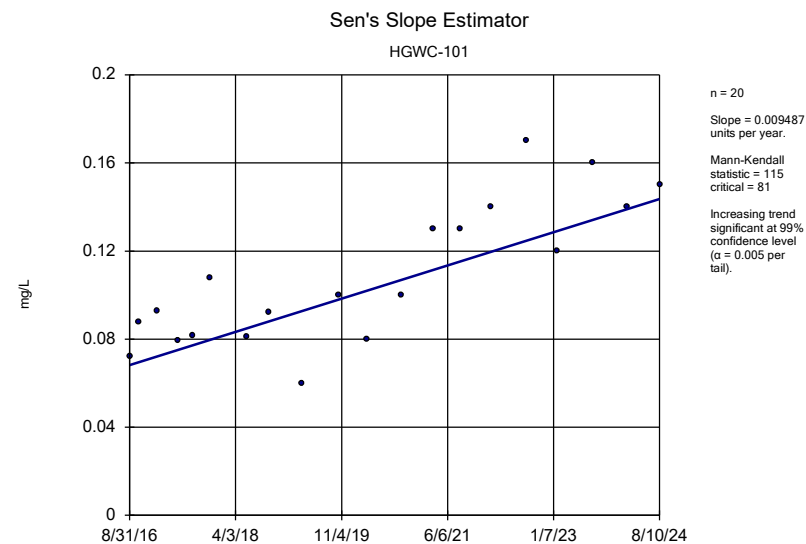
Constituent: Boron, total Analysis Run 10/17/2024 12:51 PM View: Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-4



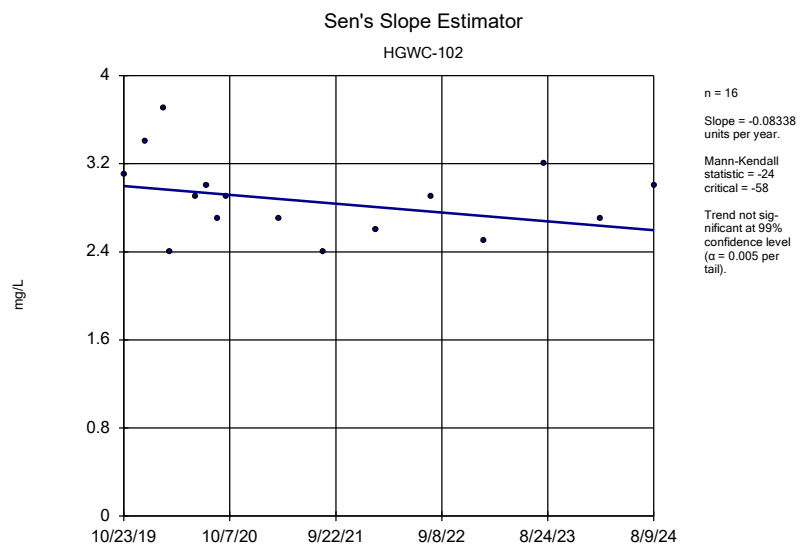
Constituent: Boron, total Analysis Run 10/17/2024 12:51 PM View: Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-4



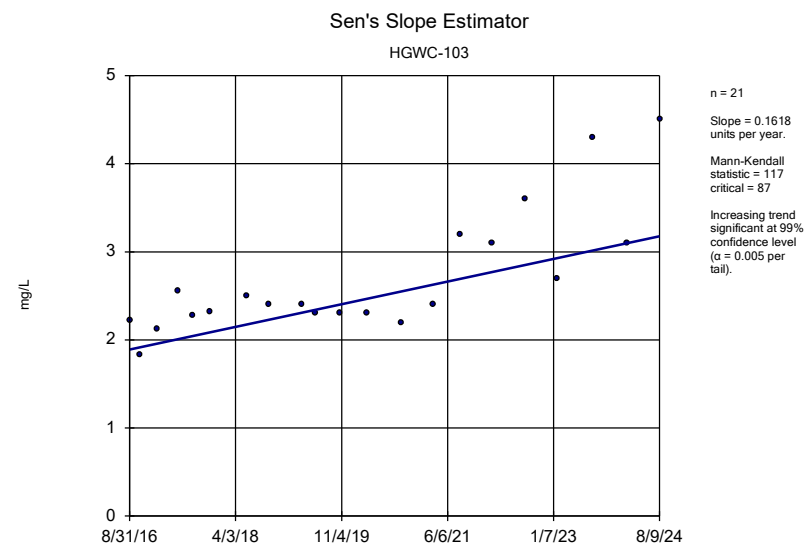
Constituent: Boron, total Analysis Run 10/17/2024 12:51 PM View: Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-4



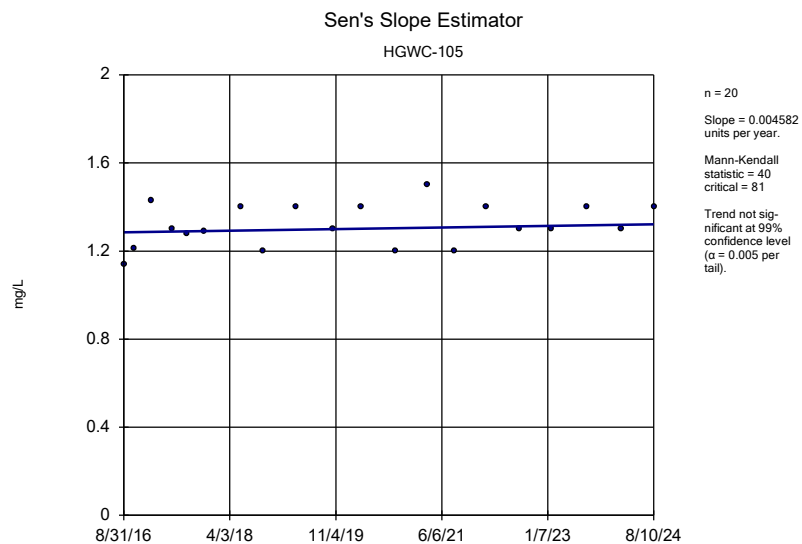
Constituent: Boron, total Analysis Run 10/17/2024 12:51 PM View: Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-4



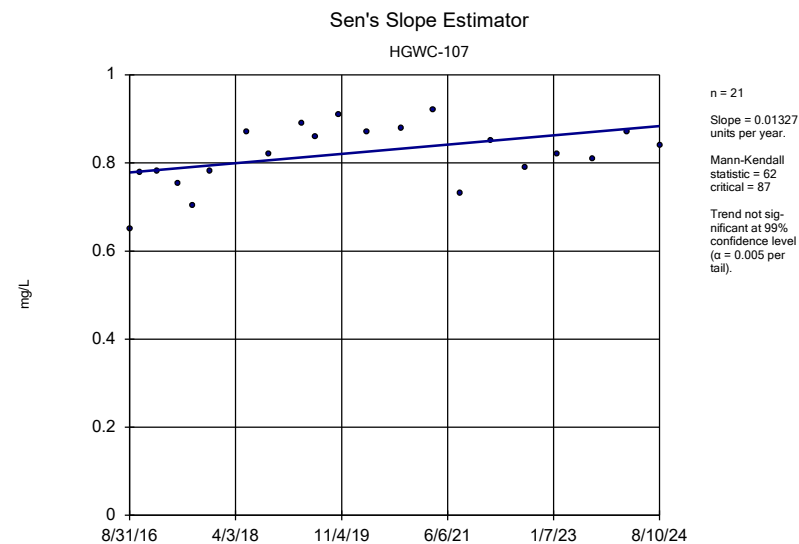
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Plant Hammond Client: Southern Company Data: Hammond AP-4



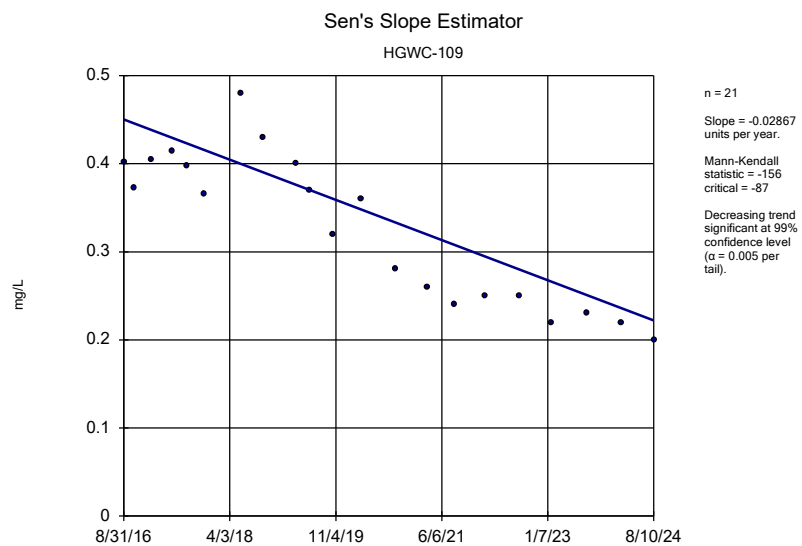
Constituent: Boron, total Analysis Run 10/17/2024 12:51 PM View: Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-4



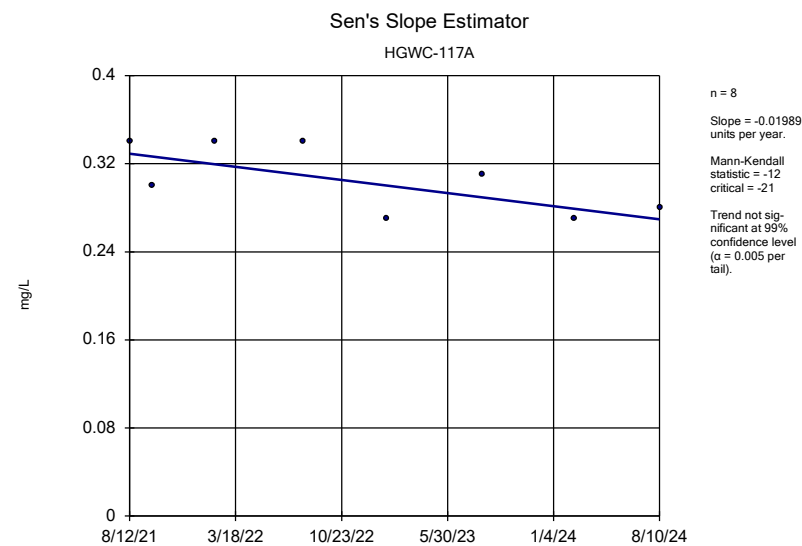
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Plant Hammond Client: Southern Company Data: Hammond AP-4



Constituent: Boron, total Analysis Run 10/17/2024 12:51 PM View: Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-4



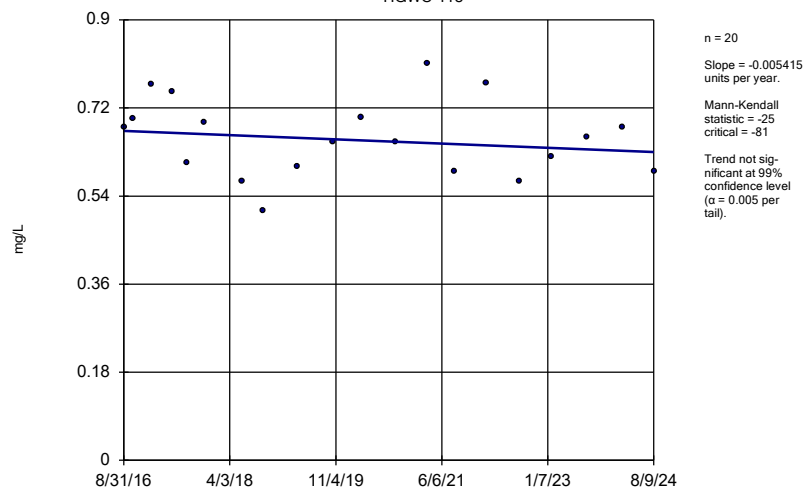
Constituent: Boron, total Analysis Run 10/17/2024 12:51 PM View: Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-4



Constituent: Boron, total Analysis Run 10/17/2024 12:51 PM View: Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-4

## Sen's Slope Estimator

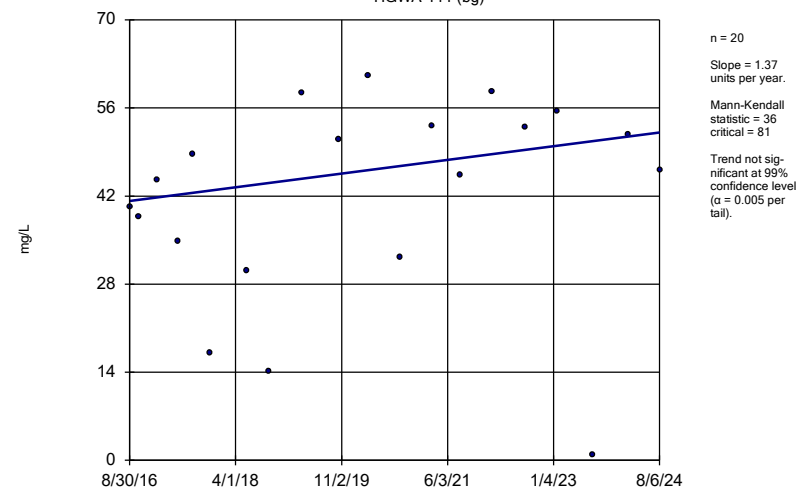
HGWC-118



Constituent: Boron, total Analysis Run 10/17/2024 12:51 PM View: Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-4

## Sen's Slope Estimator

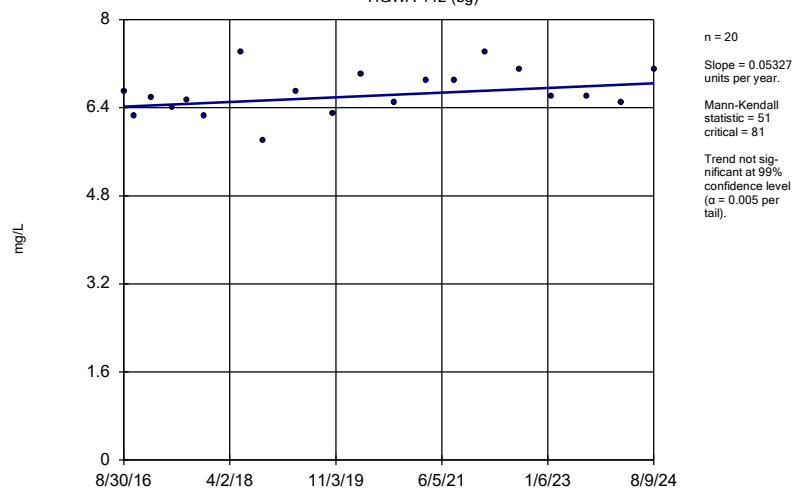
HGWA-111 (bg)



Constituent: Calcium, total Analysis Run 10/17/2024 12:51 PM View: Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-4

## Sen's Slope Estimator

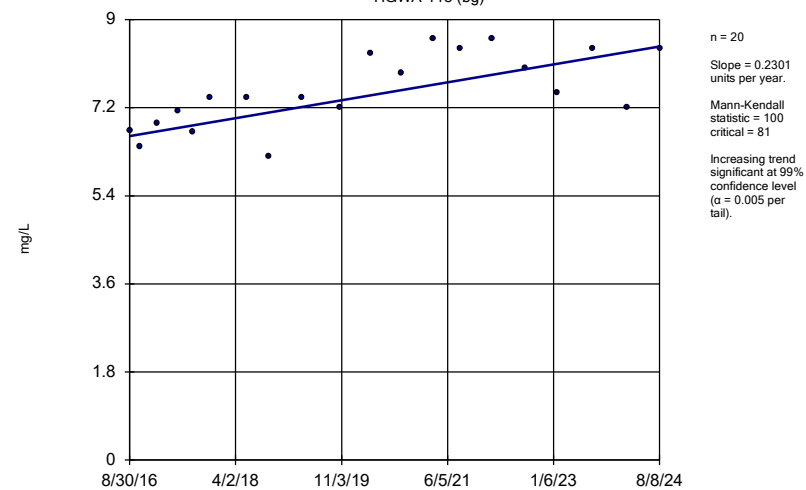
HGWA-112 (bg)



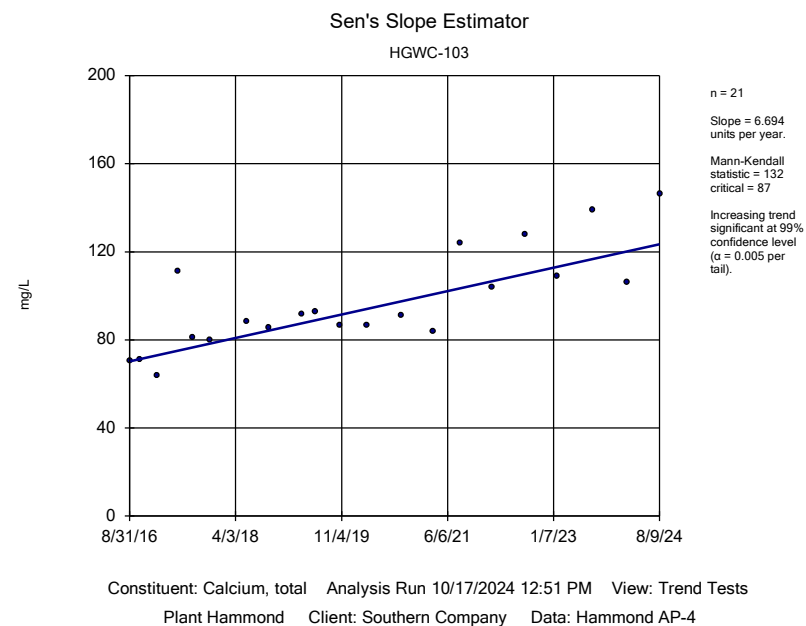
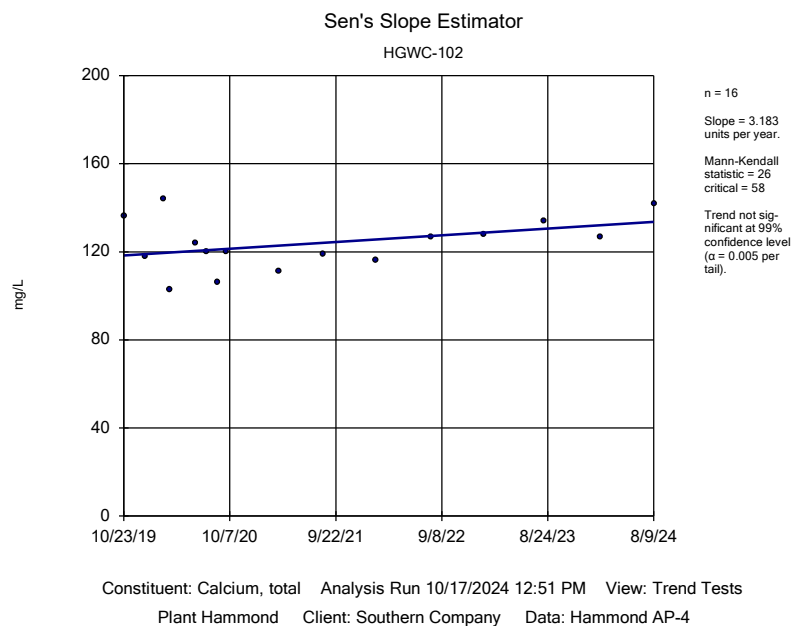
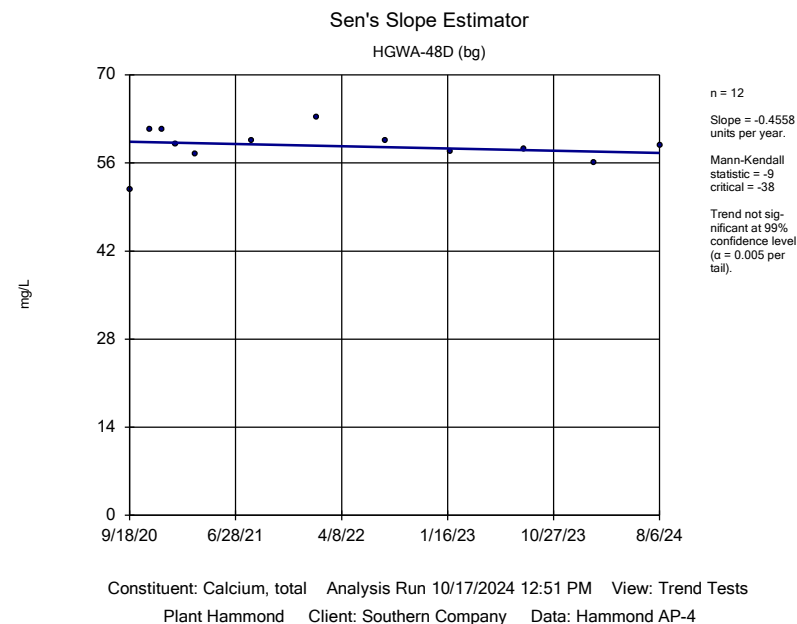
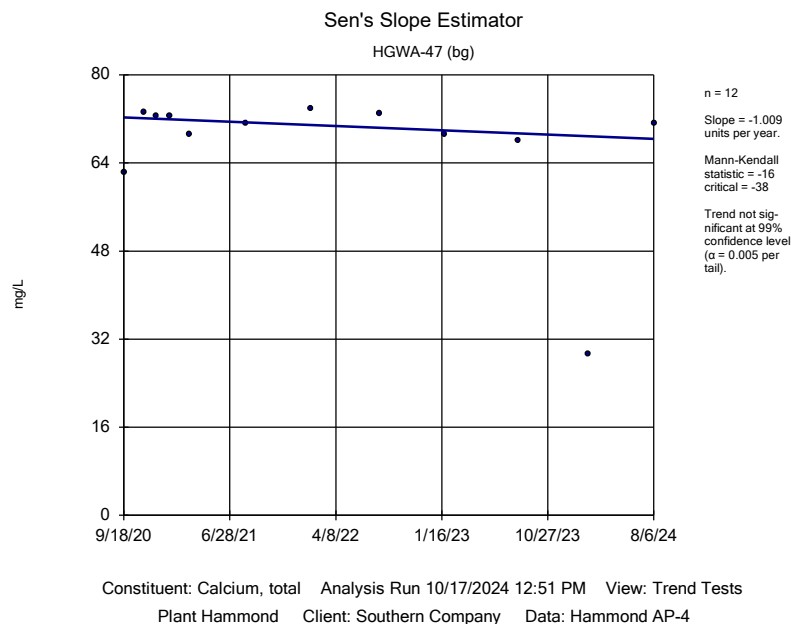
Constituent: Calcium, total Analysis Run 10/17/2024 12:51 PM View: Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-4

## Sen's Slope Estimator

HGWA-113 (bg)

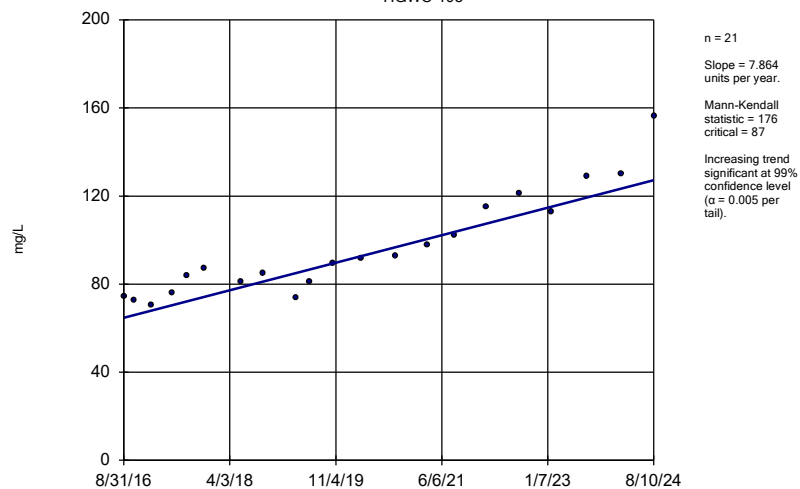


Constituent: Calcium, total Analysis Run 10/17/2024 12:51 PM View: Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-4



## Sen's Slope Estimator

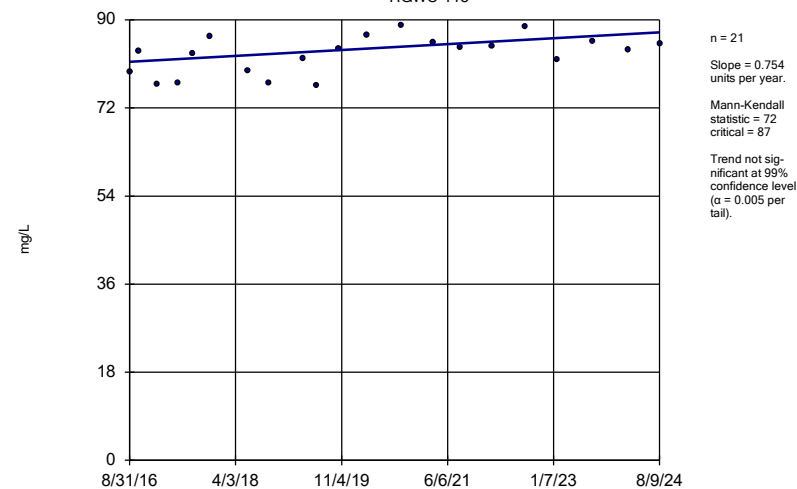
HGWC-105



Constituent: Calcium, total Analysis Run 10/17/2024 12:51 PM View: Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-4

## Sen's Slope Estimator

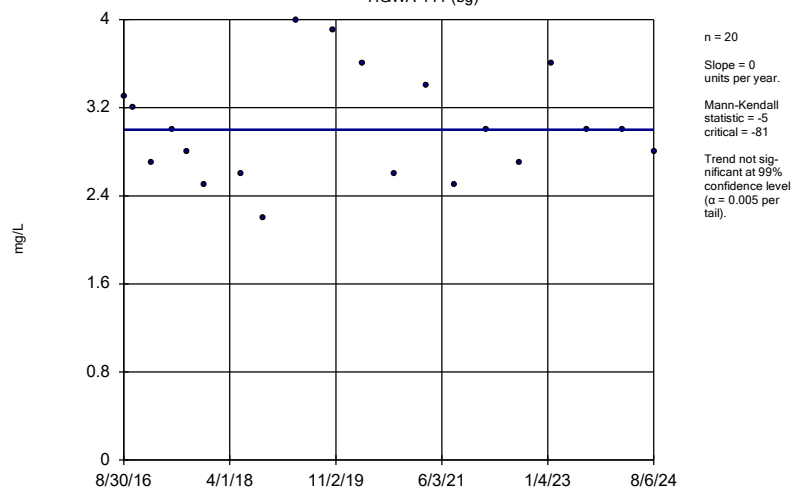
HGWC-118



Constituent: Calcium, total Analysis Run 10/17/2024 12:51 PM View: Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-4

## Sen's Slope Estimator

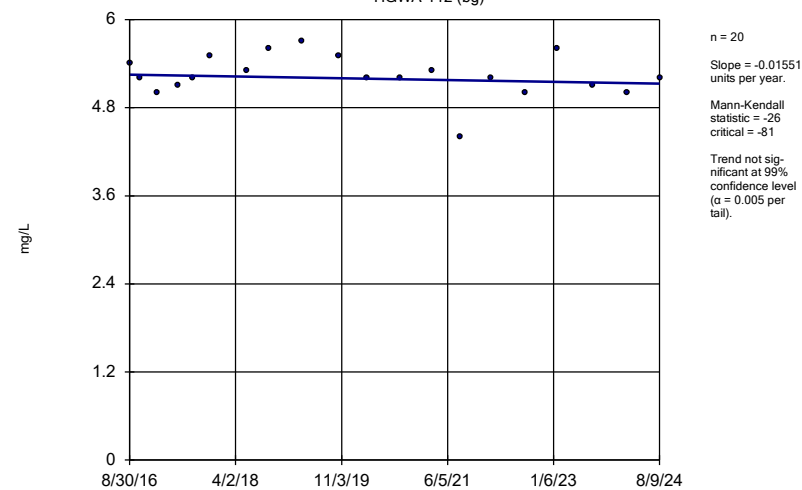
HGWA-111 (bg)



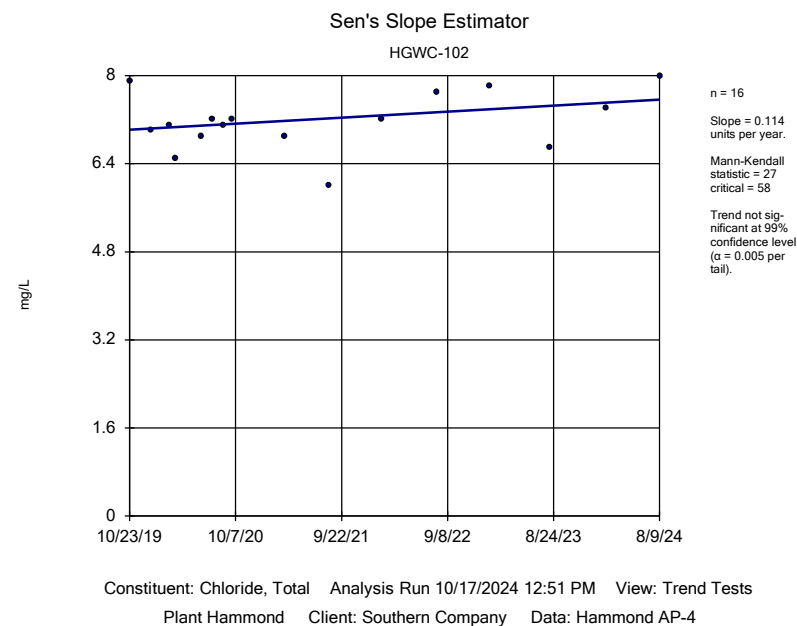
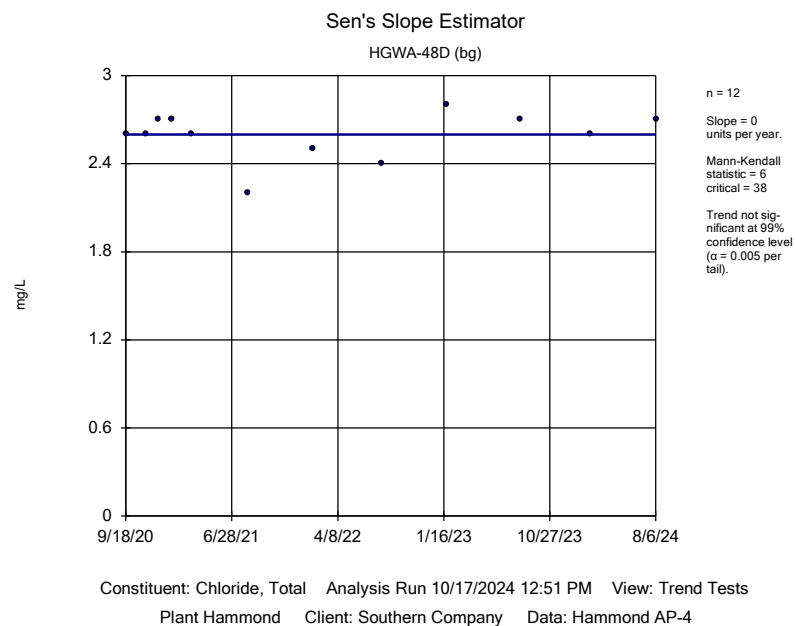
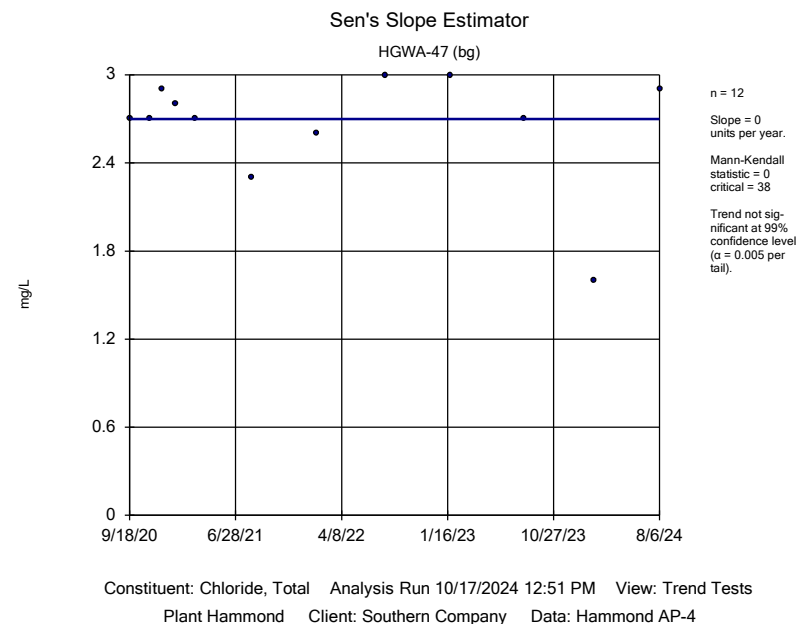
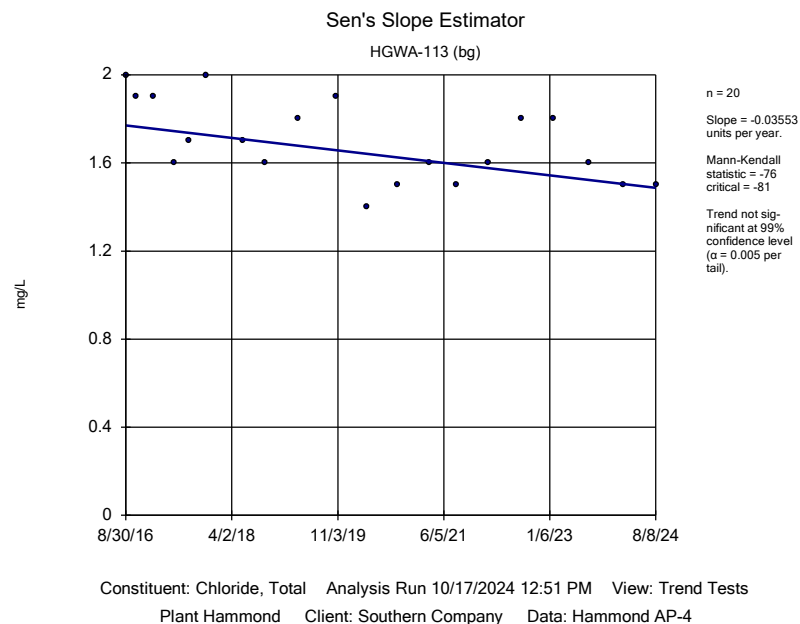
Constituent: Chloride, Total Analysis Run 10/17/2024 12:51 PM View: Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-4

## Sen's Slope Estimator

HGWA-112 (bg)



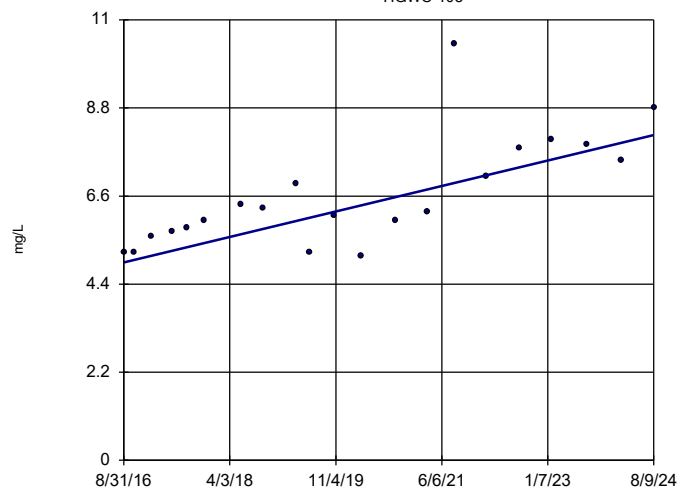
Constituent: Chloride, Total Analysis Run 10/17/2024 12:51 PM View: Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-4





## Sen's Slope Estimator

HGWC-103

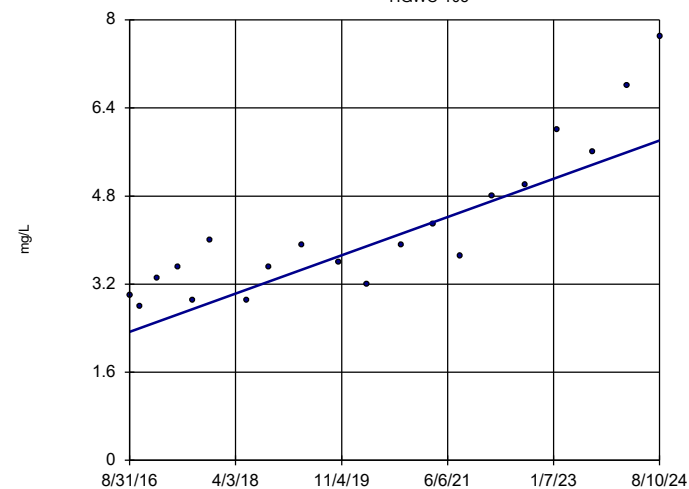


n = 21  
Slope = 0.4  
units per year.  
Mann-Kendall  
statistic = 128  
critical = 87  
Increasing trend  
significant at 99%  
confidence level  
( $\alpha = 0.005$  per  
tail).

Constituent: Chloride, Total Analysis Run 10/17/2024 12:51 PM View: Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-4

## Sen's Slope Estimator

HGWC-105

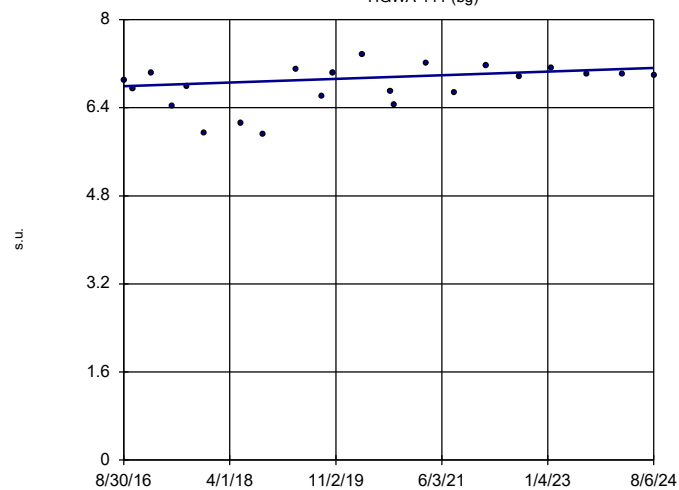


n = 20  
Slope = 0.4372  
units per year.  
Mann-Kendall  
statistic = 139  
critical = 81  
Increasing trend  
significant at 99%  
confidence level  
( $\alpha = 0.005$  per  
tail).

Constituent: Chloride, Total Analysis Run 10/17/2024 12:51 PM View: Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-4

## Sen's Slope Estimator

HGWA-111 (bg)

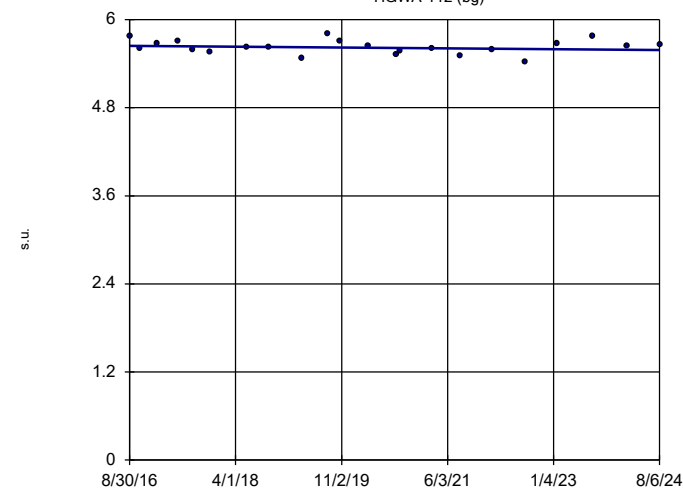


n = 22  
Slope = 0.04142  
units per year.  
Mann-Kendall  
statistic = 50  
critical = 92  
Trend not sig-  
nificant at 99%  
confidence level  
( $\alpha = 0.005$  per  
tail).

Constituent: pH, Field Analysis Run 10/17/2024 12:51 PM View: Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-4

## Sen's Slope Estimator

HGWA-112 (bg)

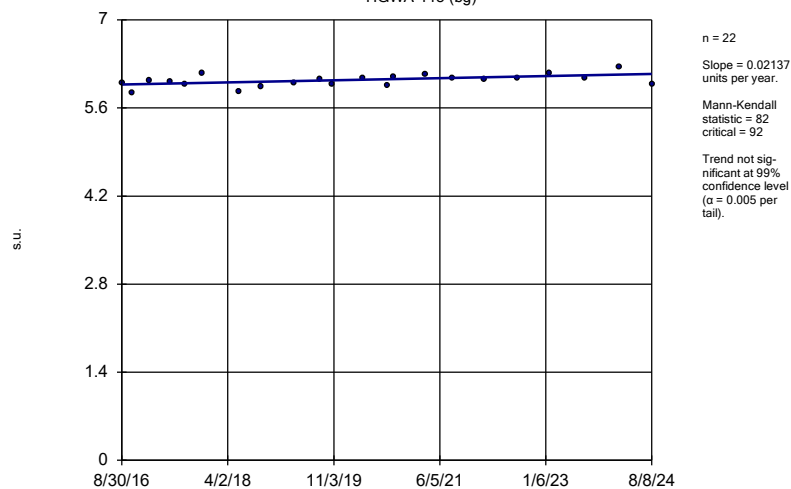


n = 22  
Slope = -0.007213  
units per year.  
Mann-Kendall  
statistic = -22  
critical = -92  
Trend not sig-  
nificant at 99%  
confidence level  
( $\alpha = 0.005$  per  
tail).

Constituent: pH, Field Analysis Run 10/17/2024 12:51 PM View: Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-4

## Sen's Slope Estimator

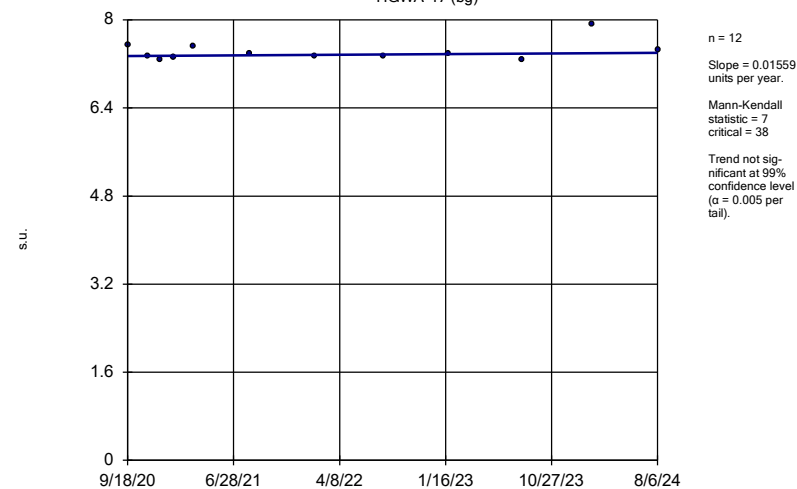
HGWA-113 (bg)



Constituent: pH, Field Analysis Run 10/17/2024 12:51 PM View: Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-4

## Sen's Slope Estimator

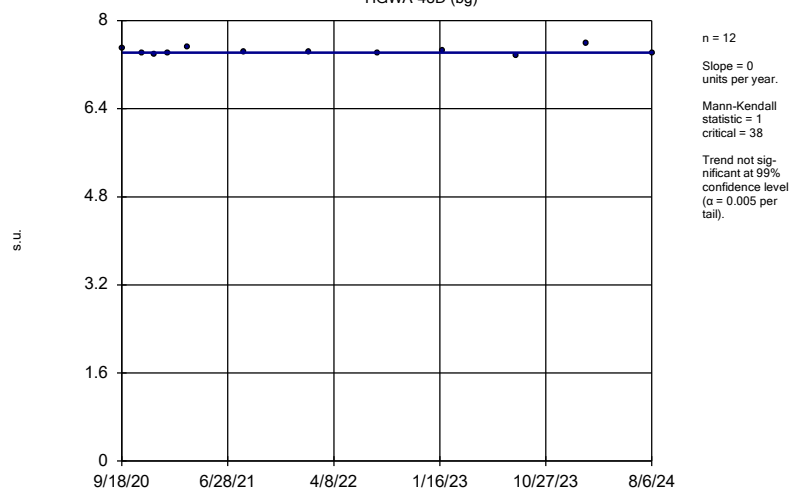
HGWA-47 (bg)



Constituent: pH, Field Analysis Run 10/17/2024 12:51 PM View: Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-4

## Sen's Slope Estimator

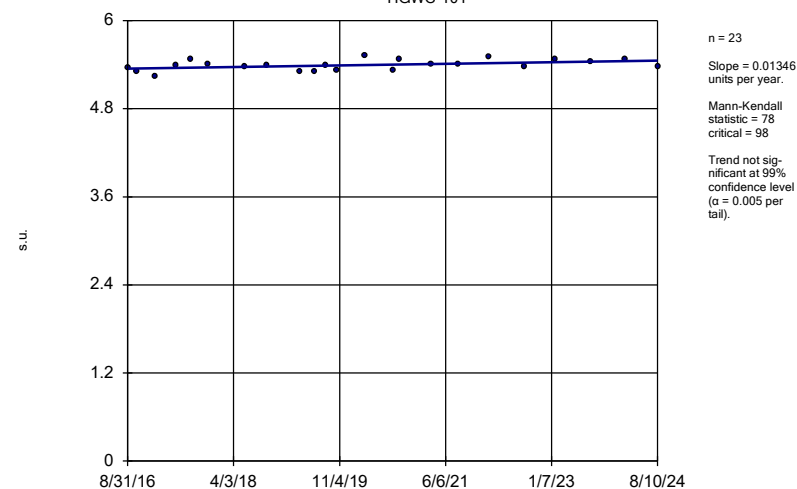
HGWA-48D (bg)



Constituent: pH, Field Analysis Run 10/17/2024 12:51 PM View: Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-4

## Sen's Slope Estimator

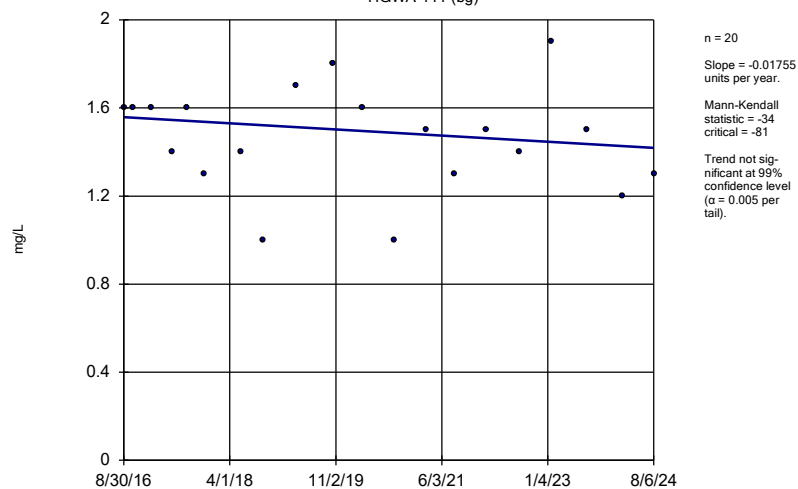
HGWC-101



Constituent: pH, Field Analysis Run 10/17/2024 12:51 PM View: Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-4

## Sen's Slope Estimator

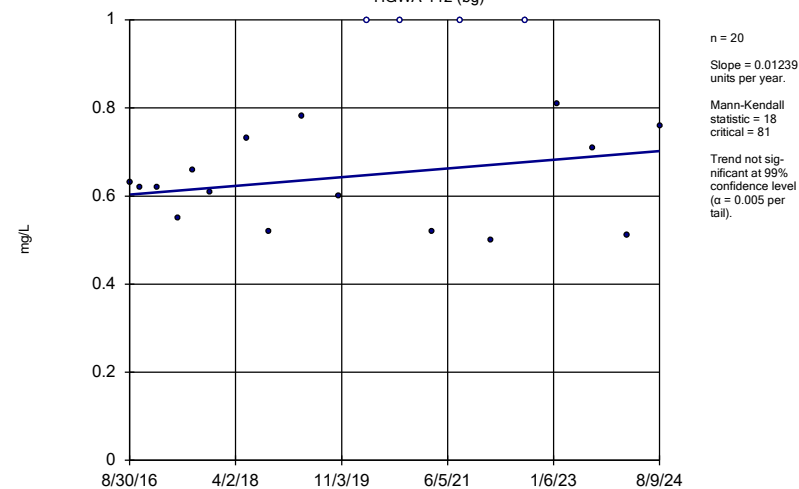
HGWA-111 (bg)



Constituent: Sulfate as SO4 Analysis Run 10/17/2024 12:51 PM View: Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-4

## Sen's Slope Estimator

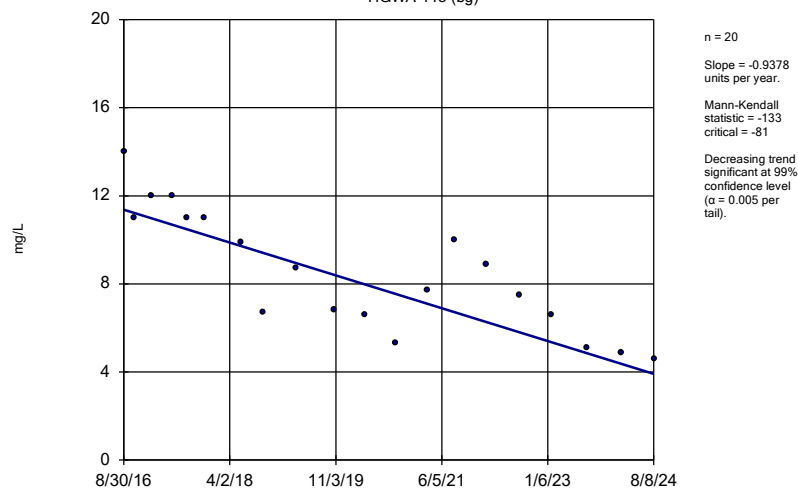
HGWA-112 (bg)



Constituent: Sulfate as SO4 Analysis Run 10/17/2024 12:52 PM View: Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-4

## Sen's Slope Estimator

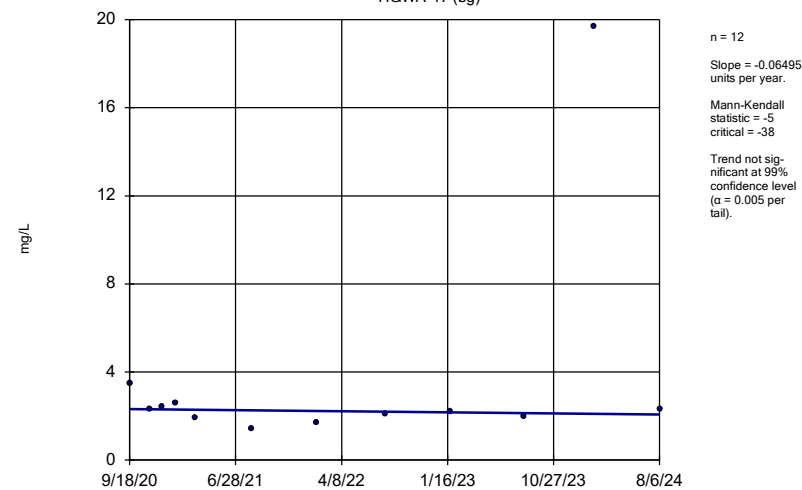
HGWA-113 (bg)



Constituent: Sulfate as SO4 Analysis Run 10/17/2024 12:52 PM View: Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-4

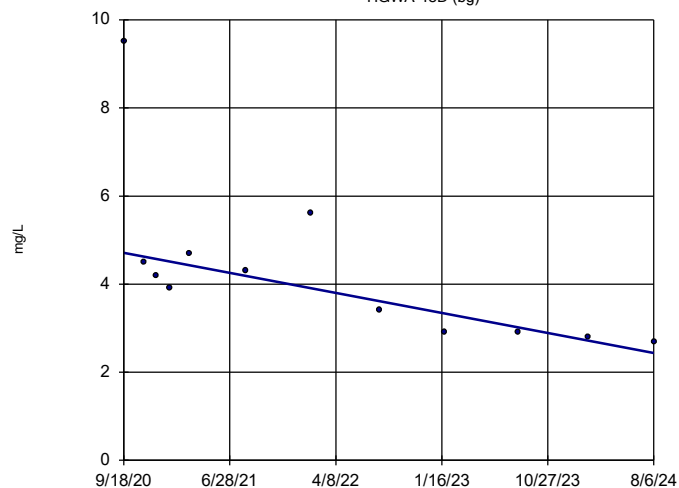
## Sen's Slope Estimator

HGWA-47 (bg)



## Sen's Slope Estimator

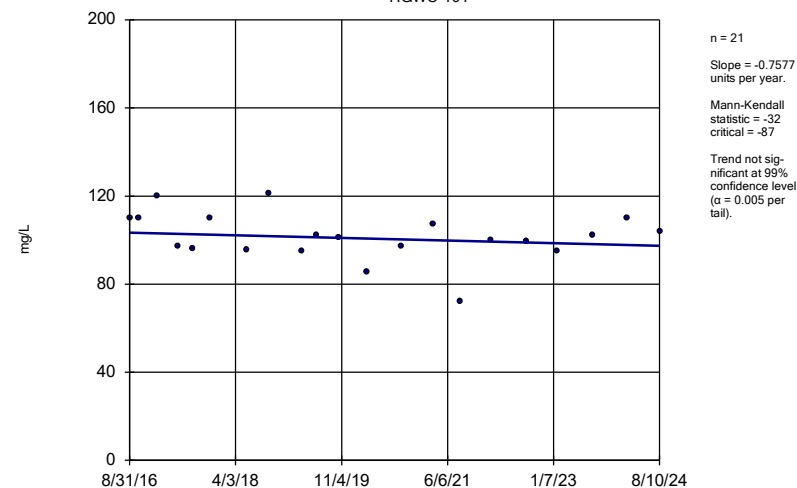
HGWA-48D (bg)



Constituent: Sulfate as SO<sub>4</sub> Analysis Run 10/17/2024 12:52 PM View: Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-4

## Sen's Slope Estimator

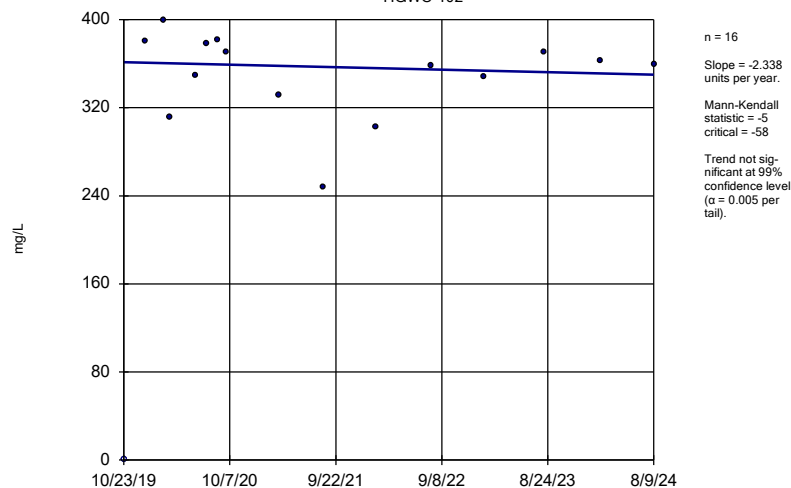
HGWC-101



Constituent: Sulfate as SO<sub>4</sub> Analysis Run 10/17/2024 12:52 PM View: Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-4

## Sen's Slope Estimator

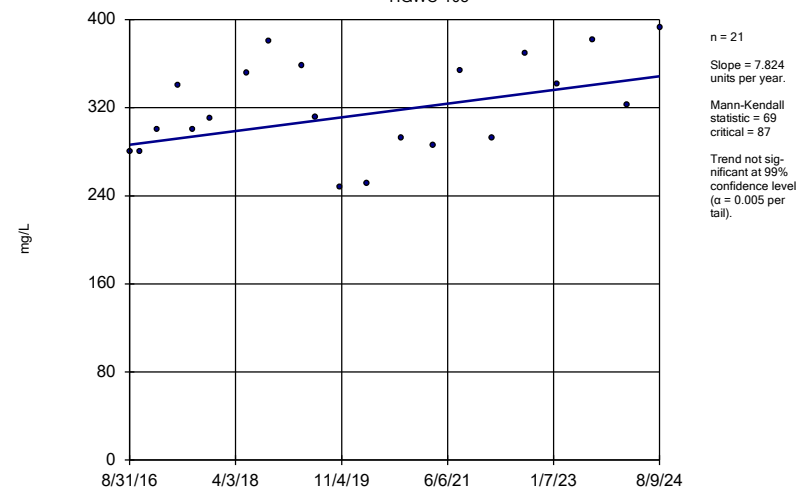
HGWC-102



Constituent: Sulfate as SO<sub>4</sub> Analysis Run 10/17/2024 12:52 PM View: Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-4

## Sen's Slope Estimator

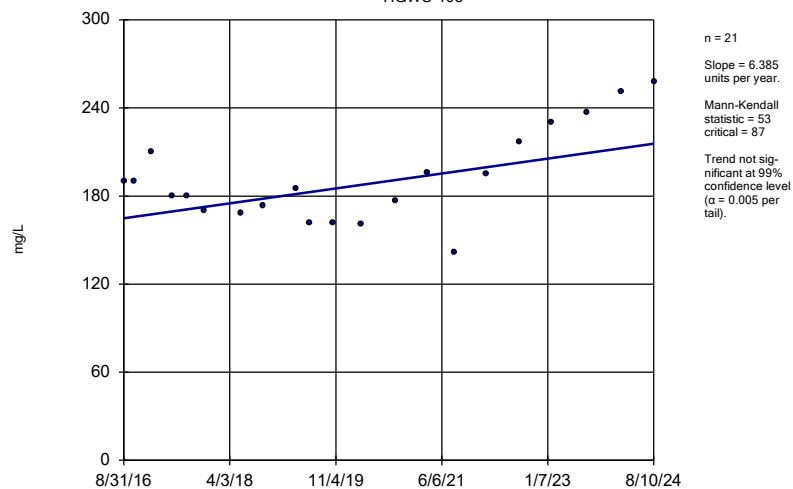
HGWC-103



Constituent: Sulfate as SO<sub>4</sub> Analysis Run 10/17/2024 12:52 PM View: Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-4

## Sen's Slope Estimator

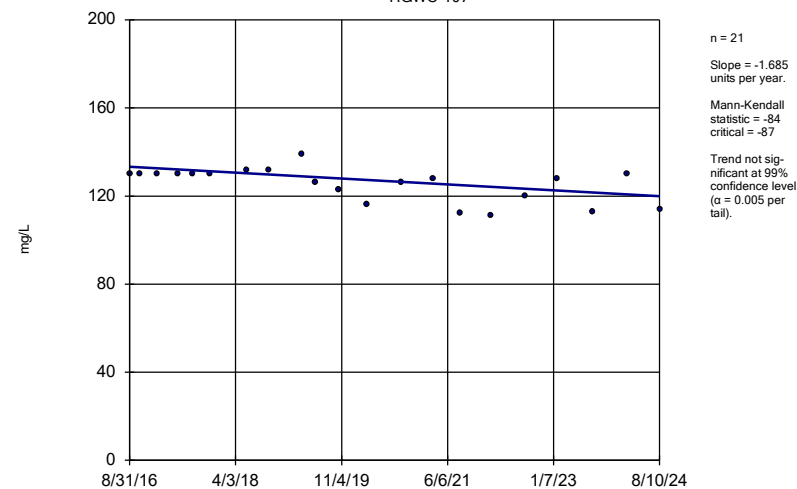
HGWC-105



Constituent: Sulfate as SO4 Analysis Run 10/17/2024 12:52 PM View: Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-4

## Sen's Slope Estimator

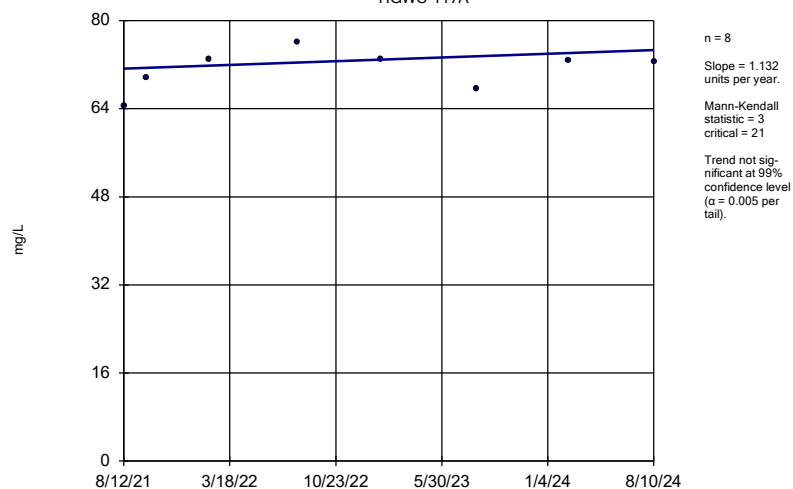
HGWC-107



Constituent: Sulfate as SO4 Analysis Run 10/17/2024 12:52 PM View: Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-4

## Sen's Slope Estimator

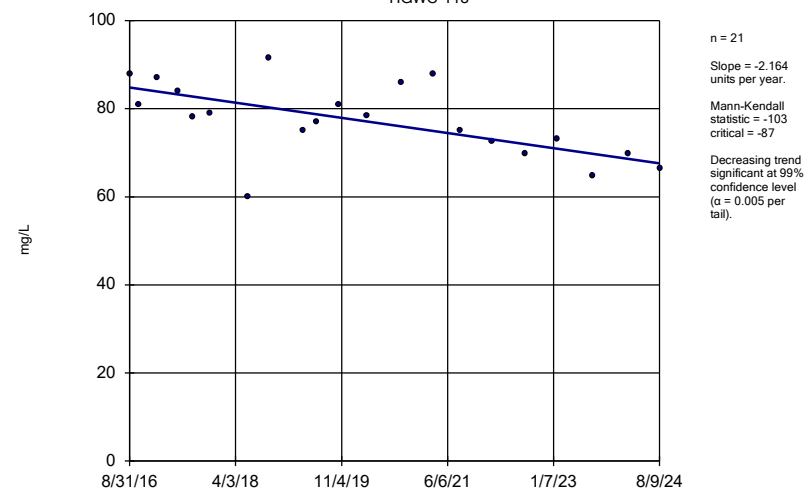
HGWC-117A



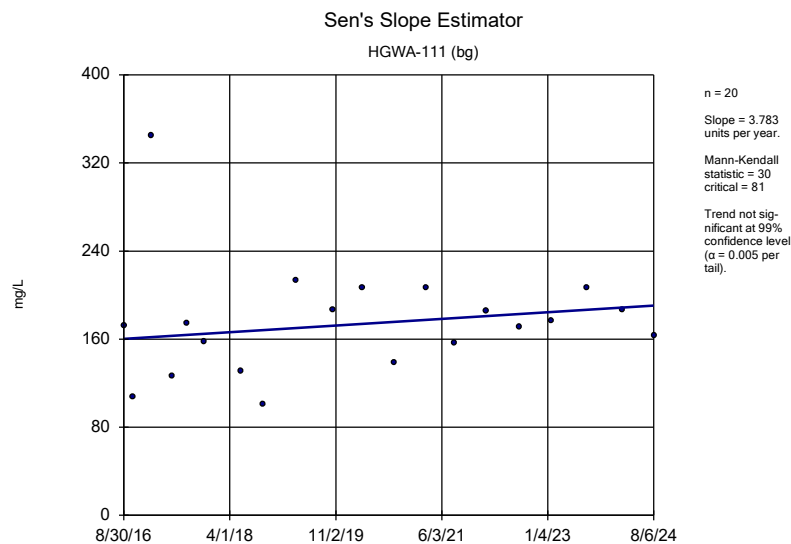
Constituent: Sulfate as SO4 Analysis Run 10/17/2024 12:52 PM View: Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-4

## Sen's Slope Estimator

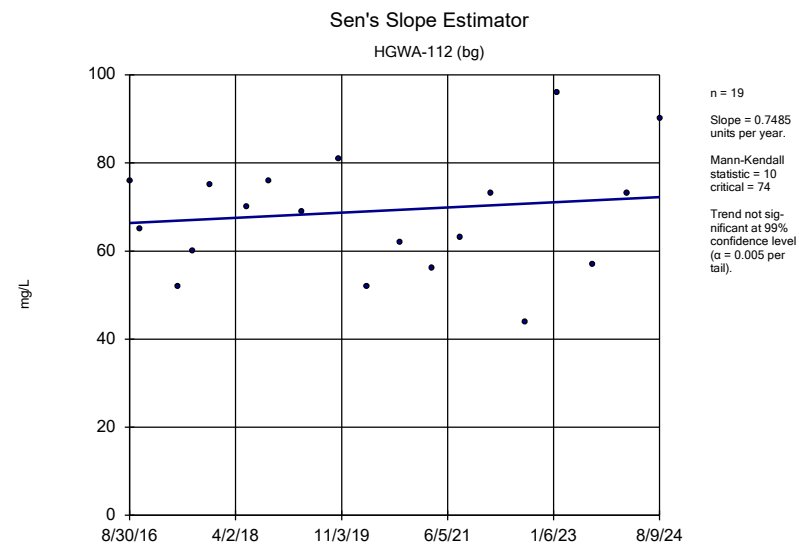
HGWC-118



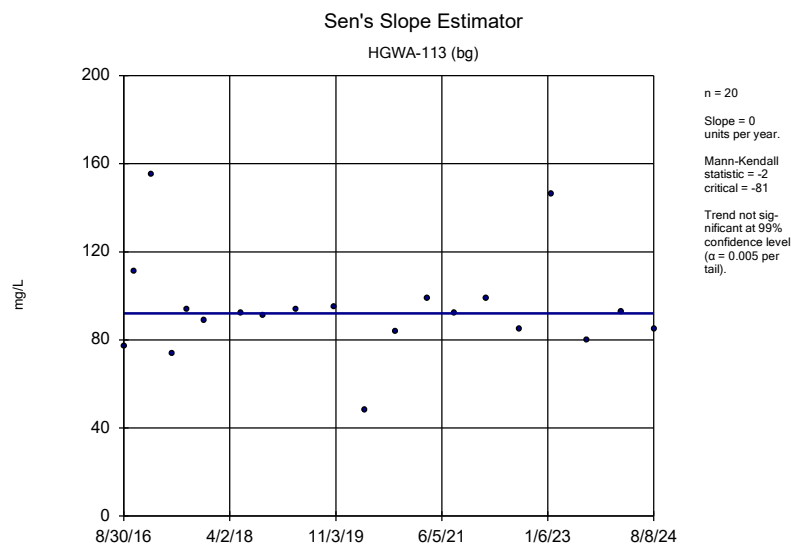
Constituent: Sulfate as SO4 Analysis Run 10/17/2024 12:52 PM View: Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-4



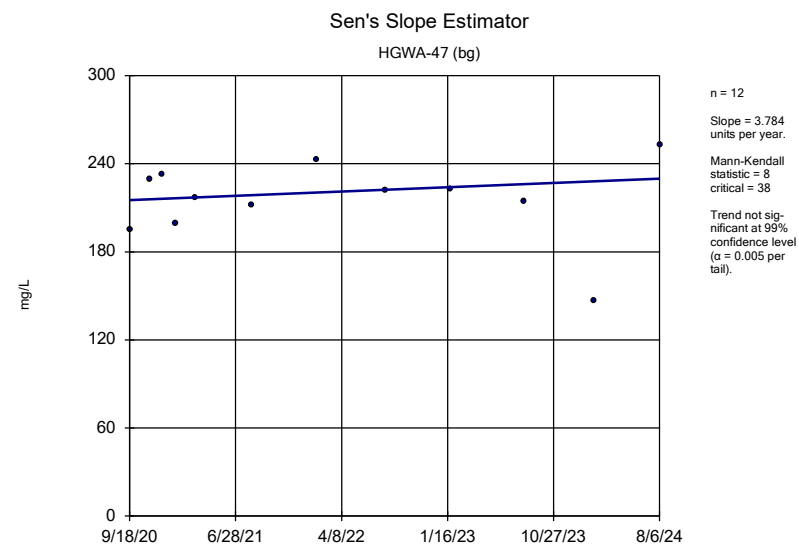
Constituent: Total Dissolved Solids [TDS] Analysis Run 10/17/2024 12:52 PM View: Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-4



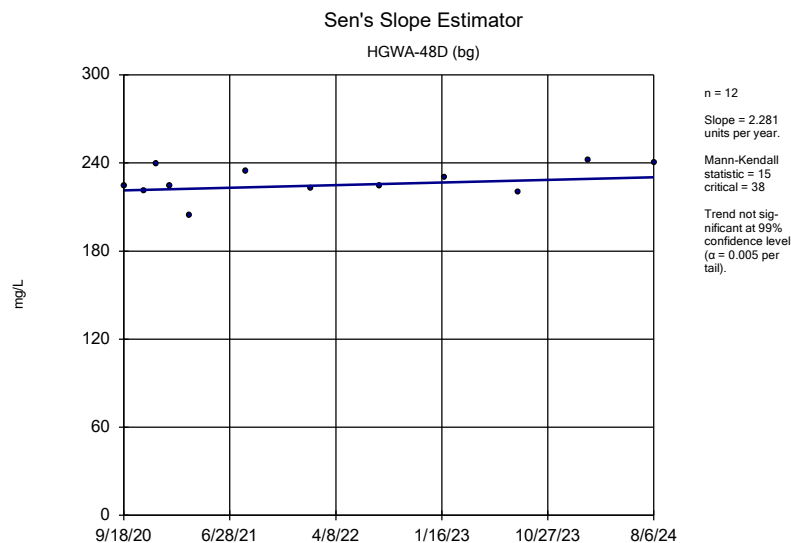
Constituent: Total Dissolved Solids [TDS] Analysis Run 10/17/2024 12:52 PM View: Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-4



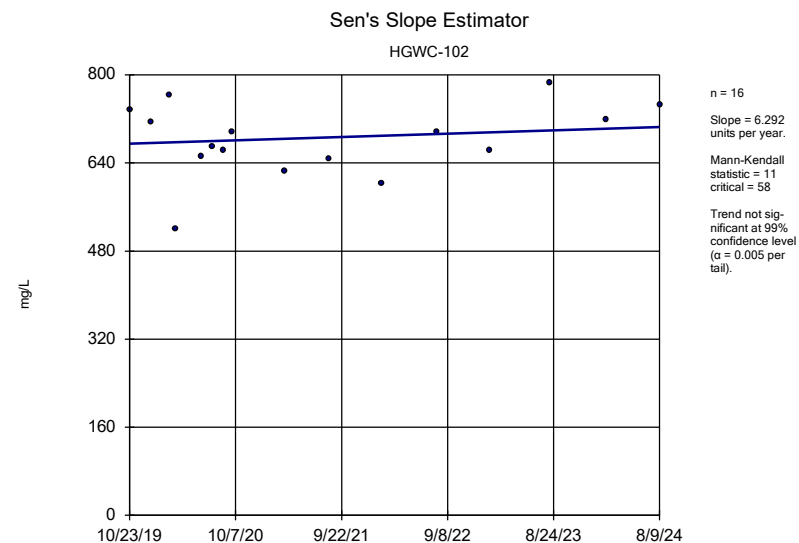
Constituent: Total Dissolved Solids [TDS] Analysis Run 10/17/2024 12:52 PM View: Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-4



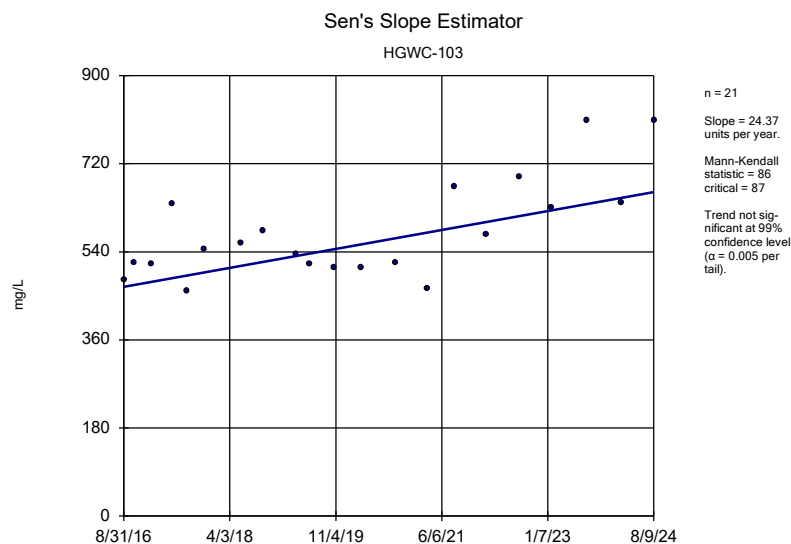
Constituent: Total Dissolved Solids [TDS] Analysis Run 10/17/2024 12:52 PM View: Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-4



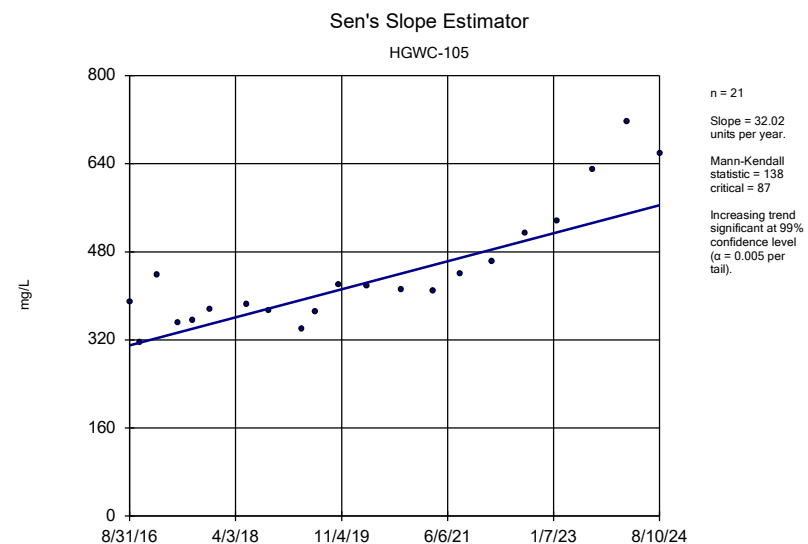
Constituent: Total Dissolved Solids [TDS] Analysis Run 10/17/2024 12:52 PM View: Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-4



Constituent: Total Dissolved Solids [TDS] Analysis Run 10/17/2024 12:52 PM View: Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-4



Constituent: Total Dissolved Solids [TDS] Analysis Run 10/17/2024 12:52 PM View: Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-4



Constituent: Total Dissolved Solids [TDS] Analysis Run 10/17/2024 12:52 PM View: Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-4

FIGURE F.

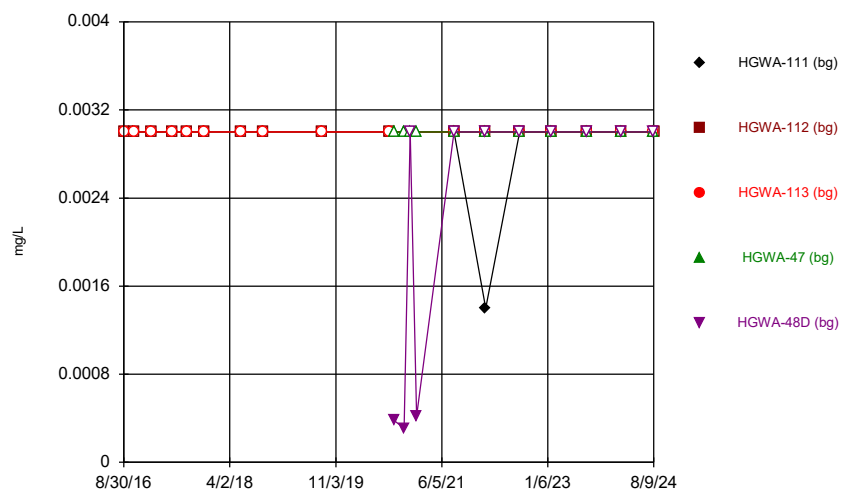


# Upper Tolerance Limits Summary Table

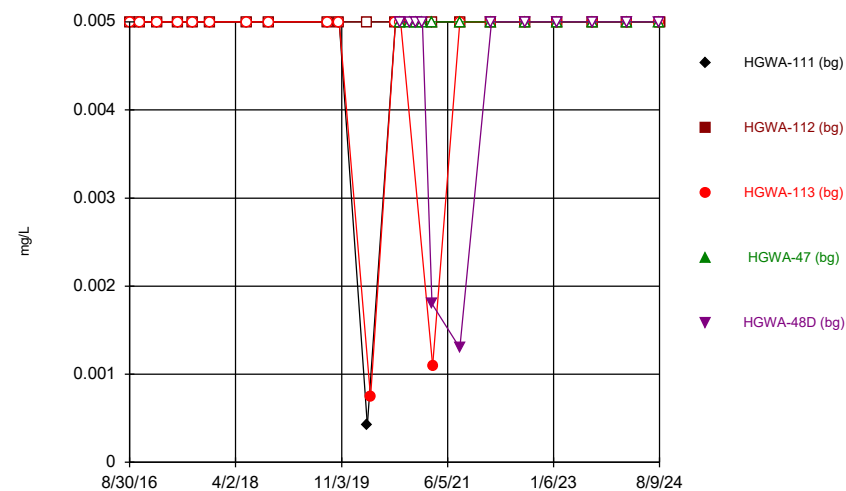
Plant Hammond    Client: Southern Company    Data: Hammond AP-4    Printed 10/16/2024, 2:59 PM

<u>Constituent</u>	<u>Upper Lim.</u>	<u>Lower Lim.</u>	<u>Date</u>	<u>Observ.</u>	<u>Sig.</u>	<u>Bg N</u>	<u>%NDs</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Antimony (mg/L)	0.003	n/a	n/a	n/a	n/a	73	94.52	n/a	0.02365	NP Inter(NDs)
Arsenic (mg/L)	0.005	n/a	n/a	n/a	n/a	87	94.25	n/a	0.01153	NP Inter(NDs)
Barium (mg/L)	0.12	n/a	n/a	n/a	n/a	87	0	n/a	0.01153	NP Inter(normality)
Beryllium (mg/L)	0.0019	n/a	n/a	n/a	n/a	87	91.95	n/a	0.01153	NP Inter(NDs)
Cadmium (mg/L)	0.0005	n/a	n/a	n/a	n/a	87	100	n/a	0.01153	NP Inter(NDs)
Chromium (mg/L)	0.0061	n/a	n/a	n/a	n/a	87	42.53	n/a	0.01153	NP Inter(normality)
Cobalt (mg/L)	0.005	n/a	n/a	n/a	n/a	87	90.8	n/a	0.01153	NP Inter(NDs)
Combined Radium 226 & 228 (pCi/L)	1.29	n/a	n/a	n/a	n/a	87	0	No	0.05	Inter
Fluoride, total (mg/L)	0.23	n/a	n/a	n/a	n/a	90	20	n/a	0.009888	NP Inter(normality)
Lead (mg/L)	0.0016	n/a	n/a	n/a	n/a	87	74.71	n/a	0.01153	NP Inter(NDs)
Lithium (mg/L)	0.03	n/a	n/a	n/a	n/a	87	37.93	n/a	0.01153	NP Inter(normality)
Mercury (mg/L)	0.0002	n/a	n/a	n/a	n/a	73	83.56	n/a	0.02365	NP Inter(NDs)
Molybdenum (mg/L)	0.01	n/a	n/a	n/a	n/a	73	82.19	n/a	0.02365	NP Inter(NDs)
Selenium (mg/L)	0.005	n/a	n/a	n/a	n/a	73	79.45	n/a	0.02365	NP Inter(NDs)
Thallium (mg/L)	0.001	n/a	n/a	n/a	n/a	73	100	n/a	0.02365	NP Inter(NDs)

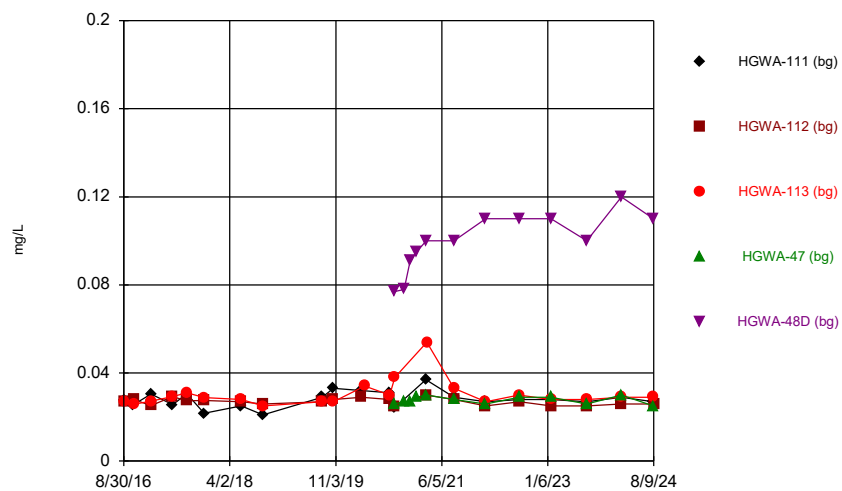
Time Series



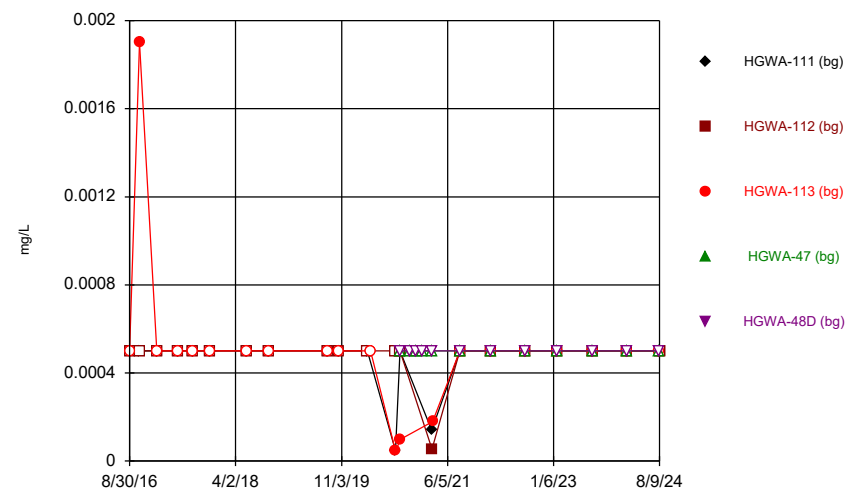
Time Series



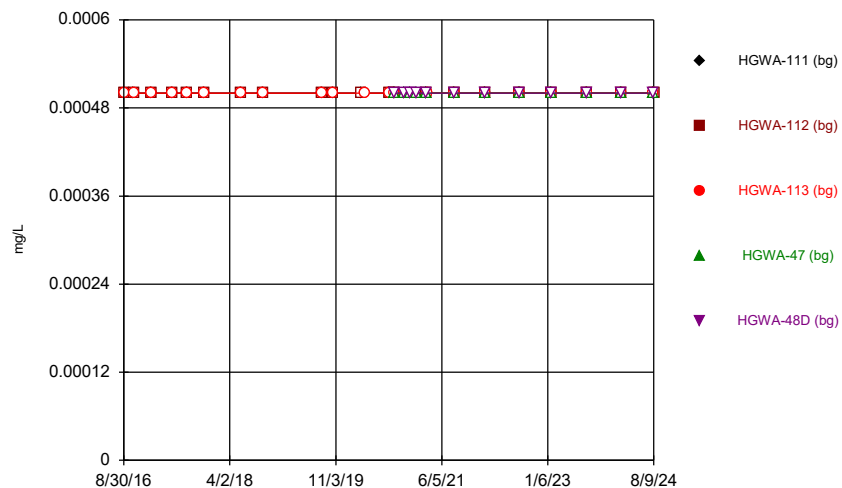
Time Series



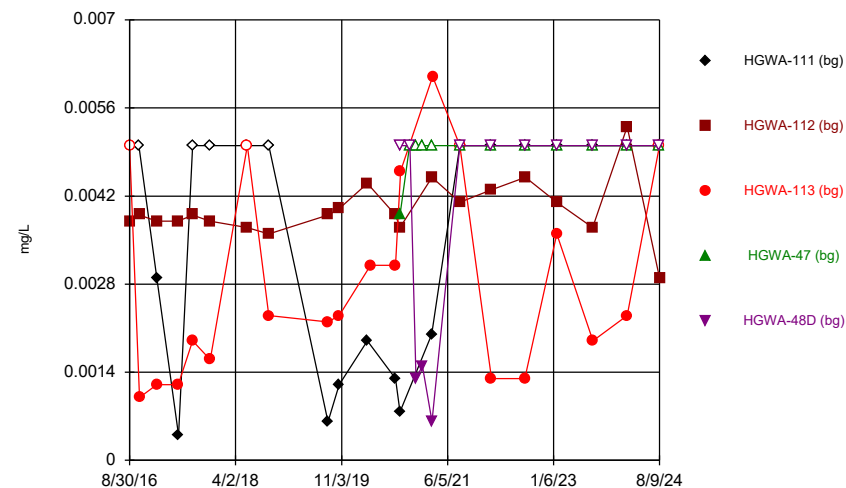
Time Series



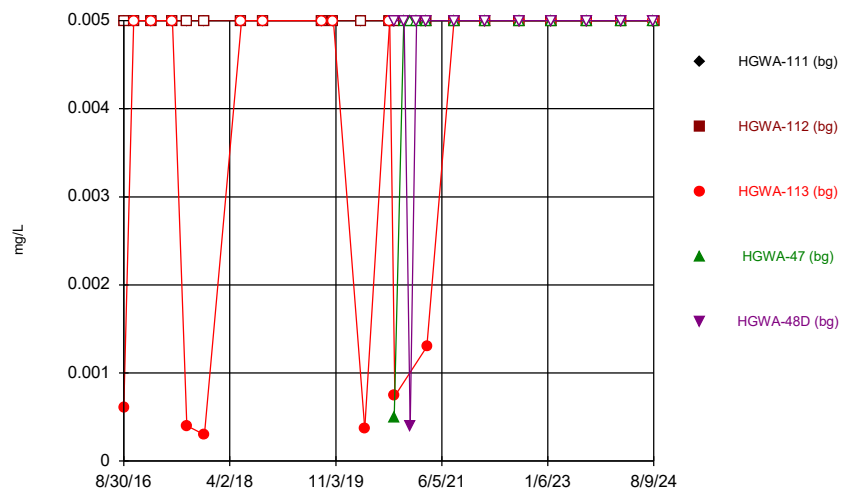
Time Series



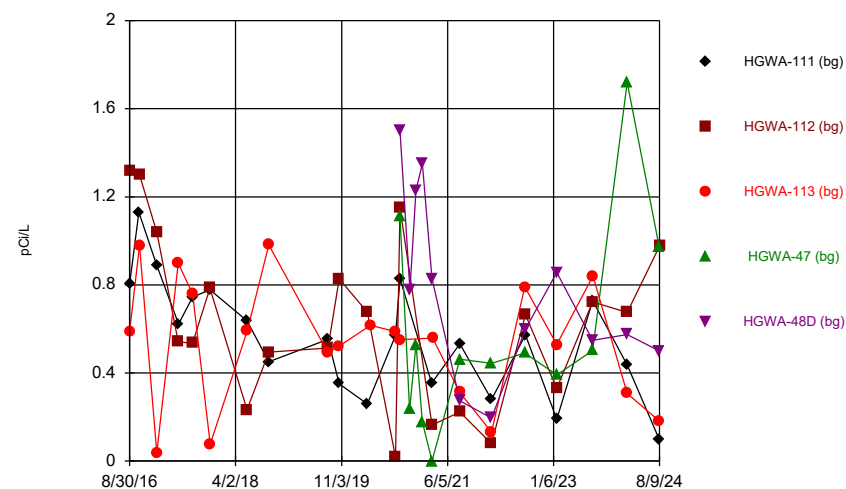
Time Series



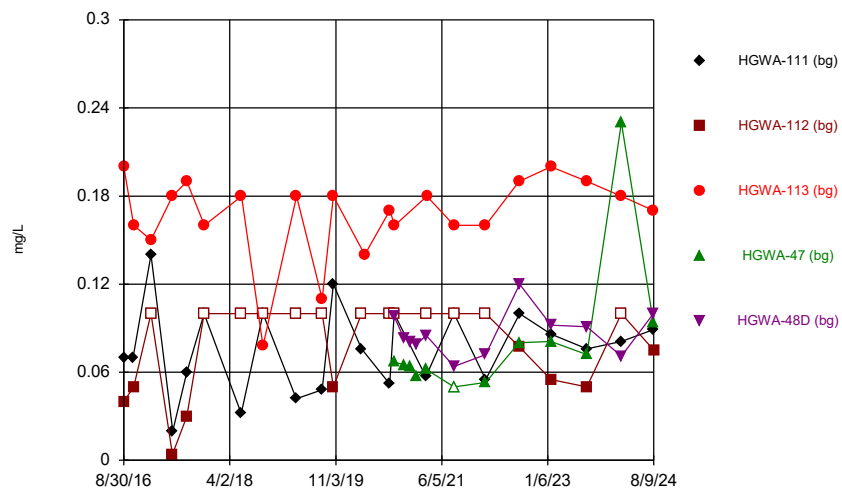
Time Series



Time Series

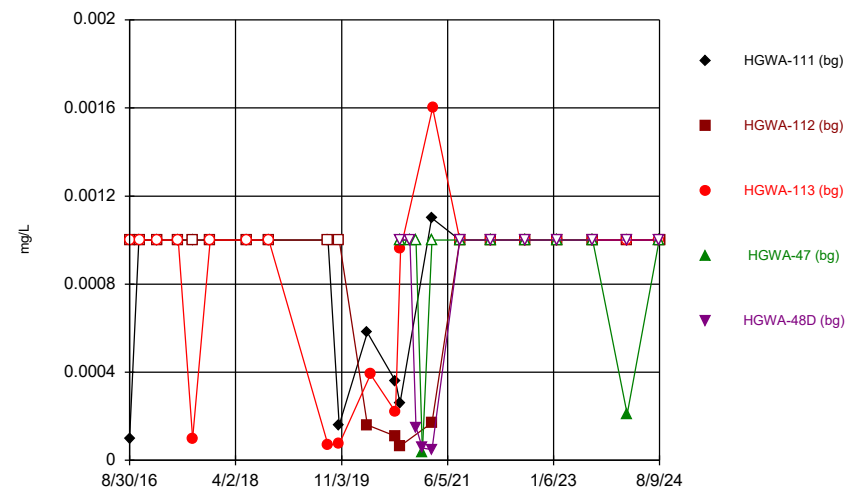


Time Series



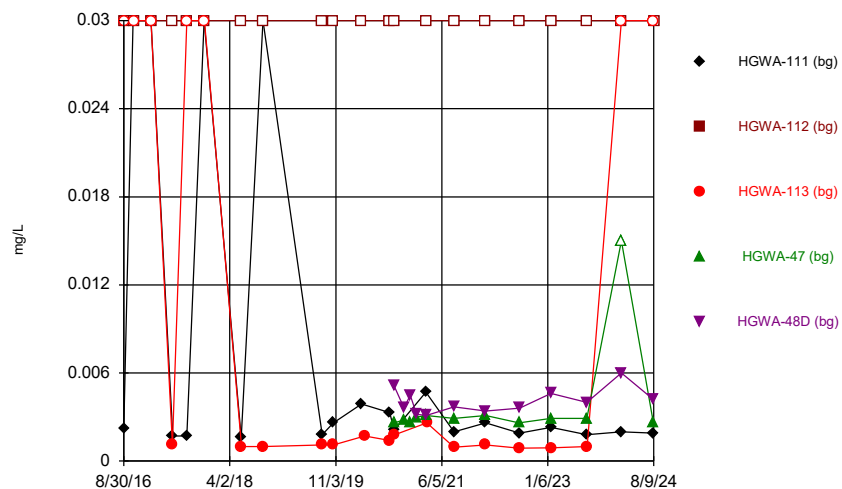
Constituent: Fluoride, total Analysis Run 10/16/2024 2:56 PM View: UTLs  
Plant Hammond Client: Southern Company Data: Hammond AP-4

Time Series



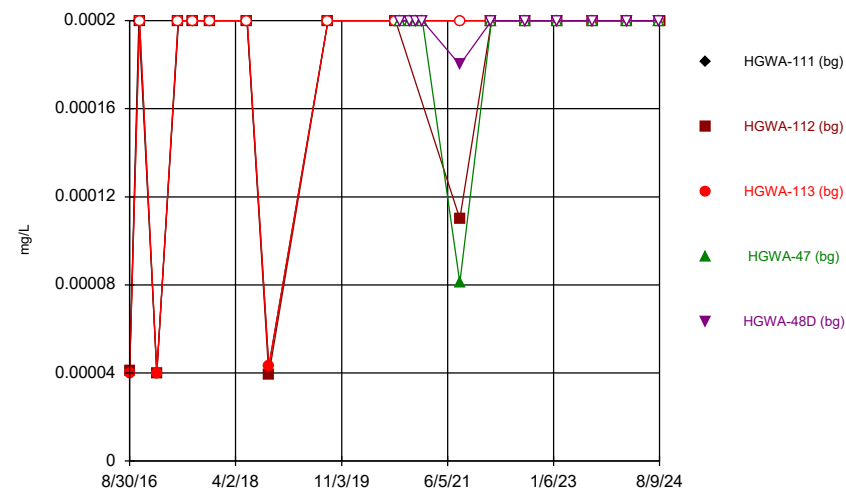
Constituent: Lead Analysis Run 10/16/2024 2:56 PM View: UTLs  
Plant Hammond Client: Southern Company Data: Hammond AP-4

Time Series



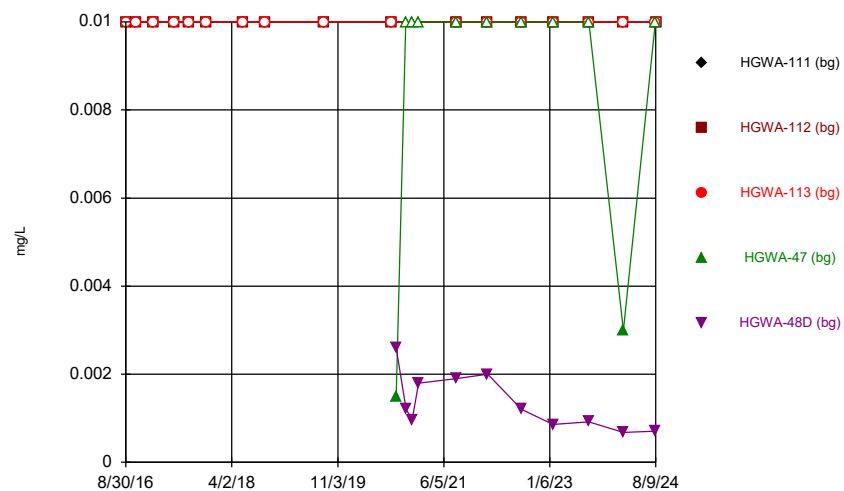
Constituent: Lithium Analysis Run 10/16/2024 2:56 PM View: UTLs  
Plant Hammond Client: Southern Company Data: Hammond AP-4

Time Series

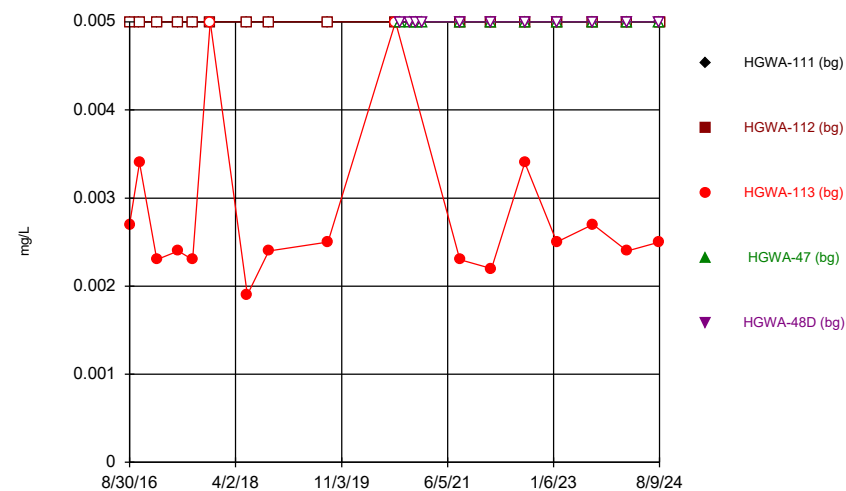


Constituent: Mercury Analysis Run 10/16/2024 2:56 PM View: UTLs  
Plant Hammond Client: Southern Company Data: Hammond AP-4

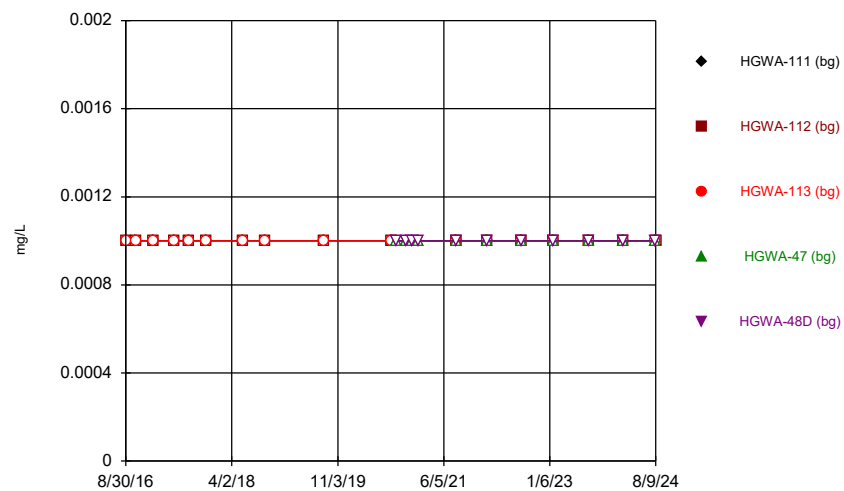
### Time Series



### Time Series

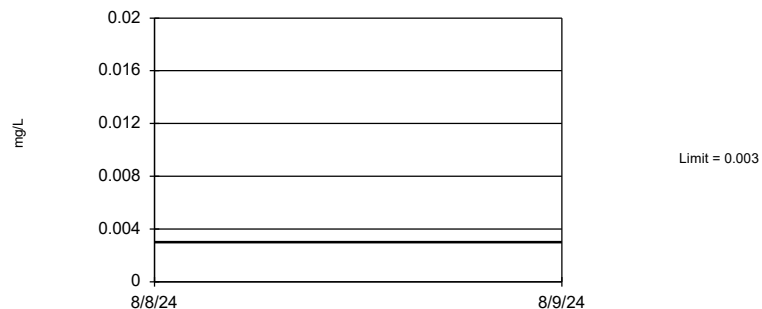


### Time Series



### Tolerance Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric tolerance limit because censored data exceeded 50%. Limit is highest of 73 background values. 94.52% NDs. 93.95% coverage at alpha=0.01; 95.9% coverage at alpha=0.05; 99.02% coverage at alpha=0.5. Report alpha = 0.02365.

Constituent: Antimony Analysis Run 10/16/2024 2:58 PM View: UTLs  
Plant Hammond Client: Southern Company Data: Hammond AP-4

### Tolerance Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric tolerance limit because censored data exceeded 50%. Limit is highest of 87 background values. 94.25% NDs. 94.73% coverage at alpha=0.01; 96.68% coverage at alpha=0.05; 99.02% coverage at alpha=0.5. Report alpha = 0.01153.

Constituent: Arsenic Analysis Run 10/16/2024 2:58 PM View: UTLs  
Plant Hammond Client: Southern Company Data: Hammond AP-4

### Tolerance Limit

Interwell Non-parametric

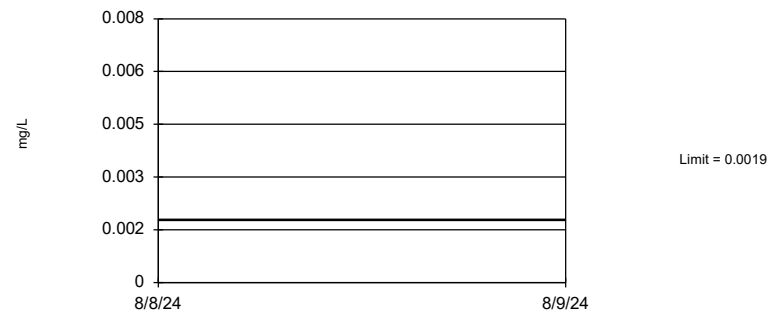


Non-parametric test used in lieu of parametric tolerance limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 87 background values. 94.73% coverage at alpha=0.01; 96.68% coverage at alpha=0.05; 99.02% coverage at alpha=0.5. Report alpha = 0.01153.

Constituent: Barium Analysis Run 10/16/2024 2:58 PM View: UTLs  
Plant Hammond Client: Southern Company Data: Hammond AP-4

### Tolerance Limit

Interwell Non-parametric

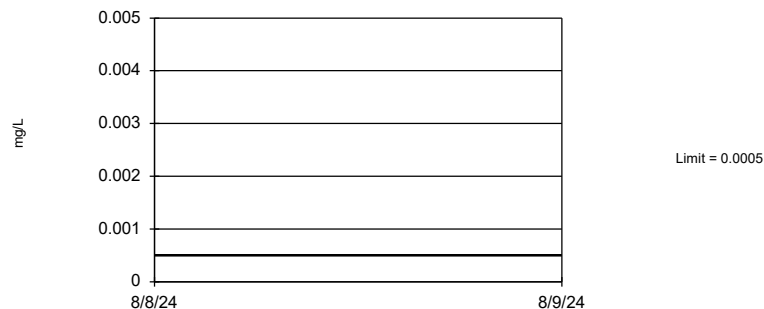


Non-parametric test used in lieu of parametric tolerance limit because censored data exceeded 50%. Limit is highest of 87 background values. 91.95% NDs. 94.73% coverage at alpha=0.01; 96.68% coverage at alpha=0.05; 99.02% coverage at alpha=0.5. Report alpha = 0.01153.

Constituent: Beryllium Analysis Run 10/16/2024 2:58 PM View: UTLs  
Plant Hammond Client: Southern Company Data: Hammond AP-4

### Tolerance Limit

Interwell Non-parametric

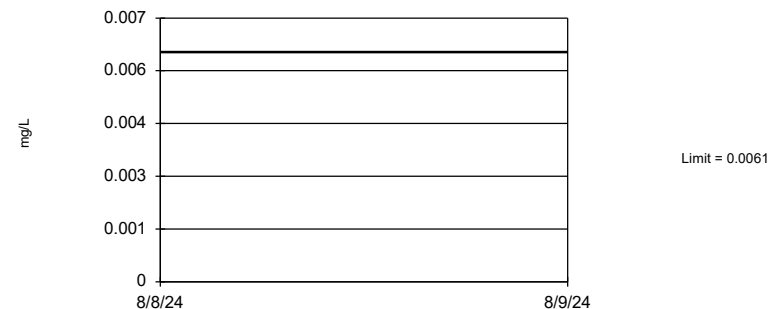


Non-parametric test used in lieu of parametric tolerance limit because censored data exceeded 50%. All background values were censored; limit is most recent reporting limit. 94.73% coverage at alpha=0.01; 96.68% coverage at alpha=0.05; 99.02% coverage at alpha=0.5. Report alpha = 0.01153.

Constituent: Cadmium Analysis Run 10/16/2024 2:58 PM View: UTLs  
Plant Hammond Client: Southern Company Data: Hammond AP-4

### Tolerance Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric tolerance limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 87 background values. 42.53% NDs. 94.73% coverage at alpha=0.01; 96.68% coverage at alpha=0.05; 99.02% coverage at alpha=0.5. Report alpha = 0.01153.

Constituent: Chromium Analysis Run 10/16/2024 2:58 PM View: UTLs  
Plant Hammond Client: Southern Company Data: Hammond AP-4

### Tolerance Limit

Interwell Non-parametric

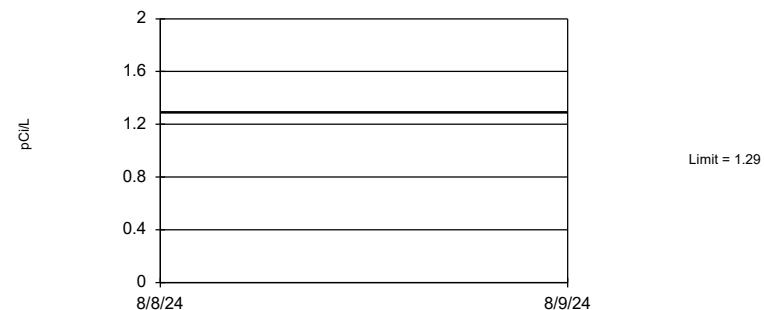


Non-parametric test used in lieu of parametric tolerance limit because censored data exceeded 50%. Limit is highest of 87 background values. 90.8% NDs. 94.73% coverage at alpha=0.01; 96.68% coverage at alpha=0.05; 99.02% coverage at alpha=0.5. Report alpha = 0.01153.

Constituent: Cobalt Analysis Run 10/16/2024 2:58 PM View: UTLs  
Plant Hammond Client: Southern Company Data: Hammond AP-4

### Tolerance Limit

Interwell Parametric

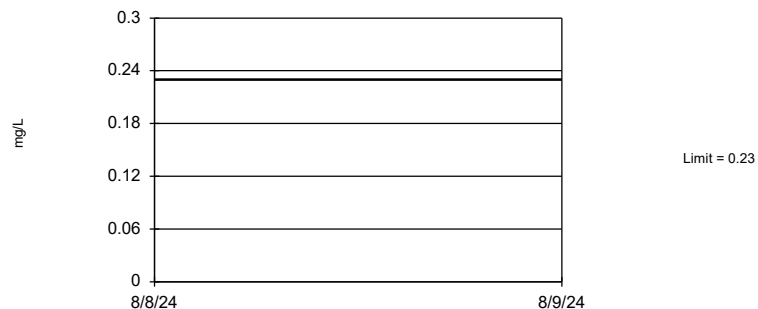


95% coverage. Background Data Summary: Mean=0.6056, Std. Dev.=0.3511, n=87. Normality test: Shapiro Francia @alpha = 0.01, calculated = 0.9665, critical = 0.961. Report alpha = 0.05.

Constituent: Combined Radium 226 & 228 Analysis Run 10/16/2024 2:58 PM View: UTLs  
Plant Hammond Client: Southern Company Data: Hammond AP-4

### Tolerance Limit

Interwell Non-parametric

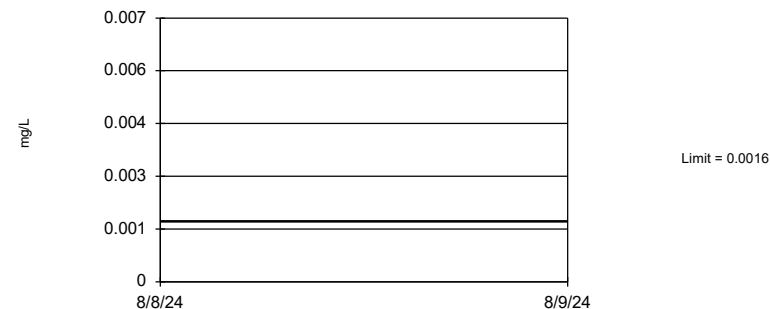


Non-parametric test used in lieu of parametric tolerance limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 90 background values. 20% NDs. 95.12% coverage at alpha=0.01; 96.68% coverage at alpha=0.05; 99.41% coverage at alpha=0.5. Report alpha = 0.009888.

Constituent: Fluoride, total Analysis Run 10/16/2024 2:58 PM View: UTLs  
Plant Hammond Client: Southern Company Data: Hammond AP-4

### Tolerance Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric tolerance limit because censored data exceeded 50%. Limit is highest of 87 background values. 74.71% NDs. 94.73% coverage at alpha=0.01; 96.68% coverage at alpha=0.05; 99.02% coverage at alpha=0.5. Report alpha = 0.01153.

Constituent: Lead Analysis Run 10/16/2024 2:58 PM View: UTLs  
Plant Hammond Client: Southern Company Data: Hammond AP-4

### Tolerance Limit

Interwell Non-parametric

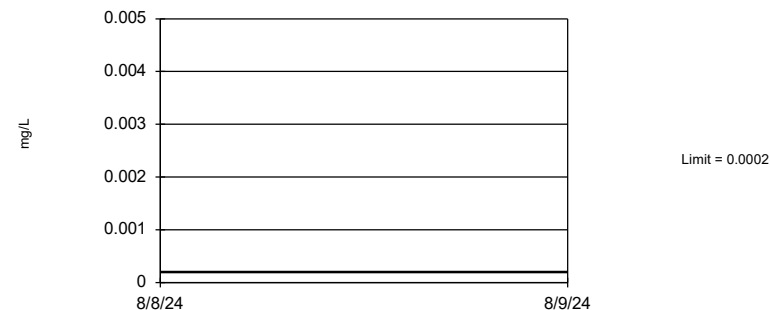


Non-parametric test used in lieu of parametric tolerance limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 87 background values. 37.93% NDs. 94.73% coverage at alpha=0.01; 96.68% coverage at alpha=0.05; 99.02% coverage at alpha=0.5. Report alpha = 0.01153.

Constituent: Lithium Analysis Run 10/16/2024 2:58 PM View: UTLs  
Plant Hammond Client: Southern Company Data: Hammond AP-4

### Tolerance Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric tolerance limit because censored data exceeded 50%. Limit is highest of 73 background values. 83.56% NDs. 93.95% coverage at alpha=0.01; 95.9% coverage at alpha=0.05; 99.02% coverage at alpha=0.5. Report alpha = 0.02365.

Constituent: Mercury Analysis Run 10/16/2024 2:58 PM View: UTLs  
Plant Hammond Client: Southern Company Data: Hammond AP-4



### Tolerance Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric tolerance limit because censored data exceeded 50%. Limit is highest of 73 background values. 82.19% NDs. 93.95% coverage at alpha=0.01; 95.9% coverage at alpha=0.05; 99.02% coverage at alpha=0.5. Report alpha = 0.02365.

Constituent: Molybdenum Analysis Run 10/16/2024 2:58 PM View: UTLs  
Plant Hammond Client: Southern Company Data: Hammond AP-4

### Tolerance Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric tolerance limit because censored data exceeded 50%. Limit is highest of 73 background values. 79.45% NDs. 93.95% coverage at alpha=0.01; 95.9% coverage at alpha=0.05; 99.02% coverage at alpha=0.5. Report alpha = 0.02365.

Constituent: Selenium Analysis Run 10/16/2024 2:58 PM View: UTLs  
Plant Hammond Client: Southern Company Data: Hammond AP-4

### Tolerance Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric tolerance limit because censored data exceeded 50%. All background values were censored; limit is most recent reporting limit. 93.95% coverage at alpha=0.01; 95.9% coverage at alpha=0.05; 99.02% coverage at alpha=0.5. Report alpha = 0.02365.

Constituent: Thallium Analysis Run 10/16/2024 2:58 PM View: UTLs  
Plant Hammond Client: Southern Company Data: Hammond AP-4

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		0.12	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		1.29	5
Fluoride, Total (mg/L)	4		0.23	4
Lead, Total (mg/L)	n/a	0.015	0.0016	0.015
Lithium, Total (mg/L)	n/a	0.040	0.030	0.040
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 Summary Table - All Results (No Significant)

Plant Hammond    Client: Southern Company    Data: Hammond AP-4    Printed 10/16/2024, 3:12 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>Std. Dev.</u>	<u>%NDs</u>	<u>ND Adj.</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Antimony (mg/L)	HGWC-102	0.003	0.003	0.006	No	15	0.0005784	86.67	None	No	0.01	NP (NDs)
Antimony (mg/L)	HGWC-103	0.003	0.0022	0.006	No	17	0.000194	94.12	None	No	0.01	NP (NDs)
Antimony (mg/L)	HGWC-107	0.003	0.0011	0.006	No	17	0.0004608	94.12	None	No	0.01	NP (NDs)
Arsenic (mg/L)	HGWC-101	0.005	0.00039	0.01	No	21	0.001006	95.24	None	No	0.01	NP (NDs)
Arsenic (mg/L)	HGWC-102	0.005	0.00083	0.01	No	16	0.002029	68.75	None	No	0.01	NP (NDs)
Arsenic (mg/L)	HGWC-103	0.005	0.0015	0.01	No	21	0.0007638	95.24	None	No	0.01	NP (NDs)
Arsenic (mg/L)	HGWC-109	0.002537	0.001578	0.01	No	21	0.0008697	14.29	None	No	0.01	Param.
Arsenic (mg/L)	HGWC-118	0.005	0.001	0.01	No	21	0.0008729	95.24	None	No	0.01	NP (NDs)
Barium (mg/L)	HGWC-101	0.04409	0.03785	2	No	21	0.005658	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-102	0.03172	0.02716	2	No	16	0.003502	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-103	0.03924	0.03444	2	No	21	0.004352	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-105	0.085	0.0668	2	No	21	0.009941	0	None	No	0.01	NP (normality)
Barium (mg/L)	HGWC-107	0.03841	0.03535	2	No	21	0.002778	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-109	0.08611	0.07993	2	No	21	0.005601	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-117A	0.0658	0.042	2	No	8	0.01188	0	None	sqrt(x)	0.01	Param.
Barium (mg/L)	HGWC-118	0.05922	0.04855	2	No	21	0.00967	0	None	No	0.01	Param.
Beryllium (mg/L)	HGWC-101	0.0005	0.000062	0.004	No	21	0.0002238	52.38	None	No	0.01	NP (NDs)
Beryllium (mg/L)	HGWC-103	0.0005	0.000088	0.004	No	21	0.0001735	80.95	None	No	0.01	NP (NDs)
Beryllium (mg/L)	HGWC-118	0.0005	0.000093	0.004	No	21	0.00008881	95.24	None	No	0.01	NP (NDs)
Cadmium (mg/L)	HGWC-101	0.0002048	0.0001433	0.005	No	21	0.00005571	14.29	None	No	0.01	Param.
Cadmium (mg/L)	HGWC-102	0.0006287	0.0003438	0.005	No	16	0.000219	0	None	No	0.01	Param.
Cadmium (mg/L)	HGWC-103	0.0007812	0.0006883	0.005	No	21	0.00008424	0	None	No	0.01	Param.
Cadmium (mg/L)	HGWC-107	0.0005	0.00011	0.005	No	21	0.0001933	66.67	None	No	0.01	NP (NDs)
Cadmium (mg/L)	HGWC-117A	0.0005	0.00016	0.005	No	8	0.0001202	87.5	None	No	0.004	NP (NDs)
Chromium (mg/L)	HGWC-101	0.005	0.00098	0.1	No	21	0.001714	80.95	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-102	0.005	0.00063	0.1	No	16	0.001513	87.5	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-103	0.005	0.0013	0.1	No	21	0.001899	66.67	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-105	0.005	0.0013	0.1	No	21	0.001725	80.95	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-107	0.005	0.00074	0.1	No	21	0.0009296	95.24	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-109	0.005	0.0014	0.1	No	21	0.001206	90.48	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-118	0.005	0.0021	0.1	No	21	0.00166	76.19	None	No	0.01	NP (NDs)
Cobalt (mg/L)	HGWC-101	0.002738	0.002186	0.006	No	21	0.0005005	4.762	None	No	0.01	Param.
Cobalt (mg/L)	HGWC-102	0.0019	0.00098	0.006	No	16	0.0007443	0	None	No	0.01	NP (normality)
Cobalt (mg/L)	HGWC-103	0.002225	0.001842	0.006	No	21	0.0003469	0	None	No	0.01	Param.
Cobalt (mg/L)	HGWC-105	0.005	0.00047	0.006	No	21	0.002036	28.57	None	No	0.01	NP (normality)
Cobalt (mg/L)	HGWC-109	0.001919	0.001161	0.006	No	21	0.0006876	0	None	No	0.01	Param.
Cobalt (mg/L)	HGWC-117A	0.00155	0.0003807	0.006	No	8	0.0006479	0	None	sqrt(x)	0.01	Param.
Cobalt (mg/L)	HGWC-118	0.005	0.00045	0.006	No	21	0.002296	52.38	None	No	0.01	NP (NDs)
Combined Radium 226 & 228 (pCi/L)	HGWC-101	0.8314	0.4516	5	No	21	0.3443	0	None	No	0.01	Param.
Combined Radium 226 & 228 (pCi/L)	HGWC-102	1.088	0.5756	5	No	15	0.3784	0	None	No	0.01	Param.
Combined Radium 226 & 228 (pCi/L)	HGWC-103	0.8483	0.4709	5	No	21	0.3421	0	None	No	0.01	Param.
Combined Radium 226 & 228 (pCi/L)	HGWC-105	0.8398	0.5035	5	No	21	0.3048	0	None	No	0.01	Param.
Combined Radium 226 & 228 (pCi/L)	HGWC-107	0.9837	0.4954	5	No	21	0.4426	0	None	No	0.01	Param.
Combined Radium 226 & 228 (pCi/L)	HGWC-109	0.7311	0.4294	5	No	21	0.2735	0	None	No	0.01	Param.
Combined Radium 226 & 228 (pCi/L)	HGWC-117A	0.9243	0.1862	5	No	8	0.3482	0	None	No	0.01	Param.
Combined Radium 226 & 228 (pCi/L)	HGWC-118	1.037	0.4568	5	No	20	0.5107	0	None	No	0.01	Param.
Fluoride, total (mg/L)	HGWC-101	0.1	0.068	4	No	22	0.01959	81.82	None	No	0.01	NP (NDs)
Fluoride, total (mg/L)	HGWC-102	0.22	0.076	4	No	16	0.03247	81.25	None	No	0.01	NP (NDs)
Fluoride, total (mg/L)	HGWC-103	0.13	0.077	4	No	22	0.02128	72.73	None	No	0.01	NP (NDs)
Fluoride, total (mg/L)	HGWC-105	0.1	0.074	4	No	22	0.02809	54.55	None	No	0.01	NP (NDs)
Fluoride, total (mg/L)	HGWC-107	0.1	0.069	4	No	22	0.0331	54.55	None	No	0.01	NP (NDs)
Fluoride, total (mg/L)	HGWC-109	0.1245	0.08585	4	No	22	0.03602	9.091	None	No	0.01	Param.
Fluoride, total (mg/L)	HGWC-117A	0.102	0.05154	4	No	8	0.02513	25	Kaplan-Meier	No	0.01	Param.
Fluoride, total (mg/L)	HGWC-118	0.14	0.072	4	No	23	0.178	0	None	No	0.01	NP (normality)
Lead (mg/L)	HGWC-101	0.001	0.0009	0.015	No	21	0.00002182	95.24	None	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-102	0.001	0.00011	0.015	No	16	0.0002225	93.75	None	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-103	0.001	0.00028	0.015	No	21	0.0003539	71.43	None	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-105	0.001	0.000085	0.015	No	21	0.0003763	80.95	None	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-107	0.001	0.00034	0.015	No	21	0.0003333	80.95	None	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-109	0.001	0.000058	0.015	No	21	0.0002839	90.48	None	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-118	0.001	0.00088	0.015	No	21	0.0003099	76.19	None	No	0.01	NP (NDs)
Lithium (mg/L)	HGWC-102	0.015	0.0011	0.04	No	16	0.004724	12.5	None	No	0.01	NP (normality)
Lithium (mg/L)	HGWC-103	0.002	0.0015	0.04	No	21	0.0124	23.81	None	No	0.01	NP (normality)
Lithium (mg/L)	HGWC-105	0.004236	0.003897	0.04	No	21	0.0003071	0	None	No	0.01	Param.
Lithium (mg/L)	HGWC-107	0.03	0.00091	0.04	No	21	0.01488	47.62	None	No	0.01	NP (normality)
Lithium (mg/L)	HGWC-109	0.03	0.0009	0.04	No	21	0.01483	52.38	None	No	0.01	NP (NDs)
Lithium (mg/L)	HGWC-117A	0.0051	0.0035	0.04	No	8	0.0005069	0	None	No	0.004	NP (normality)
Lithium (mg/L)	HGWC-118	0.03	0.0017	0.04	No	21	0.01357	33.33	None	No	0.01	NP (normality)

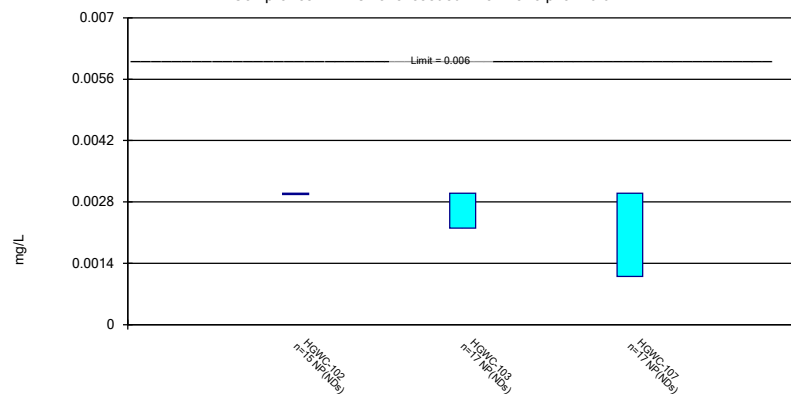
# Confidence Intervals Summary Table - All Results (No Significant) <sup>Page 2</sup>

Plant Hammond Client: Southern Company Data: Hammond AP-4 Printed 10/16/2024, 3:12 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Mercury (mg/L)	HGWC-101	0.0002	0.000099	0.002	No	17	0.00003456	88.24	None	No	0.01	NP (NDs)
Mercury (mg/L)	HGWC-102	0.0002	0.0001	0.002	No	15	0.00002582	93.33	None	No	0.01	NP (NDs)
Mercury (mg/L)	HGWC-103	0.00025	0.00017	0.002	No	17	0.00003762	76.47	None	No	0.01	NP (NDs)
Mercury (mg/L)	HGWC-105	0.00022	0.0002	0.002	No	17	0.000004851	94.12	None	No	0.01	NP (NDs)
Mercury (mg/L)	HGWC-107	0.0002	0.000084	0.002	No	17	0.00002813	94.12	None	No	0.01	NP (NDs)
Mercury (mg/L)	HGWC-109	0.0002	0.00008	0.002	No	17	0.00003985	88.24	None	No	0.01	NP (NDs)
Mercury (mg/L)	HGWC-117A	0.0002	0.000094	0.002	No	8	0.00003748	87.5	None	No	0.004	NP (NDs)
Mercury (mg/L)	HGWC-118	0.0002	0.00009	0.002	No	17	0.00003806	88.24	None	No	0.01	NP (NDs)
Selenium (mg/L)	HGWC-102	0.005	0.0015	0.05	No	15	0.0009037	93.33	None	No	0.01	NP (NDs)
Thallium (mg/L)	HGWC-102	0.001	0.00008	0.002	No	15	0.0002375	93.33	None	No	0.01	NP (NDs)

## Non-Parametric Confidence Interval

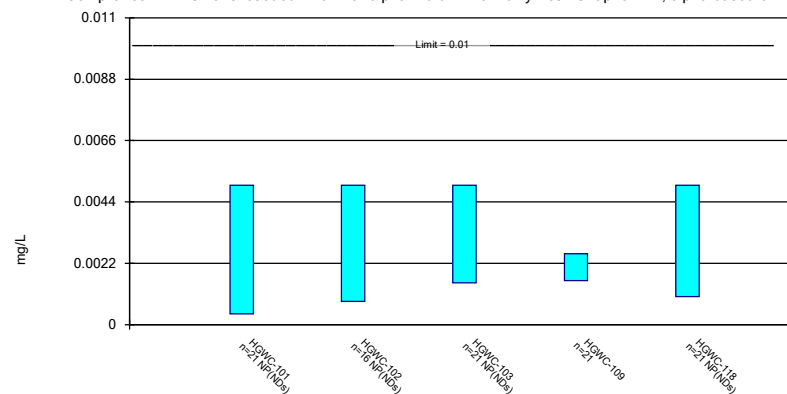
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Antimony Analysis Run 10/16/2024 3:11 PM View: Confidence Intervals  
Plant Hammond Client: Southern Company Data: Hammond AP-4

## Parametric and Non-Parametric (NP) Confidence Interval

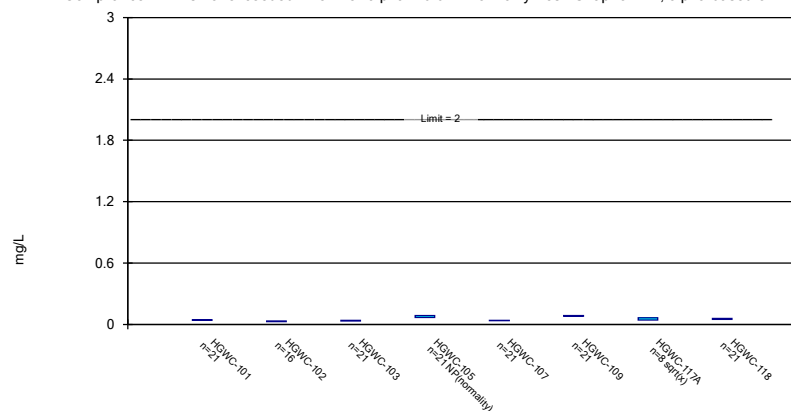
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Arsenic Analysis Run 10/16/2024 3:11 PM View: Confidence Intervals  
Plant Hammond Client: Southern Company Data: Hammond AP-4

## Parametric and Non-Parametric (NP) Confidence Interval

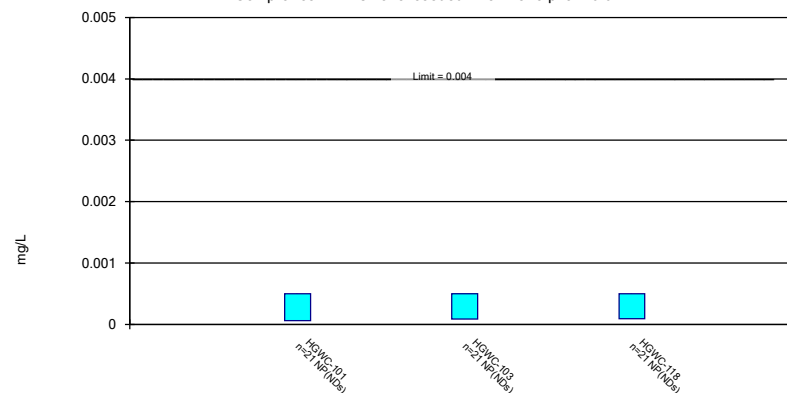
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Barium Analysis Run 10/16/2024 3:11 PM View: Confidence Intervals  
Plant Hammond Client: Southern Company Data: Hammond AP-4

## Non-Parametric Confidence Interval

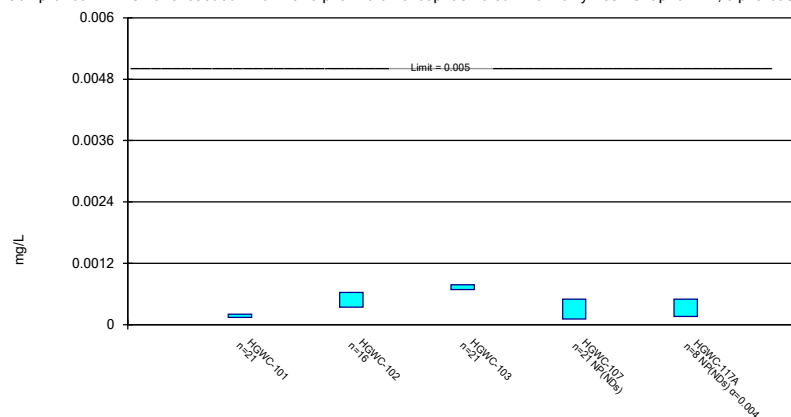
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Beryllium Analysis Run 10/16/2024 3:11 PM View: Confidence Intervals  
Plant Hammond Client: Southern Company Data: Hammond AP-4

## Parametric and Non-Parametric (NP) Confidence Interval

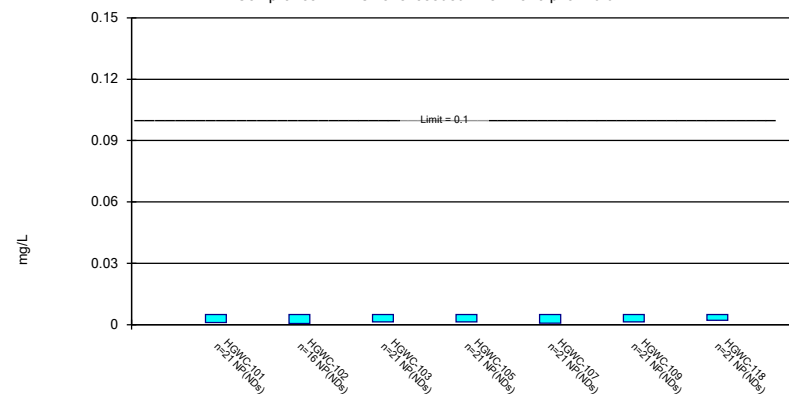
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cadmium Analysis Run 10/16/2024 3:11 PM View: Confidence Intervals  
Plant Hammond Client: Southern Company Data: Hammond AP-4

## Non-Parametric Confidence Interval

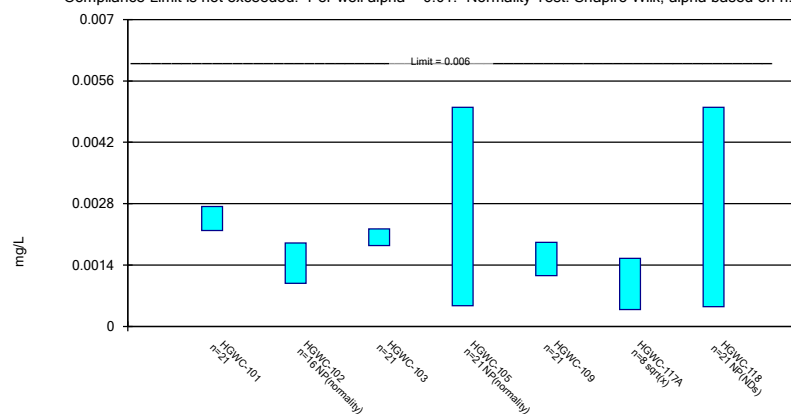
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Chromium Analysis Run 10/16/2024 3:11 PM View: Confidence Intervals  
Plant Hammond Client: Southern Company Data: Hammond AP-4

## Parametric and Non-Parametric (NP) Confidence Interval

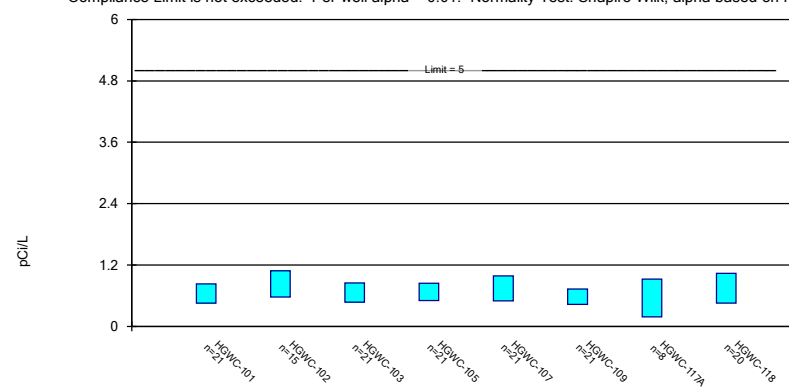
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cobalt Analysis Run 10/16/2024 3:11 PM View: Confidence Intervals  
Plant Hammond Client: Southern Company Data: Hammond AP-4

## Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.

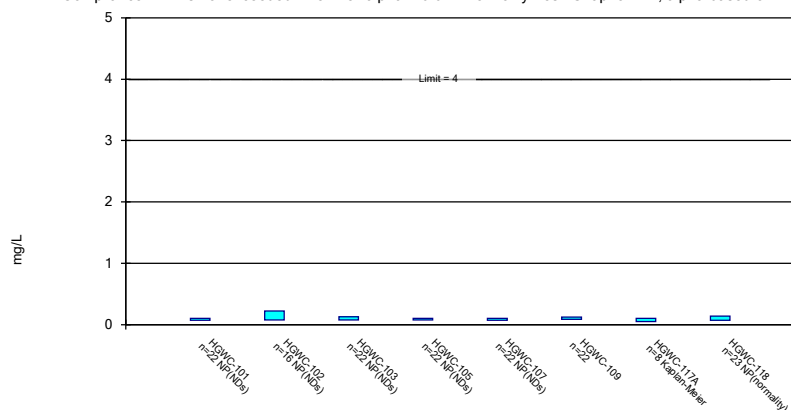


Constituent: Combined Radium 226 & 228 Analysis Run 10/16/2024 3:11 PM View: Confidence Intervals  
Plant Hammond Client: Southern Company Data: Hammond AP-4



## Parametric and Non-Parametric (NP) Confidence Interval

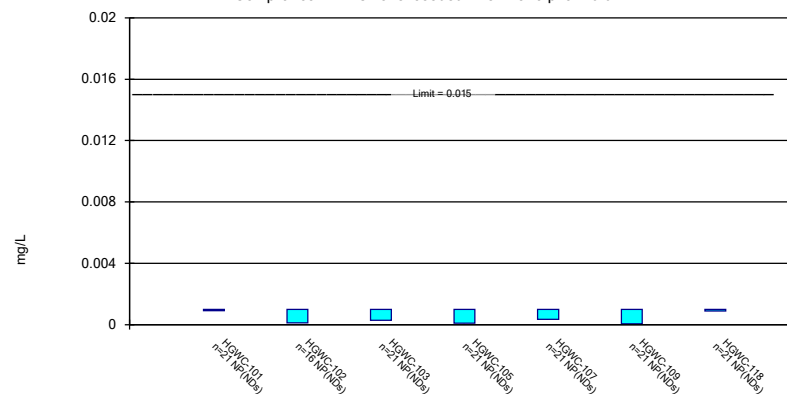
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Fluoride, total    Analysis Run 10/16/2024 3:11 PM    View: Confidence Intervals  
Plant Hammond    Client: Southern Company    Data: Hammond AP-4

## Non-Parametric Confidence Interval

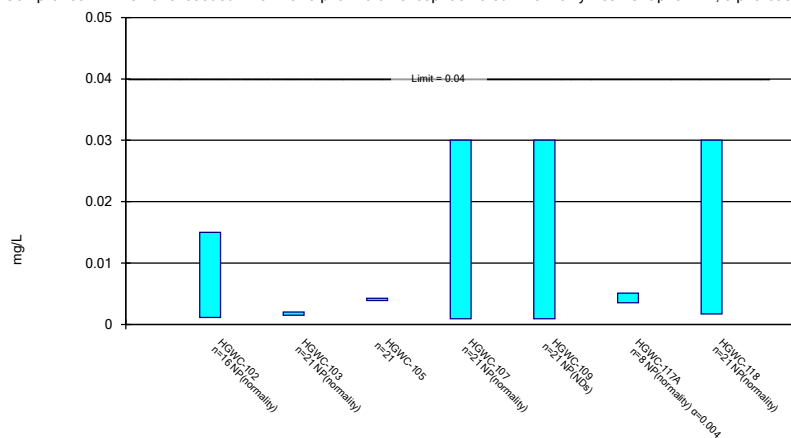
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Lead    Analysis Run 10/16/2024 3:12 PM    View: Confidence Intervals  
Plant Hammond    Client: Southern Company    Data: Hammond AP-4

## Parametric and Non-Parametric (NP) Confidence Interval

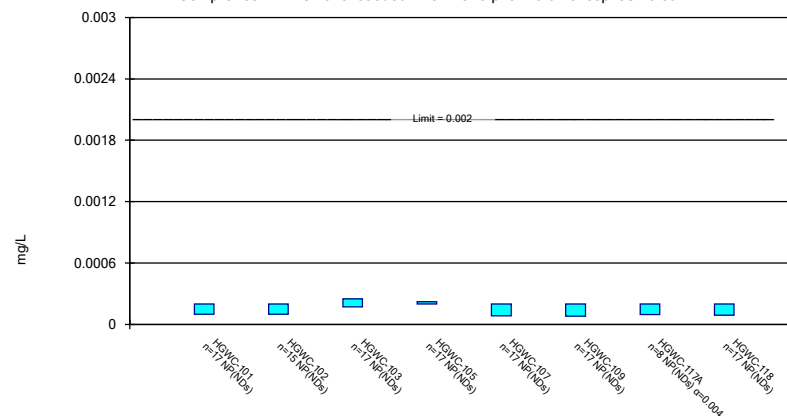
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



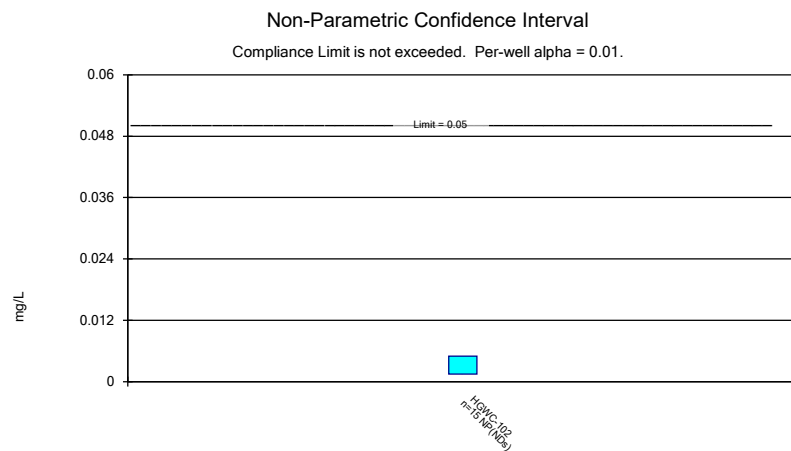
Constituent: Lithium    Analysis Run 10/16/2024 3:12 PM    View: Confidence Intervals  
Plant Hammond    Client: Southern Company    Data: Hammond AP-4

## Non-Parametric Confidence Interval

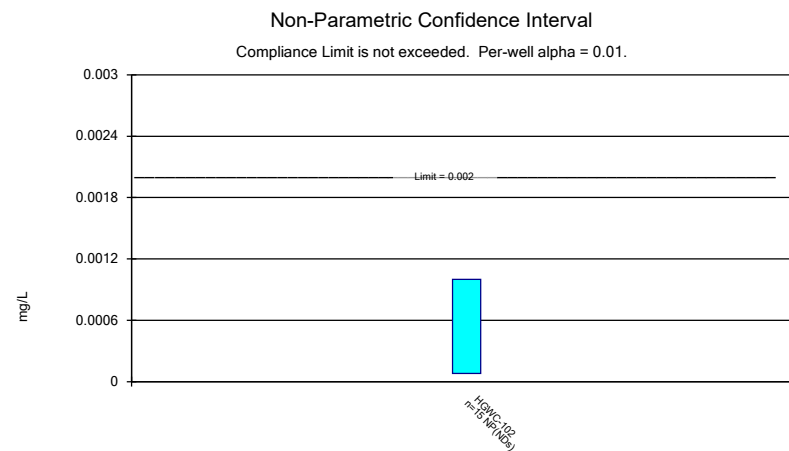
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted.



Constituent: Mercury    Analysis Run 10/16/2024 3:12 PM    View: Confidence Intervals  
Plant Hammond    Client: Southern Company    Data: Hammond AP-4



Constituent: Selenium    Analysis Run 10/16/2024 3:12 PM    View: Confidence Intervals  
Plant Hammond    Client: Southern Company    Data: Hammond AP-4



Constituent: Thallium    Analysis Run 10/16/2024 3:12 PM    View: Confidence Intervals  
Plant Hammond    Client: Southern Company    Data: Hammond AP-4

# Confidence Interval

Constituent: Antimony (mg/L)   Analysis Run 10/16/2024 3:12 PM   View: Confidence Intervals  
Plant Hammond   Client: Southern Company   Data: Hammond AP-4

	HGWC-102	HGWC-103	HGWC-107
8/31/2016		<0.003	<0.003
10/24/2016		<0.003	
10/25/2016			<0.003
1/31/2017		<0.003	<0.003
5/23/2017		<0.003	
5/24/2017			<0.003
8/10/2017		<0.003	<0.003
11/14/2017		<0.003	<0.003
6/6/2018		0.0022 (J)	<0.003
10/2/2018			0.0011 (J)
10/3/2018		<0.003	
8/22/2019		<0.003	
8/23/2019			<0.003
10/23/2019	<0.003		
1/3/2020	0.00076 (J)		
3/4/2020	<0.003		
3/24/2020	<0.003		
6/18/2020	<0.003		
7/21/2020	<0.003		
8/27/2020	<0.003	<0.003	<0.003
9/24/2020	<0.003		
8/13/2021	<0.003		<0.003
8/16/2021		<0.003	
2/2/2022	<0.003	<0.003	<0.003
8/5/2022	<0.003	<0.003	<0.003
1/25/2023	<0.003	<0.003	<0.003
8/11/2023	0.003	<0.003	<0.003
2/16/2024	<0.003	<0.003	<0.003
8/9/2024	<0.003	<0.003	
8/10/2024			<0.003
Mean	0.002851	0.002953	0.002888
Std. Dev.	0.0005784	0.000194	0.0004608
Upper Lim.	0.003	0.003	0.003
Lower Lim.	0.003	0.0022	0.0011

# Confidence Interval

Constituent: Arsenic (mg/L) Analysis Run 10/16/2024 3:12 PM View: Confidence Intervals

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-101	HGWC-102	HGWC-103	HGWC-109	HGWC-118
8/31/2016	<0.005		<0.005	0.0045 (J)	<0.005
10/20/2016	<0.005				<0.005
10/24/2016			<0.005		
10/25/2016				0.003 (J)	
1/31/2017	<0.005		<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		<0.005	0.0016 (J)	<0.005
11/14/2017	<0.005		<0.005	0.0011 (J)	<0.005
6/6/2018	<0.005		<0.005	0.0018 (J)	
6/7/2018					<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
10/23/2019	<0.005	<0.005	<0.005		
1/3/2020		0.00065 (J)			
3/4/2020		0.00036 (J)			
3/24/2020		<0.005			
3/25/2020	0.00039 (J)		<0.005	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	<0.005	0.0011 (J)	
9/24/2020	<0.005	<0.005	<0.005		
9/25/2020				0.0017 (J)	
9/28/2020					<0.005
3/17/2021	<0.005	<0.005		0.0019 (J)	
3/18/2021			<0.005		0.001 (J)
8/13/2021		<0.005		0.0019 (J)	<0.005
8/16/2021	<0.005		<0.005		
2/2/2022	<0.005	<0.005	<0.005	<0.005	
2/3/2022					<0.005
8/5/2022		<0.005	<0.005	0.0022 (J)	<0.005
8/10/2022	<0.005				
1/25/2023	<0.005	<0.005	<0.005	<0.005	<0.005
8/11/2023	<0.005	<0.005	<0.005	<0.005	<0.005
2/16/2024	<0.005	<0.005	<0.005		
2/17/2024				0.0013 (J)	<0.005
8/9/2024		0.0011 (J)	0.0015 (J)		<0.005
8/10/2024	<0.005			0.00091 (J)	
Mean	0.00478	0.003679	0.004833	0.002058	0.00481
Std. Dev.	0.001006	0.002029	0.0007638	0.0008697	0.0008729
Upper Lim.	0.005	0.005	0.005	0.002537	0.005
Lower Lim.	0.00039	0.00083	0.0015	0.001578	0.001

# Confidence Interval

Constituent: Barium (mg/L)    Analysis Run 10/16/2024 3:12 PM    View: Confidence Intervals

Plant Hammond    Client: Southern Company    Data: Hammond AP-4

	HGWC-101	HGWC-102	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117A	HGWC-118
8/31/2016	0.0527		0.045	0.067	0.0391	0.0883		0.0595
10/20/2016	0.0477							0.055
10/24/2016			0.0386					
10/25/2016				0.0745	0.041	0.0831		
1/31/2017	0.0527		0.0365	0.0674	0.0382	0.0844		0.0613
5/23/2017	0.0436		0.0254					0.068
5/24/2017				0.0668	0.0377	0.0784		
8/10/2017	0.0419		0.0396	0.067	0.0385	0.0903		0.0638
11/14/2017	0.0407		0.0385	0.0643	0.039	0.083		0.07
6/6/2018	0.043		0.043	0.068	0.039	0.095		
6/7/2018								0.059
10/2/2018				0.066	0.038	0.089		
10/3/2018	0.041		0.04					0.056
8/22/2019	0.043		0.036	0.066				0.052
8/23/2019					0.038	0.088		
10/22/2019					0.039	0.087		0.054
10/23/2019	0.043	0.037	0.039	0.066				
1/3/2020		0.036						
3/4/2020		0.033						
3/24/2020		0.024						
3/25/2020	0.038		0.036	0.074	0.037	0.084		0.06
6/18/2020		0.029						
7/21/2020		0.028						
8/26/2020								0.056
8/27/2020	0.045	0.028	0.038	0.068	0.034	0.083		
9/24/2020	0.041	0.029	0.036	0.075	0.039			
9/25/2020						0.085		
9/28/2020								0.046
3/17/2021	0.04	0.031				0.077		
3/18/2021			0.042	0.082	0.041			0.067
8/12/2021							0.079	
8/13/2021		0.026		0.073	0.033	0.08		0.043
8/16/2021	0.037		0.037					
9/27/2021							0.062	
2/2/2022	0.036	0.029	0.036		0.034	0.072		
2/3/2022				0.093			0.049	0.047
8/5/2022		0.031	0.037	0.088	0.036	0.085	0.055	0.039
8/10/2022	0.04							
1/25/2023	0.033	0.027	0.032	0.094	0.035	0.076	0.05	0.048
8/11/2023	0.036	0.028	0.035	0.089	0.032	0.081	0.046	0.04
2/16/2024	0.032	0.026	0.031		0.033			
2/17/2024				0.085		0.078	0.047	0.05
8/9/2024		0.029	0.032					0.037
8/10/2024	0.033			0.083	0.033	0.076	0.042	
Mean	0.04097	0.02944	0.03684	0.0751	0.03688	0.08302	0.05375	0.05389
Std. Dev.	0.005658	0.003502	0.004352	0.009941	0.002778	0.005601	0.01188	0.00967
Upper Lim.	0.04409	0.03172	0.03924	0.085	0.03841	0.08611	0.0658	0.05922
Lower Lim.	0.03785	0.02716	0.03444	0.0668	0.03535	0.07993	0.042	0.04855

# Confidence Interval

Constituent: Beryllium (mg/L) Analysis Run 10/16/2024 3:12 PM View: Confidence Intervals  
 Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-101	HGWC-103	HGWC-118
8/31/2016	<0.0005	<0.0005	<0.0005
10/20/2016	<0.0005		<0.0005
10/24/2016		<0.0005	
1/31/2017	<0.0005	<0.0005	<0.0005
5/23/2017	7E-05 (J)	<0.0005	<0.0005
8/10/2017	<0.0005	<0.0005	<0.0005
11/14/2017	<0.0005	<0.0005	<0.0005
6/6/2018	5.9E-05 (J)	<0.0005	
6/7/2018			<0.0005
10/3/2018	6.5E-05 (J)	<0.0005	<0.0005
8/22/2019	<0.0005	<0.0005	<0.0005
10/22/2019			<0.0005
10/23/2019	7.5E-05 (J)	<0.0005	
3/25/2020	<0.0005	<0.0005	<0.0005
8/26/2020			<0.0005
8/27/2020	5.7E-05 (J)	5E-05 (J)	
9/24/2020	4.8E-05 (J)	8.8E-05 (J)	
9/28/2020			<0.0005
3/17/2021	5.9E-05 (J)		
3/18/2021		6.1E-05 (J)	9.3E-05 (J)
8/13/2021			<0.0005
8/16/2021	<0.0005	<0.0005	
2/2/2022	6.2E-05 (J)	7.7E-05 (J)	
2/3/2022			<0.0005
8/5/2022		<0.0005	<0.0005
8/10/2022	6.4E-05 (J)		
1/25/2023	<0.0005	<0.0005	<0.0005
8/11/2023	7E-05 (J)	<0.0005	<0.0005
2/16/2024	<0.0005	<0.0005	
2/17/2024			<0.0005
8/9/2024		<0.0005	<0.0005
8/10/2024	<0.0005		
Mean	0.0002919	0.0004179	0.0004806
Std. Dev.	0.0002238	0.0001735	8.881E-05
Upper Lim.	0.0005	0.0005	0.0005
Lower Lim.	6.2E-05	8.8E-05	9.3E-05

# Confidence Interval

Constituent: Cadmium (mg/L)    Analysis Run 10/16/2024 3:12 PM    View: Confidence Intervals  
Plant Hammond    Client: Southern Company    Data: Hammond AP-4

	HGWC-101	HGWC-102	HGWC-103	HGWC-107	HGWC-117A
8/31/2016	0.0002 (J)		0.0006 (J)	0.0001 (J)	
10/20/2016	0.0003 (J)				
10/24/2016			0.0008 (J)		
10/25/2016				8E-05 (J)	
1/31/2017	0.0001 (J)		0.0006 (J)	9E-05 (J)	
5/23/2017	0.0002 (J)		0.0006 (J)		
5/24/2017				0.0001 (J)	
8/10/2017	0.0002 (J)		0.0007 (J)	<0.0005	
11/14/2017	<0.0005		0.0007 (J)	<0.0005	
6/6/2018	9.5E-05 (J)		0.00073 (J)	0.00012 (J)	
10/2/2018				0.0001 (J)	
10/3/2018	0.00018 (J)		0.00078 (J)		
8/22/2019	0.00014 (J)		0.0008 (J)		
8/23/2019				0.00011 (J)	
10/22/2019				<0.0005	
10/23/2019	0.0002 (J)	0.00026 (J)	0.00091 (J)		
1/3/2020		0.0002 (J)			
3/4/2020		0.00026 (J)			
3/24/2020		0.00068 (J)			
3/25/2020	0.00014 (J)		0.00068 (J)	<0.0005	
6/18/2020		0.00047 (J)			
7/21/2020		0.00083 (J)			
8/27/2020	0.00019 (J)	0.00038 (J)	0.00082 (J)	<0.0005	
9/24/2020	0.00014 (J)	0.00032 (J)	0.00076 (J)	<0.0005	
3/17/2021	<0.0005	0.00094			
3/18/2021			0.00068	<0.0005	
8/12/2021					0.00016 (J)
8/13/2021		0.00069		<0.0005	
8/16/2021	0.00015 (J)		0.00081		
9/27/2021					<0.0005
2/2/2022	<0.0005	0.00055	0.0008	<0.0005	
2/3/2022					<0.0005
8/5/2022		0.00044 (J)	0.00081	<0.0005	<0.0005
8/10/2022	0.00011 (J)				
1/25/2023	0.00011 (J)	0.00035 (J)	0.00063	<0.0005	<0.0005
8/11/2023	0.00015 (J)	0.00067	0.0007	<0.0005	<0.0005
2/16/2024	0.00016 (J)	0.00031 (J)	0.00074	<0.0005	
2/17/2024					<0.0005
8/9/2024		0.00043 (J)	0.00078		
8/10/2024	0.00014 (J)			<0.0005	<0.0005
Mean	0.000174	0.0004863	0.0007348	0.0003667	0.0004575
Std. Dev.	5.571E-05	0.000219	8.424E-05	0.0001933	0.0001202
Upper Lim.	0.0002048	0.0006287	0.0007812	0.0005	0.0005
Lower Lim.	0.0001433	0.0003438	0.0006883	0.00011	0.00016

# Confidence Interval

Constituent: Chromium (mg/L) Analysis Run 10/16/2024 3:12 PM View: Confidence Intervals

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-101	HGWC-102	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-118
8/31/2016	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005
10/20/2016	<0.005						<0.005
10/24/2016			<0.005				
10/25/2016				<0.005	<0.005	<0.005	
1/31/2017	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005
5/23/2017	0.0006 (J)		<0.005				<0.005
5/24/2017				<0.005	<0.005	<0.005	
8/10/2017	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005
11/14/2017	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005
6/6/2018	<0.005		<0.005	<0.005	<0.005	<0.005	
6/7/2018							<0.005
10/2/2018				<0.005	<0.005	<0.005	
10/3/2018	<0.005		<0.005				<0.005
8/22/2019	0.00064 (J)		0.00063 (J)	<0.005			<0.005
8/23/2019					<0.005	<0.005	
10/22/2019					<0.005	0.00062 (J)	0.00066 (J)
10/23/2019	<0.005	<0.005	0.0015 (J)	0.0004 (J)			
1/3/2020		0.00063 (J)					
3/4/2020		<0.005					
3/24/2020		0.00051 (J)					
3/25/2020	0.00098 (J)		0.00045 (J)	0.0013 (J)	0.00074 (J)	0.0014 (J)	0.00081 (J)
6/18/2020		<0.005					
7/21/2020		<0.005					
8/26/2020							0.00098 (J)
8/27/2020	<0.005	<0.005	0.00069 (J)	<0.005	<0.005	<0.005	
9/24/2020	<0.005	<0.005	0.00081 (J)	0.00064 (J)	<0.005		
9/25/2020						<0.005	
9/28/2020							0.0017 (J)
3/17/2021	0.00075 (J)	<0.005				<0.005	
3/18/2021			0.003 (J)	0.00058 (J)	<0.005		0.0021 (J)
8/13/2021		<0.005		<0.005	<0.005	<0.005	<0.005
8/16/2021	<0.005		<0.005				
2/2/2022	<0.005	<0.005	0.0013 (J)		<0.005	<0.005	
2/3/2022				<0.005			<0.005
8/5/2022		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
8/10/2022	<0.005						
1/25/2023	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
8/11/2023	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
2/16/2024	<0.005	<0.005	<0.005		<0.005		
2/17/2024				<0.005		<0.005	<0.005
8/9/2024		<0.005	<0.005				<0.005
8/10/2024	<0.005			<0.005	<0.005	<0.005	
Mean	0.004189	0.004446	0.003732	0.004187	0.004797	0.00462	0.004107
Std. Dev.	0.001714	0.001513	0.001899	0.001725	0.0009296	0.001206	0.00166
Upper Lim.	0.005	0.005	0.005	0.005	0.005	0.005	0.005
Lower Lim.	0.00098	0.00063	0.0013	0.0013	0.00074	0.0014	0.0021



# Confidence Interval

Constituent: Cobalt (mg/L)    Analysis Run 10/16/2024 3:12 PM    View: Confidence Intervals

Plant Hammond    Client: Southern Company    Data: Hammond AP-4

	HGWC-101	HGWC-102	HGWC-103	HGWC-105	HGWC-109	HGWC-117A	HGWC-118
8/31/2016	0.0033 (J)		0.0018 (J)	0.0014 (J)	0.0023 (J)		<0.005
10/20/2016	0.0025 (J)						<0.005
10/24/2016			0.0018 (J)				
10/25/2016				0.0013 (J)	0.0017 (J)		
1/31/2017	0.001 (J)		0.0016 (J)	0.0006 (J)	0.0017 (J)		<0.005
5/23/2017	0.0025 (J)		0.0014 (J)				0.0005 (J)
5/24/2017				0.0007 (J)	0.002 (J)		
8/10/2017	0.0029 (J)		0.0025 (J)	0.0006 (J)	0.0012 (J)		0.0003 (J)
11/14/2017	0.003 (J)		0.002 (J)	0.0005 (J)	0.0014 (J)		0.0004 (J)
6/6/2018	0.0016 (J)		0.0031 (J)	0.00056 (J)	0.0014 (J)		
6/7/2018							<0.005
10/2/2018				<0.005	0.00081 (J)		
10/3/2018	0.0028 (J)		0.0023 (J)				<0.005
8/22/2019	<0.005		0.0019 (J)	<0.005			0.0003 (J)
8/23/2019					0.0027 (J)		
10/22/2019					0.0022 (J)		0.00061 (J)
10/23/2019	0.0023 (J)	0.0018 (J)	0.0021 (J)	0.00038 (J)			
1/3/2020		0.0038 (J)					
3/4/2020		0.0021 (J)					
3/24/2020		0.0019 (J)					
3/25/2020	0.0021 (J)		0.0022 (J)	0.00047 (J)	0.0022 (J)		<0.005
6/18/2020		0.0012 (J)					
7/21/2020		0.00098 (J)					
8/26/2020							0.00061 (J)
8/27/2020	0.0027 (J)	0.001 (J)	0.0019 (J)	<0.005	0.00086 (J)		
9/24/2020	0.0021 (J)	0.0011 (J)	0.0019 (J)	0.00044 (J)			
9/25/2020					0.001 (J)		
9/28/2020							0.00048 (J)
3/17/2021	0.0023 (J)	0.0012 (J)			0.003 (J)		
3/18/2021			0.0021 (J)	0.00045 (J)			0.0012 (J)
8/12/2021						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)				
9/27/2021						0.0011 (J)	
2/2/2022	0.0027 (J)	0.0019 (J)	0.0022 (J)		0.002 (J)		
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)	0.0011 (J)	<0.005
8/10/2022	0.0028 (J)						
1/25/2023	0.0021 (J)	0.0016 (J)	0.0017 (J)	0.00046 (J)	0.0016 (J)	0.00048 (J)	<0.005
8/11/2023	0.0028 (J)	0.001 (J)	0.0019 (J)	0.00047 (J)	0.00077 (J)	0.00078 (J)	<0.005
2/16/2024	0.0026 (J)	0.0011 (J)	0.002 (J)				
2/17/2024				0.00071 (J)	0.0011 (J)	0.00047 (J)	0.00042 (J)
8/9/2024		0.00094 (J)	0.002 (J)				<0.005
8/10/2024	0.0025 (J)			0.00052 (J)	0.0005 (J)	0.00081 (J)	
Mean	0.002462	0.001467	0.002033	0.001884	0.00154	0.0009438	0.00287
Std. Dev.	0.0005005	0.0007443	0.0003469	0.002036	0.0006876	0.0006479	0.002296
Upper Lim.	0.002738	0.0019	0.002225	0.005	0.001919	0.00155	0.005
Lower Lim.	0.002186	0.00098	0.001842	0.00047	0.001161	0.0003807	0.00045

# Confidence Interval

Constituent: Combined Radium 226 & 228 (pCi/L)    Analysis Run 10/16/2024 3:12 PM    View: Confidence Intervals

Plant Hammond    Client: Southern Company    Data: Hammond AP-4

	HGWC-101	HGWC-102	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117A	HGWC-118
8/31/2016	0.621 (U)		1.62	0.906 (U)	1.2	1.03		
10/20/2016	1.4							1.97
10/24/2016			1.01 (U)					
10/25/2016				1.03	1.11 (U)	1.07		
1/31/2017	0.906 (U)		0.976 (U)	0.868 (U)	1.45	0.588 (U)		1.03
5/23/2017	0.388 (U)		0.891 (U)					0.398 (U)
5/24/2017				0.728 (U)	0.393 (U)	0.593 (U)		
8/10/2017	1.03 (U)		0.601 (U)	1.35	0.84 (U)	0.691 (U)		0.938 (U)
11/14/2017	0.769 (U)		0.567 (U)	0.817 (U)	1.01 (U)	0.653 (U)		0.335 (U)
6/6/2018	1.28 (U)		0.836 (U)	0.559 (U)	0.365 (U)	0.939 (U)		
6/7/2018								0.696 (U)
10/2/2018				0.336 (U)	1.23	0.225 (U)		
10/3/2018	0.302 (U)		0.111 (U)					1.6 (U)
8/22/2019	0.474 (U)		0.946 (U)	0.694 (U)				0.904 (U)
8/23/2019					1.69	0.47 (U)		
10/22/2019					0.705 (U)	0.545 (U)		0.424 (U)
10/23/2019	0.776 (U)	0.858 (U)	0.571 (U)	0.584 (U)				
1/22/2020		1.04 (U)						
3/4/2020		1.32						
3/24/2020		1.23 (U)						
3/25/2020	0.603 (U)		0.403 (U)	0.663 (U)	0.673 (U)	0.508 (U)		0.915 (U)
7/21/2020		0.0938 (U)						
8/26/2020								1.19
8/27/2020	0.109 (U)	1.17 (U)	0.37 (U)	0.416 (U)	0.264 (U)	0.989 (U)		
9/24/2020	0.625 (U)	1.42	0.804 (U)	1.11 (U)	0.576 (U)			
9/25/2020						0.584 (U)		
9/28/2020								0.613 (U)
3/17/2021	0.248 (U)	0.401 (U)				0.556 (U)		
3/18/2021			0.274 (U)	0.252 (U)	0.145 (U)			0.323 (U)
8/12/2021							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)					
9/27/2021							1.05 (U)	
2/1/2022	0.162 (U)	0.806 (U)	0.569 (U)		0.0564 (U)	0.542 (U)		
2/3/2022				0.835			0.499 (U)	0.5 (U)
8/5/2022		0.618 (U)	0.205 (U)	0.139 (U)	0.917 (U)	0.22 (U)	0 (U)	0.206 (U)
8/10/2022	0.601 (U)							
1/25/2023	0.419 (U)	0.513 (U)	0.568 (U)	0.432 (U)	0.71 (U)	0.195 (U)	0.595 (U)	1.44
8/11/2023	0.93 (U)	1.08	0.849 (U)	0.292 (U)	0.314 (U)	0.105 (U)	0.822 (U)	0.806 (U)
2/16/2024	0.344 (U)	0.498 (U)	0.81 (U)		0.845 (U)			
2/17/2024				0.888 (U)		0.388 (U)	0.629 (U)	0 (U)
8/9/2024		0.604 (U)	0.378 (U)					0.421 (U)
8/10/2024	0.817 (U)			0.693 (U)	0.223 (U)	0.5 (U)	0.723 (U)	
Mean	0.6415	0.832	0.6596	0.6717	0.7396	0.5802	0.5553	0.7469
Std. Dev.	0.3443	0.3784	0.3421	0.3048	0.4426	0.2735	0.3482	0.5107
Upper Lim.	0.8314	1.088	0.8483	0.8398	0.9837	0.7311	0.9243	1.037
Lower Lim.	0.4516	0.5756	0.4709	0.5035	0.4954	0.4294	0.1862	0.4568

# Confidence Interval

Constituent: Fluoride, total (mg/L) Analysis Run 10/16/2024 3:12 PM View: Confidence Intervals

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-101	HGWC-102	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117A	HGWC-118
8/31/2016	0.05 (J)		0.06 (J)	0.15 (J)	0.08 (J)	0.12 (J)		0.18 (J)
10/20/2016	0.03 (J)							0.12 (J)
10/24/2016			0.13 (J)					
10/25/2016				0.09 (J)	0.16 (J)	0.17 (J)		
1/31/2017	<0.1		<0.1	0.13 (J)	0.16 (J)	0.05 (J)		0.3
5/23/2017	<0.1		0.15 (J)					0.14 (J)
5/24/2017				0.07 (J)	0.009 (J)	0.13 (J)		
8/10/2017	<0.1		<0.1	0.03 (J)	<0.1	0.12 (J)		0.11 (J)
11/14/2017	<0.1		<0.1	<0.1	<0.1	<0.3		0.07 (J)
6/6/2018	<0.1		<0.1	0.074 (J)	0.057 (J)	0.15 (J)		
6/7/2018								0.3
10/2/2018				<0.1	<0.1	<0.3		
10/3/2018	<0.1		<0.1					0.12 (J)
4/3/2019					<0.1	0.05 (J)		
4/4/2019	<0.1		0.042 (J)	0.03 (J)				
4/5/2019								0.33
6/18/2019								0.89
8/22/2019	<0.1		<0.1	<0.1				0.07 (J)
8/23/2019					<0.1	0.034 (J)		
10/22/2019					0.047 (J)	0.099 (J)		0.087 (J)
10/23/2019	<0.1	0.22 (J)	<0.1	<0.1				
1/3/2020		<0.1						
3/4/2020		<0.1						
3/24/2020		<0.1						
3/25/2020	<0.1		<0.1	<0.1	<0.1	0.075 (J)		0.078 (J)
6/18/2020		<0.1						
7/21/2020		<0.1						
8/26/2020								0.072 (J)
8/27/2020	<0.1	<0.1	<0.1	<0.1	<0.1	0.094 (J)		
9/24/2020	<0.1	<0.1	<0.1	<0.1	0.064 (J)			
9/25/2020						0.091 (J)		
9/28/2020								0.078 (J)
3/17/2021	<0.1	<0.1				0.089 (J)		
3/18/2021			<0.1	<0.1	<0.1			0.079 (J)
8/12/2021							<0.1	
8/13/2021		<0.1		<0.1	<0.1	0.086 (J)		0.075 (J)
8/16/2021	<0.1		<0.1					
9/27/2021							<0.1	
2/2/2022	<0.1	<0.1	<0.1		<0.1	0.086 (J)		
2/3/2022				<0.1			0.056 (J)	0.069 (J)
8/5/2022		0.076 (J)	0.071 (J)	0.075 (J)	0.093 (J)	0.14	0.12	0.12
8/10/2022	0.065 (J)							
1/25/2023	<0.1	<0.1	<0.1	0.051 (J)	0.054 (J)	0.12	0.085 (J)	0.095 (J)
8/11/2023	<0.1	<0.1	<0.1	<0.1	<0.1	0.086 (J)	0.057 (J)	0.07 (J)
2/16/2024	<0.1	<0.1	<0.1		<0.1			
2/17/2024				<0.1		0.094 (J)	0.055 (J)	0.068 (J)
8/9/2024		0.067 (J)	0.077 (J)					0.11
8/10/2024	0.068 (J)			0.066 (J)	0.069 (J)	0.13	0.1	
Mean	0.0915	0.1039	0.09682	0.08936	0.09059	0.1052	0.08413	0.1579
Std. Dev.	0.01959	0.03247	0.02128	0.02809	0.0331	0.03602	0.02513	0.178
Upper Lim.	0.1	0.22	0.13	0.1	0.1	0.1245	0.102	0.14
Lower Lim.	0.068	0.076	0.077	0.074	0.069	0.08585	0.05154	0.072

# Confidence Interval

Constituent: Lead (mg/L) Analysis Run 10/16/2024 3:12 PM View: Confidence Intervals

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-101	HGWC-102	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-118
8/31/2016	<0.001		<0.001	<0.001	<0.001	<0.001	<0.001
10/20/2016	<0.001						<0.001
10/24/2016			<0.001				
10/25/2016				<0.001	<0.001	<0.001	
1/31/2017	<0.001		<0.001	<0.001	<0.001	<0.001	<0.001
5/23/2017	0.0009 (J)		<0.001				<0.001
5/24/2017				<0.001	<0.001	<0.001	
8/10/2017	<0.001		<0.001	<0.001	<0.001	<0.001	<0.001
11/14/2017	<0.001		<0.001	<0.001	<0.001	<0.001	<0.001
6/6/2018	<0.001		<0.001	<0.001	<0.001	<0.001	
6/7/2018							<0.001
10/2/2018				<0.001	<0.001	<0.001	
10/3/2018	<0.001		<0.001				<0.001
8/22/2019	<0.001		<0.001	<0.001			<0.001
8/23/2019					<0.001	5.8E-05 (J)	
10/22/2019					7.9E-05 (J)	5.4E-05 (J)	0.00025 (J)
10/23/2019	<0.001	<0.001	0.00043 (J)	6.8E-05 (J)			
1/3/2020		<0.001					
3/4/2020		0.00011 (J)					
3/24/2020		<0.001					
3/25/2020	<0.001		7.6E-05 (J)	8.5E-05 (J)	0.00021 (J)	<0.001	0.0001 (J)
6/18/2020		<0.001					
7/21/2020		<0.001					
8/26/2020							0.00036 (J)
8/27/2020	<0.001	<0.001	0.00018 (J)	<0.001	<0.001	<0.001	
9/24/2020	<0.001	<0.001	0.00028 (J)	4.9E-05 (J)	0.00034 (J)		
9/25/2020						<0.001	
9/28/2020							0.00022 (J)
3/17/2021	<0.001	<0.001				<0.001	
3/18/2021			0.00024 (J)	5.8E-05 (J)	9.1E-05 (J)		0.00088 (J)
8/13/2021		<0.001		<0.001	<0.001	<0.001	<0.001
8/16/2021	<0.001		<0.001				
2/2/2022	<0.001	<0.001	<0.001		<0.001	<0.001	
2/3/2022				<0.001			<0.001
8/5/2022		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
8/10/2022	<0.001						
1/25/2023	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
8/11/2023	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
2/16/2024	<0.001	<0.001	0.00027 (J)		<0.001		
2/17/2024				<0.001		<0.001	<0.001
8/9/2024		<0.001	<0.001				<0.001
8/10/2024	<0.001			<0.001	<0.001	<0.001	
Mean	0.0009952	0.0009444	0.0007846	0.0008219	0.0008438	0.0009101	0.0008481
Std. Dev.	2.182E-05	0.0002225	0.0003539	0.0003763	0.0003333	0.0002839	0.0003099
Upper Lim.	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Lower Lim.	0.0009	0.00011	0.00028	8.5E-05	0.00034	5.8E-05	0.00088

# Confidence Interval

Constituent: Lithium (mg/L) Analysis Run 10/16/2024 3:12 PM View: Confidence Intervals

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-102	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117A	HGWC-118
8/31/2016		<0.03	0.0034 (J)	<0.03	<0.03		<0.03
10/20/2016							<0.03
10/24/2016		<0.03					
10/25/2016			0.0043 (J)	<0.03	<0.03		
1/31/2017		<0.03	0.0042 (J)	<0.03	<0.03		<0.03
5/23/2017		0.0012 (J)					0.0012 (J)
5/24/2017			0.0039 (J)	<0.03	0.0012 (J)		
8/10/2017		0.0016 (J)	0.004 (J)	<0.03	<0.03		<0.03
11/14/2017		0.0015 (J)	0.0044 (J)	<0.03	<0.03		<0.03
6/6/2018		0.0017 (J)	0.0041 (J)	0.00099 (J)	0.0013 (J)		
6/7/2018							0.0015 (J)
10/2/2018			0.0041 (J)	<0.03	0.0013 (J)		
10/3/2018		0.0016 (J)					<0.03
8/22/2019		0.0015 (J)	0.004 (J)				0.0018 (J)
8/23/2019				0.00092 (J)	0.0009 (J)		
10/22/2019				0.00094 (J)	0.00088 (J)		0.0027 (J)
10/23/2019	0.0012 (J)	0.002 (J)	0.0039 (J)				
1/3/2020	0.0011 (J)						
3/4/2020	0.0013 (J)						
3/24/2020	0.00084 (J)						
3/25/2020		0.0016 (J)	0.0041 (J)	0.00091 (J)	<0.03		0.0017 (J)
6/18/2020	0.0013 (J)						
7/21/2020	0.0013 (J)						
8/26/2020							0.0028 (J)
8/27/2020	0.0011 (J)	0.0016 (J)	0.0037 (J)	<0.03	0.0011 (J)		
9/24/2020	0.0011 (J)	0.0017 (J)	0.0038 (J)	0.00098 (J)			
9/25/2020					0.001 (J)		
9/28/2020							0.0022 (J)
3/17/2021	0.0012 (J)				<0.03		
3/18/2021		0.0018 (J)	0.0042 (J)	0.0011 (J)			0.0029 (J)
8/12/2021						0.0036 (J)	
8/13/2021	0.0011 (J)		0.0038 (J)	0.00084 (J)	<0.03		0.0017 (J)
8/16/2021		0.0016 (J)					
9/27/2021						0.0035 (J)	
2/2/2022	0.0013 (J)	0.0019 (J)		0.001 (J)	0.00084 (J)		
2/3/2022			0.0046 (J)			0.0051 (J)	0.0015 (J)
8/5/2022	0.0013 (J)	0.0014 (J)	0.0039 (J)	0.00082 (J)	0.00087 (J)	0.0038 (J)	0.0018 (J)
1/25/2023	0.001 (J)	0.0012 (J)	0.0038 (J)	0.00081 (J)	<0.03	0.0037 (J)	0.001 (J)
8/11/2023	0.0013 (J)	0.0014 (J)	0.0044 (J)	0.00083 (J)	0.00076 (J)	0.0041 (J)	0.0023 (J)
2/16/2024	<0.03	<0.03		<0.03			
2/17/2024			0.0041 (J)		<0.03	0.0038 (J)	<0.03
8/9/2024	<0.03	<0.03					0.0019 (J)
8/10/2024			0.0047 (J)	<0.03	<0.03	0.0041 (J)	
Mean	0.002902	0.008348	0.004067	0.01477	0.0162	0.003963	0.01129
Std. Dev.	0.004724	0.0124	0.0003071	0.01488	0.01483	0.0005069	0.01357
Upper Lim.	0.015	0.002	0.004236	0.03	0.03	0.0051	0.03
Lower Lim.	0.0011	0.0015	0.003897	0.00091	0.0009	0.0035	0.0017

# Confidence Interval

Constituent: Mercury (mg/L) Analysis Run 10/16/2024 3:12 PM View: Confidence Intervals

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-101	HGWC-102	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117A	HGWC-118
8/31/2016	<0.0002		<0.0002	<0.0002	<0.0002	<0.0002		<0.0002
10/20/2016	<0.0002							<0.0002
10/24/2016			<0.0002					
10/25/2016				<0.0002	<0.0002	<0.0002		
1/31/2017	9.3E-05 (J)		8E-05 (J)	<0.0002	<0.0002	8E-05 (J)		9E-05 (J)
5/23/2017	<0.0002		<0.0002					<0.0002
5/24/2017				<0.0002	<0.0002	<0.0002		
8/10/2017	<0.0002		<0.0002	<0.0002	<0.0002	<0.0002		<0.0002
11/14/2017	<0.0002		<0.0002	<0.0002	<0.0002	<0.0002		<0.0002
6/6/2018	<0.0002		<0.0002	<0.0002	<0.0002	<0.0002		
6/7/2018								<0.0002
10/2/2018				<0.0002	<0.0002	<0.0002		
10/3/2018	<0.0002		<0.0002					<0.0002
8/22/2019	<0.0002		<0.0002	<0.0002				<0.0002
8/23/2019					<0.0002	<0.0002		
10/23/2019		<0.0002						
1/3/2020		<0.0002						
3/4/2020		<0.0002						
3/24/2020		<0.0002						
6/18/2020		<0.0002						
7/21/2020		<0.0002						
8/26/2020								<0.0002
8/27/2020	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002		
9/24/2020		<0.0002						
8/12/2021							9.4E-05 (J)	
8/13/2021		0.0001 (J)		0.00022	8.4E-05 (J)	8E-05 (J)		8.1E-05 (J)
8/16/2021	9.9E-05 (J)		0.00027					
9/27/2021							<0.0002	
2/2/2022	<0.0002	<0.0002	<0.0002		<0.0002	<0.0002		
2/3/2022				<0.0002			<0.0002	<0.0002
8/5/2022		<0.0002	0.00017 (J)	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
8/10/2022	<0.0002							
1/25/2023	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
8/11/2023	<0.0002	<0.0002	0.00025	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
2/16/2024	<0.0002	<0.0002	<0.0002		<0.0002			
2/17/2024				<0.0002		<0.0002	<0.0002	<0.0002
8/9/2024		<0.0002	<0.0002					<0.0002
8/10/2024	<0.0002			<0.0002	<0.0002	<0.0002	<0.0002	
Mean	0.0001878	0.0001933	0.0001982	0.0002012	0.0001932	0.0001859	0.0001867	0.0001865
Std. Dev.	3.456E-05	2.582E-05	3.762E-05	4.851E-06	2.813E-05	3.985E-05	3.748E-05	3.806E-05
Upper Lim.	0.0002	0.0002	0.00025	0.00022	0.0002	0.0002	0.0002	0.0002
Lower Lim.	9.9E-05	0.0001	0.00017	0.0002	8.4E-05	8E-05	9.4E-05	9E-05

# Confidence Interval

Constituent: Selenium (mg/L)    Analysis Run 10/16/2024 3:12 PM    View: Confidence Intervals  
Plant Hammond    Client: Southern Company    Data: Hammond AP-4

	HGWC-102
10/23/2019	<0.005
1/3/2020	0.0015 (J)
3/4/2020	<0.005
3/24/2020	<0.005
6/18/2020	<0.005
7/21/2020	<0.005
8/27/2020	<0.005
9/24/2020	<0.005
8/13/2021	<0.005
2/2/2022	<0.005
8/5/2022	<0.005
1/25/2023	<0.005
8/11/2023	<0.005
2/16/2024	<0.005
8/9/2024	<0.005
Mean	0.004767
Std. Dev.	0.0009037
Upper Lim.	0.005
Lower Lim.	0.0015

# Confidence Interval

Constituent: Thallium (mg/L)    Analysis Run 10/16/2024 3:13 PM    View: Confidence Intervals  
Plant Hammond    Client: Southern Company    Data: Hammond AP-4

	HGWC-102
10/23/2019	<0.001
1/3/2020	8E-05 (J)
3/4/2020	<0.001
3/24/2020	<0.001
6/18/2020	<0.001
7/21/2020	<0.001
8/27/2020	<0.001
9/24/2020	<0.001
8/13/2021	<0.001
2/2/2022	<0.001
8/5/2022	<0.001
1/25/2023	<0.001
8/11/2023	<0.001
2/16/2024	<0.001
8/9/2024	<0.001
Mean	0.0009387
Std. Dev.	0.0002375
Upper Lim.	0.001
Lower Lim.	8E-05