



Prepared for

Georgia Power Company
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2024 SEMIANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT

PLANT HAMMOND ASH POND 3 (AP-3)

Prepared by

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Project Number GW6581D

February 2025

CERTIFICATION STATEMENT

This 2024 *Semiannual Groundwater Monitoring and Corrective Action Report, Plant Hammond – Ash Pond 3 (AP-3)* has been prepared in compliance with the United States Environmental Protection Agency Coal Combustion Residual Rule (40 Code of Federal Regulations [CFR] 257 Subpart D), specifically 40 CFR § 257.90(e), and the Georgia Environmental Protection Division Rules for Solid Waste Management 391-3-4-.10 by a qualified groundwater scientist or engineer with Geosyntec Consultants, Inc. I hereby certify that I am a qualified groundwater scientist, in accordance with the Georgia Rules of Solid Waste Management 391-3-4-.04.



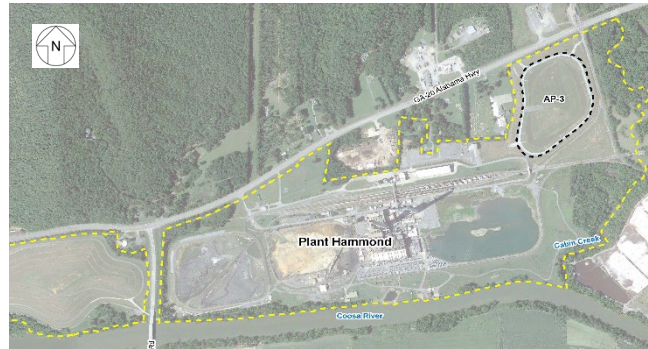
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SUMMARY

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 3 (AP-3) (the Site). This summary was prepared by Geosyntec Consultants, Inc. (Geosyntec) on behalf of Georgia Power to meet the requirements listed in Part A, Section 6¹ of the United States Environmental Protection Agency (USEPA) Coal Combustion Residual Rule (federal CCR Rule) (40 Code of Federal Regulations [CFR] 257 Subpart D).

Plant Hammond is located at 5963 Alabama Highway SW, approximately 10 miles west of Rome in Floyd County, Georgia. AP-3 is located on the northeastern corner of the Plant Hammond property. In the early 1980’s, AP-3 was converted into a dry ash disposal area and in the early 1990’s the pond stopped receiving CCR materials. Final capping of the pond with a low-permeability cover system was completed in the second quarter of 2018. The Georgia Environmental Protection Division (GA EPD) approved closure permit no. 057-026D(CCR) for AP-3 on November 13, 2023.



Plant Hammond and the Site

Groundwater at the Site is monitored using a comprehensive monitoring network that meets federal and state monitoring requirements. Groundwater monitoring-related activities have been performed at AP-3 since August 2016.

During the semiannual reporting period, Geosyntec conducted one groundwater sampling event, in August 2024. Groundwater samples were submitted to Pace Analytical Services, LLC, for analysis. Groundwater data for the event were evaluated in accordance with the certified statistical methods. Statistically significant increases of Appendix III²

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

² Boron, calcium, chloride, fluoride, pH, sulfate, and total dissolved solids (TDS)

constituents above background were observed in select monitoring wells following the August 2024 event, as summarized in the table below.

<i>Appendix III Constituent²</i>	<i>August 2024</i>
Boron	HGWC-120, HGWC-121A, HGWC-125
Calcium	HGWC-120, HGWC-121A, HGWC-125
Sulfate	HGWC-120, HGWC-121A, HGWC-125
Total dissolved solids	HGWC-120, HGWC-121A, HGWC-125

No statistically significant levels (SSLs) were identified for Appendix IV groundwater data from the August 2024 event³.

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

³ Antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, fluoride, lead, lithium, mercury, molybdenum, selenium, thallium, and radium 226 + 228. A statistically significant level (SSL)-related constituent is determined by comparing the confidence intervals developed to either the constituent's maximum contaminant level (MCL), if available, 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-3	Ash Pond 3
CCR	coal combustion residuals
CFR	Code of Federal Regulations
cm/sec	centimeters per second
DO	dissolved oxygen
ft/day	feet per day
ft/ft	feet per foot
GA EPD	Georgia Environmental Protection Division
Georgia Power	Georgia Power Company
Geosyntec	Geosyntec Consultants, Inc.
GSC	Groundwater Stats Consulting
GWPS	Groundwater Protection Standard
HAR	Hydrogeologic Assessment Report
HDPE	high density polyethylene
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 (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 3 (AP-3) for the reporting period of July 2024 through December 2024 (referred herein as the “semiannual reporting period”).

Groundwater monitoring and reporting for the CCR unit is performed in accordance with the monitoring requirements of § 257.90 through § 257.95 of the federal CCR Rule, and GA EPD Rules for Solid Waste Management 391-3-4-.10(6). To specify groundwater monitoring requirements, GA EPD rule 391-3-4-.10(6)(a) incorporates by reference the federal CCR Rule. For ease of reference, the federal CCR rules are cited within this report, in lieu of citing both sets of regulations.

A notification of intent to initiate closure of the inactive CCR surface impoundment was certified on December 7, 2015 and posted to Georgia Power’s website. Groundwater monitoring and reporting for AP-3 are being completed in accordance with the alternate schedule in § 257.100(e)(5) of the revised federal CCR Rule (August 5, 2016). Pursuant to § 257.96(b), Georgia Power monitors groundwater associated with AP-3 in accordance with the assessment monitoring program established for the unit in 2019, including semiannual monitoring and reporting pursuant to § 257.90 through § 257.95 of the federal CCR Rule. Also, the closure permit issued by GA EPD (i.e., no. 057-026D(CCR)) stipulates that groundwater monitoring is required for the duration of the post closure care period (30-years).

1.1 Site Description and Background

Plant Hammond is located in Floyd County, Georgia, approximately 10 miles west of Rome and is bordered by Georgia Highway 20 (GA-20) on the north, the Coosa River on the south, Cabin Creek and industrial land on the east, and sparsely populated, forested, rural and industrial land on the west (**Figure 1**). The physical address of the plant is 5963 Alabama Highway, Rome, Georgia, 30165.

Plant Hammond was a four-unit, coal-fired electric generating facility. All four units at Plant Hammond were retired on July 29, 2019, and no longer produce electricity.

AP-3 is a 25-acre former ash pond that was constructed in 1973 and 1974. Ash sluicing and placement operations at AP-3 commenced in June 1977. In the early 1980's, AP-3 was converted into a dry ash disposal area, and in the early 1990's, the pond stopped receiving CCR materials.

Closure of AP-3 commenced in 2016. As part of closure, AP-3 was dewatered sufficiently to remove the free liquids. The CCR material remaining in AP-3 was graded, and a final cover system installed. The final cover system consists of a 60-millimeter-high density polyethylene (HDPE) liner, geocomposite drainage media, a minimum 18-inch-thick protective soil cover, and a 6-inch-thick vegetative layer. The final cover system was designed to limit infiltration of precipitation using low permeability materials and is graded to promote positive drainage and shed stormwater away from AP-3 via riprap drainage ditches toward three outfall locations around AP-3. Final capping of the unit was completed in the second quarter of 2018. Closure permit no. 057-026D(CCR) was approved by GA EPD on November 13, 2023. As part of the closure process and in compliance with the closure permit, a Treewell system was installed in November 2024.

1.2 Regional Geology and Hydrogeologic Setting

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

1.2.1 Regional and Site Geology

The Site is located within the Great Valley District of the Valley and Ridge Physiographic Province (Valley and Ridge) in northwest Georgia. The Valley and Ridge is characterized by Paleozoic sedimentary rocks that have been folded and faulted into the ridges and valleys that gave this region its name. Geologic mapping performed at the Site by Petrologic Solutions, Inc. under the direction of Golder (Golder, 2018), indicates that AP-3 is underlain by the middle units of the Cambrian age Conasauga Formation, consisting of mostly shaley limestone. Based on review of site-specific subsurface investigations, the bedrock at AP-3 was identified as limestone or shaley limestone. AP-3 is underlain primarily by five units: (i) fill material; (ii) terrace alluvium; (iii) residuum; (iv) highly weathered/fractured limestone bedrock; and (v) unweathered limestone bedrock.

Based on subsurface investigations, the fill is composed of lean clay or gravelly lean clay with sand, sometimes identified by the presence of wood or roots. The terrace alluvium

consists of unconsolidated sediments with high sand and gravel content associated with deposition from the Coosa River and Cabin Creek. Residual or native soils have been derived from the in-place weathering of the shaley limestone bedrock. The residuum is generally described as fat clay with typically only trace amounts of sand, and rarely gravel. Just below the residuum clay layer is a gradational zone of varying proportions of clayey residuum and sand, gravel, and cobble-sized angular pieces of partially weathered limestone, grading into a zone of fractured limestone, before grading into unweathered, fresh limestone. The upper highly weathered zone appears more as residuum with various sized rock fragments. The lower zone becomes less clayey with depth and is estimated to be approximately 5 feet thick. Most of the limestone is described as medium to dark gray with a slabby or flaggy habit when broken in pieces by the sonic drilling. The limestone is very finely laminated with lighter and darker gray layers, and contains interbeds of calcareous shale.

1.2.2 Hydrogeologic Setting

The uppermost aquifer at AP-3 is a regional groundwater aquifer that occurs within the residuum and the weathered and fractured bedrock. The uppermost aquifer is considered to be unconfined; however, localized, semi-confined conditions may be encountered due to the low-permeability clayey nature of the residual soils, or as a result of perched groundwater or poorly interconnected fracture networks in the bedrock. Based on observations of soil types and horizontal conductivity values, the movement of groundwater in the soil, and to some degree the highly weathered bedrock zone, can be characterized as low-to moderate permeability, porous media flow. Groundwater flow in the more competent underlying bedrock is characterized as fracture flow. Flow direction within the area of AP-3 is generally from west to east.

1.3 Groundwater Monitoring Well Network

In accordance with § 257.91, a groundwater monitoring system was installed at AP-3 that consists of a sufficient number of wells installed at appropriate locations and depths to yield groundwater samples from the uppermost aquifer to represent the groundwater quality both upgradient of the unit (i.e., background conditions) and passing the waste boundary of the unit. The number, spacing, and depths of the groundwater monitoring wells were selected based on the characterization of site-specific hydrogeologic conditions.

The current on-site network of piezometers is used to gauge water levels to define groundwater flow direction and gradients. The locations of the detection monitoring wells and piezometers associated with AP-3 are shown on **Figure 2**; well construction details are listed in **Table 1**.

2.0 GROUNDWATER MONITORING ACTIVITIES

In accordance with § 257.90(e), the following describes groundwater monitoring-related activities performed during the 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

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

The well and piezometer networks are inspected semiannually to evaluate if any repairs or corrective actions are necessary to meet the requirements of the Georgia Water Well Standards Act (O.C.G.A. § 12-5-134(5)(d)(vii)). In August 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-3 in August 2019. No SSLs of Appendix IV constituents were identified during the semiannual reporting period. Groundwater at AP-3 will continue to be managed under the assessment monitoring program stipulated by § 257.95.

For the current semiannual reporting period, one semiannual assessment monitoring event was conducted in August 2024. The number of groundwater samples collected for analysis and the dates the samples were collected at AP-3 during the semiannual reporting period are summarized in **Table 2**. Details of these events and analytical results are discussed in Section 3, while the statistical results are discussed in Section 4.

2.3 Additional Surface Water Evaluation

Following the issuance of the closure permit no. 057-026D(CCR), three surface water sampling locations (SW-1, SW-2, and SW-3) on the stormwater outfalls were added to semiannual sampling network for the full Appendix IV constituent list, as shown on **Figure 2**. The surface water sampling locations were dry during the August 2024 sampling event and therefore, no sample was collected.

3.0 SAMPLING METHODOLOGY AND ANALYSES

The following section presents a summary of the field sampling procedures that were implemented, and the groundwater sampling results that were obtained in connection with the assessment monitoring program conducted at AP-3 during the 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-3 wells and piezometers during the August 2024 assessment monitoring events and used to calculate 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.

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

The groundwater and surface water elevation data presented in **Table 3** were used to prepare a potentiometric surface contour map for the August 2024 event, which is presented on **Figure 3**. Groundwater in the AP-3 area flows under the influence of topography from slightly higher ground surface elevations on the western side of the Site toward lower elevations to the east of AP-3. The flow direction is generally consistent with previous observations for AP-3.

3.2 Groundwater Gradient and Flow Velocity

The horizontal groundwater hydraulic gradients within the uppermost aquifer beneath AP-3 was calculated using the groundwater elevation data from the August 2024 semiannual sampling event. The hydraulic gradients are commonly calculated along the groundwater flow path perpendicular to groundwater elevation contours. Ideally, this flow path originates and concludes with groundwater elevations reported for two wells, but this may not be feasible and still remain perpendicular to the contours. The hydraulic gradients in this report have been calculated between an upgradient and downgradient well pair selected to provide the most accurate alignment possible relative to the

interpreted groundwater flow path (i.e., between HGWA-122 and HGWC-120). The hydraulic gradient calculation is presented in **Table 4**. The general trajectory of the flow path for the August 2024 event is shown on **Figure 3**. The average hydraulic gradient for this semiannual reporting period across AP-3 is 0.008 feet per foot (ft/ft).

The approximate horizontal flow velocity associated with AP-3 groundwater was calculated using the following derivative of Darcy's Law. The calculation is provided in **Table 4**.

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

where:

$$V = \text{Groundwater flow velocity} \left(\frac{\text{feet}}{\text{day}} \right)$$

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

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

$$h_1 \text{ and } h_2 = \text{Groundwater elevation at location 1 and 2}$$

$$L = \text{distance between location 1 and 2}$$

$$n_e = \text{Effective porosity}$$

The groundwater flow velocity calculation was performed using the geometric mean value for K_h of the highly weathered/fractured rock of 9.8×10^{-4} centimeters per second (cm/sec) or 2.76 feet per day (ft/day). An estimated effective porosity (n_e) of 0.15 is used to represent average lithologic conditions at AP-3, derived based on review of literature, observed site lithology, and professional judgement. With these variables assigned, and accounting for the hydraulic gradient discussed above, the average horizontal groundwater flow velocity underneath AP-3 for this semiannual reporting period was calculated to be 0.14 ft/day.

3.3 Groundwater Sampling Procedures

Groundwater samples were collected using low-flow sampling procedures in accordance with § 257.93(a). Purging and sampling was performed using dedicated bladder pumps

with dedicated tubing, non-dedicated bladder pumps, or peristaltic pumps. For wells sampled with non-dedicated bladder pumps, the pump intake was lowered to the midpoint of the well screen (or as appropriate based on the groundwater level). Non-dedicated bladder pump samples were collected using new disposable polyethylene tubing; all non-dedicated tubing was disposed of following the sampling event. All non-disposable equipment was decontaminated before use and between well locations.

An in-situ water quality field meter (Aqua TROLL 400) was used to monitor and record field water quality parameters [i.e., pH, conductivity, dissolved oxygen (DO), temperature, and oxidation reduction potential (ORP)] during well purging to verify stabilization prior to sampling. Turbidity was monitored using a 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%.
- ± 0.2 milligram per liter (mg/L) \pm 10%, whichever is greater, for DO > 0.5 mg/L. No criterion applies if DO < 0.5 mg/L, record only.
- Turbidity measured less than 5 nephelometric turbidity units (NTU) or measured between 5 and 10 NTU following three hours of purging.

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

3.4 Laboratory Analyses

Laboratory analyses were performed by Pace Analytical, which is accredited by the National Environmental Laboratory Accreditation Program (NELAP). Pace Analytical maintains a NELAP certification for the Appendix III and Appendix IV constituents 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 event are summarized in **Table 5**.

3.5 Quality Assurance and Quality Control Summary

Quality assurance/quality control (QA/QC) samples were collected during the groundwater monitoring events in accordance with the Site's *Groundwater Monitoring Plan* (Geosyntec, 2021), and included the following: field duplicates, equipment blanks, and field blank samples. QA/QC samples were collected in appropriately preserved laboratory-provided containers and submitted under the same chain of custody as the primary samples for analysis of the same constituents by Pace Analytical.

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

4.0 STATISTICAL ANALYSIS

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

4.1 Statistical Methods

Groundwater data from the 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, that incorporates the statistical tests required of Subtitle C and D facilities by USEPA regulations and guidance as recommended in the USEPA document *Statistical Analysis of Groundwater Data at RCRA Facilities Unified Guidance* (Unified Guidance) (USEPA, 2009).

Appendix III statistical analysis was performed to determine if Appendix III constituents have returned to background levels. Appendix IV constituents were evaluated to assess if concentrations statistically exceeded the established GWPS. Detailed statistical methods used for Appendix III and Appendix IV constituents are discussed in statistical analysis packages provided in **Appendix C** and summarized in Sections 4.1.1 and 4.1.2. The GWPS were finalized pursuant to § 257.95(d)(2) and are presented in **Table 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. The most recent sample from each downgradient well is compared to the background limit to determine whether there are significant statistical increases (SSIs). An “initial exceedance” occurs when an Appendix III constituent reported in the groundwater of a downgradient detection monitoring well exceeds the constituent’s associated PL. The 1-of-2 resample plan allows for collection of an independent resample. A confirmed

exceedance is noted only when the resample confirms the initial exceedance by also exceeding the statistical limit. If the resample falls within its respective prediction limit, no exceedance is declared.

4.1.2 Appendix IV Statistical Methods

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

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

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 analysis discussion presented in **Appendix C**, groundwater conditions have not returned to background and assessment monitoring should continue. However, no SSLs of Appendix IV constituents were identified following statistical analyses of the August 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; and therefore, Georgia Power will continue to monitor groundwater at AP-3 in accordance with the assessment monitoring program regulations of § 257.95.

6.0 CONCLUSIONS AND FUTURE ACTIONS

This *2024 Semiannual Groundwater Monitoring and Corrective Action Report* for Plant Hammond AP-3 was prepared to fulfill the requirements of the federal CCR Rule and the GA EPD Rules for Solid Waste Management 391-3-4-.10.

Statistical analyses of the groundwater monitoring data for AP-3 for the 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-3 is scheduled to begin in February 2025.

7.0 REFERENCES

- Geosyntec, 2020. Hydrogeologic Assessment Report (Revision 01) – Plant Hammond Ash Pond 3 (AP-3). November 2020.
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TABLES

Table 1
Monitoring Well Network Summary
Georgia Power Company
Plant Hammond - Ash Pond 3
Floyd County, GA

Well ID	Well Designation	Hydraulic Location	Northing ⁽¹⁾	Easting ⁽¹⁾	Ground Surface Elevation ⁽¹⁾ (feet)	Top of Casing Elevation ⁽¹⁾ (feet)	Top of Screen Elevation ⁽¹⁾ (feet)	Bottom of Screen Elevation ⁽¹⁾ (feet)	Total Well Depth from (Feet Below Top of Casing) ⁽²⁾	Groundwater Zone Screened	Installation Date
HGWA-1	Detection	Upgradient	1550423.32	1940770.00	592.32	595.21	573.12	563.12	32.49	Bedrock	12/03/2014
HGWA-2	Detection	Upgradient	1549796.87	1939845.15	585.29	587.92	570.29	560.29	27.95	Overburden	12/02/2015
HGWA-3	Detection	Upgradient	1549794.41	1939833.39	585.23	587.74	553.23	543.23	44.51	PWR	12/02/2015
HGWA-43D	Detection	Upgradient	1550422.85	1940753.80	592.08	595.08	544.08	534.08	61.25	Bedrock	08/26/2020
HGWA-44D	Detection	Upgradient	1550409.13	1940756.18	592.01	594.79	491.76	481.76	113.28	Bedrock	08/25/2020
HGWA-45D	Detection	Upgradient	1551157.68	1941907.54	584.08	586.95	535.23	525.23	62.87	Bedrock	08/19/2020
HGWA-122	Detection	Upgradient	1551251.42	1941887.11	585.04	587.90	570.54	560.54	27.76	Overburden	11/20/2014
HGWC-120	Detection	Downgradient	1551067.24	1942926.62	602.83	605.82	548.83	538.83	67	Bedrock	06/27/2016
HGWC-121A	Detection	Downgradient	1550607.97	1943030.44	582.31	584.69	556.71	546.71	37.98	Overburden	07/17/2017
HGWC-124	Detection	Downgradient	1551624.93	1942781.05	579.80	582.52	557.80	547.80	35.12	Bedrock	11/13/2014
HGWC-125	Detection	Downgradient	1550821.41	1942962.87	605.70	608.89	556.03	546.03	63.19	Overburden/PWR	05/04/2020
HGWC-126	Detection	Downgradient	1550422.03	1942689.40	608.72	611.24	552.72	542.72	68.52	PWR/Bedrock	11/25/2019
MW-21	Piezometer	Upgradient	1550270.15	1941809.76	583.60	586.27	570.40	560.40	26.28	Overburden/PWR/Bedrock	12/03/2014
MW-23	Piezometer	Downgradient	1551641.44	1942496.83	582.13	584.91	563.03	553.03	32.28	Overburden/Bedrock	11/24/2014
MW-32	Piezometer	Downgradient	1551092.83	1943021.47	583.10	585.46	559.30	549.30	36.16	Overburden/PWR/Bedrock	11/22/2019
MW-39	Piezometer	Downgradient	1551111.45	1943089.26	577.60	580.42	564.93	554.93	25.82	Overburden/PWR/Bedrock	03/16/2020
MW-41	Piezometer	Downgradient	1551158.16	1943196.47	574.87	577.25	563.20	553.20	24.38	Overburden	05/18/2020
MW-46D	Piezometer	Downgradient	1551056.48	1942929.10	603.17	605.72	513.92	503.92	102.05	Bedrock	08/18/2020

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 data certified by GEL Solutions May 19, 2020. Survey data for HGWA-43D and HGWA-44D certified by GEL Solutions September 10, 2020.

(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 3
Floyd County, GA

Well ID	Hydraulic Location	Well Designation	August 05 2024 - August 07 2024
			Assessment Event
Georgia Power Company - Plant Hammond Ash Pond 3			
HGWA-1	Upgradient	Detection	X
HGWA-2	Upgradient	Detection	X
HGWA-3	Upgradient	Detection	X
HGWA-43D	Upgradient	Detection	X
HGWA-44D	Upgradient	Detection	X
HGWA-45D	Upgradient	Detection	X
HGWA-122	Upgradient	Detection	X
HGWC-120	Downgradient	Detection	X
HGWC-121A	Downgradient	Detection	X
HGWC-124	Downgradient	Detection	X
HGWC-125	Downgradient	Detection	X
HGWC-126	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 3
Floyd County, GA

		August 2024	
Well ID	Top of Casing Elevation (feet)	Depth to Water (feet)	Groundwater Elevation (feet)
HGWA-1	595.21	20.87	574.34
HGWA-2	587.92	14.59	573.33
HGWA-3	587.74	14.37	573.37
HGWA-43D	595.08	20.78	574.30
HGWA-44D	594.79	20.73	574.06
HGWA-45D	586.95	13.14	573.81
HGWA-122	587.90	14.25	573.65
HGWC-120	605.82	40.75	565.07
HGWC-121A	584.69	18.21	566.48
HGWC-124	582.52	16.34	566.18
HGWC-125	608.89	44.11	564.78
HGWC-126	611.24	41.48	569.76
MW-21	586.27	10.69	575.58
MW-23	584.91	14.40	570.51
MW-32	585.46	20.42	565.04
MW-39	580.42	15.45	564.97
MW-41	577.25	12.40	564.85
MW-46D	605.72	40.37	565.35
Cabin Creek (Hwy 20)	594.46	29.98	564.48
Cabin Creek (Railroad Bridge)	586.60	22.56	564.04

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 3
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 _h) (ft/day)	Estimated Effective Porosity (n _e)	Calculated Groundwater Flow Velocity (V) (ft/day)	Calculated Groundwater Flow Velocity (V) (ft/year)
August 2024	HGWA-122 to HGWC-120	573.65	565.07	8.58	1102.00	0.008	2.76	0.15	0.14	52.3

Notes:

ft = feet

ft/day = feet per day

ft/ft = feet per foot

ft/year = feet per year

K_h = Average horizontal hydraulic conductivity

Average horizontal hydraulic conductivity (K_h) of 2.76 feet per day (ft/day) was computed from slug test data derived from AP-3.

n_e = 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 (h₁ and h₂ = groundwater elevation at location 1 and 2)

L = distance between location 1 and 2 along the flow path. See Figure 3 for illustrated flow path.

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 3
Floyd County, GA

Sample Location		HGWA-1	HGWA-2	HGWA-3	HGWA-43D	HGWA-44D	HGWA-45D	HGWC-120	HGWC-121A	HGWA-122	HGWC-124	HGWC-125	HGWC-126
Sample Date		08/05/2024	08/05/2024	08/05/2024	08/06/2024	08/06/2024	08/06/2024	08/07/2024	08/06/2024	08/06/2024	08/07/2024	08/07/2024	08/07/2024
ANALYTE	UNITS												
APPENDIX III													
Boron	mg/L	0.020 J	0.057	< 0.012	0.043	0.52	0.16	1.1	1.4	0.15	0.34	1.5	0.021 J
Calcium	mg/L	113	34.7	83.3	57.2	7.1	53.3	154	152	73.7	97.7	159	136
Chloride	mg/L	8.7	7.9	5.2	4.0	30.2	3.6	2.6	11.6	2.1	2.2	9.7	8.7
Fluoride	mg/L	0.11	0.12	0.077 J	0.21	1.3	0.20	0.34	0.20	0.14	< 0.050	0.12	0.50
pH, Field	SU	7.29	4.91	7.27	7.46	8.36	7.47	7.01	6.91	6.86	7.24	6.15	6.99
Sulfate	mg/L	49.4	87.2	31.1	25.5	0.86 J	2.9	191	127	37.8	69.7	289	72.8
TDS	mg/L	444	217	304	283	380	256	647	661	270	337	695	518
APPENDIX IV													
Antimony	mg/L	< 0.00054	< 0.00054	< 0.00054	< 0.00054	< 0.00054	< 0.00054	< 0.00054	0.0018 J	< 0.00054	0.0020 J	< 0.00054	< 0.00054
Arsenic	mg/L	< 0.00084	< 0.00084	< 0.00084	< 0.00084	< 0.00084	< 0.00084	< 0.00084	< 0.00084	< 0.00084	< 0.00084	0.00090 J	< 0.00084
Barium	mg/L	0.032	0.062	0.13	0.28	0.11	0.50	0.051	0.044	0.029	0.064	0.035	0.23
Beryllium	mg/L	< 0.000094	0.00026 J	< 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	0.00026 J	< 0.00010	< 0.00010	< 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	< 0.0019	< 0.0019	< 0.0019
Cobalt	mg/L	0.00055 J	0.032	< 0.00032	< 0.00032	< 0.00032	< 0.00032	0.0064	< 0.00032	< 0.00032	< 0.00032	0.012	< 0.00032
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
Lithium	mg/L	< 0.0016	0.0019 J	0.0034 J	0.0025 J	0.10	0.0048 J	0.023 J	0.0063 J	< 0.0016	< 0.0016	0.0038 J	0.0042 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
Molybdenum	mg/L	< 0.00062	< 0.00062	< 0.00062	0.0010 J	0.00079 J	< 0.00062	0.036	< 0.00062	0.0047 J	0.0012 J	0.0028 J	< 0.00062
Combined Radium 226 + 228	pCi/L	0.640 U	1.27	0.371 U	0.674 U	0.529 U	1.76	0.679 U	1.27	0.661 U	0.422 U	0.603 U	0.662 U
Selenium	mg/L	< 0.00096	0.0013 J	< 0.00096	< 0.00096	< 0.00096	< 0.00096	< 0.00096	< 0.00096	0.0012 J	< 0.00096	< 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
Fluoride	mg/L	0.11	0.12	0.077 J	0.21	1.3	0.20	0.34	0.20	0.14	< 0.050	0.12	0.50

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 3
Floyd County, GA

Analyte	Units	EPA MCL	CCR-Rule Specified ⁽¹⁾	Background Limit	GWPS ⁽²⁾
Antimony	mg/L	0.006	N/A	0.003	0.006
Arsenic	mg/L	0.01	N/A	0.005	0.01
Barium	mg/L	2	N/A	0.64	2
Beryllium	mg/L	0.004	N/A	0.0005	0.004
Cadmium	mg/L	0.005	N/A	0.0005	0.005
Chromium	mg/L	0.1	N/A	0.0079	0.1
Cobalt	mg/L	N/A	0.006	0.038	0.038
Combined Radium 226 + 228	pCi/L	5	N/A	1.69	5
Fluoride	mg/L	4	N/A	1.5	4
Lead	mg/L	N/A	0.015	0.001	0.015
Lithium	mg/L	N/A	0.040	0.064	0.064
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

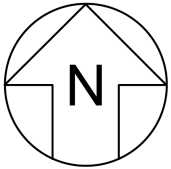
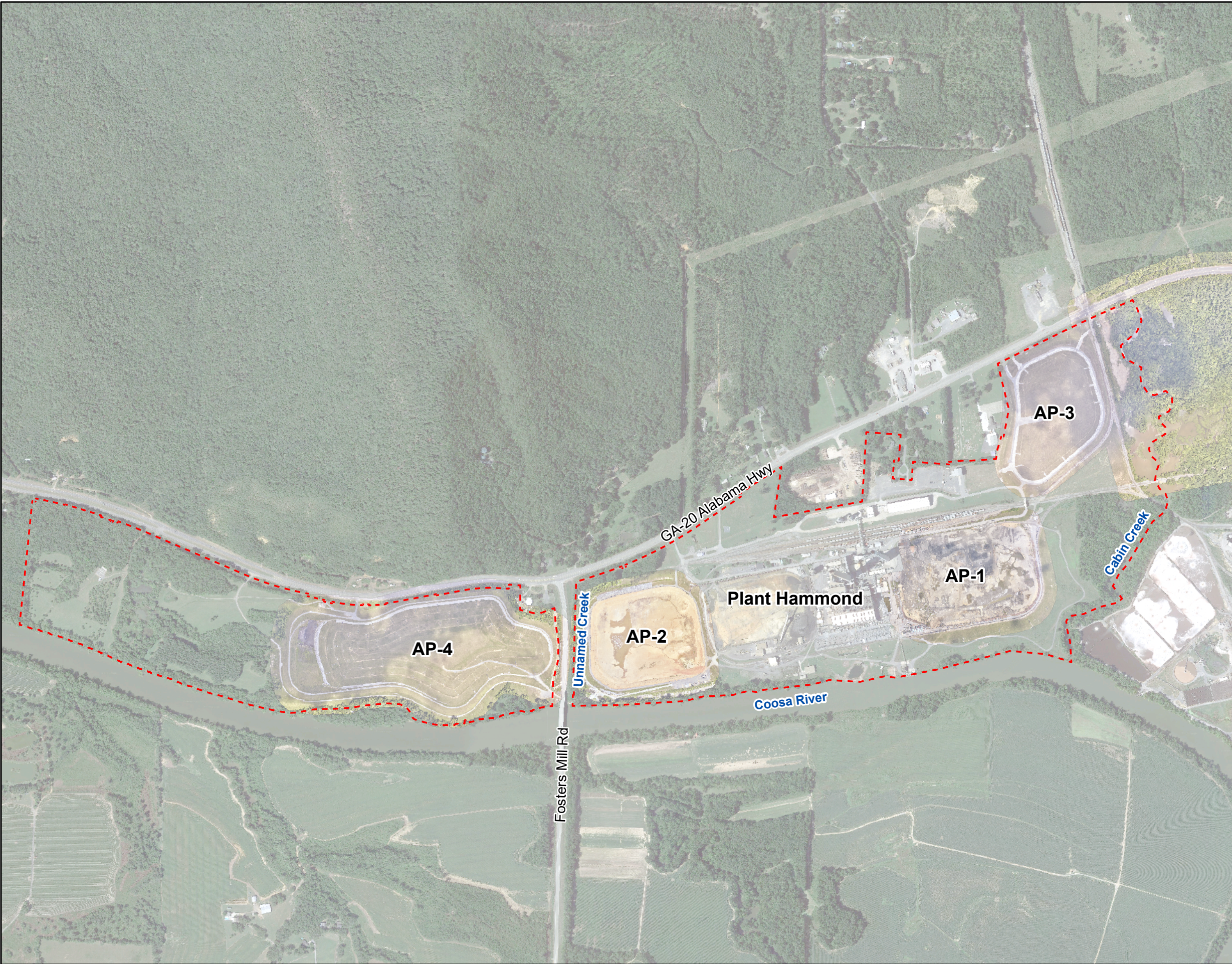
The background limits are used when determining the groundwater protection standard (GWPS) under 40 CFR § 257.95(h) and 391-3-4-.10(6)(a).

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.

(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.

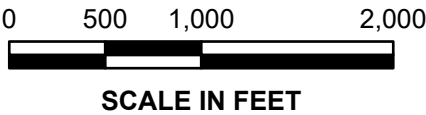
FIGURES



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.



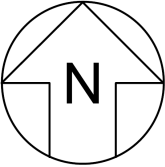
SITE LOCATION MAP

GEORGIA POWER COMPANY
PLANT HAMMOND AP-3
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
 - Surface Water Sample Point
 - Approximate AP-3 Boundary
 - Plant Hammond Property Boundary

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



**MONITORING WELL NETWORK
AND SAMPLING LOCATION MAP**

GEORGIA POWER COMPANY
PLANT HAMMOND AP-3
ROME, FLOYD COUNTY, GEORGIA

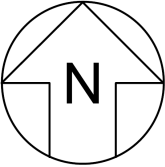
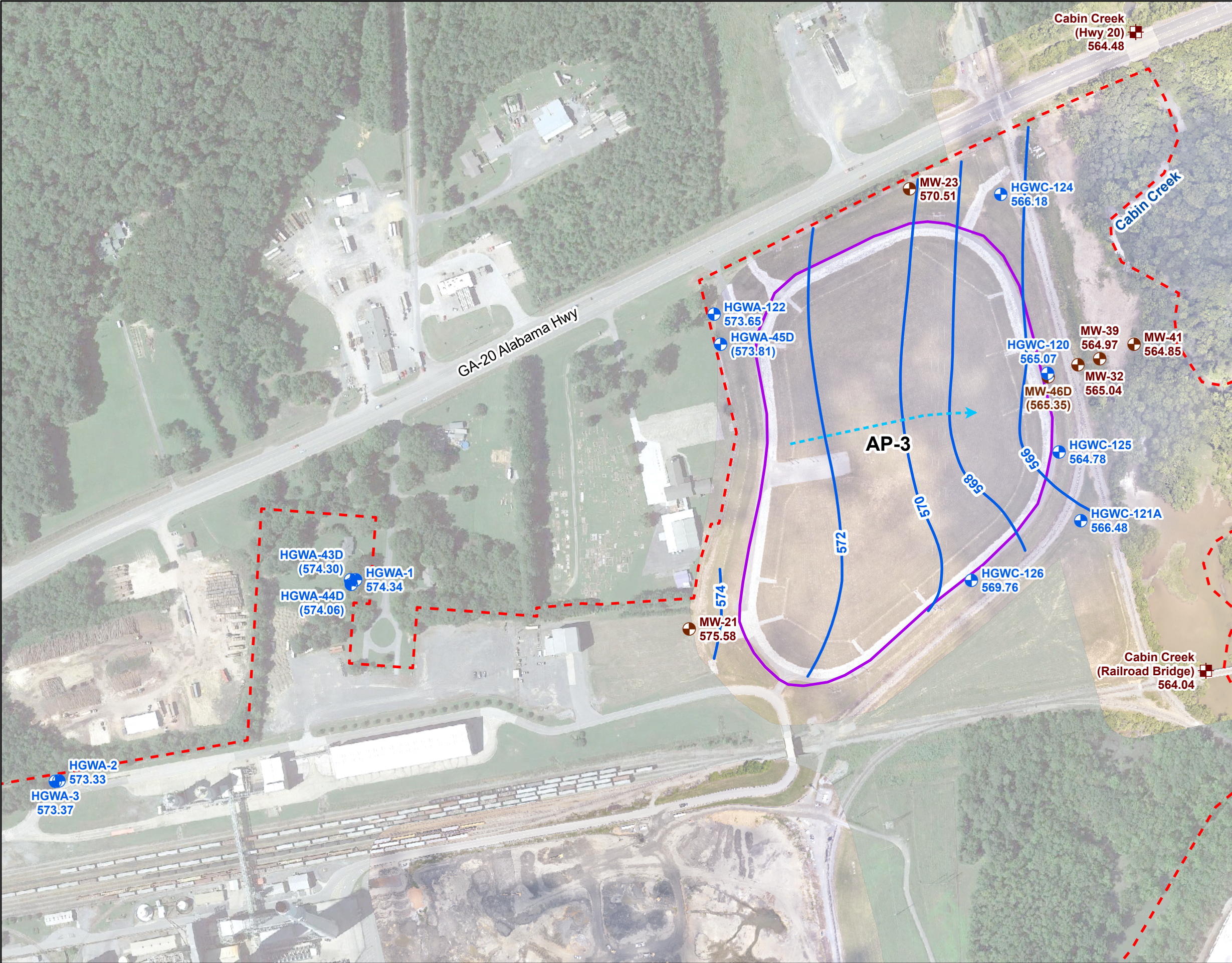
Prepared For:  Georgia Power

Prepared By:  Geosyntec
consultants

KENNESAW, GA

FEBRUARY 2025

**FIGURE
2**



- LEGEND**
- Groundwater Elevation Contour
 - Approximate Groundwater Flow Direction
 - Approximate AP-3 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-3
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 2, 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 3 (AP-3) – Well Maintenance and Repair Documentation, Georgia Power Company**

Geosyntec Consultants has prepared this memorandum to provide documentation of groundwater monitoring well maintenance and/or repair performed at Plant Hammond Ash Pond 3 (AP-3) 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-3	8/5/2024	All Wells	Checked and cleared weep holes of debris.

Attachment

Well Inspection Summary Table

Well Inspection

Site Name: Plant Hammond AP-3

Date: 08/05/2024

Permit Number: 057-026D (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)
Well ID:				
HGWA-1	Yes	Yes	No	Yes
HGWA-2	Yes	Yes	No	Yes
HGWA-3	Yes	Yes	No	Yes
HGWA-43D	Yes	Yes	No	Yes
HGWA-44D	Yes	Yes	No	Yes
HGWA-45D	Yes	Yes	No	Yes
HGWA-122	Yes	Yes	No	Yes
HGWC-120	Yes	Yes	No	Yes
HGWC-121A	Yes	Yes	No	Yes
HGWC-124	Yes	Yes	No	Yes
HGWC-125	Yes	Yes	No	Yes
HGWC-126	Yes	Yes	No	Yes
MW-21	Yes	Yes	No	Yes
MW-23	Yes	Yes	No	Yes
MW-32	Yes	Yes	No	Yes
MW-39	Yes	Yes	No	Yes
MW-41	Yes	Yes	No	Yes
MW-46D	Yes	Yes	No	Yes

Well Inspection

Site Name: Plant Hammond AP-3

Date: 08/05/2024

Permit Number: 057-026D (CCR)

Field Conditions: Sunny, 80° F

Well ID:	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
HGWA-1	Yes	Yes	Yes	Yes	Yes
HGWA-2	Yes	Yes	Yes	Yes	Yes
HGWA-3	Yes	Yes	Yes	Yes	Yes
HGWA-43D	Yes	Yes	Yes	Yes	Yes
HGWA-44D	Yes	Yes	Yes	Yes	Yes
HGWA-45D	Yes	Yes	Yes	Yes	Yes
HGWA-122	Yes	Yes	Yes	Yes	Yes
HGWC-120	Yes	Yes	Yes	Yes	Yes
HGWC-121A	Yes	Yes	Yes	Yes	Yes
HGWC-124	Yes	Yes	Yes	Yes	Yes
HGWC-125	Yes	Yes	Yes	Yes	Yes
HGWC-126	Yes	Yes	Yes	Yes	Yes
MW-21	Yes	Yes	Yes	Yes	Yes
MW-23	Yes	Yes	Yes	Yes	Yes
MW-32	Yes	Yes	Yes	Yes	Yes
MW-39	Yes	Yes	Yes	Yes	Yes
MW-41	Yes	Yes	Yes	Yes	Yes
MW-46D	Yes	Yes	Yes	Yes	Yes

Well Inspection

Site Name: Plant Hammond AP-3

Date: 08/05/2024

Permit Number: 057-026D (CCR)

Field Conditions: Sunny, 80° F

Well ID:	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
HGWA-1	Yes	Yes	Yes	Yes	Yes	Yes
HGWA-2	Yes	Yes	Yes	Yes	Yes	Yes
HGWA-3	Yes	Yes	Yes	Yes	Yes	Yes
HGWA-43D	Yes	Yes	Yes	Yes	Yes	Yes
HGWA-44D	Yes	Yes	Yes	Yes	Yes	Yes
HGWA-45D	Yes	Yes	Yes	Yes	Yes	Yes
HGWA-122	Yes	Yes	Yes	Yes	Yes	Yes
HGWC-120	Yes	Yes	Yes	Yes	Yes	Yes
HGWC-121A	Yes	Yes	Yes	Yes	Yes	Yes
HGWC-124	Yes	Yes	Yes	Yes	Yes	Yes
HGWC-125	Yes	Yes	Yes	Yes	Yes	Yes
HGWC-126	Yes	Yes	Yes	Yes	Yes	Yes
MW-21	Yes	Yes	Yes	Yes	Yes	Yes
MW-23	Yes	Yes	Yes	Yes	Yes	Yes
MW-32	Yes	Yes	Yes	Yes	Yes	Yes
MW-39	Yes	Yes	Yes	Yes	Yes	Yes
MW-41	Yes	Yes	Yes	Yes	Yes	Yes
MW-46D	Yes	Yes	Yes	Yes	Yes	Yes

Well Inspection

Site Name: Plant Hammond AP-3

Date: 08/05/2024

Permit Number: 057-026D (CCR)

Field Conditions: Sunny, 80° F

	Corrective actions as needed, by date:
Well ID:	
HGWA-1	N/A
HGWA-2	N/A
HGWA-3	N/A
HGWA-43D	N/A
HGWA-44D	N/A
HGWA-45D	N/A
HGWA-122	N/A
HGWC-120	N/A
HGWC-121A	N/A
HGWC-124	N/A
HGWC-125	N/A
HGWC-126	N/A
MW-21	N/A
MW-23	N/A
MW-32	N/A
MW-39	N/A
MW-41	N/A
MW-46D	N/A

APPENDIX B

Laboratory Analytical and Field Sampling Reports

LABORATORY ANALYTICAL RESULTS



August 20, 2024

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

RE: Project: Hammond AP-3
Pace Project No.: 92746286

Dear Kristen Jurinko:

Enclosed are the analytical results for sample(s) received by the laboratory between August 07, 2024 and August 09, 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-3

Pace Project No.: 92746286

Pace Analytical Services Asheville

2225 Riverside Drive, Asheville, NC 28804

Florida/NELAP Certification #: E87648

North Carolina Drinking Water Certification #: 37712

North Carolina Wastewater Certification #: 40

South Carolina Laboratory ID: 99030

South Carolina Certification #: 99030001

Virginia/VELAP Certification #: 460222

Pace Analytical Services Peachtree Corners

110 Technology Pkwy, Peachtree Corners, GA 30092

Florida DOH Certification #: E87315

Georgia DW Inorganics Certification #: 812

North Carolina Certification #: 381

South Carolina Certification #: 98011001

Virginia Certification #: 460204

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: Hammond AP-3

Pace Project No.: 92746286

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92746286001	HAM-HGWA-45D	Water	08/06/24 14:40	08/07/24 12:25
92746286002	HAM-HGWC-121A	Water	08/06/24 16:22	08/07/24 12:25
92746286003	HAM-HGWA-122	Water	08/06/24 12:56	08/07/24 12:25
92746286004	HAM-HGWC-120	Water	08/07/24 11:22	08/09/24 14:15
92746286005	HAM-HGWC-124	Water	08/07/24 09:21	08/09/24 14:15
92746286006	HAM-HGWC-125	Water	08/07/24 13:01	08/09/24 14:15
92746286007	HAM-HGWC-126	Water	08/07/24 14:38	08/09/24 14:15
92746286008	HAM-AP3-FD-01	Water	08/07/24 00:00	08/09/24 14:15
92746286009	HAM-AP3-FB-01	Water	08/07/24 15:30	08/09/24 14:15
92746286010	HAM-AP3-EB-01	Water	08/07/24 15:35	08/09/24 14:15

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SAMPLE ANALYTE COUNT

Project: Hammond AP-3

Pace Project No.: 92746286

Lab ID	Sample ID	Method	Analysts	Analytes Reported
92746286001	HAM-HGWA-45D	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
92746286002	HAM-HGWC-121A	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
92746286003	HAM-HGWA-122	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
92746286004	HAM-HGWC-120	EPA 6010D	AJM	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2540C-2015	DL1	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92746286005	HAM-HGWC-124	EPA 6010D	AJM	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2540C-2015	DL1	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92746286006	HAM-HGWC-125	EPA 6010D	AJM	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2540C-2015	DL1	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92746286007	HAM-HGWC-126	EPA 6010D	AJM	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2540C-2015	DL1	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92746286008	HAM-AP3-FD-01	EPA 6010D	AJM	1
		EPA 6020B	CW1	13

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SAMPLE ANALYTE COUNT

Project: Hammond AP-3

Pace Project No.: 92746286

Lab ID	Sample ID	Method	Analysts	Analytes Reported
92746286009	HAM-AP3-FB-01	EPA 7470A	VB	1
		SM 2540C-2015	DL1	1
		EPA 300.0 Rev 2.1 1993	CDC	3
		EPA 6010D	AJM	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2540C-2015	DL1	1
92746286010	HAM-AP3-EB-01	EPA 300.0 Rev 2.1 1993	CDC	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	CDC	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-3

Pace Project No.: 92746286

Lab Sample ID	Client Sample ID					
Method	Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92746286001	HAM-HGWA-45D					
EPA 6010D	Calcium	53.3	mg/L	1.0	08/15/24 23:13	
EPA 6020B	Barium	0.50	mg/L	0.0050	08/09/24 18:32	M1
EPA 6020B	Boron	0.16	mg/L	0.040	08/09/24 18:32	
EPA 6020B	Lithium	0.0048J	mg/L	0.030	08/09/24 18:32	
SM 2540C-2015	Total Dissolved Solids	256	mg/L	25.0	08/09/24 11:41	
EPA 300.0 Rev 2.1 1993	Chloride	3.6	mg/L	1.0	08/09/24 02:22	
EPA 300.0 Rev 2.1 1993	Fluoride	0.20	mg/L	0.10	08/09/24 02:22	
EPA 300.0 Rev 2.1 1993	Sulfate	2.9	mg/L	1.0	08/09/24 02:22	
92746286002	HAM-HGWC-121A					
EPA 6010D	Calcium	152	mg/L	1.0	08/15/24 23:17	
EPA 6020B	Antimony	0.0018J	mg/L	0.0030	08/09/24 18:49	
EPA 6020B	Barium	0.044	mg/L	0.0050	08/09/24 18:49	
EPA 6020B	Boron	1.4	mg/L	0.040	08/09/24 18:49	
EPA 6020B	Lithium	0.0063J	mg/L	0.030	08/09/24 18:49	
SM 2540C-2015	Total Dissolved Solids	661	mg/L	25.0	08/09/24 11:42	
EPA 300.0 Rev 2.1 1993	Chloride	11.6	mg/L	1.0	08/09/24 02:37	
EPA 300.0 Rev 2.1 1993	Fluoride	0.20	mg/L	0.10	08/09/24 02:37	
EPA 300.0 Rev 2.1 1993	Sulfate	127	mg/L	3.0	08/09/24 14:01	M1
92746286003	HAM-HGWA-122					
EPA 6010D	Calcium	73.7	mg/L	1.0	08/15/24 23:21	
EPA 6020B	Barium	0.029	mg/L	0.0050	08/09/24 18:53	
EPA 6020B	Boron	0.15	mg/L	0.040	08/09/24 18:53	
EPA 6020B	Molybdenum	0.0047J	mg/L	0.010	08/09/24 18:53	
EPA 6020B	Selenium	0.0012J	mg/L	0.0050	08/09/24 18:53	
SM 2540C-2015	Total Dissolved Solids	270	mg/L	25.0	08/09/24 11:42	
EPA 300.0 Rev 2.1 1993	Chloride	2.1	mg/L	1.0	08/09/24 04:08	
EPA 300.0 Rev 2.1 1993	Fluoride	0.14	mg/L	0.10	08/09/24 04:08	
EPA 300.0 Rev 2.1 1993	Sulfate	37.8	mg/L	1.0	08/09/24 04:08	
92746286004	HAM-HGWC-120					
EPA 6010D	Calcium	154	mg/L	1.0	08/19/24 16:27	
EPA 6020B	Barium	0.051	mg/L	0.0050	08/16/24 13:15	
EPA 6020B	Boron	1.1	mg/L	0.040	08/16/24 13:15	
EPA 6020B	Cobalt	0.0064	mg/L	0.0050	08/16/24 13:15	
EPA 6020B	Lithium	0.023J	mg/L	0.030	08/16/24 13:15	
EPA 6020B	Molybdenum	0.036	mg/L	0.010	08/16/24 13:15	
SM 2540C-2015	Total Dissolved Solids	647	mg/L	25.0	08/12/24 11:32	
EPA 300.0 Rev 2.1 1993	Chloride	2.6	mg/L	1.0	08/13/24 11:49	
EPA 300.0 Rev 2.1 1993	Fluoride	0.34	mg/L	0.10	08/13/24 11:49	
EPA 300.0 Rev 2.1 1993	Sulfate	191	mg/L	5.0	08/13/24 22:48	
92746286005	HAM-HGWC-124					
EPA 6010D	Calcium	97.7	mg/L	1.0	08/19/24 16:30	
EPA 6020B	Antimony	0.0020J	mg/L	0.0030	08/16/24 13:31	
EPA 6020B	Barium	0.064	mg/L	0.0050	08/16/24 13:31	
EPA 6020B	Boron	0.34	mg/L	0.040	08/16/24 13:31	
EPA 6020B	Molybdenum	0.0012J	mg/L	0.010	08/16/24 13:31	

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SUMMARY OF DETECTION

Project: Hammond AP-3

Pace Project No.: 92746286

Lab Sample ID	Client Sample ID					
Method	Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92746286005	HAM-HGWC-124					
SM 2540C-2015	Total Dissolved Solids	337	mg/L	25.0	08/12/24 11:34	
EPA 300.0 Rev 2.1 1993	Chloride	2.2	mg/L	1.0	08/13/24 12:03	
EPA 300.0 Rev 2.1 1993	Sulfate	69.7	mg/L	1.0	08/13/24 12:03	
92746286006	HAM-HGWC-125					
EPA 6010D	Calcium	159	mg/L	1.0	08/19/24 16:34	
EPA 6020B	Arsenic	0.00090J	mg/L	0.0050	08/16/24 13:36	
EPA 6020B	Barium	0.035	mg/L	0.0050	08/16/24 13:36	
EPA 6020B	Boron	1.5	mg/L	0.040	08/16/24 13:36	
EPA 6020B	Cobalt	0.012	mg/L	0.0050	08/16/24 13:36	
EPA 6020B	Lithium	0.0038J	mg/L	0.030	08/16/24 13:36	
EPA 6020B	Molybdenum	0.0028J	mg/L	0.010	08/16/24 13:36	
SM 2540C-2015	Total Dissolved Solids	695	mg/L	25.0	08/12/24 11:38	
EPA 300.0 Rev 2.1 1993	Chloride	9.7	mg/L	1.0	08/13/24 12:17	
EPA 300.0 Rev 2.1 1993	Fluoride	0.12	mg/L	0.10	08/13/24 12:17	
EPA 300.0 Rev 2.1 1993	Sulfate	289	mg/L	7.0	08/13/24 23:02	
92746286007	HAM-HGWC-126					
EPA 6010D	Calcium	136	mg/L	1.0	08/19/24 16:45	
EPA 6020B	Barium	0.23	mg/L	0.0050	08/16/24 13:40	
EPA 6020B	Boron	0.021J	mg/L	0.040	08/16/24 13:40	
EPA 6020B	Lithium	0.0042J	mg/L	0.030	08/16/24 13:40	
SM 2540C-2015	Total Dissolved Solids	518	mg/L	25.0	08/12/24 11:38	
EPA 300.0 Rev 2.1 1993	Chloride	8.7	mg/L	1.0	08/13/24 12:31	
EPA 300.0 Rev 2.1 1993	Fluoride	0.50	mg/L	0.10	08/13/24 12:31	
EPA 300.0 Rev 2.1 1993	Sulfate	72.8	mg/L	1.0	08/13/24 12:31	
92746286008	HAM-AP3-FD-01					
EPA 6010D	Calcium	95.3	mg/L	1.0	08/19/24 16:48	
EPA 6020B	Barium	0.066	mg/L	0.0050	08/16/24 13:44	
EPA 6020B	Boron	0.37	mg/L	0.040	08/16/24 13:44	
EPA 6020B	Molybdenum	0.0011J	mg/L	0.010	08/16/24 13:44	
SM 2540C-2015	Total Dissolved Solids	345	mg/L	25.0	08/12/24 11:39	
EPA 300.0 Rev 2.1 1993	Chloride	2.2	mg/L	1.0	08/13/24 12:45	
EPA 300.0 Rev 2.1 1993	Sulfate	69.2	mg/L	1.0	08/13/24 12:45	
92746286009	HAM-AP3-FB-01					
SM 2540C-2015	Total Dissolved Solids	33.0	mg/L	25.0	08/12/24 11:39	
92746286010	HAM-AP3-EB-01					
SM 2540C-2015	Total Dissolved Solids	34.0	mg/L	25.0	08/12/24 11:39	

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ANALYTICAL RESULTS

Project: Hammond AP-3
Pace Project No.: 92746286

Sample: HAM-HGWA-45D		Lab ID: 92746286001		Collected: 08/06/24 14:40		Received: 08/07/24 12:25		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010D ATL ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA							
Calcium	53.3	mg/L	1.0	0.12	1	08/09/24 11:23	08/15/24 23:13	7440-70-2	
6020 MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA							
Antimony	ND	mg/L	0.0030	0.00054	1	08/08/24 10:21	08/09/24 18:32	7440-36-0	M1
Arsenic	ND	mg/L	0.0050	0.00084	1	08/08/24 10:21	08/09/24 18:32	7440-38-2	
Barium	0.50	mg/L	0.0050	0.00047	1	08/08/24 10:21	08/09/24 18:32	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000094	1	08/08/24 10:21	08/09/24 18:32	7440-41-7	
Boron	0.16	mg/L	0.040	0.012	1	08/08/24 10:21	08/09/24 18:32	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00010	1	08/08/24 10:21	08/09/24 18:32	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0019	1	08/08/24 10:21	08/09/24 18:32	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00032	1	08/08/24 10:21	08/09/24 18:32	7440-48-4	
Lead	ND	mg/L	0.0010	0.00016	1	08/08/24 10:21	08/09/24 18:32	7439-92-1	
Lithium	0.0048J	mg/L	0.030	0.0016	1	08/08/24 10:21	08/09/24 18:32	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00062	1	08/08/24 10:21	08/09/24 18:32	7439-98-7	
Selenium	ND	mg/L	0.0050	0.00096	1	08/08/24 10:21	08/09/24 18:32	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00038	1	08/08/24 10:21	08/09/24 18:32	7440-28-0	
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA							
Mercury	ND	mg/L	0.00020	0.00013	1	08/19/24 16:00	08/20/24 09:18	7439-97-6	
2540C Total Dissolved Solids		Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA							
Total Dissolved Solids	256	mg/L	25.0	25.0	1		08/09/24 11:41		
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville							
Chloride	3.6	mg/L	1.0	0.60	1		08/09/24 02:22	16887-00-6	
Fluoride	0.20	mg/L	0.10	0.050	1		08/09/24 02:22	16984-48-8	
Sulfate	2.9	mg/L	1.0	0.50	1		08/09/24 02:22	14808-79-8	

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ANALYTICAL RESULTS

Project: Hammond AP-3

Pace Project No.: 92746286

Sample: HAM-HGWC-121A		Lab ID: 92746286002		Collected: 08/06/24 16:22		Received: 08/07/24 12:25		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010D ATL ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA							
Calcium	152	mg/L	1.0	0.12	1	08/09/24 11:23	08/15/24 23:17	7440-70-2	
6020 MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA							
Antimony	0.0018J	mg/L	0.0030	0.00054	1	08/08/24 10:21	08/09/24 18:49	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00084	1	08/08/24 10:21	08/09/24 18:49	7440-38-2	
Barium	0.044	mg/L	0.0050	0.00047	1	08/08/24 10:21	08/09/24 18:49	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000094	1	08/08/24 10:21	08/09/24 18:49	7440-41-7	
Boron	1.4	mg/L	0.040	0.012	1	08/08/24 10:21	08/09/24 18:49	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00010	1	08/08/24 10:21	08/09/24 18:49	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0019	1	08/08/24 10:21	08/09/24 18:49	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00032	1	08/08/24 10:21	08/09/24 18:49	7440-48-4	
Lead	ND	mg/L	0.0010	0.00016	1	08/08/24 10:21	08/09/24 18:49	7439-92-1	
Lithium	0.0063J	mg/L	0.030	0.0016	1	08/08/24 10:21	08/09/24 18:49	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00062	1	08/08/24 10:21	08/09/24 18:49	7439-98-7	
Selenium	ND	mg/L	0.0050	0.00096	1	08/08/24 10:21	08/09/24 18:49	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00038	1	08/08/24 10:21	08/09/24 18:49	7440-28-0	
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA							
Mercury	ND	mg/L	0.00020	0.00013	1	08/19/24 16:00	08/20/24 09:35	7439-97-6	
2540C Total Dissolved Solids		Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA							
Total Dissolved Solids	661	mg/L	25.0	25.0	1		08/09/24 11:42		
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville							
Chloride	11.6	mg/L	1.0	0.60	1		08/09/24 02:37	16887-00-6	
Fluoride	0.20	mg/L	0.10	0.050	1		08/09/24 02:37	16984-48-8	
Sulfate	127	mg/L	3.0	1.5	3		08/09/24 14:01	14808-79-8	M1

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ANALYTICAL RESULTS

Project: Hammond AP-3

Pace Project No.: 92746286

Sample: HAM-HGWA-122		Lab ID: 92746286003		Collected: 08/06/24 12:56		Received: 08/07/24 12:25		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Calcium	73.7	mg/L	1.0	0.12	1	08/09/24 11:23	08/15/24 23:21	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00054	1	08/08/24 10:21	08/09/24 18:53	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00084	1	08/08/24 10:21	08/09/24 18:53	7440-38-2	
Barium	0.029	mg/L	0.0050	0.00047	1	08/08/24 10:21	08/09/24 18:53	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000094	1	08/08/24 10:21	08/09/24 18:53	7440-41-7	
Boron	0.15	mg/L	0.040	0.012	1	08/08/24 10:21	08/09/24 18:53	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00010	1	08/08/24 10:21	08/09/24 18:53	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0019	1	08/08/24 10:21	08/09/24 18:53	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00032	1	08/08/24 10:21	08/09/24 18:53	7440-48-4	
Lead	ND	mg/L	0.0010	0.00016	1	08/08/24 10:21	08/09/24 18:53	7439-92-1	
Lithium	ND	mg/L	0.030	0.0016	1	08/08/24 10:21	08/09/24 18:53	7439-93-2	
Molybdenum	0.0047J	mg/L	0.010	0.00062	1	08/08/24 10:21	08/09/24 18:53	7439-98-7	
Selenium	0.0012J	mg/L	0.0050	0.00096	1	08/08/24 10:21	08/09/24 18:53	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00038	1	08/08/24 10:21	08/09/24 18:53	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	08/19/24 16:00	08/20/24 09:37	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	270	mg/L	25.0	25.0	1		08/09/24 11:42		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	2.1	mg/L	1.0	0.60	1		08/09/24 04:08	16887-00-6	
Fluoride	0.14	mg/L	0.10	0.050	1		08/09/24 04:08	16984-48-8	
Sulfate	37.8	mg/L	1.0	0.50	1		08/09/24 04:08	14808-79-8	

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ANALYTICAL RESULTS

Project: Hammond AP-3

Pace Project No.: 92746286

Sample: HAM-HGWC-120		Lab ID: 92746286004		Collected: 08/07/24 11:22		Received: 08/09/24 14:15		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Calcium	154	mg/L	1.0	0.12	1	08/15/24 16:46	08/19/24 16:27	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00054	1	08/15/24 12:21	08/16/24 13:15	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00084	1	08/15/24 12:21	08/16/24 13:15	7440-38-2	
Barium	0.051	mg/L	0.0050	0.00047	1	08/15/24 12:21	08/16/24 13:15	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000094	1	08/15/24 12:21	08/16/24 13:15	7440-41-7	
Boron	1.1	mg/L	0.040	0.012	1	08/15/24 12:21	08/16/24 13:15	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00010	1	08/15/24 12:21	08/16/24 13:15	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0019	1	08/15/24 12:21	08/16/24 13:15	7440-47-3	
Cobalt	0.0064	mg/L	0.0050	0.00032	1	08/15/24 12:21	08/16/24 13:15	7440-48-4	
Lead	ND	mg/L	0.0010	0.00016	1	08/15/24 12:21	08/16/24 13:15	7439-92-1	
Lithium	0.023J	mg/L	0.030	0.0016	1	08/15/24 12:21	08/16/24 13:15	7439-93-2	
Molybdenum	0.036	mg/L	0.010	0.00062	1	08/15/24 12:21	08/16/24 13:15	7439-98-7	
Selenium	ND	mg/L	0.0050	0.00096	1	08/15/24 12:21	08/16/24 13:15	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00038	1	08/15/24 12:21	08/16/24 13:15	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	08/19/24 16:00	08/20/24 09:40	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	647	mg/L	25.0	25.0	1		08/12/24 11:32		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	2.6	mg/L	1.0	0.60	1		08/13/24 11:49	16887-00-6	
Fluoride	0.34	mg/L	0.10	0.050	1		08/13/24 11:49	16984-48-8	
Sulfate	191	mg/L	5.0	2.5	5		08/13/24 22:48	14808-79-8	

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ANALYTICAL RESULTS

Project: Hammond AP-3

Pace Project No.: 92746286

Sample: HAM-HGWC-124		Lab ID: 92746286005		Collected: 08/07/24 09:21		Received: 08/09/24 14:15		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Calcium	97.7	mg/L	1.0	0.12	1	08/15/24 16:46	08/19/24 16:30	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	0.0020J	mg/L	0.0030	0.00054	1	08/15/24 12:21	08/16/24 13:31	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00084	1	08/15/24 12:21	08/16/24 13:31	7440-38-2	
Barium	0.064	mg/L	0.0050	0.00047	1	08/15/24 12:21	08/16/24 13:31	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000094	1	08/15/24 12:21	08/16/24 13:31	7440-41-7	
Boron	0.34	mg/L	0.040	0.012	1	08/15/24 12:21	08/16/24 13:31	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00010	1	08/15/24 12:21	08/16/24 13:31	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0019	1	08/15/24 12:21	08/16/24 13:31	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00032	1	08/15/24 12:21	08/16/24 13:31	7440-48-4	
Lead	ND	mg/L	0.0010	0.00016	1	08/15/24 12:21	08/16/24 13:31	7439-92-1	
Lithium	ND	mg/L	0.030	0.0016	1	08/15/24 12:21	08/16/24 13:31	7439-93-2	
Molybdenum	0.0012J	mg/L	0.010	0.00062	1	08/15/24 12:21	08/16/24 13:31	7439-98-7	
Selenium	ND	mg/L	0.0050	0.00096	1	08/15/24 12:21	08/16/24 13:31	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00038	1	08/15/24 12:21	08/16/24 13:31	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	08/19/24 16:00	08/20/24 09:43	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	337	mg/L	25.0	25.0	1		08/12/24 11:34		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	2.2	mg/L	1.0	0.60	1		08/13/24 12:03	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		08/13/24 12:03	16984-48-8	
Sulfate	69.7	mg/L	1.0	0.50	1		08/13/24 12:03	14808-79-8	

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ANALYTICAL RESULTS

Project: Hammond AP-3
Pace Project No.: 92746286

Sample: HAM-HGWC-125		Lab ID: 92746286006		Collected: 08/07/24 13:01		Received: 08/09/24 14:15		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010D ATL ICP Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	159	mg/L	1.0	0.12	1	08/15/24 16:46	08/19/24 16:34	7440-70-2	
6020 MET ICPMS Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00054	1	08/15/24 12:21	08/16/24 13:36	7440-36-0	
Arsenic	0.00090J	mg/L	0.0050	0.00084	1	08/15/24 12:21	08/16/24 13:36	7440-38-2	
Barium	0.035	mg/L	0.0050	0.00047	1	08/15/24 12:21	08/16/24 13:36	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000094	1	08/15/24 12:21	08/16/24 13:36	7440-41-7	
Boron	1.5	mg/L	0.040	0.012	1	08/15/24 12:21	08/16/24 13:36	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00010	1	08/15/24 12:21	08/16/24 13:36	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0019	1	08/15/24 12:21	08/16/24 13:36	7440-47-3	
Cobalt	0.012	mg/L	0.0050	0.00032	1	08/15/24 12:21	08/16/24 13:36	7440-48-4	
Lead	ND	mg/L	0.0010	0.00016	1	08/15/24 12:21	08/16/24 13:36	7439-92-1	
Lithium	0.0038J	mg/L	0.030	0.0016	1	08/15/24 12:21	08/16/24 13:36	7439-93-2	
Molybdenum	0.0028J	mg/L	0.010	0.00062	1	08/15/24 12:21	08/16/24 13:36	7439-98-7	
Selenium	ND	mg/L	0.0050	0.00096	1	08/15/24 12:21	08/16/24 13:36	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00038	1	08/15/24 12:21	08/16/24 13:36	7440-28-0	
7470 Mercury Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	08/19/24 16:00	08/20/24 09:45	7439-97-6	
2540C Total Dissolved Solids Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	695	mg/L	25.0	25.0	1		08/12/24 11:38		
300.0 IC Anions 28 Days Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	9.7	mg/L	1.0	0.60	1		08/13/24 12:17	16887-00-6	
Fluoride	0.12	mg/L	0.10	0.050	1		08/13/24 12:17	16984-48-8	
Sulfate	289	mg/L	7.0	3.5	7		08/13/24 23:02	14808-79-8	

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ANALYTICAL RESULTS

Project: Hammond AP-3
Pace Project No.: 92746286

Sample: HAM-HGWC-126		Lab ID: 92746286007		Collected: 08/07/24 14:38		Received: 08/09/24 14:15		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	136	mg/L	1.0	0.12	1	08/15/24 16:46	08/19/24 16:45	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00054	1	08/15/24 12:21	08/16/24 13:40	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00084	1	08/15/24 12:21	08/16/24 13:40	7440-38-2	
Barium	0.23	mg/L	0.0050	0.00047	1	08/15/24 12:21	08/16/24 13:40	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000094	1	08/15/24 12:21	08/16/24 13:40	7440-41-7	
Boron	0.021J	mg/L	0.040	0.012	1	08/15/24 12:21	08/16/24 13:40	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00010	1	08/15/24 12:21	08/16/24 13:40	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0019	1	08/15/24 12:21	08/16/24 13:40	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00032	1	08/15/24 12:21	08/16/24 13:40	7440-48-4	
Lead	ND	mg/L	0.0010	0.00016	1	08/15/24 12:21	08/16/24 13:40	7439-92-1	
Lithium	0.0042J	mg/L	0.030	0.0016	1	08/15/24 12:21	08/16/24 13:40	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00062	1	08/15/24 12:21	08/16/24 13:40	7439-98-7	
Selenium	ND	mg/L	0.0050	0.00096	1	08/15/24 12:21	08/16/24 13:40	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00038	1	08/15/24 12:21	08/16/24 13:40	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	08/19/24 16:00	08/20/24 09:48	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	518	mg/L	25.0	25.0	1		08/12/24 11:38		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	8.7	mg/L	1.0	0.60	1		08/13/24 12:31	16887-00-6	
Fluoride	0.50	mg/L	0.10	0.050	1		08/13/24 12:31	16984-48-8	
Sulfate	72.8	mg/L	1.0	0.50	1		08/13/24 12:31	14808-79-8	

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ANALYTICAL RESULTS

Project: Hammond AP-3

Pace Project No.: 92746286

Sample: HAM-AP3-FD-01		Lab ID: 92746286008		Collected: 08/07/24 00:00		Received: 08/09/24 14:15		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Calcium	95.3	mg/L	1.0	0.12	1	08/15/24 16:46	08/19/24 16:48	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00054	1	08/15/24 12:21	08/16/24 13:44	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00084	1	08/15/24 12:21	08/16/24 13:44	7440-38-2	
Barium	0.066	mg/L	0.0050	0.00047	1	08/15/24 12:21	08/16/24 13:44	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000094	1	08/15/24 12:21	08/16/24 13:44	7440-41-7	
Boron	0.37	mg/L	0.040	0.012	1	08/15/24 12:21	08/16/24 13:44	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00010	1	08/15/24 12:21	08/16/24 13:44	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0019	1	08/15/24 12:21	08/16/24 13:44	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00032	1	08/15/24 12:21	08/16/24 13:44	7440-48-4	
Lead	ND	mg/L	0.0010	0.00016	1	08/15/24 12:21	08/16/24 13:44	7439-92-1	
Lithium	ND	mg/L	0.030	0.0016	1	08/15/24 12:21	08/16/24 13:44	7439-93-2	
Molybdenum	0.0011J	mg/L	0.010	0.00062	1	08/15/24 12:21	08/16/24 13:44	7439-98-7	
Selenium	ND	mg/L	0.0050	0.00096	1	08/15/24 12:21	08/16/24 13:44	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00038	1	08/15/24 12:21	08/16/24 13:44	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	08/19/24 16:00	08/20/24 09:50	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	345	mg/L	25.0	25.0	1		08/12/24 11:39		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	2.2	mg/L	1.0	0.60	1		08/13/24 12:45	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		08/13/24 12:45	16984-48-8	
Sulfate	69.2	mg/L	1.0	0.50	1		08/13/24 12:45	14808-79-8	

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ANALYTICAL RESULTS

Project: Hammond AP-3

Pace Project No.: 92746286

Sample: HAM-AP3-FB-01		Lab ID: 92746286009		Collected: 08/07/24 15:30		Received: 08/09/24 14:15		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010D ATL ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA							
Calcium	ND	mg/L	1.0	0.12	1	08/15/24 16:46	08/19/24 16:52	7440-70-2	
6020 MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA							
Antimony	ND	mg/L	0.0030	0.00054	1	08/15/24 12:21	08/16/24 14:04	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00084	1	08/15/24 12:21	08/16/24 14:04	7440-38-2	
Barium	ND	mg/L	0.0050	0.00047	1	08/15/24 12:21	08/16/24 14:04	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000094	1	08/15/24 12:21	08/16/24 14:04	7440-41-7	
Boron	ND	mg/L	0.040	0.012	1	08/15/24 12:21	08/16/24 14:04	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00010	1	08/15/24 12:21	08/16/24 14:04	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0019	1	08/15/24 12:21	08/16/24 14:04	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00032	1	08/15/24 12:21	08/16/24 14:04	7440-48-4	
Lead	ND	mg/L	0.0010	0.00016	1	08/15/24 12:21	08/16/24 14:04	7439-92-1	
Lithium	ND	mg/L	0.030	0.0016	1	08/15/24 12:21	08/16/24 14:04	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00062	1	08/15/24 12:21	08/16/24 14:04	7439-98-7	
Selenium	ND	mg/L	0.0050	0.00096	1	08/15/24 12:21	08/16/24 14:04	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00038	1	08/15/24 12:21	08/16/24 14:04	7440-28-0	
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA							
Mercury	ND	mg/L	0.00020	0.00013	1	08/19/24 16:00	08/20/24 09:53	7439-97-6	
2540C Total Dissolved Solids		Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA							
Total Dissolved Solids	33.0	mg/L	25.0	25.0	1		08/12/24 11:39		
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville							
Chloride	ND	mg/L	1.0	0.60	1		08/12/24 23:09	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		08/12/24 23:09	16984-48-8	
Sulfate	ND	mg/L	1.0	0.50	1		08/12/24 23:09	14808-79-8	

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ANALYTICAL RESULTS

Project: Hammond AP-3

Pace Project No.: 92746286

Sample: HAM-AP3-EB-01		Lab ID: 92746286010		Collected: 08/07/24 15:35		Received: 08/09/24 14:15		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Calcium	ND	mg/L	1.0	0.12	1	08/15/24 16:46	08/19/24 16:55	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00054	1	08/15/24 12:21	08/16/24 14:08	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00084	1	08/15/24 12:21	08/16/24 14:08	7440-38-2	
Barium	ND	mg/L	0.0050	0.00047	1	08/15/24 12:21	08/16/24 14:08	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000094	1	08/15/24 12:21	08/16/24 14:08	7440-41-7	
Boron	ND	mg/L	0.040	0.012	1	08/15/24 12:21	08/16/24 14:08	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00010	1	08/15/24 12:21	08/16/24 14:08	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0019	1	08/15/24 12:21	08/16/24 14:08	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00032	1	08/15/24 12:21	08/16/24 14:08	7440-48-4	
Lead	ND	mg/L	0.0010	0.00016	1	08/15/24 12:21	08/16/24 14:08	7439-92-1	
Lithium	ND	mg/L	0.030	0.0016	1	08/15/24 12:21	08/16/24 14:08	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00062	1	08/15/24 12:21	08/16/24 14:08	7439-98-7	
Selenium	ND	mg/L	0.0050	0.00096	1	08/15/24 12:21	08/16/24 14:08	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00038	1	08/15/24 12:21	08/16/24 14:08	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	08/19/24 16:00	08/20/24 10:01	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	34.0	mg/L	25.0	25.0	1		08/12/24 11:39		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	ND	mg/L	1.0	0.60	1		08/12/24 23:23	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		08/12/24 23:23	16984-48-8	
Sulfate	ND	mg/L	1.0	0.50	1		08/12/24 23:23	14808-79-8	

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QUALITY CONTROL DATA

Project: Hammond AP-3

Pace Project No.: 92746286

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: 92746286001, 92746286002, 92746286003

METHOD BLANK: 4505177

Matrix: Water

Associated Lab Samples: 92746286001, 92746286002, 92746286003

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-3

Pace Project No.: 92746286

QC Batch: 875957

Analysis Method: EPA 6010D

QC Batch Method: EPA 3010A

Analysis Description: 6010D ATL

Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92746286004, 92746286005, 92746286006, 92746286007, 92746286008, 92746286009, 92746286010

METHOD BLANK: 4512098

Matrix: Water

Associated Lab Samples: 92746286004, 92746286005, 92746286006, 92746286007, 92746286008, 92746286009, 92746286010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	0.12	08/19/24 15:46	

LABORATORY CONTROL SAMPLE: 4512099

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	mg/L	1	1.0	100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4512100 4512101

Parameter	Units	92746285005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Calcium	mg/L	182	1	1	187	186	444	443	75-125	0	20	M1

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QUALITY CONTROL DATA

Project: Hammond AP-3
Pace Project No.: 92746286

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: 92746286001, 92746286002, 92746286003

METHOD BLANK: 4503459 Matrix: Water
Associated Lab Samples: 92746286001, 92746286002, 92746286003

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-3

Pace Project No.: 92746286

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-3

Pace Project No.: 92746286

QC Batch: 875884

Analysis Method: EPA 6020B

QC Batch Method: EPA 3005A

Analysis Description: 6020 MET

Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92746286004, 92746286005, 92746286006, 92746286007, 92746286008, 92746286009, 92746286010

METHOD BLANK: 4511647

Matrix: Water

Associated Lab Samples: 92746286004, 92746286005, 92746286006, 92746286007, 92746286008, 92746286009, 92746286010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00054	08/16/24 13:06	
Arsenic	mg/L	ND	0.0050	0.00084	08/16/24 13:06	
Barium	mg/L	ND	0.0050	0.00047	08/16/24 13:06	
Beryllium	mg/L	ND	0.00050	0.000094	08/16/24 13:06	
Boron	mg/L	ND	0.040	0.012	08/16/24 13:06	
Cadmium	mg/L	ND	0.00050	0.00010	08/16/24 13:06	
Chromium	mg/L	ND	0.0050	0.0019	08/16/24 13:06	
Cobalt	mg/L	ND	0.0050	0.00032	08/16/24 13:06	
Lead	mg/L	ND	0.0010	0.00016	08/16/24 13:06	
Lithium	mg/L	ND	0.030	0.0016	08/16/24 13:06	
Molybdenum	mg/L	ND	0.010	0.00062	08/16/24 13:06	
Selenium	mg/L	ND	0.0050	0.00096	08/16/24 13:06	
Thallium	mg/L	ND	0.0010	0.00038	08/16/24 13:06	

LABORATORY CONTROL SAMPLE: 4511648

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.10	104	80-120	
Arsenic	mg/L	0.1	0.10	104	80-120	
Barium	mg/L	0.1	0.10	104	80-120	
Beryllium	mg/L	0.1	0.11	108	80-120	
Boron	mg/L	1	1.1	114	80-120	
Cadmium	mg/L	0.1	0.11	107	80-120	
Chromium	mg/L	0.1	0.11	110	80-120	
Cobalt	mg/L	0.1	0.11	108	80-120	
Lead	mg/L	0.1	0.10	103	80-120	
Lithium	mg/L	0.1	0.11	112	80-120	
Molybdenum	mg/L	0.1	0.10	105	80-120	
Selenium	mg/L	0.1	0.11	107	80-120	
Thallium	mg/L	0.1	0.097	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4511649

4511650

Parameter	Units	92746286004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	mg/L	ND	0.1	0.1	0.10	0.10	101	101	75-125	1	20	
Arsenic	mg/L	ND	0.1	0.1	0.11	0.11	107	107	75-125	0	20	

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QUALITY CONTROL DATA

Project: Hammond AP-3

Pace Project No.: 92746286

MATRIX SPIKE & MATRIX SPIKE DUPLICATE:			4511649		4511650							
Parameter	Units	92746286004	MS	MSD	MS	MSD	MS	MSD	% Rec	RPD	Max	Qual
		Result	Spike	Spike								
Barium	mg/L	0.051	0.1	0.1	0.15	0.15	101	100	75-125	0	20	
Beryllium	mg/L	ND	0.1	0.1	0.10	0.097	100	97	75-125	3	20	
Boron	mg/L	1.1	1	1	2.1	2.1	91	99	75-125	3	20	
Cadmium	mg/L	ND	0.1	0.1	0.10	0.097	103	97	75-125	5	20	
Chromium	mg/L	ND	0.1	0.1	0.10	0.10	102	100	75-125	3	20	
Cobalt	mg/L	0.0064	0.1	0.1	0.11	0.10	99	97	75-125	2	20	
Lead	mg/L	ND	0.1	0.1	0.099	0.10	99	101	75-125	2	20	
Lithium	mg/L	0.023J	0.1	0.1	0.12	0.12	99	102	75-125	2	20	
Molybdenum	mg/L	0.036	0.1	0.1	0.14	0.14	104	107	75-125	2	20	
Selenium	mg/L	ND	0.1	0.1	0.10	0.10	102	104	75-125	2	20	
Thallium	mg/L	ND	0.1	0.1	0.096	0.097	96	97	75-125	2	20	

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QUALITY CONTROL DATA

Project: Hammond AP-3

Pace Project No.: 92746286

QC Batch:	876620	Analysis Method:	EPA 7470A
QC Batch Method:	EPA 7470A	Analysis Description:	7470 Mercury
		Laboratory:	Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples:	92746286001, 92746286002, 92746286003, 92746286004, 92746286005, 92746286006, 92746286007, 92746286008, 92746286009, 92746286010		

METHOD BLANK:	4515362	Matrix:	Water
Associated Lab Samples:	92746286001, 92746286002, 92746286003, 92746286004, 92746286005, 92746286006, 92746286007, 92746286008, 92746286009, 92746286010		

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00020	0.00013	08/20/24 09:05	

LABORATORY CONTROL SAMPLE: 4515363						
Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	0.0025	0.0025	101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE:					4515364	4515365							
Parameter	Units	92746286001 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	0.0026	0.0026	106	104	75-125	2	20		

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QUALITY CONTROL DATA

Project: Hammond AP-3

Pace Project No.: 92746286

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: 92746286001, 92746286002, 92746286003

METHOD BLANK: 4503653

Matrix: Water

Associated Lab Samples: 92746286001, 92746286002, 92746286003

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-3

Pace Project No.: 92746286

QC Batch:	874945	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: 92746286004, 92746286005, 92746286006, 92746286007, 92746286008, 92746286009, 92746286010

METHOD BLANK: 4506901 Matrix: Water

Associated Lab Samples: 92746286004, 92746286005, 92746286006, 92746286007, 92746286008, 92746286009, 92746286010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	25.0	25.0	08/12/24 11:29	

LABORATORY CONTROL SAMPLE: 4506902

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	391	98	80-120	

SAMPLE DUPLICATE: 4506903

Parameter	Units	92745465020 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	27.0	27.0	0	10	

SAMPLE DUPLICATE: 4506904

Parameter	Units	92746286004 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	647	631	3	10	

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QUALITY CONTROL DATA

Project: Hammond AP-3

Pace Project No.: 92746286

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: 92746286001, 92746286002, 92746286003

METHOD BLANK: 4504473 Matrix: Water

Associated Lab Samples: 92746286001, 92746286002, 92746286003

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-3

Pace Project No.: 92746286

QC Batch: 875040 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: 92746286004, 92746286005, 92746286006, 92746286007, 92746286008, 92746286009, 92746286010

METHOD BLANK: 4507379 Matrix: Water
Associated Lab Samples: 92746286004, 92746286005, 92746286006, 92746286007, 92746286008, 92746286009, 92746286010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	08/12/24 22:41	
Fluoride	mg/L	ND	0.10	0.050	08/12/24 22:41	
Sulfate	mg/L	ND	1.0	0.50	08/12/24 22:41	

LABORATORY CONTROL SAMPLE: 4507380

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	52.0	104	90-110	
Fluoride	mg/L	2.5	2.6	103	90-110	
Sulfate	mg/L	50	52.2	104	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4507381 4507382

Parameter	Units	92746285005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	80.2	50	50	104	105	48	50	90-110	1	10	M1
Fluoride	mg/L	0.080J	2.5	2.5	2.4	2.4	92	94	90-110	3	10	
Sulfate	mg/L	286	50	50	319	321	65	69	90-110	0	10	M1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4507383 4507384

Parameter	Units	92746891001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	28.6	50	50	78.9	79.3	101	101	90-110	0	10	
Fluoride	mg/L	0.074J	2.5	2.5	2.6	2.6	99	100	90-110	0	10	
Sulfate	mg/L	86.5	50	50	116	116	60	58	90-110	1	10	M1

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QUALIFIERS

Project: Hammond AP-3
Pace Project No.: 92746286

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.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Hammond AP-3

Pace Project No.: 92746286

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92746286001	HAM-HGWA-45D	EPA 3010A	874538	EPA 6010D	874645
92746286002	HAM-HGWC-121A	EPA 3010A	874538	EPA 6010D	874645
92746286003	HAM-HGWA-122	EPA 3010A	874538	EPA 6010D	874645
92746286004	HAM-HGWC-120	EPA 3010A	875957	EPA 6010D	876038
92746286005	HAM-HGWC-124	EPA 3010A	875957	EPA 6010D	876038
92746286006	HAM-HGWC-125	EPA 3010A	875957	EPA 6010D	876038
92746286007	HAM-HGWC-126	EPA 3010A	875957	EPA 6010D	876038
92746286008	HAM-AP3-FD-01	EPA 3010A	875957	EPA 6010D	876038
92746286009	HAM-AP3-FB-01	EPA 3010A	875957	EPA 6010D	876038
92746286010	HAM-AP3-EB-01	EPA 3010A	875957	EPA 6010D	876038
92746286001	HAM-HGWA-45D	EPA 3005A	874205	EPA 6020B	874325
92746286002	HAM-HGWC-121A	EPA 3005A	874205	EPA 6020B	874325
92746286003	HAM-HGWA-122	EPA 3005A	874205	EPA 6020B	874325
92746286004	HAM-HGWC-120	EPA 3005A	875884	EPA 6020B	876010
92746286005	HAM-HGWC-124	EPA 3005A	875884	EPA 6020B	876010
92746286006	HAM-HGWC-125	EPA 3005A	875884	EPA 6020B	876010
92746286007	HAM-HGWC-126	EPA 3005A	875884	EPA 6020B	876010
92746286008	HAM-AP3-FD-01	EPA 3005A	875884	EPA 6020B	876010
92746286009	HAM-AP3-FB-01	EPA 3005A	875884	EPA 6020B	876010
92746286010	HAM-AP3-EB-01	EPA 3005A	875884	EPA 6020B	876010
92746286001	HAM-HGWA-45D	EPA 7470A	876620	EPA 7470A	876670
92746286002	HAM-HGWC-121A	EPA 7470A	876620	EPA 7470A	876670
92746286003	HAM-HGWA-122	EPA 7470A	876620	EPA 7470A	876670
92746286004	HAM-HGWC-120	EPA 7470A	876620	EPA 7470A	876670
92746286005	HAM-HGWC-124	EPA 7470A	876620	EPA 7470A	876670
92746286006	HAM-HGWC-125	EPA 7470A	876620	EPA 7470A	876670
92746286007	HAM-HGWC-126	EPA 7470A	876620	EPA 7470A	876670
92746286008	HAM-AP3-FD-01	EPA 7470A	876620	EPA 7470A	876670
92746286009	HAM-AP3-FB-01	EPA 7470A	876620	EPA 7470A	876670
92746286010	HAM-AP3-EB-01	EPA 7470A	876620	EPA 7470A	876670
92746286001	HAM-HGWA-45D	SM 2540C-2015	874243		
92746286002	HAM-HGWC-121A	SM 2540C-2015	874243		
92746286003	HAM-HGWA-122	SM 2540C-2015	874243		
92746286004	HAM-HGWC-120	SM 2540C-2015	874945		
92746286005	HAM-HGWC-124	SM 2540C-2015	874945		
92746286006	HAM-HGWC-125	SM 2540C-2015	874945		
92746286007	HAM-HGWC-126	SM 2540C-2015	874945		
92746286008	HAM-AP3-FD-01	SM 2540C-2015	874945		
92746286009	HAM-AP3-FB-01	SM 2540C-2015	874945		
92746286010	HAM-AP3-EB-01	SM 2540C-2015	874945		
92746286001	HAM-HGWA-45D	EPA 300.0 Rev 2.1 1993	874380		
92746286002	HAM-HGWC-121A	EPA 300.0 Rev 2.1 1993	874380		
92746286003	HAM-HGWA-122	EPA 300.0 Rev 2.1 1993	874380		
92746286004	HAM-HGWC-120	EPA 300.0 Rev 2.1 1993	875040		
92746286005	HAM-HGWC-124	EPA 300.0 Rev 2.1 1993	875040		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Hammond AP-3
Pace Project No.: 92746286

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92746286006	HAM-HGWC-125	EPA 300.0 Rev 2.1 1993	875040		
92746286007	HAM-HGWC-126	EPA 300.0 Rev 2.1 1993	875040		
92746286008	HAM-AP3-FD-01	EPA 300.0 Rev 2.1 1993	875040		
92746286009	HAM-AP3-FB-01	EPA 300.0 Rev 2.1 1993	875040		
92746286010	HAM-AP3-EB-01	EPA 300.0 Rev 2.1 1993	875040		

REPORT OF LABORATORY ANALYSIS



DC#_TITLE: ENV-FRM-MONT-0083 V03_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#: 92746286



92746286

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: 5/17/24

COY

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 type="checkbox"/> N/A	8.
Sample Labels Match COC?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	9.
-Includes Date/Time/ID/Analysis Matrix: W				
Headspace in VOA Vials (>5-6mm)?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A	10.
Trip Blank Present?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A	11.
Trip Blank Custody Seals Present?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? ☐ Yes ☐ No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: _____

Date/Time: _____

Project Manager SCURF Review: _____

Date: _____

Project Manager SRF Review: _____

Date: _____



DC#_Title: ENV-FRM-HUN1-0083 v05_Sample Condition Upon Receipt

Effective Date: 05/24/2024

Project

WO#: 92746286

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 2N 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)	SP7T-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)	
CC																												
1		1	1		2	1	1																					
2		1	1		2	1	1																					
3		1	1		2	1	1																					
4																												
5																												
6																												
7																												
8																												
9																												
10																												
11																												
12																												

pH Adjustment Log for Preserved Samples

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

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

CHAIN-OF-CUSTODY / Analytical Request Document

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

Section A

Section B

Section C

Required Client Information:

Required Project Information:

Invoice Information:

Page: 1 of 1

Company: GFA Power

Report To: SCS Contacts

Attention: Southern Co.

REGULATORY AGENCY

HEDES ☐ GROUND WATER ☐ DRINKING WATER ☐
☐ USE ☐ EGRA ☐ OTHER ☐

Address: Atlanta, GA

Copy To: Geosyntec Contacts

Company Name:

Site Location

STATE: GA

Email To: SCS Contacts

Purchase Order No:

Address:

Project Name: Hammond AP-3

Project Profile # 10839

Phone: Fax:

Project Number: GW6581D

Project Profile # 10839

Requested Analysis Filtered (Y/N)

Residual Chlorine (Y/N)

Section D
Valid Matrix Codes
Required Client Information

MATRIX CODE (See valid codes to left)

SAMPLE TYPE (G=GRAB C=COMP)

COLLECTED
COMPOSITE
DATE
TIME
DATE
TIME

SAMPLE TEMP AT COLLECTION
OF CONTAINERS
Unpreserved
H₂SO₄
HNO₃
HCl
NaOH
Na₂S₂O₃
Methanol
Other

Analysis Test
Chloride, Fluoride, Sulfate
Full App. III and IV metals
RAD 226/228
TDS

Requested Analysis Filtered (Y/N)

Residual Chlorine (Y/N)

Section E
Valid Matrix Codes
Required Client Information

MATRIX CODE (See valid codes to left)

SAMPLE TYPE (G=GRAB C=COMP)

COLLECTED
COMPOSITE
DATE
TIME
DATE
TIME

SAMPLE TEMP AT COLLECTION
OF CONTAINERS
Unpreserved
H₂SO₄
HNO₃
HCl
NaOH
Na₂S₂O₃
Methanol
Other

Analysis Test
Chloride, Fluoride, Sulfate
Full App. III and IV metals
RAD 226/228
TDS

Requested Analysis Filtered (Y/N)

Residual Chlorine (Y/N)

Section F
Valid Matrix Codes
Required Client Information

MATRIX CODE (See valid codes to left)

SAMPLE TYPE (G=GRAB C=COMP)

COLLECTED
COMPOSITE
DATE
TIME
DATE
TIME

SAMPLE TEMP AT COLLECTION
OF CONTAINERS
Unpreserved
H₂SO₄
HNO₃
HCl
NaOH
Na₂S₂O₃
Methanol
Other

Analysis Test
Chloride, Fluoride, Sulfate
Full App. III and IV metals
RAD 226/228
TDS

Requested Analysis Filtered (Y/N)

Residual Chlorine (Y/N)

Section G
Valid Matrix Codes
Required Client Information

MATRIX CODE (See valid codes to left)

SAMPLE TYPE (G=GRAB C=COMP)

COLLECTED
COMPOSITE
DATE
TIME
DATE
TIME

SAMPLE TEMP AT COLLECTION
OF CONTAINERS
Unpreserved
H₂SO₄
HNO₃
HCl
NaOH
Na₂S₂O₃
Methanol
Other

Analysis Test
Chloride, Fluoride, Sulfate
Full App. III and IV metals
RAD 226/228
TDS

Requested Analysis Filtered (Y/N)

Residual Chlorine (Y/N)

Section H
Valid Matrix Codes
Required Client Information

MATRIX CODE (See valid codes to left)

SAMPLE TYPE (G=GRAB C=COMP)

COLLECTED
COMPOSITE
DATE
TIME
DATE
TIME

SAMPLE TEMP AT COLLECTION
OF CONTAINERS
Unpreserved
H₂SO₄
HNO₃
HCl
NaOH
Na₂S₂O₃
Methanol
Other

Analysis Test
Chloride, Fluoride, Sulfate
Full App. III and IV metals
RAD 226/228
TDS

Requested Analysis Filtered (Y/N)

Residual Chlorine (Y/N)

Section I
Valid Matrix Codes
Required Client Information

MATRIX CODE (See valid codes to left)

SAMPLE TYPE (G=GRAB C=COMP)

COLLECTED
COMPOSITE
DATE
TIME
DATE
TIME

SAMPLE TEMP AT COLLECTION
OF CONTAINERS
Unpreserved
H₂SO₄
HNO₃
HCl
NaOH
Na₂S₂O₃
Methanol
Other

Analysis Test
Chloride, Fluoride, Sulfate
Full App. III and IV metals
RAD 226/228
TDS

Requested Analysis Filtered (Y/N)

Residual Chlorine (Y/N)

Section J
Valid Matrix Codes
Required Client Information

MATRIX CODE (See valid codes to left)

SAMPLE TYPE (G=GRAB C=COMP)

COLLECTED
COMPOSITE
DATE
TIME
DATE
TIME

SAMPLE TEMP AT COLLECTION
OF CONTAINERS
Unpreserved
H₂SO₄
HNO₃
HCl
NaOH
Na₂S₂O₃
Methanol
Other

Analysis Test
Chloride, Fluoride, Sulfate
Full App. III and IV metals
RAD 226/228
TDS

Requested Analysis Filtered (Y/N)

Residual Chlorine (Y/N)

Section K
Valid Matrix Codes
Required Client Information

MATRIX CODE (See valid codes to left)

SAMPLE TYPE (G=GRAB C=COMP)

COLLECTED
COMPOSITE
DATE
TIME
DATE
TIME

SAMPLE TEMP AT COLLECTION
OF CONTAINERS
Unpreserved
H₂SO₄
HNO₃
HCl
NaOH
Na₂S₂O₃
Methanol
Other

Analysis Test
Chloride, Fluoride, Sulfate
Full App. III and IV metals
RAD 226/228
TDS

Requested Analysis Filtered (Y/N)

Residual Chlorine (Y/N)

Section L
Valid Matrix Codes
Required Client Information

MATRIX CODE (See valid codes to left)

SAMPLE TYPE (G=GRAB C=COMP)

COLLECTED
COMPOSITE
DATE
TIME
DATE
TIME

SAMPLE TEMP AT COLLECTION
OF CONTAINERS
Unpreserved
H₂SO₄
HNO₃
HCl
NaOH
Na₂S₂O₃
Methanol
Other

Analysis Test
Chloride, Fluoride, Sulfate
Full App. III and IV metals
RAD 226/228
TDS

Requested Analysis Filtered (Y/N)

Residual Chlorine (Y/N)

Section M
Valid Matrix Codes
Required Client Information

MATRIX CODE (See valid codes to left)

SAMPLE TYPE (G=GRAB C=COMP)

COLLECTED
COMPOSITE
DATE
TIME
DATE
TIME

SAMPLE TEMP AT COLLECTION
OF CONTAINERS
Unpreserved
H₂SO₄
HNO₃
HCl
NaOH
Na₂S₂O₃
Methanol
Other

Analysis Test
Chloride, Fluoride, Sulfate
Full App. III and IV metals
RAD 226/228
TDS

Requested Analysis Filtered (Y/N)

Residual Chlorine (Y/N)

Section N
Valid Matrix Codes
Required Client Information

MATRIX CODE (See valid codes to left)

SAMPLE TYPE (G=GRAB C=COMP)

COLLECTED
COMPOSITE
DATE
TIME
DATE
TIME

SAMPLE TEMP AT COLLECTION
OF CONTAINERS
Unpreserved
H₂SO₄
HNO₃
HCl
NaOH
Na₂S₂O₃
Methanol
Other

Analysis Test
Chloride, Fluoride, Sulfate
Full App. III and IV metals
RAD 226/228
TDS

Requested Analysis Filtered (Y/N)

Residual Chlorine (Y/N)

Section O
Valid Matrix Codes
Required Client Information

MATRIX CODE (See valid codes to left)

SAMPLE TYPE (G=GRAB C=COMP)

COLLECTED
COMPOSITE
DATE
TIME
DATE
TIME

SAMPLE TEMP AT COLLECTION
OF CONTAINERS
Unpreserved
H₂SO₄
HNO₃
HCl
NaOH
Na₂S₂O₃
Methanol
Other

Analysis Test
Chloride, Fluoride, Sulfate
Full App. III and IV metals
RAD 226/228
TDS

Requested Analysis Filtered (Y/N)

Residual Chlorine (Y/N)

Temp in °C

Received on Ice (Y/N)

Custody Sealed Cooler (Y/N)

Samples Intact (Y/N)

PRINT Name of SAMPLER: Z. Webb

SIGNATURE of SAMPLER: [Signature]

DATE Signed (MM/DD/YY): 05/06/2024

Geosyntec Consultants, Inc

Geosyntec Consultants, Inc

Geosyntec Consultants, Inc

Geosyntec Consultants, Inc

Geosyntec Consultants, Inc

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Geosyntec Consultants, Inc

Geosyntec Consultants, Inc



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 #:

92746286

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:

8/4/24
Cof

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: 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:



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-)	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)	DG8H-40 mL Amber NH4Cl (N/A)(Cl-)	DG8H-40 mL VOA HCl (N/A)	VG8T-40 mL VOA Na2S2O3 (N/A)	VG8U-40 mL VOA Unpreserved (N/A)	DG8V-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 (NH4)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved (N/A) (Cl-)	VSGU-20 mL Scintillation vials (N/A)	DG8U-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 DLNR Certification Office (i.e. Out of hold, incorrect preservative, out of temp, incorrect containers).

Page 37 of 37



August 19, 2024

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

RE: Project: Plant Hammond Pooled Upgradien
Pace Project No.: 92746292

Dear Kristen Jurinko:

Enclosed are the analytical results for sample(s) received by the laboratory on August 07, 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: Plant Hammond Pooled Upgradien

Pace Project No.: 92746292

Pace Analytical Services Asheville

2225 Riverside Drive, Asheville, NC 28804

Florida/NELAP Certification #: E87648

North Carolina Drinking Water Certification #: 37712

North Carolina Wastewater Certification #: 40

South Carolina Laboratory ID: 99030

South Carolina Certification #: 99030001

Virginia/VELAP Certification #: 460222

Pace Analytical Services Peachtree Corners

110 Technology Pkwy, Peachtree Corners, GA 30092

Florida DOH Certification #: E87315

Georgia DW Inorganics Certification #: 812

North Carolina Certification #: 381

South Carolina Certification #: 98011001

Virginia Certification #: 460204

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: Plant Hammond Pooled Upgradien

Pace Project No.: 92746292

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92746292001	HAM-HGWA-43D	Water	08/06/24 10:07	08/07/24 12:25
92746292002	HAM-HGWA-44D	Water	08/06/24 10:03	08/07/24 12:25
92746292003	HAM-UGRD-FD-01	Water	08/06/24 00:00	08/07/24 12:25
92746292004	HAM-UGRD-EB-01	Water	08/06/24 17:15	08/07/24 12:25
92746292005	HAM-UGRD-FB-01	Water	08/06/24 17:10	08/07/24 12:25
92746292006	HAM-HGWA-1	Water	08/05/24 16:37	08/07/24 12:25
92746292007	HAM-HGWA-2	Water	08/05/24 16:30	08/07/24 12:25
92746292008	HAM-HGWA-3	Water	08/05/24 16:33	08/07/24 12:25

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SAMPLE ANALYTE COUNT

Project: Plant Hammond Pooled Upgradien

Pace Project No.: 92746292

Lab ID	Sample ID	Method	Analysts	Analytes Reported
92746292001	HAM-HGWA-43D	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
92746292002	HAM-HGWA-44D	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
92746292003	HAM-UGRD-FD-01	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
92746292004	HAM-UGRD-EB-01	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
92746292005	HAM-UGRD-FB-01	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
92746292006	HAM-HGWA-1	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
92746292007	HAM-HGWA-2	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
92746292008	HAM-HGWA-3	EPA 6010D	MJS2	1
		EPA 6020B	CW1	13

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SAMPLE ANALYTE COUNT

Project: Plant Hammond Pooled Upgradien

Pace Project No.: 92746292

Lab ID	Sample ID	Method	Analysts	Analytes Reported
		EPA 7470A	VB	1
		SM 2540C-2015	DL1	1
		EPA 300.0 Rev 2.1 1993	CDC	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: Plant Hammond Pooled Upgradien

Pace Project No.: 92746292

Lab Sample ID	Client Sample ID					
Method	Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92746292001	HAM-HGWA-43D					
EPA 6010D	Calcium	57.2	mg/L	1.0	08/15/24 23:37	
EPA 6020B	Barium	0.28	mg/L	0.0050	08/13/24 12:43	
EPA 6020B	Boron	0.043	mg/L	0.040	08/13/24 12:43	
EPA 6020B	Lithium	0.0025J	mg/L	0.030	08/13/24 12:43	
EPA 6020B	Molybdenum	0.0010J	mg/L	0.010	08/09/24 19:18	
SM 2540C-2015	Total Dissolved Solids	283	mg/L	25.0	08/09/24 11:43	
EPA 300.0 Rev 2.1 1993	Chloride	4.0	mg/L	1.0	08/09/24 05:05	
EPA 300.0 Rev 2.1 1993	Fluoride	0.21	mg/L	0.10	08/09/24 05:05	
EPA 300.0 Rev 2.1 1993	Sulfate	25.5	mg/L	1.0	08/09/24 05:05	
92746292002	HAM-HGWA-44D					
EPA 6010D	Calcium	7.1	mg/L	1.0	08/15/24 23:41	
EPA 6020B	Barium	0.11	mg/L	0.0050	08/13/24 12:46	
EPA 6020B	Boron	0.52	mg/L	0.040	08/13/24 12:46	
EPA 6020B	Lithium	0.10	mg/L	0.030	08/13/24 12:46	
EPA 6020B	Molybdenum	0.00079J	mg/L	0.010	08/09/24 19:22	
SM 2540C-2015	Total Dissolved Solids	380	mg/L	25.0	08/09/24 11:43	
EPA 300.0 Rev 2.1 1993	Chloride	30.2	mg/L	1.0	08/09/24 05:19	
EPA 300.0 Rev 2.1 1993	Fluoride	1.3	mg/L	0.10	08/09/24 05:19	
EPA 300.0 Rev 2.1 1993	Sulfate	0.86J	mg/L	1.0	08/09/24 05:19	
92746292003	HAM-UGRD-FD-01					
EPA 6010D	Calcium	56.9	mg/L	1.0	08/15/24 20:07	
EPA 6020B	Barium	0.28	mg/L	0.0050	08/13/24 12:50	
EPA 6020B	Boron	0.043	mg/L	0.040	08/13/24 12:50	
EPA 6020B	Lithium	0.0027J	mg/L	0.030	08/13/24 12:50	
EPA 6020B	Molybdenum	0.00096J	mg/L	0.010	08/09/24 19:26	
SM 2540C-2015	Total Dissolved Solids	295	mg/L	25.0	08/09/24 11:44	
EPA 300.0 Rev 2.1 1993	Chloride	4.1	mg/L	1.0	08/09/24 05:34	
EPA 300.0 Rev 2.1 1993	Fluoride	0.21	mg/L	0.10	08/09/24 05:34	
EPA 300.0 Rev 2.1 1993	Sulfate	25.0	mg/L	1.0	08/09/24 05:34	
92746292004	HAM-UGRD-EB-01					
SM 2540C-2015	Total Dissolved Solids	41.0	mg/L	25.0	08/09/24 11:44	D6
92746292005	HAM-UGRD-FB-01					
SM 2540C-2015	Total Dissolved Solids	135	mg/L	25.0	08/09/24 11:45	
92746292006	HAM-HGWA-1					
EPA 6010D	Calcium	113	mg/L	1.0	08/15/24 20:25	M1
EPA 6020B	Barium	0.032	mg/L	0.0050	08/13/24 13:01	
EPA 6020B	Boron	0.020J	mg/L	0.040	08/13/24 13:01	
EPA 6020B	Cobalt	0.00055J	mg/L	0.0050	08/09/24 19:39	
SM 2540C-2015	Total Dissolved Solids	444	mg/L	25.0	08/08/24 12:18	
EPA 300.0 Rev 2.1 1993	Chloride	8.7	mg/L	1.0	08/09/24 06:36	
EPA 300.0 Rev 2.1 1993	Fluoride	0.11	mg/L	0.10	08/09/24 06:36	
EPA 300.0 Rev 2.1 1993	Sulfate	49.4	mg/L	1.0	08/09/24 06:36	M1
92746292007	HAM-HGWA-2					
EPA 6010D	Calcium	34.7	mg/L	1.0	08/15/24 20:38	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: Plant Hammond Pooled Upgradien

Pace Project No.: 92746292

Lab Sample ID	Client Sample ID					
Method	Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92746292007	HAM-HGWA-2					
EPA 6020B	Barium	0.062	mg/L	0.0050	08/13/24 13:05	
EPA 6020B	Beryllium	0.00026J	mg/L	0.00050	08/13/24 13:05	
EPA 6020B	Boron	0.057	mg/L	0.040	08/13/24 13:05	
EPA 6020B	Cadmium	0.00026J	mg/L	0.00050	08/09/24 19:43	
EPA 6020B	Cobalt	0.032	mg/L	0.0050	08/09/24 19:43	
EPA 6020B	Lithium	0.0019J	mg/L	0.030	08/13/24 13:05	
EPA 6020B	Selenium	0.0013J	mg/L	0.0050	08/09/24 19:43	
SM 2540C-2015	Total Dissolved Solids	217	mg/L	25.0	08/08/24 12:18	
EPA 300.0 Rev 2.1 1993	Chloride	7.9	mg/L	1.0	08/09/24 07:19	
EPA 300.0 Rev 2.1 1993	Fluoride	0.12	mg/L	0.10	08/09/24 07:19	
EPA 300.0 Rev 2.1 1993	Sulfate	87.2	mg/L	2.0	08/09/24 15:44	
92746292008	HAM-HGWA-3					
EPA 6010D	Calcium	83.3	mg/L	1.0	08/15/24 20:42	
EPA 6020B	Barium	0.13	mg/L	0.0050	08/13/24 13:08	
EPA 6020B	Lithium	0.0034J	mg/L	0.030	08/13/24 13:08	
SM 2540C-2015	Total Dissolved Solids	304	mg/L	25.0	08/08/24 12:18	
EPA 300.0 Rev 2.1 1993	Chloride	5.2	mg/L	1.0	08/09/24 07:33	
EPA 300.0 Rev 2.1 1993	Fluoride	0.077J	mg/L	0.10	08/09/24 07:33	
EPA 300.0 Rev 2.1 1993	Sulfate	31.1	mg/L	1.0	08/09/24 07:33	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Hammond Pooled Upgradien

Pace Project No.: 92746292

Sample: HAM-HGWA-43D		Lab ID: 92746292001		Collected: 08/06/24 10:07		Received: 08/07/24 12:25		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Calcium	57.2	mg/L	1.0	0.12	1	08/09/24 11:23	08/15/24 23:37	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00054	1	08/08/24 10:21	08/09/24 19:18	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00084	1	08/08/24 10:21	08/09/24 19:18	7440-38-2	
Barium	0.28	mg/L	0.0050	0.00047	1	08/08/24 10:21	08/13/24 12:43	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000094	1	08/08/24 10:21	08/13/24 12:43	7440-41-7	
Boron	0.043	mg/L	0.040	0.012	1	08/08/24 10:21	08/13/24 12:43	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00010	1	08/08/24 10:21	08/09/24 19:18	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0019	1	08/08/24 10:21	08/09/24 19:18	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00032	1	08/08/24 10:21	08/09/24 19:18	7440-48-4	
Lead	ND	mg/L	0.0010	0.00016	1	08/08/24 10:21	08/09/24 19:18	7439-92-1	
Lithium	0.0025J	mg/L	0.030	0.0016	1	08/08/24 10:21	08/13/24 12:43	7439-93-2	
Molybdenum	0.0010J	mg/L	0.010	0.00062	1	08/08/24 10:21	08/09/24 19:18	7439-98-7	
Selenium	ND	mg/L	0.0050	0.00096	1	08/08/24 10:21	08/09/24 19:18	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00038	1	08/08/24 10:21	08/13/24 12:43	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	08/12/24 13:00	08/12/24 16:29	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	283	mg/L	25.0	25.0	1		08/09/24 11:43		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	4.0	mg/L	1.0	0.60	1		08/09/24 05:05	16887-00-6	
Fluoride	0.21	mg/L	0.10	0.050	1		08/09/24 05:05	16984-48-8	
Sulfate	25.5	mg/L	1.0	0.50	1		08/09/24 05:05	14808-79-8	

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ANALYTICAL RESULTS

Project: Plant Hammond Pooled Upgradien

Pace Project No.: 92746292

Sample: HAM-HGWA-44D		Lab ID: 92746292002		Collected: 08/06/24 10:03		Received: 08/07/24 12:25		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Calcium	7.1	mg/L	1.0	0.12	1	08/09/24 11:23	08/15/24 23:41	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00054	1	08/08/24 10:21	08/09/24 19:22	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00084	1	08/08/24 10:21	08/09/24 19:22	7440-38-2	
Barium	0.11	mg/L	0.0050	0.00047	1	08/08/24 10:21	08/13/24 12:46	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000094	1	08/08/24 10:21	08/13/24 12:46	7440-41-7	
Boron	0.52	mg/L	0.040	0.012	1	08/08/24 10:21	08/13/24 12:46	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00010	1	08/08/24 10:21	08/09/24 19:22	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0019	1	08/08/24 10:21	08/09/24 19:22	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00032	1	08/08/24 10:21	08/09/24 19:22	7440-48-4	
Lead	ND	mg/L	0.0010	0.00016	1	08/08/24 10:21	08/09/24 19:22	7439-92-1	
Lithium	0.10	mg/L	0.030	0.0016	1	08/08/24 10:21	08/13/24 12:46	7439-93-2	
Molybdenum	0.00079J	mg/L	0.010	0.00062	1	08/08/24 10:21	08/09/24 19:22	7439-98-7	
Selenium	ND	mg/L	0.0050	0.00096	1	08/08/24 10:21	08/09/24 19:22	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00038	1	08/08/24 10:21	08/13/24 12:46	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	08/12/24 13:00	08/12/24 16:32	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	380	mg/L	25.0	25.0	1		08/09/24 11:43		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	30.2	mg/L	1.0	0.60	1		08/09/24 05:19	16887-00-6	
Fluoride	1.3	mg/L	0.10	0.050	1		08/09/24 05:19	16984-48-8	
Sulfate	0.86J	mg/L	1.0	0.50	1		08/09/24 05:19	14808-79-8	

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ANALYTICAL RESULTS

Project: Plant Hammond Pooled Upgradien

Pace Project No.: 92746292

Sample: HAM-UGRD-FD-01		Lab ID: 92746292003		Collected: 08/06/24 00:00		Received: 08/07/24 12:25		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Calcium	56.9	mg/L	1.0	0.12	1	08/10/24 14:24	08/15/24 20:07	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00054	1	08/08/24 10:21	08/09/24 19:26	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00084	1	08/08/24 10:21	08/09/24 19:26	7440-38-2	
Barium	0.28	mg/L	0.0050	0.00047	1	08/08/24 10:21	08/13/24 12:50	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000094	1	08/08/24 10:21	08/13/24 12:50	7440-41-7	
Boron	0.043	mg/L	0.040	0.012	1	08/08/24 10:21	08/13/24 12:50	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00010	1	08/08/24 10:21	08/09/24 19:26	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0019	1	08/08/24 10:21	08/09/24 19:26	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00032	1	08/08/24 10:21	08/09/24 19:26	7440-48-4	
Lead	ND	mg/L	0.0010	0.00016	1	08/08/24 10:21	08/09/24 19:26	7439-92-1	
Lithium	0.0027J	mg/L	0.030	0.0016	1	08/08/24 10:21	08/13/24 12:50	7439-93-2	
Molybdenum	0.00096J	mg/L	0.010	0.00062	1	08/08/24 10:21	08/09/24 19:26	7439-98-7	
Selenium	ND	mg/L	0.0050	0.00096	1	08/08/24 10:21	08/09/24 19:26	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00038	1	08/08/24 10:21	08/13/24 12:50	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	08/12/24 13:00	08/12/24 16:34	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	295	mg/L	25.0	25.0	1		08/09/24 11:44		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	4.1	mg/L	1.0	0.60	1		08/09/24 05:34	16887-00-6	
Fluoride	0.21	mg/L	0.10	0.050	1		08/09/24 05:34	16984-48-8	
Sulfate	25.0	mg/L	1.0	0.50	1		08/09/24 05:34	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Hammond Pooled Upgradien

Pace Project No.: 92746292

Sample: HAM-UGRD-EB-01		Lab ID: 92746292004		Collected: 08/06/24 17:15		Received: 08/07/24 12:25		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010D ATL ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA							
Calcium	ND	mg/L	1.0	0.12	1	08/10/24 14:24	08/15/24 20:17	7440-70-2	
6020 MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA							
Antimony	ND	mg/L	0.0030	0.00054	1	08/08/24 10:21	08/09/24 19:30	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00084	1	08/08/24 10:21	08/09/24 19:30	7440-38-2	
Barium	ND	mg/L	0.0050	0.00047	1	08/08/24 10:21	08/13/24 12:54	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000094	1	08/08/24 10:21	08/13/24 12:54	7440-41-7	
Boron	ND	mg/L	0.040	0.012	1	08/08/24 10:21	08/13/24 12:54	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00010	1	08/08/24 10:21	08/09/24 19:30	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0019	1	08/08/24 10:21	08/09/24 19:30	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00032	1	08/08/24 10:21	08/09/24 19:30	7440-48-4	
Lead	ND	mg/L	0.0010	0.00016	1	08/08/24 10:21	08/09/24 19:30	7439-92-1	
Lithium	ND	mg/L	0.030	0.0016	1	08/08/24 10:21	08/13/24 12:54	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00062	1	08/08/24 10:21	08/09/24 19:30	7439-98-7	
Selenium	ND	mg/L	0.0050	0.00096	1	08/08/24 10:21	08/09/24 19:30	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00038	1	08/08/24 10:21	08/13/24 12:54	7440-28-0	
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA							
Mercury	ND	mg/L	0.00020	0.00013	1	08/12/24 13:00	08/12/24 16:37	7439-97-6	
2540C Total Dissolved Solids		Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA							
Total Dissolved Solids	41.0	mg/L	25.0	25.0	1		08/09/24 11:44		D6
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville							
Chloride	ND	mg/L	1.0	0.60	1		08/08/24 22:43	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		08/08/24 22:43	16984-48-8	
Sulfate	ND	mg/L	1.0	0.50	1		08/08/24 22:43	14808-79-8	

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ANALYTICAL RESULTS

Project: Plant Hammond Pooled Upgradien

Pace Project No.: 92746292

Sample: HAM-UGRD-FB-01		Lab ID: 92746292005		Collected: 08/06/24 17:10		Received: 08/07/24 12:25		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Calcium	ND	mg/L	1.0	0.12	1	08/10/24 14:24	08/15/24 20:21	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00054	1	08/08/24 10:21	08/09/24 19:34	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00084	1	08/08/24 10:21	08/09/24 19:34	7440-38-2	
Barium	ND	mg/L	0.0050	0.00047	1	08/08/24 10:21	08/13/24 12:57	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000094	1	08/08/24 10:21	08/13/24 12:57	7440-41-7	
Boron	ND	mg/L	0.040	0.012	1	08/08/24 10:21	08/13/24 12:57	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00010	1	08/08/24 10:21	08/09/24 19:34	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0019	1	08/08/24 10:21	08/09/24 19:34	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00032	1	08/08/24 10:21	08/09/24 19:34	7440-48-4	
Lead	ND	mg/L	0.0010	0.00016	1	08/08/24 10:21	08/09/24 19:34	7439-92-1	
Lithium	ND	mg/L	0.030	0.0016	1	08/08/24 10:21	08/13/24 12:57	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00062	1	08/08/24 10:21	08/09/24 19:34	7439-98-7	
Selenium	ND	mg/L	0.0050	0.00096	1	08/08/24 10:21	08/09/24 19:34	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00038	1	08/08/24 10:21	08/13/24 12:57	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	08/12/24 13:00	08/12/24 16:39	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	135	mg/L	25.0	25.0	1		08/09/24 11:45		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	ND	mg/L	1.0	0.60	1		08/08/24 22:57	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		08/08/24 22:57	16984-48-8	
Sulfate	ND	mg/L	1.0	0.50	1		08/08/24 22:57	14808-79-8	

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ANALYTICAL RESULTS

Project: Plant Hammond Pooled Upgradien

Pace Project No.: 92746292

Sample: HAM-HGWA-1		Lab ID: 92746292006		Collected: 08/05/24 16:37		Received: 08/07/24 12:25		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Calcium	113	mg/L	1.0	0.12	1	08/10/24 14:24	08/15/24 20:25	7440-70-2	M1
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00054	1	08/08/24 10:21	08/09/24 19:39	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00084	1	08/08/24 10:21	08/09/24 19:39	7440-38-2	
Barium	0.032	mg/L	0.0050	0.00047	1	08/08/24 10:21	08/13/24 13:01	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000094	1	08/08/24 10:21	08/13/24 13:01	7440-41-7	
Boron	0.020J	mg/L	0.040	0.012	1	08/08/24 10:21	08/13/24 13:01	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00010	1	08/08/24 10:21	08/09/24 19:39	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0019	1	08/08/24 10:21	08/09/24 19:39	7440-47-3	
Cobalt	0.00055J	mg/L	0.0050	0.00032	1	08/08/24 10:21	08/09/24 19:39	7440-48-4	
Lead	ND	mg/L	0.0010	0.00016	1	08/08/24 10:21	08/09/24 19:39	7439-92-1	
Lithium	ND	mg/L	0.030	0.0016	1	08/08/24 10:21	08/13/24 13:01	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00062	1	08/08/24 10:21	08/09/24 19:39	7439-98-7	
Selenium	ND	mg/L	0.0050	0.00096	1	08/08/24 10:21	08/09/24 19:39	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00038	1	08/08/24 10:21	08/13/24 13:01	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	08/12/24 13:00	08/12/24 16:42	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	444	mg/L	25.0	25.0	1		08/08/24 12:18		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	8.7	mg/L	1.0	0.60	1		08/09/24 06:36	16887-00-6	
Fluoride	0.11	mg/L	0.10	0.050	1		08/09/24 06:36	16984-48-8	
Sulfate	49.4	mg/L	1.0	0.50	1		08/09/24 06:36	14808-79-8	M1

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ANALYTICAL RESULTS

Project: Plant Hammond Pooled Upgradien

Pace Project No.: 92746292

Sample: HAM-HGWA-2		Lab ID: 92746292007		Collected: 08/05/24 16:30		Received: 08/07/24 12:25		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Calcium	34.7	mg/L	1.0	0.12	1	08/10/24 14:24	08/15/24 20:38	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00054	1	08/08/24 10:21	08/09/24 19:43	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00084	1	08/08/24 10:21	08/09/24 19:43	7440-38-2	
Barium	0.062	mg/L	0.0050	0.00047	1	08/08/24 10:21	08/13/24 13:05	7440-39-3	
Beryllium	0.00026J	mg/L	0.00050	0.000094	1	08/08/24 10:21	08/13/24 13:05	7440-41-7	
Boron	0.057	mg/L	0.040	0.012	1	08/08/24 10:21	08/13/24 13:05	7440-42-8	
Cadmium	0.00026J	mg/L	0.00050	0.00010	1	08/08/24 10:21	08/09/24 19:43	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0019	1	08/08/24 10:21	08/09/24 19:43	7440-47-3	
Cobalt	0.032	mg/L	0.0050	0.00032	1	08/08/24 10:21	08/09/24 19:43	7440-48-4	
Lead	ND	mg/L	0.0010	0.00016	1	08/08/24 10:21	08/09/24 19:43	7439-92-1	
Lithium	0.0019J	mg/L	0.030	0.0016	1	08/08/24 10:21	08/13/24 13:05	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00062	1	08/08/24 10:21	08/09/24 19:43	7439-98-7	
Selenium	0.0013J	mg/L	0.0050	0.00096	1	08/08/24 10:21	08/09/24 19:43	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00038	1	08/08/24 10:21	08/13/24 13:05	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	08/12/24 13:00	08/12/24 16:45	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	217	mg/L	25.0	25.0	1		08/08/24 12:18		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	7.9	mg/L	1.0	0.60	1		08/09/24 07:19	16887-00-6	
Fluoride	0.12	mg/L	0.10	0.050	1		08/09/24 07:19	16984-48-8	
Sulfate	87.2	mg/L	2.0	1.0	2		08/09/24 15:44	14808-79-8	

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ANALYTICAL RESULTS

Project: Plant Hammond Pooled Upgradien

Pace Project No.: 92746292

Sample: HAM-HGWA-3		Lab ID: 92746292008		Collected: 08/05/24 16:33		Received: 08/07/24 12:25		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Calcium	83.3	mg/L	1.0	0.12	1	08/10/24 14:24	08/15/24 20:42	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00054	1	08/08/24 10:21	08/09/24 19:47	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00084	1	08/08/24 10:21	08/09/24 19:47	7440-38-2	
Barium	0.13	mg/L	0.0050	0.00047	1	08/08/24 10:21	08/13/24 13:08	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000094	1	08/08/24 10:21	08/13/24 13:08	7440-41-7	
Boron	ND	mg/L	0.040	0.012	1	08/08/24 10:21	08/13/24 13:08	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00010	1	08/08/24 10:21	08/09/24 19:47	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0019	1	08/08/24 10:21	08/09/24 19:47	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00032	1	08/08/24 10:21	08/09/24 19:47	7440-48-4	
Lead	ND	mg/L	0.0010	0.00016	1	08/08/24 10:21	08/09/24 19:47	7439-92-1	
Lithium	0.0034J	mg/L	0.030	0.0016	1	08/08/24 10:21	08/13/24 13:08	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00062	1	08/08/24 10:21	08/09/24 19:47	7439-98-7	
Selenium	ND	mg/L	0.0050	0.00096	1	08/08/24 10:21	08/09/24 19:47	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00038	1	08/08/24 10:21	08/13/24 13:08	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	08/12/24 13:00	08/12/24 16:47	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	304	mg/L	25.0	25.0	1		08/08/24 12:18		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	5.2	mg/L	1.0	0.60	1		08/09/24 07:33	16887-00-6	
Fluoride	0.077J	mg/L	0.10	0.050	1		08/09/24 07:33	16984-48-8	
Sulfate	31.1	mg/L	1.0	0.50	1		08/09/24 07:33	14808-79-8	

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QUALITY CONTROL DATA

Project: Plant Hammond Pooled Upgradien

Pace Project No.: 92746292

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: 92746292001, 92746292002

METHOD BLANK: 4505177

Matrix: Water

Associated Lab Samples: 92746292001, 92746292002

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

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

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QUALITY CONTROL DATA

Project: Plant Hammond Pooled Upgradien

Pace Project No.: 92746292

QC Batch: 874768

Analysis Method: EPA 6010D

QC Batch Method: EPA 3010A

Analysis Description: 6010D ATL

Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92746292003, 92746292004, 92746292005, 92746292006, 92746292007, 92746292008

METHOD BLANK: 4506473

Matrix: Water

Associated Lab Samples: 92746292003, 92746292004, 92746292005, 92746292006, 92746292007, 92746292008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	0.12	08/15/24 20:00	

LABORATORY CONTROL SAMPLE: 4506474

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	mg/L	1	1.0	104	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4506475 4506476

Parameter	Units	92746292006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Calcium	mg/L	113	1	1	112	114	-137	107	75-125	2	20	M1

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

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QUALITY CONTROL DATA

Project: Plant Hammond Pooled Upgradien

Pace Project No.: 92746292

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:	92746292001, 92746292002, 92746292003, 92746292004, 92746292005, 92746292006, 92746292007, 92746292008		

METHOD BLANK: 4503459

Matrix: Water

Associated Lab Samples: 92746292001, 92746292002, 92746292003, 92746292004, 92746292005, 92746292006, 92746292007, 92746292008

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	MS	MSD	MS	MSD	MS	MSD	% Rec	RPD	Max	Qual
		Result	Spike	Spike								
Antimony	mg/L	ND	0.1	0.1	0.099	0.096	99	96	75-125	2	20	

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QUALITY CONTROL DATA

Project: Plant Hammond Pooled Upgradien

Pace Project No.: 92746292

MATRIX SPIKE & MATRIX SPIKE DUPLICATE:					4503461	4503462							
Parameter	Units	92746286001	MS	MSD	MS	MSD	MS	MSD	% Rec	RPD	Max	Qual	
		Result	Spike Conc.	Spike Conc.									Result
Arsenic	mg/L	ND	0.1	0.1	0.10	0.10	102	103	75-125	1	20	M1	
Barium	mg/L	0.50	0.1	0.1	0.62	0.63	120	128	75-125	1	20		
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: Plant Hammond Pooled Upgradien

Pace Project No.: 92746292

QC Batch:	874947	Analysis Method:	EPA 7470A
QC Batch Method:	EPA 7470A	Analysis Description:	7470 Mercury
		Laboratory:	Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples:	92746292001, 92746292002, 92746292003, 92746292004, 92746292005, 92746292006, 92746292007, 92746292008		

METHOD BLANK:	4506909	Matrix:	Water
Associated Lab Samples:	92746292001, 92746292002, 92746292003, 92746292004, 92746292005, 92746292006, 92746292007, 92746292008		

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00020	0.00013	08/12/24 15:59	

LABORATORY CONTROL SAMPLE: 4506910						
Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	0.0025	0.0024	96	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4506911					4506912							
Parameter	Units	92746435001	MS	MSD	MS	MSD	MS	MSD	% Rec	RPD	Max	Qual
		Result	Spike Conc.	Spike Conc.								
Mercury	mg/L	ND	0.0025	0.0025	0.0025	0.0017	101	67	75-125	41	20	M1,R1

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QUALITY CONTROL DATA

Project: Plant Hammond Pooled Upgradien

Pace Project No.: 92746292

QC Batch: 874221

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: 92746292006, 92746292007, 92746292008

METHOD BLANK: 4503508

Matrix: Water

Associated Lab Samples: 92746292006, 92746292007, 92746292008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	25.0	25.0	08/08/24 12:15	

LABORATORY CONTROL SAMPLE: 4503509

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	405	101	80-120	

SAMPLE DUPLICATE: 4503510

Parameter	Units	92745465014 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	226	219	3	10	

SAMPLE DUPLICATE: 4503511

Parameter	Units	92745784003 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	102	107	5	10	

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QUALITY CONTROL DATA

Project: Plant Hammond Pooled Upgradien

Pace Project No.: 92746292

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: 92746292001, 92746292002, 92746292003, 92746292004, 92746292005

METHOD BLANK: 4503653

Matrix: Water

Associated Lab Samples: 92746292001, 92746292002, 92746292003, 92746292004, 92746292005

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: Plant Hammond Pooled Upgradien

Pace Project No.: 92746292

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: 92746292001, 92746292002, 92746292003, 92746292004, 92746292005

METHOD BLANK: 4504473 Matrix: Water
Associated Lab Samples: 92746292001, 92746292002, 92746292003, 92746292004, 92746292005

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: Plant Hammond Pooled Upgradien

Pace Project No.: 92746292

QC Batch: 874382 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: 92746292006, 92746292007, 92746292008

METHOD BLANK: 4504498 Matrix: Water

Associated Lab Samples: 92746292006, 92746292007, 92746292008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	08/08/24 22:14	
Fluoride	mg/L	ND	0.10	0.050	08/08/24 22:14	
Sulfate	mg/L	ND	1.0	0.50	08/08/24 22:14	

LABORATORY CONTROL SAMPLE: 4504499

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	51.3	103	90-110	
Fluoride	mg/L	2.5	2.6	104	90-110	
Sulfate	mg/L	50	51.2	102	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4504500 4504501

Parameter	Units	92746292006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	8.7	50	50	59.5	60.3	102	103	90-110	1	10	
Fluoride	mg/L	0.11	2.5	2.5	2.6	2.7	101	103	90-110	2	10	
Sulfate	mg/L	49.4	50	50	87.3	85.9	76	73	90-110	2	10 M1	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4504502 4504503

Parameter	Units	92746434001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	5.7	50	50	56.6	57.6	102	104	90-110	2	10	
Fluoride	mg/L	0.053J	2.5	2.5	2.7	2.8	105	109	90-110	3	10	
Sulfate	mg/L	ND	50	50	50.5	51.6	100	102	90-110	2	10	

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QUALIFIERS

Project: Plant Hammond Pooled Upgradien
Pace Project No.: 92746292

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.
R1 RPD value was outside control limits.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Hammond Pooled Upgradien

Pace Project No.: 92746292

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92746292001	HAM-HGWA-43D	EPA 3010A	874538	EPA 6010D	874645
92746292002	HAM-HGWA-44D	EPA 3010A	874538	EPA 6010D	874645
92746292003	HAM-UGRD-FD-01	EPA 3010A	874768	EPA 6010D	874814
92746292004	HAM-UGRD-EB-01	EPA 3010A	874768	EPA 6010D	874814
92746292005	HAM-UGRD-FB-01	EPA 3010A	874768	EPA 6010D	874814
92746292006	HAM-HGWA-1	EPA 3010A	874768	EPA 6010D	874814
92746292007	HAM-HGWA-2	EPA 3010A	874768	EPA 6010D	874814
92746292008	HAM-HGWA-3	EPA 3010A	874768	EPA 6010D	874814
92746292001	HAM-HGWA-43D	EPA 3005A	874205	EPA 6020B	874325
92746292002	HAM-HGWA-44D	EPA 3005A	874205	EPA 6020B	874325
92746292003	HAM-UGRD-FD-01	EPA 3005A	874205	EPA 6020B	874325
92746292004	HAM-UGRD-EB-01	EPA 3005A	874205	EPA 6020B	874325
92746292005	HAM-UGRD-FB-01	EPA 3005A	874205	EPA 6020B	874325
92746292006	HAM-HGWA-1	EPA 3005A	874205	EPA 6020B	874325
92746292007	HAM-HGWA-2	EPA 3005A	874205	EPA 6020B	874325
92746292008	HAM-HGWA-3	EPA 3005A	874205	EPA 6020B	874325
92746292001	HAM-HGWA-43D	EPA 7470A	874947	EPA 7470A	875009
92746292002	HAM-HGWA-44D	EPA 7470A	874947	EPA 7470A	875009
92746292003	HAM-UGRD-FD-01	EPA 7470A	874947	EPA 7470A	875009
92746292004	HAM-UGRD-EB-01	EPA 7470A	874947	EPA 7470A	875009
92746292005	HAM-UGRD-FB-01	EPA 7470A	874947	EPA 7470A	875009
92746292006	HAM-HGWA-1	EPA 7470A	874947	EPA 7470A	875009
92746292007	HAM-HGWA-2	EPA 7470A	874947	EPA 7470A	875009
92746292008	HAM-HGWA-3	EPA 7470A	874947	EPA 7470A	875009
92746292001	HAM-HGWA-43D	SM 2540C-2015	874243		
92746292002	HAM-HGWA-44D	SM 2540C-2015	874243		
92746292003	HAM-UGRD-FD-01	SM 2540C-2015	874243		
92746292004	HAM-UGRD-EB-01	SM 2540C-2015	874243		
92746292005	HAM-UGRD-FB-01	SM 2540C-2015	874243		
92746292006	HAM-HGWA-1	SM 2540C-2015	874221		
92746292007	HAM-HGWA-2	SM 2540C-2015	874221		
92746292008	HAM-HGWA-3	SM 2540C-2015	874221		
92746292001	HAM-HGWA-43D	EPA 300.0 Rev 2.1 1993	874380		
92746292002	HAM-HGWA-44D	EPA 300.0 Rev 2.1 1993	874380		
92746292003	HAM-UGRD-FD-01	EPA 300.0 Rev 2.1 1993	874380		
92746292004	HAM-UGRD-EB-01	EPA 300.0 Rev 2.1 1993	874380		
92746292005	HAM-UGRD-FB-01	EPA 300.0 Rev 2.1 1993	874380		
92746292006	HAM-HGWA-1	EPA 300.0 Rev 2.1 1993	874382		
92746292007	HAM-HGWA-2	EPA 300.0 Rev 2.1 1993	874382		
92746292008	HAM-HGWA-3	EPA 300.0 Rev 2.1 1993	874382		

REPORT OF LABORATORY ANALYSIS

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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 ☒ Kernersville ☐Sample Condition
Upon Receipt

Client Name:

GA Power

Project #:

WO#: 92746292



Courier:

☐ Commercial☐ Fed Ex☒ Pace☐ UPS☐ USPS☐ Other: _____☐ ClientCustody Seal Present? ☐ Yes ☒ NoSeals Intact? ☐ Yes ☐ No ☒ N/A

Date/Initials Person Examining Contents: 5/17/24

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#: 92746292

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 (pH)	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 VQA 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 (N/A) H2SO4 (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		1	1		2	2	2																					
2		1	1		2	2	2																					
3		1	1		2	2	2																					
4		1	1		2	2	2																					
5		1	1		2	2	2																					
6		1	1		2	2	2																					
7		1	1		2	2	2																					
8		1	1		2	2	2																					
9																												
10																												
11																												
12																												

pH Adjustment Log for Preserved Samples

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

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



September 04, 2024

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

RE: Project: Hammond AP-3- RADs
Pace Project No.: 92746295

Dear Kristen Jurinko:

Enclosed are the analytical results for sample(s) received by the laboratory between August 07, 2024 and August 09, 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-3- RADs

Pace Project No.: 92746295

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

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SAMPLE SUMMARY

Project: Hammond AP-3- RADs

Pace Project No.: 92746295

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92746295001	HAM-HGWA-45D	Water	08/06/24 14:40	08/07/24 12:25
92746295002	HAM-HGWC-121A	Water	08/06/24 16:22	08/07/24 12:25
92746295003	HAM-HGWA-122	Water	08/06/24 12:56	08/07/24 12:25
92746295004	HAM-HGWC-120	Water	08/07/24 11:22	08/09/24 14:15
92746295005	HAM-HGWC-124	Water	08/07/24 09:21	08/09/24 14:15
92746295006	HAM-HGWC-125	Water	08/07/24 13:01	08/09/24 14:15
92746295007	HAM-HGWC-126	Water	08/07/24 14:38	08/09/24 14:15
92746295008	HAM-AP3-FD-01	Water	08/07/24 00:00	08/09/24 14:15
92746295009	HAM-AP3-FB-01	Water	08/07/24 15:30	08/09/24 14:15
92746295010	HAM-AP3-EB-01	Water	08/07/24 15:35	08/09/24 14:15

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SAMPLE ANALYTE COUNT

Project: Hammond AP-3- RADs

Pace Project No.: 92746295

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92746295001	HAM-HGWA-45D	EPA 9315	SLC	1	PASI-PA
		EPA 9320	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92746295002	HAM-HGWC-121A	EPA 9315	SLC	1	PASI-PA
		EPA 9320	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92746295003	HAM-HGWA-122	EPA 9315	SLC	1	PASI-PA
		EPA 9320	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92746295004	HAM-HGWC-120	EPA 9315	SLC	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92746295005	HAM-HGWC-124	EPA 9315	SLC	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92746295006	HAM-HGWC-125	EPA 9315	SLC	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92746295007	HAM-HGWC-126	EPA 9315	SLC	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92746295008	HAM-AP3-FD-01	EPA 9315	SLC	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92746295009	HAM-AP3-FB-01	EPA 9315	SLC	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92746295010	HAM-AP3-EB-01	EPA 9315	SLC	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: Hammond AP-3- RADs

Pace Project No.: 92746295

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92746295001	HAM-HGWA-45D					
EPA 9315	Radium-226	0.517 ± 0.295 (0.484) C:93% T:NA	pCi/L		08/29/24 08:41	
EPA 9320	Radium-228	1.24 ± 0.427 (0.568) C:83% T:90%	pCi/L		08/26/24 11:35	
Total Radium Calculation	Total Radium	1.76 ± 0.722 (1.05)	pCi/L		08/30/24 12:32	
92746295002	HAM-HGWC-121A					
EPA 9315	Radium-226	0.386U ± 0.264 (0.467) C:90% T:NA	pCi/L		08/29/24 08:41	
EPA 9320	Radium-228	0.884 ± 0.413 (0.695) C:79% T:85%	pCi/L		08/26/24 11:35	
Total Radium Calculation	Total Radium	1.27 ± 0.677 (1.16)	pCi/L		08/30/24 12:32	
92746295003	HAM-HGWA-122					
EPA 9315	Radium-226	0.251U ± 0.214 (0.399) C:92% T:NA	pCi/L		08/29/24 08:41	
EPA 9320	Radium-228	0.410U ± 0.304 (0.585) C:81% T:88%	pCi/L		08/26/24 11:35	
Total Radium Calculation	Total Radium	0.661U ± 0.518 (0.984)	pCi/L		08/30/24 12:32	
92746295004	HAM-HGWC-120					
EPA 9315	Radium-226	0.132U ± 0.179 (0.391) C:83% T:NA	pCi/L		09/02/24 14:39	
EPA 9320	Radium-228	0.547U ± 0.320 (0.583) C:89% T:93%	pCi/L		08/27/24 15:39	
Total Radium Calculation	Total Radium	0.679U ± 0.499 (0.974)	pCi/L		09/03/24 16:40	

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SUMMARY OF DETECTION

Project: Hammond AP-3- RADs

Pace Project No.: 92746295

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92746295005	HAM-HGWC-124					
EPA 9315	Radium-226	0.0747U ± 0.136 (0.310) C:89% T:NA	pCi/L		09/02/24 14:40	
EPA 9320	Radium-228	0.347U ± 0.367 (0.764) C:82% T:86%	pCi/L		08/27/24 15:39	
Total Radium Calculation	Total Radium	0.422U ± 0.503 (1.07)	pCi/L		09/03/24 16:40	
92746295006	HAM-HGWC-125					
EPA 9315	Radium-226	0.0502U ± 0.103 (0.239) C:91% T:NA	pCi/L		09/02/24 14:40	
EPA 9320	Radium-228	0.553U ± 0.339 (0.619) C:82% T:87%	pCi/L		08/27/24 15:39	
Total Radium Calculation	Total Radium	0.603U ± 0.442 (0.858)	pCi/L		09/03/24 16:40	
92746295007	HAM-HGWC-126					
EPA 9315	Radium-226	0.548 ± 0.217 (0.248) C:87% T:NA	pCi/L		09/03/24 08:22	
EPA 9320	Radium-228	0.114U ± 0.275 (0.614) C:79% T:89%	pCi/L		08/27/24 15:39	
Total Radium Calculation	Total Radium	0.662U ± 0.492 (0.862)	pCi/L		09/03/24 16:40	
92746295008	HAM-AP3-FD-01					
EPA 9315	Radium-226	0.241U ± 0.171 (0.309) C:91% T:NA	pCi/L		09/03/24 08:22	
EPA 9320	Radium-228	0.260U ± 0.306 (0.642) C:84% T:88%	pCi/L		08/27/24 15:40	
Total Radium Calculation	Total Radium	0.501U ± 0.477 (0.951)	pCi/L		09/03/24 16:40	

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SUMMARY OF DETECTION

Project: Hammond AP-3- RADs

Pace Project No.: 92746295

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92746295009	HAM-AP3-FB-01					
EPA 9315	Radium-226	0.0542U ± 0.145 (0.344) C:91% T:NA	pCi/L		09/03/24 09:22	
EPA 9320	Radium-228	0.113U ± 0.313 (0.702) C:86% T:83%	pCi/L		08/27/24 15:40	
Total Radium Calculation	Total Radium	0.167U ± 0.458 (1.05)	pCi/L		09/03/24 16:40	
92746295010	HAM-AP3-EB-01					
EPA 9315	Radium-226	-0.0892U ± 0.0958 (0.317) C:77% T:NA	pCi/L		09/03/24 08:23	
EPA 9320	Radium-228	0.226U ± 0.349 (0.755) C:84% T:87%	pCi/L		08/27/24 15:40	
Total Radium Calculation	Total Radium	0.226U ± 0.445 (1.07)	pCi/L		09/03/24 16:40	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Hammond AP-3- RADs

Pace Project No.: 92746295

Sample: HAM-HGWA-45D Lab ID: 92746295001 Collected: 08/06/24 14:40 Received: 08/07/24 12:25 Matrix: Water

PWS: Site ID: Sample Type:

Comments: • Analysis was performed on a TCLP Extract received from the client.

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.517 ± 0.295 (0.484) C:93% T:NA	pCi/L	08/29/24 08:41	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	1.24 ± 0.427 (0.568) C:83% T:90%	pCi/L	08/26/24 11:35	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	1.76 ± 0.722 (1.05)	pCi/L	08/30/24 12:32	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Hammond AP-3- RADs

Pace Project No.: 92746295

Sample: HAM-HGWC-121A		Lab ID: 92746295002	Collected: 08/06/24 16:22	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	0.386U ± 0.264 (0.467) C:90% T:NA		pCi/L	08/29/24 08:41	13982-63-3	
Pace Analytical Services - Greensburg							
Radium-228	EPA 9320	0.884 ± 0.413 (0.695) C:79% T:85%		pCi/L	08/26/24 11:35	15262-20-1	
Pace Analytical Services - Greensburg							
Total Radium	Total Radium Calculation	1.27 ± 0.677 (1.16)		pCi/L	08/30/24 12:32	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Hammond AP-3- RADs

Pace Project No.: 92746295

Sample: HAM-HGWA-122		Lab ID: 92746295003	Collected: 08/06/24 12:56	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	0.251U ± 0.214 (0.399) C:92% T:NA		pCi/L	08/29/24 08:41	13982-63-3	
Pace Analytical Services - Greensburg							
Radium-228	EPA 9320	0.410U ± 0.304 (0.585) C:81% T:88%		pCi/L	08/26/24 11:35	15262-20-1	
Pace Analytical Services - Greensburg							
Total Radium	Total Radium Calculation	0.661U ± 0.518 (0.984)		pCi/L	08/30/24 12:32	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Hammond AP-3- RADs

Pace Project No.: 92746295

Sample: HAM-HGWC-120		Lab ID: 92746295004	Collected: 08/07/24 11:22	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	0.132U ± 0.179 (0.391) C:83% T:NA		pCi/L	09/02/24 14:39	13982-63-3	
Pace Analytical Services - Greensburg							
Radium-228	EPA 9320	0.547U ± 0.320 (0.583) C:89% T:93%		pCi/L	08/27/24 15:39	15262-20-1	
Pace Analytical Services - Greensburg							
Total Radium	Total Radium Calculation	0.679U ± 0.499 (0.974)		pCi/L	09/03/24 16:40	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Hammond AP-3- RADs

Pace Project No.: 92746295

Sample: HAM-HGWC-124		Lab ID: 92746295005	Collected: 08/07/24 09:21	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	0.0747U ± 0.136 (0.310) C:89% T:NA		pCi/L	09/02/24 14:40	13982-63-3	
Pace Analytical Services - Greensburg							
Radium-228	EPA 9320	0.347U ± 0.367 (0.764) C:82% T:86%		pCi/L	08/27/24 15:39	15262-20-1	
Pace Analytical Services - Greensburg							
Total Radium	Total Radium Calculation	0.422U ± 0.503 (1.07)		pCi/L	09/03/24 16:40	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Hammond AP-3- RADs

Pace Project No.: 92746295

Sample: HAM-HGWC-125		Lab ID: 92746295006	Collected: 08/07/24 13:01	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	0.0502U ± 0.103 (0.239) C:91% T:NA		pCi/L	09/02/24 14:40	13982-63-3	
Pace Analytical Services - Greensburg							
Radium-228	EPA 9320	0.553U ± 0.339 (0.619) C:82% T:87%		pCi/L	08/27/24 15:39	15262-20-1	
Pace Analytical Services - Greensburg							
Total Radium	Total Radium Calculation	0.603U ± 0.442 (0.858)		pCi/L	09/03/24 16:40	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Hammond AP-3- RADs

Pace Project No.: 92746295

Sample: HAM-HGWC-126		Lab ID: 92746295007	Collected: 08/07/24 14:38	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
Radium-226	Pace Analytical Services - Greensburg			pCi/L	09/03/24 08:22	13982-63-3	
	EPA 9315	0.548 ± 0.217 (0.248) C:87% T:NA					
Radium-228	Pace Analytical Services - Greensburg			pCi/L	08/27/24 15:39	15262-20-1	
	EPA 9320	0.114U ± 0.275 (0.614) C:79% T:89%					
Total Radium	Pace Analytical Services - Greensburg			pCi/L	09/03/24 16:40	7440-14-4	
	Total Radium Calculation	0.662U ± 0.492 (0.862)					

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Hammond AP-3- RADs

Pace Project No.: 92746295

Sample: HAM-AP3-FD-01		Lab ID: 92746295008	Collected: 08/07/24 00:00	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	0.241U ± 0.171 (0.309) C:91% T:NA		pCi/L	09/03/24 08:22	13982-63-3	
Pace Analytical Services - Greensburg							
Radium-228	EPA 9320	0.260U ± 0.306 (0.642) C:84% T:88%		pCi/L	08/27/24 15:40	15262-20-1	
Pace Analytical Services - Greensburg							
Total Radium	Total Radium Calculation	0.501U ± 0.477 (0.951)		pCi/L	09/03/24 16:40	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Hammond AP-3- RADs

Pace Project No.: 92746295

Sample: HAM-AP3-FB-01		Lab ID: 92746295009	Collected: 08/07/24 15:30	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	0.0542U ± 0.145 (0.344) C:91% T:NA		pCi/L	09/03/24 09:22	13982-63-3	
Pace Analytical Services - Greensburg							
Radium-228	EPA 9320	0.113U ± 0.313 (0.702) C:86% T:83%		pCi/L	08/27/24 15:40	15262-20-1	
Pace Analytical Services - Greensburg							
Total Radium	Total Radium Calculation	0.167U ± 0.458 (1.05)		pCi/L	09/03/24 16:40	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Hammond AP-3- RADs

Pace Project No.: 92746295

Sample: HAM-AP3-EB-01		Lab ID: 92746295010	Collected: 08/07/24 15:35	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
Radium-226	Pace Analytical Services - Greensburg			pCi/L	09/03/24 08:23	13982-63-3	
	EPA 9315	-0.0892U ± 0.0958 (0.317) C:77% T:NA					
Radium-228	Pace Analytical Services - Greensburg			pCi/L	08/27/24 15:40	15262-20-1	
	EPA 9320	0.226U ± 0.349 (0.755) C:84% T:87%					
Total Radium	Pace Analytical Services - Greensburg			pCi/L	09/03/24 16:40	7440-14-4	
	Total Radium Calculation	0.226U ± 0.445 (1.07)					

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Hammond AP-3- RADs

Pace Project No.: 92746295

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: 92746295001, 92746295002, 92746295003

METHOD BLANK: 3361203

Matrix: Water

Associated Lab Samples: 92746295001, 92746295002, 92746295003

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	

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

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Hammond AP-3- RADs

Pace Project No.: 92746295

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: 92746295004, 92746295005, 92746295006, 92746295007, 92746295008, 92746295009, 92746295010

METHOD BLANK: 3359344

Matrix: Water

Associated Lab Samples: 92746295004, 92746295005, 92746295006, 92746295007, 92746295008, 92746295009, 92746295010

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	

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

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Hammond AP-3- RADs

Pace Project No.: 92746295

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: 92746295001, 92746295002, 92746295003

METHOD BLANK: 3359338

Matrix: Water

Associated Lab Samples: 92746295001, 92746295002, 92746295003

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	

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

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Hammond AP-3- RADs

Pace Project No.: 92746295

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:	92746295004, 92746295005, 92746295006, 92746295007, 92746295008, 92746295009, 92746295010		

METHOD BLANK:	3361205	Matrix:	Water
Associated Lab Samples:	92746295004, 92746295005, 92746295006, 92746295007, 92746295008, 92746295009, 92746295010		

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	

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

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QUALIFIERS

Project: Hammond AP-3- RADs
Pace Project No.: 92746295

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.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Hammond AP-3- RADs
Pace Project No.: 92746295

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92746295001	HAM-HGWA-45D	EPA 9315	690237		
92746295002	HAM-HGWC-121A	EPA 9315	690237		
92746295003	HAM-HGWA-122	EPA 9315	690237		
92746295004	HAM-HGWC-120	EPA 9315	690239		
92746295005	HAM-HGWC-124	EPA 9315	690239		
92746295006	HAM-HGWC-125	EPA 9315	690239		
92746295007	HAM-HGWC-126	EPA 9315	690239		
92746295008	HAM-AP3-FD-01	EPA 9315	690239		
92746295009	HAM-AP3-FB-01	EPA 9315	690239		
92746295010	HAM-AP3-EB-01	EPA 9315	690239		
92746295001	HAM-HGWA-45D	EPA 9320	689870		
92746295002	HAM-HGWC-121A	EPA 9320	689870		
92746295003	HAM-HGWA-122	EPA 9320	689870		
92746295004	HAM-HGWC-120	EPA 9320	689874		
92746295005	HAM-HGWC-124	EPA 9320	689874		
92746295006	HAM-HGWC-125	EPA 9320	689874		
92746295007	HAM-HGWC-126	EPA 9320	689874		
92746295008	HAM-AP3-FD-01	EPA 9320	689874		
92746295009	HAM-AP3-FB-01	EPA 9320	689874		
92746295010	HAM-AP3-EB-01	EPA 9320	689874		
92746295001	HAM-HGWA-45D	Total Radium Calculation	693014		
92746295002	HAM-HGWC-121A	Total Radium Calculation	693014		
92746295003	HAM-HGWA-122	Total Radium Calculation	693014		
92746295004	HAM-HGWC-120	Total Radium Calculation	693459		
92746295005	HAM-HGWC-124	Total Radium Calculation	693459		
92746295006	HAM-HGWC-125	Total Radium Calculation	693459		
92746295007	HAM-HGWC-126	Total Radium Calculation	693459		
92746295008	HAM-AP3-FD-01	Total Radium Calculation	693459		
92746295009	HAM-AP3-FB-01	Total Radium Calculation	693459		
92746295010	HAM-AP3-EB-01	Total Radium Calculation	693459		

REPORT OF LABORATORY ANALYSIS

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DC#_Title: ENV-FRM-HUNT-0063 v03_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#: 92746295

Courier:

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

92746295

Custody Seal Present?

☐ Yes☒ No

Seals Intact?

☐ Yes☐ No☒ N/A

Date/Initials Person Examining Contents:

8/17/24
COY

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

WO#: 92746295

*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 # 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 2N Acetate & NaOH (>8)	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																												
1		1	1		2	2	1																					
2		1	1		2	2	1																					
3		1	1		2	2	1																					
4																												
5																												
6																												
7																												
8																												
9																												
10																												
11																												
12																												

pH Adjustment Log for Preserved Samples

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

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

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	Report To:	SCS Contacts
Address:	Atlanta, GA	Copy To:	Geosyntec Contacts
Email To:	SCS Contacts	Purchase Order No.:	
Phone:		Project Name:	Hammond AP-3
Requested Due Date/At:	10 Day	Project Number:	GW5581D
		Address:	
		Company Name:	Southern Co.
		Project Name:	Bonnie Yang
		Project Number:	10839

Section B

Required Project Information:

Section C

Invoice Information:

REGULATORY AGENCY

NEDES	GROUND WATER	DRINKING WATER
UST	EGRA	OTHER
Site Location	STATE:	GA

Section D

Valid Matrix Codes

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

Valid Matrix Codes
BALANCE
DRINKING WATER
WASTE WATER
WASTE WATER
PRODUCT
SOLID
CUT
WASTE
AIR
OTHER
TISSE

ITEM #	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	DATE	TIME	DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives	Analysis Test	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	HGWA-45D	WG	8/6/24	14:40			22	5	2	3			92946275
2	HGWC-121A	WG	08/06/24	16:22			20	5	2	3			001
3	HGWA-122	WG	08/06/24	12:56			23	5	2	3			003
4													
5													
6													
7													
8													
9													
10													
11													
12													

ADDITIONAL COMMENTS

Task Code: HAM-COR-ASSNT-2024S2

RELINQUISHED BY / AFFILIATION

DATE

TIME

ACCEPTED BY / AFFILIATION

DATE

TIME

SAMPLE CONDITIONS

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Geosyntec

SIGNATURE of SAMPLER: [Signature]

DATE Signed (MM/DD/YY): 08/06/2024

Temp in °C

Received on Ice (Y/N)

Custody Sealed Cooler (Y/N)

Samples Intact (Y/N)



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 #:

92746295

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:

8/4/24
Cof

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 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 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:



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)	D694-40 mL Amber NH4Cl (N/A)(Cl-)	D69H-40 mL VOA HCl (N/A)	V69T-40 mL VOA Na2S2O3 (N/A)	V69U-40 mL VOA Unpreserved (N/A)	D69V-40 mL VOA H3PO4 (N/A)	KP7U-50 mL Plastic Unpreserved (N/A)	V/GK (3 vials per kit) VPH/Gas kit (N/A)	SPST-125 mL Sterile Plastic (N/A - lab)	SPST-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-)	V5GU-20 mL Scintillation vials (N/A)	D69U-40 mL Amber Unpreserved vial (N/A)	
CC																														
1	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
2	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
3	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
4	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
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12	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/

pH Adjustment Log for Preserved Samples

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

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

Face Analytical
10000 17th Ave, Suite 110, Dayton, OH 45424
937-233-1100
www.faceanalytical.com

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

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

Method Blank Assessment	
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

Laboratory Control Sample Assessment	
LCSID (Y or N)?	Y
LCS80840	LCS80840
Count Date:	9/2/2024
Spike I.D.:	23-014
Decay Corrected Spike Concentration (pCi/mL):	25.020
Volume Used (mL):	0.10
Aliquot Volume (L, g, F):	0.503
Target Conc. (pCi/L, g, F):	4.977
Uncertainty (Calculated):	0.234
Result (pCi/L, g, F):	4.300
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	0.822
Numerical Performance Indicator:	-1.55
Percent Recovery:	86.40%
Status vs Numerical Indicator:	Pass
Status vs Recovery:	N/A
Upper % Recovery Limits:	125%
Lower % Recovery Limits:	75%

Duplicate Sample Assessment	
Sample I.D.:	LCS80840
Duplicate Sample I.D.:	LCS80840
Sample Result (pCi/L, g, F):	4.300
Sample Result 2 Sigma CSU (pCi/L, g, F):	0.822
Sample Duplicate Result (pCi/L, g, F):	4.998
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	0.914
Are sample and/or duplicate results below RL?	NO
Duplicate Numerical Performance Indicator:	-1.113
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	15.16%
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:

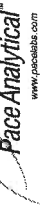
Sample Matrix Spike Control Assessment	
Sample Collection Date:	Sample I.D.
Sample MS I.D.	Sample MS I.D.
Sample MSD I.D.	Sample MSD I.D.
Spike I.D.:	MS/MSD Decay Corrected Spike Concentration (pCi/mL):
Spike Volume Used in MS (mL):	Spike Volume Used in MSD (mL):
MS Aliquot (L, g, F):	MS Target Conc.(pCi/L, 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:	Sample Matrix Spike Duplicate Result:
MS Numerical Performance Indicator:	MS Numerical Performance Indicator:
MS Percent Recovery:	MS 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:

Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample I.D.	Sample MS I.D.
Sample MS I.D.	Sample MSD I.D.
Sample Matrix Spike Result:	Sample Matrix Spike Duplicate Result:
Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):	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:

9-3-24

9-3-24

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.

Method Blank Assessment	
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

Laboratory Control Sample Assessment	
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%

Duplicate Sample Assessment	
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.

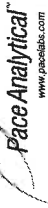
Comments:

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

AM 8/30/24

8-30-24

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

Method Blank Assessment	
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

Laboratory Control Sample Assessment	
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%

Duplicate Sample Assessment	
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):	3.565
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

Sample Matrix Spike Control Assessment	
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:	

Matrix Spike/Matrix Spike Duplicate Sample Assessment	
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:	

Quality Control Sample Performance Assessment



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

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
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

Laboratory Control Sample Assessment	
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%

Duplicate Sample Assessment	
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

Sample Matrix Spike Control Assessment	
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:

Matrix Spike/Matrix Spike Duplicate Sample Assessment	
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:



September 03, 2024

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

RE: Project: Plant Hammond Pooled Upgr-RADs
Pace Project No.: 92746297

Dear Kristen Jurinko:

Enclosed are the analytical results for sample(s) received by the laboratory on August 07, 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: Plant Hammond Pooled Upgr-RADs
Pace Project No.: 92746297

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: Plant Hammond Pooled Upgr-RADs

Pace Project No.: 92746297

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92746297001	HAM-HGWA-43D	Water	08/06/24 10:07	08/07/24 12:25
92746297002	HAM-HGWA-44D	Water	08/06/24 10:03	08/07/24 12:25
92746297003	HAM-UGRD-FD-01	Water	08/06/24 00:00	08/07/24 12:25
92746297004	HAM-UGRD-EB-01	Water	08/06/24 17:15	08/07/24 12:25
92746297005	HAM-UGRD-FB-01	Water	08/06/24 17:10	08/07/24 12:25
92746297006	HAM-HGWA-1	Water	08/05/24 16:37	08/07/24 12:25
92746297007	HAM-HGWA-2	Water	08/05/24 16:30	08/07/24 12:25
92746297008	HAM-HGWA-3	Water	08/05/24 16:33	08/07/24 12:25

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: Plant Hammond Pooled Upgr-RADs

Pace Project No.: 92746297

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92746297001	HAM-HGWA-43D	EPA 9315	SLC	1	PASI-PA
		EPA 9320	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92746297002	HAM-HGWA-44D	EPA 9315	SLC	1	PASI-PA
		EPA 9320	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92746297003	HAM-UGRD-FD-01	EPA 9315	SLC	1	PASI-PA
		EPA 9320	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92746297004	HAM-UGRD-EB-01	EPA 9315	SLC	1	PASI-PA
		EPA 9320	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92746297005	HAM-UGRD-FB-01	EPA 9315	SLC	1	PASI-PA
		EPA 9320	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92746297006	HAM-HGWA-1	EPA 9315	SLC	1	PASI-PA
		EPA 9320	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92746297007	HAM-HGWA-2	EPA 9315	SLC	1	PASI-PA
		EPA 9320	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92746297008	HAM-HGWA-3	EPA 9315	SLC	1	PASI-PA
		EPA 9320	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: Plant Hammond Pooled Upgr-RADs
Pace Project No.: 92746297

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92746297001	HAM-HGWA-43D					
EPA 9315	Radium-226	0.144U ± 0.222 (0.494) C:94% T:NA	pCi/L		08/29/24 08:40	
EPA 9320	Radium-228	0.530U ± 0.342 (0.643) C:79% T:92%	pCi/L		08/26/24 11:33	
Total Radium Calculation	Total Radium	0.674U ± 0.564 (1.14)	pCi/L		08/30/24 12:31	
92746297002	HAM-HGWA-44D					
EPA 9315	Radium-226	0.449 ± 0.235 (0.321) C:97% T:NA	pCi/L		08/29/24 08:39	
EPA 9320	Radium-228	0.0799U ± 0.269 (0.609) C:85% T:91%	pCi/L		08/26/24 11:34	
Total Radium Calculation	Total Radium	0.529U ± 0.504 (0.930)	pCi/L		08/30/24 12:31	
92746297003	HAM-UGRD-FD-01					
EPA 9315	Radium-226	0.339U ± 0.235 (0.400) C:94% T:NA	pCi/L		08/29/24 08:40	
EPA 9320	Radium-228	0.746 ± 0.389 (0.669) C:77% T:88%	pCi/L		08/26/24 11:34	
Total Radium Calculation	Total Radium	1.09 ± 0.624 (1.07)	pCi/L		08/30/24 12:31	
92746297004	HAM-UGRD-EB-01					
EPA 9315	Radium-226	0.129U ± 0.176 (0.378) C:97% T:NA	pCi/L		08/29/24 08:40	
EPA 9320	Radium-228	0.709 ± 0.342 (0.572) C:82% T:92%	pCi/L		08/26/24 11:34	
Total Radium Calculation	Total Radium	0.838U ± 0.518 (0.950)	pCi/L		08/30/24 12:32	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: Plant Hammond Pooled Upgr-RADs
Pace Project No.: 92746297

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92746297005	HAM-UGRD-FB-01					
EPA 9315	Radium-226	0.223U ± 0.215 (0.424) C:93% T:NA	pCi/L		08/29/24 08:40	
EPA 9320	Radium-228	0.0533U ± 0.296 (0.680) C:83% T:88%	pCi/L		08/26/24 11:34	
Total Radium Calculation	Total Radium	0.276U ± 0.511 (1.10)	pCi/L		08/30/24 12:32	
92746297006	HAM-HGWA-1					
EPA 9315	Radium-226	0.161U ± 0.191 (0.397) C:93% T:NA	pCi/L		08/29/24 08:40	
EPA 9320	Radium-228	0.479U ± 0.354 (0.682) C:80% T:84%	pCi/L		08/26/24 11:34	
Total Radium Calculation	Total Radium	0.640U ± 0.545 (1.08)	pCi/L		08/30/24 12:32	
92746297007	HAM-HGWA-2					
EPA 9315	Radium-226	0.174U ± 0.194 (0.394) C:92% T:NA	pCi/L		08/29/24 08:40	
EPA 9320	Radium-228	1.10 ± 0.429 (0.641) C:81% T:87%	pCi/L		08/26/24 11:34	
Total Radium Calculation	Total Radium	1.27 ± 0.623 (1.04)	pCi/L		08/30/24 12:32	
92746297008	HAM-HGWA-3					
EPA 9315	Radium-226	0.000251U ± 0.162 (0.437) C:91% T:NA	pCi/L		08/29/24 08:41	
EPA 9320	Radium-228	0.371U ± 0.327 (0.657) C:80% T:85%	pCi/L		08/26/24 11:34	
Total Radium Calculation	Total Radium	0.371U ± 0.489 (1.09)	pCi/L		08/30/24 12:32	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Hammond Pooled Upgr-RADs

Pace Project No.: 92746297

Sample: HAM-HGWA-43D Lab ID: 92746297001 Collected: 08/06/24 10:07 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.
• Upon receipt at the laboratory, 5.0 mls of nitric acid were added to sample 006 (2/2) to meet the sample preservation requirement of pH <2 for radiochemistry analysis, where the method requires preservation, in wastewater. The samples were not preserved pH < 2 within 15 minutes of collection (40CFR136).

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.144U ± 0.222 (0.494) C:94% T:NA	pCi/L	08/29/24 08:40	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.530U ± 0.342 (0.643) C:79% T:92%	pCi/L	08/26/24 11:33	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.674U ± 0.564 (1.14)	pCi/L	08/30/24 12:31	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Hammond Pooled Upgr-RADs

Pace Project No.: 92746297

Sample: HAM-HGWA-44D		Lab ID: 92746297002	Collected: 08/06/24 10:03	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
Radium-226	Pace Analytical Services - Greensburg			pCi/L	08/29/24 08:39	13982-63-3	
	EPA 9315	0.449 ± 0.235 (0.321) C:97% T:NA					
Radium-228	Pace Analytical Services - Greensburg			pCi/L	08/26/24 11:34	15262-20-1	
	EPA 9320	0.0799U ± 0.269 (0.609) C:85% T:91%					
Total Radium	Pace Analytical Services - Greensburg			pCi/L	08/30/24 12:31	7440-14-4	
	Total Radium Calculation	0.529U ± 0.504 (0.930)					

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Hammond Pooled Upgr-RADs

Pace Project No.: 92746297

Sample: HAM-UGRD-FD-01		Lab ID: 92746297003	Collected: 08/06/24 00:00	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	0.339U ± 0.235 (0.400) C:94% T:NA		pCi/L	08/29/24 08:40	13982-63-3	
Pace Analytical Services - Greensburg							
Radium-228	EPA 9320	0.746 ± 0.389 (0.669) C:77% T:88%		pCi/L	08/26/24 11:34	15262-20-1	
Pace Analytical Services - Greensburg							
Total Radium	Total Radium Calculation	1.09 ± 0.624 (1.07)		pCi/L	08/30/24 12:31	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Hammond Pooled Upgr-RADs

Pace Project No.: 92746297

Sample: HAM-UGRD-EB-01		Lab ID: 92746297004	Collected: 08/06/24 17:15	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	0.129U ± 0.176 (0.378) C:97% T:NA		pCi/L	08/29/24 08:40	13982-63-3	
Pace Analytical Services - Greensburg							
Radium-228	EPA 9320	0.709 ± 0.342 (0.572) C:82% T:92%		pCi/L	08/26/24 11:34	15262-20-1	
Pace Analytical Services - Greensburg							
Total Radium	Total Radium Calculation	0.838U ± 0.518 (0.950)		pCi/L	08/30/24 12:32	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Hammond Pooled Upgr-RADs

Pace Project No.: 92746297

Sample: HAM-UGRD-FB-01 Lab ID: 92746297005 Collected: 08/06/24 17:10 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	0.223U ± 0.215 (0.424) C:93% T:NA	pCi/L	08/29/24 08:40	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.0533U ± 0.296 (0.680) C:83% T:88%	pCi/L	08/26/24 11:34	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.276U ± 0.511 (1.10)	pCi/L	08/30/24 12:32	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Hammond Pooled Upgr-RADs

Pace Project No.: 92746297

Sample: HAM-HGWA-1		Lab ID: 92746297006	Collected: 08/05/24 16:37	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	0.161U ± 0.191 (0.397) C:93% T:NA		pCi/L	08/29/24 08:40	13982-63-3	
Pace Analytical Services - Greensburg							
Radium-228	EPA 9320	0.479U ± 0.354 (0.682) C:80% T:84%		pCi/L	08/26/24 11:34	15262-20-1	
Pace Analytical Services - Greensburg							
Total Radium	Total Radium Calculation	0.640U ± 0.545 (1.08)		pCi/L	08/30/24 12:32	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Hammond Pooled Upgr-RADs

Pace Project No.: 92746297

Sample: HAM-HGWA-2		Lab ID: 92746297007	Collected: 08/05/24 16:30	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	0.174U ± 0.194 (0.394) C:92% T:NA		pCi/L	08/29/24 08:40	13982-63-3	
Pace Analytical Services - Greensburg							
Radium-228	EPA 9320	1.10 ± 0.429 (0.641) C:81% T:87%		pCi/L	08/26/24 11:34	15262-20-1	
Pace Analytical Services - Greensburg							
Total Radium	Total Radium Calculation	1.27 ± 0.623 (1.04)		pCi/L	08/30/24 12:32	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Hammond Pooled Upgr-RADs

Pace Project No.: 92746297

Sample: HAM-HGWA-3		Lab ID: 92746297008	Collected: 08/05/24 16:33	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
Radium-226	Pace Analytical Services - Greensburg			pCi/L	08/29/24 08:41	13982-63-3	
	EPA 9315	0.000251U ± 0.162 (0.437) C:91% T:NA					
Radium-228	Pace Analytical Services - Greensburg			pCi/L	08/26/24 11:34	15262-20-1	
	EPA 9320	0.371U ± 0.327 (0.657) C:80% T:85%					
Total Radium	Pace Analytical Services - Greensburg			pCi/L	08/30/24 12:32	7440-14-4	
	Total Radium Calculation	0.371U ± 0.489 (1.09)					

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Hammond Pooled Upgr-RADs

Pace Project No.: 92746297

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:	92746297001, 92746297002, 92746297003, 92746297004, 92746297005, 92746297006, 92746297007, 92746297008		

METHOD BLANK: 3361203 Matrix: Water

Associated Lab Samples: 92746297001, 92746297002, 92746297003, 92746297004, 92746297005, 92746297006, 92746297007, 92746297008

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	

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

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Hammond Pooled Upgr-RADs

Pace Project No.: 92746297

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:	92746297001, 92746297002, 92746297003, 92746297004, 92746297005, 92746297006, 92746297007, 92746297008		

METHOD BLANK: 3359338 Matrix: Water

Associated Lab Samples: 92746297001, 92746297002, 92746297003, 92746297004, 92746297005, 92746297006, 92746297007, 92746297008

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	

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

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QUALIFIERS

Project: Plant Hammond Pooled Upgr-RADs
Pace Project No.: 92746297

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: Plant Hammond Pooled Upgr-RADs

Pace Project No.: 92746297

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92746297001	HAM-HGWA-43D	EPA 9315	690237		
92746297002	HAM-HGWA-44D	EPA 9315	690237		
92746297003	HAM-UGRD-FD-01	EPA 9315	690237		
92746297004	HAM-UGRD-EB-01	EPA 9315	690237		
92746297005	HAM-UGRD-FB-01	EPA 9315	690237		
92746297006	HAM-HGWA-1	EPA 9315	690237		
92746297007	HAM-HGWA-2	EPA 9315	690237		
92746297008	HAM-HGWA-3	EPA 9315	690237		
92746297001	HAM-HGWA-43D	EPA 9320	689870		
92746297002	HAM-HGWA-44D	EPA 9320	689870		
92746297003	HAM-UGRD-FD-01	EPA 9320	689870		
92746297004	HAM-UGRD-EB-01	EPA 9320	689870		
92746297005	HAM-UGRD-FB-01	EPA 9320	689870		
92746297006	HAM-HGWA-1	EPA 9320	689870		
92746297007	HAM-HGWA-2	EPA 9320	689870		
92746297008	HAM-HGWA-3	EPA 9320	689870		
92746297001	HAM-HGWA-43D	Total Radium Calculation	693014		
92746297002	HAM-HGWA-44D	Total Radium Calculation	693014		
92746297003	HAM-UGRD-FD-01	Total Radium Calculation	693014		
92746297004	HAM-UGRD-EB-01	Total Radium Calculation	693014		
92746297005	HAM-UGRD-FB-01	Total Radium Calculation	693014		
92746297006	HAM-HGWA-1	Total Radium Calculation	693014		
92746297007	HAM-HGWA-2	Total Radium Calculation	693014		
92746297008	HAM-HGWA-3	Total Radium Calculation	693014		

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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 ☒ Kernersville ☐Sample Condition
Upon Receipt

Client Name:

GA Power

Project #:

WO#: 92746297

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
CSY

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#: 92746297

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 VQA 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 (N/A) (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		1	1		2	1	1	1																			
2		1	1		2	1	1	1																			
3		1	1		2	1	1	1																			
4		1	1		2	1	1	1																			
5		1	1		2	1	1	1																			
6		1	1		2	1	1	1																			
7		1	1		2	1	1	1																			
8		1	1		2	1	1	1																			
9																											
10																											
11																											
12																											

pH Adjustment Log for Preserved Samples

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

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

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

Page: 1 of 1SAMPLER NAME AND SIGNATURE

Government Consultants Inc.

DATE Signed
(MM/DD/YY): 08/06/2024

Temp in °C

Received on _____
Ice (Y/N) _____

Custody Sealed
Cooler (Y/N)

Samples Intact
(Y/N)

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

Section A		Section B		Section C	
Required Client Information:					
Company:	GA Power	Report To:	SCS Contacts	Invoice Information:	
Address:	Atlanta, GA	Copy To:	Geosynlec Contacts	Attention:	Southern Co.
Email To:	SCS Contacts	Purchase Order No.:		Company Name:	
Phone:	Fax:	Project Name:	Plant Hammond Pooled Upgradient	Price Quote Reference:	Price Project Manager:
Requested Due Date/TAT:	10 Day	Project Number:	GW6587E	Bonnie Yang	Part Profile #
				10839	

REGULATORY AGENCY

NPDES ☐ GROUND WATER ☐ DRINKING WATER ☐

UST ☐ RCRA ☒ OTHER ☐

Site Location

STATE: GA

Page: 1 of 1

Section D Required Client Information		Valid Matrix Codes		COLLECTED		PRESERVATIVES		ANALYSIS TEST		Residual Chlorine (Y/N)	
		MATRIX CODE		COMPOSITE	COMPOSITE						
		DIPROX WATER 1/2 WATER 3/1 WASTE WATER 3/2 PRODUCTS 3/3 SOLIDS 3/4 OIL 3/5 WIPE 3/6 AIR 3/7 OTHER 3/8 TISSUE 3/9									
SAMPLE ID (A-Z, 0-9 / -) Sample IDs MUST BE UNIQUE		MATRIX CODE (see valid codes to left)		DATE		TIME		SAMPLE TEMP AT COLLECTION		# OF CONTAINERS	
ITEM #		SAMPLE TYPE (G=GRAB C=COMP)		DATE		TIME		Unpreserved		H ₂ SO ₄ HNO ₃ HCl NaOH Na ₂ S ₂ O ₃ Methanol Other	
1	HAM-HGWA-1	WG	G	8/5/24	16:37	19	5	2	3	X	N
2	HAM-HGWA-2	WG	G	8/5/24	16:30	21	5	2	3	X	N
3	HAM-HGWA-3	WG	G	8/5/24	16:33	20	5	2	3	X	N
4	/	/	/	/	/	/	/	/	/	/	/
5	/	/	/	/	/	/	/	/	/	/	/
6	/	/	/	/	/	/	/	/	/	/	/
7	/	/	/	/	/	/	/	/	/	/	/
8	TK 8/5/24	/	/	/	/	/	/	/	/	/	/
9	/	/	/	/	/	/	/	/	/	/	/
10	/	/	/	/	/	/	/	/	/	/	/
11	/	/	/	/	/	/	/	/	/	/	/
12	/	/	/	/	/	/	/	/	/	/	/
ADDITIONAL COMMENTS		REINQUISHED BY / AFFILIATION		DATE		TIME		ACCEPTED BY / AFFILIATION		DATE	
Task Code: HAM-COR-ASSMT-3024S2		The mcs fresh		8/5/24		1725		Lyon William Inc		8/7/24 1225	
		Lyon William Inc		8/7/24		1505		Daniel Spauld 8/7/24 1505			
SAMPLER NAME AND SIGNATURE		PRINT Name of SAMPLER: T. Messer Z. Webb C. Cai		DATE Signed (MM/DD/YYYY): 08/08/24		Geosyntec Consultants, Inc.					
SIGNATURE of SAMPLER:											
Temp in °C		Received on Ice (Y/N)		Custody Sealed Cooler (Y/N)		Samples Intact (Y/N)					
Page Project No./ Lab I.D.											

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

Method Blank Assessment	
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

Laboratory Control Sample Assessment	
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%

Duplicate Sample Assessment	
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

Sample Matrix Spike Control Assessment	
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:	

Matrix Spike/Matrix Spike Duplicate Sample Assessment	
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:	

Quality Control Sample Performance Assessment

Analyst Must Manually Enter All Fields Highlighted in Yellow.

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



Method Blank Assessment	
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

Laboratory Control Sample Assessment	
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%

Duplicate Sample Assessment	
Sample ID:	92746901002
Duplicate Sample ID:	92746901002DUP
Sample Result (pCi/L, g, F):	4.245
Sample Duplicate Result (pCi/L, g, F):	0.897
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	3.953
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	0.854
Are sample and/or duplicate results below RL?	NO
Duplicate Numerical Performance Indicator:	-0.556
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	6.86%
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:

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

8-3024

AM 8/30/24

VALIDATION REPORT

Memorandum

Date: 5 December 2024
To: Caroline Nelson
Christine Hug
From: Ashley Wilson
CC: Kristoffer Henderson
Subject: **Stage 2A Data Validation - Level II Data Deliverables – Pace Analytical Project Services, Project Numbers: 92746292 and 92746286**

SITE: Plant Hammond AP-3

INTRODUCTION

This report summarizes the findings of the Stage 2A data validation of twelve aqueous samples, two field duplicates, two field blanks and two equipment blanks, collected 5-7 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
- Calcium 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
92746292001	HAM-HGWA-43D
92746292002	HAM-HGWA-44D
92746292003	HAM-UGRD-FD-01
92746292004	HAM-UGRD-EB-01
92746292005	HAM-UGRD-FB-01
92746292006	HAM-HGWA-1
92746292007	HAM-HGWA-2
92746292008	HAM-HGWA-3
92746286001	HAM-HGWA-45D

Laboratory IDs	Client IDs
92746286002	HAM-HGWC-121A
92746286003	HAM-HGWA-122
92746286004	HAM-HGWC-120
92746286005	HAM-HGWC-124
92746286006	HAM-HGWC-125
92746286007	HAM-HGWC-126
92746286008	HAM-AP3-FD-01
92746286009	HAM-AP3-FB-01
92746286010	HAM-AP3-EB-01

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

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-HGWA-1, HAM-HGWA-45D and HAM-HGWC-120. The recovery and relative percent difference (RPD) results were within the laboratory specified acceptance criteria, with the following exceptions.

92746292: The recovery of calcium in the MS using sample HAM-HGWA-1 was low and outside of laboratory specified acceptance criteria. Since the calcium concentration in sample HAM-MW-1 was greater than four times the spiked concentration, no qualifications were applied to the data based on the MS/MSD recovery results.

92746286: The MSD recovery of barium in the MS/MSD pair using sample HAM-HGWA-45D was high and outside of laboratory specified acceptance criteria. Therefore, the concentration of barium in sample HAM-HGWA-45D was J+ qualified as estimated with a high bias.

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

Sample ID	Compound	Laboratory Result (mg/L)	Laboratory Flag	Validation Result (mg/L)	Validation Qualifier*	Reason Code**
HAM-HGWA-45D	Barium	0.50	M1	0.50	J+	MS1

mg/L- milligram per liter

M1-Matrix spike recovery exceeded QC limits

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

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

1.5 **Laboratory Control Sample (LCS)**

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

1.6 **Equipment Blank**

Two equipment blanks were collected with the sample set, HAM-UGRD-EB-01 and HAM-AP3-EB-01. Metals were not detected in the equipment blanks at or above the MDLs.

1.7 **Field Blank**

Two field blanks were collected with the sample set, HAM-UGRD-FB-01 and HAM-AP3-FB-01. 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-UGRD-FD-01 and HAM-AP3-FD-01. Acceptable precision (RPD < 30%) was demonstrated between the field duplicate and the original samples, HAM-HGWA-43D and HAM-HGWC-124, respectively, with the following exception.

Antimony was not detected in field duplicate HAM-AP3-FD-01 and detected in sample HAM-HGWC-124, resulting in a noncalculable RPD. Therefore, based on professional and technical judgment, the antimony concentration in sample HAM-HGWC-124 was J qualified as estimated and the non-detect result in field duplicate HAM-AP3-FD-01 was UJ qualified as estimated less than the MDL.

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	RPD	Validation Result (mg/L)	Validation Qualifier	Reason Code
HAM-AP3-FD-01	Antimony	0.0030	U	NC	0.0030	UJ	RPDF2
HAM-HGWC-124	Antimony	0.0020	J		0.0020	J	RPDF2

mg/L- milligram per liter

U-not detected at or above the MDL

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

NC-noncalculable

1.9 Sensitivity

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

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

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).

92746286: One sample set specific MS/MSD pair was reported, using sample HAM-HGWA-45D. The recovery and RPD results were within laboratory specified acceptance criteria.

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

2.5 Laboratory Control Sample

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

2.6 Equipment Blank

Two equipment blanks were collected with the sample set, HAM-UGRD-EB-01 and HAM-AP3-EB-01. 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-UGRD-FB-01 and HAM-AP3-FB-01. 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-UGRD-FD-01 and HAM-AP3-FD-01. Acceptable precision ($RPD < 30\%$) was demonstrated between the field duplicate and the original samples, HAM-HGWA-43D and HAM-HGWC-124, respectively.

2.9 Sensitivity

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

3.0 WET CHEMISTRY

The samples were analyzed for chloride, fluoride and sulfate by US EPA method 300.0 Rev 2.1 1993 and TDS by SM 2540C-2015.

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

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). Four sample set specific MS/MSD pairs were reported for chloride, fluoride and sulfate using samples HAM-HGWA-1 and HAM-HGWC-121A. The recovery and RPD results were within the laboratory specified acceptance criteria, with the following exceptions.

92746292: The recoveries of sulfate in the MS/MSD pair using sample HAM-HGWA-1 were low and outside of laboratory specified acceptance criteria. Therefore, the concentration of sulfate in sample HAM-HGWA-1 was J- qualified as estimated with a low bias.

92746286: The MS recovery of sulfate in the MS/MSD pair using sample HAM-HGWC-121A was low and outside of laboratory specified acceptance criteria. Therefore, the concentration of sulfate in sample HAM-HGWC-121A was J- qualified as estimated with a low bias.

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

Sample ID	Compound	Laboratory Result (mg/L)	Laboratory Flag	Validation Result (mg/L)	Validation Qualifier	Reason Code
HAM-HGWA-1	Sulfate	49.4	M1	49.4	J-	MS1
HAM-HGWC-121A	Sulfate	127	M1	127	J-	MS1

mg/L- milligram per liter

M1-Matrix spike recovery exceeded QC limits

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

3.6 Laboratory Duplicate

Three laboratory duplicates were reported for TDS using samples HAM-HGWC-120, HAM-UGRD-EB-01, HAM-HGWA-42D and HAM-HGWC-17. The RPD results were within the laboratory specified acceptance criteria, with the following exception.

92746292: The RPD of TDS in the laboratory duplicate pair using sample HAM-UGRD-EB-01 was high and outside of laboratory specified acceptance criteria. Since the TDS concentration for sample HAM-UGRD-EB-01 was less than five times the RL and the absolute difference between the original result and laboratory duplicate was less than the RL, no qualifications were applied to the data.

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

3.7 Equipment Blank

Two equipment blanks were collected with the sample set, HAM-UGRD-EB-01 and HAM-AP3-EB-01. The wet chemistry parameters were not detected in the equipment blank at or above the MDLs, with the following exceptions.

92746292: TDS (41.0 mg/L) was detected in HAM-UGRD-EB-01 at a concentration greater than the RL. Since HAM-UGRD-EB-01 was qualified due to field blank contamination in HAM-AP1-FB-01, and based on professional and technical judgment, no additional qualifications were applied to the data.

92746286: TDS (34.0 mg/L) was detected in HAM-AP3-EB-01 at a concentration greater than the RL. Since HAM-AP3-EB-01 was qualified due to field blank contamination in HAM-AP3-FB-01, and based on professional and technical judgment, no additional qualifications were applied to the data.

3.8 Field Blank

Two field blanks were collected with the sample set, HAM-UGRD-FB-01 and HAM-AP3-FB-01. The wet chemistry parameters were not detected in the field blank at or above the MDLs, with the following exception.

92746292: TDS (135 mg/L) was detected in HAM-UGRD-FB-01 at a concentration greater than the RL. Therefore, the concentrations of TDS in samples HAM-HGWA-1, HAM-HGWA-2, HAM-HGWA-3, HAM-HGWA-43D, HAM-HGWA-44D and HAM-UGRD-FD-01 were J+ qualified as estimated with a high bias. The concentration in sample HAM-UGRD-EB-01 was U qualified as not detected at or above the reported concentration.

92746286: TDS (33.0 mg/L) was detected in HAM-AP3-FB-01 at a concentration greater than the RL. Since the associated samples were qualified due to equipment blank contamination in HAM-AP3-EB-01, and based on professional and technical judgment, no additional qualifications were applied to the data.

Sample ID	Compound	Laboratory Result (mg/L)	Laboratory Flag	Validation Result (mg/L)	Validation Qualifier	Reason Code
HAM-AP3-EB-01	TDS	34.0	NA	34.0	U	BFH
HAM-HGWA-122	TDS	270	NA	270	J+	BFH
HAM-HGWA-45D	TDS	256	NA	256	J+	BFH
HAM-HGWC-124	TDS	337	NA	337	J+	BFH
HAM-HGWA-1	TDS	444	NA	444	J+	BFH
HAM-HGWA-2	TDS	217	NA	217	J+	BFH
HAM-HGWA-3	TDS	304	NA	304	J+	BFH
HAM-HGWA-43D	TDS	283	NA	283	J+	BFH
HAM-HGWA-44D	TDS	380	NA	380	J+	BFH
HAM-UGRD-EB-01	TDS	41.0	D6	41.0	U	BFH
HAM-UGRD-FD-01	TDS	295	NA	295	J+	BFH

mg/L- milligram per liter

NA-not applicable

D6-Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference

3.9 **Field Duplicate**

Two field duplicate samples were collected with the sample set, HAM-UGRD-FD-01 and HAM-AP3-FD-01. Acceptable precision (RPD < 30%) was demonstrated between the field duplicate and the original samples, HAM-HGWA-43D and HAM-HGWC-124, respectively.

3.10 **Sensitivity**

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

* * * * *

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

DQM Reason Code	Description
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

DQM Reason Code	Description
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

DQM Reason Code	Description
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

DQM Reason Code	Description
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: 10 January 2024
To: Whitney Law
From: Matthew Richardson
CC: Kristoffer Henderson
Subject: **Stage 2A Data Validation - Level II Data Deliverables – Pace Analytical Services, LLC Project Numbers 92681881 and 92681882**

SITE: Plant Hammond AP-3

INTRODUCTION

This report summarizes the findings of the Stage 2A data validation of twelve aqueous samples, one field duplicate sample, one field blank, and one equipment blank, collected 8 and 10-11 August 2023, as part of the Plant Hammond AP on-site sampling event.

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

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

EXECUTIVE SUMMARY

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 ID	Client ID
92681881001	HAM-HGWA-1
92681881002	HAM-HGWA-2
92681881003	HAM-HGWA-3
92681881004	HAM-HGWA-43D
92681881005	HAM-HGWA-44D
92681882001	HAM-HGWA-45D
92681882002	HAM-HGWA-122
92681882003	HAM-HGWC-124

Laboratory ID	Client ID
92681882004	HAM-HGWC-126
92681882005	HAM-AP3-FD-03
92682395001	HAM-HGWC-120
92682395002	HAM-HGWC-121A
92682395003	HAM-HGWC-125
92682395004	HAM-AP3-EB-03
92682395005	HAM-AP3-FB-03

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%.

1.2 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). Four method blanks were reported for the radium-228 data (batches 610549, 611582, 611584 and 610551). Three method blanks were reported for the radium-226 data (batches 611645, 611647 and 610646). Radium-226 and radium-228 were not detected in the method blanks above the minimum detectable concentrations (MDCs), with the following exception.

92681881 and 92681882: Radium-228 was detected in the method blank in batch 610549 (0.453 pCi/L) at a concentration greater than the MDC. Since radium-228 was not detected in the associated samples at concentrations greater than the MDCs, no qualifications were applied to the data.

1.4 Matrix Spike/Matrix Spike Duplicate

MS/MSD pairs were not reported with the data.

1.5 Laboratory Control Sample (LCS)

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

92681882: The LCS recovery of radium-226 in the LCS/LCSD pair in batch 611647 was high and outside of the laboratory specified acceptance criteria. Therefore, the concentrations of radium-

226 and combined radium-226 and radium-228 in the associated samples were J qualified as estimated.

Sample	Analyte	Laboratory Result (pCi/L)	Laboratory Flag	Validation Result (pCi/L)	Validation Qualifier*	Reason Code**
HAM-AP3-FD-03	Combined Radium 226 + 228	1.3	NA	1.3	J	5
HAM-AP3-FD-03	Radium-226	0.323	NA	0.323	J	5
HAM-HGWC-126	Combined Radium 226 + 228	1.34	NA	1.34	J	5
HAM-HGWC-126	Radium-226	0.573	NA	0.573	J	5

pCi/L-picocuries per liter

NA-not applicable

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

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

1.6 Laboratory Duplicate

One sample set specific laboratory duplicate was reported for radium-226 using sample HAM-HGWA-43D. The replicate percent difference (RPD) was outside of the laboratory specified acceptance criteria. Since the RER was within the laboratory specified acceptance criteria and based on professional and technical judgment, no qualifications were applied to the data.

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

1.7 Tracers and Carriers

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

1.8 Equipment Blank

One equipment blank, HAM-AP3-EB-03, was collected with the sample set. Radium-226 and radium-228 were not detected in the equipment blank above the MDCs.

1.9 Field Blank

One field blank, HAM-AP3-FB-03, was collected with the sample set. Radium-226 and radium-228 were not detected in the field blank above the MDCs.

1.10 Field Duplicate

One field duplicate sample was collected with the sample set, HAM-AP-3-FD-03. Acceptable precision ($RER (1\sigma) < 3$) was demonstrated between the field duplicate and the original sample, HAM-HGWC-124.

However, radium-226, radium-228 and combined radium-226 and radium-228 were detected in field duplicate sample HAM-AP3-FD-03 at a concentration greater than the MDA and not detected in the parent sample HAM-HGWC-124, resulting in noncalculable RPDs. Since the RERs were less than three, no qualifications were applied to the data.

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

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

LCS - Laboratory Control Sample

LCSD - Laboratory Control Sample Duplicate

RPD - Relative Percent Difference

FIELD SAMPLING REPORTS

Low-Flow Test Report:

Test Date / Time: 8/5/2024 3:58:06 PM
Project: GP-Plant Hammond
Operator Name: C. Cain

Location Name: HGWA-1 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 22.49 ft Total Depth: 32.49 ft Initial Depth to Water: 20.86 ft	Pump Type: Bladder Tubing Type: Poly Pump Intake From TOC: 27.49 ft Estimated Total Volume Pumped: 3 liter Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 0.68 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	
8/5/2024 3:58 PM	00:00	8.01 pH	35.03 °C	0.15 µS/cm	6.62 mg/L	5.31 NTU	467.1 mV	21.15 ft	200.00 ml/min
8/5/2024 4:01 PM	03:50	7.20 pH	22.52 °C	589.94 µS/cm	2.88 mg/L	4.65 NTU	16.9 mV	21.15 ft	200.00 ml/min
8/5/2024 4:06 PM	08:50	7.22 pH	19.15 °C	620.89 µS/cm	0.63 mg/L	3.44 NTU	115.2 mV	21.57 ft	200.00 ml/min
8/5/2024 4:11 PM	13:50	7.23 pH	19.02 °C	607.63 µS/cm	0.24 mg/L	1.90 NTU	202.7 mV	21.63 ft	200.00 ml/min
8/5/2024 4:16 PM	18:50	7.24 pH	18.88 °C	621.19 µS/cm	0.31 mg/L	1.51 NTU	310.2 mV	21.71 ft	200.00 ml/min
8/5/2024 4:21 PM	23:50	7.25 pH	18.85 °C	609.77 µS/cm	0.21 mg/L	1.34 NTU	373.6 mV	21.78 ft	200.00 ml/min
8/5/2024 4:26 PM	28:50	7.27 pH	18.95 °C	626.76 µS/cm	0.19 mg/L	1.32 NTU	434.7 mV	21.81 ft	200.00 ml/min
8/5/2024 4:31 PM	33:50	7.29 pH	18.97 °C	624.60 µS/cm	0.16 mg/L	1.02 NTU	408.8 mV	21.83 ft	200.00 ml/min

Samples

Sample ID:	Description:
HAM-HGWA-1	Grab.

Low-Flow Test Report:

Test Date / Time: 8/5/2024 3:55:27 PM
Project: GP-Plant Hammond
Operator Name: Z. Webb

Location Name: HGWA-2 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 17.95 ft Total Depth: 27.95 ft Initial Depth to Water: 14.87 ft	Pump Type: Bladder Tubing Type: Poly Pump Intake From TOC: 27.95 ft Estimated Total Volume Pumped: 5.25 liter Flow Cell Volume: 90 ml Final Flow Rate: 150 ml/min Final Draw Down: 0.04 ft	Instrument Used: Aqua TROLL 400 Serial Number: 1080297
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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	
8/5/2024 3:55 PM	00:00	4.92 pH	18.97 °C	298.88 µS/cm	0.17 mg/L	15.80 NTU	140.8 mV	14.67 ft	150.00 ml/min
8/5/2024 4:00 PM	05:00	4.93 pH	19.19 °C	300.77 µS/cm	0.12 mg/L	7.58 NTU	146.4 mV	14.72 ft	150.00 ml/min
8/5/2024 4:05 PM	10:00	4.92 pH	19.75 °C	301.53 µS/cm	0.12 mg/L	5.87 NTU	107.6 mV	14.72 ft	150.00 ml/min
8/5/2024 4:10 PM	15:00	4.92 pH	20.06 °C	299.78 µS/cm	0.12 mg/L	2.69 NTU	98.3 mV	14.72 ft	150.00 ml/min
8/5/2024 4:15 PM	20:00	4.91 pH	20.85 °C	300.42 µS/cm	0.12 mg/L	2.03 NTU	95.5 mV	14.72 ft	150.00 ml/min
8/5/2024 4:20 PM	25:00	4.91 pH	20.96 °C	299.53 µS/cm	0.12 mg/L	1.89 NTU	92.2 mV	14.72 ft	150.00 ml/min
8/5/2024 4:25 PM	30:00	4.91 pH	21.05 °C	298.80 µS/cm	0.12 mg/L	1.87 NTU	89.7 mV	14.72 ft	150.00 ml/min

Samples

Sample ID:	Description:
HAM-HGWA-2	Grab.

Low-Flow Test Report:

Test Date / Time: 8/5/2024 3:49:27 PM
Project: GP-Plant Hammond
Operator Name: T. Kessler

Location Name: HGWA-3 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 34.51 ft Total Depth: 44.51 ft Initial Depth to Water: 14.3 ft	Pump Type: Bladder Tubing Type: Poly Pump Intake From TOC: 39.51 ft Estimated Total Volume Pumped: 9 liter Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 0.05 ft	Instrument Used: Aqua TROLL 400 Serial Number: 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	
8/5/2024 3:49 PM	00:00	7.29 pH	20.92 °C	467.17 µS/cm	0.24 mg/L	61.20 NTU	-48.8 mV	14.35 ft	200.00 ml/min
8/5/2024 3:52 PM	03:21	7.27 pH	20.71 °C	468.77 µS/cm	0.19 mg/L	60.50 NTU	-69.8 mV	14.35 ft	200.00 ml/min
8/5/2024 3:57 PM	08:21	7.24 pH	20.52 °C	466.20 µS/cm	0.13 mg/L	14.35 NTU	-51.1 mV	14.35 ft	200.00 ml/min
8/5/2024 4:02 PM	13:21	7.24 pH	20.50 °C	466.63 µS/cm	0.10 mg/L	41.90 NTU	-72.4 mV	14.35 ft	200.00 ml/min
8/5/2024 4:07 PM	18:21	7.25 pH	20.42 °C	465.40 µS/cm	0.10 mg/L	14.90 NTU	-55.5 mV	14.35 ft	200.00 ml/min
8/5/2024 4:12 PM	23:21	7.25 pH	20.41 °C	464.44 µS/cm	0.09 mg/L	8.92 NTU	-57.9 mV	14.35 ft	200.00 ml/min
8/5/2024 4:17 PM	28:21	7.26 pH	20.32 °C	463.35 µS/cm	0.09 mg/L	9.16 NTU	-58.7 mV	14.35 ft	200.00 ml/min
8/5/2024 4:22 PM	33:21	7.27 pH	20.39 °C	462.13 µS/cm	0.09 mg/L	6.24 NTU	-60.1 mV	14.35 ft	200.00 ml/min
8/5/2024 4:27 PM	38:21	7.27 pH	20.35 °C	461.63 µS/cm	0.09 mg/L	4.71 NTU	-60.9 mV	14.35 ft	200.00 ml/min

Samples

Sample ID:	Description:
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HAM-HGWA-3	Grab.
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Low-Flow Test Report:

Test Date / Time: 8/6/2024 8:47:20 AM
Project: GP-Plant Hammond
Operator Name: Z. Webb

Location Name: HGWA-43D Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 51.25 ft Total Depth: 61.25 ft Initial Depth to Water: 20.9 ft	Pump Type: Bladder Tubing Type: Poly Pump Intake From TOC: 56.25 ft Estimated Total Volume Pumped: 12 liter Flow Cell Volume: 90 ml Final Flow Rate: 150 ml/min Final Draw Down: 1.42 ft	Instrument Used: Aqua TROLL 400 Serial Number: 1080297
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Test Notes:
5 bottles; Full app. III and IV.

Weather Conditions:
Sunny, 75 degrees F.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
8/6/2024 8:47 AM	00:00	7.44 pH	19.26 °C	466.18 µS/cm	1.61 mg/L	2.55 NTU	-64.8 mV	20.90 ft	150.00 ml/min
8/6/2024 8:52 AM	05:00	7.43 pH	19.17 °C	464.02 µS/cm	1.22 mg/L	1.71 NTU	-56.3 mV	22.07 ft	150.00 ml/min
8/6/2024 8:57 AM	10:00	7.45 pH	19.23 °C	448.23 µS/cm	1.56 mg/L	1.91 NTU	-89.1 mV	22.13 ft	150.00 ml/min
8/6/2024 9:02 AM	15:00	7.46 pH	19.22 °C	464.78 µS/cm	1.00 mg/L	1.38 NTU	-61.4 mV	22.20 ft	150.00 ml/min
8/6/2024 9:07 AM	20:00	7.48 pH	19.19 °C	465.66 µS/cm	1.26 mg/L	1.11 NTU	-63.5 mV	22.29 ft	150.00 ml/min
8/6/2024 9:12 AM	25:00	7.49 pH	19.36 °C	452.13 µS/cm	0.94 mg/L	1.75 NTU	-63.9 mV	22.32 ft	150.00 ml/min
8/6/2024 9:17 AM	30:00	7.49 pH	19.49 °C	431.03 µS/cm	1.36 mg/L	1.79 NTU	-65.4 mV	22.32 ft	150.00 ml/min
8/6/2024 9:22 AM	35:00	7.50 pH	19.40 °C	456.51 µS/cm	0.78 mg/L	1.29 NTU	-63.7 mV	22.32 ft	150.00 ml/min
8/6/2024 9:27 AM	40:00	7.50 pH	19.43 °C	453.74 µS/cm	0.92 mg/L	0.86 NTU	-63.0 mV	22.32 ft	150.00 ml/min
8/6/2024 9:32 AM	45:00	7.50 pH	19.63 °C	413.85 µS/cm	1.08 mg/L	0.72 NTU	-62.9 mV	22.32 ft	150.00 ml/min
8/6/2024 9:37 AM	50:00	7.49 pH	19.69 °C	448.82 µS/cm	2.67 mg/L	0.68 NTU	-61.0 mV	22.32 ft	150.00 ml/min
8/6/2024 9:42 AM	55:00	7.49 pH	19.01 °C	441.63 µS/cm	4.92 mg/L	1.05 NTU	-59.9 mV	22.32 ft	150.00 ml/min
8/6/2024 9:47 AM	01:00:00	7.49 pH	18.88 °C	435.31 µS/cm	1.83 mg/L	1.21 NTU	-58.1 mV	22.32 ft	150.00 ml/min

8/6/2024 9:52 AM	01:05:00	7.46 pH	18.93 °C	450.19 µS/cm	0.36 mg/L	0.88 NTU	-57.4 mV	22.32 ft	150.00 ml/min
8/6/2024 9:57 AM	01:10:00	7.46 pH	19.00 °C	447.01 µS/cm	0.34 mg/L	0.69 NTU	-88.7 mV	22.32 ft	150.00 ml/min
8/6/2024 10:02 AM	01:15:00	7.46 pH	18.99 °C	445.19 µS/cm	0.36 mg/L	0.72 NTU	-88.1 mV	22.32 ft	150.00 ml/min

Samples

Sample ID:	Description:
HAM-HGWA-43D	Grab.
HAM-UGRD-FD-01	Grab.

Low-Flow Test Report:

Test Date / Time: 8/6/2024 8:53:38 AM
Project: GP-Plant Hammond
Operator Name: T. Kessler

Location Name: HGWA-44D Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 103.5 ft Total Depth: 113.5 ft Initial Depth to Water: 20.75 ft	Pump Type: Bladder Tubing Type: Poly Pump Intake From TOC: 108.5 ft Estimated Total Volume Pumped: 7.5 liter Flow Cell Volume: 90 ml Final Flow Rate: 100 ml/min Final Draw Down: 5.25 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, 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	
8/6/2024 8:53 AM	00:00	7.94 pH	20.44 °C	550.82 µS/cm	1.67 mg/L	63.60 NTU	40.8 mV	20.85 ft	200.00 ml/min
8/6/2024 8:58 AM	05:00	8.02 pH	19.26 °C	558.24 µS/cm	0.41 mg/L	71.70 NTU	-40.5 mV	21.68 ft	200.00 ml/min
8/6/2024 9:03 AM	10:00	8.07 pH	19.03 °C	548.90 µS/cm	0.27 mg/L	26.80 NTU	-59.8 mV	22.88 ft	200.00 ml/min
8/6/2024 9:08 AM	15:00	8.09 pH	18.97 °C	540.26 µS/cm	0.21 mg/L	25.30 NTU	-96.5 mV	23.51 ft	200.00 ml/min
8/6/2024 9:13 AM	20:00	8.11 pH	19.15 °C	538.33 µS/cm	0.18 mg/L	11.50 NTU	-74.8 mV	23.60 ft	200.00 ml/min
8/6/2024 9:18 AM	25:00	8.12 pH	19.10 °C	535.48 µS/cm	0.14 mg/L	8.86 NTU	-122.3 mV	24.10 ft	200.00 ml/min
8/6/2024 9:23 AM	30:00	8.13 pH	19.13 °C	533.17 µS/cm	0.12 mg/L	6.32 NTU	-98.9 mV	24.40 ft	200.00 ml/min
8/6/2024 9:28 AM	35:00	8.28 pH	19.14 °C	536.64 µS/cm	0.12 mg/L	5.13 NTU	-144.1 mV	24.90 ft	200.00 ml/min
8/6/2024 9:33 AM	40:00	8.30 pH	19.24 °C	533.19 µS/cm	0.09 mg/L	4.09 NTU	-151.4 mV	25.20 ft	200.00 ml/min
8/6/2024 9:38 AM	45:00	8.31 pH	19.29 °C	540.94 µS/cm	0.08 mg/L	3.99 NTU	-157.9 mV	25.50 ft	200.00 ml/min
8/6/2024 9:43 AM	50:00	8.33 pH	19.24 °C	539.19 µS/cm	0.07 mg/L	4.27 NTU	-125.6 mV	25.80 ft	200.00 ml/min
8/6/2024 9:48 AM	55:00	8.34 pH	19.24 °C	535.59 µS/cm	0.06 mg/L	3.83 NTU	-166.2 mV	25.80 ft	200.00 ml/min
8/6/2024 9:53 AM	01:00:00	8.35 pH	19.30 °C	534.74 µS/cm	0.05 mg/L	4.01 NTU	-167.7 mV	25.95 ft	200.00 ml/min

8/6/2024 9:58 AM	01:05:00	8.36 pH	19.29 °C	533.45 µS/cm	0.05 mg/L	1.47 NTU	-173.4 mV	26.00 ft	200.00 ml/min
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Samples

Sample ID:	Description:
HAM-HGWA-44D	Grab.

Low-Flow Test Report:

Test Date / Time: 8/6/2024 1:59:45 PM
Project: GP-Plant Hammond
Operator Name: Z. Webb

Location Name: HGWA-45D Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 52.87 ft Total Depth: 62.87 ft Initial Depth to Water: 13.3 ft	Pump Type: Bladder Tubing Type: Polyethylene Pump Intake From TOC: 57.87 ft Estimated Total Volume Pumped: 8 liter Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 0.65 ft	Instrument Used: Aqua TROLL 400 Serial Number: 1080297
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Test Notes:
5 bottles; Full app. III & 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	
8/6/2024 1:59 PM	00:00	7.46 pH	23.06 °C	486.00 µS/cm	1.02 mg/L	2.77 NTU	-77.1 mV	13.30 ft	200.00 ml/min
8/6/2024 2:04 PM	05:00	7.54 pH	22.17 °C	485.42 µS/cm	0.90 mg/L	1.56 NTU	-77.1 mV	13.87 ft	200.00 ml/min
8/6/2024 2:09 PM	10:00	7.51 pH	22.21 °C	471.46 µS/cm	1.00 mg/L	1.89 NTU	-102.6 mV	13.90 ft	200.00 ml/min
8/6/2024 2:14 PM	15:00	7.49 pH	21.98 °C	457.01 µS/cm	0.96 mg/L	1.34 NTU	-106.5 mV	13.92 ft	200.00 ml/min
8/6/2024 2:19 PM	20:00	7.49 pH	21.67 °C	448.83 µS/cm	0.97 mg/L	1.04 NTU	-110.6 mV	13.95 ft	200.00 ml/min
8/6/2024 2:24 PM	25:00	7.46 pH	21.97 °C	443.57 µS/cm	0.95 mg/L	1.01 NTU	-114.1 mV	13.95 ft	200.00 ml/min
8/6/2024 2:29 PM	30:00	7.46 pH	22.29 °C	442.86 µS/cm	0.93 mg/L	0.78 NTU	-80.6 mV	13.95 ft	200.00 ml/min
8/6/2024 2:34 PM	35:00	7.47 pH	22.21 °C	430.96 µS/cm	0.88 mg/L	0.67 NTU	-122.9 mV	13.95 ft	200.00 ml/min

Samples

Sample ID:	Description:
HAM-HGWA-45D	Grab.

Low-Flow Test Report:

Test Date / Time: 8/6/2024 11:46:25 AM
Project: GP-Plant Hammond
Operator Name: Z. Webb

Location Name: HGWA-122 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 17.76 ft Total Depth: 27.76 ft Initial Depth to Water: 14.39 ft	Pump Type: Bladder Tubing Type: Polyethylene Pump Intake From TOC: 22.76 ft Estimated Total Volume Pumped: 10 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: 1080297
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Test Notes:
5 Bottles; Full app. III & 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	
8/6/2024 11:46 AM	00:00	6.80 pH	20.52 °C	358.71 µS/cm	2.51 mg/L	4.80 NTU	95.8 mV	14.39 ft	150.00 ml/min
8/6/2024 11:51 AM	05:00	6.84 pH	20.37 °C	357.13 µS/cm	2.21 mg/L	2.95 NTU	96.3 mV	14.42 ft	150.00 ml/min
8/6/2024 11:56 AM	10:00	6.86 pH	20.35 °C	370.26 µS/cm	1.93 mg/L	1.33 NTU	91.4 mV	14.42 ft	150.00 ml/min
8/6/2024 12:01 PM	15:00	6.86 pH	20.38 °C	368.54 µS/cm	1.76 mg/L	1.24 NTU	71.1 mV	14.43 ft	150.00 ml/min
8/6/2024 12:06 PM	20:00	6.88 pH	20.29 °C	383.05 µS/cm	1.74 mg/L	1.79 NTU	86.7 mV	14.43 ft	150.00 ml/min
8/6/2024 12:11 PM	25:00	6.88 pH	22.44 °C	384.53 µS/cm	1.82 mg/L	1.18 NTU	67.5 mV	14.43 ft	150.00 ml/min
8/6/2024 12:16 PM	30:00	6.87 pH	26.41 °C	386.16 µS/cm	1.79 mg/L	--	67.0 mV	14.43 ft	150.00 ml/min
8/6/2024 12:21 PM	35:00	6.86 pH	29.66 °C	388.27 µS/cm	1.88 mg/L	--	66.9 mV	14.43 ft	150.00 ml/min
8/6/2024 12:26 PM	40:00	6.86 pH	32.63 °C	390.36 µS/cm	2.01 mg/L	--	66.6 mV	14.43 ft	150.00 ml/min
8/6/2024 12:31 PM	45:00	6.89 pH	33.08 °C	378.17 µS/cm	2.02 mg/L	--	68.8 mV	14.43 ft	150.00 ml/min
8/6/2024 12:36 PM	50:00	6.81 pH	20.95 °C	356.27 µS/cm	2.44 mg/L	1.62 NTU	95.3 mV	14.43 ft	150.00 ml/min
8/6/2024 12:41 PM	55:00	6.90 pH	20.20 °C	375.57 µS/cm	1.96 mg/L	0.83 NTU	69.3 mV	14.43 ft	150.00 ml/min
8/6/2024 12:46 PM	01:00:00	6.89 pH	22.22 °C	379.46 µS/cm	1.93 mg/L	0.77 NTU	67.9 mV	14.43 ft	150.00 ml/min

8/6/2024 12:51 PM	01:05:00	6.86 pH	22.83 °C	373.99 µS/cm	1.99 mg/L	0.72 NTU	87.8 mV	14.43 ft	150.00 ml/min
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Samples

Sample ID:	Description:
HAM-HGWA-122	Grab.

Low-Flow Test Report:

Test Date / Time: 8/7/2024 10:46:54 AM
Project: GP-Plant Hammond
Operator Name: Z. Webb

Location Name: HGWC-120 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 57.00 ft Total Depth: 67.00 ft Initial Depth to Water: 40.85 ft	Pump Type: Bladder Tubing Type: Polyethylene Pump Intake From TOC: 62.00 ft Estimated Total Volume Pumped: 7 liter Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 0.02 ft	Instrument Used: Aqua TROLL 400 Serial Number: 1080297
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Test Notes:
5 Bottles; Full app. III & 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	
8/7/2024 10:46 AM	00:00	7.08 pH	22.19 °C	859.85 µS/cm	1.56 mg/L	5.75 NTU	-39.5 mV	40.85 ft	200.00 ml/min
8/7/2024 10:51 AM	05:00	7.05 pH	21.45 °C	863.98 µS/cm	0.82 mg/L	4.68 NTU	-29.1 mV	40.87 ft	200.00 ml/min
8/7/2024 10:56 AM	10:00	7.04 pH	21.37 °C	864.78 µS/cm	0.79 mg/L	2.87 NTU	-45.8 mV	40.87 ft	200.00 ml/min
8/7/2024 11:01 AM	15:00	7.03 pH	21.50 °C	865.94 µS/cm	0.74 mg/L	1.93 NTU	-43.9 mV	40.87 ft	200.00 ml/min
8/7/2024 11:06 AM	20:00	7.03 pH	21.47 °C	865.57 µS/cm	0.82 mg/L	1.31 NTU	-41.3 mV	40.87 ft	200.00 ml/min
8/7/2024 11:11 AM	25:00	7.02 pH	21.50 °C	861.79 µS/cm	0.77 mg/L	1.17 NTU	-39.5 mV	40.87 ft	200.00 ml/min
8/7/2024 11:16 AM	30:00	7.01 pH	21.68 °C	858.69 µS/cm	0.83 mg/L	1.22 NTU	-19.0 mV	40.87 ft	200.00 ml/min

Samples

Sample ID:	Description:
HAM-HGWC-120	Grab.

Low-Flow Test Report:

Test Date / Time: 8/6/2024 3:47:18 PM
Project: GP-Plant Hammond
Operator Name: Z. Webb

Location Name: HGWC-121A Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 27.98 ft Total Depth: 37.98 ft Initial Depth to Water: 18.27 ft	Pump Type: Bladder Tubing Type: Polyethylene Pump Intake From TOC: 32.98 ft Estimated Total Volume Pumped: 7 liter Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 0.09 ft	Instrument Used: Aqua TROLL 400 Serial Number: 1080297
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Test Notes:
5 Bottles; Full app. III & 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 3:47 PM	00:00	6.92 pH	20.66 °C	828.56 µS/cm	0.95 mg/L	1.86 NTU	20.8 mV	18.27 ft	200.00 ml/min
8/6/2024 3:52 PM	05:00	6.92 pH	20.41 °C	837.59 µS/cm	0.82 mg/L	1.67 NTU	19.8 mV	18.36 ft	200.00 ml/min
8/6/2024 3:57 PM	10:00	6.92 pH	20.47 °C	844.86 µS/cm	0.86 mg/L	1.49 NTU	21.9 mV	18.36 ft	200.00 ml/min
8/6/2024 4:02 PM	15:00	6.91 pH	20.31 °C	841.94 µS/cm	0.85 mg/L	1.17 NTU	25.7 mV	18.36 ft	200.00 ml/min
8/6/2024 4:07 PM	20:00	6.90 pH	20.11 °C	836.98 µS/cm	0.81 mg/L	1.03 NTU	24.3 mV	18.36 ft	200.00 ml/min
8/6/2024 4:12 PM	25:00	6.90 pH	19.85 °C	842.86 µS/cm	0.80 mg/L	1.11 NTU	24.1 mV	18.36 ft	200.00 ml/min
8/6/2024 4:17 PM	30:00	6.91 pH	19.87 °C	847.06 µS/cm	0.68 mg/L	0.94 NTU	22.7 mV	18.36 ft	200.00 ml/min

Samples

Sample ID:	Description:
HGWC-121A	Grab.

Low-Flow Test Report:

Test Date / Time: 8/7/2024 8:46:26 AM
Project: GP-Plant Hammond
Operator Name: Z. Webb

Location Name: HGWC-124 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 25.12 ft Total Depth: 35.12 ft Initial Depth to Water: 17.06 ft	Pump Type: Bladder Tubing Type: Polyethylene Pump Intake From TOC: 30.12 ft Estimated Total Volume Pumped: 7 liter Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 0.18 ft	Instrument Used: Aqua TROLL 400 Serial Number: 1080297
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Test Notes:
5 Bottles; Full app. III & 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	
8/7/2024 8:46 AM	00:00	7.31 pH	19.05 °C	521.00 µS/cm	1.05 mg/L	1.48 NTU	-0.4 mV	17.06 ft	200.00 ml/min
8/7/2024 8:51 AM	05:00	7.31 pH	19.08 °C	507.74 µS/cm	1.20 mg/L	1.17 NTU	8.8 mV	17.24 ft	200.00 ml/min
8/7/2024 8:56 AM	10:00	7.30 pH	19.05 °C	510.34 µS/cm	1.11 mg/L	0.95 NTU	9.7 mV	17.24 ft	200.00 ml/min
8/7/2024 9:01 AM	15:00	7.28 pH	19.05 °C	508.89 µS/cm	0.99 mg/L	0.90 NTU	13.8 mV	17.24 ft	200.00 ml/min
8/7/2024 9:06 AM	20:00	7.27 pH	19.00 °C	507.66 µS/cm	1.13 mg/L	0.84 NTU	12.9 mV	17.24 ft	200.00 ml/min
8/7/2024 9:11 AM	25:00	7.25 pH	18.97 °C	507.01 µS/cm	1.08 mg/L	0.82 NTU	13.7 mV	17.24 ft	200.00 ml/min
8/7/2024 9:16 AM	30:00	7.24 pH	18.98 °C	505.67 µS/cm	1.00 mg/L	0.62 NTU	13.0 mV	17.24 ft	200.00 ml/min

Samples

Sample ID:	Description:
HAM-HGWC-124	Grab.
HAM-AP3-FD-01	Grab.

Low-Flow Test Report:

Test Date / Time: 8/7/2024 12:21:39 PM
Project: GP-Plant Hammond
Operator Name: Z. Webb

Location Name: HGWC-125 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 53.19 ft Total Depth: 63.19 ft Initial Depth to Water: 44.22 ft	Pump Type: Bladder Tubing Type: Polyethylene Pump Intake From TOC: 58.19 ft Estimated Total Volume Pumped: 8 liter Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 0.03 ft	Instrument Used: Aqua TROLL 400 Serial Number: 1080297
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Test Notes:
5 Bottles; Full app. III & 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	
8/7/2024 12:21 PM	00:00	6.26 pH	26.44 °C	879.77 µS/cm	2.96 mg/L	1.81 NTU	110.5 mV	44.22 ft	200.00 ml/min
8/7/2024 12:26 PM	05:00	6.17 pH	24.86 °C	886.57 µS/cm	1.73 mg/L	1.56 NTU	95.5 mV	44.25 ft	200.00 ml/min
8/7/2024 12:31 PM	10:00	6.17 pH	24.49 °C	885.31 µS/cm	1.53 mg/L	1.02 NTU	90.4 mV	44.25 ft	200.00 ml/min
8/7/2024 12:36 PM	15:00	6.17 pH	24.27 °C	887.69 µS/cm	1.41 mg/L	0.60 NTU	88.1 mV	44.25 ft	200.00 ml/min
8/7/2024 12:41 PM	20:00	6.16 pH	24.31 °C	880.10 µS/cm	1.22 mg/L	0.66 NTU	86.0 mV	44.25 ft	200.00 ml/min
8/7/2024 12:46 PM	25:00	6.14 pH	24.68 °C	867.85 µS/cm	1.05 mg/L	0.58 NTU	83.2 mV	44.25 ft	200.00 ml/min
8/7/2024 12:51 PM	30:00	6.13 pH	24.33 °C	871.85 µS/cm	0.96 mg/L	0.81 NTU	80.7 mV	44.25 ft	200.00 ml/min
8/7/2024 12:56 PM	35:00	6.15 pH	24.27 °C	871.08 µS/cm	0.93 mg/L	0.94 NTU	79.0 mV	44.25 ft	200.00 ml/min

Samples

Sample ID:	Description:
HAM-HGWC-125	Grab.

Low-Flow Test Report:

Test Date / Time: 8/7/2024 2:03:00 PM
Project: GP-Plant Hammond
Operator Name: Z. Webb

Location Name: HGWC-126 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 58.52 ft Total Depth: 68.52 ft Initial Depth to Water: 41.45 ft	Pump Type: Bladder Tubing Type: Polyethylene Pump Intake From TOC: 63.52 ft Estimated Total Volume Pumped: 7 liter Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 1.08 ft	Instrument Used: Aqua TROLL 400 Serial Number: 1080297
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Test Notes:
5 Bottles; Full app. III & 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	
8/7/2024 2:03 PM	00:00	8.14 pH	35.35 °C	449.30 µS/cm	7.51 mg/L	12.84 NTU	55.8 mV	41.45 ft	200.00 ml/min
8/7/2024 2:08 PM	05:00	7.03 pH	25.79 °C	820.10 µS/cm	2.50 mg/L	12.27 NTU	-24.0 mV	41.80 ft	200.00 ml/min
8/7/2024 2:13 PM	10:00	6.99 pH	23.85 °C	847.26 µS/cm	1.02 mg/L	10.16 NTU	-50.1 mV	42.08 ft	200.00 ml/min
8/7/2024 2:18 PM	15:00	6.99 pH	24.34 °C	852.69 µS/cm	0.79 mg/L	4.08 NTU	-52.3 mV	42.27 ft	200.00 ml/min
8/7/2024 2:23 PM	20:00	6.99 pH	23.87 °C	844.20 µS/cm	0.68 mg/L	3.49 NTU	-29.6 mV	42.34 ft	200.00 ml/min
8/7/2024 2:28 PM	25:00	6.99 pH	24.08 °C	839.30 µS/cm	0.60 mg/L	2.74 NTU	-29.1 mV	42.42 ft	200.00 ml/min
8/7/2024 2:33 PM	30:00	6.99 pH	24.18 °C	836.69 µS/cm	0.60 mg/L	2.26 NTU	-30.7 mV	42.53 ft	200.00 ml/min

Samples

Sample ID:	Description:
HAM-HGWC-126	Grab.

CALIBRATION REPORTS

Site Name: Plant Hammond

Field Instrumentation Calibration Form

Date: 8/5/24Calibrated By: C. CAINField Conditions: Sunny

Instrument	Manufacturer/ Model	Serial Number
Water Quality Meter <u>Turbidity</u>	<u>LalMotte 78904</u>	<u>4173-1625</u>
<u>Turbidity Meter</u>	<u>Argentell</u>	<u>883530</u>

Calibration Standard Information				
Parameter	Standard	Lot #	Date of Expiration	Brand
Specific Conductance ($\mu\text{S}/\text{cm}$)	4.490	<u>24005593</u>	<u>11/2024</u>	<u>In-situ</u>
pH (SU)	4.00	<u>24065593</u>	<u>12/2024</u>	
pH (SU)	7.00	<u>2404517</u>	<u>12/2024</u>	
pH (SU)	10.00	<u>201002085</u>	<u>12/2024</u>	
D.O. (%)	N/A			
ORP (mV)	228.0	<u>24006903</u>	<u>12/2024</u>	<u>In-situ</u>

Calibration					
Time Start		Time Finish			
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>32.0</u>	$\pm 10\%$ of standard	EPA 2023
pH (SU)	4.00	<u>4.0</u>	<u>32.23</u>	± 0.1	GWMP
pH (SU)	7.00	<u>7.0</u>	<u>31.20</u>	± 0.1	GWMP
pH (SU)	10.00	<u>10.0</u>	<u>30.40</u>	± 0.1	GWMP
D.O. (%)	N/A			$\pm 10\%$	NA
ORP (mV)	228.0	<u>228.0</u>	<u>29.99</u>	± 10	EPA 2023

Turbidity (NTU)	Standard	Calibration Value	Acceptance Criteria	Reference
	<u>0</u>	<u>0.6</u>	$\pm 10\%$ of standard	EPA 2023
	<u>1</u>	<u>0.92</u>		
	<u>10</u>	<u>10.15</u>		

Calibration Check					
Time Start		Time Finish			
Parameter	Standard	Calibration Value	Calibration Solution Temperature ($^{\circ}\text{C}$)	Acceptance Criteria	Reference
Specific Conductance ($\mu\text{S}/\text{cm}$)	4.490			$\pm 10\%$ of standard	EPA 2023
pH (SU)	4.00			± 0.1	GWMP
pH (SU)	7.00			± 0.1	GWMP
pH (SU)	10.00			± 0.1	GWMP

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

Notes:

Site Name: Plant Hammond

Field Instrumentation Calibration Form

Date: 8-5-24Calibrated By: Zain W. on behalf of FJ K.Field Conditions: Clear 95°F

Instrument	Manufacturer/ Model	Serial Number
Water Quality Meter	AquaTroll 400	884189
Turbidity Meter	La Motte 2020	1511-411

3123

Calibration Standard Information				
Parameter	Standard	Lot #	Date of Expiration	Brand
Specific Conductance (µS/cm)	4.490	24006903	12/2024	AIR
pH (SU)	4.00	24005593	12/2024	AIR
pH (SU)	7.00	24004517	12/2024	AIR
pH (SU)	10.00	24000085	12/2024	AIR
D.O. (%)	N/A	—	—	AIR
ORP (mV)	228.0	24006903	12/2024	AIR

Calibration					
Time Start 1510		Time Finish 1531			
Parameter	Standard	Calibration Value	Calibration Solution Temperature (°C)	Acceptance Criteria	Reference
Specific Conductance (µS/cm)	4.490	4.490	29.55	± 10% of standard	EPA 2023
pH (SU)	4.00	4.00	27.50	± 0.1	GWMP
pH (SU)	7.00	7.00	26.79	± 0.1	GWMP
pH (SU)	10.00	10.00	26.18	± 0.1	GWMP
D.O. (%)	N/A	100%	74.72	± 10%	NA
ORP (mV)	228.0	228.0	25.79	± 10	EPA 2023

Turbidity (NTU)	Standard	Calibration Value	Acceptance Criteria	Reference
	0	0	± 10% of standard	EPA 2023
	1	1.02		
	10	10.2		

Calibration Check					
Time Start		Time Finish			
Parameter	Standard	Calibration Value	Calibration Solution Temperature (°C)	Acceptance Criteria	Reference
Specific Conductance (µS/cm)	4.490			± 10% of standard	EPA 2023
pH (SU)	4.00			± 0.1	GWMP
pH (SU)	7.00			± 0.1	GWMP
pH (SU)	10.00			± 0.1	GWMP

Turbidity (NTU)	Standard	Calibration Value	Acceptance Criteria	Reference
			± 10% of standard	EPA 2023

Notes:

Site Name: Black Hammer

Field Instrumentation Calibration Form

Date: 8-5-24Calibrated By: Zain NelderField Conditions: Clear 95°F

Instrument	Manufacturer/ Model	Serial Number
Water Quality Meter	<u>Aquatrak 400</u>	<u>1080297</u>
Turbidity Meter	<u>La Motte, 10100</u>	<u>1511-4111</u>

Calibration Standard Information				
Parameter	Standard	Lot #	Date of Expiration	Brand
Specific Conductance ($\mu\text{S}/\text{cm}$)	4.490	<u>24005595</u>	<u>12/2024</u>	<u>AIR</u>
pH (SU)	4.00	<u>24005593</u>	<u>12/2024</u>	<u>AIR</u>
pH (SU)	7.00	<u>24004517</u>	<u>12/2024</u>	<u>AIR</u>
pH (SU)	10.00	<u>24000085</u>	<u>12/2024</u>	<u>AIR</u>
D.O. (%)	N/A			
ORP (mV)	228.0	<u>24006903</u>	<u>12/2024</u>	<u>AIR</u>

Calibration					
Time Start <u>1433</u>		Time Finish <u>1455</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>26.91</u>	$\pm 10\%$ of standard	EPA 2023
pH (SU)	4.00	<u>4.00</u>	<u>26.88</u>	± 0.1	GWMP
pH (SU)	7.00	<u>7.00</u>	<u>26.36</u>	± 0.1	GWMP
pH (SU)	10.00	<u>10.00</u>	<u>26.03</u>	± 0.1	GWMP
D.O. (%)	N/A	<u>100%</u>	<u>24.81</u>	$\pm 10\%$	NA
ORP (mV)	228.0	<u>228.0</u>	<u>228.0</u>	± 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>10</u>		

Calibration Check					
Time Start <u>—</u>		Time Finish <u>—</u>			
Parameter	Standard	Calibration Value	Calibration Solution Temperature ($^{\circ}\text{C}$)	Acceptance Criteria	Reference
Specific Conductance ($\mu\text{S}/\text{cm}$)	4.490	<u>—</u>	<u>—</u>	$\pm 10\%$ of standard	EPA 2023
pH (SU)	4.00	<u>—</u>	<u>—</u>	± 0.1	GWMP
pH (SU)	7.00	<u>—</u>	<u>—</u>	± 0.1	GWMP
pH (SU)	10.00	<u>—</u>	<u>—</u>	± 0.1	GWMP

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

Notes:

Site Name: Plant Hammond

Field Instrumentation Calibration Form

Date: 8-6-24Calibrated By: Zain W.Field Conditions: Sunny, 75°F

Instrument	Manufacturer/ Model	Serial Number
Water Quality Meter	AquaTroll 400	1080297
Turbidity Meter	LaMotte 2020ne	1511-9111

Calibration Standard Information				
Parameter	Standard	Lot #	Date of Expiration	Brand
Specific Conductance ($\mu\text{S}/\text{cm}$)	4,490	24005593	12/2024	AIR
pH (SU)	4.00	24005593	12/2024	AIR
pH (SU)	7.00	24004897	12/2024	AIR
pH (SU)	10.00	24000085	12/2024	AIR
D.O. (%)	N/A	—	—	AIR
ORP (mV)	228.0	24006903	12/2024	AIR

Calibration					
Time Start <u>0715</u>		Time Finish <u>0737</u>			
Parameter	Standard	Calibration Value	Calibration Solution Temperature ($^{\circ}\text{C}$)	Acceptance Criteria	Reference
Specific Conductance ($\mu\text{S}/\text{cm}$)	4,490	4490	27.05	$\pm 10\%$ of standard	EPA 2023
pH (SU)	4.00	4.00	27.23	± 0.1	GWMP
pH (SU)	7.00	7.00	27.37	± 0.1	GWMP
pH (SU)	10.00	10.00	27.30	± 0.1	GWMP
D.O. (%)	N/A	100%	24.13	$\pm 10\%$	NA
ORP (mV)	228.0	228.0	27.03	± 10	EPA 2023

Turbidity (NTU)	Standard	Calibration Value	Acceptance Criteria	Reference
	0	0	± 10% of standard	EPA 2023
	1	1		
	10	10		
	—	—		

Calibration Check					
Time Start <u>1324</u>		Time Finish <u>1343</u>			
Parameter	Standard	Calibration Value	Calibration Solution Temperature ($^{\circ}\text{C}$)	Acceptance Criteria	Reference
Specific Conductance ($\mu\text{S}/\text{cm}$)	4,490	4490	29.58	$\pm 10\%$ of standard	EPA 2023
pH (SU)	4.00	4.00	29.58	± 0.1	GWMP
pH (SU)	7.00	7.00	27.59	± 0.1	GWMP
pH (SU)	10.00	10.00	26.42	± 0.1	GWMP

Turbidity (NTU)	Standard	Calibration Value	Acceptance Criteria	Reference
	0	0	± 10% of standard	EPA 2023
	1	1		
	10	10		
	—			

Notes:

Site Name: Plant Hammond

Field Instrumentation Calibration Form

Date: 8-7-24Calibrated By: Zain W.Field Conditions: Sunny, 75°F

Instrument	Manufacturer/ Model	Serial Number
Water Quality Meter	AquaTroll 400	1080297
Turbidity Meter	LaMotte 2020w	1511-4111

Calibration Standard Information				
Parameter	Standard	Lot #	Date of Expiration	Brand
Specific Conductance ($\mu\text{S}/\text{cm}$)	4.490	24005593	12/2024	ATR
pH (SU)	4.00	24005593	12/2024	ATR
pH (SU)	7.00	24004517	12/2024	ATR
pH (SU)	10.00	24000065	12/2024	ATR
D.O. (%)	N/A		12-21	ATR
ORP (mV)	228.0	24006903	12/2024	ATR

Calibration					
Time Start <u>0750</u>		Time Finish <u>0812</u>			
Parameter	Standard	Calibration Value	Calibration Solution Temperature ($^{\circ}\text{C}$)	Acceptance Criteria	Reference
Specific Conductance ($\mu\text{S}/\text{cm}$)	4.490	<u>4.490</u>	<u>26.31</u>	$\pm 10\%$ of standard	EPA 2023
pH (SU)	4.00	<u>4.00</u>	<u>26.27</u>	± 0.1	GWMP
pH (SU)	7.00	<u>7.00</u>	<u>26.18</u>	± 0.1	GWMP
pH (SU)	10.00	<u>10.00</u>	<u>26.09</u>	± 0.1	GWMP
D.O. (%)	N/A	<u>100%</u>	<u>23.68</u>	$\pm 10\%$	NA
ORP (mV)	228.0	<u>228.0</u>	<u>25.80</u>	± 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>10</u>		

Calibration Check					
Time Start <u>1345</u>		Time Finish <u>1356</u>			
Parameter	Standard	Calibration Value	Calibration Solution Temperature ($^{\circ}\text{C}$)	Acceptance Criteria	Reference
Specific Conductance ($\mu\text{S}/\text{cm}$)	4.490	<u>4.490</u>	<u>34.24</u>	$\pm 10\%$ of standard	EPA 2023
pH (SU)	4.00	<u>4.00</u>	<u>34.12</u>	± 0.1	GWMP
pH (SU)	7.00	<u>7.00</u>	<u>31.35</u>	± 0.1	GWMP
pH (SU)	10.00	<u>10.00</u>	<u>30.23</u>	± 0.1	GWMP

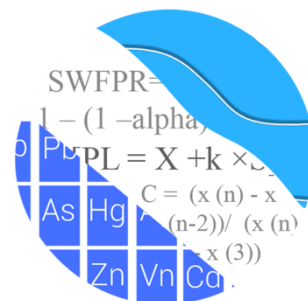
Turbidity (NTU)	Standard	Calibration Value	Acceptance Criteria	Reference
	<u>0</u>	<u>0</u>	$\pm 10\%$ of standard	EPA 2023
	<u>1</u>	<u>1</u>		
	<u>10</u>	<u>10</u>		

Notes:

APPENDIX C

Statistical Analysis 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 3 (AP-3)
August 2024 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 analysis of groundwater data for Georgia Power Company's Plant Hammond AP-3. 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 the Coal Combustion Residuals (CCR) program in 2016, and at least 8 background samples have been collected at each of the groundwater monitoring wells, except for those discussed below. The monitoring well network, as provided by Southern Company Services, consists of the following:

- **Upgradient wells:** HGWA-1, HGWA-2, HGWA-3, HGWA-43D, HGWA-44D, HGWA-45D, and HGWA-122
- **Downgradient wells:** HGWC-120, HGWC-121A, HGWC-124, HGWC-125, and HGWC-126

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

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

Data were sent electronically to Groundwater Stats Consulting, and the statistical analysis was reviewed by Andrew Collins, Project Manager of Groundwater Stats Consulting.

The CCR program consists of the following constituents listed below. The terms "constituent" and "parameter" are interchangeable.

- **Appendix III** (Detection Monitoring) - boron, calcium, chloride, fluoride, pH, sulfate, and TDS
- **Appendix IV** (Assessment Monitoring) – antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, combined radium 226 + 228, fluoride, lead, lithium, mercury, molybdenum, selenium, and thallium

When no detections are present in downgradient wells for a given constituent, statistical analyses are not required. A summary of downgradient Appendix IV well/constituent pairs containing 100% non-detects follows this letter. These well/constituent pairs were included in the time series and box plots, but no formal statistics were required.

For all constituents, a substitution of the most recent reporting limit is used for non-detect data. In the case of lithium, historical reporting limits vary among the wells. Therefore, the reporting limit of 0.030 mg/L was 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 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 (for data sets containing <15% non-detects as described above) are shown as the original reporting limit.

Natural systems continuously evolve due to physical changes made to the environment. Examples include capping a landfill, paving areas near a well, or lining a drainage channel to prevent erosion. Periodic updating of background statistical limits is necessary to accommodate these types of changes. In the interwell case, prediction limits are updated with upgradient well data during each event after careful screening for any new outliers. In some cases, an earlier portion of data may require deselection prior to construction of limits to provide sensitive limits that will rapidly detect changes in groundwater quality. Even though the data are excluded from the calculation, the values will continue to be reported and shown in tables and graphs. When this step is required a summary of any adjusted records will be provided. No records were adjusted at this time.

Summary of Background Screening Conducted in March 2019

Outlier Analysis

Time series plots were used to identify suspected outliers, or extreme values that would result in limits that are not representative of the current background data population. Suspected outliers at all wells for Appendix III and Appendix IV parameters were formally tested using Tukey's box plot method and, when identified, flagged in the computer database with "o" and deselected prior to construction of statistical limits. Those findings were submitted with the screening report.

While this was not the case during the background screening, when the most recent value is identified as an outlier, values are not flagged in the database as they may represent a possible trend. If future values do not remain at similar concentrations, these values will be flagged as outliers and deselected. Several low values existed in the data sets and appeared on the graphs as possible low outliers relative to the laboratory's Practical Quantitation Limit. However, these values were observed trace values (i.e., measurements reported between the Method Detection Limit and the Practical Quantitation Limit) by the laboratory and, therefore, were not flagged as outliers.

Of the outliers identified by Tukey's method, only one outlier was flagged for TDS in upgradient well HGWA-112. All other values are similar to remaining measurements within a given well or neighboring wells or were reported non-detects. The outlier summary follows this report (Figure C).

Additionally, when any values are flagged in the database as outliers, they are plotted in a disconnected and lighter symbol on the time series graph. The accompanying data pages display the flagged value in a lighter font as well.

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 Test Evaluation

While trends may be identified by visual inspection, a quantification of the trend and its significance is needed. The Sen's Slope/Mann Kendall trend test was used to evaluate all data at each well to identify statistically significant increasing or decreasing trends. In the absence of suspected contamination, significant trending data are typically not included as part of the background data used for construction of prediction limits. This step serves to eliminate the trend and, thus, reduce variation in background. When statistically significant decreasing trends are present, all available data are evaluated to determine whether earlier concentration levels are significantly different than current reported concentrations and will be deselected as necessary. When any records of data are truncated for the reasons above, a summary report will be provided to show the date ranges used in construction of the statistical limits.

The results of the trend analyses showed one statistically significant decreasing trend for the Appendix III parameters. However, the trend noted was relatively low in magnitude when compared to average concentrations, and the background time period is short; therefore, no adjustments were made to the data sets.

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 for each Appendix III parameter using all historical upgradient well data through August 2024 (Figure D). Interwell prediction limits use all available 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 the resample confirms the initial exceedance, a statistically significant increase (SSI) is identified and further research would be required to identify the cause of the exceedance (i.e., impact from the site, natural variation, or an off-site source). If the resample falls within the statistical limit, the initial exceedance is considered to be a false positive result and, therefore, no further action is necessary. If no resample is collected, the initial exceedance is automatically confirmed. For Appendix III parameters, several prediction limit exceedances were identified. A summary table of the interwell prediction limits follows this letter. Exceedances were identified for the following well/constituent pairs:

- Boron: HGWC-120, HGWC-121A, and HGWC-125
- Calcium: HGWC-120, HGWC-121A, and HGWC-125
- Sulfate: HGWC-120, HGWC-121A, and HGWC-125
- TDS: HGWC-120, HGWC-121A, and HGWC-125

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

Increasing trends:

- Boron: HGWA-2 and HGWA-44D (both upgradient)
- Calcium: HGWA-2 and HGWA-3 (both upgradient)
- Sulfate: HGWA-2 (upgradient)

Decreasing trends:

- Boron: HGWA-43D, HGWA-122 (both upgradient), HGWC-120, and HGWC-121A
- Calcium: HGWA-44D (upgradient) and HGWC-121A
- Sulfate: HGWA-43D, HGWA-122 (both upgradient), HGWC-120, HGWC-121A, and HGWC-125
- TDS: HGWC-120 and HGWC-121A

Statistical Methods – Appendix IV Parameters

Appendix IV parameters are evaluated by statistically comparing the mean or median of each downgradient well/constituent pair against corresponding Groundwater Protection Standards (GWPS). The GWPS may be either regulatory (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 analyses.

Data from all wells for Appendix IV parameters are reassessed for outliers during each analysis. More recent concentrations have increased for lithium at upgradient well HGWA-44D; therefore, previously flagged measurements were confirmed and the most recent value for lithium at upgradient well HGWA-44D was flagged during this analysis in order to maintain conservative limits from a regulatory perspective. If further studies indicate the flagged measurements represent variation in groundwater quality, the values will be re-evaluated for construction of interwell upper tolerance limits. A summary of 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 used. As mentioned above, a reporting limit of 0.005 mg/L was substituted for arsenic and a reporting limit of 0.030 mg/L was substituted for lithium. Parametric tolerance limits are used when data follow a normal or transformed-normal distribution.

Groundwater Protection Standards

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

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

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

Confidence Intervals

To complete the statistical comparison of downgradient well data to GWPS, confidence intervals were constructed for the Appendix IV constituents in each downgradient well with detections (Figure H). Note that a GWPS is established for each Appendix IV constituent. However, since there are 100% non-detects for beryllium, cadmium, and

thallium in downgradient wells, no confidence intervals were required for these constituents.

The Sanitas software was used to calculate 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 and 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-3. If you have any questions or comments, please feel free to contact us.

For Groundwater Stats Consulting,



Tristan Clark
Groundwater Analyst



Andrew T. Collins
Project Manager

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Summary Tables

100% Non-Detects: Appendix IV Downgradient & Assessment

Analysis Run 10/16/2024 4:01 PM View: Appendix IV
Plant Hammond Client: Southern Company Data: Hammond AP-3

Beryllium (mg/L)

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

Cadmium (mg/L)

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

Cobalt (mg/L)

HGWC-124, HGWC-126

Mercury (mg/L)

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

Molybdenum (mg/L)

HGWC-121A, HGWC-126

Selenium (mg/L)

HGWC-125, HGWC-126

Thallium (mg/L)

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

Appendix III - Interwell Prediction Limits - Significant Results

Plant Hammond Client: Southern Company Data: Hammond AP-3 Printed 10/16/2024, 3:52 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	%NDs	ND Adj.	Transform	Alpha	Method
Boron (mg/L)	HGWC-120	0.55	n/a	8/7/2024	1.1	Yes	128	5.469	n/a	n/a	0.0001209	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-121A	0.55	n/a	8/6/2024	1.4	Yes	128	5.469	n/a	n/a	0.0001209	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-125	0.55	n/a	8/7/2024	1.5	Yes	128	5.469	n/a	n/a	0.0001209	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-120	138	n/a	8/7/2024	154	Yes	128	0	n/a	n/a	0.0001209	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-121A	138	n/a	8/6/2024	152	Yes	128	0	n/a	n/a	0.0001209	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-125	138	n/a	8/7/2024	159	Yes	128	0	n/a	n/a	0.0001209	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-120	93.9	n/a	8/7/2024	191	Yes	128	0.7813	n/a	n/a	0.0001209	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-121A	93.9	n/a	8/6/2024	127	Yes	128	0.7813	n/a	n/a	0.0001209	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-125	93.9	n/a	8/7/2024	289	Yes	128	0.7813	n/a	n/a	0.0001209	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-120	632	n/a	8/7/2024	647	Yes	127	0	n/a	n/a	0.0001227	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-121A	632	n/a	8/6/2024	661	Yes	127	0	n/a	n/a	0.0001227	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-125	632	n/a	8/7/2024	695	Yes	127	0	n/a	n/a	0.0001227	NP Inter (normality) 1 of 2

Appendix III - Interwell Prediction Limits - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-3 Printed 10/16/2024, 3:52 PM

<u>Constituent</u>	<u>Well</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>ND Adj.</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Boron (mg/L)	HGWC-120	0.55	n/a	8/7/2024	1.1	Yes	128	5.469	n/a	n/a	0.0001209	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-121A	0.55	n/a	8/6/2024	1.4	Yes	128	5.469	n/a	n/a	0.0001209	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-124	0.55	n/a	8/7/2024	0.34	No	128	5.469	n/a	n/a	0.0001209	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-125	0.55	n/a	8/7/2024	1.5	Yes	128	5.469	n/a	n/a	0.0001209	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-126	0.55	n/a	8/7/2024	0.021J	No	128	5.469	n/a	n/a	0.0001209	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-120	138	n/a	8/7/2024	154	Yes	128	0	n/a	n/a	0.0001209	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-121A	138	n/a	8/6/2024	152	Yes	128	0	n/a	n/a	0.0001209	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-124	138	n/a	8/7/2024	97.7	No	128	0	n/a	n/a	0.0001209	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-125	138	n/a	8/7/2024	159	Yes	128	0	n/a	n/a	0.0001209	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-126	138	n/a	8/7/2024	136	No	128	0	n/a	n/a	0.0001209	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-120	44.8	n/a	8/7/2024	2.6	No	128	0	n/a	n/a	0.0001209	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-121A	44.8	n/a	8/6/2024	11.6	No	128	0	n/a	n/a	0.0001209	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-124	44.8	n/a	8/7/2024	2.2	No	128	0	n/a	n/a	0.0001209	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-125	44.8	n/a	8/7/2024	9.7	No	128	0	n/a	n/a	0.0001209	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-126	44.8	n/a	8/7/2024	8.7	No	128	0	n/a	n/a	0.0001209	NP Inter (normality) 1 of 2
Fluoride (mg/L)	HGWC-120	1.5	n/a	8/7/2024	0.34	No	142	20.42	n/a	n/a	0.00009736	NP Inter (normality) 1 of 2
Fluoride (mg/L)	HGWC-121A	1.5	n/a	8/6/2024	0.2	No	142	20.42	n/a	n/a	0.00009736	NP Inter (normality) 1 of 2
Fluoride (mg/L)	HGWC-124	1.5	n/a	8/7/2024	0.1ND	No	142	20.42	n/a	n/a	0.00009736	NP Inter (normality) 1 of 2
Fluoride (mg/L)	HGWC-125	1.5	n/a	8/7/2024	0.12	No	142	20.42	n/a	n/a	0.00009736	NP Inter (normality) 1 of 2
Fluoride (mg/L)	HGWC-126	1.5	n/a	8/7/2024	0.5	No	142	20.42	n/a	n/a	0.00009736	NP Inter (normality) 1 of 2
pH (s.u.)	HGWC-120	8.36	4.57	8/7/2024	7.01	No	141	0	n/a	n/a	0.000197	NP Inter (normality) 1 of 2
pH (s.u.)	HGWC-121A	8.36	4.57	8/6/2024	6.91	No	141	0	n/a	n/a	0.000197	NP Inter (normality) 1 of 2
pH (s.u.)	HGWC-124	8.36	4.57	8/7/2024	7.24	No	141	0	n/a	n/a	0.000197	NP Inter (normality) 1 of 2
pH (s.u.)	HGWC-125	8.36	4.57	8/7/2024	6.15	No	141	0	n/a	n/a	0.000197	NP Inter (normality) 1 of 2
pH (s.u.)	HGWC-126	8.36	4.57	8/7/2024	6.99	No	141	0	n/a	n/a	0.000197	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-120	93.9	n/a	8/7/2024	191	Yes	128	0.7813	n/a	n/a	0.0001209	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-121A	93.9	n/a	8/6/2024	127	Yes	128	0.7813	n/a	n/a	0.0001209	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-124	93.9	n/a	8/7/2024	69.7	No	128	0.7813	n/a	n/a	0.0001209	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-125	93.9	n/a	8/7/2024	289	Yes	128	0.7813	n/a	n/a	0.0001209	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-126	93.9	n/a	8/7/2024	72.8	No	128	0.7813	n/a	n/a	0.0001209	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-120	632	n/a	8/7/2024	647	Yes	127	0	n/a	n/a	0.0001227	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-121A	632	n/a	8/6/2024	661	Yes	127	0	n/a	n/a	0.0001227	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-124	632	n/a	8/7/2024	337	No	127	0	n/a	n/a	0.0001227	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-125	632	n/a	8/7/2024	695	Yes	127	0	n/a	n/a	0.0001227	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-126	632	n/a	8/7/2024	518	No	127	0	n/a	n/a	0.0001227	NP Inter (normality) 1 of 2

Appendix III Trend Tests - Significant Results

Plant Hammond Client: Southern Company Data: Hammond AP-3 Printed 10/23/2024, 12:32 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>Alpha</u>	<u>Method</u>
Boron (mg/L)	HGWA-122 (bg)	-0.02066	-142	-87	Yes	21	0	n/a	0.01	NP
Boron (mg/L)	HGWA-2 (bg)	0.002641	177	98	Yes	23	0	n/a	0.01	NP
Boron (mg/L)	HGWA-43D (bg)	-0.005612	-42	-38	Yes	12	0	n/a	0.01	NP
Boron (mg/L)	HGWA-44D (bg)	0.07224	46	38	Yes	12	8.333	n/a	0.01	NP
Boron (mg/L)	HGWC-120	-0.03508	-104	-92	Yes	22	0	n/a	0.01	NP
Boron (mg/L)	HGWC-121A	-0.2362	-160	-87	Yes	21	0	n/a	0.01	NP
Calcium (mg/L)	HGWA-2 (bg)	1.536	119	98	Yes	23	0	n/a	0.01	NP
Calcium (mg/L)	HGWA-3 (bg)	1.859	131	105	Yes	24	0	n/a	0.01	NP
Calcium (mg/L)	HGWA-44D (bg)	-7.17	-50	-38	Yes	12	0	n/a	0.01	NP
Calcium (mg/L)	HGWC-121A	-5.681	-124	-87	Yes	21	0	n/a	0.01	NP
Sulfate (mg/L)	HGWA-122 (bg)	-1.765	-134	-87	Yes	21	0	n/a	0.01	NP
Sulfate (mg/L)	HGWA-2 (bg)	4.063	177	98	Yes	23	0	n/a	0.01	NP
Sulfate (mg/L)	HGWA-43D (bg)	-3.566	-54	-38	Yes	12	0	n/a	0.01	NP
Sulfate (mg/L)	HGWC-120	-14.01	-159	-92	Yes	22	0	n/a	0.01	NP
Sulfate (mg/L)	HGWC-121A	-23.75	-160	-87	Yes	21	0	n/a	0.01	NP
Sulfate (mg/L)	HGWC-125	-16.24	-56	-53	Yes	15	0	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWC-120	-11.22	-91	-87	Yes	21	0	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWC-121A	-43.81	-128	-87	Yes	21	4.762	n/a	0.01	NP

Appendix III Trend Tests - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-3 Printed 10/23/2024, 12:32 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>Alpha</u>	<u>Method</u>
Boron (mg/L)	HGWA-1 (bg)	-0.0000669	-13	-105	No	24	0	n/a	0.01	NP
Boron (mg/L)	HGWA-122 (bg)	-0.02066	-142	-87	Yes	21	0	n/a	0.01	NP
Boron (mg/L)	HGWA-2 (bg)	0.002641	177	98	Yes	23	0	n/a	0.01	NP
Boron (mg/L)	HGWA-3 (bg)	0.0005613	68	105	No	24	25	n/a	0.01	NP
Boron (mg/L)	HGWA-43D (bg)	-0.005612	-42	-38	Yes	12	0	n/a	0.01	NP
Boron (mg/L)	HGWA-44D (bg)	0.07224	46	38	Yes	12	8.333	n/a	0.01	NP
Boron (mg/L)	HGWA-45D (bg)	-0.003634	-18	-38	No	12	0	n/a	0.01	NP
Boron (mg/L)	HGWC-120	-0.03508	-104	-92	Yes	22	0	n/a	0.01	NP
Boron (mg/L)	HGWC-121A	-0.2362	-160	-87	Yes	21	0	n/a	0.01	NP
Boron (mg/L)	HGWC-125	0	8	53	No	15	0	n/a	0.01	NP
Calcium (mg/L)	HGWA-1 (bg)	1.902	84	105	No	24	0	n/a	0.01	NP
Calcium (mg/L)	HGWA-122 (bg)	-1.705	-64	-87	No	21	0	n/a	0.01	NP
Calcium (mg/L)	HGWA-2 (bg)	1.536	119	98	Yes	23	0	n/a	0.01	NP
Calcium (mg/L)	HGWA-3 (bg)	1.859	131	105	Yes	24	0	n/a	0.01	NP
Calcium (mg/L)	HGWA-43D (bg)	-2.184	-32	-38	No	12	0	n/a	0.01	NP
Calcium (mg/L)	HGWA-44D (bg)	-7.17	-50	-38	Yes	12	0	n/a	0.01	NP
Calcium (mg/L)	HGWA-45D (bg)	-1.791	-36	-38	No	12	0	n/a	0.01	NP
Calcium (mg/L)	HGWC-120	0.3985	16	92	No	22	0	n/a	0.01	NP
Calcium (mg/L)	HGWC-121A	-5.681	-124	-87	Yes	21	0	n/a	0.01	NP
Calcium (mg/L)	HGWC-125	0.9777	4	53	No	15	0	n/a	0.01	NP
Sulfate (mg/L)	HGWA-1 (bg)	0.5993	35	105	No	24	0	n/a	0.01	NP
Sulfate (mg/L)	HGWA-122 (bg)	-1.765	-134	-87	Yes	21	0	n/a	0.01	NP
Sulfate (mg/L)	HGWA-2 (bg)	4.063	177	98	Yes	23	0	n/a	0.01	NP
Sulfate (mg/L)	HGWA-3 (bg)	-0.4499	-30	-105	No	24	0	n/a	0.01	NP
Sulfate (mg/L)	HGWA-43D (bg)	-3.566	-54	-38	Yes	12	0	n/a	0.01	NP
Sulfate (mg/L)	HGWA-44D (bg)	-1.833	-14	-38	No	12	8.333	n/a	0.01	NP
Sulfate (mg/L)	HGWA-45D (bg)	-1.936	-30	-38	No	12	0	n/a	0.01	NP
Sulfate (mg/L)	HGWC-120	-14.01	-159	-92	Yes	22	0	n/a	0.01	NP
Sulfate (mg/L)	HGWC-121A	-23.75	-160	-87	Yes	21	0	n/a	0.01	NP
Sulfate (mg/L)	HGWC-125	-16.24	-56	-53	Yes	15	0	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-1 (bg)	5.368	56	105	No	24	0	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-122 (bg)	-5.553	-56	-81	No	20	0	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-2 (bg)	6.288	78	98	No	23	0	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-3 (bg)	2.16	44	105	No	24	0	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-43D (bg)	0.03609	0	38	No	12	0	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-44D (bg)	28.25	38	38	No	12	0	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-45D (bg)	-3.941	-16	-38	No	12	0	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWC-120	-11.22	-91	-87	Yes	21	0	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWC-121A	-43.81	-128	-87	Yes	21	4.762	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWC-125	-12.46	-20	-53	No	15	0	n/a	0.01	NP

Upper Tolerance Limit Summary Table

Plant Hammond Client: Southern Company Data: Hammond AP-3 Printed 10/22/2024, 11:47 AM

<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>ND Adj.</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Antimony (mg/L)	0.003	n/a	n/a	n/a	n/a	127	88.19	n/a	n/a	0.001482	NP Inter(NDs)
Arsenic (mg/L)	0.005	n/a	n/a	n/a	n/a	125	74.4	n/a	n/a	0.001642	NP Inter(NDs)
Barium (mg/L)	0.64	n/a	n/a	n/a	n/a	135	0.7407	n/a	n/a	0.0009833	NP Inter(normality)
Beryllium (mg/L)	0.0005	n/a	n/a	n/a	n/a	127	83.46	n/a	n/a	0.001482	NP Inter(NDs)
Cadmium (mg/L)	0.0005	n/a	n/a	n/a	n/a	125	88	n/a	n/a	0.001642	NP Inter(NDs)
Chromium (mg/L)	0.0079	n/a	n/a	n/a	n/a	129	82.95	n/a	n/a	0.001338	NP Inter(NDs)
Cobalt (mg/L)	0.038	n/a	n/a	n/a	n/a	135	77.78	n/a	n/a	0.0009833	NP Inter(NDs)
Combined Radium 226 + 228 (pCi/L)	1.687	n/a	n/a	n/a	n/a	128	0	None	sqrt(x)	0.05	Inter
Fluoride (mg/L)	1.5	n/a	n/a	n/a	n/a	142	20.42	n/a	n/a	0.0006867	NP Inter(normality)
Lead (mg/L)	0.001	n/a	n/a	n/a	n/a	129	73.64	n/a	n/a	0.001338	NP Inter(NDs)
Lithium (mg/L)	0.064	n/a	n/a	n/a	n/a	132	31.82	n/a	n/a	0.001147	NP Inter(normality)
Mercury (mg/L)	0.0002	n/a	n/a	n/a	n/a	107	95.33	n/a	n/a	0.004135	NP Inter(NDs)
Molybdenum (mg/L)	0.01	n/a	n/a	n/a	n/a	137	64.96	n/a	n/a	0.0008874	NP Inter(NDs)
Selenium (mg/L)	0.005	n/a	n/a	n/a	n/a	125	94.4	n/a	n/a	0.001642	NP Inter(NDs)
Thallium (mg/L)	0.001	n/a	n/a	n/a	n/a	125	99.2	n/a	n/a	0.001642	NP Inter(NDs)

PLANT HAMMOND AP-3 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		0.64	2
Beryllium, Total (mg/L)	0.004		0.0005	0.004
Cadmium, Total (mg/L)	0.005		0.0005	0.005
Chromium, Total (mg/L)	0.1		0.0079	0.1
Cobalt, Total (mg/L)	n/a	0.006	0.038	0.038
Combined Radium, Total (pCi/L)	5		1.69	5
Fluoride, Total (mg/L)	4		1.5	4
Lead, Total (mg/L)	n/a	0.015	0.001	0.015
Lithium, Total (mg/L)	n/a	0.040	0.064	0.064
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

*Grey cell indicates background is higher than MCL or CCR-Rule

*MCL = Maximum Contaminant Level

*CCR = Coal Combustion Residuals

*GWPS = Groundwater Protection Standard

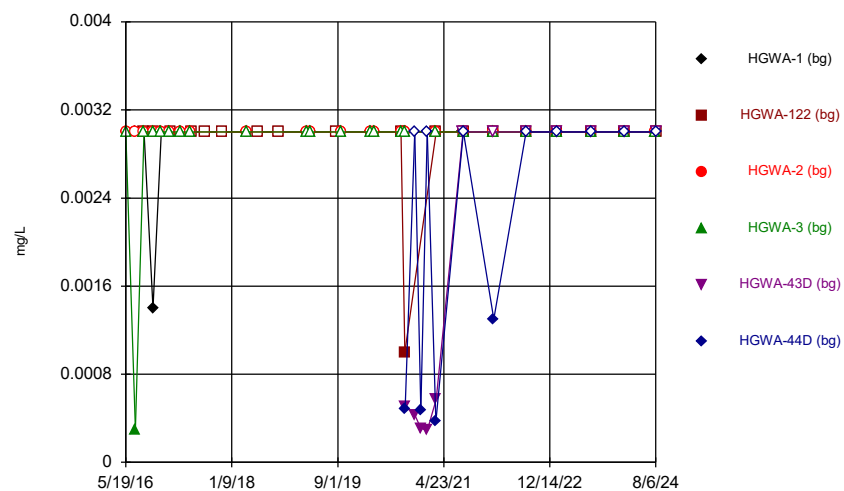
Appendix IV - Confidence Intervals - All Results (No Significant)

Plant Hammond Client: Southern Company Data: Hammond AP-3 Printed 10/22/2024, 11:50 AM

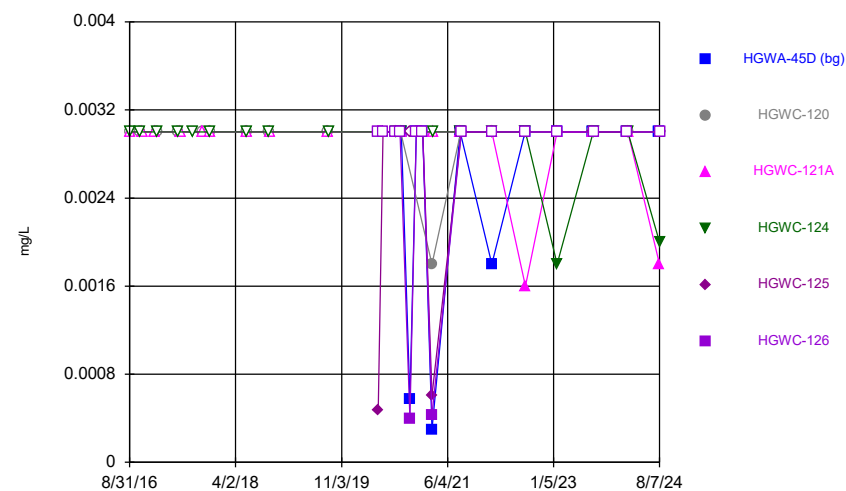
Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Antimony (mg/L)	HGWC-120	0.003	0.0018	0.006	No	19	0.002937	0.0002753	94.74	None	No	0.01	NP (NDs)
Antimony (mg/L)	HGWC-121A	0.003	0.0018	0.006	No	19	0.002863	0.0004112	89.47	None	No	0.01	NP (NDs)
Antimony (mg/L)	HGWC-124	0.003	0.002	0.006	No	19	0.002884	0.0003484	89.47	None	No	0.01	NP (NDs)
Antimony (mg/L)	HGWC-125	0.003	0.00061	0.006	No	15	0.002672	0.000866	86.67	None	No	0.01	NP (NDs)
Antimony (mg/L)	HGWC-126	0.003	0.00043	0.006	No	15	0.002655	0.0009096	86.67	None	No	0.01	NP (NDs)
Arsenic (mg/L)	HGWC-120	0.005	0.001	0.01	No	17	0.003639	0.001909	64.71	None	No	0.01	NP (NDs)
Arsenic (mg/L)	HGWC-121A	0.005	0.0014	0.01	No	17	0.004341	0.001469	82.35	None	No	0.01	NP (NDs)
Arsenic (mg/L)	HGWC-124	0.005	0.0006	0.01	No	17	0.004741	0.001067	94.12	None	No	0.01	NP (NDs)
Arsenic (mg/L)	HGWC-125	0.005	0.0014	0.01	No	14	0.004022	0.001691	71.43	None	No	0.01	NP (NDs)
Arsenic (mg/L)	HGWC-126	0.005	0.0026	0.01	No	14	0.00423	0.001583	78.57	None	No	0.01	NP (NDs)
Barium (mg/L)	HGWC-120	0.05111	0.04679	2	No	21	0.04895	0.00392	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-121A	0.07618	0.05996	2	No	21	0.06807	0.0147	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-124	0.07161	0.06538	2	No	21	0.06849	0.005646	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-125	0.04478	0.03935	2	No	15	0.04207	0.004008	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-126	0.2495	0.2278	2	No	15	0.2387	0.01598	0	None	No	0.01	Param.
Chromium (mg/L)	HGWC-120	0.005	0.0015	0.1	No	21	0.004422	0.001457	85.71	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-121A	0.005	0.0005	0.1	No	21	0.004786	0.000982	95.24	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-124	0.005	0.00051	0.1	No	21	0.00457	0.001358	90.48	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-125	0.005	0.00081	0.1	No	15	0.004127	0.001808	80	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-126	0.005	0.0014	0.1	No	15	0.004491	0.001347	86.67	None	No	0.01	NP (NDs)
Cobalt (mg/L)	HGWC-120	0.004816	0.003336	0.038	No	21	0.004076	0.001342	0	None	No	0.01	Param.
Cobalt (mg/L)	HGWC-121A	0.005	0.0005	0.038	No	21	0.004338	0.001662	85.71	None	No	0.01	NP (NDs)
Cobalt (mg/L)	HGWC-125	0.01206	0.007876	0.038	No	15	0.009967	0.003086	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-120	1.02	0.6588	5	No	20	0.8396	0.3184	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-121A	1.086	0.5125	5	No	20	0.7994	0.5051	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-124	0.8213	0.5294	5	No	20	0.6754	0.2571	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-125	1.249	0.6323	5	No	14	0.9408	0.4356	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-126	1.602	1.008	5	No	14	1.305	0.4191	0	None	No	0.01	Param.
Fluoride (mg/L)	HGWC-120	0.65	0.36	4	No	24	0.5875	0.3473	0	None	No	0.01	NP (normality)
Fluoride (mg/L)	HGWC-121A	0.19	0.15	4	No	22	0.2334	0.2364	0	None	No	0.01	NP (normality)
Fluoride (mg/L)	HGWC-124	0.11	0.078	4	No	22	0.1123	0.06373	45.45	None	No	0.01	NP (normality)
Fluoride (mg/L)	HGWC-125	0.1686	0.1247	4	No	15	0.1467	0.03244	0	None	No	0.01	Param.
Fluoride (mg/L)	HGWC-126	0.5053	0.4521	4	No	15	0.4787	0.03925	0	None	No	0.01	Param.
Lead (mg/L)	HGWC-120	0.001	0.0002	0.015	No	21	0.0008748	0.000315	85.71	None	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-121A	0.001	0.00036	0.015	No	21	0.0008848	0.0002931	85.71	None	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-124	0.001	0.000094	0.015	No	21	0.0007784	0.0004062	76.19	None	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-125	0.001	0.000092	0.015	No	15	0.0006969	0.0004444	66.67	None	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-126	0.001	0.000046	0.015	No	15	0.0008089	0.0003957	80	None	No	0.01	NP (NDs)
Lithium (mg/L)	HGWC-120	0.03055	0.02454	0.064	No	21	0.02755	0.005449	0	None	No	0.01	Param.
Lithium (mg/L)	HGWC-121A	0.00863	0.007266	0.064	No	21	0.007948	0.001236	0	None	No	0.01	Param.
Lithium (mg/L)	HGWC-124	0.03	0.0011	0.064	No	21	0.01073	0.01396	33.33	None	No	0.01	NP (normality)
Lithium (mg/L)	HGWC-125	0.005627	0.003956	0.064	No	15	0.00488	0.00141	0	None	ln(x)	0.01	Param.
Lithium (mg/L)	HGWC-126	0.004184	0.003469	0.064	No	15	0.003827	0.0005271	0	None	No	0.01	Param.
Mercury (mg/L)	HGWC-120	0.0002	0.00007	0.002	No	17	0.0001829	0.00004845	88.24	None	No	0.01	NP (NDs)
Mercury (mg/L)	HGWC-124	0.0002	0.000051	0.002	No	17	0.0001912	0.00003614	94.12	None	No	0.01	NP (NDs)
Molybdenum (mg/L)	HGWC-120	0.03664	0.02792	0.1	No	21	0.03228	0.007905	0	None	No	0.01	Param.
Molybdenum (mg/L)	HGWC-124	0.01	0.00091	0.1	No	21	0.00446	0.004456	38.1	None	No	0.01	NP (normality)
Molybdenum (mg/L)	HGWC-125	0.009185	0.001729	0.1	No	15	0.007759	0.007619	20	Kaplan-Meier	sqrt(x)	0.01	Param.
Selenium (mg/L)	HGWC-120	0.005	0.002	0.05	No	17	0.004824	0.0007276	94.12	None	No	0.01	NP (NDs)
Selenium (mg/L)	HGWC-121A	0.005	0.0011	0.05	No	17	0.004771	0.0009459	94.12	None	No	0.01	NP (NDs)
Selenium (mg/L)	HGWC-124	0.005	0.0014	0.05	No	17	0.004788	0.0008731	94.12	None	No	0.01	NP (NDs)

FIGURE A.

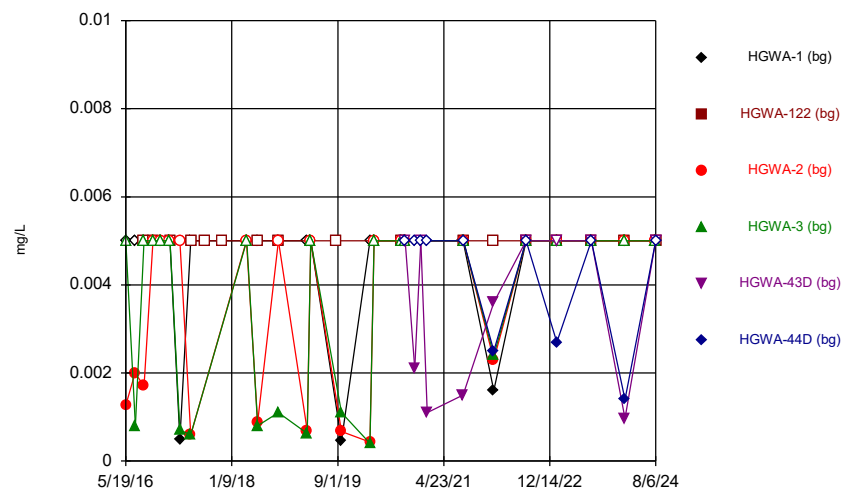
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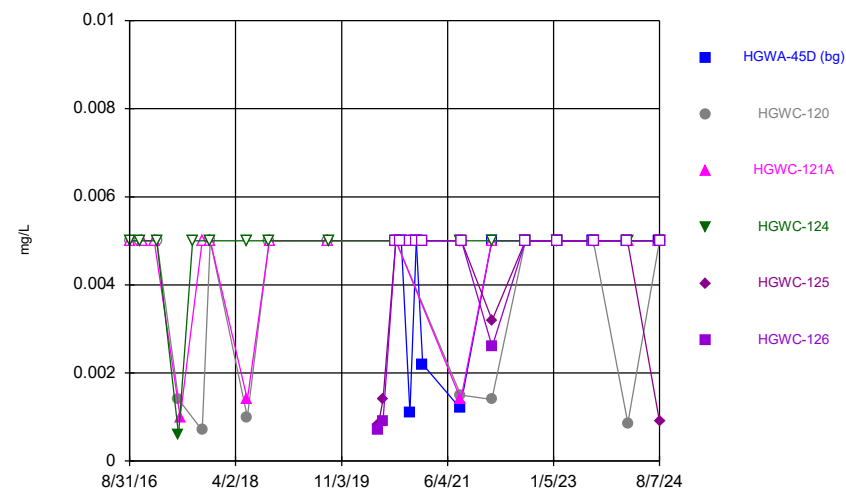
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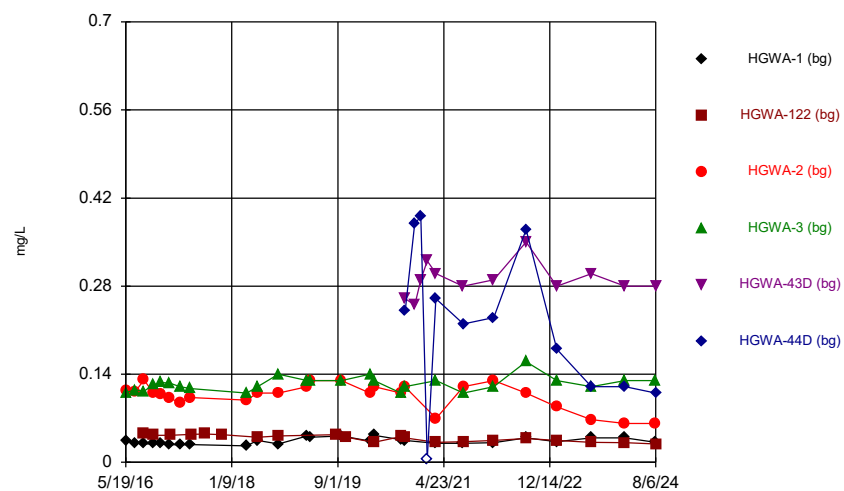
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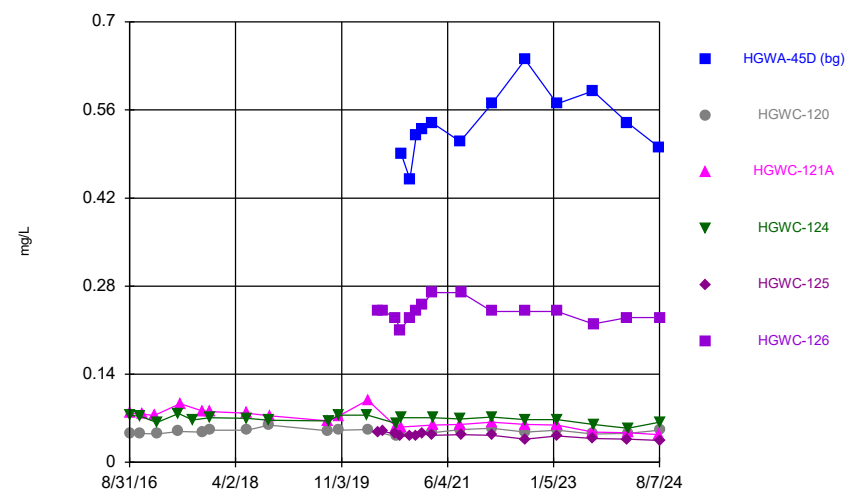


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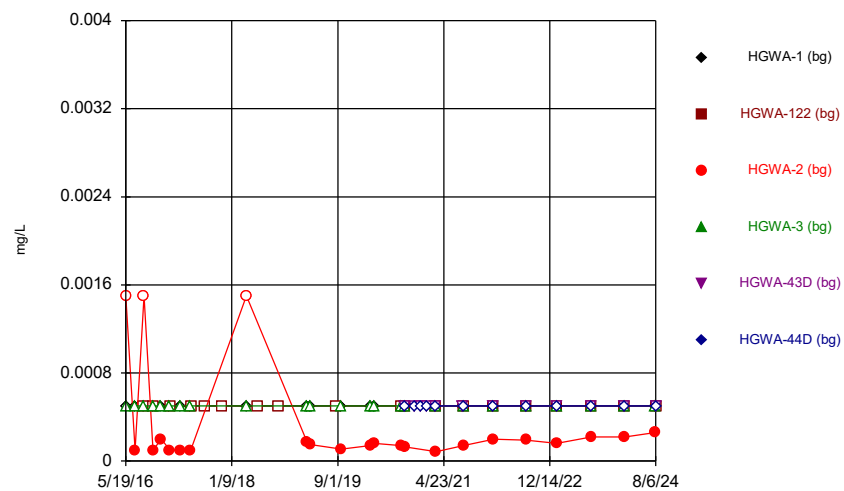
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Plant Hammond Client: Southern Company Data: Hammond AP-3

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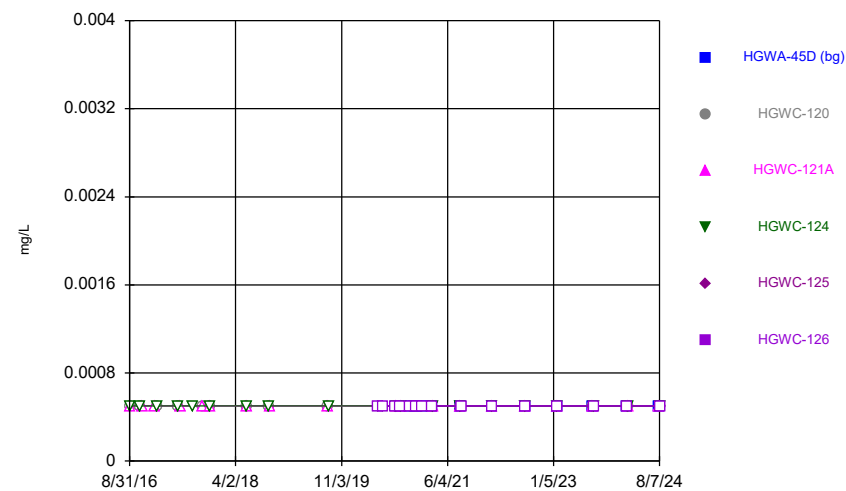
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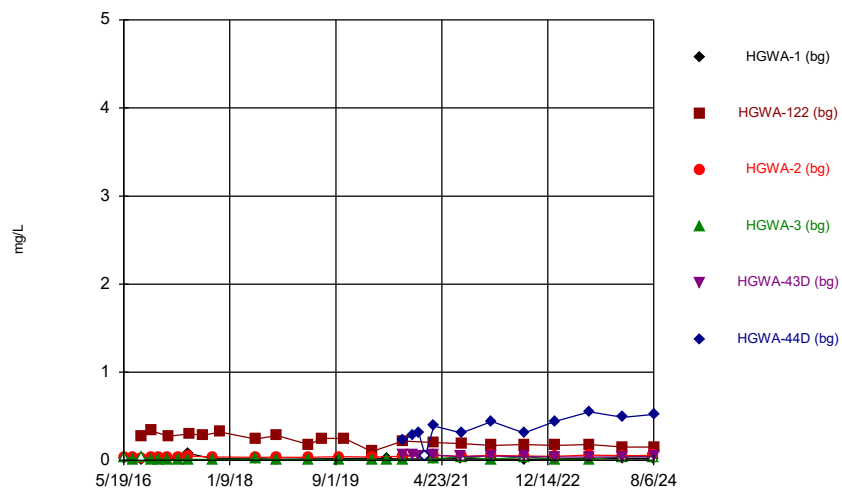
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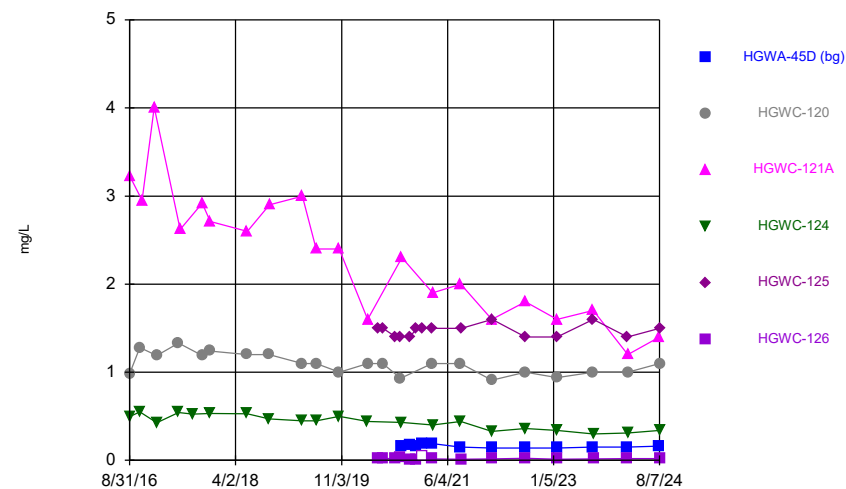
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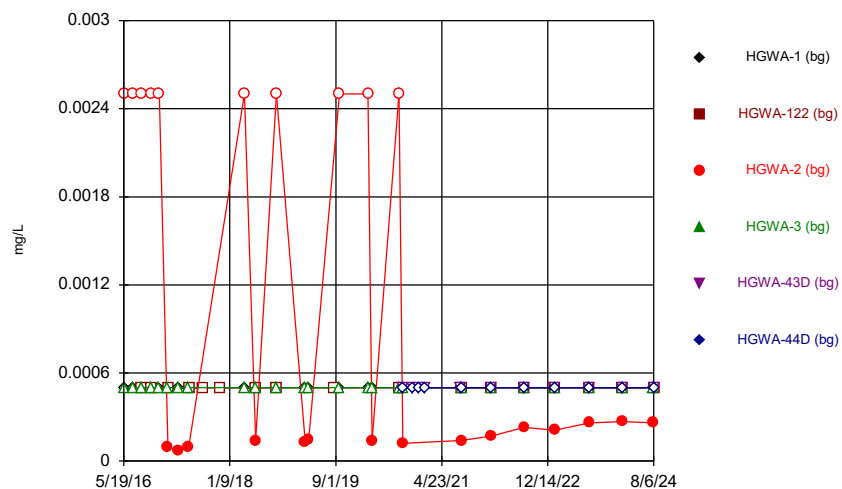
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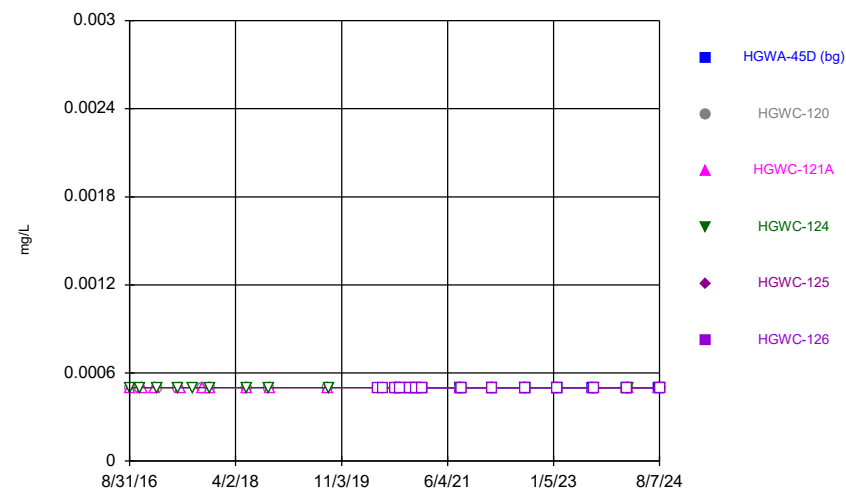
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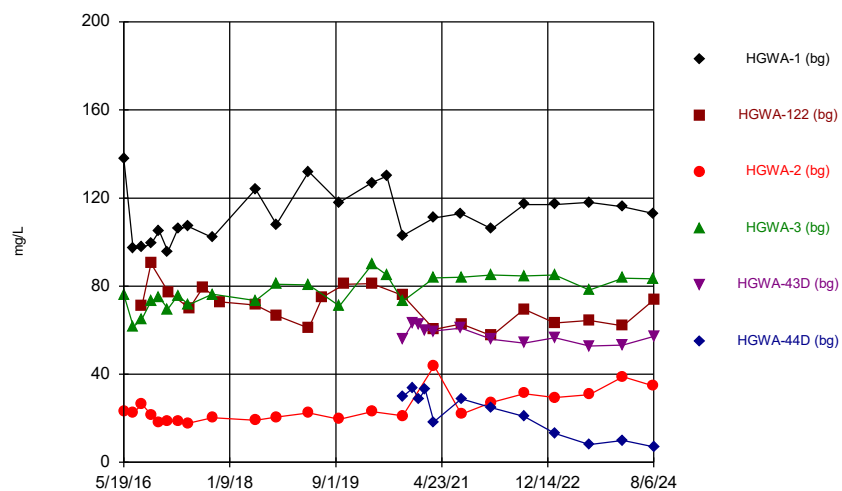
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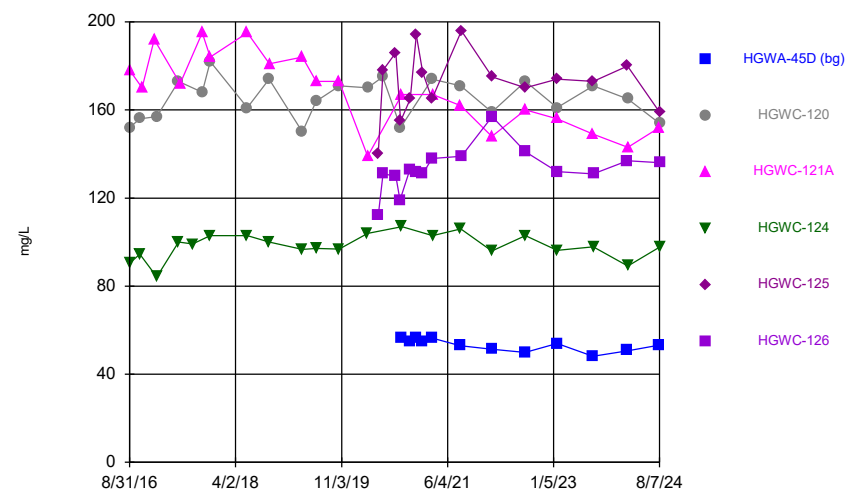


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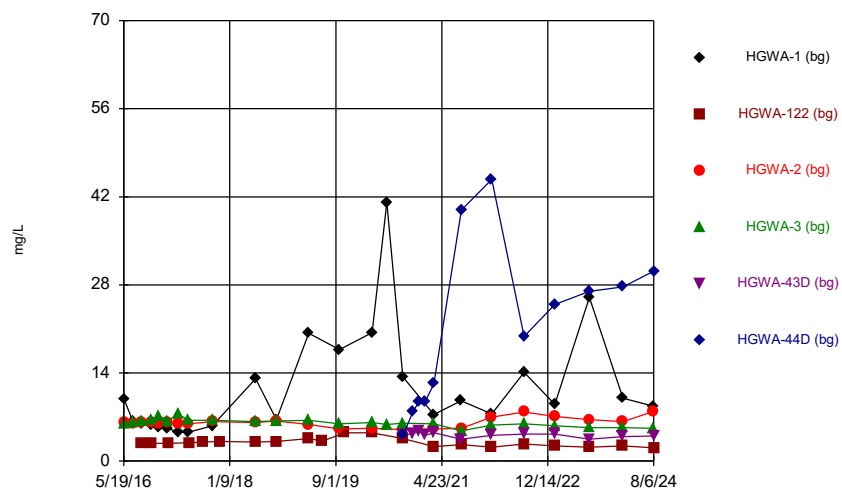
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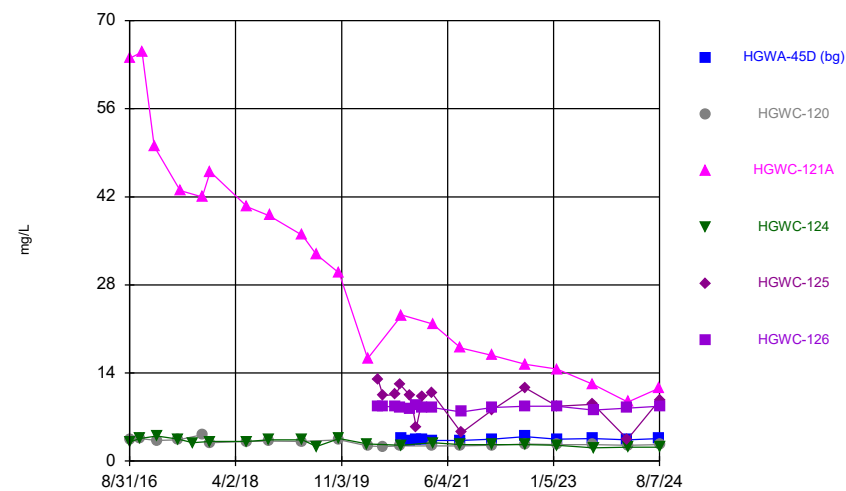
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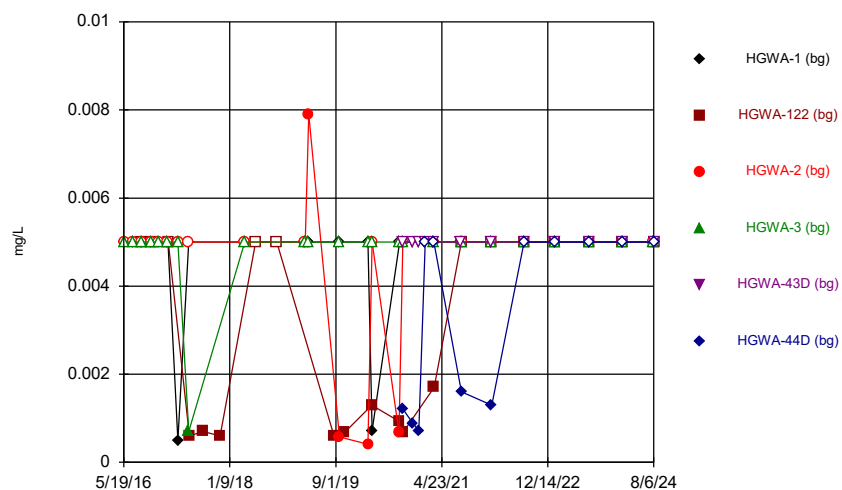
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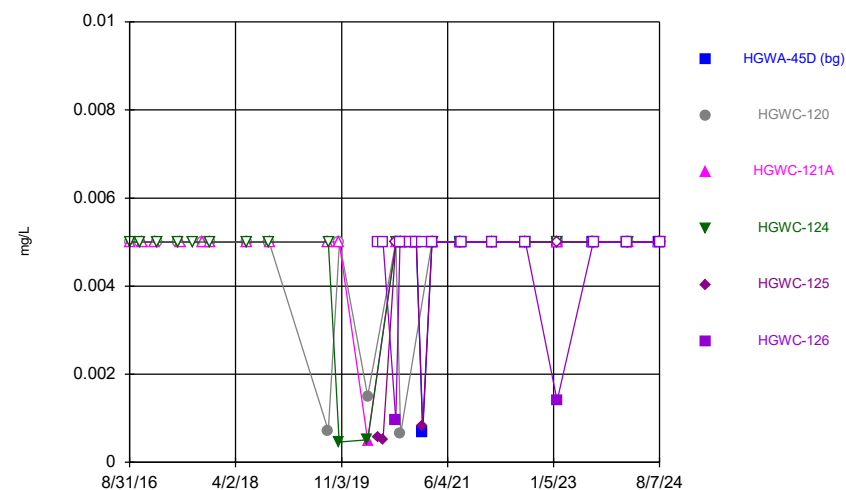


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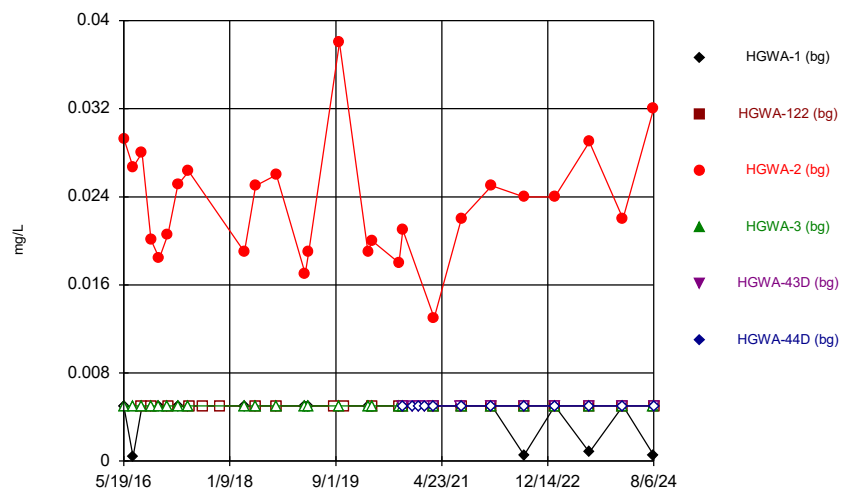
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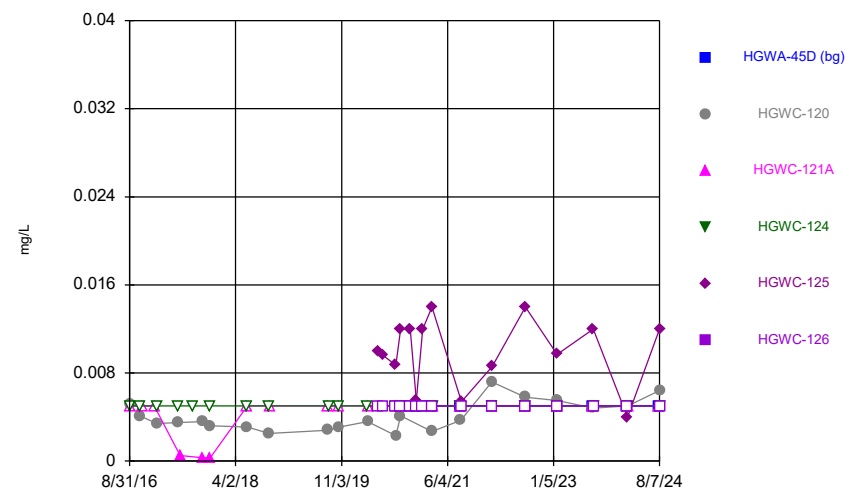
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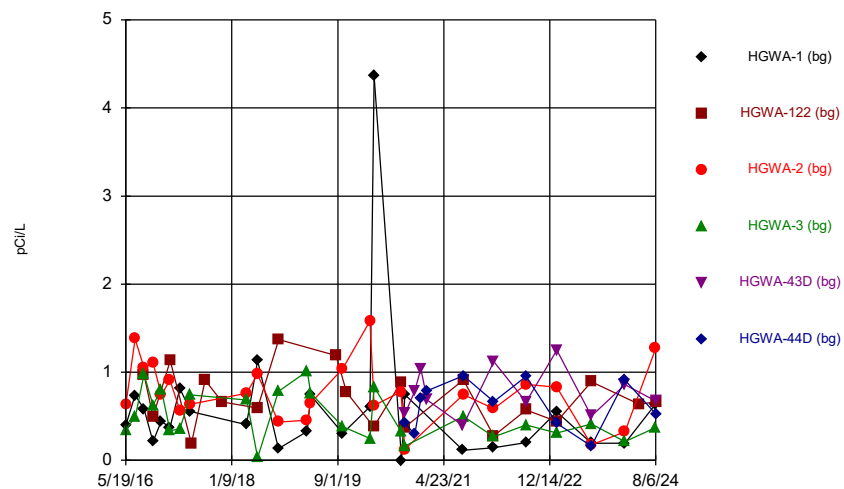
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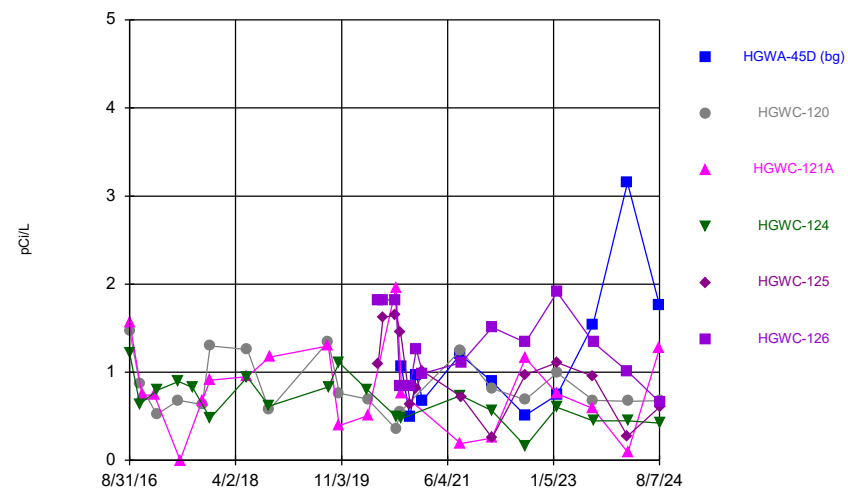


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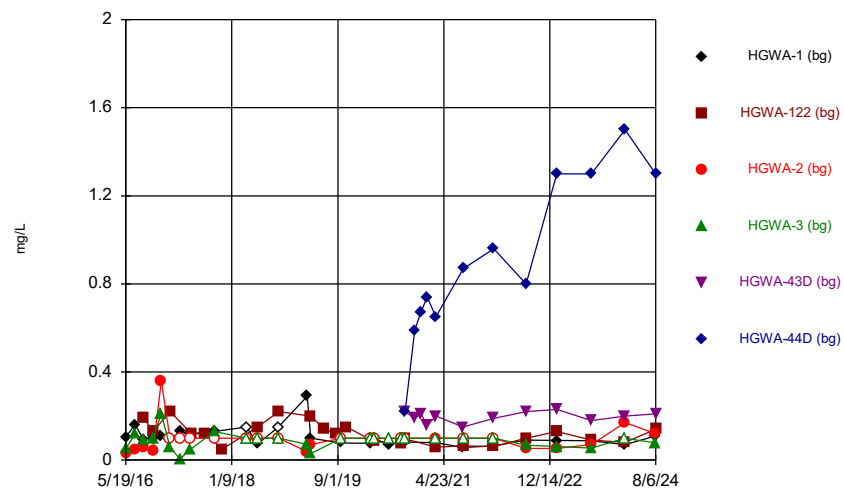
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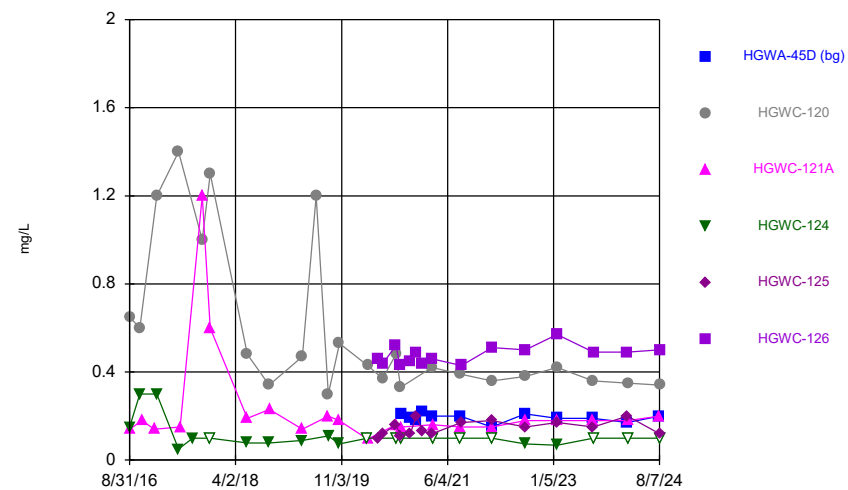
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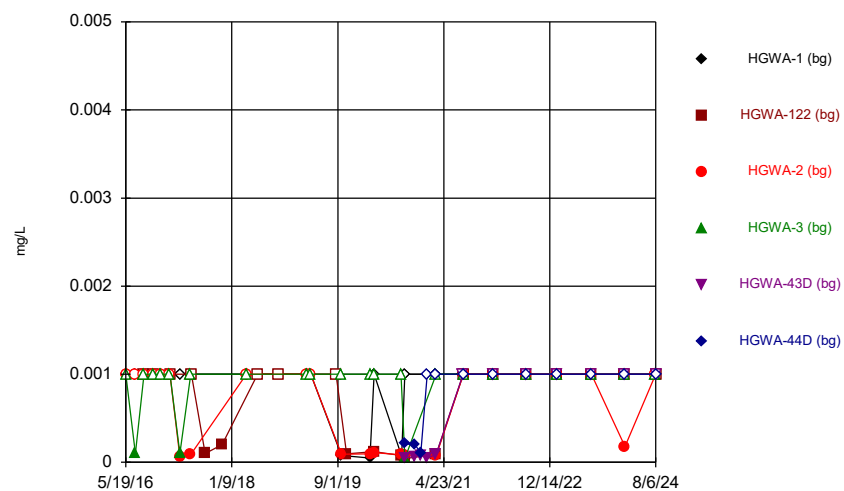
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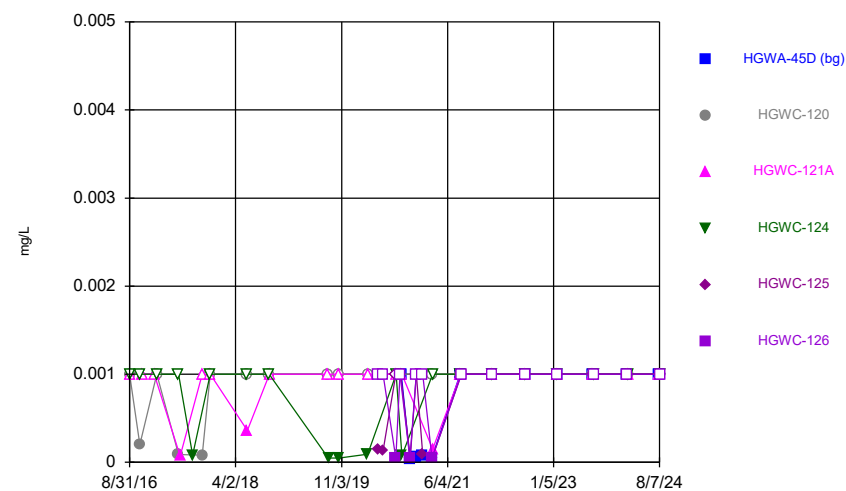
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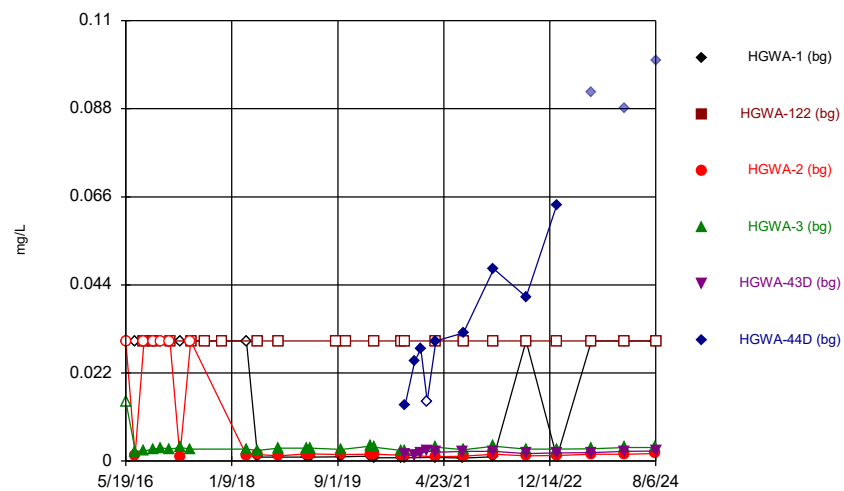
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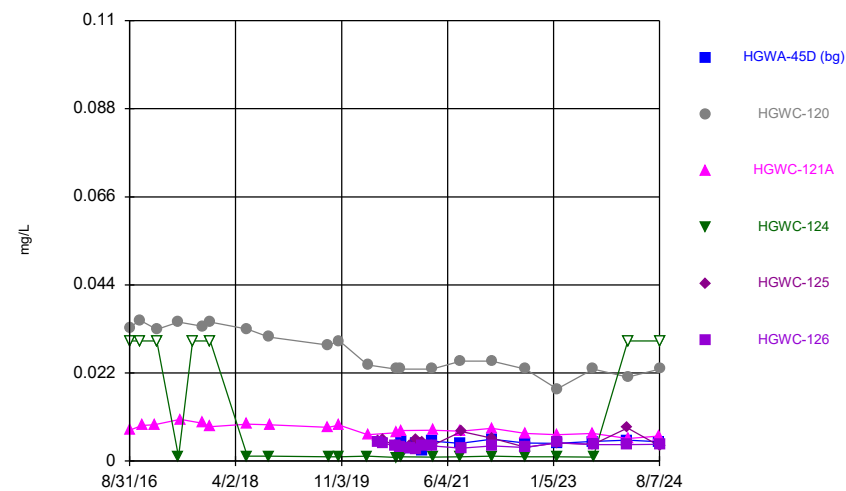
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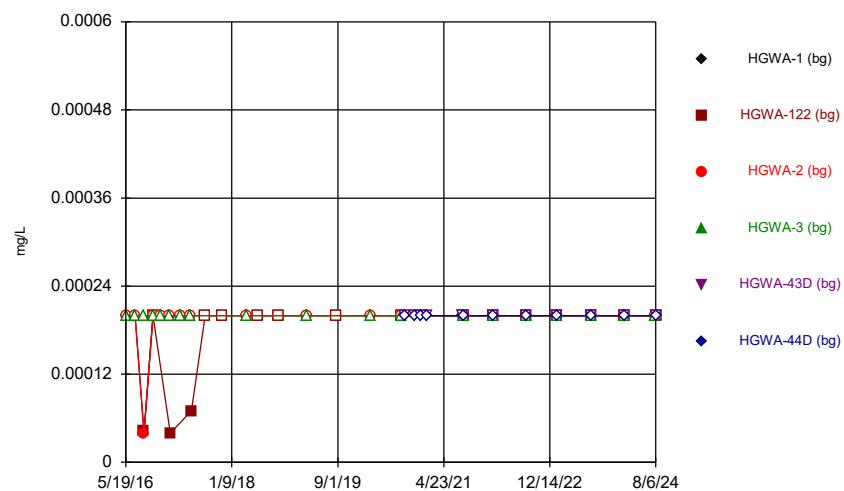
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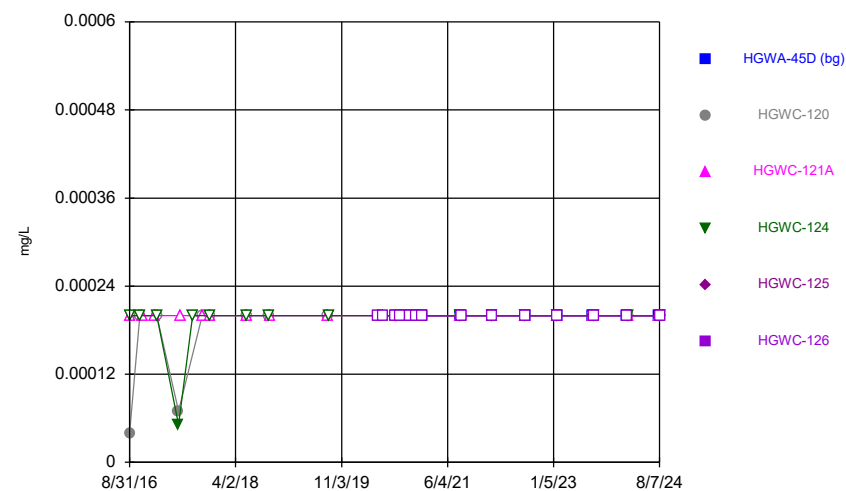
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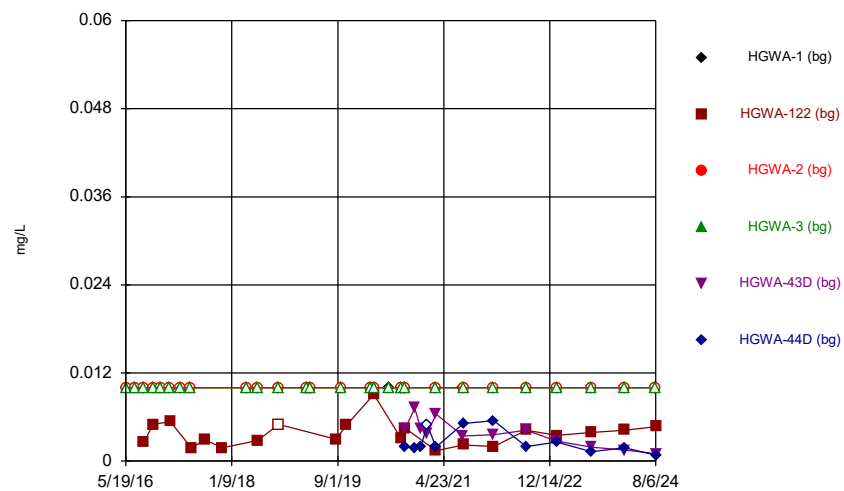
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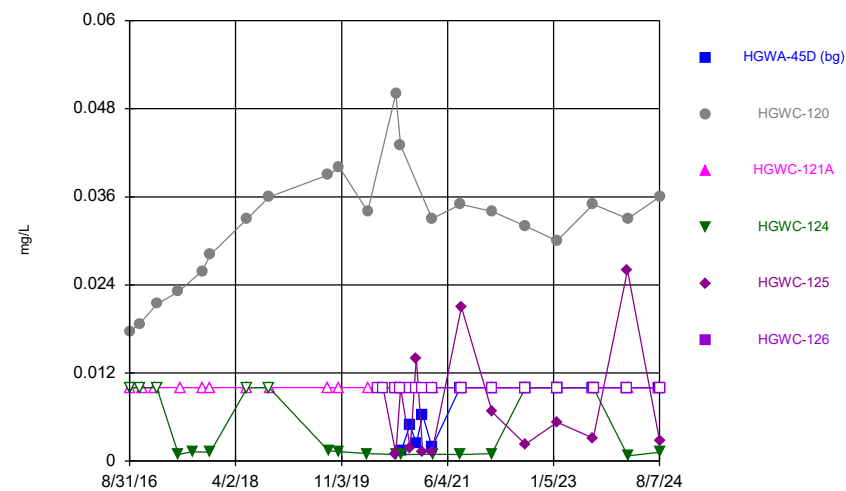
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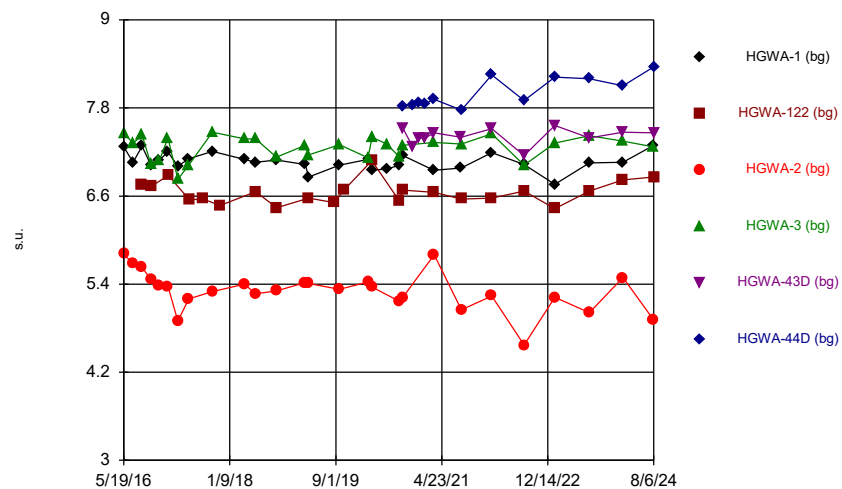
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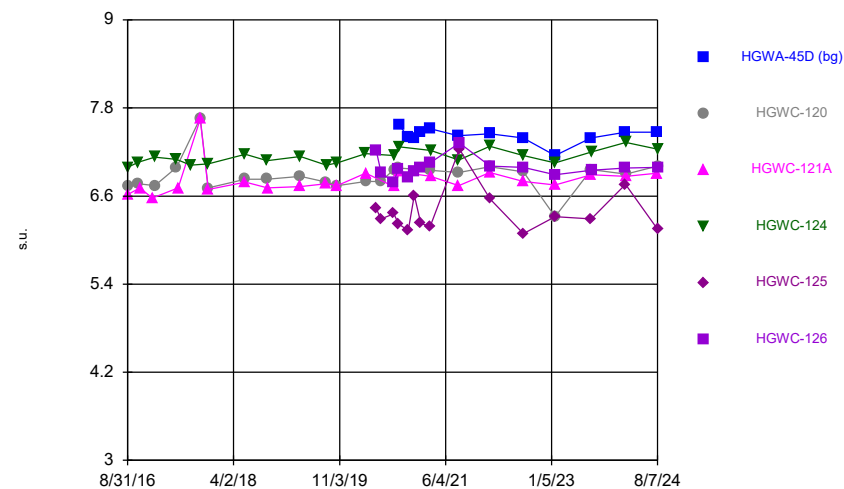


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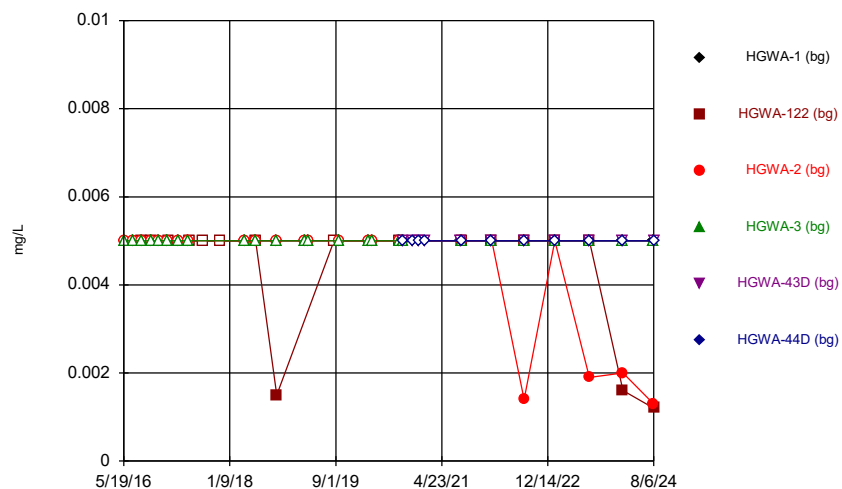
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Plant Hammond Client: Southern Company Data: Hammond AP-3

Time Series



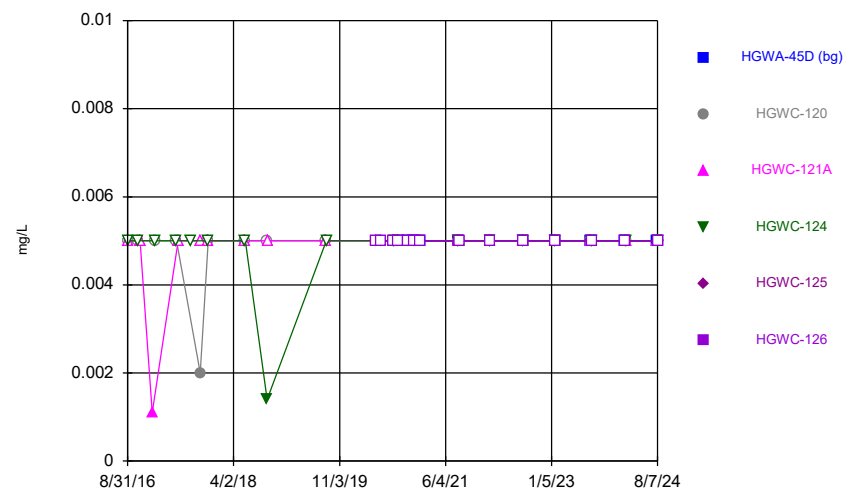
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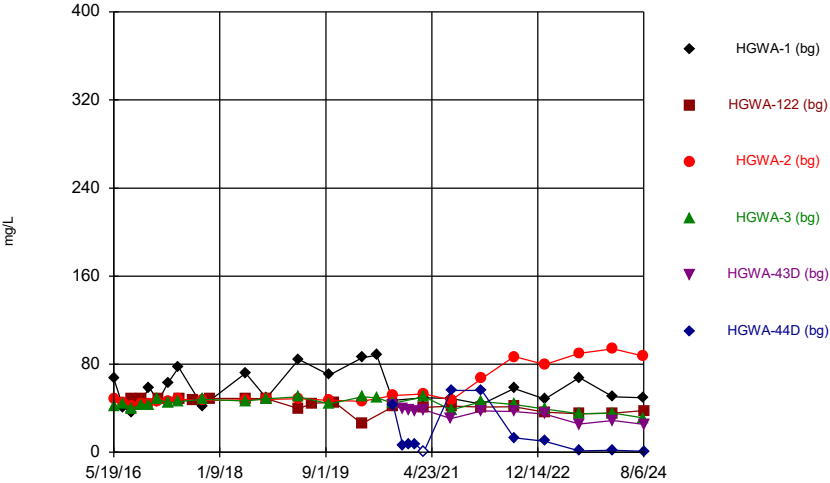
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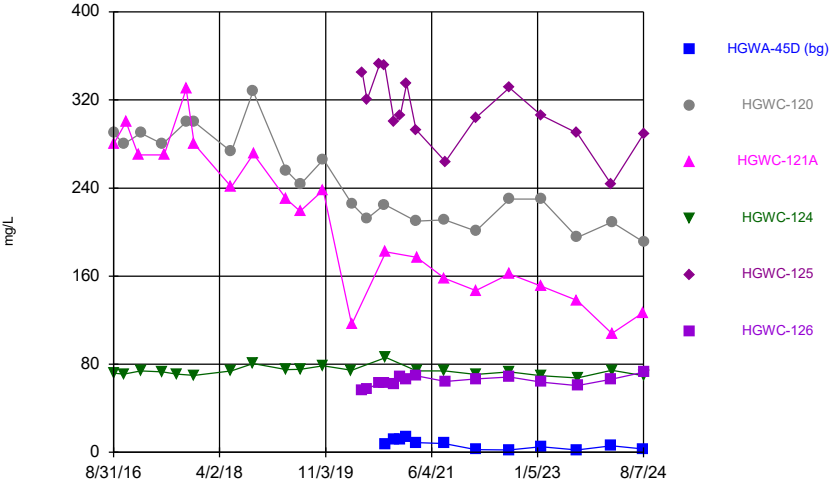


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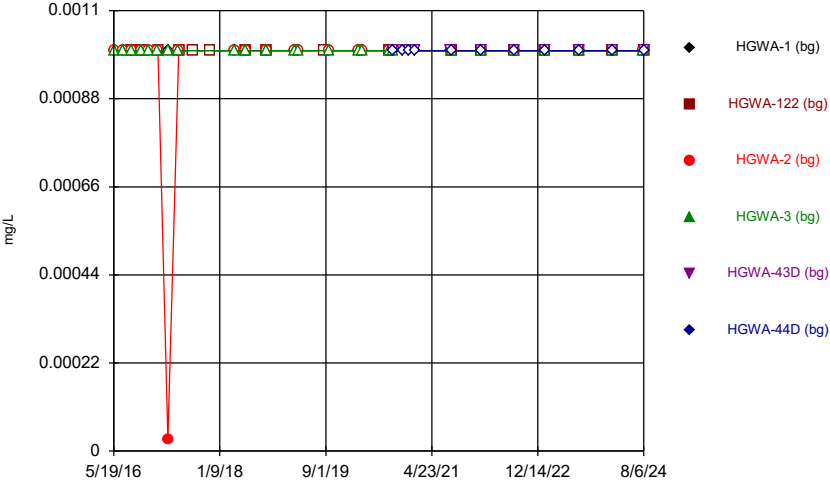
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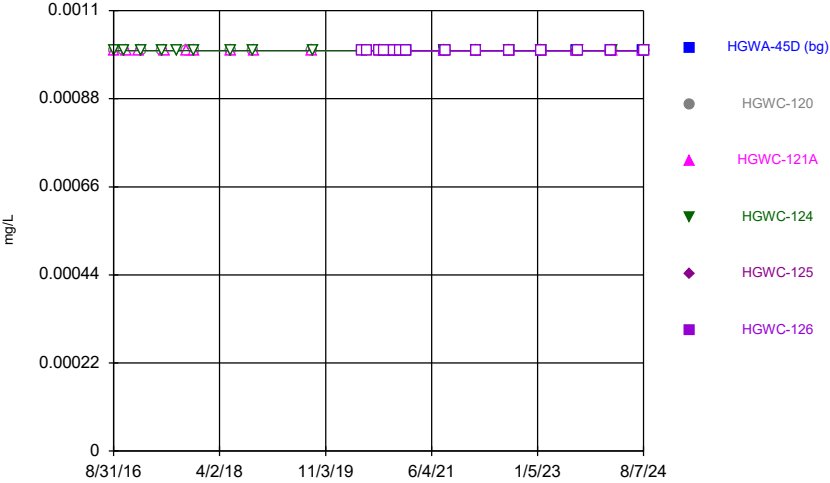
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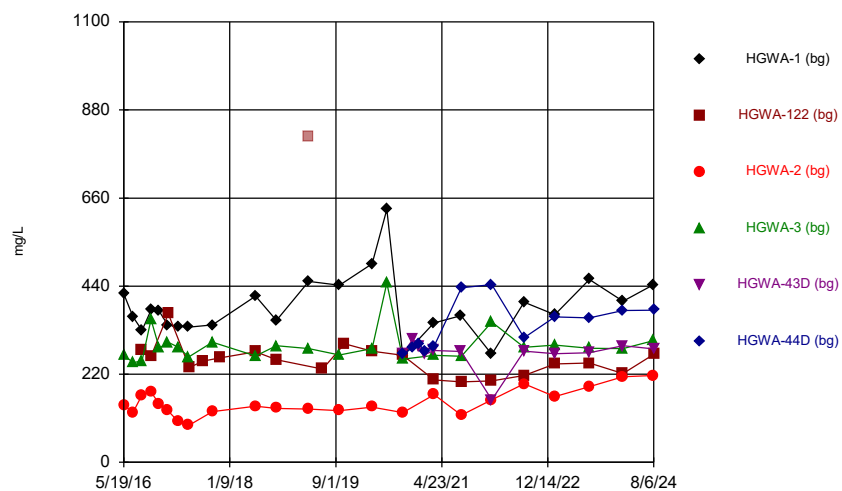
Time Series



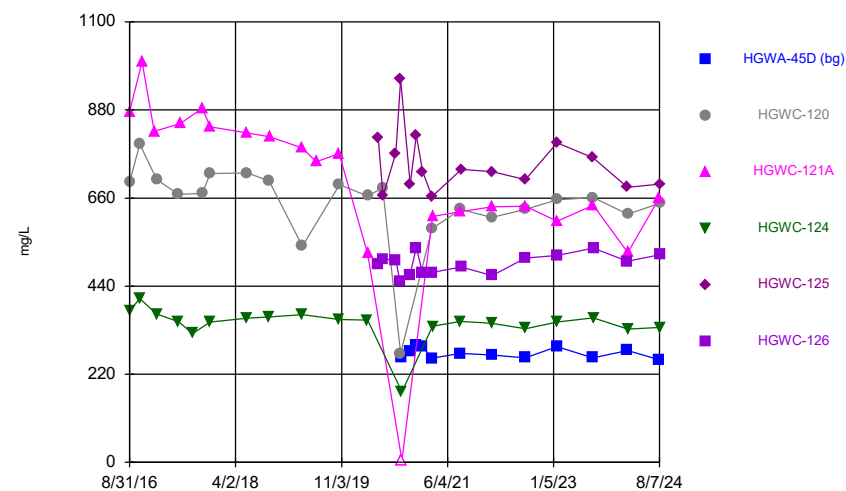
Time Series



Time Series



Time Series



Time Series

Constituent: Antimony (mg/L) Analysis Run 10/22/2024 11:43 AM
Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWA-1 (bg)	HGWA-122 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-43D (bg)	HGWA-44D (bg)
5/19/2016	<0.003		<0.003	<0.003		
7/11/2016	<0.003		<0.003			
7/12/2016				0.0003 (J)		
8/30/2016	<0.003	<0.003	<0.003	<0.003		
10/19/2016	0.0014 (J)		<0.003	<0.003		
10/20/2016		<0.003				
12/6/2016	<0.003		<0.003	<0.003		
1/24/2017	<0.003		<0.003	<0.003		
1/25/2017		<0.003				
3/21/2017	<0.003		<0.003	<0.003		
5/22/2017	<0.003		<0.003	<0.003		
5/25/2017		<0.003				
8/11/2017		<0.003				
11/15/2017		<0.003				
4/2/2018	<0.003		<0.003			
4/3/2018				<0.003		
6/5/2018		<0.003				
10/2/2018		<0.003				
3/12/2019	<0.003		<0.003	<0.003		
4/1/2019				<0.003		
4/2/2019	<0.003		<0.003			
8/22/2019		<0.003				
9/23/2019	<0.003		<0.003	<0.003		
3/2/2020	<0.003		<0.003	<0.003		
3/25/2020	<0.003		<0.003	<0.003		
8/24/2020		<0.003				
8/25/2020			<0.003	<0.003		
8/28/2020	<0.003					
9/15/2020	<0.003	0.001 (J)	<0.003	<0.003		
9/16/2020					0.00051 (J)	0.00049 (J)
11/10/2020					0.00043 (J)	<0.003
12/15/2020					0.00031 (J)	0.00047 (J)
1/19/2021					0.00029 (J)	<0.003
3/10/2021	<0.003					0.00037 (J)
3/11/2021		<0.003	<0.003	<0.003	0.00057 (J)	
8/11/2021	<0.003				<0.003	
8/12/2021			<0.003	<0.003		
8/13/2021		<0.003				<0.003
2/1/2022	<0.003	<0.003	<0.003	<0.003	<0.003	0.0013 (J)
8/2/2022	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
1/23/2023				<0.003		
1/24/2023	<0.003	<0.003	<0.003		<0.003	<0.003
8/8/2023	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
2/13/2024	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
8/5/2024	<0.003		<0.003	<0.003		
8/6/2024		<0.003			<0.003	<0.003

Time Series

Constituent: Antimony (mg/L) Analysis Run 10/22/2024 11:43 AM
Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWA-45D (bg)	HGWC-120	HGWC-121A	HGWC-124	HGWC-125	HGWC-126
8/31/2016		<0.003	<0.003	<0.003		
10/26/2016		<0.003		<0.003		
11/7/2016			<0.003			
1/13/2017			<0.003			
1/27/2017		<0.003		<0.003		
5/25/2017		<0.003		<0.003		
6/3/2017			<0.003			
8/11/2017				<0.003		
10/2/2017		<0.003	<0.003			
11/15/2017		<0.003	<0.003	<0.003		
6/5/2018		<0.003	<0.003	<0.003		
10/2/2018		<0.003		<0.003		
10/5/2018			<0.003			
8/22/2019		<0.003	<0.003			
8/23/2019				<0.003		
5/22/2020					0.00047 (J)	<0.003
6/16/2020					<0.003	<0.003
8/25/2020					<0.003	<0.003
8/26/2020		<0.003	<0.003			
8/27/2020				<0.003		
9/18/2020						<0.003
9/21/2020		<0.003			<0.003	
9/25/2020	<0.003					
9/28/2020			<0.003	<0.003		
11/11/2020	0.00057 (J)					0.0004 (J)
11/12/2020					<0.003	
12/16/2020	<0.003				<0.003	<0.003
1/20/2021	<0.003				<0.003	<0.003
3/12/2021	0.0003 (J)	0.0018 (J)			0.00061 (J)	0.00043 (J)
3/15/2021			<0.003	<0.003		
8/13/2021	<0.003					
8/16/2021		<0.003	<0.003	<0.003		
8/19/2021					<0.003	<0.003
2/1/2022	0.0018 (J)					
2/2/2022		<0.003	<0.003	<0.003		
2/3/2022					<0.003	<0.003
8/2/2022	<0.003					
8/4/2022		<0.003	0.0016 (J)	<0.003	<0.003	<0.003
1/24/2023	<0.003		<0.003	0.0018 (J)		
1/25/2023		<0.003			<0.003	<0.003
8/8/2023	<0.003					
8/10/2023		<0.003	<0.003		<0.003	
8/11/2023				<0.003		<0.003
2/13/2024	<0.003					
2/14/2024					<0.003	<0.003
2/15/2024		<0.003	<0.003			
2/16/2024				<0.003		
8/6/2024	<0.003		0.0018 (J)			
8/7/2024		<0.003		0.002 (J)	<0.003	<0.003

Time Series

Constituent: Arsenic (mg/L) Analysis Run 10/22/2024 11:43 AM
Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWA-1 (bg)	HGWA-122 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-43D (bg)	HGWA-44D (bg)
5/19/2016	<0.005		0.00127 (J)	<0.005		
7/11/2016	<0.005		0.002 (J)			
7/12/2016				0.0008 (J)		
8/30/2016	<0.005	<0.005	0.0017 (J)	<0.005		
10/19/2016	<0.005		<0.005	<0.005		
10/20/2016		<0.005				
12/6/2016	<0.005		<0.005	<0.005		
1/24/2017	<0.005		<0.005	<0.005		
1/25/2017		<0.005				
3/21/2017	0.0005 (J)		<0.005	0.0007 (J)		
5/22/2017	<0.005		0.0006 (J)	0.0006 (J)		
5/25/2017		<0.005				
8/11/2017		<0.005				
11/15/2017		<0.005				
4/2/2018	<0.005		<0.005			
4/3/2018				<0.005		
6/4/2018	<0.005		0.00088 (J)	0.0008 (J)		
6/5/2018		<0.005				
10/1/2018	<0.005		<0.005	0.0011 (J)		
10/2/2018		<0.005				
3/12/2019	<0.005		0.00069 (J)	0.00063 (J)		
4/1/2019				<0.005		
4/2/2019	<0.005		<0.005			
8/22/2019		<0.005				
9/23/2019	0.00046 (J)		0.00067 (J)	0.0011 (J)		
3/2/2020	<0.005		0.00043 (J)	0.0004 (J)		
3/25/2020	<0.005		<0.005	<0.005		
8/24/2020		<0.005				
8/25/2020			<0.005	<0.005		
8/28/2020	<0.005					
9/15/2020	<0.005		<0.005	<0.005		
9/16/2020					<0.005	<0.005
11/10/2020					0.0021 (J)	<0.005
12/15/2020					<0.005	<0.005
1/19/2021					0.0011 (J)	<0.005
8/11/2021	<0.005				0.0015 (J)	
8/12/2021			<0.005	<0.005		
8/13/2021		<0.005				<0.005
2/1/2022	0.0016 (J)	<0.005	0.0023 (J)	0.0024 (J)	0.0036 (J)	0.0025 (J)
8/2/2022	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
1/23/2023				<0.005		
1/24/2023	<0.005	<0.005	<0.005		<0.005	0.0027 (J)
8/8/2023	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
2/13/2024	<0.005	<0.005	<0.005	<0.005	0.00097 (J)	0.0014 (J)
8/5/2024	<0.005		<0.005	<0.005		
8/6/2024		<0.005			<0.005	<0.005

Time Series

Constituent: Arsenic (mg/L) Analysis Run 10/22/2024 11:43 AM
Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWA-45D (bg)	HGWC-120	HGWC-121A	HGWC-124	HGWC-125	HGWC-126
8/31/2016		<0.005	<0.005	<0.005		
10/26/2016		<0.005		<0.005		
11/7/2016			<0.005			
1/13/2017			<0.005			
1/27/2017		<0.005		<0.005		
5/25/2017		0.0014 (J)		0.0006 (J)		
6/3/2017			0.001 (J)			
8/11/2017				<0.005		
10/2/2017		0.0007 (J)	<0.005			
11/15/2017		<0.005	<0.005	<0.005		
6/5/2018		0.001 (J)	0.0014 (J)	<0.005		
10/2/2018		<0.005		<0.005		
10/5/2018			<0.005			
8/22/2019		<0.005	<0.005			
8/23/2019				<0.005		
5/22/2020					0.00081 (J)	0.00071 (J)
6/16/2020					0.0014 (J)	0.00091 (J)
8/25/2020					<0.005	<0.005
8/26/2020		<0.005	<0.005			
8/27/2020				<0.005		
9/18/2020						<0.005
9/21/2020					<0.005	
9/25/2020	<0.005					
11/11/2020	0.0011 (J)					<0.005
11/12/2020					<0.005	
12/16/2020	<0.005				<0.005	<0.005
1/20/2021	0.0022 (J)				<0.005	<0.005
8/13/2021	0.0012 (J)					
8/16/2021		0.0015 (J)	0.0014 (J)	<0.005		
8/19/2021					<0.005	<0.005
2/1/2022	<0.005					
2/2/2022		0.0014 (J)	<0.005	<0.005		
2/3/2022					0.0032 (J)	0.0026 (J)
8/2/2022	<0.005					
8/4/2022		<0.005	<0.005	<0.005	<0.005	<0.005
1/24/2023	<0.005		<0.005	<0.005		
1/25/2023		<0.005			<0.005	<0.005
8/8/2023	<0.005					
8/10/2023		<0.005	<0.005		<0.005	
8/11/2023				<0.005		<0.005
2/13/2024	<0.005					
2/14/2024					<0.005	<0.005
2/15/2024		0.00086 (J)	<0.005			
2/16/2024				<0.005		
8/6/2024	<0.005		<0.005			
8/7/2024		<0.005		<0.005	0.0009 (J)	<0.005

Time Series

Constituent: Barium (mg/L) Analysis Run 10/22/2024 11:43 AM
Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWA-1 (bg)	HGWA-122 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-43D (bg)	HGWA-44D (bg)
5/19/2016	0.0346		0.114	0.111		
7/11/2016	0.0311		0.112			
7/12/2016				0.115		
8/30/2016	0.0293	0.0463	0.131	0.113		
10/19/2016	0.0293		0.111	0.123		
10/20/2016		0.0431				
12/6/2016	0.0304		0.108	0.127		
1/24/2017	0.028		0.102	0.126		
1/25/2017		0.0429				
3/21/2017	0.0275		0.095	0.12		
5/22/2017	0.0281		0.103	0.117		
5/25/2017		0.0447				
8/11/2017		0.0451				
11/15/2017		0.0439				
4/2/2018	0.026		0.099			
4/3/2018				0.11		
6/4/2018	0.035		0.11	0.12		
6/5/2018		0.04				
10/1/2018	0.029		0.11	0.14		
10/2/2018		0.042				
3/12/2019	0.042		0.12	0.13		
4/1/2019				0.13		
4/2/2019	0.04		0.13			
8/22/2019		0.044				
9/23/2019	0.042		0.13	0.13		
10/21/2019		0.04				
3/2/2020	0.034		0.11	0.14		
3/24/2020		0.032				
3/25/2020	0.043		0.12	0.13		
8/24/2020		0.041				
8/25/2020			0.11	0.11		
8/28/2020	0.036					
9/15/2020	0.035	0.039	0.12	0.12		
9/16/2020					0.26	0.24
11/10/2020					0.25	0.38
12/15/2020					0.29	0.39
1/19/2021					0.32	<0.01
3/10/2021	0.03					0.26
3/11/2021		0.032	0.07	0.13	0.3	
8/11/2021	0.03				0.28	
8/12/2021			0.12	0.11		
8/13/2021		0.033				0.22
2/1/2022	0.031	0.035	0.13	0.12	0.29	0.23
8/2/2022	0.039	0.038	0.11	0.16	0.35	0.37
1/23/2023				0.13		
1/24/2023	0.033	0.035	0.088		0.28	0.18
8/8/2023	0.039	0.032	0.068	0.12	0.3	0.12
2/13/2024	0.039	0.031	0.062	0.13	0.28	0.12
8/5/2024	0.032		0.062	0.13		
8/6/2024		0.029			0.28	0.11

Time Series

Constituent: Barium (mg/L) Analysis Run 10/22/2024 11:43 AM
Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWA-45D (bg)	HGWC-120	HGWC-121A	HGWC-124	HGWC-125	HGWC-126
8/31/2016		0.045	0.0782	0.0744		
10/26/2016		0.0462		0.0735		
11/7/2016			0.0764			
1/13/2017			0.0744			
1/27/2017		0.0451		0.0632		
5/25/2017		0.0488		0.0773		
6/3/2017			0.0933			
8/11/2017				0.0672		
10/2/2017		0.0479	0.0815			
11/15/2017		0.051	0.0807	0.0707		
6/5/2018		0.051	0.078	0.07		
10/2/2018		0.059		0.067		
10/5/2018			0.074			
8/22/2019		0.05	0.066			
8/23/2019				0.066		
10/21/2019			0.074	0.075		
10/22/2019		0.051				
3/24/2020				0.075		
3/25/2020		0.052	0.099			
5/22/2020					0.048	0.24
6/16/2020					0.049	0.24
8/25/2020					0.045	0.23
8/26/2020		0.041	0.057			
8/27/2020				0.062		
9/18/2020						0.21
9/21/2020		0.046			0.042	
9/25/2020	0.49					
9/28/2020			0.056	0.071		
11/11/2020	0.45					0.23
11/12/2020					0.042	
12/16/2020	0.52				0.041	0.24
1/20/2021	0.53				0.045	0.25
3/12/2021	0.54	0.047			0.043	0.27
3/15/2021			0.059	0.071		
8/13/2021	0.51					
8/16/2021		0.052	0.06	0.069		
8/19/2021					0.044	0.27
2/1/2022	0.57					
2/2/2022		0.054	0.064	0.072		
2/3/2022					0.043	0.24
8/2/2022	0.64					
8/4/2022		0.048	0.06	0.068	0.037	0.24
1/24/2023	0.57		0.059	0.068		
1/25/2023		0.051			0.042	0.24
8/8/2023	0.59					
8/10/2023		0.045	0.048		0.038	
8/11/2023				0.06		0.22
2/13/2024	0.54					
2/14/2024					0.037	0.23
2/15/2024		0.046	0.047			
2/16/2024				0.054		
8/6/2024	0.5		0.044			

Time Series

Constituent: Barium (mg/L) Analysis Run 10/22/2024 11:43 AM
Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWA-45D (bg)	HGWC-120	HGWC-121A	HGWC-124	HGWC-125	HGWC-126
8/7/2024		0.051		0.064	0.035	0.23

Time Series

Constituent: Beryllium (mg/L) Analysis Run 10/22/2024 11:43 AM
Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWA-1 (bg)	HGWA-122 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-43D (bg)	HGWA-44D (bg)
5/19/2016	<0.0005		<0.003	<0.0005		
7/11/2016	<0.0005		0.0001 (J)			
7/12/2016				<0.0005		
8/30/2016	<0.0005	<0.0005	<0.003	<0.0005		
10/19/2016	<0.0005		0.0001 (J)	<0.0005		
10/20/2016		<0.0005				
12/6/2016	<0.0005		0.0002 (J)	<0.0005		
1/24/2017	<0.0005		0.0001 (J)	<0.0005		
1/25/2017		<0.0005				
3/21/2017	<0.0005		0.0001 (J)	<0.0005		
5/22/2017	<0.0005		0.0001 (J)	<0.0005		
5/25/2017		<0.0005				
8/11/2017		<0.0005				
11/15/2017		<0.0005				
4/2/2018	<0.0005		<0.003			
4/3/2018				<0.0005		
6/5/2018		<0.0005				
10/2/2018		<0.0005				
3/12/2019	<0.0005		0.00017 (J)	<0.0005		
4/1/2019				<0.0005		
4/2/2019	<0.0005		0.00015 (J)			
8/22/2019		<0.0005				
9/23/2019	<0.0005		0.00011 (J)	<0.0005		
3/2/2020	<0.0005		0.00014 (J)	<0.0005		
3/25/2020	<0.0005		0.00016 (J)	<0.0005		
8/24/2020		<0.0005				
8/25/2020			0.00014 (J)	<0.0005		
8/28/2020	<0.0005					
9/15/2020	<0.0005	<0.0005	0.00013 (J)	<0.0005		
9/16/2020					<0.0005	<0.0005
11/10/2020					<0.0005	<0.0005
12/15/2020					<0.0005	<0.0005
1/19/2021					<0.0005	<0.0005
3/10/2021	<0.0005					<0.0005
3/11/2021		<0.0005	8.6E-05 (J)	<0.0005	<0.0005	
8/11/2021	<0.0005				<0.0005	
8/12/2021			0.00014 (J)	<0.0005		
8/13/2021		<0.0005				<0.0005
2/1/2022	<0.0005	<0.0005	0.0002 (J)	<0.0005	<0.0005	<0.0005
8/2/2022	<0.0005	<0.0005	0.00019 (J)	<0.0005	<0.0005	<0.0005
1/23/2023				<0.0005		
1/24/2023	<0.0005	<0.0005	0.00016 (J)		<0.0005	<0.0005
8/8/2023	<0.0005	<0.0005	0.00022 (J)	<0.0005	<0.0005	<0.0005
2/13/2024	<0.0005	<0.0005	0.00022 (J)	<0.0005	<0.0005	<0.0005
8/5/2024	<0.0005		0.00026 (J)	<0.0005		
8/6/2024		<0.0005			<0.0005	<0.0005

Time Series

Constituent: Beryllium (mg/L) Analysis Run 10/22/2024 11:43 AM
Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWA-45D (bg)	HGWC-120	HGWC-121A	HGWC-124	HGWC-125	HGWC-126
8/31/2016		<0.0005	<0.0005	<0.0005		
10/26/2016		<0.0005		<0.0005		
11/7/2016			<0.0005			
1/13/2017			<0.0005			
1/27/2017		<0.0005		<0.0005		
5/25/2017		<0.0005		<0.0005		
6/3/2017			<0.0005			
8/11/2017				<0.0005		
10/2/2017		<0.0005	<0.0005			
11/15/2017		<0.0005	<0.0005	<0.0005		
6/5/2018		<0.0005	<0.0005	<0.0005		
10/2/2018		<0.0005		<0.0005		
10/5/2018			<0.0005			
8/22/2019		<0.0005	<0.0005			
8/23/2019				<0.0005		
5/22/2020					<0.0005	<0.0005
6/16/2020					<0.0005	<0.0005
8/25/2020					<0.0005	<0.0005
8/26/2020		<0.0005	<0.0005			
8/27/2020				<0.0005		
9/18/2020						<0.0005
9/21/2020		<0.0005			<0.0005	
9/25/2020	<0.0005					
9/28/2020			<0.0005	<0.0005		
11/1/2020	<0.0005					<0.0005
11/12/2020					<0.0005	
12/16/2020	<0.0005				<0.0005	<0.0005
1/20/2021	<0.0005				<0.0005	<0.0005
3/12/2021	<0.0005	<0.0005			<0.0005	<0.0005
3/15/2021			<0.0005	<0.0005		
8/13/2021	<0.0005					
8/16/2021		<0.0005	<0.0005	<0.0005		
8/19/2021					<0.0005	<0.0005
2/1/2022	<0.0005					
2/2/2022		<0.0005	<0.0005	<0.0005		
2/3/2022					<0.0005	<0.0005
8/2/2022	<0.0005					
8/4/2022		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
1/24/2023	<0.0005		<0.0005	<0.0005		
1/25/2023		<0.0005			<0.0005	<0.0005
8/8/2023	<0.0005					
8/10/2023		<0.0005	<0.0005		<0.0005	
8/11/2023				<0.0005		<0.0005
2/13/2024	<0.0005					
2/14/2024					<0.0005	<0.0005
2/15/2024		<0.0005	<0.0005			
2/16/2024				<0.0005		
8/6/2024	<0.0005		<0.0005			
8/7/2024		<0.0005		<0.0005	<0.0005	<0.0005

Time Series

Constituent: Boron (mg/L) Analysis Run 10/22/2024 11:43 AM
Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWA-1 (bg)	HGWA-122 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-43D (bg)	HGWA-44D (bg)
5/19/2016	0.0214 (J)		0.0321 (J)	<0.04		
7/11/2016	0.0142 (J)		0.0337 (J)			
7/12/2016				0.0074 (J)		
8/30/2016	0.0074 (J)	0.277	0.0173 (J)	<0.04		
10/19/2016	0.0224 (J)		0.0341 (J)	0.0085 (J)		
10/20/2016		0.336				
12/6/2016	0.0211 (J)		0.0326 (J)	0.0085 (J)		
1/24/2017	0.0165 (J)		0.0365 (J)	0.01 (J)		
1/25/2017		0.274				
3/21/2017	0.0187 (J)		0.0349 (J)	0.0079 (J)		
5/22/2017	0.0782		0.0475	0.0131 (J)		
5/25/2017		0.298				
8/11/2017		0.285				
10/3/2017	0.0198 (J)		0.0386 (J)	0.0097 (J)		
11/15/2017		0.322				
6/4/2018	0.02 (J)		0.036 (J)	0.017 (J)		
6/5/2018		0.24				
10/1/2018	0.013 (J)		0.035 (J)	0.0061 (J)		
10/2/2018		0.28				
4/1/2019				0.0066 (J)		
4/2/2019	0.016 (J)	0.18	0.034 (J)			
6/18/2019		0.25				
9/23/2019	0.021 (J)		0.04 (J)	0.0081 (J)		
10/21/2019		0.25				
3/24/2020		0.1				
3/25/2020	0.025 (J)		0.039 (J)	0.0096 (J)		
6/16/2020	0.021 (J)			0.01 (J)		
9/15/2020	0.017 (J)	0.22	0.044 (J)	0.0071 (J)		
9/16/2020					0.061 (J)	0.23
11/10/2020					0.057 (J)	0.29
12/15/2020					0.052 (J)	0.31
1/19/2021					0.049 (J)	<0.1
3/10/2021	0.015 (J)					0.39
3/11/2021		0.2	0.056	0.015 (J)	0.06	
8/11/2021	0.02 (J)				0.042	
8/12/2021			0.044	<0.04		
8/13/2021		0.19				0.31
2/1/2022	0.016 (J)	0.17	0.056	0.011 (J)	0.05	0.44
8/2/2022	0.012 (J)	0.18	0.047	<0.04	0.043	0.31
1/23/2023				0.012 (J)		
1/24/2023	0.015 (J)	0.17	0.046		0.037 (J)	0.44
8/8/2023	0.023 (J)	0.18	0.06	0.011 (J)	0.038 (J)	0.55
2/13/2024	0.02 (J)	0.15	0.051	<0.04	0.037 (J)	0.49
8/5/2024	0.02 (J)		0.057	<0.04		
8/6/2024		0.15			0.043	0.52

Time Series

Constituent: Boron (mg/L) Analysis Run 10/22/2024 11:43 AM
Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWA-45D (bg)	HGWC-120	HGWC-121A	HGWC-124	HGWC-125	HGWC-126
8/31/2016		0.981	3.23	0.494		
10/26/2016		1.28		0.55		
11/7/2016			2.95			
1/13/2017			4.01			
1/27/2017		1.19		0.428		
5/25/2017		1.33		0.544		
6/3/2017			2.62			
8/11/2017				0.524		
10/2/2017		1.19	2.92			
11/15/2017		1.24	2.71	0.531		
6/5/2018		1.2	2.6	0.53		
10/2/2018		1.2		0.47		
10/5/2018			2.9			
4/2/2019		1.1				
4/3/2019			3	0.45		
6/17/2019		1.1	2.4			
6/18/2019				0.45		
10/21/2019			2.4	0.5		
10/22/2019		1				
3/24/2020				0.44		
3/25/2020		1.1	1.6			
5/22/2020					1.5	0.026 (J)
6/15/2020		1.1				
6/16/2020					1.5	0.023 (J)
8/25/2020					1.4	0.016 (J)
9/18/2020						0.041 (J)
9/21/2020		0.93			1.4	
9/25/2020	0.16					
9/28/2020			2.3	0.43		
11/11/2020	0.17					0.009 (J)
11/12/2020					1.4	
12/16/2020	0.16				1.5	0.011 (J)
1/20/2021	0.19				1.5	<0.1
3/12/2021	0.19	1.1			1.5	0.016 (J)
3/15/2021			1.9	0.4		
8/13/2021	0.15					
8/16/2021		1.1	2	0.44		
8/19/2021					1.5	0.011 (J)
2/1/2022	0.14					
2/2/2022		0.91	1.6	0.33		
2/3/2022					1.6	0.016 (J)
8/2/2022	0.14					
8/4/2022		1	1.8	0.36	1.4	0.023 (J)
1/24/2023	0.14		1.6	0.34		
1/25/2023		0.94			1.4	0.014 (J)
8/8/2023	0.15					
8/10/2023		1	1.7		1.6	
8/11/2023				0.3		0.016 (J)
2/13/2024	0.15					
2/14/2024					1.4	0.019 (J)
2/15/2024		1	1.2			
2/16/2024				0.31		

Time Series

Constituent: Boron (mg/L) Analysis Run 10/22/2024 11:43 AM
Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWA-45D (bg)	HGWC-120	HGWC-121A	HGWC-124	HGWC-125	HGWC-126
8/6/2024	0.16		1.4			
8/7/2024		1.1		0.34	1.5	0.021 (J)

Time Series

Constituent: Cadmium (mg/L) Analysis Run 10/22/2024 11:43 AM
Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWA-1 (bg)	HGWA-122 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-43D (bg)	HGWA-44D (bg)
5/19/2016	<0.0005		<0.0025	<0.0005		
7/11/2016	<0.0005		<0.0025			
7/12/2016				<0.0005		
8/30/2016	<0.0005	<0.0005	<0.0025	<0.0005		
10/19/2016	<0.0005		<0.0025	<0.0005		
10/20/2016		<0.0005				
12/6/2016	<0.0005		<0.0025	<0.0005		
1/24/2017	<0.0005		0.0001 (J)	<0.0005		
1/25/2017		<0.0005				
3/21/2017	<0.0005		7E-05 (J)	<0.0005		
5/22/2017	<0.0005		0.0001 (J)	<0.0005		
5/25/2017		<0.0005				
8/11/2017		<0.0005				
11/15/2017		<0.0005				
4/2/2018	<0.0005		<0.0025			
4/3/2018				<0.0005		
6/4/2018	<0.0005		0.00014 (J)	<0.0005		
6/5/2018		<0.0005				
10/1/2018	<0.0005		<0.0025	<0.0005		
10/2/2018		<0.0005				
3/12/2019	<0.0005		0.00013 (J)	<0.0005		
4/1/2019				<0.0005		
4/2/2019	<0.0005		0.00015 (J)			
8/22/2019		<0.0005				
9/23/2019	<0.0005		<0.0025	<0.0005		
3/2/2020	<0.0005		<0.0025	<0.0005		
3/25/2020	<0.0005		0.00014 (J)	<0.0005		
8/24/2020		<0.0005				
8/25/2020			<0.0025	<0.0005		
8/28/2020	<0.0005					
9/15/2020	<0.0005		0.00012 (J)	<0.0005		
9/16/2020					<0.0005	<0.0005
11/10/2020					<0.0005	<0.0005
12/15/2020					<0.0005	<0.0005
1/19/2021					<0.0005	<0.0005
8/11/2021	<0.0005				<0.0005	
8/12/2021			0.00014 (J)	<0.0005		
8/13/2021		<0.0005				<0.0005
2/1/2022	<0.0005	<0.0005	0.00017 (J)	<0.0005	<0.0005	<0.0005
8/2/2022	<0.0005	<0.0005	0.00023 (J)	<0.0005	<0.0005	<0.0005
1/23/2023				<0.0005		
1/24/2023	<0.0005	<0.0005	0.00021 (J)		<0.0005	<0.0005
8/8/2023	<0.0005	<0.0005	0.00026 (J)	<0.0005	<0.0005	<0.0005
2/13/2024	<0.0005	<0.0005	0.00027 (J)	<0.0005	<0.0005	<0.0005
8/5/2024	<0.0005		0.00026 (J)	<0.0005		
8/6/2024		<0.0005			<0.0005	<0.0005

Time Series

Constituent: Cadmium (mg/L) Analysis Run 10/22/2024 11:43 AM
Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWA-45D (bg)	HGWC-120	HGWC-121A	HGWC-124	HGWC-125	HGWC-126
8/31/2016		<0.0005	<0.0005	<0.0005		
10/26/2016		<0.0005		<0.0005		
11/7/2016			<0.0005			
1/13/2017			<0.0005			
1/27/2017		<0.0005		<0.0005		
5/25/2017		<0.0005		<0.0005		
6/3/2017			<0.0005			
8/11/2017				<0.0005		
10/2/2017		<0.0005	<0.0005			
11/15/2017		<0.0005	<0.0005	<0.0005		
6/5/2018		<0.0005	<0.0005	<0.0005		
10/2/2018		<0.0005		<0.0005		
10/5/2018			<0.0005			
8/22/2019		<0.0005	<0.0005			
8/23/2019				<0.0005		
5/22/2020					<0.0005	<0.0005
6/16/2020					<0.0005	<0.0005
8/25/2020					<0.0005	<0.0005
8/26/2020		<0.0005	<0.0005			
8/27/2020				<0.0005		
9/18/2020						<0.0005
9/21/2020					<0.0005	
9/25/2020	<0.0005					
11/11/2020	<0.0005					<0.0005
11/12/2020					<0.0005	
12/16/2020	<0.0005				<0.0005	<0.0005
1/20/2021	<0.0005				<0.0005	<0.0005
8/13/2021	<0.0005					
8/16/2021		<0.0005	<0.0005	<0.0005		
8/19/2021					<0.0005	<0.0005
2/1/2022	<0.0005					
2/2/2022		<0.0005	<0.0005	<0.0005		
2/3/2022					<0.0005	<0.0005
8/2/2022	<0.0005					
8/4/2022		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
1/24/2023	<0.0005		<0.0005	<0.0005		
1/25/2023		<0.0005			<0.0005	<0.0005
8/8/2023	<0.0005					
8/10/2023		<0.0005	<0.0005		<0.0005	
8/11/2023				<0.0005		<0.0005
2/13/2024	<0.0005					
2/14/2024					<0.0005	<0.0005
2/15/2024		<0.0005	<0.0005			
2/16/2024				<0.0005		
8/6/2024	<0.0005		<0.0005			
8/7/2024		<0.0005		<0.0005	<0.0005	<0.0005

Time Series

Constituent: Calcium (mg/L) Analysis Run 10/22/2024 11:43 AM
Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWA-1 (bg)	HGWA-122 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-43D (bg)	HGWA-44D (bg)
5/19/2016	138		22.9	76.2		
7/11/2016	97.2		22.3			
7/12/2016				61.5		
8/30/2016	97.5	71.3	26.4	65.1		
10/19/2016	99.2		21.7	73.2		
10/20/2016		90.3				
12/6/2016	105		18.2	74.9		
1/24/2017	95.7		18.5	69.6		
1/25/2017		77.3				
3/21/2017	106		18.6	75.7		
5/22/2017	107		17.8	71.5		
5/25/2017		69.9				
8/11/2017		79.5				
10/3/2017	102		20.2	76.3		
11/15/2017		72.8				
6/4/2018	124		19.1	73.4		
6/5/2018		71.4				
10/1/2018	108		20.5 (J)	80.9		
10/2/2018		66.6				
4/1/2019				80.5		
4/2/2019	132	60.9	22.5 (J)			
6/18/2019		75				
9/23/2019	118		19.5	71		
10/21/2019		80.8				
3/24/2020		81.2				
3/25/2020	127		23	89.8		
6/16/2020	130			85.1		
9/15/2020	103	75.8	21.1	73.1		
9/16/2020					56	30
11/10/2020					63.3	33.6
12/15/2020					62.6	28.7
1/19/2021					60.1	33
3/10/2021	111					18.3
3/11/2021		60.4 (M1)	43.8	83.8	59.6	
8/11/2021	113				61	
8/12/2021			21.9	84		
8/13/2021		62.9				28.9
2/1/2022	106	57.5	27.2	85.1	55.9	24.8
8/2/2022	117	69.5	31.2	84.6	54.1	20.9
1/23/2023				85		
1/24/2023	117	63.3	29.4		56.6	13.2
8/8/2023	118	64.4	30.7	78.3	52.8	8.1
2/13/2024	116	61.9	38.8	83.6	53.3	9.9
8/5/2024	113		34.7	83.3		
8/6/2024		73.7			57.2	7.1

Time Series

Constituent: Calcium (mg/L) Analysis Run 10/22/2024 11:43 AM
Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWA-45D (bg)	HGWC-120	HGWC-121A	HGWC-124	HGWC-125	HGWC-126
8/31/2016		152	178	90.4		
10/26/2016		156		94.5		
11/7/2016			170			
1/13/2017			192			
1/27/2017		157		84.2		
5/25/2017		173		100		
6/3/2017			172			
8/11/2017				99.1		
10/2/2017		168	195			
11/15/2017		182	184	103		
6/5/2018		161	195	103		
10/2/2018		174		100		
10/5/2018			181			
4/2/2019		150				
4/3/2019			184	96.7		
6/17/2019		164	173			
6/18/2019				97.1		
10/21/2019			173	96.9		
10/22/2019		171				
3/24/2020				104		
3/25/2020		170	139			
5/22/2020					140	112
6/15/2020		175				
6/16/2020					178	131
8/25/2020					186	130
9/18/2020						119
9/21/2020		152			155	
9/25/2020	56.8					
9/28/2020			167	107		
11/11/2020	54.9					133
11/12/2020					165	
12/16/2020	56.4				194	132
1/20/2021	55				177 (M1)	131
3/12/2021	56.5	174			165	138
3/15/2021			167	103		
8/13/2021	53					
8/16/2021		171	162	106		
8/19/2021					196	139
2/1/2022	51.3					
2/2/2022		159	148	95.9		
2/3/2022					175	157
8/2/2022	49.9					
8/4/2022		173	160	103	170	141
1/24/2023	53.9		156	96.2		
1/25/2023		161			174	132
8/8/2023	48.1					
8/10/2023		171	149		173	
8/11/2023				97.8		131
2/13/2024	50.7					
2/14/2024					180	137
2/15/2024		165	143			
2/16/2024				89.2		

Time Series

Constituent: Calcium (mg/L) Analysis Run 10/22/2024 11:43 AM
Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWA-45D (bg)	HGWC-120	HGWC-121A	HGWC-124	HGWC-125	HGWC-126
8/6/2024	53.3		152			
8/7/2024		154		97.7	159	136

Time Series

Constituent: Chloride (mg/L) Analysis Run 10/22/2024 11:43 AM
Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWA-1 (bg)	HGWA-122 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-43D (bg)	HGWA-44D (bg)
5/19/2016	9.94		6.14	5.93		
7/11/2016	6.3		5.9			
7/12/2016				6.2		
8/30/2016	6	2.8	6.2	6.4		
10/19/2016	5.8		6.1	6.5		
10/20/2016		2.8				
12/6/2016	5.4		6	7.2		
1/24/2017	5.2		6.1	6.4		
1/25/2017		2.8				
3/21/2017	4.6		5.9	7.5		
5/22/2017	4.6		5.9	6.5		
5/25/2017		2.9				
8/11/2017		3				
10/3/2017	5.6		6.3	6.5		
11/15/2017		3.1				
6/4/2018	13.1		6.1	6.3		
6/5/2018		3				
10/1/2018	6.6		6.4	6.4		
10/2/2018		3.1				
4/1/2019				6.5		
4/2/2019	20.3	3.6	5.8			
6/18/2019		3.2				
9/23/2019	17.7		5.1	5.9		
10/21/2019		4.5				
3/24/2020		4.5				
3/25/2020	20.4		5.2	6.1		
6/16/2020	41.1			5.8		
9/15/2020	13.4	3.6	5	6		
9/16/2020					4.1	4.1
11/10/2020					4.4	7.8
12/15/2020					4.7	9.4
1/19/2021					4.1	9.5
3/10/2021	7.4					12.3
3/11/2021		2.3	5.1	5.9	4.5	
8/11/2021	9.6				3.5	
8/12/2021			5.2	4.8		
8/13/2021		2.6				39.9
2/1/2022	7.5	2.2	7	5.7	4.1	44.8
8/2/2022	14.1	2.7	7.8	5.9	4.3	19.8
1/23/2023				5.6		
1/24/2023	9	2.4	7.1		4.3	24.9
8/8/2023	26	2.2	6.6	5.3	3.5	27
2/13/2024	10	2.4	6.3	5.3	3.9	27.7
8/5/2024	8.7		7.9	5.2		
8/6/2024		2.1			4	30.2

Time Series

Constituent: Chloride (mg/L) Analysis Run 10/22/2024 11:43 AM
Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWA-45D (bg)	HGWC-120	HGWC-121A	HGWC-124	HGWC-125	HGWC-126
8/31/2016		3.5	64	3		
10/26/2016		3.6		3.6		
11/7/2016			65			
1/13/2017			50			
1/27/2017		3.3		4		
5/25/2017		3.4		3.5		
6/3/2017			43			
8/11/2017				2.9		
10/2/2017		4.2	42			
11/15/2017		2.9	46	3.1		
6/5/2018		3.1	40.4	3.1		
10/2/2018		3.2		3.4		
10/5/2018			39			
4/2/2019		3.1				
4/3/2019			35.9	3.4		
6/17/2019			32.9			
6/18/2019				2.3 (J)		
10/21/2019			29.9	3.6		
10/22/2019		3.4				
3/24/2020				2.7		
3/25/2020		2.4	16.3			
5/22/2020					12.9	8.6
6/15/2020		2.3				
6/16/2020					10.4	8.6
8/25/2020					10.6	8.7
9/18/2020						8.4
9/21/2020		2.4			12.1	
9/25/2020	3.6					
9/28/2020			23.2	2.5		
11/11/2020	3.3					8.3
11/12/2020					10.4	
12/16/2020	3.4				5.3	8.9
1/20/2021	3.5				10.2	8.5
3/12/2021	3.3	2.4			10.8	8.5
3/15/2021			21.8	2.9		
8/13/2021	3.3					
8/16/2021		2.4	18	2.6		
8/19/2021					4.5	7.8
2/1/2022	3.5					
2/2/2022		2.5	16.8	2.6		
2/3/2022					8.1	8.5
8/2/2022	3.9					
8/4/2022		2.7	15.4	2.6	11.6	8.7
1/24/2023	3.5		14.6	2.5		
1/25/2023		2.6			8.7	8.7
8/8/2023	3.6					
8/10/2023		2.6	12.2		9	
8/11/2023				2.1		8.1
2/13/2024	3.4					
2/14/2024					3.5	8.4
2/15/2024		2.5	9.4			
2/16/2024				2.2		

Time Series

Constituent: Chloride (mg/L) Analysis Run 10/22/2024 11:43 AM
Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWA-45D (bg)	HGWC-120	HGWC-121A	HGWC-124	HGWC-125	HGWC-126
8/6/2024	3.6		11.6			
8/7/2024		2.6		2.2	9.7	8.7

Time Series

Constituent: Chromium (mg/L) Analysis Run 10/22/2024 11:43 AM
Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWA-1 (bg)	HGWA-122 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-43D (bg)	HGWA-44D (bg)
5/19/2016	<0.005		<0.005	<0.005		
7/11/2016	<0.005		<0.005			
7/12/2016				<0.005		
8/30/2016	<0.005	<0.005	<0.005	<0.005		
10/19/2016	<0.005		<0.005	<0.005		
10/20/2016		<0.005				
12/6/2016	<0.005		<0.005	<0.005		
1/24/2017	<0.005		<0.005	<0.005		
1/25/2017		<0.005				
3/21/2017	0.0005 (J)		<0.005	<0.005		
5/22/2017	<0.005		<0.005	0.0007 (J)		
5/25/2017		0.0006 (J)				
8/11/2017		0.0007 (J)				
11/15/2017		0.0006 (J)				
4/2/2018	<0.005		<0.005			
4/3/2018				<0.005		
6/5/2018		<0.005				
10/2/2018		<0.005				
3/12/2019	<0.005		<0.005	<0.005		
4/1/2019				<0.005		
4/2/2019	<0.005		0.0079 (J)			
8/22/2019		0.0006 (J)				
9/23/2019	<0.005		0.00058 (J)	<0.005		
10/21/2019		0.00068 (J)				
3/2/2020	<0.005		0.00041 (J)	<0.005		
3/24/2020		0.0013 (J)				
3/25/2020	0.00072 (J)		<0.005	<0.005		
8/24/2020		0.00093 (J)				
8/25/2020			0.00067 (J)	<0.005		
8/28/2020	<0.005					
9/15/2020	<0.005	0.00067 (J)	<0.005	<0.005		
9/16/2020					<0.005	0.0012 (J)
11/10/2020					<0.005	0.00089 (J)
12/15/2020					<0.005	0.00072 (J)
1/19/2021					<0.005	<0.005
3/10/2021	<0.005					<0.005
3/11/2021		0.0017 (J)	<0.005	<0.005	<0.005	
8/11/2021	<0.005				<0.005	
8/12/2021			<0.005	<0.005		
8/13/2021		<0.005				0.0016 (J)
2/1/2022	<0.005	<0.005	<0.005	<0.005	<0.005	0.0013 (J)
8/2/2022	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
1/23/2023				<0.005		
1/24/2023	<0.005	<0.005	<0.005		<0.005	<0.005
8/8/2023	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
2/13/2024	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
8/5/2024	<0.005		<0.005	<0.005		
8/6/2024		<0.005			<0.005	<0.005

Time Series

Constituent: Chromium (mg/L) Analysis Run 10/22/2024 11:43 AM
Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWA-45D (bg)	HGWC-120	HGWC-121A	HGWC-124	HGWC-125	HGWC-126
8/31/2016		<0.005	<0.005	<0.005		
10/26/2016		<0.005		<0.005		
11/7/2016			<0.005			
1/13/2017			<0.005			
1/27/2017		<0.005		<0.005		
5/25/2017		<0.005		<0.005		
6/3/2017			<0.005			
8/11/2017				<0.005		
10/2/2017		<0.005	<0.005			
11/15/2017		<0.005	<0.005	<0.005		
6/5/2018		<0.005	<0.005	<0.005		
10/2/2018		<0.005		<0.005		
10/5/2018			<0.005			
8/22/2019		0.00072 (J)	<0.005			
8/23/2019				<0.005		
10/21/2019			<0.005	0.00046 (J)		
10/22/2019		<0.005				
3/24/2020				0.00051 (J)		
3/25/2020		0.0015 (J)	0.0005 (J)			
5/22/2020					0.00058 (J)	<0.005
6/16/2020					0.00052 (J)	<0.005
8/25/2020					<0.005	0.00096 (J)
8/26/2020		<0.005	<0.005			
8/27/2020				<0.005		
9/18/2020						<0.005
9/21/2020		0.00065 (J)			<0.005	
9/25/2020	<0.005					
9/28/2020			<0.005	<0.005		
11/1/2020	<0.005					<0.005
11/12/2020					<0.005	
12/16/2020	<0.005				<0.005	<0.005
1/20/2021	0.00067 (J)				0.00081 (J)	<0.005
3/12/2021	<0.005	<0.005			<0.005	<0.005
3/15/2021			<0.005	<0.005		
8/13/2021	<0.005					
8/16/2021		<0.005	<0.005	<0.005		
8/19/2021					<0.005	<0.005
2/1/2022	<0.005					
2/2/2022		<0.005	<0.005	<0.005		
2/3/2022					<0.005	<0.005
8/2/2022	<0.005					
8/4/2022		<0.005	<0.005	<0.005	<0.005	<0.005
1/24/2023	<0.005		<0.005	<0.005		
1/25/2023		<0.005			<0.005	0.0014 (J)
8/8/2023	<0.005					
8/10/2023		<0.005	<0.005		<0.005	
8/11/2023				<0.005		<0.005
2/13/2024	<0.005					
2/14/2024					<0.005	<0.005
2/15/2024		<0.005	<0.005			
2/16/2024				<0.005		
8/6/2024	<0.005		<0.005			

Time Series

Constituent: Chromium (mg/L) Analysis Run 10/22/2024 11:43 AM
Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWA-45D (bg)	HGWC-120	HGWC-121A	HGWC-124	HGWC-125	HGWC-126
8/7/2024		<0.005		<0.005	<0.005	<0.005

Time Series

Constituent: Cobalt (mg/L) Analysis Run 10/22/2024 11:43 AM
Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWA-1 (bg)	HGWA-122 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-43D (bg)	HGWA-44D (bg)
5/19/2016	<0.005		0.0293	<0.005		
7/11/2016	0.0004 (J)		0.0267			
7/12/2016				<0.005		
8/30/2016	<0.005	<0.005	0.028	<0.005		
10/19/2016	<0.005		0.0201	<0.005		
10/20/2016		<0.005				
12/6/2016	<0.005		0.0184	<0.005		
1/24/2017	<0.005		0.0206	<0.005		
1/25/2017		<0.005				
3/21/2017	<0.005		0.0251	<0.005		
5/22/2017	<0.005		0.0263	<0.005		
5/25/2017		<0.005				
8/11/2017		<0.005				
11/15/2017		<0.005				
4/2/2018	<0.005		0.019			
4/3/2018				<0.005		
6/4/2018	<0.005		0.025	<0.005		
6/5/2018		<0.005				
10/1/2018	<0.005		0.026	<0.005		
10/2/2018		<0.005				
3/12/2019	<0.005		0.017	<0.005		
4/1/2019				<0.005		
4/2/2019	<0.005		0.019			
8/22/2019		<0.005				
9/23/2019	<0.005		0.038	<0.005		
10/21/2019		<0.005				
3/2/2020	<0.005		0.019	<0.005		
3/24/2020		<0.005				
3/25/2020	<0.005		0.02	<0.005		
8/24/2020		<0.005				
8/25/2020			0.018	<0.005		
8/28/2020	<0.005					
9/15/2020	<0.005	<0.005	0.021	<0.005		
9/16/2020					<0.005	<0.005
11/10/2020					<0.005	<0.005
12/15/2020					<0.005	<0.005
1/19/2021					<0.005	<0.005
3/10/2021	<0.005					<0.005
3/11/2021		<0.005	0.013	<0.005	<0.005	
8/11/2021	<0.005				<0.005	
8/12/2021			0.022	<0.005		
8/13/2021		<0.005				<0.005
2/1/2022	<0.005	<0.005	0.025	<0.005	<0.005	<0.005
8/2/2022	0.00054 (J)	<0.005	0.024	<0.005	<0.005	<0.005
1/23/2023				<0.005		
1/24/2023	<0.005	<0.005	0.024		<0.005	<0.005
8/8/2023	0.0008 (J)	<0.005	0.029	<0.005	<0.005	<0.005
2/13/2024	<0.005	<0.005	0.022	<0.005	<0.005	<0.005
8/5/2024	0.00055 (J)		0.032	<0.005		
8/6/2024		<0.005			<0.005	<0.005

Time Series

Constituent: Cobalt (mg/L) Analysis Run 10/22/2024 11:43 AM
Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWA-45D (bg)	HGWC-120	HGWC-121A	HGWC-124	HGWC-125	HGWC-126
8/31/2016		0.0052 (J)	<0.005	<0.005		
10/26/2016		0.0041 (J)		<0.005		
11/7/2016			<0.005			
1/13/2017			<0.005			
1/27/2017		0.0034 (J)		<0.005		
5/25/2017		0.0035 (J)		<0.005		
6/3/2017			0.0005 (J)			
8/11/2017				<0.005		
10/2/2017		0.0036 (J)	0.0003 (J)			
11/15/2017		0.0032 (J)	0.0003 (J)	<0.005		
6/5/2018		0.0031 (J)	<0.005	<0.005		
10/2/2018		0.0025 (J)		<0.005		
10/5/2018			<0.005			
8/22/2019		0.0028 (J)	<0.005			
8/23/2019				<0.005		
10/21/2019			<0.005	<0.005		
10/22/2019		0.0031 (J)				
3/24/2020				<0.005		
3/25/2020		0.0036 (J)	<0.005			
5/22/2020					0.01	<0.005
6/16/2020					0.0096	<0.005
8/25/2020					0.0087	<0.005
8/26/2020		0.0023 (J)	<0.005			
8/27/2020				<0.005		
9/18/2020						<0.005
9/21/2020		0.0041 (J)			0.012	
9/25/2020	<0.005					
9/28/2020			<0.005	<0.005		
11/11/2020	<0.005					<0.005
11/12/2020					0.012	
12/16/2020	<0.005				0.0055	<0.005
1/20/2021	<0.005				0.012	<0.005
3/12/2021	<0.005	0.0027 (J)			0.014	<0.005
3/15/2021			<0.005	<0.005		
8/13/2021	<0.005					
8/16/2021		0.0037 (J)	<0.005	<0.005		
8/19/2021					0.0054	<0.005
2/1/2022	<0.005					
2/2/2022		0.0072	<0.005	<0.005		
2/3/2022					0.0086	<0.005
8/2/2022	<0.005					
8/4/2022		0.0058	<0.005	<0.005	0.014	<0.005
1/24/2023	<0.005		<0.005	<0.005		
1/25/2023		0.0055			0.0097	<0.005
8/8/2023	<0.005					
8/10/2023		0.0048 (J)	<0.005		0.012	
8/11/2023				<0.005		<0.005
2/13/2024	<0.005					
2/14/2024					0.004 (J)	<0.005
2/15/2024		0.005 (J)	<0.005			
2/16/2024				<0.005		
8/6/2024	<0.005		<0.005			

Time Series

Constituent: Cobalt (mg/L) Analysis Run 10/22/2024 11:43 AM
Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWA-45D (bg)	HGWC-120	HGWC-121A	HGWC-124	HGWC-125	HGWC-126
8/7/2024		0.0064		<0.005	0.012	<0.005

Time Series

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 10/22/2024 11:43 AM

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

	HGWA-1 (bg)	HGWA-122 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-43D (bg)	HGWA-44D (bg)
5/19/2016	0.397 (U)		0.627 (U)	0.342 (U)		
7/11/2016	0.738 (U)		1.38			
7/12/2016				0.499 (U)		
8/30/2016	0.581 (U)	0.972 (U)	1.05 (U)	0.976 (U)		
10/19/2016	0.213 (U)		1.11 (U)	0.626 (U)		
10/20/2016		0.496 (U)				
12/6/2016	0.444 (U)		0.741 (U)	0.805 (U)		
1/24/2017	0.373 (U)		0.908 (U)	0.336 (U)		
1/25/2017		1.13 (U)				
3/21/2017	0.816 (U)		0.567 (U)	0.358 (U)		
5/22/2017	0.554 (U)		0.638 (U)	0.744 (U)		
5/25/2017		0.192 (U)				
8/11/2017		0.908 (U)				
11/15/2017		0.662 (U)				
4/2/2018	0.405 (U)		0.761 (U)			
4/3/2018				0.684 (U)		
6/4/2018	1.13 (U)		0.975 (U)	0.0291 (U)		
6/5/2018		0.593 (U)				
10/1/2018	0.132 (U)		0.434 (U)	0.781 (U)		
10/2/2018		1.37				
3/12/2019	0.327 (U)		0.454 (U)	1.01 (U)		
4/1/2019				0.76 (U)		
4/2/2019	0.739 (U)		0.651 (U)			
8/22/2019		1.19 (U)				
9/30/2019	0.306 (U)		1.04 (U)	0.384 (U)		
10/21/2019		0.772 (U)				
3/2/2020	0.61 (U)		1.58	0.249 (U)		
3/24/2020		0.379 (U)				
3/25/2020	4.36		0.621 (U)	0.833 (U)		
8/24/2020		0.883 (U)				
8/25/2020			0.778 (U)	0.33 (U)		
8/28/2020	0 (U)					
9/15/2020	0.748 (U)	0.375 (U)	0.124 (U)	0.161 (U)		
9/16/2020					0.531 (U)	0.422 (U)
11/10/2020					0.788 (U)	0.293 (U)
12/15/2020					1.04 (U)	0.7 (U)
1/19/2021					0.685 (U)	0.79 (U)
8/11/2021	0.115 (U)				0.394 (U)	
8/12/2021			0.746 (U)	0.498 (U)		
8/13/2021		0.914 (U)				0.959 (U)
2/1/2022	0.143 (U)	0.276 (U)	0.588 (U)	0.266 (U)	1.12	0.665 (U)
8/2/2022	0.203 (U)	0.573 (U)	0.861 (U)	0.4 (U)	0.662 (U)	0.952 (U)
1/23/2023				0.311 (U)		
1/24/2023	0.549 (U)	0.442 (U)	0.829 (U)		1.25	0.421 (U)
8/8/2023	0.195 (U)	0.892 (U)	0.175 (U)	0.411 (U)	0.503 (U)	0.163 (U)
2/13/2024	0.194 (U)		0.325 (U)	0.213 (U)	0.86 (U)	0.909
5/3/2024		0.636 (U)				
8/5/2024	0.64 (U)		1.27	0.371 (U)		
8/6/2024		0.661 (U)			0.674 (U)	0.529 (U)

Time Series

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 10/22/2024 11:43 AM

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

	HGWA-45D (bg)	HGWC-120	HGWC-121A	HGWC-124	HGWC-125	HGWC-126
8/31/2016		1.47	1.57	1.22		
10/26/2016		0.864 (U)		0.637 (U)		
11/7/2016			0.739 (U)			
1/13/2017			0.744 (U)			
1/27/2017		0.521 (U)		0.795 (U)		
5/25/2017		0.681 (U)		0.896 (U)		
6/3/2017			0 (U)			
8/11/2017				0.828 (U)		
10/2/2017		0.632 (U)	0.68 (U)			
11/15/2017		1.3	0.911 (U)	0.478 (U)		
6/5/2018		1.26 (U)	0.948 (U)	0.947 (U)		
10/2/2018		0.572 (U)		0.617 (U)		
10/5/2018			1.17 (U)			
8/22/2019		1.35	1.3			
8/23/2019				0.834		
10/21/2019			0.393 (U)	1.11 (U)		
10/22/2019		0.76 (U)				
3/24/2020				0.796 (U)		
3/25/2020		0.696 (U)	0.505 (U)			
5/22/2020					1.1 (U)	1.82
6/16/2020					1.62	1.82
8/25/2020					1.65	1.82
8/26/2020		0.357 (U)	1.96			
8/27/2020				0.494 (U)		
9/18/2020						0.841 (U)
9/21/2020		0.553 (U)			1.45	
9/25/2020	1.07 (U)					
9/28/2020			0.761 (U)	0.477 (U)		
11/11/2020	0.49 (U)					0.837 (U)
11/12/2020					0.633 (U)	
12/16/2020	0.963 (U)				0.818 (U)	1.26 (U)
1/20/2021	0.682 (U)				1.01 (U)	0.985 (U)
8/13/2021	1.2					
8/16/2021		1.25	0.192 (U)	0.734 (U)		
8/19/2021					0.721 (U)	1.11
2/1/2022	0.895					
2/2/2022		0.816 (U)	0.254 (U)	0.564 (U)		
2/3/2022					0.257 (U)	1.51
8/2/2022	0.509 (U)					
8/4/2022		0.687 (U)	1.16 (U)	0.16 (U)	0.971 (U)	1.34 (U)
1/24/2023	0.743 (U)		0.757 (U)	0.601 (U)		
1/25/2023		0.992			1.11	1.91
8/8/2023	1.54					
8/10/2023		0.682 (U)	0.585 (U)		0.953 (U)	
8/11/2023				0.449 (U)		1.34
2/13/2024	3.15					
2/14/2024					0.275 (U)	1.01 (U)
2/15/2024		0.669 (U)	0.0885 (U)			
2/16/2024				0.448 (U)		
8/6/2024	1.76		1.27			
8/7/2024		0.679 (U)		0.422 (U)	0.603 (U)	0.662 (U)

Time Series

Constituent: Fluoride (mg/L) Analysis Run 10/22/2024 11:43 AM
Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWA-1 (bg)	HGWA-122 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-43D (bg)	HGWA-44D (bg)
5/19/2016	0.105 (J)		0.0303 (J)	0.0513 (J)		
7/11/2016	0.16 (J)		0.05 (J)			
7/12/2016				0.12 (J)		
8/30/2016	0.09 (J)	0.19 (J)	0.06 (J)	0.09 (J)		
10/19/2016	0.1 (J)		0.04 (J)	0.1 (J)		
10/20/2016		0.13 (J)				
12/6/2016	0.11 (J)		0.36	0.21 (J)		
1/24/2017	0.09 (J)		<0.1	0.06 (J)		
1/25/2017		0.22 (J)				
3/21/2017	0.13 (J)		<0.1	0.005 (J)		
5/22/2017	0.12 (J)		<0.1	0.05 (J)		
5/25/2017		0.12 (J)				
8/11/2017		0.12 (J)				
10/3/2017	0.13 (J)		<0.1	0.13 (J)		
11/15/2017		0.05 (J)				
4/2/2018	<0.3		<0.1			
4/3/2018				<0.1		
6/4/2018	0.074 (J)		<0.1	<0.1		
6/5/2018		0.15 (J)				
10/1/2018	<0.3		<0.1	<0.1		
10/2/2018		0.22 (J)				
3/12/2019	0.29 (J)		0.038 (J)	0.072 (J)		
4/1/2019				0.029 (J)		
4/2/2019	0.1 (J)	0.2 (J)	0.071 (J)			
6/18/2019		0.14 (J)				
8/22/2019		0.12 (J)				
9/23/2019	0.078 (J)		<0.1	<0.1		
10/21/2019		0.15 (J)				
3/2/2020	0.076 (J)		<0.1	<0.1		
3/24/2020		0.085 (J)				
3/25/2020	0.098 (J)		<0.1	<0.1		
6/16/2020	0.071 (J)			<0.1		
8/24/2020		0.075 (J)				
8/25/2020			<0.1	<0.1		
8/28/2020	0.08 (J)					
9/15/2020	0.082 (J)	0.096 (J)	<0.1	<0.1		
9/16/2020					0.22	0.22
11/10/2020					0.19	0.59
12/15/2020					0.21	0.67
1/19/2021					0.16	0.74
3/10/2021	0.079 (J)					0.65
3/11/2021		0.059 (J)	0.1	<0.1	0.2	
8/11/2021	0.058 (J)				0.15	
8/12/2021			<0.1	<0.1		
8/13/2021		0.065 (J)				0.87
2/1/2022	0.064 (J)	0.062 (J)	<0.1	<0.1	0.19	0.96
8/2/2022	0.09 (J)	0.1	0.053 (J)	0.067 (J)	0.22	0.8
1/23/2023				0.061 (J)		
1/24/2023	0.089 (J)	0.13	0.053 (J)		0.23	1.3
8/8/2023	0.088 (J)	0.091 (J)	0.07 (J)	0.055 (J)	0.18	1.3
2/13/2024	0.071 (J)	0.081 (J)	0.17	<0.1	0.2	1.5
8/5/2024	0.11		0.12	0.077 (J)		

Time Series

Constituent: Fluoride (mg/L) Analysis Run 10/22/2024 11:43 AM
Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWA-1 (bg)	HGWA-122 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-43D (bg)	HGWA-44D (bg)
8/6/2024		0.14			0.21	1.3

Time Series

Constituent: Fluoride (mg/L) Analysis Run 10/22/2024 11:43 AM
Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWA-45D (bg)	HGWC-120	HGWC-121A	HGWC-124	HGWC-125	HGWC-126
8/31/2016		0.65	0.14 (J)	0.15 (J)		
10/26/2016		0.6		0.3		
11/7/2016			0.18 (J)			
1/13/2017			0.14 (J)			
1/27/2017		1.2		0.3		
5/25/2017		1.4		0.05 (J)		
6/3/2017			0.15 (J)			
8/11/2017				0.1 (J)		
10/2/2017		1	1.2			
11/15/2017		1.3	0.6	<0.1		
6/5/2018		0.48	0.19 (J)	0.078 (J)		
10/2/2018		0.34		0.078 (J)		
10/5/2018			0.23 (J)			
4/2/2019		0.47				
4/3/2019			0.14 (J)	0.089 (J)		
6/17/2019		1.2				
8/22/2019		0.3 (J)	0.2 (J)			
8/23/2019				0.11 (J)		
10/21/2019			0.18 (J)	0.073 (J)		
10/22/2019		0.53				
3/24/2020				<0.1		
3/25/2020		0.43	0.095 (J)			
5/22/2020					0.1 (J)	0.46
6/15/2020		0.37				
6/16/2020					0.12	0.44
8/25/2020					0.16	0.52
8/26/2020		0.48	0.16			
8/27/2020				<0.1		
9/18/2020						0.43
9/21/2020		0.33			0.11	
9/25/2020	0.21					
9/28/2020			0.15	<0.1		
11/11/2020	0.19					0.45
11/12/2020					0.12	
12/16/2020	0.18				0.2	0.49
1/20/2021	0.22				0.13	0.44
3/12/2021	0.2	0.42			0.12	0.46
3/15/2021			0.16	<0.1		
8/13/2021	0.2					
8/16/2021		0.39	0.15	<0.1		
8/19/2021					0.17	0.43
2/1/2022	0.15					
2/2/2022		0.36	0.15	<0.1		
2/3/2022					0.18	0.51
8/2/2022	0.21					
8/4/2022		0.38	0.18	0.074 (J)	0.15	0.5
1/24/2023	0.19		0.18	0.068 (J)		
1/25/2023		0.42			0.17	0.57
8/8/2023	0.19					
8/10/2023		0.36	0.18		0.15	
8/11/2023				<0.1		0.49
2/13/2024	0.17					

Time Series

Constituent: Fluoride (mg/L) Analysis Run 10/22/2024 11:43 AM
Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWA-45D (bg)	HGWC-120	HGWC-121A	HGWC-124	HGWC-125	HGWC-126
2/14/2024					0.2	0.49
2/15/2024		0.35	0.18			
2/16/2024				<0.1		
8/6/2024	0.2		0.2			
8/7/2024		0.34		<0.1	0.12	0.5

Time Series

Constituent: Lead (mg/L) Analysis Run 10/22/2024 11:43 AM
Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWA-1 (bg)	HGWA-122 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-43D (bg)	HGWA-44D (bg)
5/19/2016	<0.001		<0.001	<0.001		
7/11/2016	<0.001		<0.001			
7/12/2016				0.0001 (J)		
8/30/2016	<0.001	<0.001	<0.001	<0.001		
10/19/2016	<0.001		<0.001	<0.001		
10/20/2016		<0.001				
12/6/2016	<0.001		<0.001	<0.001		
1/24/2017	<0.001		<0.001	<0.001		
1/25/2017		<0.001				
3/21/2017	<0.001		6E-05 (J)	0.0001 (J)		
5/22/2017	<0.001		9E-05 (J)	<0.001		
5/25/2017		<0.001				
8/11/2017		0.0001 (J)				
11/15/2017		0.0002 (J)				
4/2/2018	<0.001		<0.001			
4/3/2018				<0.001		
6/5/2018		<0.001				
10/2/2018		<0.001				
3/12/2019	<0.001		<0.001	<0.001		
4/1/2019				<0.001		
4/2/2019	<0.001		<0.001			
8/22/2019		<0.001				
9/23/2019	7.8E-05 (J)		9.2E-05 (J)	<0.001		
10/21/2019		9.7E-05 (J)				
3/2/2020	4.8E-05 (J)		9.5E-05 (J)	<0.001		
3/24/2020		0.00012 (J)				
3/25/2020	<0.001		0.00011 (J)	<0.001		
8/24/2020		7.7E-05 (J)				
8/25/2020			8.5E-05 (J)	<0.001		
8/28/2020	7E-05 (J)					
9/15/2020	<0.001	4.3E-05 (J)	8E-05 (J)	4.2E-05 (J)		
9/16/2020					5E-05 (J)	0.00021 (J)
11/10/2020					6.9E-05 (J)	0.0002 (J)
12/15/2020					8.2E-05 (J)	0.00011 (J)
1/19/2021					4.4E-05 (J)	<0.001
3/10/2021	<0.001					<0.001
3/11/2021		9.3E-05 (J)	7.6E-05 (J)	<0.001	9.4E-05 (J)	
8/11/2021	<0.001				<0.001	
8/12/2021			<0.001	<0.001		
8/13/2021		<0.001				<0.001
2/1/2022	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
8/2/2022	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
1/23/2023				<0.001		
1/24/2023	<0.001	<0.001	<0.001		<0.001	<0.001
8/8/2023	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
2/13/2024	<0.001	<0.001	0.00018 (J)	<0.001	<0.001	<0.001
8/5/2024	<0.001		<0.001	<0.001		
8/6/2024		<0.001			<0.001	<0.001

Time Series

Constituent: Lead (mg/L) Analysis Run 10/22/2024 11:43 AM
Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWA-45D (bg)	HGWC-120	HGWC-121A	HGWC-124	HGWC-125	HGWC-126
8/31/2016		<0.001	<0.001	<0.001		
10/26/2016		0.0002 (J)		<0.001		
11/7/2016			<0.001			
1/13/2017			<0.001			
1/27/2017		<0.001		<0.001		
5/25/2017		9E-05 (J)		<0.001		
6/3/2017			7E-05 (J)			
8/11/2017				8E-05 (J)		
10/2/2017		8E-05 (J)	<0.001			
11/15/2017		<0.001	<0.001	<0.001		
6/5/2018		<0.001	0.00036 (J)	<0.001		
10/2/2018		<0.001		<0.001		
10/5/2018			<0.001			
8/22/2019		<0.001	<0.001			
8/23/2019				4.9E-05 (J)		
10/21/2019			<0.001	4.9E-05 (J)		
10/22/2019		<0.001				
3/24/2020				9.4E-05 (J)		
3/25/2020		<0.001	<0.001			
5/22/2020					0.00014 (J)	<0.001
6/16/2020					0.00013 (J)	<0.001
8/25/2020					<0.001	4.5E-05 (J)
8/26/2020		<0.001	<0.001			
8/27/2020				<0.001		
9/18/2020						<0.001
9/21/2020		<0.001			<0.001	
9/25/2020	<0.001					
9/28/2020			<0.001	7.5E-05 (J)		
11/11/2020	4E-05 (J)					4.2E-05 (J)
11/12/2020					4.7E-05 (J)	
12/16/2020	5.8E-05 (J)				<0.001	<0.001
1/20/2021	8.2E-05 (J)				9.2E-05 (J)	<0.001
3/12/2021	5.5E-05 (J)	<0.001			4.4E-05 (J)	4.6E-05 (J)
3/15/2021			0.00015 (J)	<0.001		
8/13/2021	<0.001					
8/16/2021		<0.001	<0.001	<0.001		
8/19/2021					<0.001	<0.001
2/1/2022	<0.001					
2/2/2022		<0.001	<0.001	<0.001		
2/3/2022					<0.001	<0.001
8/2/2022	<0.001					
8/4/2022		<0.001	<0.001	<0.001	<0.001	<0.001
1/24/2023	<0.001		<0.001	<0.001		
1/25/2023		<0.001			<0.001	<0.001
8/8/2023	<0.001					
8/10/2023		<0.001	<0.001		<0.001	
8/11/2023				<0.001		<0.001
2/13/2024	<0.001					
2/14/2024					<0.001	<0.001
2/15/2024		<0.001	<0.001			
2/16/2024				<0.001		
8/6/2024	<0.001		<0.001			

Time Series

Constituent: Lead (mg/L) Analysis Run 10/22/2024 11:43 AM
Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWA-45D (bg)	HGWC-120	HGWC-121A	HGWC-124	HGWC-125	HGWC-126
8/7/2024		<0.001		<0.001	<0.001	<0.001

Time Series

Constituent: Lithium (mg/L) Analysis Run 10/22/2024 11:43 AM
Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWA-1 (bg)	HGWA-122 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-43D (bg)	HGWA-44D (bg)
5/19/2016	<0.03		<0.03	<0.03		
7/11/2016	<0.03		0.0014 (J)			
7/12/2016				0.0024 (J)		
8/30/2016	<0.03	<0.03	<0.03	0.0025 (J)		
10/19/2016	<0.03		<0.03	0.003 (J)		
10/20/2016		<0.03				
12/6/2016	<0.03		<0.03	0.0033 (J)		
1/24/2017	<0.03		<0.03	0.003 (J)		
1/25/2017		<0.03				
3/21/2017	<0.03		0.0012 (J)	0.0034 (J)		
5/22/2017	<0.03		<0.03	0.003 (J)		
5/25/2017		<0.03				
8/11/2017		<0.03				
11/15/2017		<0.03				
4/2/2018	<0.03		0.0015 (J)			
4/3/2018				0.003 (J)		
6/4/2018	0.001 (J)		0.0016 (J)	0.0027 (J)		
6/5/2018		<0.03				
10/1/2018	0.00099 (J)		0.0013 (J)	0.0032 (J)		
10/2/2018		<0.03				
3/12/2019	0.001 (J)		0.0018 (J)	0.0032 (J)		
4/1/2019				0.0032 (J)		
4/2/2019	0.001 (J)		0.0018 (J)			
8/22/2019		<0.03				
9/23/2019	0.0011 (J)		0.0016 (J)	0.0029 (J)		
10/21/2019		<0.03				
3/2/2020	0.0012 (J)		0.0017 (J)	0.0037 (J)		
3/24/2020		<0.03				
3/25/2020	0.00083 (J)		0.0017 (J)	0.0035 (J)		
8/24/2020		<0.03				
8/25/2020			0.0015 (J)	0.0027 (J)		
8/28/2020	0.00087 (J)					
9/15/2020	0.00087 (J)	<0.03	0.0015 (J)	0.0026 (J)		
9/16/2020					0.0018 (J)	0.014 (J)
11/10/2020					0.0013 (J)	0.025 (J)
12/15/2020					0.0019 (J)	0.028 (J)
1/19/2021					0.0025 (J)	<0.03
3/10/2021	0.0009 (J)					0.03
3/11/2021		<0.03	0.0011 (J)	0.0035 (J)	0.0022 (J)	
8/11/2021	0.00078 (J)				0.0024 (J)	
8/12/2021			0.0012 (J)	0.0028 (J)		
8/13/2021		<0.03				0.032
2/1/2022	0.0011 (J)	<0.03	0.0017 (J)	0.0037 (J)	0.0024 (J)	0.048
8/2/2022	<0.03	<0.03	0.0013 (J)	0.003 (J)	0.0019 (J)	0.041
1/23/2023				0.003 (J)		
1/24/2023	0.00092 (J)	<0.03	0.0014 (J)		0.002 (J)	0.064
8/8/2023	<0.03	<0.03	0.0017 (J)	0.0031 (J)	0.0021 (J)	0.092 (o)
2/13/2024	<0.03	<0.03	0.0017 (J)	0.0034 (J)	0.0024 (J)	0.088 (o)
8/5/2024	<0.03		0.0019 (J)	0.0034 (J)		
8/6/2024		<0.03			0.0025 (J)	0.1 (o)

Time Series

Constituent: Lithium (mg/L) Analysis Run 10/22/2024 11:43 AM
Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWA-45D (bg)	HGWC-120	HGWC-121A	HGWC-124	HGWC-125	HGWC-126
8/31/2016		0.0333 (J)	0.0077 (J)	<0.03		
10/26/2016		0.0352 (J)		<0.03		
11/7/2016			0.0089 (J)			
1/13/2017			0.0091 (J)			
1/27/2017		0.0329 (J)		<0.03		
5/25/2017		0.0347 (J)		0.0011 (J)		
6/3/2017			0.0104 (J)			
8/11/2017				<0.03		
10/2/2017		0.0337 (J)	0.0095 (J)			
11/15/2017		0.0347 (J)	0.0086 (J)	<0.03		
6/5/2018		0.033 (J)	0.0092 (J)	0.0012 (J)		
10/2/2018		0.031 (J)		0.0012 (J)		
10/5/2018			0.0091 (J)			
8/22/2019		0.029 (J)	0.0084 (J)			
8/23/2019				0.0011 (J)		
10/21/2019			0.009 (J)	0.0011 (J)		
10/22/2019		0.03 (J)				
3/24/2020				0.0012 (J)		
3/25/2020		0.024 (J)	0.0066 (J)			
5/22/2020					0.0052 (J)	0.0046 (J)
6/16/2020					0.0053 (J)	0.0045 (J)
8/25/2020					0.0037 (J)	0.0037 (J)
8/26/2020		0.023 (J)	0.0071 (J)			
8/27/2020				0.00091 (J)		
9/18/2020						0.0035 (J)
9/21/2020		0.023 (J)			0.0038 (J)	
9/25/2020	0.0049 (J)					
9/28/2020			0.0076 (J)	0.0011 (J)		
11/11/2020	0.0032 (J)					0.0032 (J)
11/12/2020					0.0038 (J)	
12/16/2020	0.0045 (J)				0.0055 (J)	0.0029 (J)
1/20/2021	0.0025 (J)				0.0046 (J)	0.0038 (J)
3/12/2021	0.005 (J)	0.023 (J)			0.0039 (J)	0.0038 (J)
3/15/2021			0.0077 (J)	0.001 (J)		
8/13/2021	0.0044 (J)					
8/16/2021		0.025 (J)	0.0075 (J)	0.0011 (J)		
8/19/2021					0.0074 (J)	0.0032 (J)
2/1/2022	0.0055 (J)					
2/2/2022		0.025 (J)	0.0082 (J)	0.0012 (J)		
2/3/2022					0.0057 (J)	0.0038 (J)
8/2/2022	0.0045 (J)					
8/4/2022		0.023 (J)	0.0069 (J)	0.0011 (J)	0.0035 (J)	0.0034 (J)
1/24/2023	0.0044 (J)		0.0066 (J)	0.0011 (J)		
1/25/2023		0.018 (J)			0.0045 (J)	0.0046 (J)
8/8/2023	0.0049 (J)					
8/10/2023		0.023 (J)	0.0069 (J)		0.0042 (J)	
8/11/2023				0.00097 (J)		0.0041 (J)
2/13/2024	0.0052 (J)					
2/14/2024					0.0083 (J)	0.0041 (J)
2/15/2024		0.021 (J)	0.0056 (J)			
2/16/2024				<0.03		
8/6/2024	0.0048 (J)		0.0063 (J)			

Time Series

Constituent: Lithium (mg/L) Analysis Run 10/22/2024 11:43 AM
Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWA-45D (bg)	HGWC-120	HGWC-121A	HGWC-124	HGWC-125	HGWC-126
8/7/2024		0.023 (J)		<0.03	0.0038 (J)	0.0042 (J)

Time Series

Constituent: Mercury (mg/L) Analysis Run 10/22/2024 11:43 AM
Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWA-1 (bg)	HGWA-122 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-43D (bg)	HGWA-44D (bg)
5/19/2016	<0.0002		<0.0002	<0.0002		
7/11/2016	<0.0002		<0.0002			
7/12/2016				<0.0002		
8/30/2016	4E-05 (J)	4.3E-05 (J)	4E-05 (J)	<0.0002		
10/19/2016	<0.0002		<0.0002	<0.0002		
10/20/2016		<0.0002				
12/6/2016	<0.0002		<0.0002	<0.0002		
1/24/2017	<0.0002		<0.0002	<0.0002		
1/25/2017		4E-05 (J)				
3/21/2017	<0.0002		<0.0002	<0.0002		
5/22/2017	<0.0002		<0.0002	<0.0002		
5/25/2017		7E-05 (J)				
8/11/2017		<0.0002				
11/15/2017		<0.0002				
4/2/2018	<0.0002		<0.0002			
4/3/2018				<0.0002		
6/5/2018		<0.0002				
10/2/2018		<0.0002				
3/12/2019	<0.0002		<0.0002	<0.0002		
8/22/2019		<0.0002				
3/2/2020	<0.0002		<0.0002	<0.0002		
8/24/2020		<0.0002				
8/25/2020			<0.0002	<0.0002		
8/28/2020	<0.0002					
9/16/2020					<0.0002	<0.0002
11/10/2020					<0.0002	<0.0002
12/15/2020					<0.0002	<0.0002
1/19/2021					<0.0002	<0.0002
8/11/2021	<0.0002				<0.0002	
8/12/2021			<0.0002	<0.0002		
8/13/2021		<0.0002				<0.0002
2/1/2022	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
8/2/2022	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
1/23/2023				<0.0002		
1/24/2023	<0.0002	<0.0002	<0.0002		<0.0002	<0.0002
8/8/2023	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
2/13/2024	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
8/5/2024	<0.0002		<0.0002	<0.0002		
8/6/2024		<0.0002			<0.0002	<0.0002

Time Series

Constituent: Mercury (mg/L) Analysis Run 10/22/2024 11:43 AM
Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWA-45D (bg)	HGWC-120	HGWC-121A	HGWC-124	HGWC-125	HGWC-126
8/31/2016		4E-05 (J)	<0.0002	<0.0002		
10/26/2016		<0.0002		<0.0002		
11/7/2016			<0.0002			
1/13/2017			<0.0002			
1/27/2017		<0.0002		<0.0002		
5/25/2017		7E-05 (J)		5.1E-05 (J)		
6/3/2017			<0.0002			
8/11/2017				<0.0002		
10/2/2017		<0.0002	<0.0002			
11/15/2017		<0.0002	<0.0002	<0.0002		
6/5/2018		<0.0002	<0.0002	<0.0002		
10/2/2018		<0.0002		<0.0002		
10/5/2018			<0.0002			
8/22/2019		<0.0002	<0.0002			
8/23/2019				<0.0002		
5/22/2020					<0.0002	<0.0002
6/16/2020					<0.0002	<0.0002
8/25/2020					<0.0002	<0.0002
8/26/2020		<0.0002	<0.0002			
8/27/2020				<0.0002		
9/18/2020						<0.0002
9/21/2020					<0.0002	
9/25/2020	<0.0002					
11/11/2020	<0.0002					<0.0002
11/12/2020					<0.0002	
12/16/2020	<0.0002				<0.0002	<0.0002
1/20/2021	<0.0002				<0.0002	<0.0002
8/13/2021	<0.0002					
8/16/2021		<0.0002	<0.0002	<0.0002		
8/19/2021					<0.0002	<0.0002
2/1/2022	<0.0002					
2/2/2022		<0.0002	<0.0002	<0.0002		
2/3/2022					<0.0002	<0.0002
8/2/2022	<0.0002					
8/4/2022		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
1/24/2023	<0.0002		<0.0002	<0.0002		
1/25/2023		<0.0002			<0.0002	<0.0002
8/8/2023	<0.0002					
8/10/2023		<0.0002	<0.0002		<0.0002	
8/11/2023				<0.0002		<0.0002
2/13/2024	<0.0002					
2/14/2024					<0.0002	<0.0002
2/15/2024		<0.0002	<0.0002			
2/16/2024				<0.0002		
8/6/2024	<0.0002		<0.0002			
8/7/2024		<0.0002		<0.0002	<0.0002	<0.0002

Time Series

Constituent: Molybdenum (mg/L) Analysis Run 10/22/2024 11:43 AM
Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWA-1 (bg)	HGWA-122 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-43D (bg)	HGWA-44D (bg)
5/19/2016	<0.01		<0.01	<0.01		
7/11/2016	<0.01		<0.01			
7/12/2016				<0.01		
8/30/2016	<0.01	0.0026 (J)	<0.01	<0.01		
10/19/2016	<0.01		<0.01	<0.01		
10/20/2016		0.005 (J)				
12/6/2016	<0.01		<0.01	<0.01		
1/24/2017	<0.01		<0.01	<0.01		
1/25/2017		0.0054 (J)				
3/21/2017	<0.01		<0.01	<0.01		
5/22/2017	<0.01		<0.01	<0.01		
5/25/2017		0.0018 (J)				
8/11/2017		0.0029 (J)				
11/15/2017		0.0018 (J)				
4/2/2018	<0.01		<0.01			
4/3/2018				<0.01		
6/4/2018	<0.01		<0.01	<0.01		
6/5/2018		0.0028 (J)				
10/1/2018	<0.01		<0.01	<0.01		
10/2/2018		<0.01				
3/12/2019	<0.01		<0.01	<0.01		
4/1/2019				<0.01		
4/2/2019	<0.01		<0.01			
8/22/2019		0.003 (J)				
9/23/2019	<0.01		<0.01	<0.01		
10/21/2019		0.0049 (J)				
3/2/2020	<0.01		<0.01	<0.01		
3/24/2020		0.0091 (J)				
3/25/2020	<0.01		<0.01	<0.01		
6/16/2020	<0.01			<0.01		
8/24/2020		0.0031 (J)				
8/25/2020			<0.01	<0.01		
8/28/2020	<0.01					
9/15/2020	<0.01	0.0045 (J)	<0.01	<0.01		
9/16/2020					0.0044 (J)	0.0019 (J)
11/10/2020					0.0072 (J)	0.0018 (J)
12/15/2020					0.0044 (J)	0.0019 (J)
1/19/2021					0.0038 (J)	<0.01
3/10/2021	<0.01					0.0019 (J)
3/11/2021		0.0014 (J)	<0.01	<0.01	0.0064 (J)	
8/11/2021	<0.01				0.0034 (J)	
8/12/2021			<0.01	<0.01		
8/13/2021		0.0022 (J)				0.0051 (J)
2/1/2022	<0.01	0.002 (J)	<0.01	<0.01	0.0036 (J)	0.0055 (J)
8/2/2022	<0.01	0.0042 (J)	<0.01	<0.01	0.0042 (J)	0.002 (J)
1/23/2023				<0.01		
1/24/2023	<0.01	0.0035 (J)	<0.01		0.0027 (J)	0.0026 (J)
8/8/2023	<0.01	0.0039 (J)	<0.01	<0.01	0.0019 (J)	0.0013 (J)
2/13/2024	<0.01	0.0042 (J)	<0.01	<0.01	0.0015 (J)	0.0018 (J)
8/5/2024	<0.01		<0.01	<0.01		
8/6/2024		0.0047 (J)			0.001 (J)	0.00079 (J)

Time Series

Constituent: Molybdenum (mg/L) Analysis Run 10/22/2024 11:43 AM
Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWA-45D (bg)	HGWC-120	HGWC-121A	HGWC-124	HGWC-125	HGWC-126
8/31/2016		0.0176	<0.01	<0.01		
10/26/2016		0.0187		<0.01		
11/7/2016			<0.01			
1/13/2017			<0.01			
1/27/2017		0.0214		<0.01		
5/25/2017		0.0231		0.0009 (J)		
6/3/2017			<0.01			
8/11/2017				0.0013 (J)		
10/2/2017		0.0259	<0.01			
11/15/2017		0.0281	<0.01	0.0012 (J)		
6/5/2018		0.033	<0.01	<0.01		
10/2/2018		0.036		<0.01		
10/5/2018			<0.01			
8/22/2019		0.039	<0.01			
8/23/2019				0.0014 (J)		
10/21/2019			<0.01	0.0013 (J)		
10/22/2019		0.04				
3/24/2020				0.001 (J)		
3/25/2020		0.034	<0.01			
5/22/2020					<0.01	<0.01
6/16/2020					<0.01	<0.01
8/25/2020					0.00099 (J)	<0.01
8/26/2020		0.05	<0.01			
8/27/2020				0.00091 (J)		
9/18/2020						<0.01
9/21/2020		0.043			<0.01	
9/25/2020	0.0014 (J)					
9/28/2020			<0.01	0.0009 (J)		
11/11/2020	0.0049 (J)					<0.01
11/12/2020					0.0017 (J)	
12/16/2020	0.0024 (J)				0.014	<0.01
1/20/2021	0.0063 (J)				0.0013 (J)	<0.01
3/12/2021	0.0019 (J)	0.033			0.0012 (J)	<0.01
3/15/2021			<0.01	0.00092 (J)		
8/13/2021	<0.01					
8/16/2021		0.035	<0.01	0.00091 (J)		
8/19/2021					0.021	<0.01
2/1/2022	<0.01					
2/2/2022		0.034	<0.01	0.001 (J)		
2/3/2022					0.0067 (J)	<0.01
8/2/2022	<0.01					
8/4/2022		0.032	<0.01	<0.01	0.0023 (J)	<0.01
1/24/2023	<0.01		<0.01	<0.01		
1/25/2023		0.03			0.0053 (J)	<0.01
8/8/2023	<0.01					
8/10/2023		0.035	<0.01		0.0031 (J)	
8/11/2023				<0.01		<0.01
2/13/2024	<0.01					
2/14/2024					0.026	<0.01
2/15/2024		0.033	<0.01			
2/16/2024				0.00072 (J)		
8/6/2024	<0.01		<0.01			

Time Series

Constituent: Molybdenum (mg/L) Analysis Run 10/22/2024 11:43 AM
Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWA-45D (bg)	HGWC-120	HGWC-121A	HGWC-124	HGWC-125	HGWC-126
8/7/2024		0.036		0.0012 (J)	0.0028 (J)	<0.01

Time Series

Constituent: pH (s.u.) Analysis Run 10/22/2024 11:43 AM
Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWA-1 (bg)	HGWA-122 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-43D (bg)	HGWA-44D (bg)
5/19/2016	7.27		5.81	7.45		
7/11/2016	7.06		5.68			
7/12/2016				7.32		
8/30/2016	7.28	6.75	5.63	7.43		
10/19/2016	7.02		5.46	7.03		
10/20/2016		6.73				
12/6/2016	7.09		5.38	7.08		
1/24/2017	7.2		5.37	7.39		
1/25/2017		6.88				
3/21/2017	7.01		4.9	6.83		
5/22/2017	7.11		5.2	7.02		
5/25/2017		6.55				
8/11/2017		6.56				
10/3/2017	7.21		5.3	7.47		
11/15/2017		6.47				
4/2/2018	7.1		5.4			
4/3/2018				7.38		
6/4/2018	7.06		5.27	7.38		
6/5/2018		6.66				
10/1/2018	7.09		5.31	7.13		
10/2/2018		6.44				
3/12/2019	7.03		5.42	7.29		
4/1/2019				7.16		
4/2/2019	6.86	6.57	5.41			
8/22/2019		6.51				
9/23/2019	7.02		5.33	7.3		
10/21/2019		6.69				
3/2/2020	7.1		5.43	7.12		
3/24/2020		7.08				
3/25/2020	6.95		5.36	7.4		
6/16/2020	6.97			7.31		
8/24/2020		6.54				
8/25/2020			5.17	7.14		
8/28/2020	7.02					
9/15/2020	7.15	6.68	5.22	7.29		
9/16/2020					7.52	7.83
11/10/2020					7.27	7.84
12/15/2020					7.39	7.87
1/19/2021					7.39	7.86
3/10/2021	6.95					7.92
3/11/2021		6.65	5.8	7.33	7.46	
8/11/2021	6.98				7.4	
8/12/2021			5.05	7.31		
8/13/2021		6.56				7.77
2/1/2022	7.19	6.57	5.24	7.45	7.52	8.25
8/2/2022	7.03	6.67	4.57	7.02	7.15	7.9
1/23/2023				7.32		
1/24/2023	6.76	6.43	5.22		7.56	8.22
8/8/2023	7.05	6.67	5.01	7.42	7.39	8.2
2/13/2024	7.06	6.82	5.49	7.35	7.47	8.1
8/5/2024	7.29		4.91	7.27		
8/6/2024		6.86			7.46	8.36

Time Series

Constituent: pH (s.u.) Analysis Run 10/22/2024 11:43 AM
Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWA-45D (bg)	HGWC-120	HGWC-121A	HGWC-124	HGWC-125	HGWC-126
8/31/2016		6.73	6.62	6.99		
10/27/2016		6.77		7.06		
11/7/2016			6.71			
1/13/2017			6.57			
1/27/2017		6.74		7.13		
5/25/2017		6.99		7.1		
6/3/2017			6.71			
8/11/2017				7.02		
10/2/2017		7.66	7.65			
11/15/2017		6.71	6.69	7.04		
6/5/2018		6.83	6.79	7.17		
10/2/2018		6.83		7.08		
10/5/2018			6.71			
4/2/2019		6.87				
4/3/2019			6.73	7.14		
8/22/2019		6.79	6.77			
8/23/2019				7.02		
10/21/2019			6.74	7.05		
10/22/2019		6.74				
3/24/2020				7.18		
3/25/2020		6.8	6.91			
5/22/2020					6.43	7.22
6/15/2020		6.8				
6/16/2020					6.29	6.92
8/25/2020					6.36	6.78
8/26/2020		6.96	6.73			
8/27/2020				7.15		
9/18/2020						6.97
9/21/2020		6.98			6.22	
9/25/2020	7.57					
9/28/2020			6.93	7.27		
11/11/2020	7.4					6.86
11/12/2020					6.13	
12/16/2020	7.39				6.61	6.93
1/20/2021	7.47				6.23	6.99
3/12/2021	7.52	6.95			6.18	7.05
3/15/2021			6.87	7.22		
8/13/2021	7.42					
8/16/2021		6.92	6.74	7.09		
8/19/2021					7.24	7.32
2/1/2022	7.45					
2/2/2022		7	6.92	7.28		
2/3/2022					6.56	7.01
8/2/2022	7.39					
8/4/2022		6.93	6.8	7.15	6.09	6.99
1/24/2023	7.15		6.75	7.05		
1/25/2023		6.32			6.32	6.89
8/8/2023	7.39					
8/10/2023		6.96	6.89		6.29	
8/11/2023				7.2		6.95
2/13/2024	7.47					
2/14/2024					6.76	6.98

Time Series

Constituent: pH (s.u.) Analysis Run 10/22/2024 11:43 AM
Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWA-45D (bg)	HGWC-120	HGWC-121A	HGWC-124	HGWC-125	HGWC-126
2/15/2024		6.9	6.87			
2/16/2024				7.33		
8/6/2024	7.47		6.91			
8/7/2024		7.01		7.24	6.15	6.99

Time Series

Constituent: Selenium (mg/L) Analysis Run 10/22/2024 11:43 AM
Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWA-1 (bg)	HGWA-122 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-43D (bg)	HGWA-44D (bg)
5/19/2016	<0.005		<0.005	<0.005		
7/11/2016	<0.005		<0.005			
7/12/2016				<0.005		
8/30/2016	<0.005	<0.005	<0.005	<0.005		
10/19/2016	<0.005		<0.005	<0.005		
10/20/2016		<0.005				
12/6/2016	<0.005		<0.005	<0.005		
1/24/2017	<0.005		<0.005	<0.005		
1/25/2017		<0.005				
3/21/2017	<0.005		<0.005	<0.005		
5/22/2017	<0.005		<0.005	<0.005		
5/25/2017		<0.005				
8/11/2017		<0.005				
11/15/2017		<0.005				
4/2/2018	<0.005		<0.005			
4/3/2018				<0.005		
6/4/2018	<0.005		<0.005	<0.005		
6/5/2018		<0.005				
10/1/2018	<0.005		<0.005	<0.005		
10/2/2018		0.0015 (J)				
3/12/2019	<0.005		<0.005	<0.005		
4/1/2019				<0.005		
4/2/2019	<0.005		<0.005			
8/22/2019		<0.005				
9/23/2019	<0.005		<0.005	<0.005		
3/2/2020	<0.005		<0.005	<0.005		
3/25/2020	<0.005		<0.005	<0.005		
8/24/2020		<0.005				
8/25/2020			<0.005	<0.005		
8/28/2020	<0.005					
9/15/2020	<0.005		<0.005	<0.005		
9/16/2020					<0.005	<0.005
11/10/2020					<0.005	<0.005
12/15/2020					<0.005	<0.005
1/19/2021					<0.005	<0.005
8/11/2021	<0.005				<0.005	
8/12/2021			<0.005	<0.005		
8/13/2021		<0.005				<0.005
2/1/2022	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
8/2/2022	<0.005	<0.005	0.0014 (J)	<0.005	<0.005	<0.005
1/23/2023				<0.005		
1/24/2023	<0.005	<0.005	<0.005		<0.005	<0.005
8/8/2023	<0.005	<0.005	0.0019 (J)	<0.005	<0.005	<0.005
2/13/2024	<0.005	0.0016 (J)	0.002 (J)	<0.005	<0.005	<0.005
8/5/2024	<0.005		0.0013 (J)	<0.005		
8/6/2024		0.0012 (J)			<0.005	<0.005

Time Series

Constituent: Selenium (mg/L) Analysis Run 10/22/2024 11:43 AM
Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWA-45D (bg)	HGWC-120	HGWC-121A	HGWC-124	HGWC-125	HGWC-126
8/31/2016		<0.005	<0.005	<0.005		
10/26/2016		<0.005		<0.005		
11/7/2016			<0.005			
1/13/2017			0.0011 (J)			
1/27/2017		<0.005		<0.005		
5/25/2017		<0.005		<0.005		
6/3/2017			<0.005			
8/11/2017				<0.005		
10/2/2017		0.002 (J)	<0.005			
11/15/2017		<0.005	<0.005	<0.005		
6/5/2018		<0.005	<0.005	<0.005		
10/2/2018		<0.005		0.0014 (J)		
10/5/2018			<0.005			
8/22/2019		<0.005	<0.005			
8/23/2019				<0.005		
5/22/2020					<0.005	<0.005
6/16/2020					<0.005	<0.005
8/25/2020					<0.005	<0.005
8/26/2020		<0.005	<0.005			
8/27/2020				<0.005		
9/18/2020						<0.005
9/21/2020					<0.005	
9/25/2020	<0.005					
11/11/2020	<0.005					<0.005
11/12/2020					<0.005	
12/16/2020	<0.005				<0.005	<0.005
1/20/2021	<0.005				<0.005	<0.005
8/13/2021	<0.005					
8/16/2021		<0.005	<0.005	<0.005		
8/19/2021					<0.005	<0.005
2/1/2022	<0.005					
2/2/2022		<0.005	<0.005	<0.005		
2/3/2022					<0.005	<0.005
8/2/2022	<0.005					
8/4/2022		<0.005	<0.005	<0.005	<0.005	<0.005
1/24/2023	<0.005		<0.005	<0.005		
1/25/2023		<0.005			<0.005	<0.005
8/8/2023	<0.005					
8/10/2023		<0.005	<0.005		<0.005	
8/11/2023				<0.005		<0.005
2/13/2024	<0.005					
2/14/2024					<0.005	<0.005
2/15/2024		<0.005	<0.005			
2/16/2024				<0.005		
8/6/2024	<0.005		<0.005			
8/7/2024		<0.005		<0.005	<0.005	<0.005

Time Series

Constituent: Sulfate (mg/L) Analysis Run 10/22/2024 11:43 AM
Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWA-1 (bg)	HGWA-122 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-43D (bg)	HGWA-44D (bg)
5/19/2016	66.9		48.6	42.3		
7/11/2016	41		45			
7/12/2016				44		
8/30/2016	36	49	42	40		
10/19/2016	46		44	43		
10/20/2016		49				
12/6/2016	59		44	43		
1/24/2017	46		46	48		
1/25/2017		48				
3/21/2017	63		46	45		
5/22/2017	77		48	46		
5/25/2017		48				
8/11/2017		47				
10/3/2017	42		47	48		
11/15/2017		49				
6/4/2018	71.8		47.8	46.6		
6/5/2018		48.9				
10/1/2018	49.1		48.1	48.6		
10/2/2018		48.6				
4/1/2019				50.4		
4/2/2019	84.3	39.6	48.7			
6/18/2019		44.5				
9/23/2019	70.2		47.2	43.9		
10/21/2019		45.6				
3/24/2020		25.9				
3/25/2020	85.9		46.3	50.5		
6/16/2020	88.2			49.5		
9/15/2020	47.3	41.4	51.5	44.7		
9/16/2020					43	43
11/10/2020					39	6.3
12/15/2020					38.8	6.7
1/19/2021					37.3	7.4
3/10/2021	49.6					<1
3/11/2021		40.7	52.9	50.4	38.6	
8/11/2021	48.9				30.5	
8/12/2021			47.4	38.6		
8/13/2021		42.1				56.1
2/1/2022	43.7	41.1	67.1	46	37.5	56.3
8/2/2022	58.1	41.5	86.9	43.5	37	13.2
1/23/2023				39.5		
1/24/2023	48.3	36.5	79.7		34.7	10.1
8/8/2023	67.7	34.9	89.9	35	25.6	1.3
2/13/2024	50.4	35.6	93.9	35.5	28.9	2
8/5/2024	49.4		87.2	31.1		
8/6/2024		37.8			25.5	0.86 (J)

Time Series

Constituent: Sulfate (mg/L) Analysis Run 10/22/2024 11:43 AM
Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWA-45D (bg)	HGWC-120	HGWC-121A	HGWC-124	HGWC-125	HGWC-126
8/31/2016		290	280	72		
10/26/2016		280		71		
11/7/2016			300			
1/13/2017			270			
1/27/2017		290		74		
5/25/2017		280		73		
6/3/2017			270			
8/11/2017				71		
10/2/2017		300	330			
11/15/2017		300	280	70		
6/5/2018		273	241	74		
10/2/2018		328		80.7		
10/5/2018			271			
4/2/2019		256				
4/3/2019			230	75.2		
6/17/2019		243	219			
6/18/2019				75.3		
10/21/2019			238	78.5		
10/22/2019		266				
3/24/2020				74.6		
3/25/2020		226	116			
5/22/2020					345	56.1
6/15/2020		212				
6/16/2020					320	57.6
8/25/2020					353	62.8
9/18/2020						62.7
9/21/2020		225			352	
9/25/2020	6.8					
9/28/2020			182	86.2		
11/11/2020	11.2					62.3
11/12/2020					300	
12/16/2020	11.3				306	68.1
1/20/2021	14.2				335	66.6
3/12/2021	8.7	210			293	69.7
3/15/2021			177	74		
8/13/2021	8.1					
8/16/2021		211	158	74		
8/19/2021					264	64.4
2/1/2022	2.5					
2/2/2022		201	147	70.7		
2/3/2022					304	66.8
8/2/2022	2.1					
8/4/2022		230	162	73.1	331	68.3
1/24/2023	5.2		151	69.6		
1/25/2023		230			306	63.7
8/8/2023	2.2					
8/10/2023		195	138		290	
8/11/2023				67.6		60.5
2/13/2024	6					
2/14/2024					243	66.4
2/15/2024		209	108			
2/16/2024				74.5		

Time Series

Constituent: Sulfate (mg/L) Analysis Run 10/22/2024 11:43 AM
Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWA-45D (bg)	HGWC-120	HGWC-121A	HGWC-124	HGWC-125	HGWC-126
8/6/2024	2.9		127			
8/7/2024		191		69.7	289	72.8

Time Series

Constituent: Thallium (mg/L) Analysis Run 10/22/2024 11:43 AM
Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWA-1 (bg)	HGWA-122 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-43D (bg)	HGWA-44D (bg)
5/19/2016	<0.001		<0.001	<0.001		
7/11/2016	<0.001		<0.001			
7/12/2016				<0.001		
8/30/2016	<0.001	<0.001	<0.001	<0.001		
10/19/2016	<0.001		<0.001	<0.001		
10/20/2016		<0.001				
12/6/2016	<0.001		<0.001	<0.001		
1/24/2017	<0.001		<0.001	<0.001		
1/25/2017		<0.001				
3/21/2017	<0.001		3E-05 (J)	<0.001		
5/22/2017	<0.001		<0.001	<0.001		
5/25/2017		<0.001				
8/11/2017		<0.001				
11/15/2017		<0.001				
4/2/2018	<0.001		<0.001			
4/3/2018				<0.001		
6/4/2018	<0.001		<0.001	<0.001		
6/5/2018		<0.001				
10/1/2018	<0.001		<0.001	<0.001		
10/2/2018		<0.001				
3/12/2019	<0.001		<0.001	<0.001		
4/1/2019				<0.001		
4/2/2019	<0.001		<0.001			
8/22/2019		<0.001				
9/23/2019	<0.001		<0.001	<0.001		
3/2/2020	<0.001		<0.001	<0.001		
3/25/2020	<0.001		<0.001	<0.001		
8/24/2020		<0.001				
8/25/2020			<0.001	<0.001		
8/28/2020	<0.001					
9/15/2020	<0.001		<0.001	<0.001		
9/16/2020					<0.001	<0.001
11/10/2020					<0.001	<0.001
12/15/2020					<0.001	<0.001
1/19/2021					<0.001	<0.001
8/11/2021	<0.001				<0.001	
8/12/2021			<0.001	<0.001		
8/13/2021		<0.001				<0.001
2/1/2022	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
8/2/2022	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
1/23/2023				<0.001		
1/24/2023	<0.001	<0.001	<0.001		<0.001	<0.001
8/8/2023	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
2/13/2024	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
8/5/2024	<0.001		<0.001	<0.001		
8/6/2024		<0.001			<0.001	<0.001

Time Series

Constituent: Thallium (mg/L) Analysis Run 10/22/2024 11:43 AM
Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWA-45D (bg)	HGWC-120	HGWC-121A	HGWC-124	HGWC-125	HGWC-126
8/31/2016		<0.001	<0.001	<0.001		
10/26/2016		<0.001		<0.001		
11/7/2016			<0.001			
1/13/2017			<0.001			
1/27/2017		<0.001		<0.001		
5/25/2017		<0.001		<0.001		
6/3/2017			<0.001			
8/11/2017				<0.001		
10/2/2017		<0.001	<0.001			
11/15/2017		<0.001	<0.001	<0.001		
6/5/2018		<0.001	<0.001	<0.001		
10/2/2018		<0.001		<0.001		
10/5/2018			<0.001			
8/22/2019		<0.001	<0.001			
8/23/2019				<0.001		
5/22/2020					<0.001	<0.001
6/16/2020					<0.001	<0.001
8/25/2020					<0.001	<0.001
8/26/2020		<0.001	<0.001			
8/27/2020				<0.001		
9/18/2020						<0.001
9/21/2020					<0.001	
9/25/2020	<0.001					
11/11/2020	<0.001					<0.001
11/12/2020					<0.001	
12/16/2020	<0.001				<0.001	<0.001
1/20/2021	<0.001				<0.001	<0.001
8/13/2021	<0.001					
8/16/2021		<0.001	<0.001	<0.001		
8/19/2021					<0.001	<0.001
2/1/2022	<0.001					
2/2/2022		<0.001	<0.001	<0.001		
2/3/2022					<0.001	<0.001
8/2/2022	<0.001					
8/4/2022		<0.001	<0.001	<0.001	<0.001	<0.001
1/24/2023	<0.001		<0.001	<0.001		
1/25/2023		<0.001			<0.001	<0.001
8/8/2023	<0.001					
8/10/2023		<0.001	<0.001		<0.001	
8/11/2023				<0.001		<0.001
2/13/2024	<0.001					
2/14/2024					<0.001	<0.001
2/15/2024		<0.001	<0.001			
2/16/2024				<0.001		
8/6/2024	<0.001		<0.001			
8/7/2024		<0.001		<0.001	<0.001	<0.001

Time Series

Constituent: Total Dissolved Solids (mg/L) Analysis Run 10/22/2024 11:43 AM

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

	HGWA-1 (bg)	HGWA-122 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-43D (bg)	HGWA-44D (bg)
5/19/2016	421		143	267		
7/11/2016	363		125			
7/12/2016				249		
8/30/2016	330	280	168	254		
10/19/2016	380		176	357		
10/20/2016		265				
12/6/2016	377		145	285		
1/24/2017	342		129	300		
1/25/2017		371				
3/21/2017	340		103	288		
5/22/2017	338		92	263		
5/25/2017		237				
8/11/2017		253				
10/3/2017	343		127	300		
11/15/2017		261				
6/4/2018	415		140	266		
6/5/2018		276				
10/1/2018	354		135	291		
10/2/2018		256				
4/1/2019				284		
4/2/2019	452	814 (o)	133			
6/18/2019		233				
9/23/2019	442		129	268		
10/21/2019		296				
3/24/2020		278				
3/25/2020	496		138	284		
6/16/2020	632			448		
9/15/2020	265	267	124	258		
9/16/2020					272	270
11/10/2020					307	287
12/15/2020					289	295
1/19/2021					270	278
3/10/2021	348					289
3/11/2021		206	169	267	279	
8/11/2021	366				277	
8/12/2021			118	265		
8/13/2021		201				436
2/1/2022	270	203	156	350	156	444
8/2/2022	400	217	196	287	278	311
1/23/2023				293		
1/24/2023	369	246	164		271	363
8/8/2023	457	248	189	285	274	361
2/13/2024	402	222	214	284	291	379
8/5/2024	444		217	304		
8/6/2024		270			283	380

Time Series

Constituent: Total Dissolved Solids (mg/L) Analysis Run 10/22/2024 11:43 AM

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

	HGWA-45D (bg)	HGWC-120	HGWC-121A	HGWC-124	HGWC-125	HGWC-126
8/31/2016		700	876	379		
10/26/2016		795		409		
11/7/2016			1000			
1/13/2017			827			
1/27/2017		706		370		
5/25/2017		669		351		
6/3/2017			846			
8/11/2017				322		
10/2/2017		672	884			
11/15/2017		721	838	350		
6/5/2018		723	823	360		
10/2/2018		703		363		
10/5/2018			813			
4/2/2019		540				
4/3/2019			785	369		
6/17/2019			751			
10/21/2019			771	357		
10/22/2019		693				
3/24/2020				355		
3/25/2020		665	521			
5/22/2020					809	496
6/15/2020		685				
6/16/2020					665	508
8/25/2020					772	505
9/18/2020						452
9/21/2020		272			956	
9/25/2020	263					
9/28/2020			<10	176		
11/11/2020	276					468
11/12/2020					694	
12/16/2020	294				816	536
1/20/2021	289				726	472
3/12/2021	260	584			664	474
3/15/2021			614	340		
8/13/2021	272					
8/16/2021		632	626	352		
8/19/2021					732	488
2/1/2022	268					
2/2/2022		612	638	347		
2/3/2022					726	466
8/2/2022	261					
8/4/2022		632	640	334	706	510
1/24/2023	289		602	350		
1/25/2023		656			798	517
8/8/2023	261					
8/10/2023		661	642		760	
8/11/2023				361		535
2/13/2024	279					
2/14/2024					687	502
2/15/2024		620	524			
2/16/2024				333		
8/6/2024	256		661			

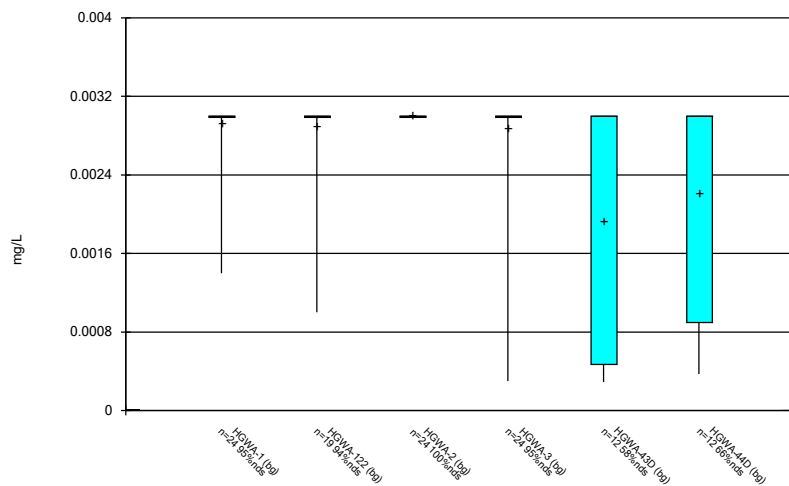
Time Series

Constituent: Total Dissolved Solids (mg/L) Analysis Run 10/22/2024 11:43 AM
Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWA-45D (bg)	HGWC-120	HGWC-121A	HGWC-124	HGWC-125	HGWC-126
8/7/2024		647		337	695	518

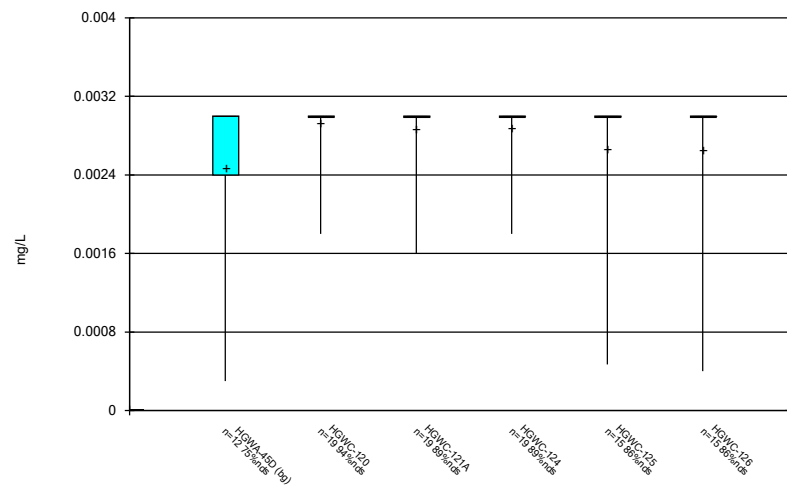
FIGURE B.

Box & Whiskers Plot



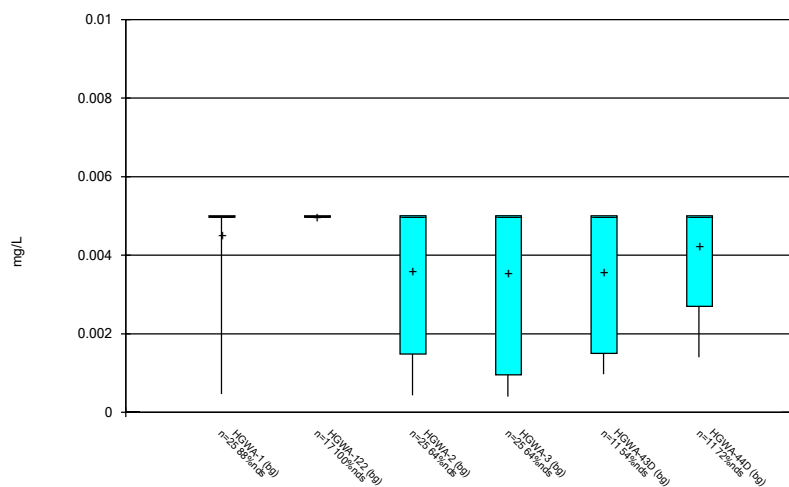
Constituent: Antimony Analysis Run 10/22/2024 11:44 AM
Plant Hammond Client: Southern Company Data: Hammond AP-3

Box & Whiskers Plot



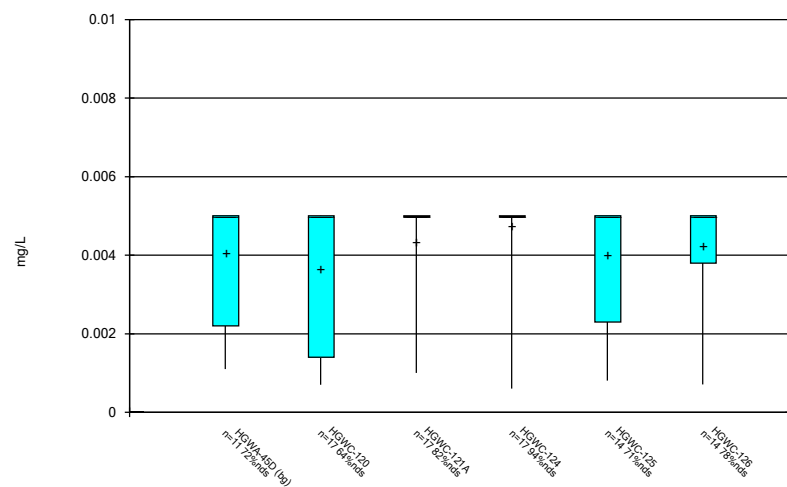
Constituent: Antimony Analysis Run 10/22/2024 11:44 AM
Plant Hammond Client: Southern Company Data: Hammond AP-3

Box & Whiskers Plot



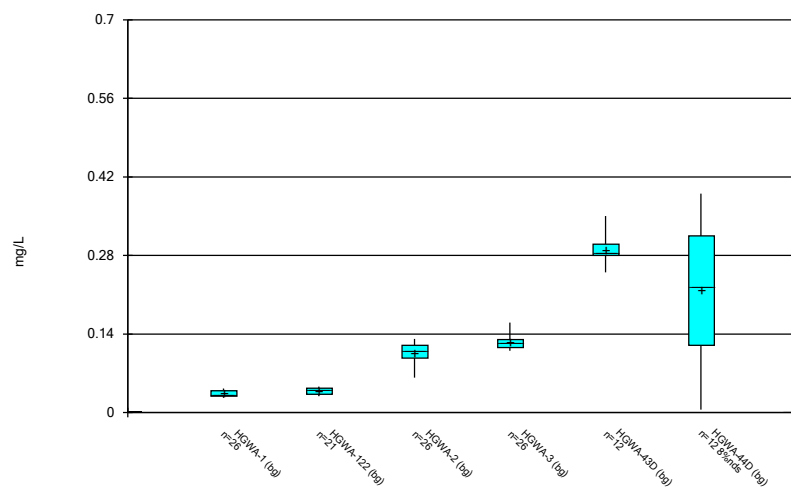
Constituent: Arsenic Analysis Run 10/22/2024 11:44 AM
Plant Hammond Client: Southern Company Data: Hammond AP-3

Box & Whiskers Plot



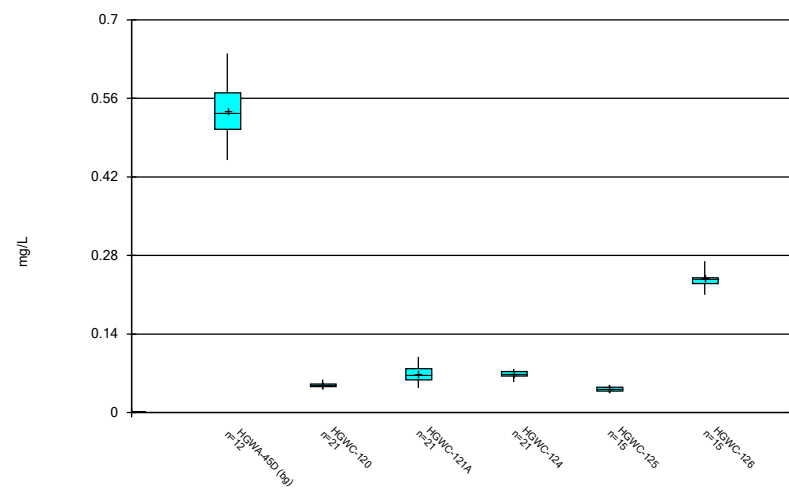
Constituent: Arsenic Analysis Run 10/22/2024 11:44 AM
Plant Hammond Client: Southern Company Data: Hammond AP-3

Box & Whiskers Plot



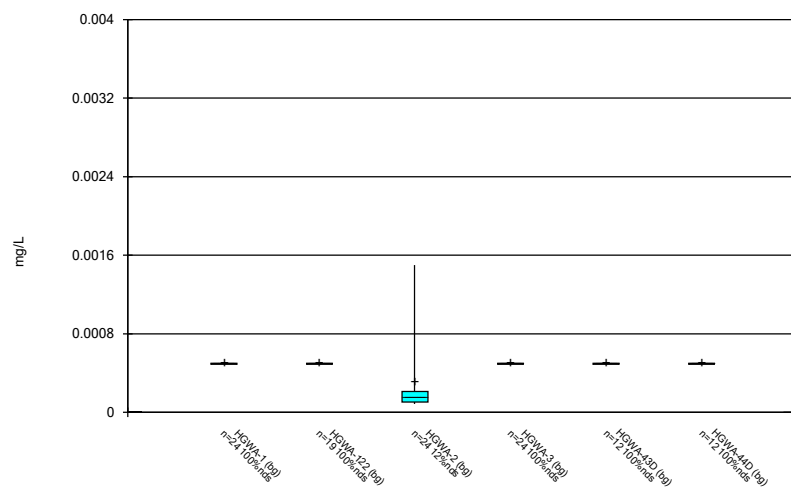
Constituent: Barium Analysis Run 10/22/2024 11:44 AM
Plant Hammond Client: Southern Company Data: Hammond AP-3

Box & Whiskers Plot



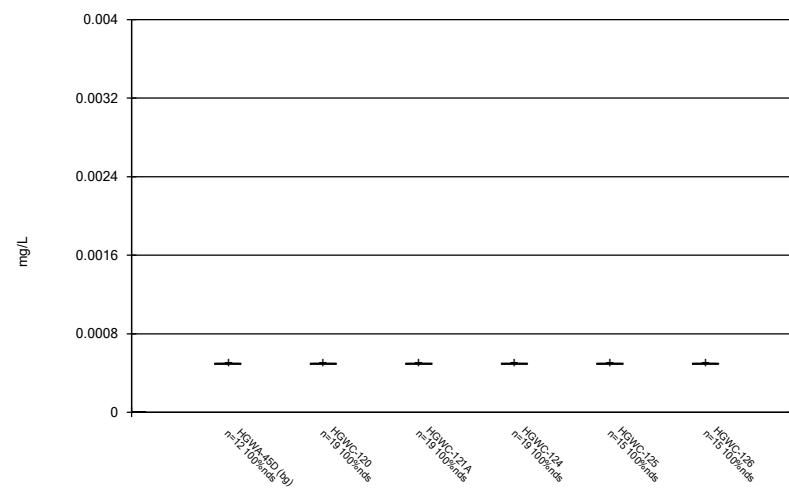
Constituent: Barium Analysis Run 10/22/2024 11:44 AM
Plant Hammond Client: Southern Company Data: Hammond AP-3

Box & Whiskers Plot



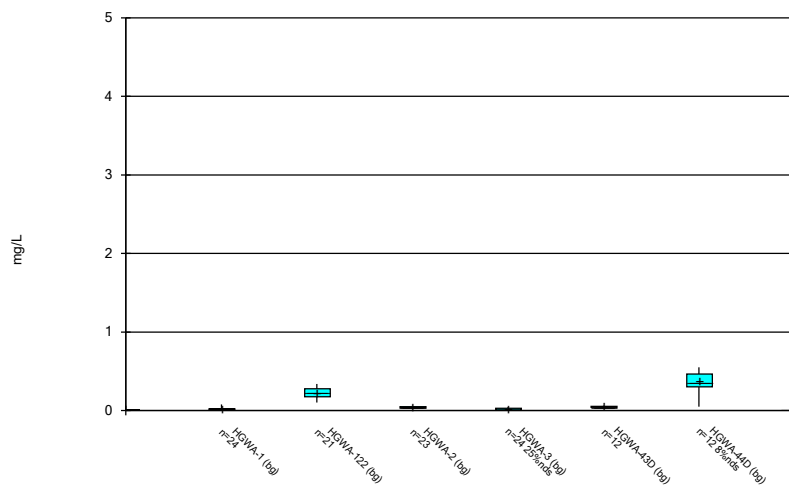
Constituent: Beryllium Analysis Run 10/22/2024 11:44 AM
Plant Hammond Client: Southern Company Data: Hammond AP-3

Box & Whiskers Plot



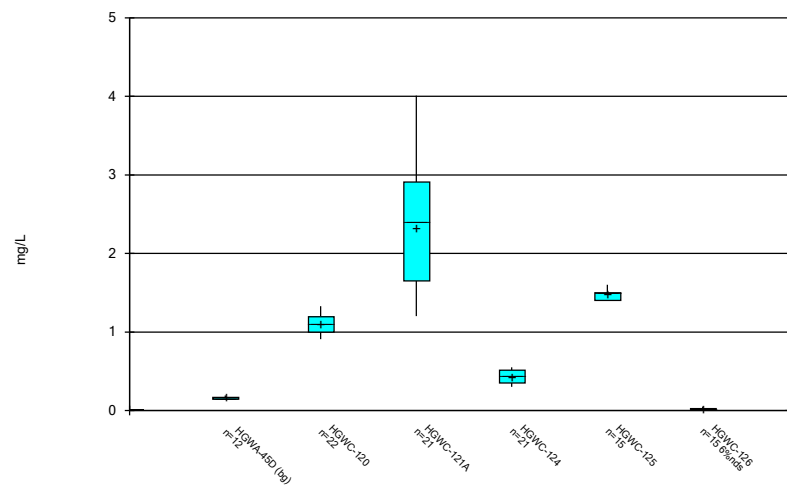
Constituent: Beryllium Analysis Run 10/22/2024 11:44 AM
Plant Hammond Client: Southern Company Data: Hammond AP-3

Box & Whiskers Plot



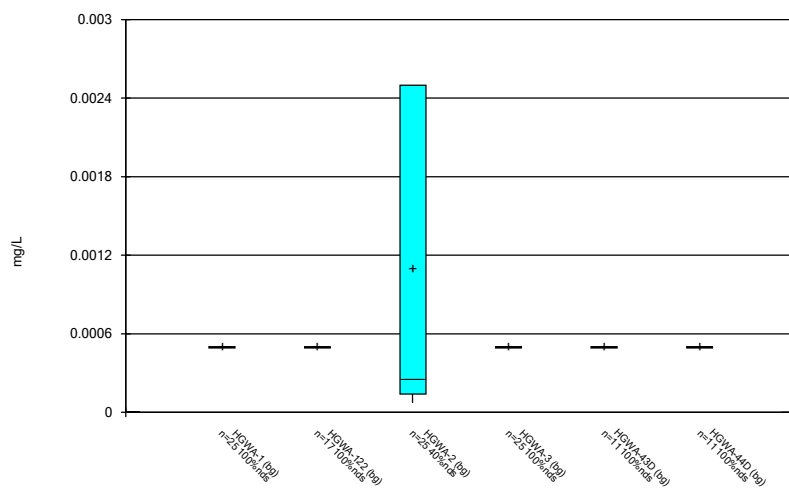
Constituent: Boron Analysis Run 10/22/2024 11:44 AM
Plant Hammond Client: Southern Company Data: Hammond AP-3

Box & Whiskers Plot



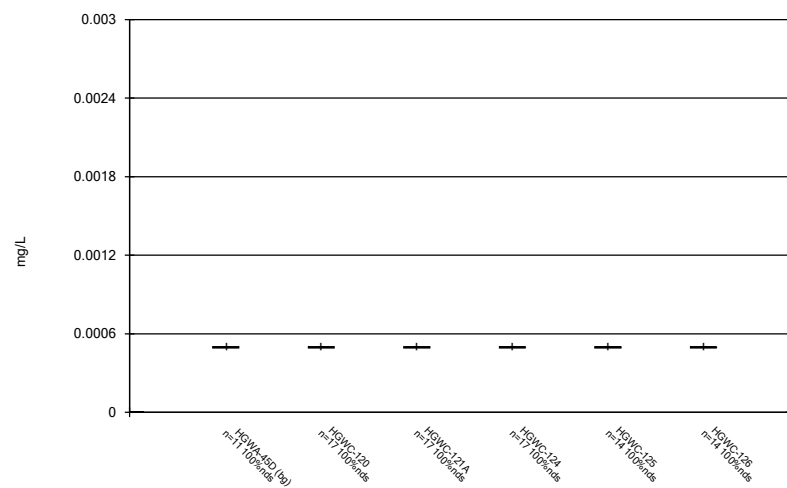
Constituent: Boron Analysis Run 10/22/2024 11:44 AM
Plant Hammond Client: Southern Company Data: Hammond AP-3

Box & Whiskers Plot



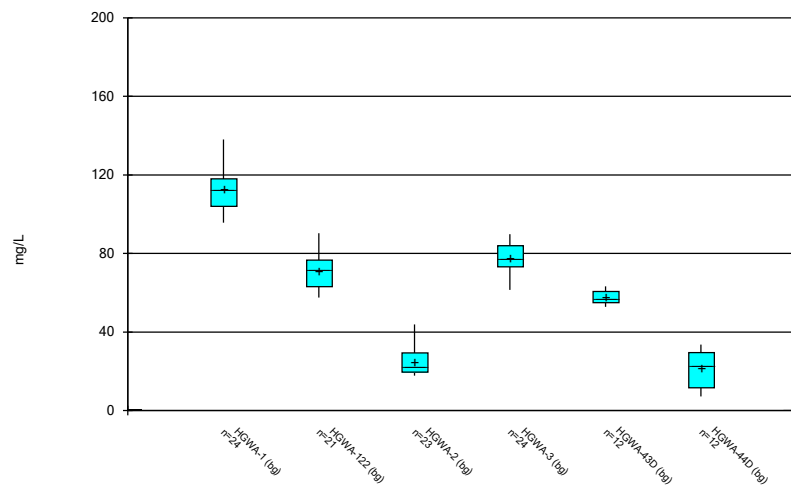
Constituent: Cadmium Analysis Run 10/22/2024 11:44 AM
Plant Hammond Client: Southern Company Data: Hammond AP-3

Box & Whiskers Plot



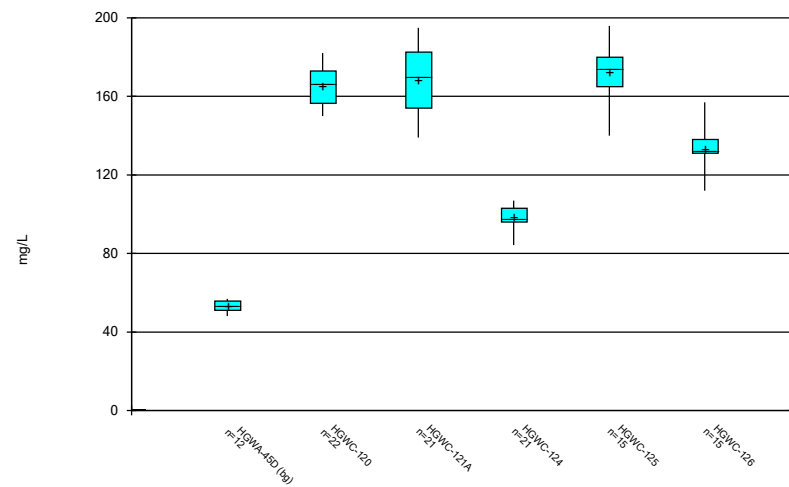
Constituent: Cadmium Analysis Run 10/22/2024 11:44 AM
Plant Hammond Client: Southern Company Data: Hammond AP-3

Box & Whiskers Plot



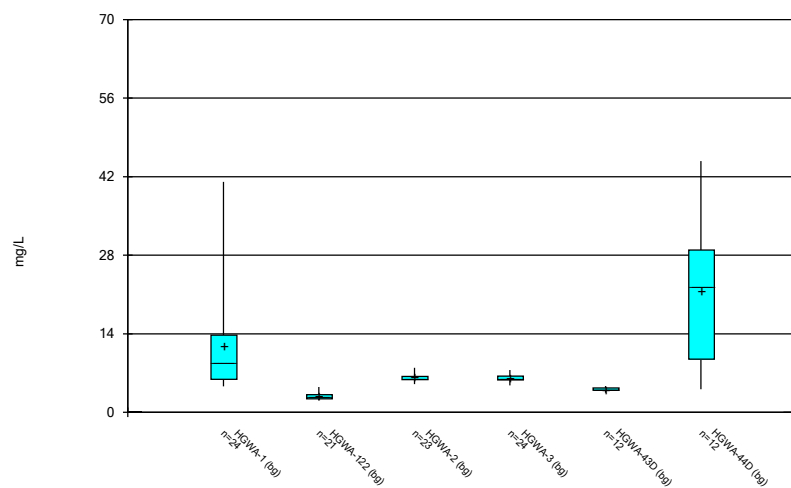
Constituent: Calcium Analysis Run 10/22/2024 11:44 AM
Plant Hammond Client: Southern Company Data: Hammond AP-3

Box & Whiskers Plot



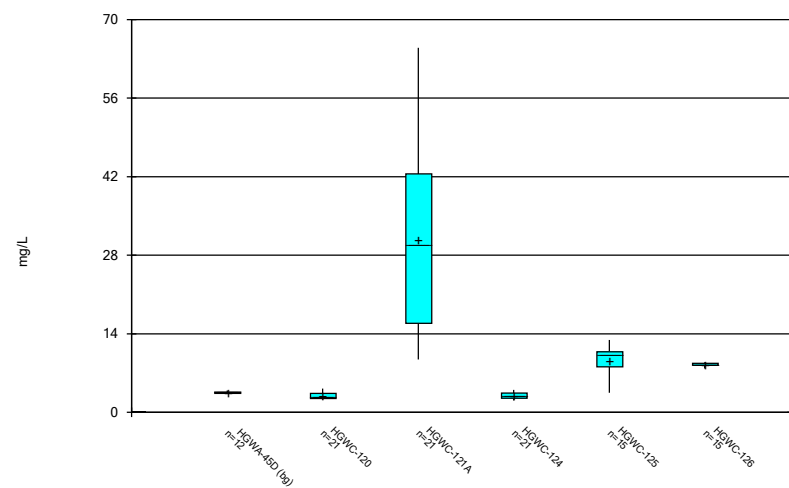
Constituent: Calcium Analysis Run 10/22/2024 11:44 AM
Plant Hammond Client: Southern Company Data: Hammond AP-3

Box & Whiskers Plot



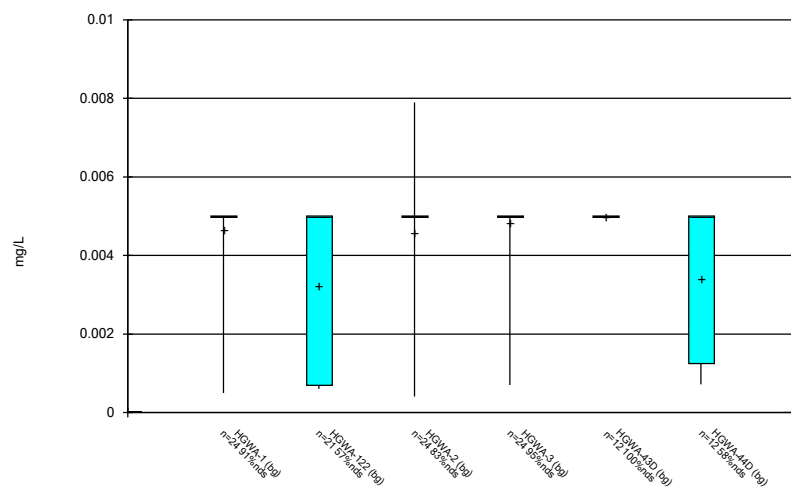
Constituent: Chloride Analysis Run 10/22/2024 11:44 AM
Plant Hammond Client: Southern Company Data: Hammond AP-3

Box & Whiskers Plot



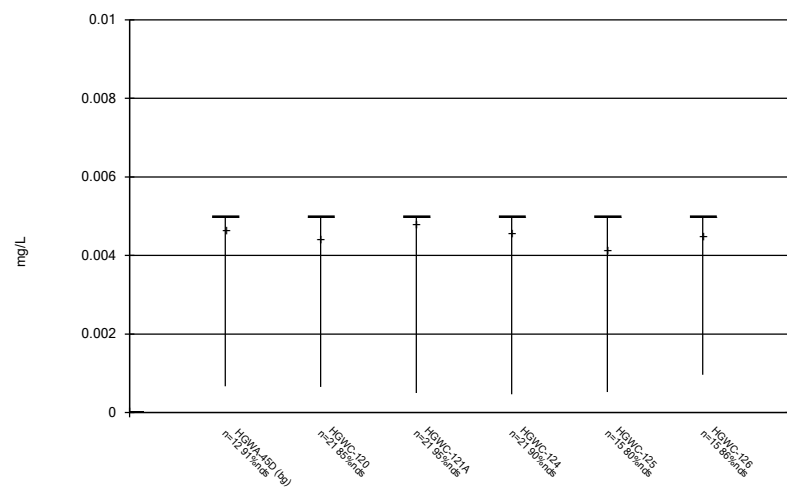
Constituent: Chloride Analysis Run 10/22/2024 11:44 AM
Plant Hammond Client: Southern Company Data: Hammond AP-3

Box & Whiskers Plot



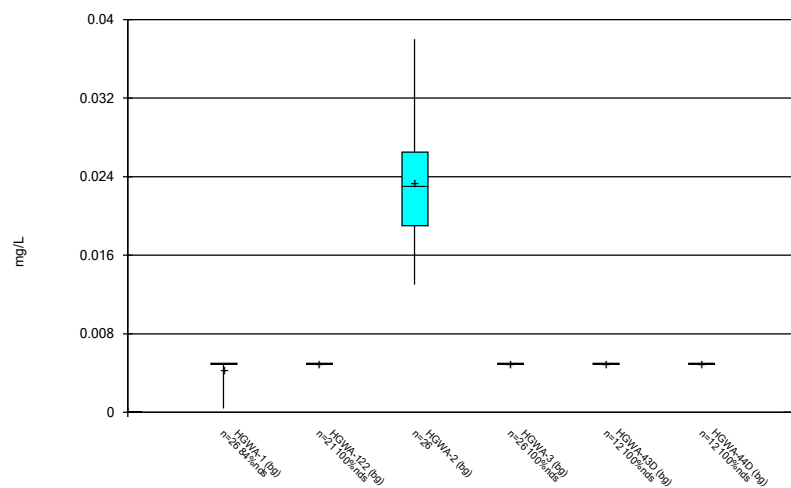
Constituent: Chromium Analysis Run 10/22/2024 11:44 AM
Plant Hammond Client: Southern Company Data: Hammond AP-3

Box & Whiskers Plot



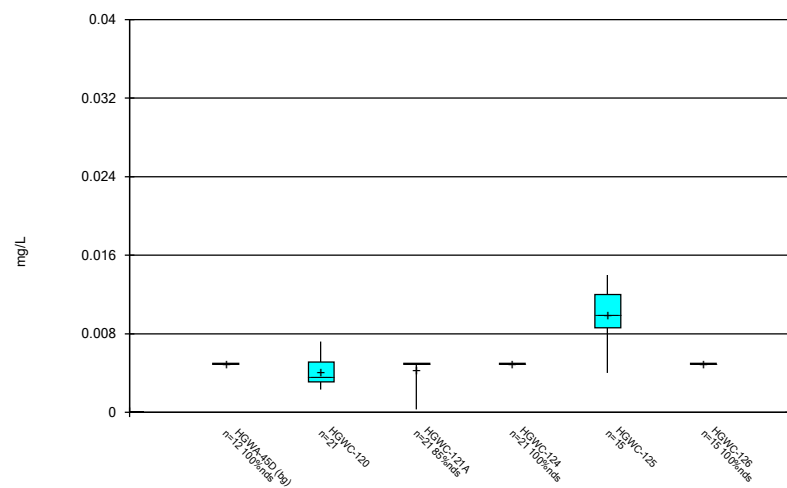
Constituent: Chromium Analysis Run 10/22/2024 11:44 AM
Plant Hammond Client: Southern Company Data: Hammond AP-3

Box & Whiskers Plot



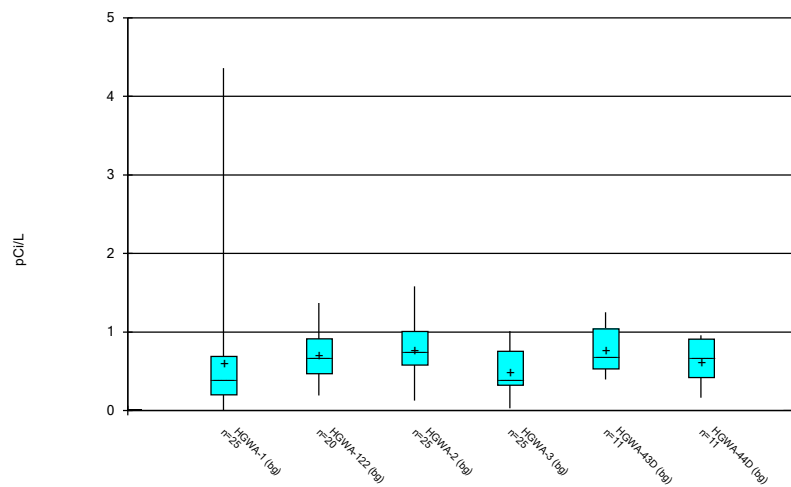
Constituent: Cobalt Analysis Run 10/22/2024 11:44 AM
Plant Hammond Client: Southern Company Data: Hammond AP-3

Box & Whiskers Plot



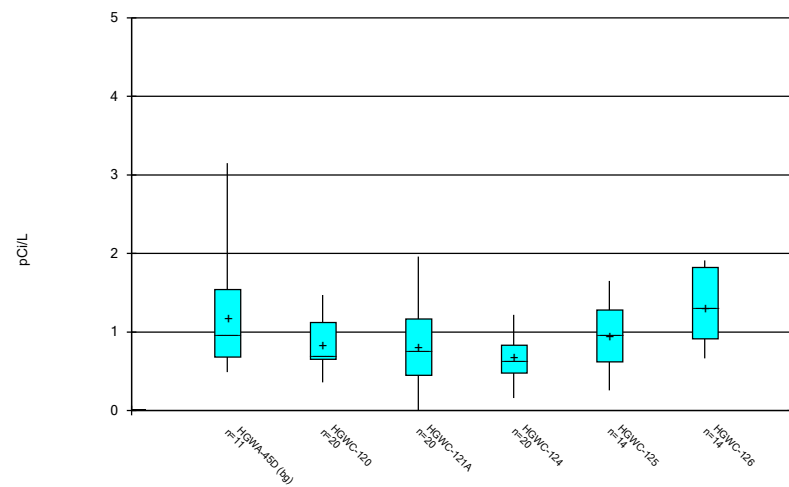
Constituent: Cobalt Analysis Run 10/22/2024 11:44 AM
Plant Hammond Client: Southern Company Data: Hammond AP-3

Box & Whiskers Plot



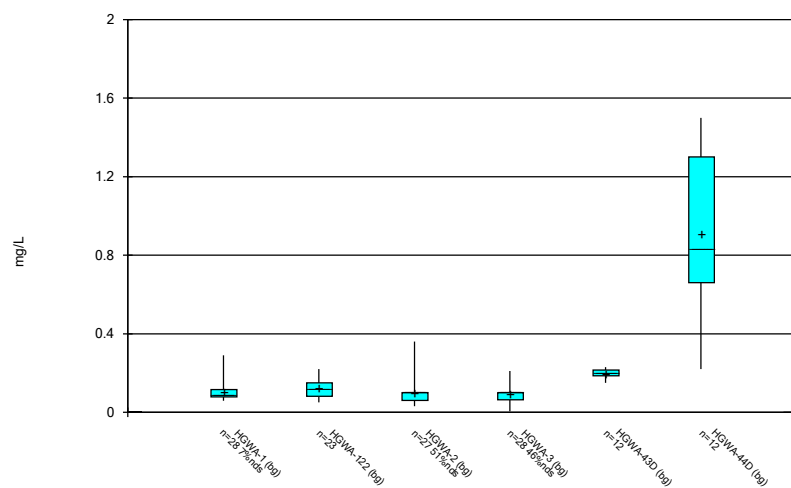
Constituent: Combined Radium 226 + 228 Analysis Run 10/22/2024 11:44 AM
Plant Hammond Client: Southern Company Data: Hammond AP-3

Box & Whiskers Plot



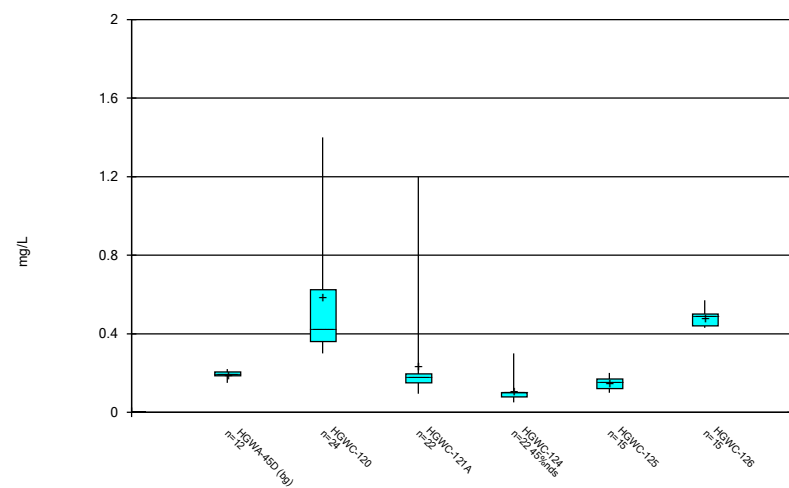
Constituent: Combined Radium 226 + 228 Analysis Run 10/22/2024 11:44 AM
Plant Hammond Client: Southern Company Data: Hammond AP-3

Box & Whiskers Plot



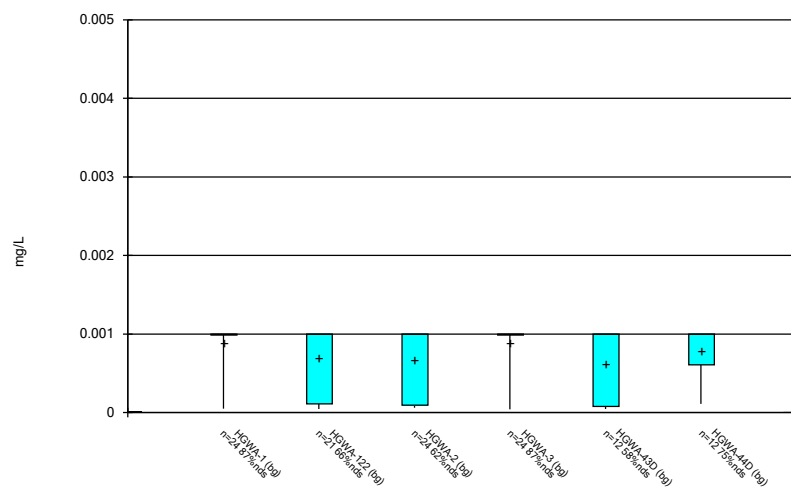
Constituent: Fluoride Analysis Run 10/22/2024 11:44 AM
Plant Hammond Client: Southern Company Data: Hammond AP-3

Box & Whiskers Plot



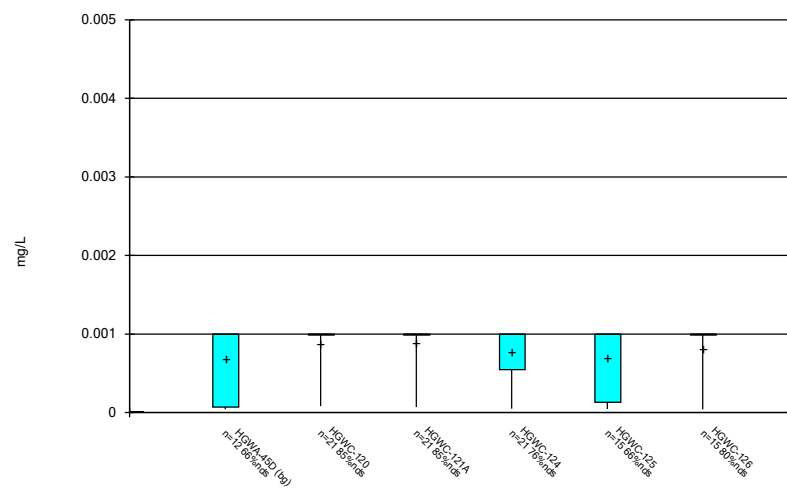
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Box & Whiskers Plot



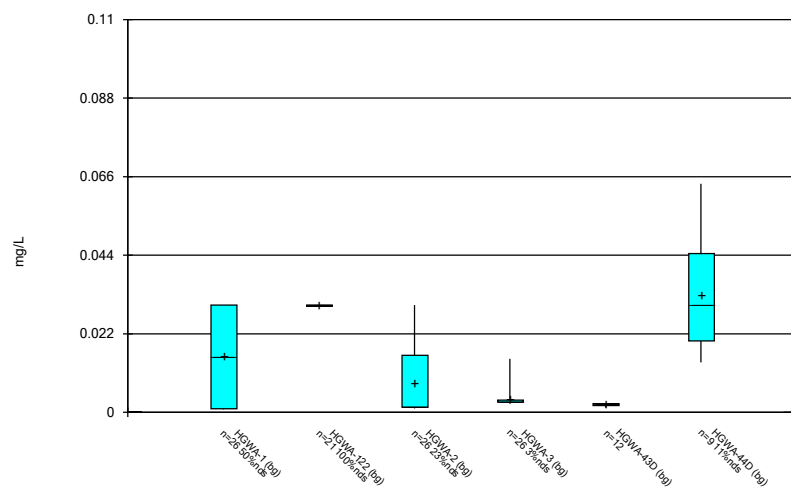
Constituent: Lead Analysis Run 10/22/2024 11:44 AM
Plant Hammond Client: Southern Company Data: Hammond AP-3

Box & Whiskers Plot



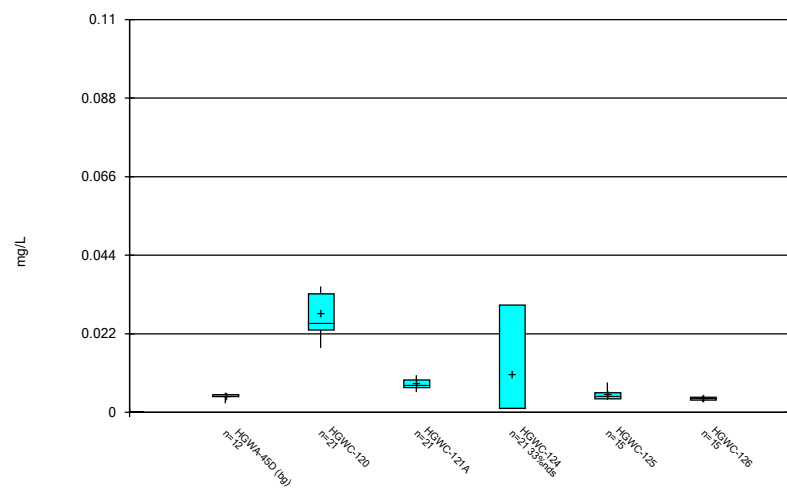
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Plant Hammond Client: Southern Company Data: Hammond AP-3

Box & Whiskers Plot



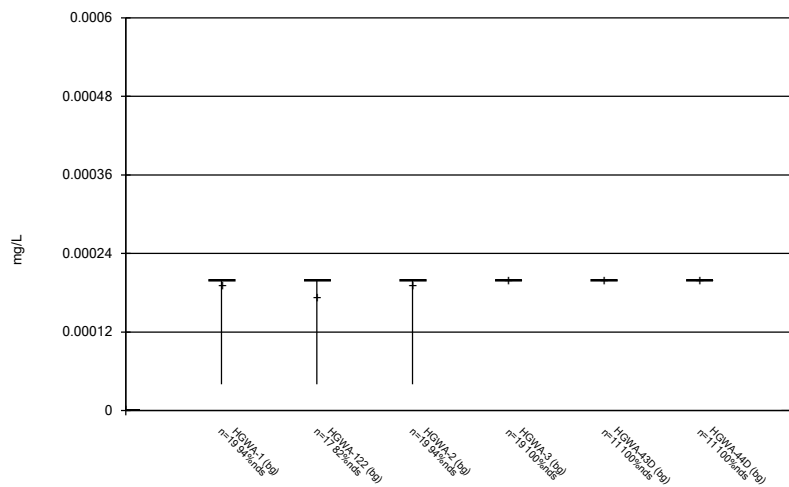
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Plant Hammond Client: Southern Company Data: Hammond AP-3

Box & Whiskers Plot



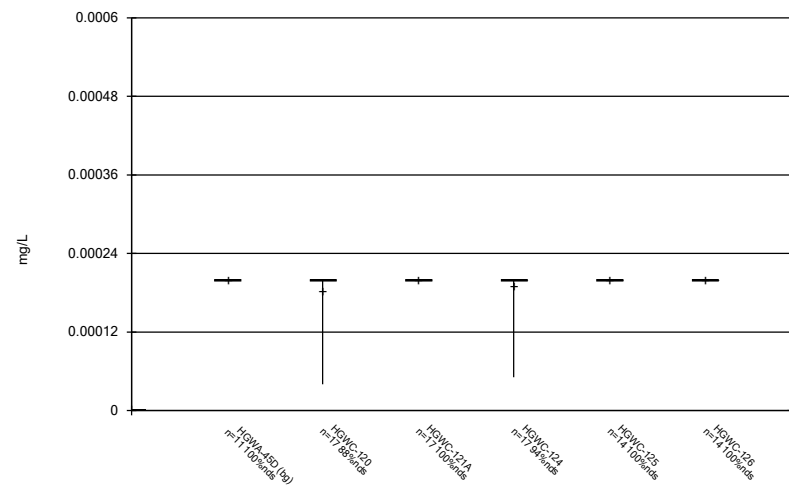
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Plant Hammond Client: Southern Company Data: Hammond AP-3

Box & Whiskers Plot



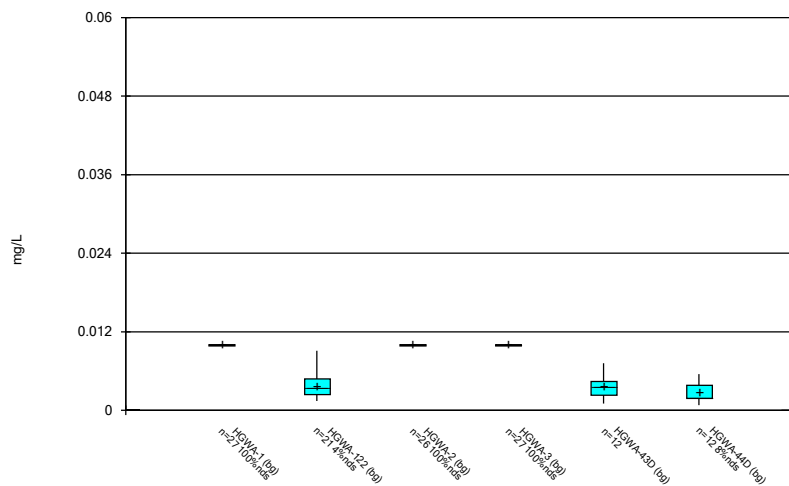
Constituent: Mercury Analysis Run 10/22/2024 11:44 AM
Plant Hammond Client: Southern Company Data: Hammond AP-3

Box & Whiskers Plot



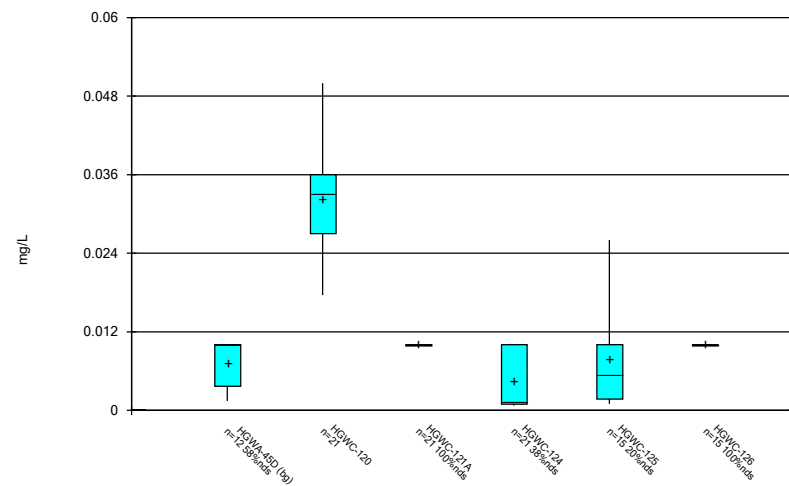
Constituent: Mercury Analysis Run 10/22/2024 11:44 AM
Plant Hammond Client: Southern Company Data: Hammond AP-3

Box & Whiskers Plot



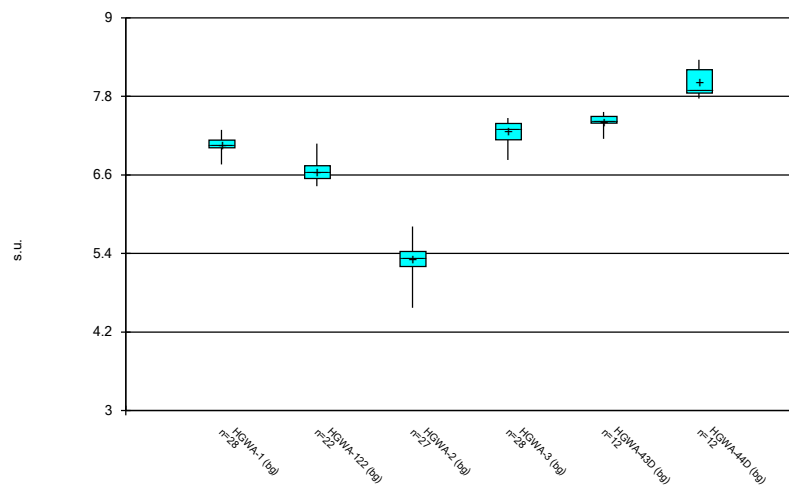
Constituent: Molybdenum Analysis Run 10/22/2024 11:44 AM
Plant Hammond Client: Southern Company Data: Hammond AP-3

Box & Whiskers Plot



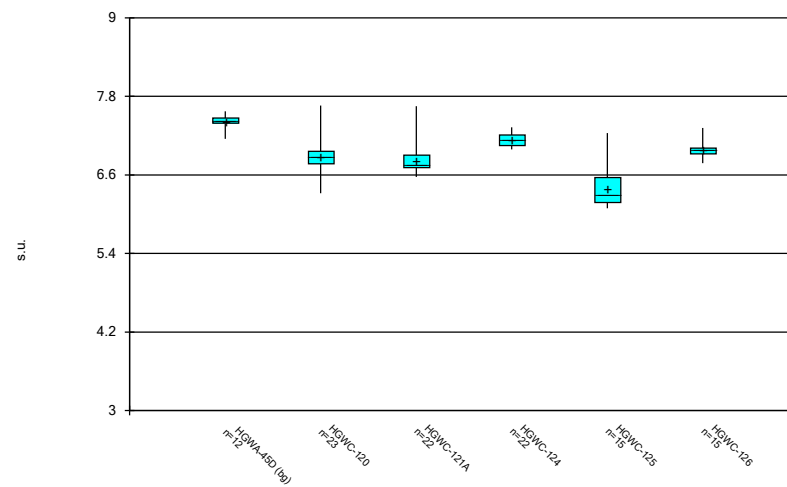
Constituent: Molybdenum Analysis Run 10/22/2024 11:44 AM
Plant Hammond Client: Southern Company Data: Hammond AP-3

Box & Whiskers Plot



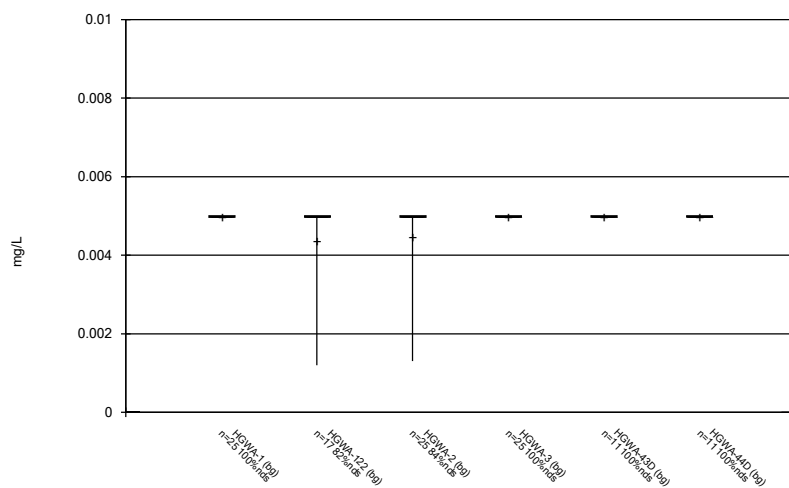
Constituent: pH Analysis Run 10/22/2024 11:44 AM
Plant Hammond Client: Southern Company Data: Hammond AP-3

Box & Whiskers Plot



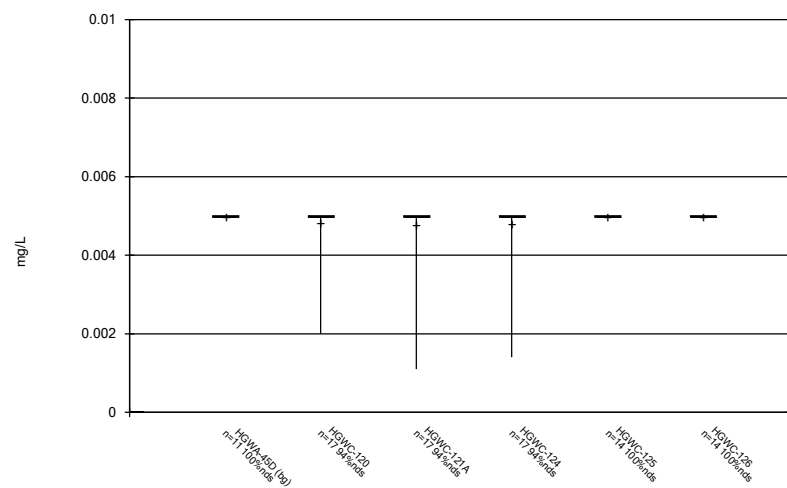
Constituent: pH Analysis Run 10/22/2024 11:44 AM
Plant Hammond Client: Southern Company Data: Hammond AP-3

Box & Whiskers Plot



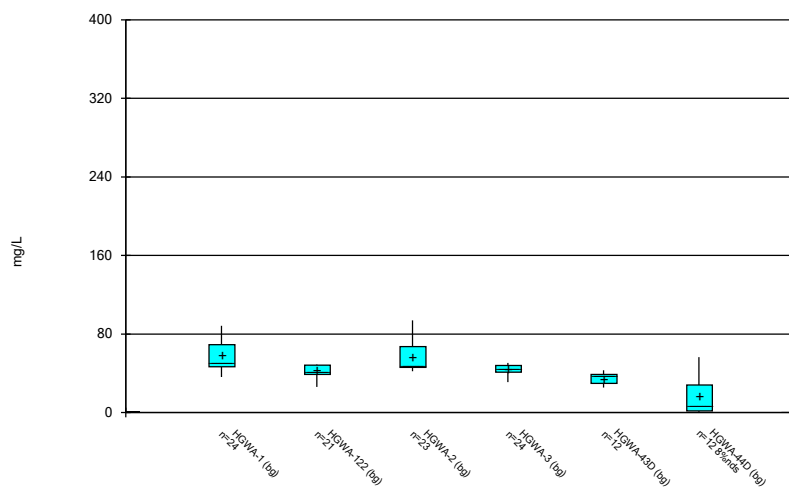
Constituent: Selenium Analysis Run 10/22/2024 11:44 AM
Plant Hammond Client: Southern Company Data: Hammond AP-3

Box & Whiskers Plot



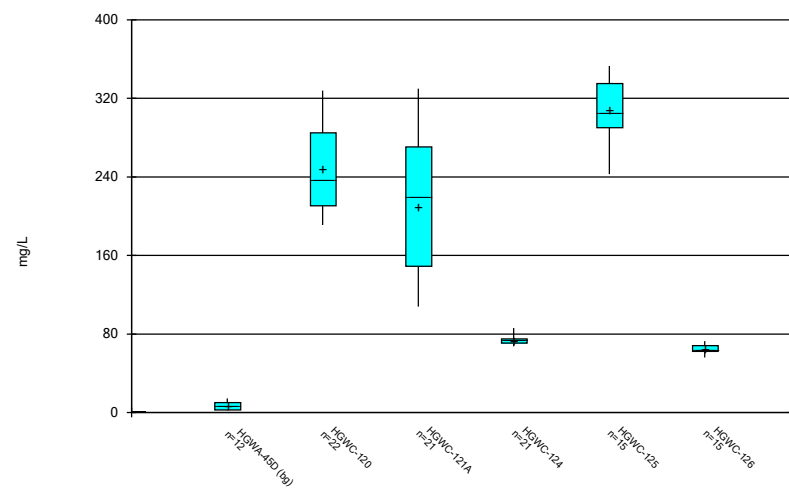
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Plant Hammond Client: Southern Company Data: Hammond AP-3

Box & Whiskers Plot



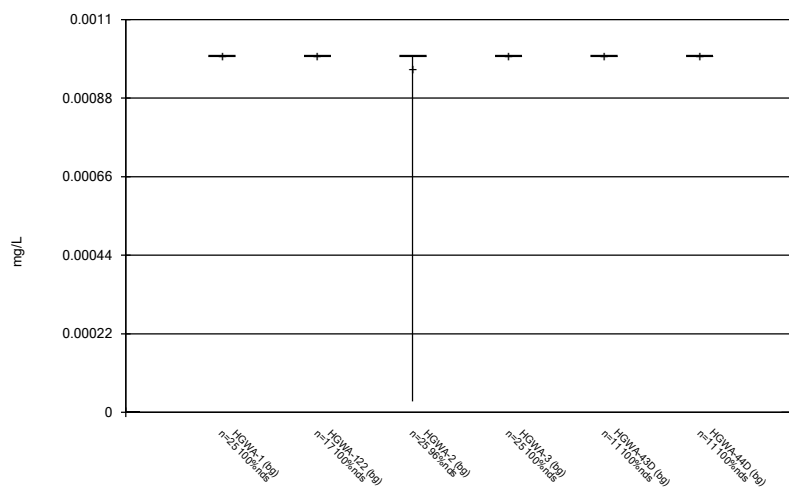
Constituent: Sulfate Analysis Run 10/22/2024 11:44 AM
Plant Hammond Client: Southern Company Data: Hammond AP-3

Box & Whiskers Plot



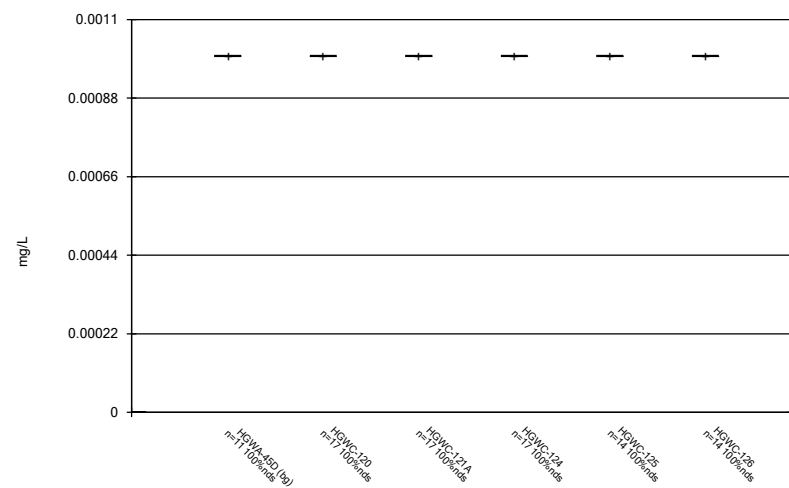
Constituent: Sulfate Analysis Run 10/22/2024 11:44 AM
Plant Hammond Client: Southern Company Data: Hammond AP-3

Box & Whiskers Plot



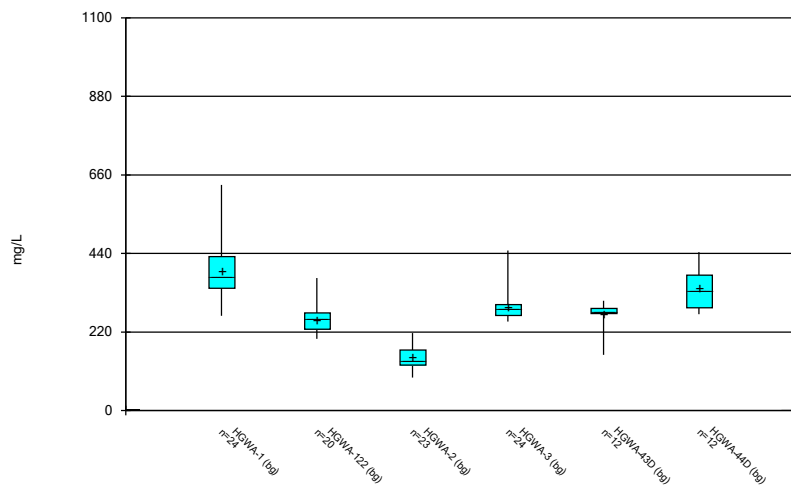
Constituent: Thallium Analysis Run 10/22/2024 11:44 AM
Plant Hammond Client: Southern Company Data: Hammond AP-3

Box & Whiskers Plot



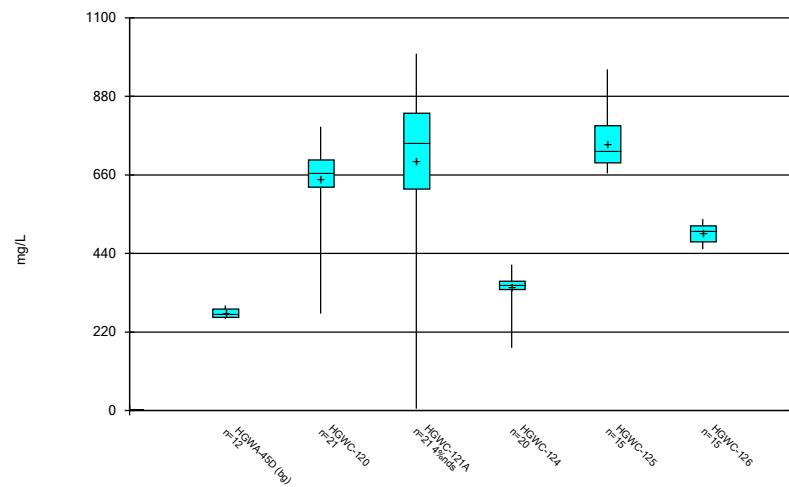
Constituent: Thallium Analysis Run 10/22/2024 11:44 AM
Plant Hammond Client: Southern Company Data: Hammond AP-3

Box & Whiskers Plot



Constituent: Total Dissolved Solids Analysis Run 10/22/2024 11:44 AM
Plant Hammond Client: Southern Company Data: Hammond AP-3

Box & Whiskers Plot



Constituent: Total Dissolved Solids Analysis Run 10/22/2024 11:44 AM
Plant Hammond Client: Southern Company Data: Hammond AP-3

FIGURE C.

Outlier Summary

Plant Hammond Client: Southern Company Data: Hammond AP-3 Printed 10/22/2024, 11:45 AM

	HGWA-44D Lithium (mg/L)	HGWA-122 Total Dissolved Solids (mg/L)
4/2/2019		814 (o)
8/8/2023	0.092 (o)	
2/13/2024	0.088 (o)	
8/6/2024	0.1 (o)	

FIGURE D.

Appendix III - Interwell Prediction Limits - Significant Results

Plant Hammond Client: Southern Company Data: Hammond AP-3 Printed 10/16/2024, 3:52 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	%NDs	ND Adj.	Transform	Alpha	Method
Boron (mg/L)	HGWC-120	0.55	n/a	8/7/2024	1.1	Yes	128	5.469	n/a	n/a	0.0001209	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-121A	0.55	n/a	8/6/2024	1.4	Yes	128	5.469	n/a	n/a	0.0001209	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-125	0.55	n/a	8/7/2024	1.5	Yes	128	5.469	n/a	n/a	0.0001209	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-120	138	n/a	8/7/2024	154	Yes	128	0	n/a	n/a	0.0001209	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-121A	138	n/a	8/6/2024	152	Yes	128	0	n/a	n/a	0.0001209	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-125	138	n/a	8/7/2024	159	Yes	128	0	n/a	n/a	0.0001209	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-120	93.9	n/a	8/7/2024	191	Yes	128	0.7813	n/a	n/a	0.0001209	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-121A	93.9	n/a	8/6/2024	127	Yes	128	0.7813	n/a	n/a	0.0001209	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-125	93.9	n/a	8/7/2024	289	Yes	128	0.7813	n/a	n/a	0.0001209	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-120	632	n/a	8/7/2024	647	Yes	127	0	n/a	n/a	0.0001227	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-121A	632	n/a	8/6/2024	661	Yes	127	0	n/a	n/a	0.0001227	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-125	632	n/a	8/7/2024	695	Yes	127	0	n/a	n/a	0.0001227	NP Inter (normality) 1 of 2

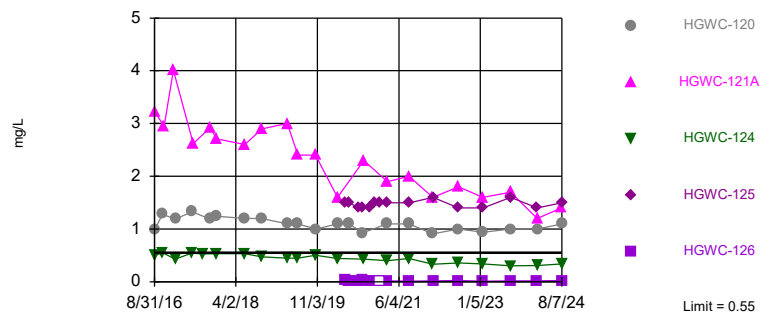
Appendix III - Interwell Prediction Limits - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-3 Printed 10/16/2024, 3:52 PM

<u>Constituent</u>	<u>Well</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>ND Adj.</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Boron (mg/L)	HGWC-120	0.55	n/a	8/7/2024	1.1	Yes	128	5.469	n/a	n/a	0.0001209	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-121A	0.55	n/a	8/6/2024	1.4	Yes	128	5.469	n/a	n/a	0.0001209	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-124	0.55	n/a	8/7/2024	0.34	No	128	5.469	n/a	n/a	0.0001209	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-125	0.55	n/a	8/7/2024	1.5	Yes	128	5.469	n/a	n/a	0.0001209	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-126	0.55	n/a	8/7/2024	0.021J	No	128	5.469	n/a	n/a	0.0001209	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-120	138	n/a	8/7/2024	154	Yes	128	0	n/a	n/a	0.0001209	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-121A	138	n/a	8/6/2024	152	Yes	128	0	n/a	n/a	0.0001209	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-124	138	n/a	8/7/2024	97.7	No	128	0	n/a	n/a	0.0001209	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-125	138	n/a	8/7/2024	159	Yes	128	0	n/a	n/a	0.0001209	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-126	138	n/a	8/7/2024	136	No	128	0	n/a	n/a	0.0001209	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-120	44.8	n/a	8/7/2024	2.6	No	128	0	n/a	n/a	0.0001209	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-121A	44.8	n/a	8/6/2024	11.6	No	128	0	n/a	n/a	0.0001209	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-124	44.8	n/a	8/7/2024	2.2	No	128	0	n/a	n/a	0.0001209	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-125	44.8	n/a	8/7/2024	9.7	No	128	0	n/a	n/a	0.0001209	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-126	44.8	n/a	8/7/2024	8.7	No	128	0	n/a	n/a	0.0001209	NP Inter (normality) 1 of 2
Fluoride (mg/L)	HGWC-120	1.5	n/a	8/7/2024	0.34	No	142	20.42	n/a	n/a	0.00009736	NP Inter (normality) 1 of 2
Fluoride (mg/L)	HGWC-121A	1.5	n/a	8/6/2024	0.2	No	142	20.42	n/a	n/a	0.00009736	NP Inter (normality) 1 of 2
Fluoride (mg/L)	HGWC-124	1.5	n/a	8/7/2024	0.1ND	No	142	20.42	n/a	n/a	0.00009736	NP Inter (normality) 1 of 2
Fluoride (mg/L)	HGWC-125	1.5	n/a	8/7/2024	0.12	No	142	20.42	n/a	n/a	0.00009736	NP Inter (normality) 1 of 2
Fluoride (mg/L)	HGWC-126	1.5	n/a	8/7/2024	0.5	No	142	20.42	n/a	n/a	0.00009736	NP Inter (normality) 1 of 2
pH (s.u.)	HGWC-120	8.36	4.57	8/7/2024	7.01	No	141	0	n/a	n/a	0.000197	NP Inter (normality) 1 of 2
pH (s.u.)	HGWC-121A	8.36	4.57	8/6/2024	6.91	No	141	0	n/a	n/a	0.000197	NP Inter (normality) 1 of 2
pH (s.u.)	HGWC-124	8.36	4.57	8/7/2024	7.24	No	141	0	n/a	n/a	0.000197	NP Inter (normality) 1 of 2
pH (s.u.)	HGWC-125	8.36	4.57	8/7/2024	6.15	No	141	0	n/a	n/a	0.000197	NP Inter (normality) 1 of 2
pH (s.u.)	HGWC-126	8.36	4.57	8/7/2024	6.99	No	141	0	n/a	n/a	0.000197	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-120	93.9	n/a	8/7/2024	191	Yes	128	0.7813	n/a	n/a	0.0001209	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-121A	93.9	n/a	8/6/2024	127	Yes	128	0.7813	n/a	n/a	0.0001209	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-124	93.9	n/a	8/7/2024	69.7	No	128	0.7813	n/a	n/a	0.0001209	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-125	93.9	n/a	8/7/2024	289	Yes	128	0.7813	n/a	n/a	0.0001209	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-126	93.9	n/a	8/7/2024	72.8	No	128	0.7813	n/a	n/a	0.0001209	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-120	632	n/a	8/7/2024	647	Yes	127	0	n/a	n/a	0.0001227	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-121A	632	n/a	8/6/2024	661	Yes	127	0	n/a	n/a	0.0001227	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-124	632	n/a	8/7/2024	337	No	127	0	n/a	n/a	0.0001227	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-125	632	n/a	8/7/2024	695	Yes	127	0	n/a	n/a	0.0001227	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-126	632	n/a	8/7/2024	518	No	127	0	n/a	n/a	0.0001227	NP Inter (normality) 1 of 2

Exceeds Limit: HGWC-120, HGWC-121A,
HGWC-125

Prediction Limit Interwell Non-parametric

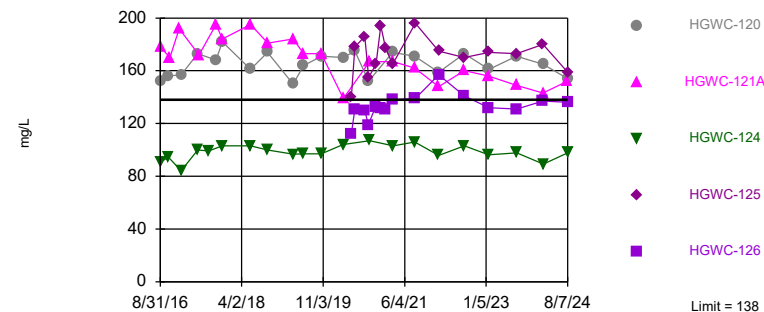


Non-parametric test used in lieu of parametric prediction limit because the Chi Squared normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 128 background values. 5.469% NDs. Annual per-constituent alpha = 0.001209. Individual comparison alpha = 0.0001209 (1 of 2). Comparing 5 points to limit.

Constituent: Boron Analysis Run 10/16/2024 3:51 PM View: Appendix III
Plant Hammond Client: Southern Company Data: Hammond AP-3

Exceeds Limit: HGWC-120, HGWC-121A,
HGWC-125

Prediction Limit Interwell Non-parametric

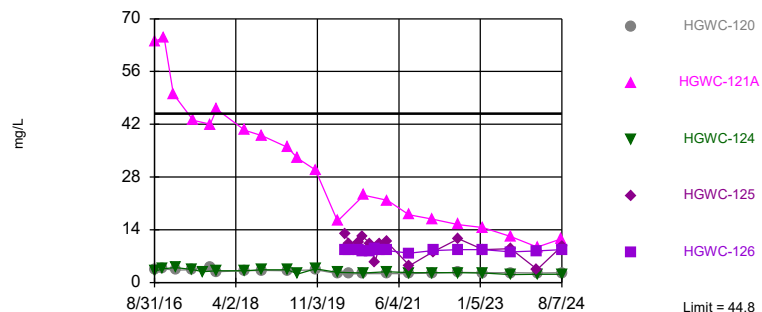


Non-parametric test used in lieu of parametric prediction limit because the Chi Squared normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 128 background values. Annual per-constituent alpha = 0.001209. Individual comparison alpha = 0.0001209 (1 of 2). Comparing 5 points to limit.

Constituent: Calcium Analysis Run 10/16/2024 3:51 PM View: Appendix III
Plant Hammond Client: Southern Company Data: Hammond AP-3

Within Limit

Prediction Limit Interwell Non-parametric

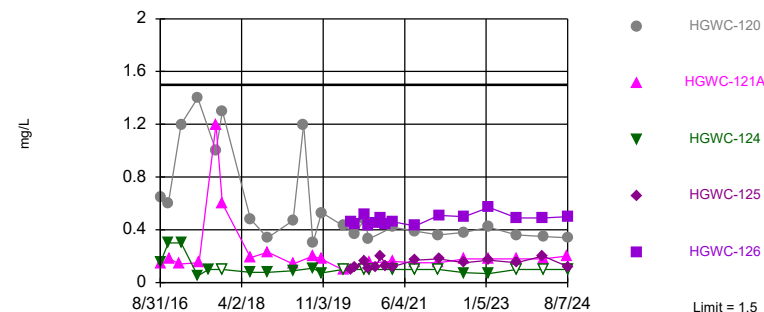


Non-parametric test used in lieu of parametric prediction limit because the Chi Squared normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 128 background values. Annual per-constituent alpha = 0.001209. Individual comparison alpha = 0.0001209 (1 of 2). Comparing 5 points to limit.

Constituent: Chloride Analysis Run 10/16/2024 3:51 PM View: Appendix III
Plant Hammond Client: Southern Company Data: Hammond AP-3

Within Limit

Prediction Limit Interwell Non-parametric



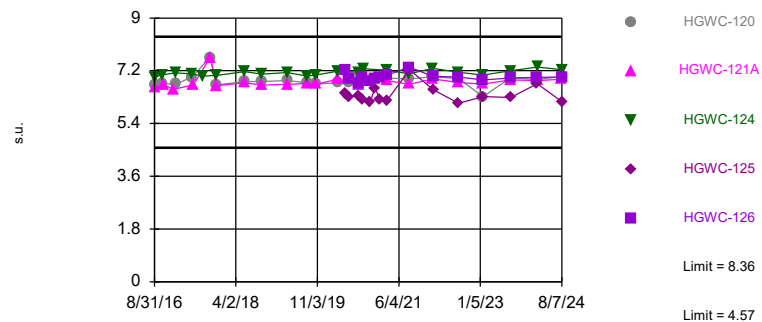
Non-parametric test used in lieu of parametric prediction limit because the Chi Squared normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 142 background values. 20.42% NDs. Annual per-constituent alpha = 0.0009732. Individual comparison alpha = 0.00009736 (1 of 2). Comparing 5 points to limit.

Constituent: Fluoride Analysis Run 10/16/2024 3:51 PM View: Appendix III
Plant Hammond Client: Southern Company Data: Hammond AP-3

Within Limits

Prediction Limit

Interwell Non-parametric



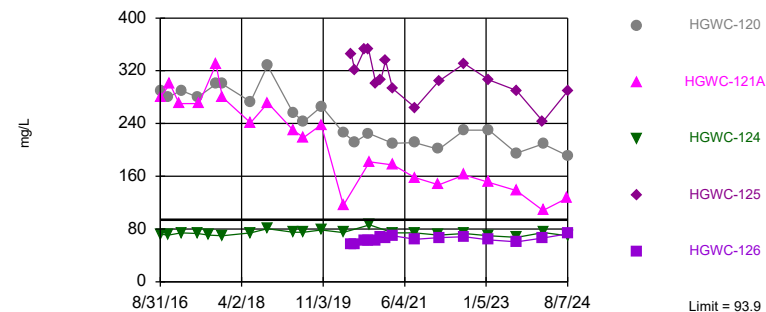
Non-parametric test used in lieu of parametric prediction limit because the Chi Squared normality test showed the data to be non-normal at the 0.01 alpha level. Limits are highest and lowest of 141 background values. Annual per-constituent alpha = 0.00197. Individual comparison alpha = 0.000197 (1 of 2). Comparing 5 points to limit.

Constituent: pH Analysis Run 10/16/2024 3:51 PM View: Appendix III
Plant Hammond Client: Southern Company Data: Hammond AP-3

Exceeds Limit: HGWC-120, HGWC-121A, HGWC-125

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Chi Squared normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 128 background values. 0.7813% NDs. Annual per-constituent alpha = 0.001209. Individual comparison alpha = 0.0001209 (1 of 2). Comparing 5 points to limit.

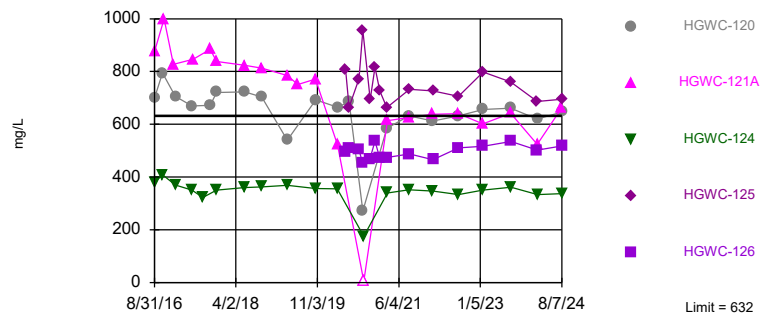
Constituent: Sulfate Analysis Run 10/16/2024 3:51 PM View: Appendix III
Plant Hammond Client: Southern Company Data: Hammond AP-3

Hollow symbols indicate censored values.

Exceeds Limit: HGWC-120, HGWC-121A, HGWC-125

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Chi Squared normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 127 background values. Annual per-constituent alpha = 0.001226. Individual comparison alpha = 0.0001227 (1 of 2). Comparing 5 points to limit.

Constituent: Total Dissolved Solids Analysis Run 10/16/2024 3:51 PM View: Appendix III
Plant Hammond Client: Southern Company Data: Hammond AP-3

Prediction Limit

Constituent: Boron (mg/L) Analysis Run 10/16/2024 3:52 PM View: Appendix III

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

	HGWA-1 (bg)	HGWA-3 (bg)	HGWA-2 (bg)	HGWA-122 (bg)	HGWC-120	HGWC-124	HGWC-121A	HGWC-126	HGWC-125
5/19/2016	0.0214 (J)	<0.04	0.0321 (J)						
7/11/2016	0.0142 (J)		0.0337 (J)						
7/12/2016		0.0074 (J)							
8/30/2016	0.0074 (J)	<0.04	0.0173 (J)	0.277					
8/31/2016					0.981	0.494	3.23		
10/19/2016	0.0224 (J)	0.0085 (J)	0.0341 (J)						
10/20/2016				0.336					
10/26/2016					1.28	0.55			
11/7/2016							2.95		
12/6/2016	0.0211 (J)	0.0085 (J)	0.0326 (J)						
1/13/2017							4.01		
1/24/2017	0.0165 (J)	0.01 (J)	0.0365 (J)						
1/25/2017				0.274					
1/27/2017					1.19	0.428			
3/21/2017	0.0187 (J)	0.0079 (J)	0.0349 (J)						
5/22/2017	0.0782	0.0131 (J)	0.0475						
5/25/2017				0.298	1.33	0.544			
6/3/2017							2.62		
8/11/2017				0.285		0.524			
10/2/2017					1.19		2.92		
10/3/2017	0.0198 (J)	0.0097 (J)	0.0386 (J)						
11/15/2017				0.322	1.24	0.531	2.71		
6/4/2018	0.02 (J)	0.017 (J)	0.036 (J)						
6/5/2018				0.24	1.2	0.53	2.6		
10/1/2018	0.013 (J)	0.0061 (J)	0.035 (J)						
10/2/2018				0.28	1.2	0.47			
10/5/2018							2.9		
4/1/2019		0.0066 (J)							
4/2/2019	0.016 (J)		0.034 (J)	0.18	1.1				
4/3/2019						0.45	3		
6/17/2019					1.1		2.4		
6/18/2019				0.25		0.45			
9/23/2019	0.021 (J)	0.0081 (J)	0.04 (J)						
10/21/2019				0.25		0.5	2.4		
10/22/2019					1				
3/24/2020				0.1		0.44			
3/25/2020	0.025 (J)	0.0096 (J)	0.039 (J)		1.1		1.6		
5/22/2020								0.026 (J)	1.5
6/15/2020					1.1				
6/16/2020	0.021 (J)	0.01 (J)					0.023 (J)	1.5	
8/25/2020							0.016 (J)	1.4	
9/15/2020	0.017 (J)	0.0071 (J)	0.044 (J)	0.22					
9/16/2020									
9/18/2020							0.041 (J)		
9/21/2020					0.93				1.4
9/25/2020									
9/28/2020						0.43	2.3		
11/10/2020									
11/11/2020							0.009 (J)		
11/12/2020									1.4
12/15/2020									
12/16/2020							0.011 (J)		1.5

Prediction Limit

Constituent: Boron (mg/L) Analysis Run 10/16/2024 3:52 PM View: Appendix III
Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWA-1 (bg)	HGWA-3 (bg)	HGWA-2 (bg)	HGWA-122 (bg)	HGWC-120	HGWC-124	HGWC-121A	HGWC-126	HGWC-125
1/19/2021									
1/20/2021								<0.04	1.5
3/10/2021	0.015 (J)								
3/11/2021		0.015 (J)	0.056	0.2					
3/12/2021					1.1			0.016 (J)	1.5
3/15/2021						0.4	1.9		
8/11/2021	0.02 (J)								
8/12/2021		<0.04	0.044						
8/13/2021				0.19					
8/16/2021					1.1	0.44	2		
8/19/2021								0.011 (J)	1.5
2/1/2022	0.016 (J)	0.011 (J)	0.056	0.17					
2/2/2022					0.91	0.33	1.6		
2/3/2022								0.016 (J)	1.6
8/2/2022	0.012 (J)	<0.04	0.047	0.18					
8/4/2022					1	0.36	1.8	0.023 (J)	1.4
1/23/2023		0.012 (J)							
1/24/2023	0.015 (J)		0.046	0.17		0.34	1.6		
1/25/2023					0.94			0.014 (J)	1.4
8/8/2023	0.023 (J)	0.011 (J)	0.06	0.18					
8/10/2023					1		1.7		1.6
8/11/2023						0.3		0.016 (J)	
2/13/2024	0.02 (J)	<0.04	0.051	0.15					
2/14/2024								0.019 (J)	1.4
2/15/2024					1		1.2		
2/16/2024						0.31			
8/5/2024	0.02 (J)	<0.04	0.057						
8/6/2024				0.15			1.4		
8/7/2024					1.1	0.34		0.021 (J)	1.5

Prediction Limit

Constituent: Boron (mg/L) Analysis Run 10/16/2024 3:52 PM View: Appendix III
Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWA-44D (bg)	HGWA-43D (bg)	HGWA-45D (bg)
5/19/2016			
7/11/2016			
7/12/2016			
8/30/2016			
8/31/2016			
10/19/2016			
10/20/2016			
10/26/2016			
11/7/2016			
12/6/2016			
1/13/2017			
1/24/2017			
1/25/2017			
1/27/2017			
3/21/2017			
5/22/2017			
5/25/2017			
6/3/2017			
8/11/2017			
10/2/2017			
10/3/2017			
11/15/2017			
6/4/2018			
6/5/2018			
10/1/2018			
10/2/2018			
10/5/2018			
4/1/2019			
4/2/2019			
4/3/2019			
6/17/2019			
6/18/2019			
9/23/2019			
10/21/2019			
10/22/2019			
3/24/2020			
3/25/2020			
5/22/2020			
6/15/2020			
6/16/2020			
8/25/2020			
9/15/2020			
9/16/2020	0.23	0.061 (J)	
9/18/2020			
9/21/2020			
9/25/2020			0.16
9/28/2020			
11/10/2020	0.29	0.057 (J)	
11/11/2020			0.17
11/12/2020			
12/15/2020	0.31	0.052 (J)	
12/16/2020			0.16

Prediction Limit

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Constituent: Boron (mg/L) Analysis Run 10/16/2024 3:52 PM View: Appendix III
Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWA-44D (bg)	HGWA-43D (bg)	HGWA-45D (bg)
1/19/2021	<0.04	0.049 (J)	
1/20/2021			0.19
3/10/2021	0.39		
3/11/2021		0.06	
3/12/2021			0.19
3/15/2021			
8/11/2021		0.042	
8/12/2021			
8/13/2021	0.31		0.15
8/16/2021			
8/19/2021			
2/1/2022	0.44	0.05	0.14
2/2/2022			
2/3/2022			
8/2/2022	0.31	0.043	0.14
8/4/2022			
1/23/2023			
1/24/2023	0.44	0.037 (J)	0.14
1/25/2023			
8/8/2023	0.55	0.038 (J)	0.15
8/10/2023			
8/11/2023			
2/13/2024	0.49	0.037 (J)	0.15
2/14/2024			
2/15/2024			
2/16/2024			
8/5/2024			
8/6/2024	0.52	0.043	0.16
8/7/2024			

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 10/16/2024 3:52 PM View: Appendix II

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

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Prediction Limit

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Constituent: Calcium (mg/L) Analysis Run 10/16/2024 3:52 PM View: Appendix III
Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWA-1 (bg)	HGWA-3 (bg)	HGWA-2 (bg)	HGWA-122 (bg)	HGWC-120	HGWC-124	HGWC-121A	HGWC-126	HGWC-125
1/19/2021									
1/20/2021								131	177 (M1)
3/10/2021	111								
3/11/2021		83.8	43.8	60.4 (M1)					
3/12/2021					174			138	165
3/15/2021						103	167		
8/11/2021	113								
8/12/2021		84	21.9						
8/13/2021				62.9					
8/16/2021					171	106	162		
8/19/2021								139	196
2/1/2022	106	85.1	27.2	57.5					
2/2/2022					159	95.9	148		
2/3/2022								157	175
8/2/2022	117	84.6	31.2	69.5					
8/4/2022					173	103	160	141	170
1/23/2023		85							
1/24/2023	117		29.4	63.3		96.2	156		
1/25/2023					161			132	174
8/8/2023	118	78.3	30.7	64.4					
8/10/2023					171		149		173
8/11/2023						97.8		131	
2/13/2024	116	83.6	38.8	61.9					
2/14/2024								137	180
2/15/2024					165		143		
2/16/2024						89.2			
8/5/2024	113	83.3	34.7						
8/6/2024				73.7			152		
8/7/2024					154	97.7		136	159

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 10/16/2024 3:52 PM View: Appendix III
Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWA-44D (bg)	HGWA-43D (bg)	HGWA-45D (bg)
5/19/2016			
7/11/2016			
7/12/2016			
8/30/2016			
8/31/2016			
10/19/2016			
10/20/2016			
10/26/2016			
11/7/2016			
12/6/2016			
1/13/2017			
1/24/2017			
1/25/2017			
1/27/2017			
3/21/2017			
5/22/2017			
5/25/2017			
6/3/2017			
8/11/2017			
10/2/2017			
10/3/2017			
11/15/2017			
6/4/2018			
6/5/2018			
10/1/2018			
10/2/2018			
10/5/2018			
4/1/2019			
4/2/2019			
4/3/2019			
6/17/2019			
6/18/2019			
9/23/2019			
10/21/2019			
10/22/2019			
3/24/2020			
3/25/2020			
5/22/2020			
6/15/2020			
6/16/2020			
8/25/2020			
9/15/2020			
9/16/2020	30	56	
9/18/2020			
9/21/2020			
9/25/2020			56.8
9/28/2020			
11/10/2020	33.6	63.3	
11/11/2020			54.9
11/12/2020			
12/15/2020	28.7	62.6	
12/16/2020			56.4

Prediction Limit

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Constituent: Calcium (mg/L) Analysis Run 10/16/2024 3:52 PM View: Appendix III
Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWA-44D (bg)	HGWA-43D (bg)	HGWA-45D (bg)
1/19/2021	33	60.1	
1/20/2021			55
3/10/2021	18.3		
3/11/2021		59.6	
3/12/2021			56.5
3/15/2021			
8/11/2021		61	
8/12/2021			
8/13/2021	28.9		53
8/16/2021			
8/19/2021			
2/1/2022	24.8	55.9	51.3
2/2/2022			
2/3/2022			
8/2/2022	20.9	54.1	49.9
8/4/2022			
1/23/2023			
1/24/2023	13.2	56.6	53.9
1/25/2023			
8/8/2023	8.1	52.8	48.1
8/10/2023			
8/11/2023			
2/13/2024	9.9	53.3	50.7
2/14/2024			
2/15/2024			
2/16/2024			
8/5/2024			
8/6/2024	7.1	57.2	53.3
8/7/2024			

Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 10/16/2024 3:52 PM View: Appendix I

Plant Hammond Client: Southern Company Data: Hammond AP-

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Constituent: Chloride (mg/L) Analysis Run 10/16/2024 3:52 PM View: Appendix III
Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWA-1 (bg)	HGWA-3 (bg)	HGWA-2 (bg)	HGWA-122 (bg)	HGWC-120	HGWC-124	HGWC-121A	HGWC-125	HGWC-126
1/19/2021									
1/20/2021								10.2	8.5
3/10/2021	7.4								
3/11/2021		5.9	5.1	2.3					
3/12/2021					2.4			10.8	8.5
3/15/2021						2.9	21.8		
8/11/2021	9.6								
8/12/2021		4.8	5.2						
8/13/2021				2.6					
8/16/2021					2.4	2.6	18		
8/19/2021								4.5	7.8
2/1/2022	7.5	5.7	7	2.2					
2/2/2022					2.5	2.6	16.8		
2/3/2022								8.1	8.5
8/2/2022	14.1	5.9	7.8	2.7					
8/4/2022					2.7	2.6	15.4	11.6	8.7
1/23/2023		5.6							
1/24/2023	9		7.1	2.4		2.5	14.6		
1/25/2023					2.6			8.7	8.7
8/8/2023	26	5.3	6.6	2.2					
8/10/2023					2.6		12.2	9	
8/11/2023						2.1			8.1
2/13/2024	10	5.3	6.3	2.4					
2/14/2024								3.5	8.4
2/15/2024					2.5		9.4		
2/16/2024						2.2			
8/5/2024	8.7	5.2	7.9						
8/6/2024				2.1			11.6		
8/7/2024					2.6	2.2		9.7	8.7

Prediction Limit

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Constituent: Chloride (mg/L) Analysis Run 10/16/2024 3:52 PM View: Appendix III
Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWA-44D (bg)	HGWA-43D (bg)	HGWA-45D (bg)
5/19/2016			
7/11/2016			
7/12/2016			
8/30/2016			
8/31/2016			
10/19/2016			
10/20/2016			
10/26/2016			
11/7/2016			
12/6/2016			
1/13/2017			
1/24/2017			
1/25/2017			
1/27/2017			
3/21/2017			
5/22/2017			
5/25/2017			
6/3/2017			
8/11/2017			
10/2/2017			
10/3/2017			
11/15/2017			
6/4/2018			
6/5/2018			
10/1/2018			
10/2/2018			
10/5/2018			
4/1/2019			
4/2/2019			
4/3/2019			
6/17/2019			
6/18/2019			
9/23/2019			
10/21/2019			
10/22/2019			
3/24/2020			
3/25/2020			
5/22/2020			
6/15/2020			
6/16/2020			
8/25/2020			
9/15/2020			
9/16/2020	4.1	4.1	
9/18/2020			
9/21/2020			
9/25/2020			3.6
9/28/2020			
11/10/2020	7.8	4.4	
11/11/2020			3.3
11/12/2020			
12/15/2020	9.4	4.7	
12/16/2020			3.4

Prediction Limit

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Constituent: Chloride (mg/L) Analysis Run 10/16/2024 3:52 PM View: Appendix III
Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWA-44D (bg)	HGWA-43D (bg)	HGWA-45D (bg)
1/19/2021	9.5	4.1	
1/20/2021			3.5
3/10/2021	12.3		
3/11/2021		4.5	
3/12/2021			3.3
3/15/2021			
8/11/2021		3.5	
8/12/2021			
8/13/2021	39.9		3.3
8/16/2021			
8/19/2021			
2/1/2022	44.8	4.1	3.5
2/2/2022			
2/3/2022			
8/2/2022	19.8	4.3	3.9
8/4/2022			
1/23/2023			
1/24/2023	24.9	4.3	3.5
1/25/2023			
8/8/2023	27	3.5	3.6
8/10/2023			
8/11/2023			
2/13/2024	27.7	3.9	3.4
2/14/2024			
2/15/2024			
2/16/2024			
8/5/2024			
8/6/2024	30.2	4	3.6
8/7/2024			

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 10/16/2024 3:52 PM View: Appendix III

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

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-122 (bg)	HGWC-121A	HGWC-124	HGWC-120	HGWC-126	HGWC-125
5/19/2016	0.105 (J)	0.0303 (J)	0.0513 (J)						
7/11/2016	0.16 (J)	0.05 (J)							
7/12/2016			0.12 (J)						
8/30/2016	0.09 (J)	0.06 (J)	0.09 (J)	0.19 (J)					
8/31/2016					0.14 (J)	0.15 (J)	0.65		
10/19/2016	0.1 (J)	0.04 (J)	0.1 (J)						
10/20/2016				0.13 (J)					
10/26/2016						0.3	0.6		
11/7/2016					0.18 (J)				
12/6/2016	0.11 (J)	0.36	0.21 (J)						
1/13/2017					0.14 (J)				
1/24/2017	0.09 (J)	<0.1	0.06 (J)						
1/25/2017				0.22 (J)					
1/27/2017						0.3	1.2		
3/21/2017	0.13 (J)	<0.1	0.005 (J)						
5/22/2017	0.12 (J)	<0.1	0.05 (J)						
5/25/2017				0.12 (J)		0.05 (J)	1.4		
6/3/2017					0.15 (J)				
8/11/2017				0.12 (J)		0.1 (J)			
10/2/2017					1.2		1		
10/3/2017	0.13 (J)	<0.1	0.13 (J)						
11/15/2017				0.05 (J)	0.6	<0.1	1.3		
4/2/2018	<0.1	<0.1							
4/3/2018			<0.1						
6/4/2018	0.074 (J)	<0.1	<0.1						
6/5/2018				0.15 (J)	0.19 (J)	0.078 (J)	0.48		
10/1/2018	<0.1	<0.1	<0.1						
10/2/2018				0.22 (J)		0.078 (J)	0.34		
10/5/2018					0.23 (J)				
3/12/2019	0.29 (J)	0.038 (J)	0.072 (J)						
4/1/2019			0.029 (J)						
4/2/2019	0.1 (J)	0.071 (J)		0.2 (J)			0.47		
4/3/2019					0.14 (J)	0.089 (J)			
6/17/2019							1.2		
6/18/2019				0.14 (J)					
8/22/2019				0.12 (J)	0.2 (J)		0.3 (J)		
8/23/2019						0.11 (J)			
9/23/2019	0.078 (J)	<0.1	<0.1						
10/21/2019				0.15 (J)	0.18 (J)	0.073 (J)			
10/22/2019							0.53		
3/2/2020	0.076 (J)	<0.1	<0.1						
3/24/2020				0.085 (J)		<0.1			
3/25/2020	0.098 (J)	<0.1	<0.1		0.095 (J)		0.43		
5/22/2020								0.46	0.1 (J)
6/15/2020							0.37		
6/16/2020	0.071 (J)		<0.1					0.44	0.12
8/24/2020				0.075 (J)					
8/25/2020		<0.1	<0.1					0.52	0.16
8/26/2020					0.16		0.48		
8/27/2020						<0.1			
8/28/2020	0.08 (J)								
9/15/2020	0.082 (J)	<0.1	<0.1	0.096 (J)					

Prediction Limit

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Constituent: Fluoride (mg/L) Analysis Run 10/16/2024 3:52 PM View: Appendix III
Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-122 (bg)	HGWC-121A	HGWC-124	HGWC-120	HGWC-126	HGWC-125
9/16/2020									
9/18/2020								0.43	
9/21/2020							0.33		0.11
9/25/2020									
9/28/2020					0.15	<0.1			
11/10/2020									
11/11/2020								0.45	
11/12/2020									0.12
12/15/2020									
12/16/2020								0.49	0.2
1/19/2021									
1/20/2021								0.44	0.13
3/10/2021	0.079 (J)								
3/11/2021		0.1	<0.1	0.059 (J)					
3/12/2021							0.42	0.46	0.12
3/15/2021					0.16	<0.1			
8/11/2021	0.058 (J)								
8/12/2021		<0.1	<0.1						
8/13/2021				0.065 (J)					
8/16/2021					0.15	<0.1	0.39		
8/19/2021								0.43	0.17
2/1/2022	0.064 (J)	<0.1	<0.1	0.062 (J)					
2/2/2022					0.15	<0.1	0.36		
2/3/2022								0.51	0.18
8/2/2022	0.09 (J)	0.053 (J)	0.067 (J)	0.1					
8/4/2022					0.18	0.074 (J)	0.38	0.5	0.15
1/23/2023			0.061 (J)						
1/24/2023	0.089 (J)	0.053 (J)		0.13	0.18	0.068 (J)			
1/25/2023							0.42	0.57	0.17
8/8/2023	0.088 (J)	0.07 (J)	0.055 (J)	0.091 (J)					
8/10/2023					0.18		0.36		0.15
8/11/2023						<0.1		0.49	
2/13/2024	0.071 (J)	0.17	<0.1	0.081 (J)					
2/14/2024								0.49	0.2
2/15/2024					0.18		0.35		
2/16/2024						<0.1			
8/5/2024	0.11	0.12	0.077 (J)						
8/6/2024				0.14	0.2				
8/7/2024						<0.1	0.34	0.5	0.12

Prediction Limit

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Constituent: Fluoride (mg/L) Analysis Run 10/16/2024 3:52 PM View: Appendix III
Plant Hammond Client: Southern Company Data: Hammond AP-3

HGWA-43D (bg) HGWA-44D (bg) HGWA-45D (bg)

5/19/2016
7/11/2016
7/12/2016
8/30/2016
8/31/2016
10/19/2016
10/20/2016
10/26/2016
11/7/2016
12/6/2016
1/13/2017
1/24/2017
1/25/2017
1/27/2017
3/21/2017
5/22/2017
5/25/2017
6/3/2017
8/11/2017
10/2/2017
10/3/2017
11/15/2017
4/2/2018
4/3/2018
6/4/2018
6/5/2018
10/1/2018
10/2/2018
10/5/2018
3/12/2019
4/1/2019
4/2/2019
4/3/2019
6/17/2019
6/18/2019
8/22/2019
8/23/2019
9/23/2019
10/21/2019
10/22/2019
3/2/2020
3/24/2020
3/25/2020
5/22/2020
6/15/2020
6/16/2020
8/24/2020
8/25/2020
8/26/2020
8/27/2020
8/28/2020
9/15/2020

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 10/16/2024 3:52 PM View: Appendix III
Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-45D (bg)
9/16/2020	0.22	0.22	
9/18/2020			
9/21/2020			
9/25/2020			0.21
9/28/2020			
11/10/2020	0.19	0.59	
11/11/2020			0.19
11/12/2020			
12/15/2020	0.21	0.67	
12/16/2020			0.18
1/19/2021	0.16	0.74	
1/20/2021			0.22
3/10/2021		0.65	
3/11/2021	0.2		
3/12/2021			0.2
3/15/2021			
8/11/2021	0.15		
8/12/2021			
8/13/2021		0.87	0.2
8/16/2021			
8/19/2021			
2/1/2022	0.19	0.96	0.15
2/2/2022			
2/3/2022			
8/2/2022	0.22	0.8	0.21
8/4/2022			
1/23/2023			
1/24/2023	0.23	1.3	0.19
1/25/2023			
8/8/2023	0.18	1.3	0.19
8/10/2023			
8/11/2023			
2/13/2024	0.2	1.5	0.17
2/14/2024			
2/15/2024			
2/16/2024			
8/5/2024			
8/6/2024	0.21	1.3	0.2
8/7/2024			

Prediction Limit

Page 2

Constituent: pH (s.u.) Analysis Run 10/16/2024 3:52 PM View: Appendix III
Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-122 (bg)	HGWC-121A	HGWC-120	HGWC-124	HGWC-125	HGWC-126
9/21/2020						6.98		6.22	
9/25/2020									
9/28/2020					6.93		7.27		
11/10/2020									
11/11/2020									6.86
11/12/2020								6.13	
12/15/2020									
12/16/2020								6.61	6.93
1/19/2021									
1/20/2021								6.23	6.99
3/10/2021	6.95								
3/11/2021		5.8	7.33	6.65					
3/12/2021						6.95		6.18	7.05
3/15/2021					6.87		7.22		
8/11/2021	6.98								
8/12/2021		5.05	7.31						
8/13/2021				6.56					
8/16/2021					6.74	6.92	7.09		
8/19/2021								7.24	7.32
2/1/2022	7.19	5.24	7.45	6.57					
2/2/2022					6.92	7	7.28		
2/3/2022								6.56	7.01
8/2/2022	7.03	4.57	7.02	6.67					
8/4/2022					6.8	6.93	7.15	6.09	6.99
1/23/2023			7.32						
1/24/2023	6.76	5.22		6.43	6.75		7.05		
1/25/2023						6.32		6.32	6.89
8/8/2023	7.05	5.01	7.42	6.67					
8/10/2023					6.89	6.96		6.29	
8/11/2023							7.2		6.95
2/13/2024	7.06	5.49	7.35	6.82					
2/14/2024								6.76	6.98
2/15/2024					6.87	6.9			
2/16/2024							7.33		
8/5/2024	7.29	4.91	7.27						
8/6/2024				6.86	6.91				
8/7/2024						7.01	7.24	6.15	6.99

Prediction Limit

Constituent: pH (s.u.) Analysis Run 10/16/2024 3:52 PM View: Appendix III
Plant Hammond Client: Southern Company Data: Hammond AP-3

HGWA-43D (bg) HGWA-44D (bg) HGWA-45D (bg)

5/19/2016
7/11/2016
7/12/2016
8/30/2016
8/31/2016
10/19/2016
10/20/2016
10/27/2016
11/7/2016
12/6/2016
1/13/2017
1/24/2017
1/25/2017
1/27/2017
3/21/2017
5/22/2017
5/25/2017
6/3/2017
8/11/2017
10/2/2017
10/3/2017
11/15/2017
4/2/2018
4/3/2018
6/4/2018
6/5/2018
10/1/2018
10/2/2018
10/5/2018
3/12/2019
4/1/2019
4/2/2019
4/3/2019
8/22/2019
8/23/2019
9/23/2019
10/21/2019
10/22/2019
3/2/2020
3/24/2020
3/25/2020
5/22/2020
6/15/2020
6/16/2020
8/24/2020
8/25/2020
8/26/2020
8/27/2020
8/28/2020
9/15/2020
9/16/2020
9/18/2020

7.52

7.83

Prediction Limit

Page 4

Constituent: pH (s.u.) Analysis Run 10/16/2024 3:52 PM View: Appendix III
Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-45D (bg)
9/21/2020			
9/25/2020			7.57
9/28/2020			
11/10/2020	7.27	7.84	
11/11/2020			7.4
11/12/2020			
12/15/2020	7.39	7.87	
12/16/2020			7.39
1/19/2021	7.39	7.86	
1/20/2021			7.47
3/10/2021		7.92	
3/11/2021	7.46		
3/12/2021			7.52
3/15/2021			
8/11/2021	7.4		
8/12/2021			
8/13/2021		7.77	7.42
8/16/2021			
8/19/2021			
2/1/2022	7.52	8.25	7.45
2/2/2022			
2/3/2022			
8/2/2022	7.15	7.9	7.39
8/4/2022			
1/23/2023			
1/24/2023	7.56	8.22	7.15
1/25/2023			
8/8/2023	7.39	8.2	7.39
8/10/2023			
8/11/2023			
2/13/2024	7.47	8.1	7.47
2/14/2024			
2/15/2024			
2/16/2024			
8/5/2024			
8/6/2024	7.46	8.36	7.47
8/7/2024			

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 10/16/2024 3:52 PM View: Appendix I

Plant Hammond Client: Southern Company Data: Hammond AP-

[illegible]

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 10/16/2024 3:52 PM View: Appendix III
Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWA-1 (bg)	HGWA-3 (bg)	HGWA-2 (bg)	HGWA-122 (bg)	HGWC-120	HGWC-124	HGWC-121A	HGWC-126	HGWC-125
1/19/2021									
1/20/2021								66.6	335
3/10/2021	49.6								
3/11/2021		50.4	52.9	40.7					
3/12/2021					210			69.7	293
3/15/2021						74	177		
8/11/2021	48.9								
8/12/2021		38.6	47.4						
8/13/2021				42.1					
8/16/2021					211	74	158		
8/19/2021								64.4	264
2/1/2022	43.7	46	67.1	41.1					
2/2/2022					201	70.7	147		
2/3/2022								66.8	304
8/2/2022	58.1	43.5	86.9	41.5					
8/4/2022					230	73.1	162	68.3	331
1/23/2023		39.5							
1/24/2023	48.3		79.7	36.5		69.6	151		
1/25/2023					230			63.7	306
8/8/2023	67.7	35	89.9	34.9					
8/10/2023					195		138		290
8/11/2023						67.6		60.5	
2/13/2024	50.4	35.5	93.9	35.6					
2/14/2024								66.4	243
2/15/2024					209		108		
2/16/2024						74.5			
8/5/2024	49.4	31.1	87.2						
8/6/2024				37.8			127		
8/7/2024					191	69.7		72.8	289

Prediction Limit

Page 3

Constituent: Sulfate (mg/L) Analysis Run 10/16/2024 3:52 PM View: Appendix III
Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWA-44D (bg)	HGWA-43D (bg)	HGWA-45D (bg)
5/19/2016			
7/11/2016			
7/12/2016			
8/30/2016			
8/31/2016			
10/19/2016			
10/20/2016			
10/26/2016			
11/7/2016			
12/6/2016			
1/13/2017			
1/24/2017			
1/25/2017			
1/27/2017			
3/21/2017			
5/22/2017			
5/25/2017			
6/3/2017			
8/11/2017			
10/2/2017			
10/3/2017			
11/15/2017			
6/4/2018			
6/5/2018			
10/1/2018			
10/2/2018			
10/5/2018			
4/1/2019			
4/2/2019			
4/3/2019			
6/17/2019			
6/18/2019			
9/23/2019			
10/21/2019			
10/22/2019			
3/24/2020			
3/25/2020			
5/22/2020			
6/15/2020			
6/16/2020			
8/25/2020			
9/15/2020			
9/16/2020	43	43	
9/18/2020			
9/21/2020			
9/25/2020			6.8
9/28/2020			
11/10/2020	6.3	39	
11/11/2020			11.2
11/12/2020			
12/15/2020	6.7	38.8	
12/16/2020			11.3

Prediction Limit

Page 4

Constituent: Sulfate (mg/L) Analysis Run 10/16/2024 3:52 PM View: Appendix III
Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWA-44D (bg)	HGWA-43D (bg)	HGWA-45D (bg)
1/19/2021	7.4	37.3	
1/20/2021			14.2
3/10/2021	<1		
3/11/2021		38.6	
3/12/2021			8.7
3/15/2021			
8/11/2021		30.5	
8/12/2021			
8/13/2021	56.1		8.1
8/16/2021			
8/19/2021			
2/1/2022	56.3	37.5	2.5
2/2/2022			
2/3/2022			
8/2/2022	13.2	37	2.1
8/4/2022			
1/23/2023			
1/24/2023	10.1	34.7	5.2
1/25/2023			
8/8/2023	1.3	25.6	2.2
8/10/2023			
8/11/2023			
2/13/2024	2	28.9	6
2/14/2024			
2/15/2024			
2/16/2024			
8/5/2024			
8/6/2024	0.86 (J)	25.5	2.9
8/7/2024			

Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 10/16/2024 3:52 PM View: Appendix III

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

	HGWA-1 (bg)	HGWA-3 (bg)	HGWA-2 (bg)	HGWA-122 (bg)	HGWC-120	HGWC-124	HGWC-121A	HGWC-125	HGWC-126
5/19/2016	421	267	143						
7/11/2016	363		125						
7/12/2016		249							
8/30/2016	330	254	168	280					
8/31/2016					700	379	876		
10/19/2016	380	357	176						
10/20/2016				265					
10/26/2016					795	409			
11/7/2016							1000		
12/6/2016	377	285	145						
1/13/2017							827		
1/24/2017	342	300	129						
1/25/2017				371					
1/27/2017					706	370			
3/21/2017	340	288	103						
5/22/2017	338	263	92						
5/25/2017				237	669	351			
6/3/2017							846		
8/11/2017				253		322			
10/2/2017					672		884		
10/3/2017	343	300	127						
11/15/2017				261	721	350	838		
6/4/2018	415	266	140						
6/5/2018				276	723	360	823		
10/1/2018	354	291	135						
10/2/2018				256	703	363			
10/5/2018							813		
4/1/2019		284							
4/2/2019	452		133	814 (o)	540				
4/3/2019						369	785		
6/17/2019							751		
6/18/2019				233					
9/23/2019	442	268	129						
10/21/2019				296		357	771		
10/22/2019					693				
3/24/2020				278		355			
3/25/2020	496	284	138		665		521		
5/22/2020								809	496
6/15/2020					685				
6/16/2020	632	448					665		508
8/25/2020							772		505
9/15/2020	265	258	124	267					
9/16/2020									
9/18/2020									452
9/21/2020					272			956	
9/25/2020									
9/28/2020						176	<10		
11/10/2020									
11/11/2020									468
11/12/2020							694		
12/15/2020									
12/16/2020								816	536

Prediction Limit

Page 2

Constituent: Total Dissolved Solids (mg/L) Analysis Run 10/16/2024 3:52 PM View: Appendix III
Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWA-1 (bg)	HGWA-3 (bg)	HGWA-2 (bg)	HGWA-122 (bg)	HGWC-120	HGWC-124	HGWC-121A	HGWC-125	HGWC-126
1/19/2021									
1/20/2021								726	472
3/10/2021	348								
3/11/2021		267	169	206					
3/12/2021					584			664	474
3/15/2021						340	614		
8/11/2021	366								
8/12/2021		265	118						
8/13/2021				201					
8/16/2021					632	352	626		
8/19/2021								732	488
2/1/2022	270	350	156	203					
2/2/2022					612	347	638		
2/3/2022								726	466
8/2/2022	400	287	196	217					
8/4/2022					632	334	640	706	510
1/23/2023		293							
1/24/2023	369		164	246		350	602		
1/25/2023					656			798	517
8/8/2023	457	285	189	248					
8/10/2023					661		642	760	
8/11/2023						361			535
2/13/2024	402	284	214	222					
2/14/2024								687	502
2/15/2024					620		524		
2/16/2024						333			
8/5/2024	444	304	217						
8/6/2024				270			661		
8/7/2024					647	337		695	518

Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 10/16/2024 3:52 PM View: Appendix III

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

	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-45D (bg)
5/19/2016			
7/11/2016			
7/12/2016			
8/30/2016			
8/31/2016			
10/19/2016			
10/20/2016			
10/26/2016			
11/7/2016			
12/6/2016			
1/13/2017			
1/24/2017			
1/25/2017			
1/27/2017			
3/21/2017			
5/22/2017			
5/25/2017			
6/3/2017			
8/11/2017			
10/2/2017			
10/3/2017			
11/15/2017			
6/4/2018			
6/5/2018			
10/1/2018			
10/2/2018			
10/5/2018			
4/1/2019			
4/2/2019			
4/3/2019			
6/17/2019			
6/18/2019			
9/23/2019			
10/21/2019			
10/22/2019			
3/24/2020			
3/25/2020			
5/22/2020			
6/15/2020			
6/16/2020			
8/25/2020			
9/15/2020			
9/16/2020	272	270	
9/18/2020			
9/21/2020			
9/25/2020			263
9/28/2020			
11/10/2020	307	287	
11/11/2020			276
11/12/2020			
12/15/2020	289	295	
12/16/2020			294

Prediction Limit

Page 4

Constituent: Total Dissolved Solids (mg/L) Analysis Run 10/16/2024 3:52 PM View: Appendix III
Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-45D (bg)
1/19/2021	270	278	
1/20/2021			289
3/10/2021		289	
3/11/2021	279		
3/12/2021			260
3/15/2021			
8/11/2021	277		
8/12/2021			
8/13/2021		436	272
8/16/2021			
8/19/2021			
2/1/2022	156	444	268
2/2/2022			
2/3/2022			
8/2/2022	278	311	261
8/4/2022			
1/23/2023			
1/24/2023	271	363	289
1/25/2023			
8/8/2023	274	361	261
8/10/2023			
8/11/2023			
2/13/2024	291	379	279
2/14/2024			
2/15/2024			
2/16/2024			
8/5/2024			
8/6/2024	283	380	256
8/7/2024			

FIGURE E.

Appendix III Trend Tests - Significant Results

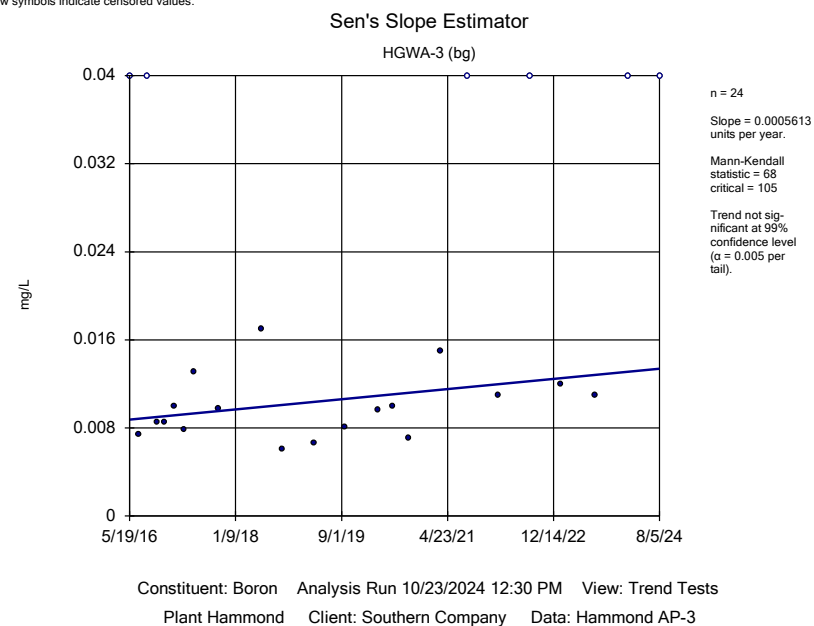
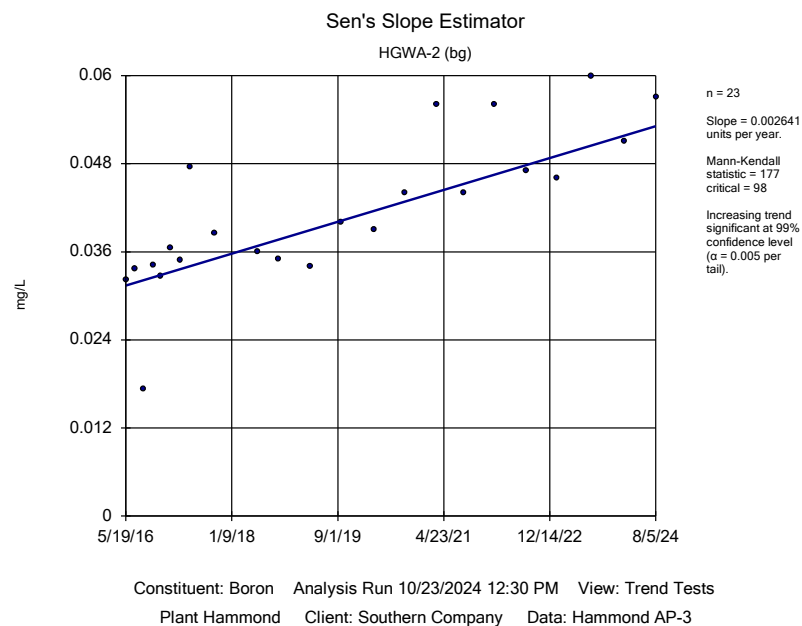
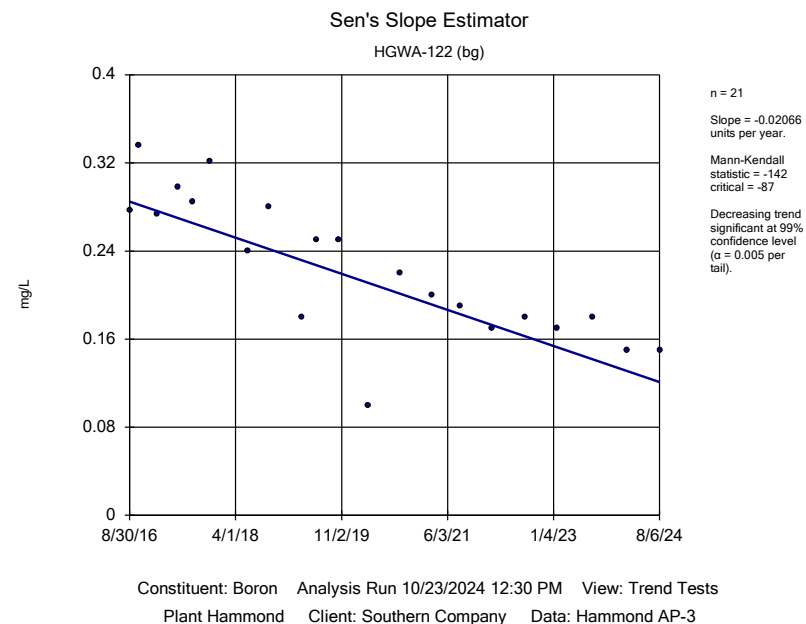
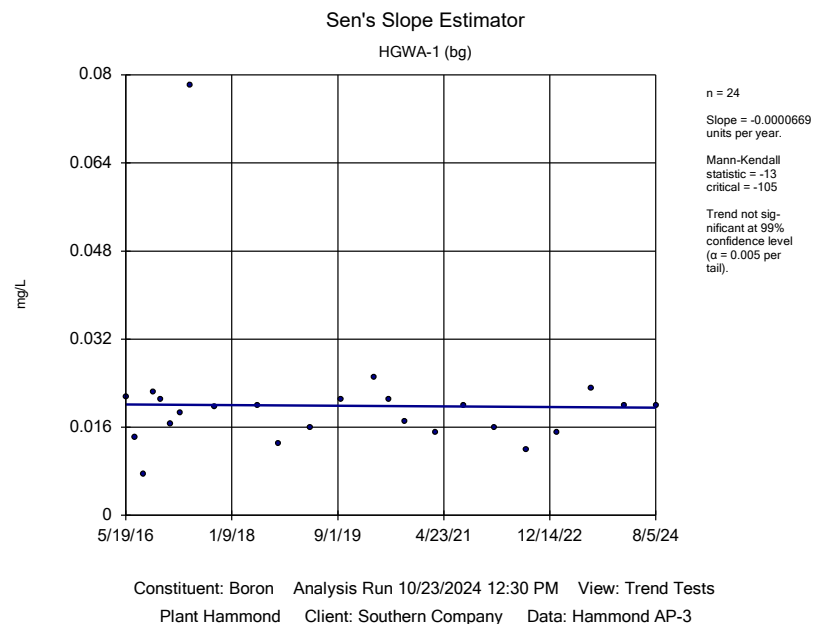
Plant Hammond Client: Southern Company Data: Hammond AP-3 Printed 10/23/2024, 12:32 PM

<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>Alpha</u>	<u>Method</u>
Boron (mg/L)	HGWA-122 (bg)	-0.02066	-142	-87	Yes	21	0	n/a	0.01	NP
Boron (mg/L)	HGWA-2 (bg)	0.002641	177	98	Yes	23	0	n/a	0.01	NP
Boron (mg/L)	HGWA-43D (bg)	-0.005612	-42	-38	Yes	12	0	n/a	0.01	NP
Boron (mg/L)	HGWA-44D (bg)	0.07224	46	38	Yes	12	8.333	n/a	0.01	NP
Boron (mg/L)	HGWC-120	-0.03508	-104	-92	Yes	22	0	n/a	0.01	NP
Boron (mg/L)	HGWC-121A	-0.2362	-160	-87	Yes	21	0	n/a	0.01	NP
Calcium (mg/L)	HGWA-2 (bg)	1.536	119	98	Yes	23	0	n/a	0.01	NP
Calcium (mg/L)	HGWA-3 (bg)	1.859	131	105	Yes	24	0	n/a	0.01	NP
Calcium (mg/L)	HGWA-44D (bg)	-7.17	-50	-38	Yes	12	0	n/a	0.01	NP
Calcium (mg/L)	HGWC-121A	-5.681	-124	-87	Yes	21	0	n/a	0.01	NP
Sulfate (mg/L)	HGWA-122 (bg)	-1.765	-134	-87	Yes	21	0	n/a	0.01	NP
Sulfate (mg/L)	HGWA-2 (bg)	4.063	177	98	Yes	23	0	n/a	0.01	NP
Sulfate (mg/L)	HGWA-43D (bg)	-3.566	-54	-38	Yes	12	0	n/a	0.01	NP
Sulfate (mg/L)	HGWC-120	-14.01	-159	-92	Yes	22	0	n/a	0.01	NP
Sulfate (mg/L)	HGWC-121A	-23.75	-160	-87	Yes	21	0	n/a	0.01	NP
Sulfate (mg/L)	HGWC-125	-16.24	-56	-53	Yes	15	0	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWC-120	-11.22	-91	-87	Yes	21	0	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWC-121A	-43.81	-128	-87	Yes	21	4.762	n/a	0.01	NP

Appendix III Trend Tests - All Results

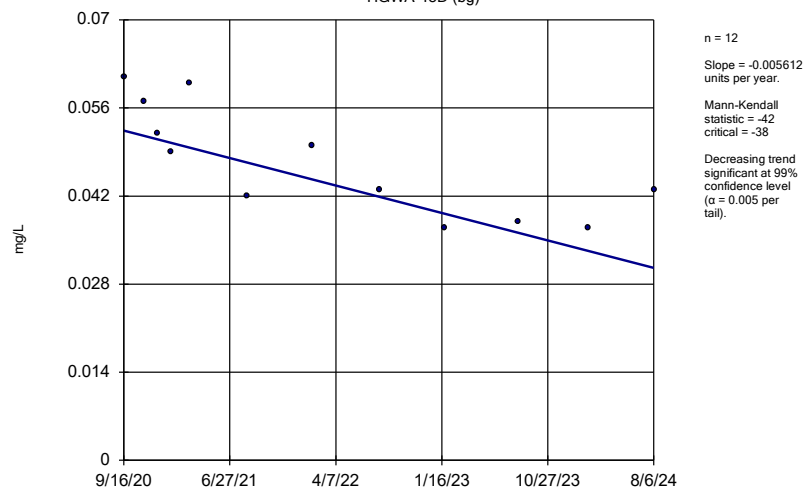
Plant Hammond Client: Southern Company Data: Hammond AP-3 Printed 10/23/2024, 12:32 PM

<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>Alpha</u>	<u>Method</u>
Boron (mg/L)	HGWA-1 (bg)	-0.0000669	-13	-105	No	24	0	n/a	0.01	NP
Boron (mg/L)	HGWA-122 (bg)	-0.02066	-142	-87	Yes	21	0	n/a	0.01	NP
Boron (mg/L)	HGWA-2 (bg)	0.002641	177	98	Yes	23	0	n/a	0.01	NP
Boron (mg/L)	HGWA-3 (bg)	0.0005613	68	105	No	24	25	n/a	0.01	NP
Boron (mg/L)	HGWA-43D (bg)	-0.005612	-42	-38	Yes	12	0	n/a	0.01	NP
Boron (mg/L)	HGWA-44D (bg)	0.07224	46	38	Yes	12	8.333	n/a	0.01	NP
Boron (mg/L)	HGWA-45D (bg)	-0.003634	-18	-38	No	12	0	n/a	0.01	NP
Boron (mg/L)	HGWC-120	-0.03508	-104	-92	Yes	22	0	n/a	0.01	NP
Boron (mg/L)	HGWC-121A	-0.2362	-160	-87	Yes	21	0	n/a	0.01	NP
Boron (mg/L)	HGWC-125	0	8	53	No	15	0	n/a	0.01	NP
Calcium (mg/L)	HGWA-1 (bg)	1.902	84	105	No	24	0	n/a	0.01	NP
Calcium (mg/L)	HGWA-122 (bg)	-1.705	-64	-87	No	21	0	n/a	0.01	NP
Calcium (mg/L)	HGWA-2 (bg)	1.536	119	98	Yes	23	0	n/a	0.01	NP
Calcium (mg/L)	HGWA-3 (bg)	1.859	131	105	Yes	24	0	n/a	0.01	NP
Calcium (mg/L)	HGWA-43D (bg)	-2.184	-32	-38	No	12	0	n/a	0.01	NP
Calcium (mg/L)	HGWA-44D (bg)	-7.17	-50	-38	Yes	12	0	n/a	0.01	NP
Calcium (mg/L)	HGWA-45D (bg)	-1.791	-36	-38	No	12	0	n/a	0.01	NP
Calcium (mg/L)	HGWC-120	0.3985	16	92	No	22	0	n/a	0.01	NP
Calcium (mg/L)	HGWC-121A	-5.681	-124	-87	Yes	21	0	n/a	0.01	NP
Calcium (mg/L)	HGWC-125	0.9777	4	53	No	15	0	n/a	0.01	NP
Sulfate (mg/L)	HGWA-1 (bg)	0.5993	35	105	No	24	0	n/a	0.01	NP
Sulfate (mg/L)	HGWA-122 (bg)	-1.765	-134	-87	Yes	21	0	n/a	0.01	NP
Sulfate (mg/L)	HGWA-2 (bg)	4.063	177	98	Yes	23	0	n/a	0.01	NP
Sulfate (mg/L)	HGWA-3 (bg)	-0.4499	-30	-105	No	24	0	n/a	0.01	NP
Sulfate (mg/L)	HGWA-43D (bg)	-3.566	-54	-38	Yes	12	0	n/a	0.01	NP
Sulfate (mg/L)	HGWA-44D (bg)	-1.833	-14	-38	No	12	8.333	n/a	0.01	NP
Sulfate (mg/L)	HGWA-45D (bg)	-1.936	-30	-38	No	12	0	n/a	0.01	NP
Sulfate (mg/L)	HGWC-120	-14.01	-159	-92	Yes	22	0	n/a	0.01	NP
Sulfate (mg/L)	HGWC-121A	-23.75	-160	-87	Yes	21	0	n/a	0.01	NP
Sulfate (mg/L)	HGWC-125	-16.24	-56	-53	Yes	15	0	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-1 (bg)	5.368	56	105	No	24	0	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-122 (bg)	-5.553	-56	-81	No	20	0	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-2 (bg)	6.288	78	98	No	23	0	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-3 (bg)	2.16	44	105	No	24	0	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-43D (bg)	0.03609	0	38	No	12	0	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-44D (bg)	28.25	38	38	No	12	0	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-45D (bg)	-3.941	-16	-38	No	12	0	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWC-120	-11.22	-91	-87	Yes	21	0	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWC-121A	-43.81	-128	-87	Yes	21	4.762	n/a	0.01	NP
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Sen's Slope Estimator

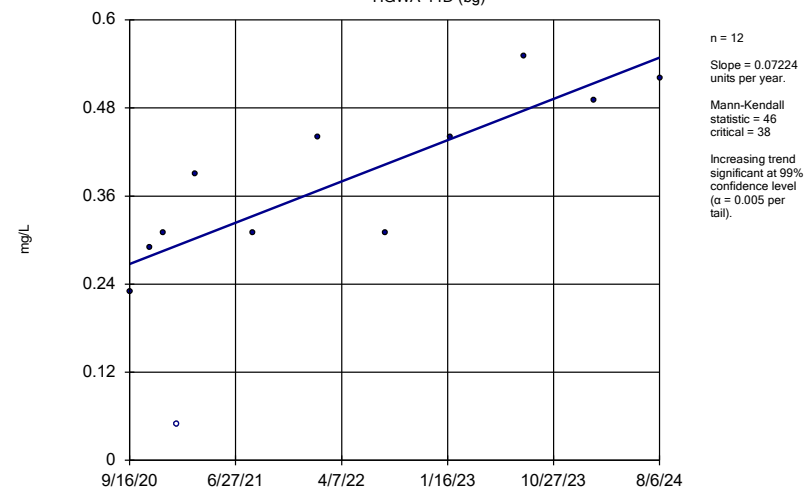
HGWA-43D (bg)



Constituent: Boron Analysis Run 10/23/2024 12:30 PM View: Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-3

Sen's Slope Estimator

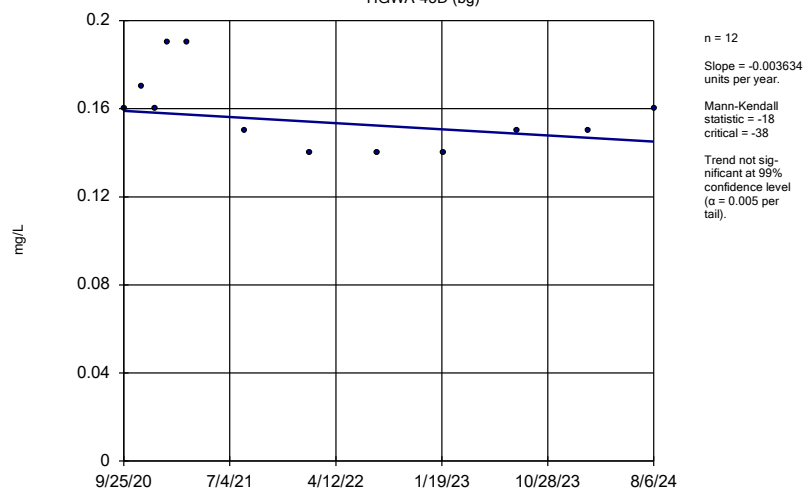
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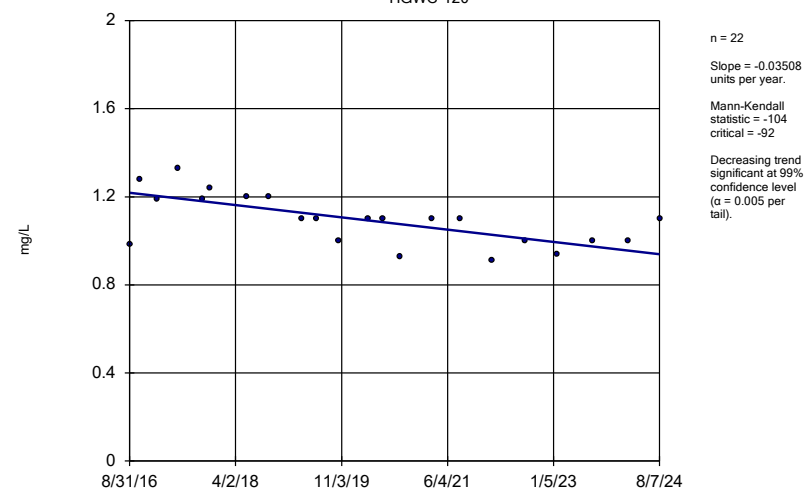
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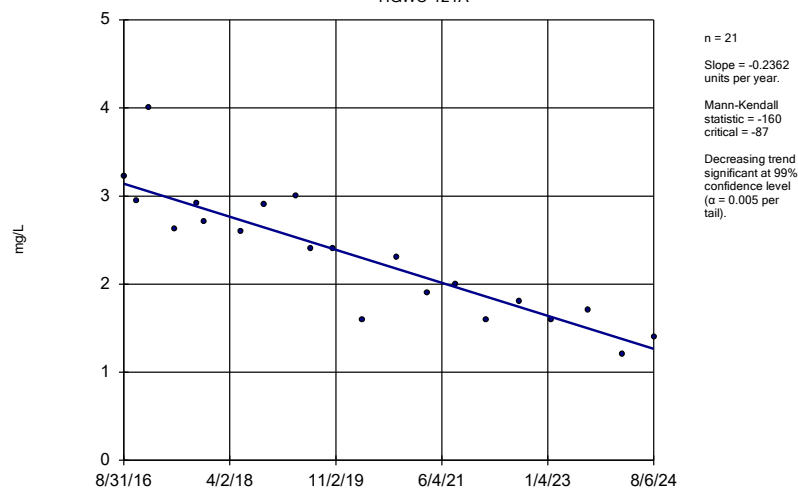
HGWC-120



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Sen's Slope Estimator

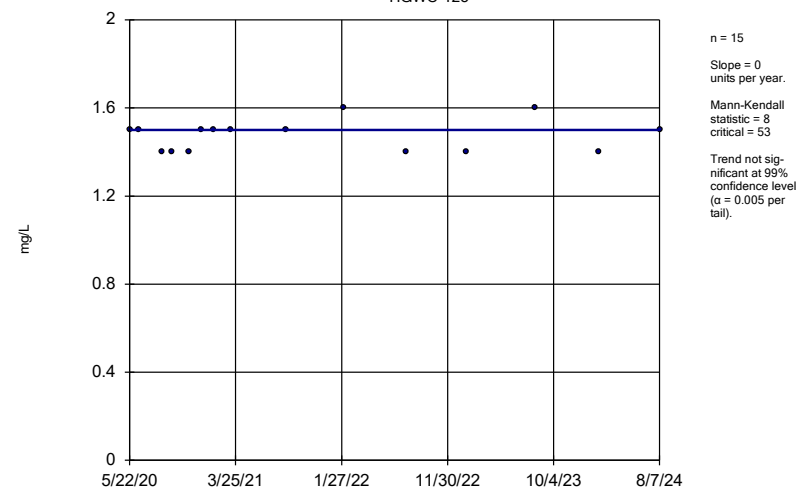
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Sen's Slope Estimator

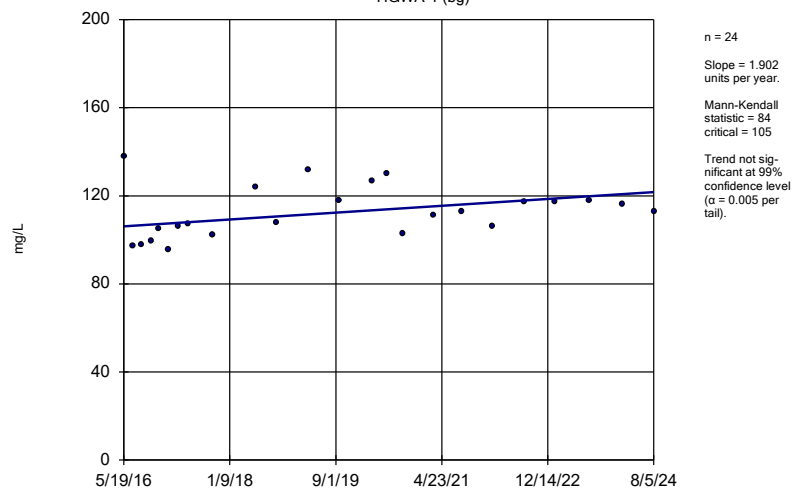
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Plant Hammond Client: Southern Company Data: Hammond AP-3

Sen's Slope Estimator

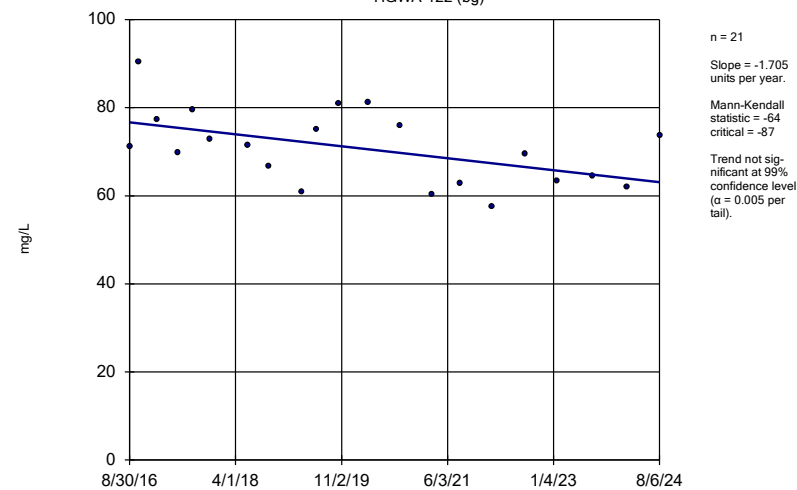
HGWA-1 (bg)



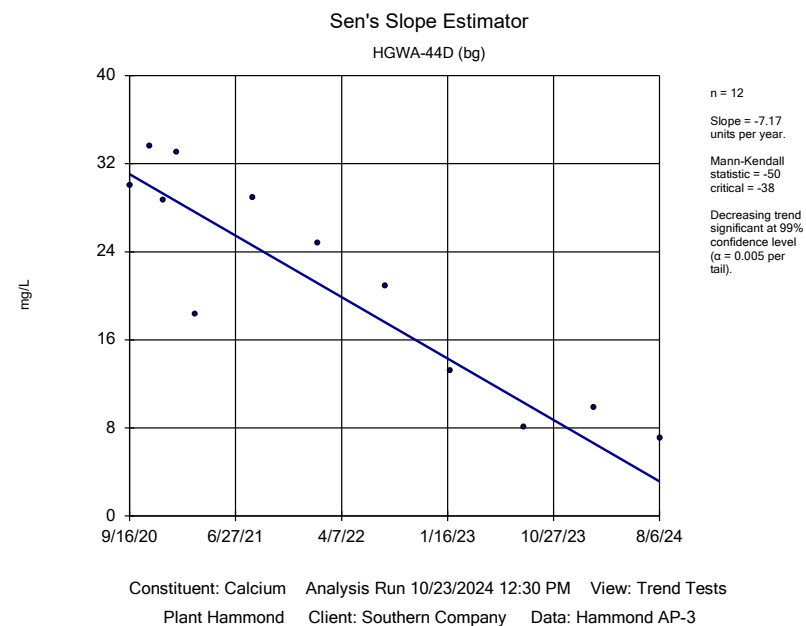
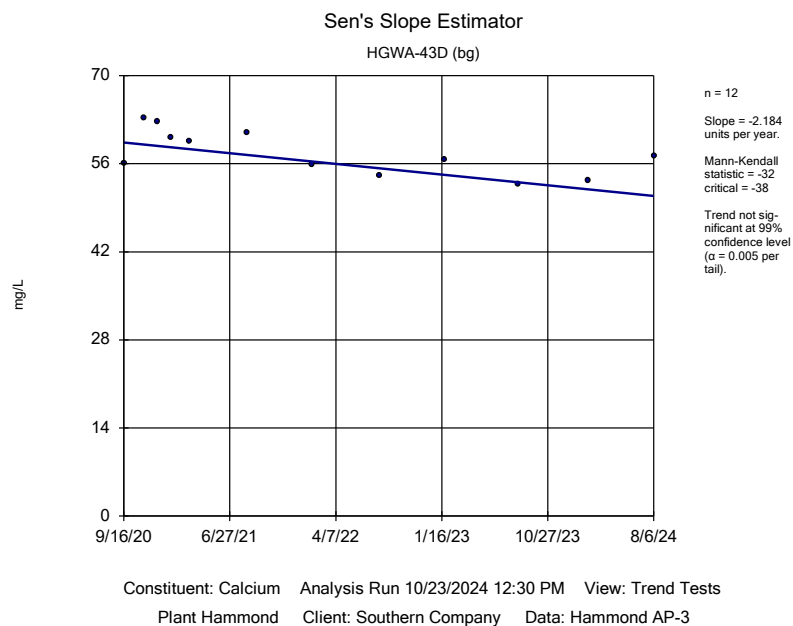
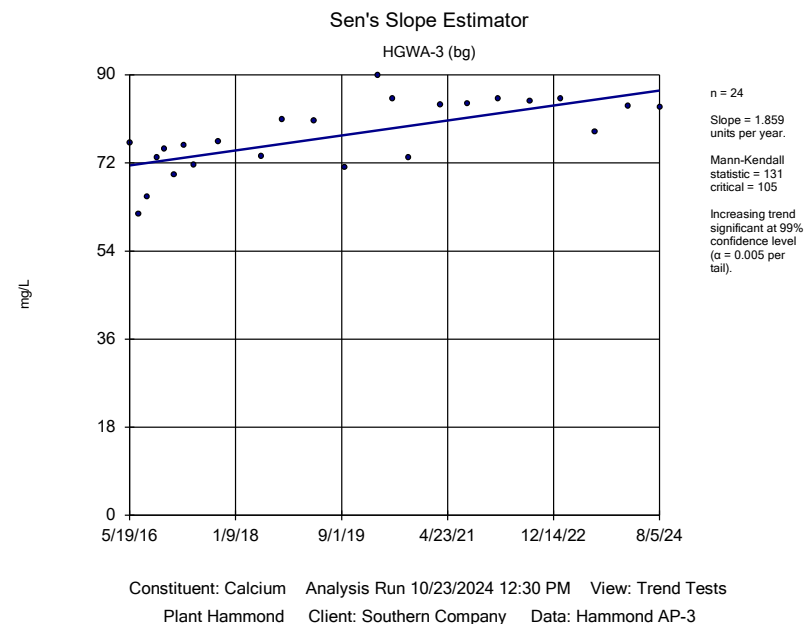
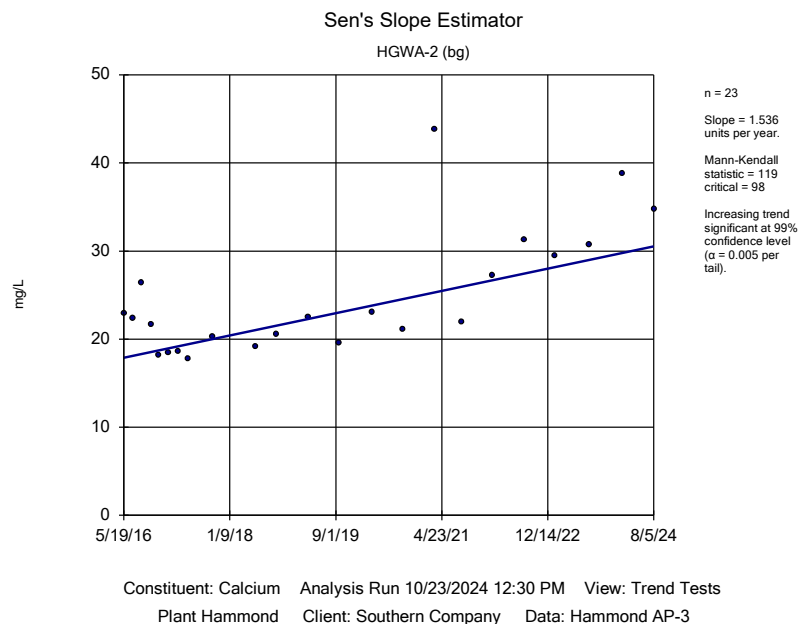
Constituent: Calcium Analysis Run 10/23/2024 12:30 PM View: Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-3

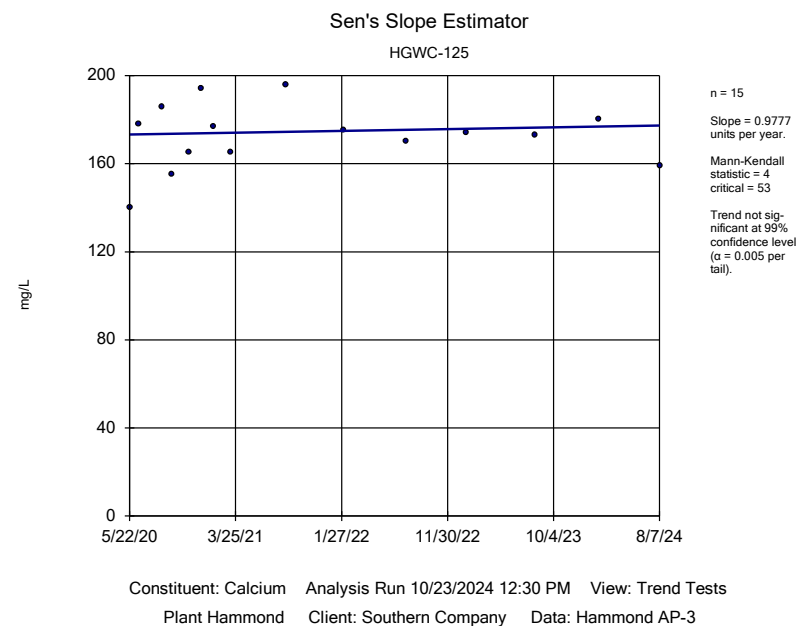
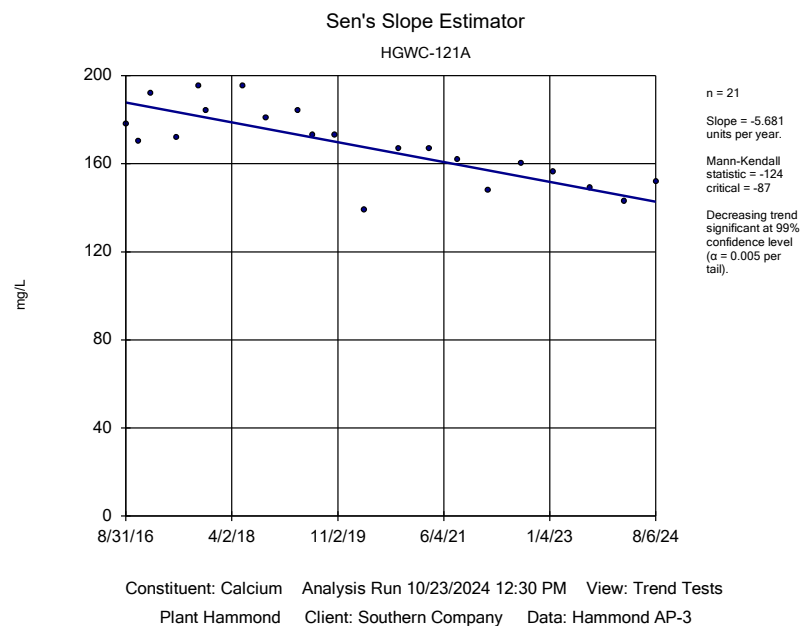
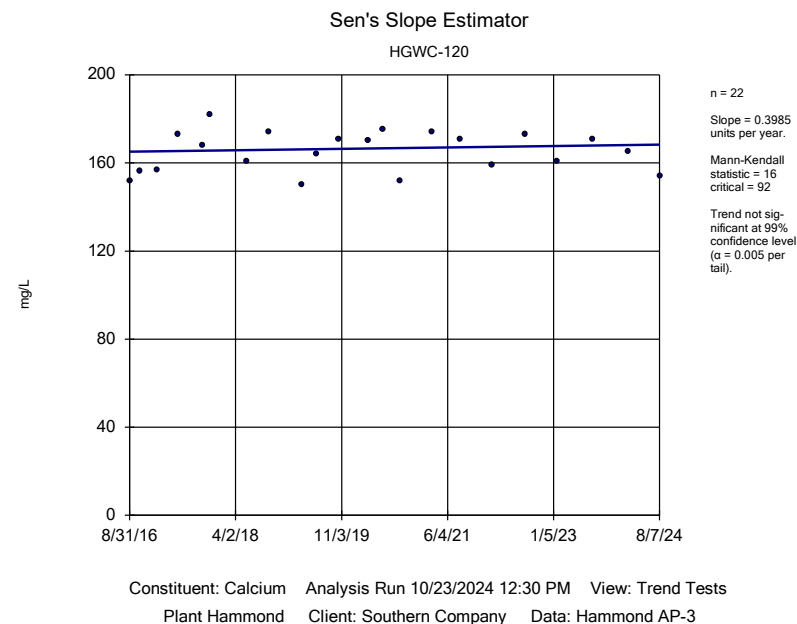
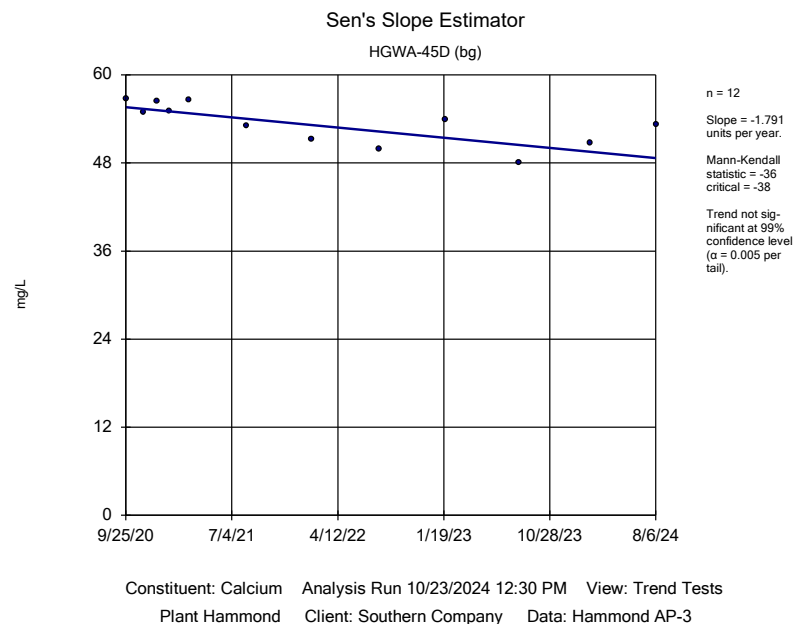
Sen's Slope Estimator

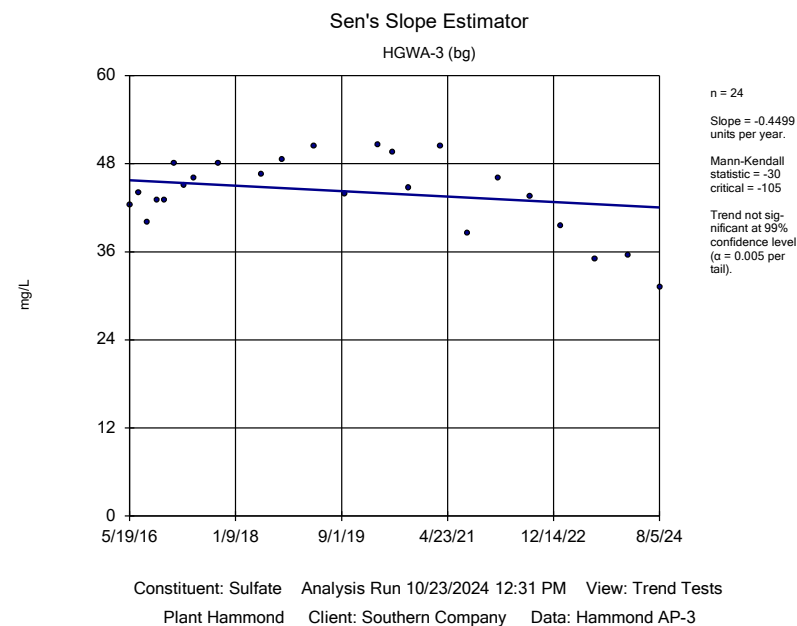
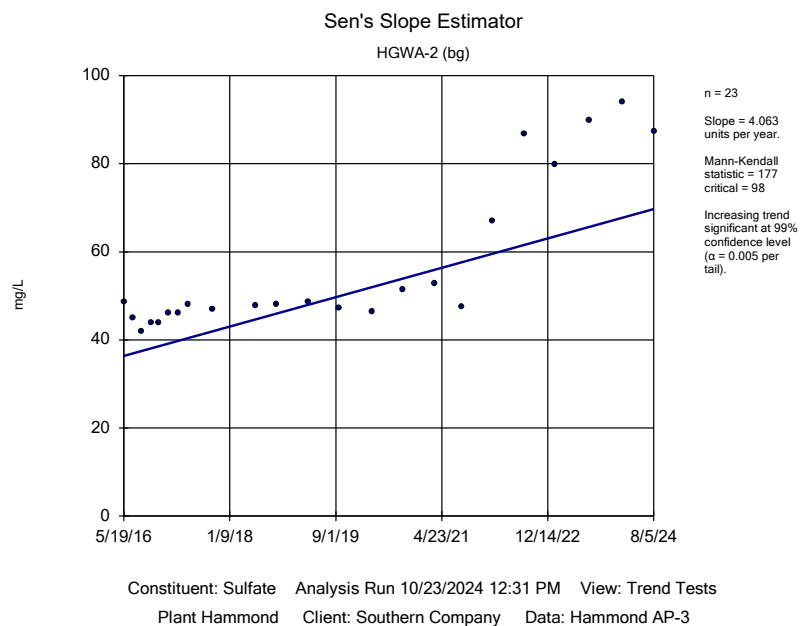
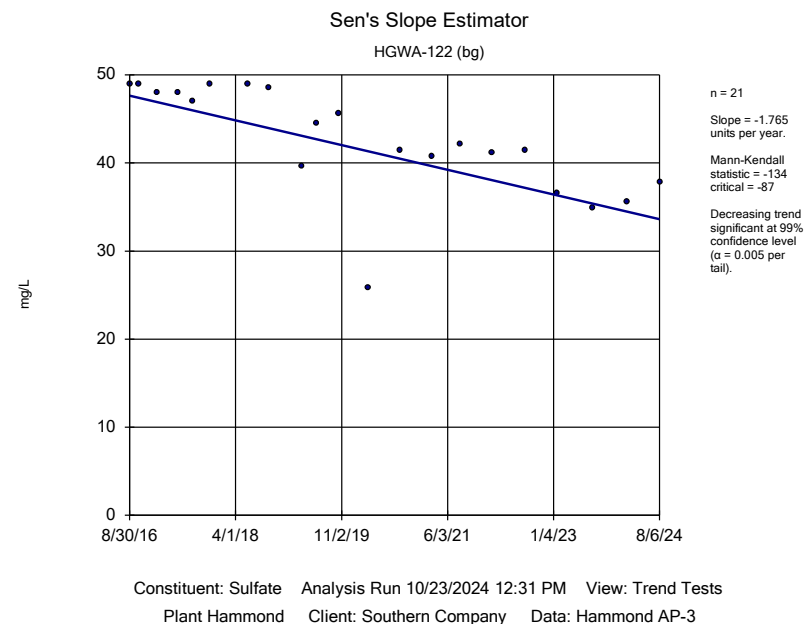
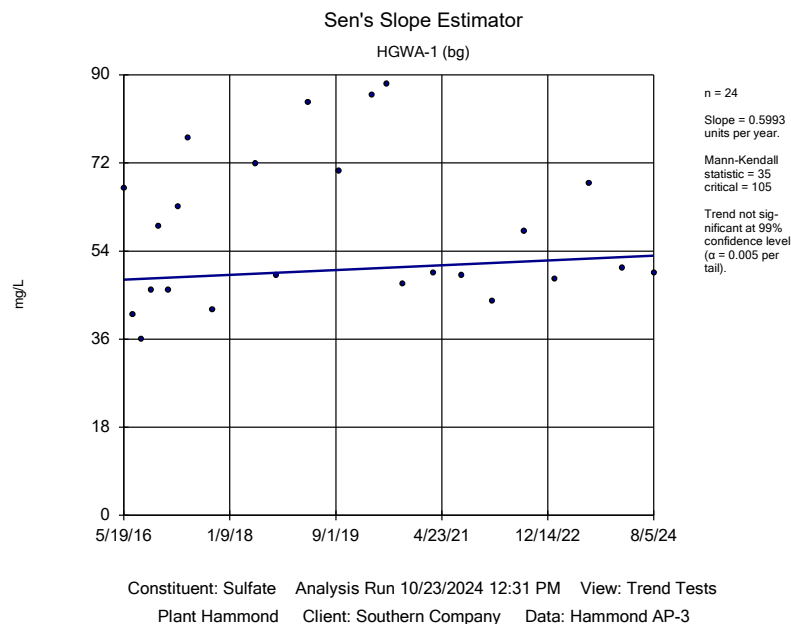
HGWA-122 (bg)



Constituent: Calcium Analysis Run 10/23/2024 12:30 PM View: Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-3

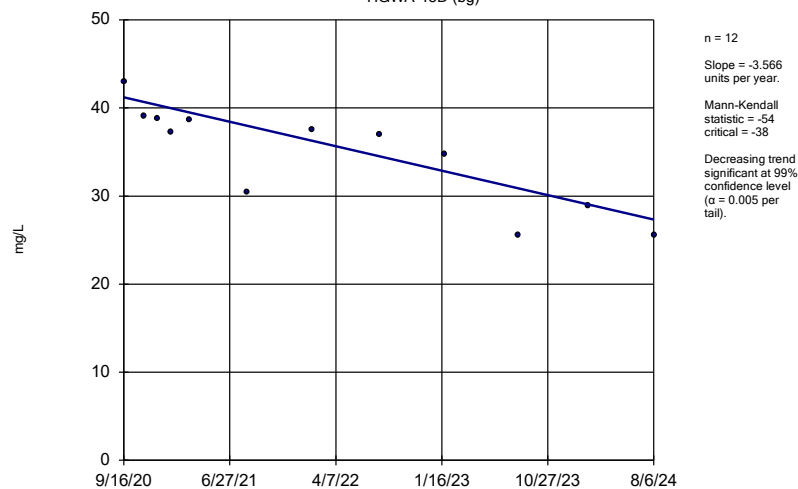






Sen's Slope Estimator

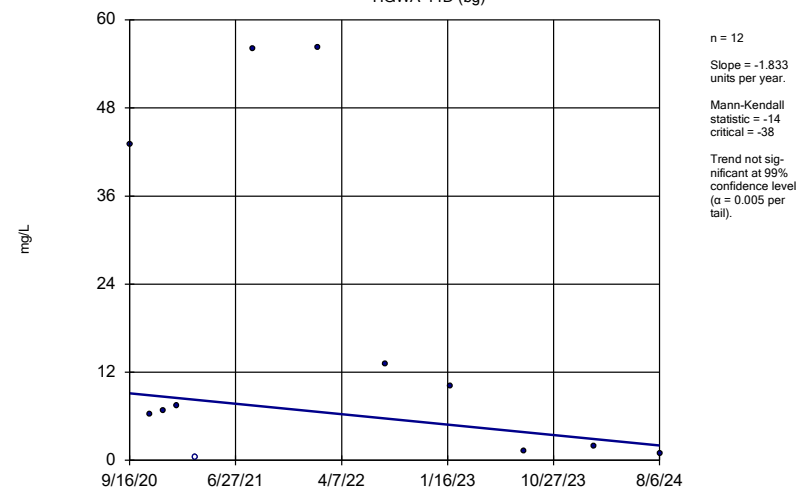
HGWA-43D (bg)



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

Sen's Slope Estimator

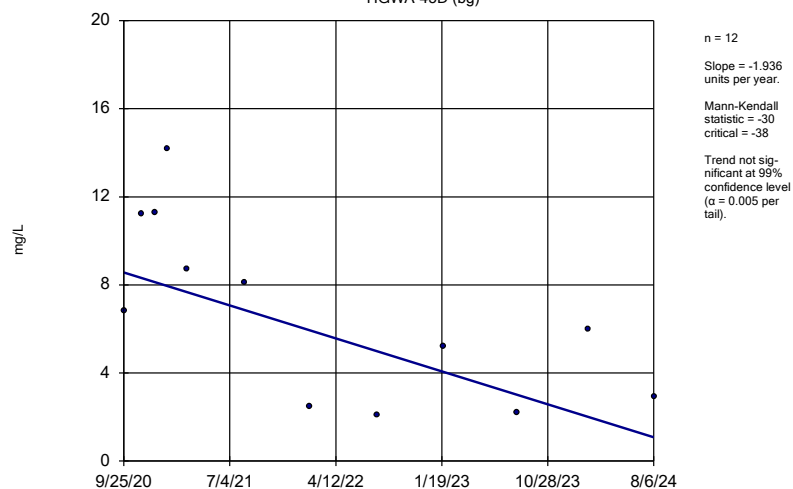
HGWA-44D (bg)



Constituent: Sulfate Analysis Run 10/23/2024 12:31 PM View: Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-3

Sen's Slope Estimator

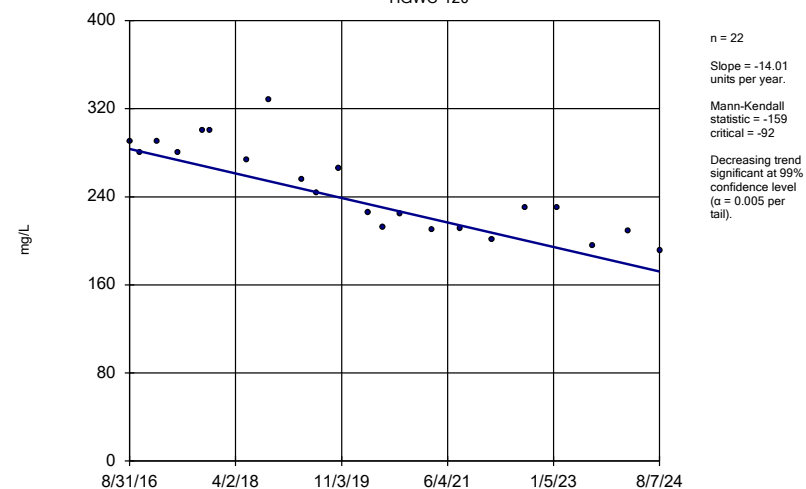
HGWA-45D (bg)



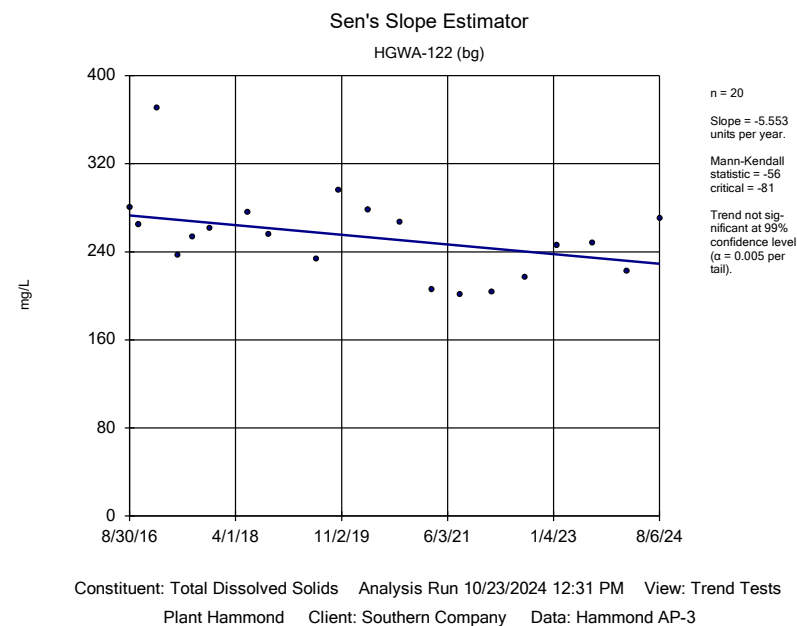
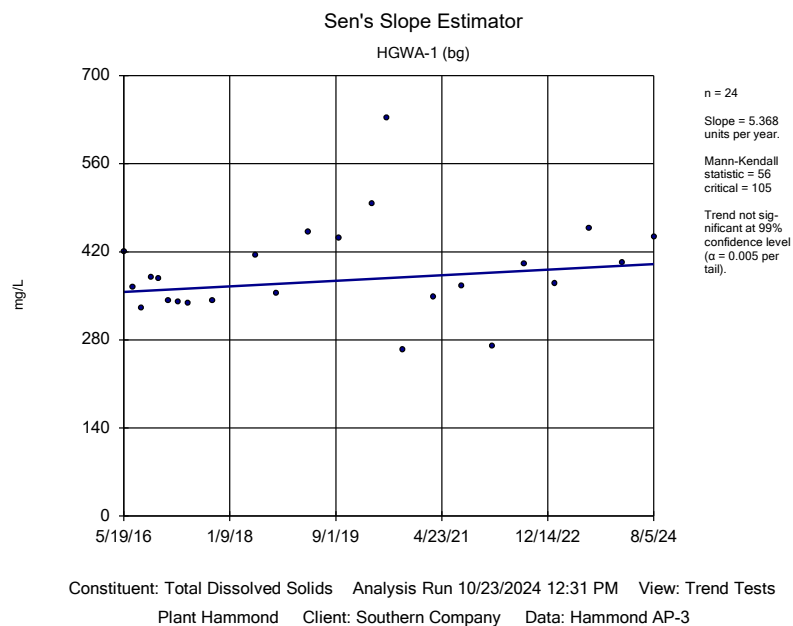
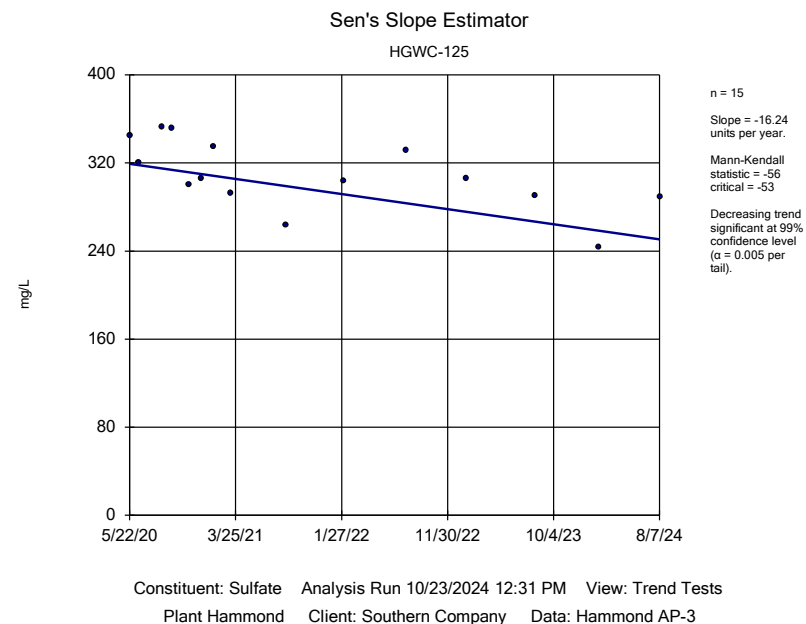
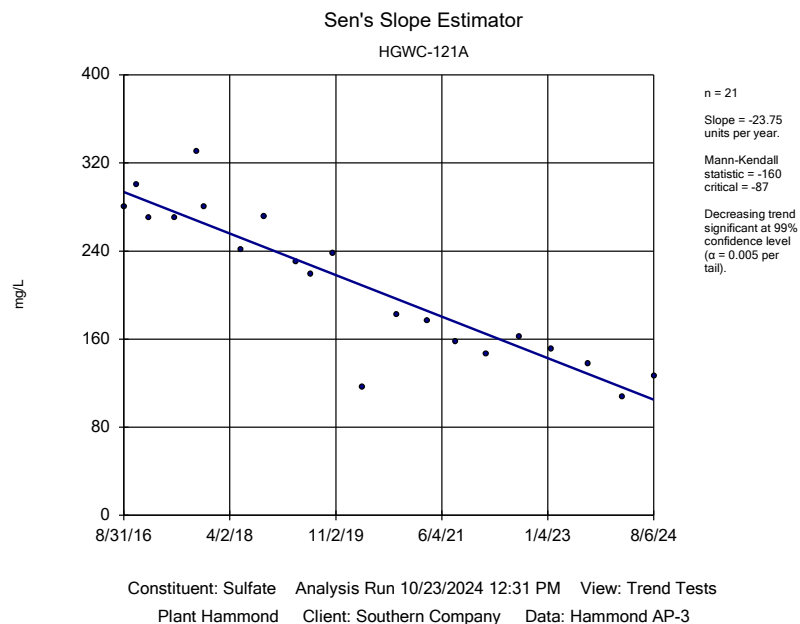
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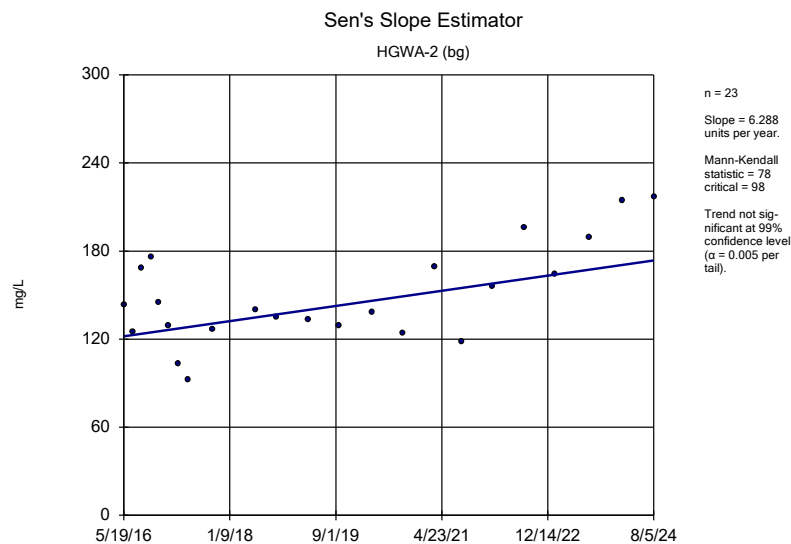
Sen's Slope Estimator

HGWC-120

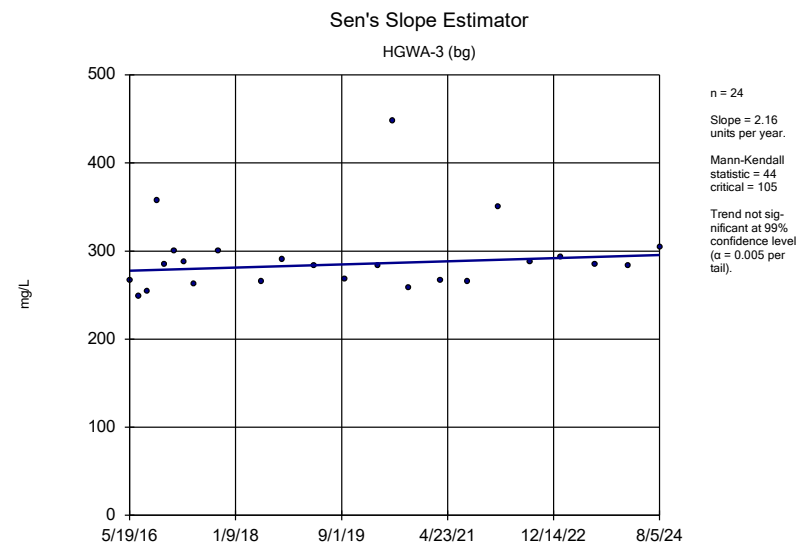


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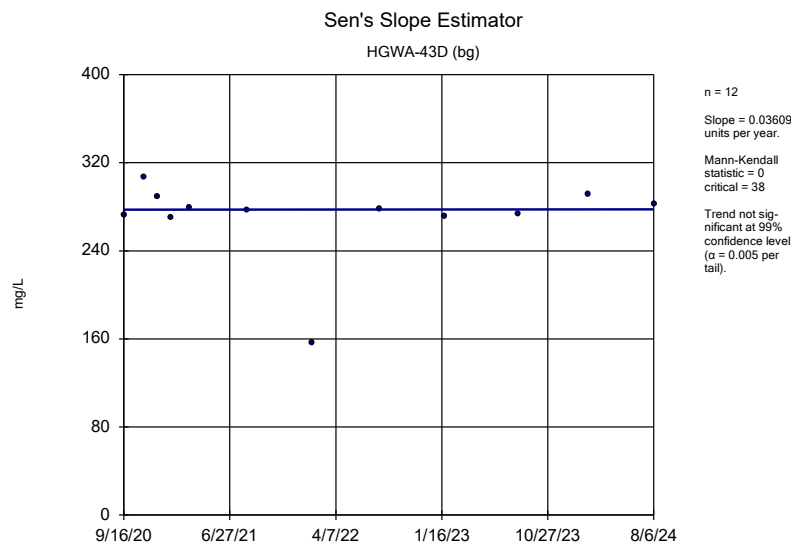




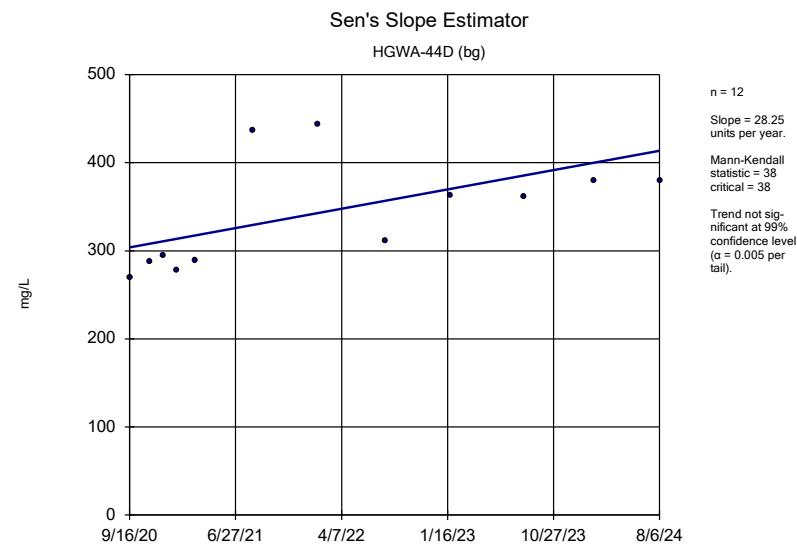
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Plant Hammond Client: Southern Company Data: Hammond AP-3



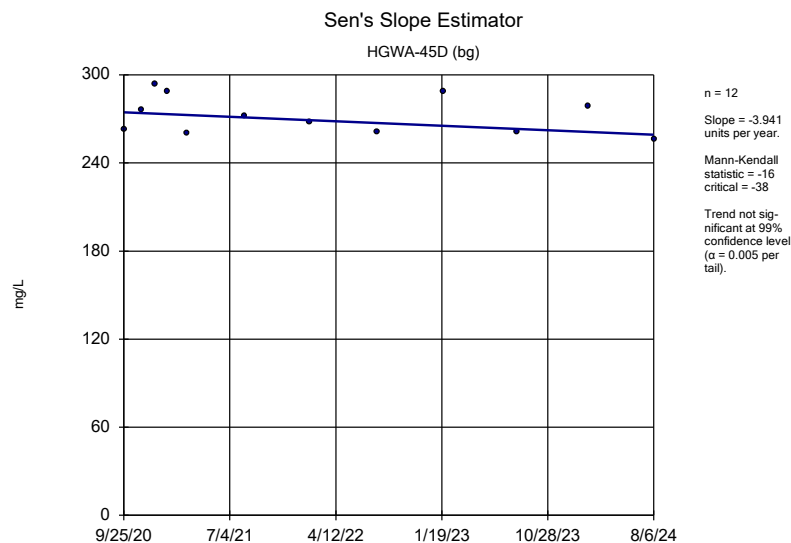
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Plant Hammond Client: Southern Company Data: Hammond AP-3



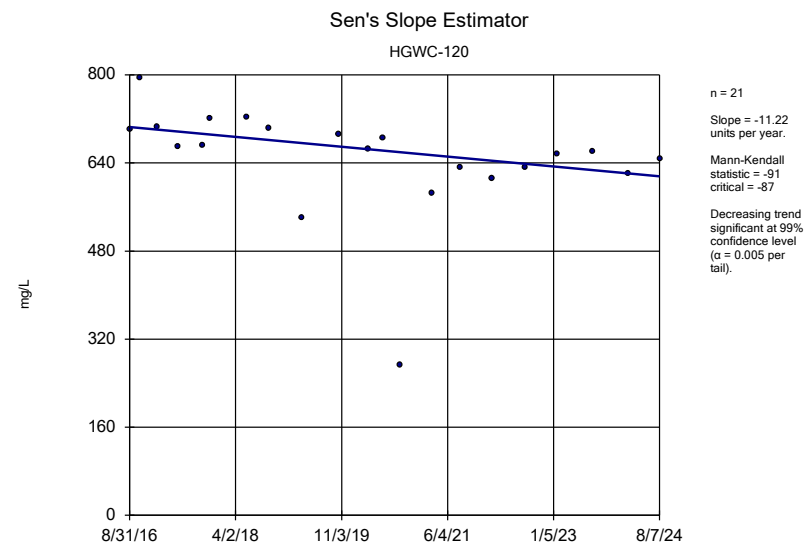
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Plant Hammond Client: Southern Company Data: Hammond AP-3



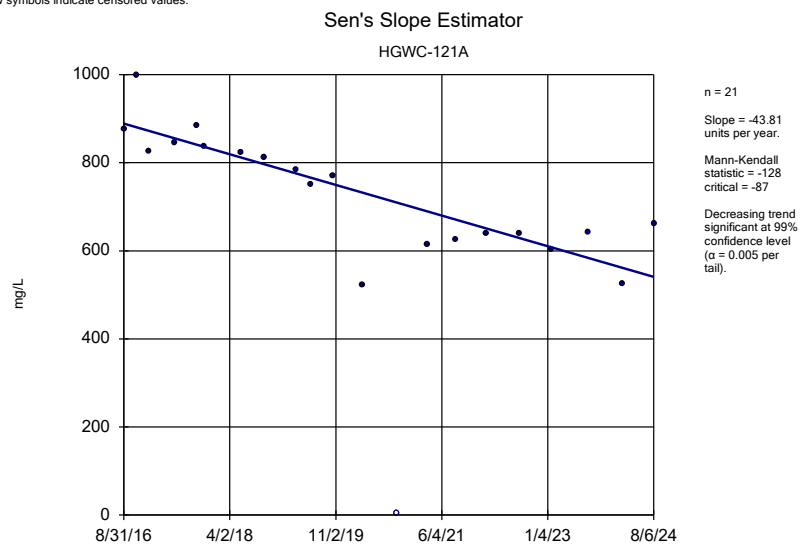
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Plant Hammond Client: Southern Company Data: Hammond AP-3



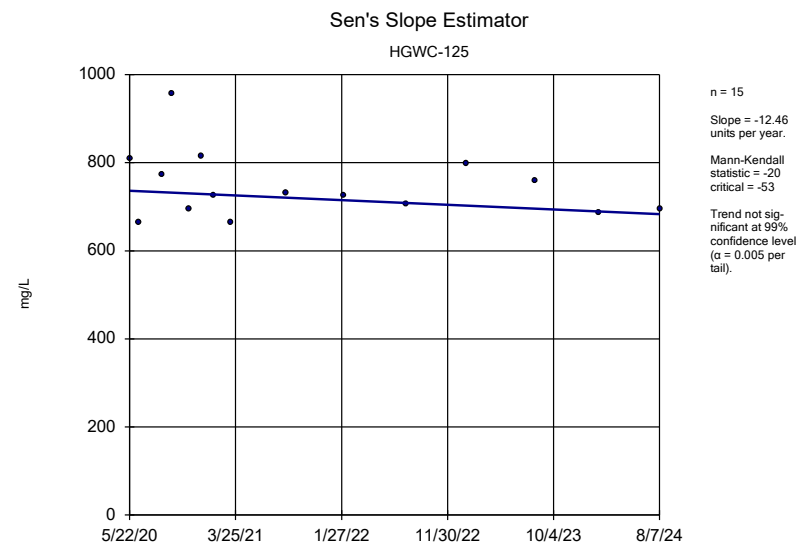
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Plant Hammond Client: Southern Company Data: Hammond AP-3



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



Constituent: Total Dissolved Solids Analysis Run 10/23/2024 12:31 PM View: Trend Tests
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Constituent: Total Dissolved Solids Analysis Run 10/23/2024 12:31 PM View: Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-3

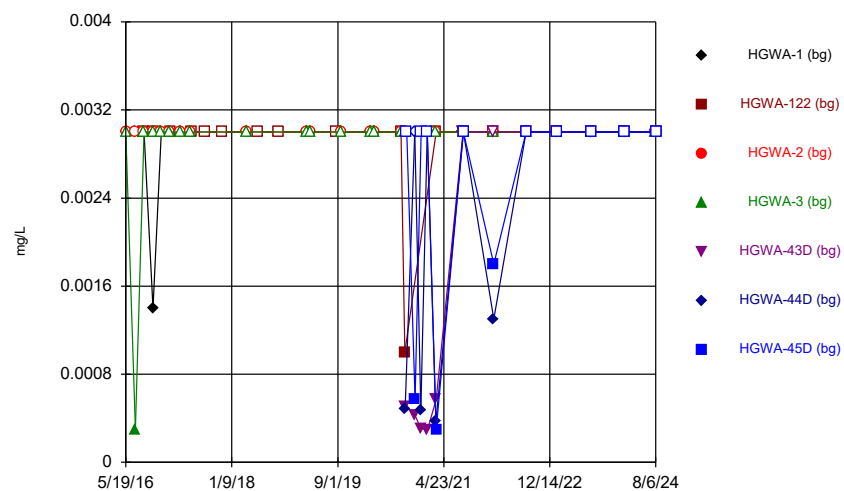
FIGURE F.

Upper Tolerance Limit Summary Table

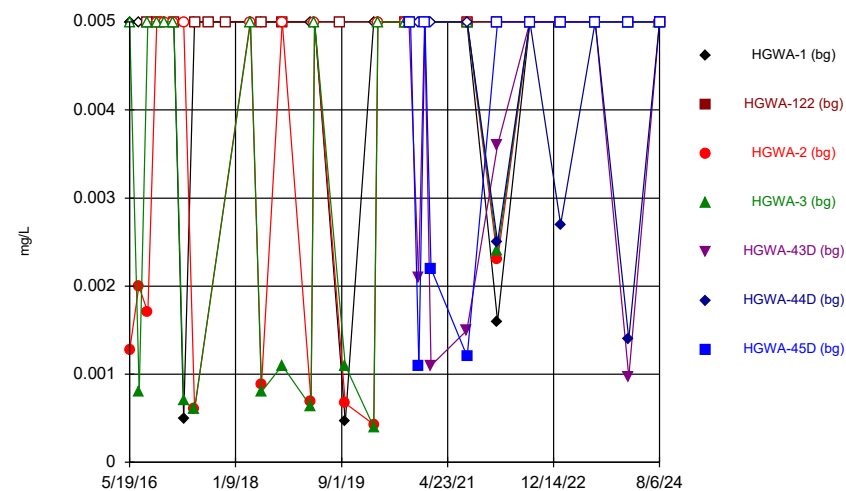
Plant Hammond Client: Southern Company Data: Hammond AP-3 Printed 10/22/2024, 11:47 AM

<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>ND Adj.</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Antimony (mg/L)	0.003	n/a	n/a	n/a	n/a	127	88.19	n/a	n/a	0.001482	NP Inter(NDs)
Arsenic (mg/L)	0.005	n/a	n/a	n/a	n/a	125	74.4	n/a	n/a	0.001642	NP Inter(NDs)
Barium (mg/L)	0.64	n/a	n/a	n/a	n/a	135	0.7407	n/a	n/a	0.0009833	NP Inter(normality)
Beryllium (mg/L)	0.0005	n/a	n/a	n/a	n/a	127	83.46	n/a	n/a	0.001482	NP Inter(NDs)
Cadmium (mg/L)	0.0005	n/a	n/a	n/a	n/a	125	88	n/a	n/a	0.001642	NP Inter(NDs)
Chromium (mg/L)	0.0079	n/a	n/a	n/a	n/a	129	82.95	n/a	n/a	0.001338	NP Inter(NDs)
Cobalt (mg/L)	0.038	n/a	n/a	n/a	n/a	135	77.78	n/a	n/a	0.0009833	NP Inter(NDs)
Combined Radium 226 + 228 (pCi/L)	1.687	n/a	n/a	n/a	n/a	128	0	None	sqrt(x)	0.05	Inter
Fluoride (mg/L)	1.5	n/a	n/a	n/a	n/a	142	20.42	n/a	n/a	0.0006867	NP Inter(normality)
Lead (mg/L)	0.001	n/a	n/a	n/a	n/a	129	73.64	n/a	n/a	0.001338	NP Inter(NDs)
Lithium (mg/L)	0.064	n/a	n/a	n/a	n/a	132	31.82	n/a	n/a	0.001147	NP Inter(normality)
Mercury (mg/L)	0.0002	n/a	n/a	n/a	n/a	107	95.33	n/a	n/a	0.004135	NP Inter(NDs)
Molybdenum (mg/L)	0.01	n/a	n/a	n/a	n/a	137	64.96	n/a	n/a	0.0008874	NP Inter(NDs)
Selenium (mg/L)	0.005	n/a	n/a	n/a	n/a	125	94.4	n/a	n/a	0.001642	NP Inter(NDs)
Thallium (mg/L)	0.001	n/a	n/a	n/a	n/a	125	99.2	n/a	n/a	0.001642	NP Inter(NDs)

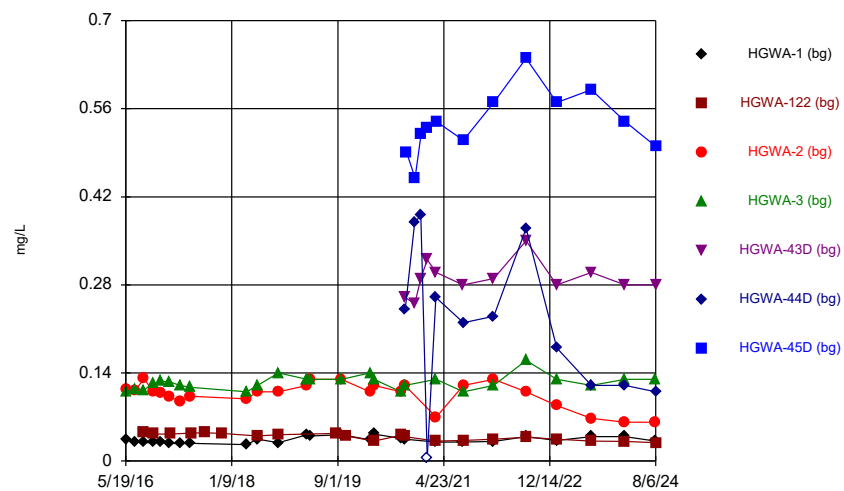
Time Series



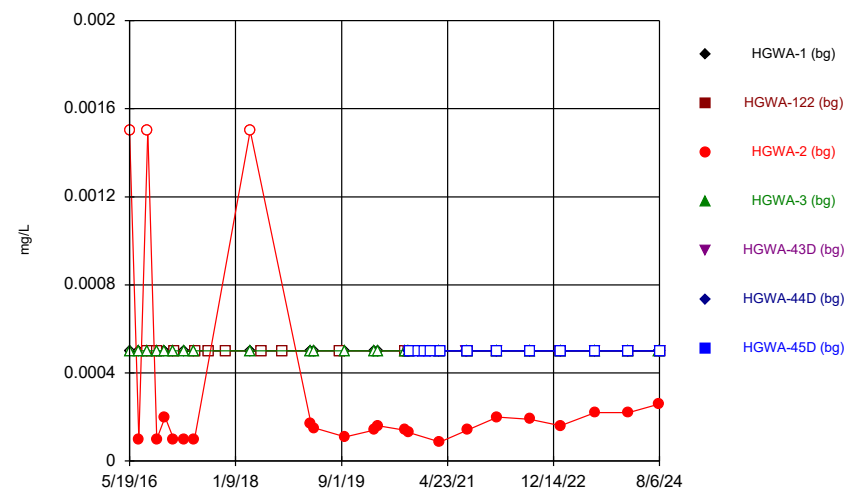
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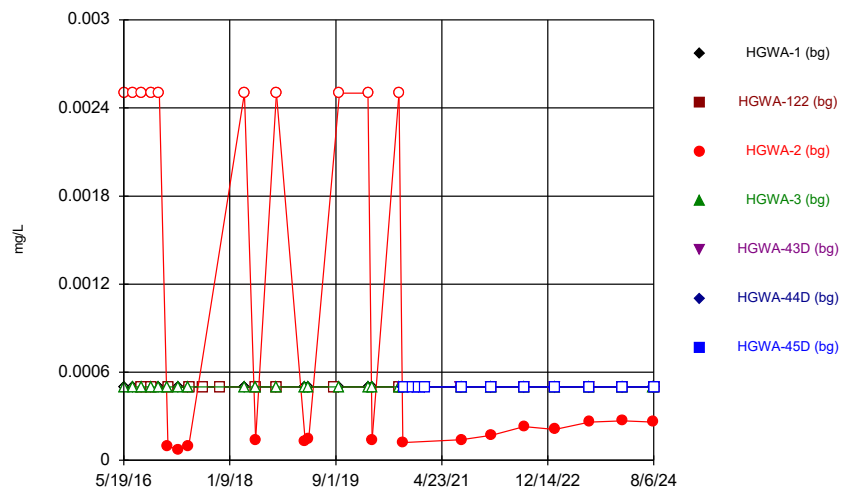
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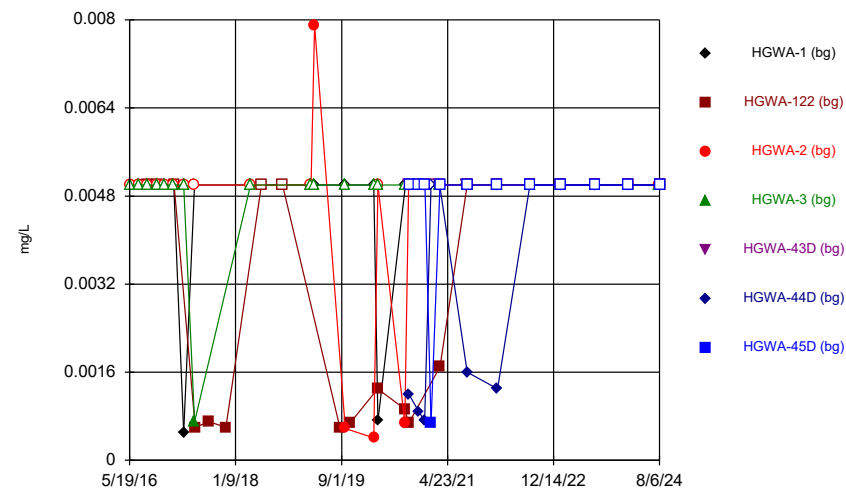
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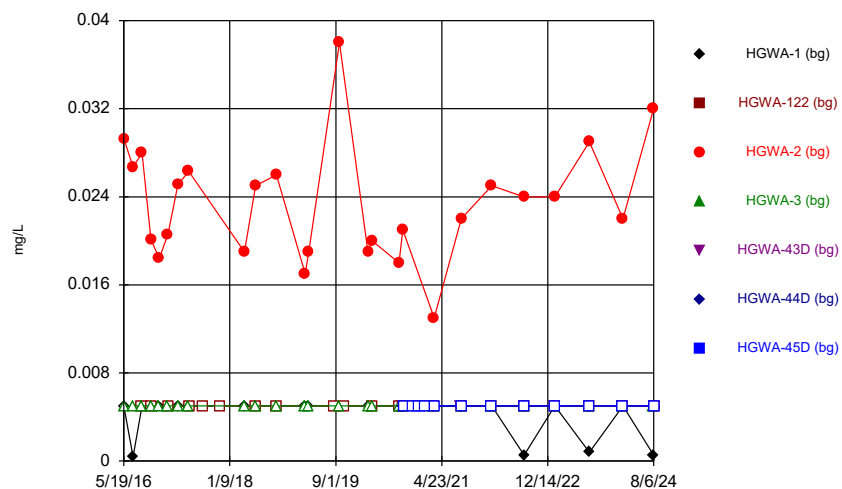
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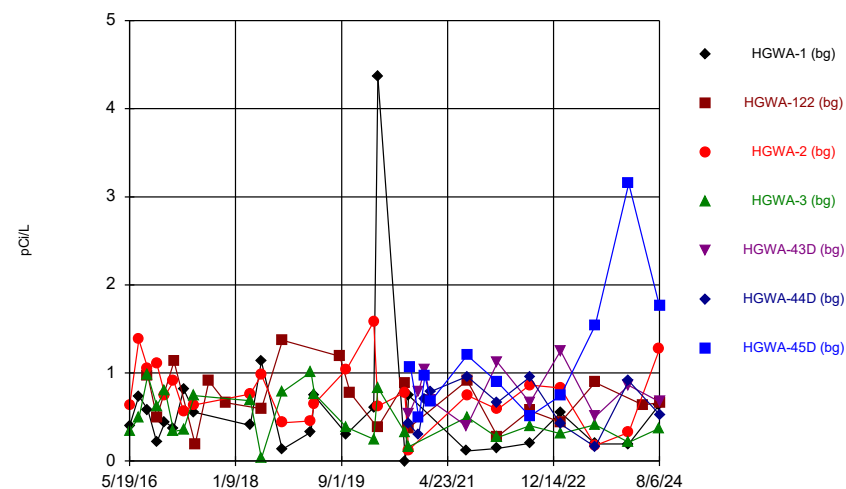
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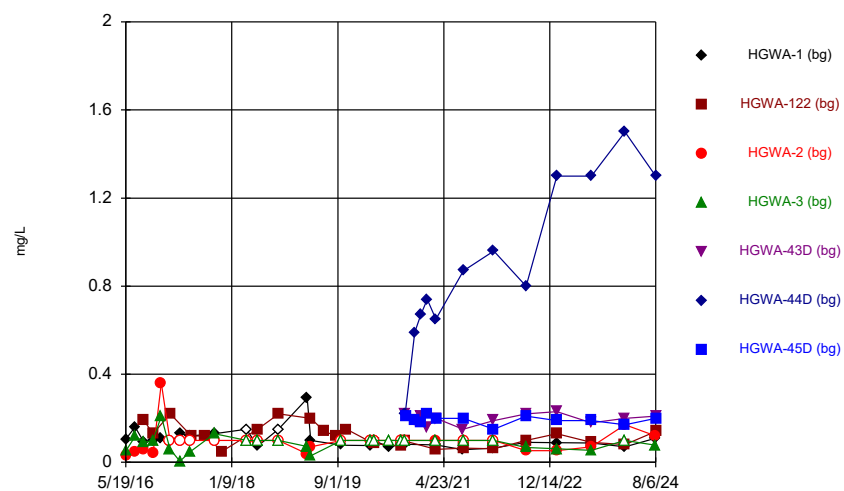
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Time Series

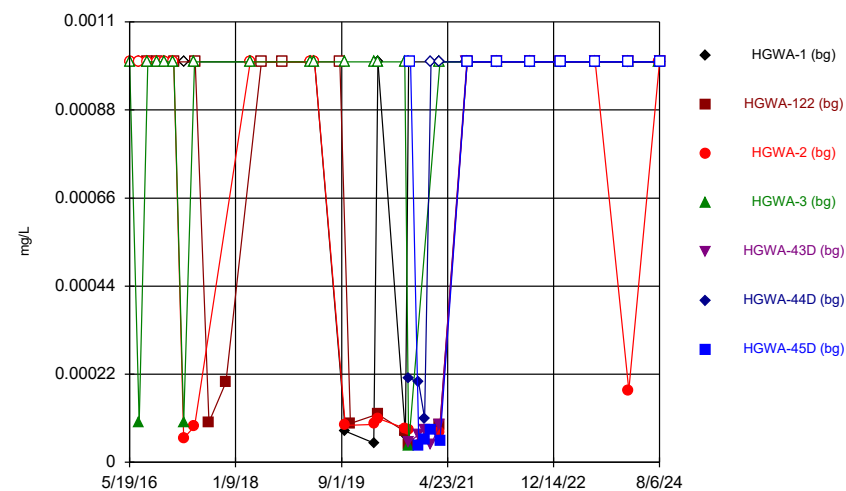


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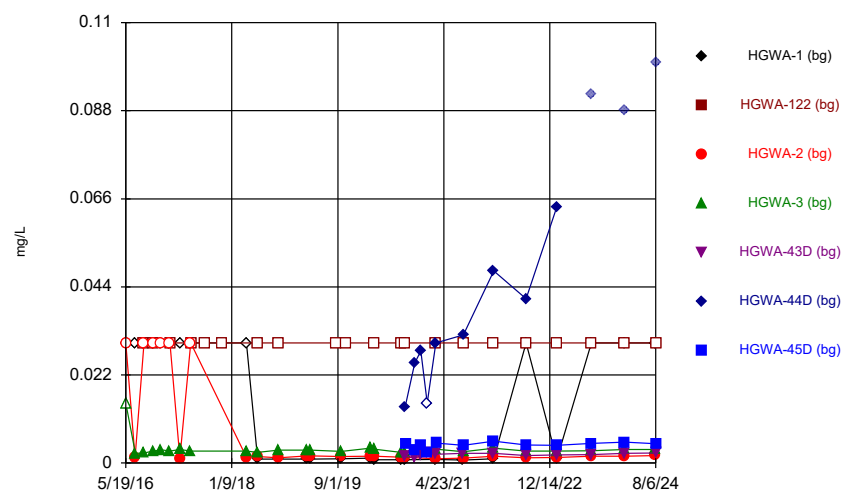
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Plant Hammond Client: Southern Company Data: Hammond AP-3

Time Series



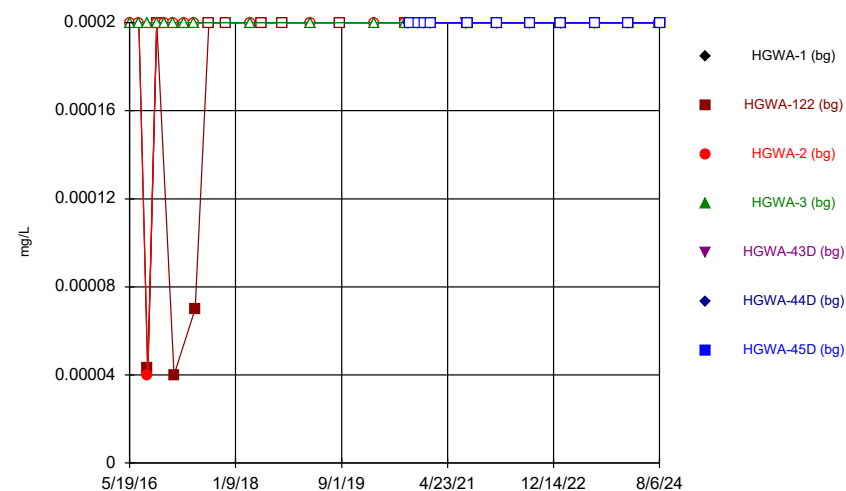
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Plant Hammond Client: Southern Company Data: Hammond AP-3

Time Series



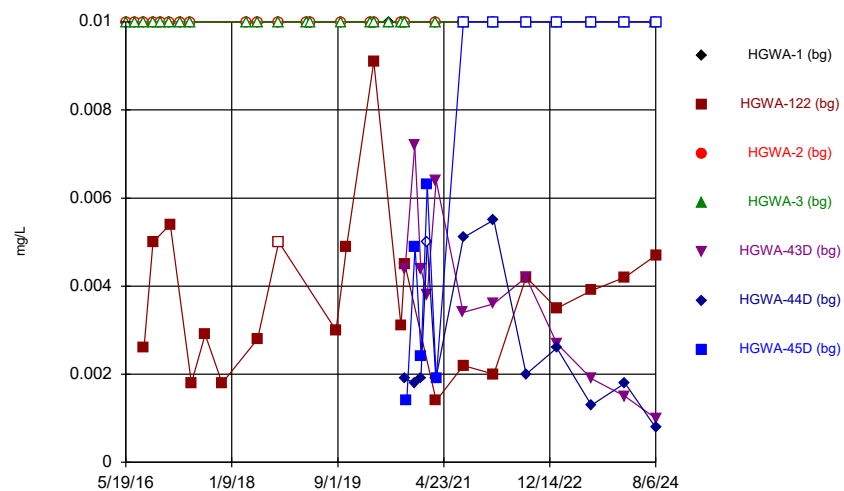
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Plant Hammond Client: Southern Company Data: Hammond AP-3

Time Series



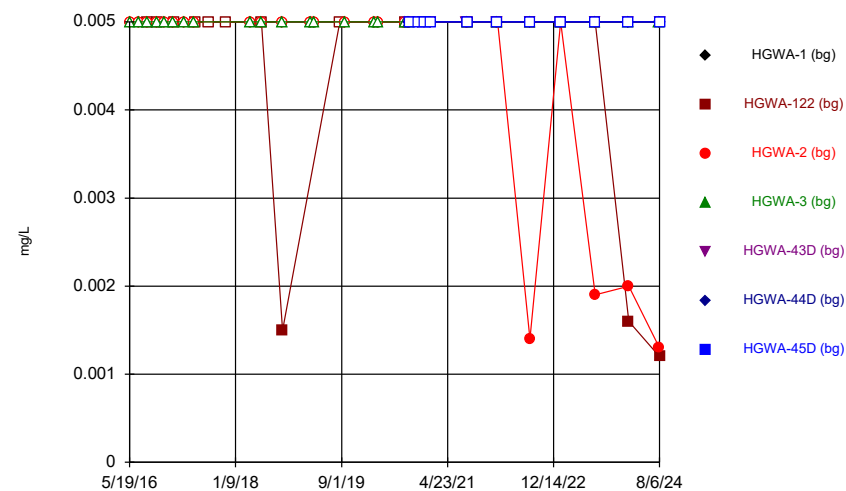
Constituent: Mercury Analysis Run 10/23/2024 3:21 PM View: Appendix IV - UTLs
Plant Hammond Client: Southern Company Data: Hammond AP-3

Time Series



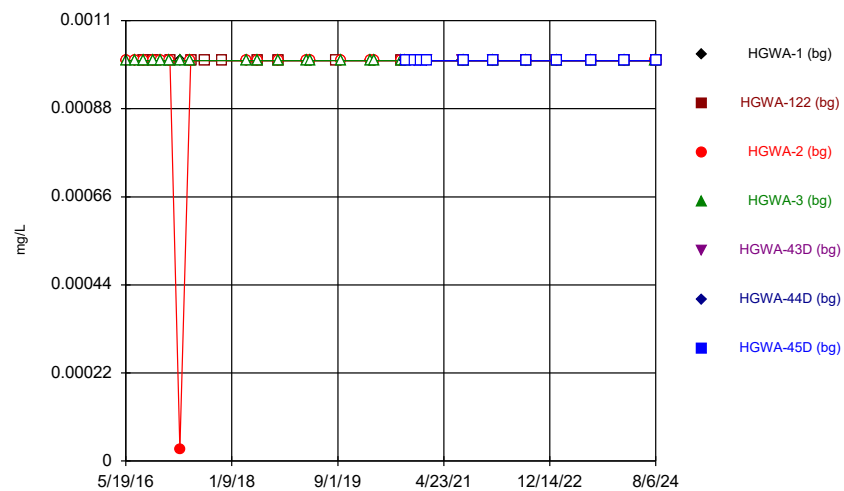
Constituent: Molybdenum Analysis Run 10/23/2024 3:21 PM View: Appendix IV - UTLs
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Time Series



Constituent: Selenium Analysis Run 10/23/2024 3:21 PM View: Appendix IV - UTLs
Plant Hammond Client: Southern Company Data: Hammond AP-3

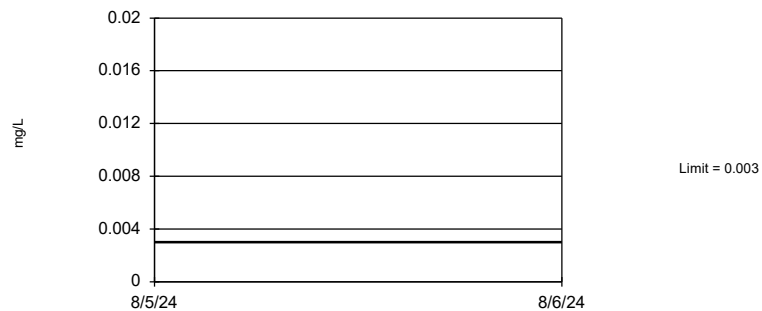
Time Series



Constituent: Thallium Analysis Run 10/23/2024 3:21 PM View: Appendix IV - UTLs
Plant Hammond Client: Southern Company Data: Hammond AP-3

Tolerance Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric tolerance limit because censored data exceeded 50%. Limit is highest of 127 background values. 88.19% NDs. 96.29% coverage at alpha=0.01; 97.85% coverage at alpha=0.05; 99.41% coverage at alpha=0.5. Report alpha = 0.001482.

Constituent: Antimony Analysis Run 10/22/2024 11:46 AM View: Appendix IV - UTLs
Plant Hammond Client: Southern Company Data: Hammond AP-3

Tolerance Limit

Interwell Non-parametric

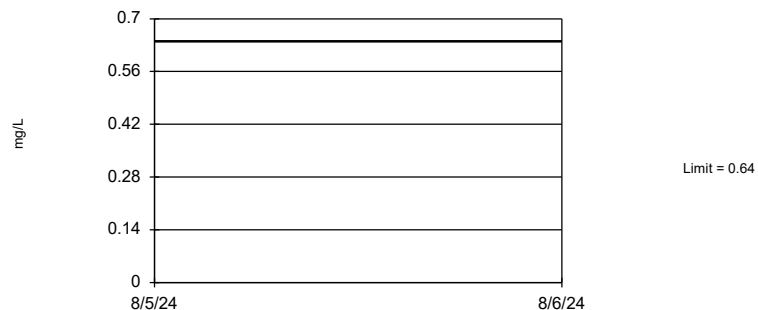


Non-parametric test used in lieu of parametric tolerance limit because censored data exceeded 50%. Limit is highest of 125 background values. 74.4% NDs. 96.29% coverage at alpha=0.01; 97.46% coverage at alpha=0.05; 99.41% coverage at alpha=0.5. Report alpha = 0.001642.

Constituent: Arsenic Analysis Run 10/22/2024 11:46 AM View: Appendix IV - UTLs
Plant Hammond Client: Southern Company Data: Hammond AP-3

Tolerance Limit

Interwell Non-parametric

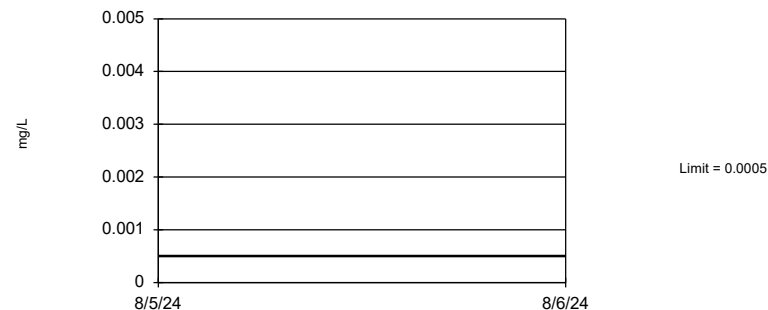


Non-parametric test used in lieu of parametric tolerance limit because the Chi Squared normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 135 background values. 0.7407% NDs. 96.68% coverage at alpha=0.01; 97.85% coverage at alpha=0.05; 99.41% coverage at alpha=0.5. Report alpha = 0.0009833.

Constituent: Barium Analysis Run 10/22/2024 11:46 AM View: Appendix IV - UTLs
Plant Hammond Client: Southern Company Data: Hammond AP-3

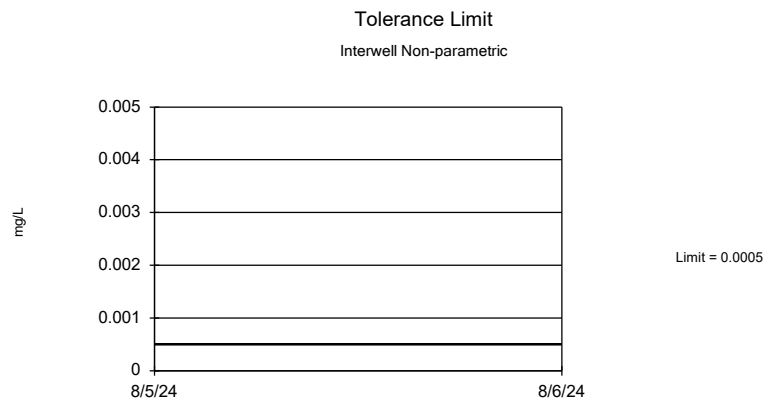
Tolerance Limit

Interwell Non-parametric



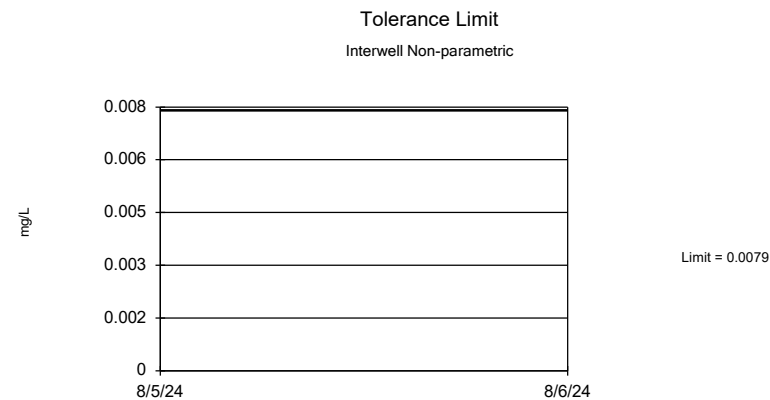
Non-parametric test used in lieu of parametric tolerance limit because censored data exceeded 50%. Limit is highest of 127 background values. 83.46% NDs. 96.29% coverage at alpha=0.01; 97.85% coverage at alpha=0.05; 99.41% coverage at alpha=0.5. Report alpha = 0.001482.

Constituent: Beryllium Analysis Run 10/22/2024 11:46 AM View: Appendix IV - UTLs
Plant Hammond Client: Southern Company Data: Hammond AP-3



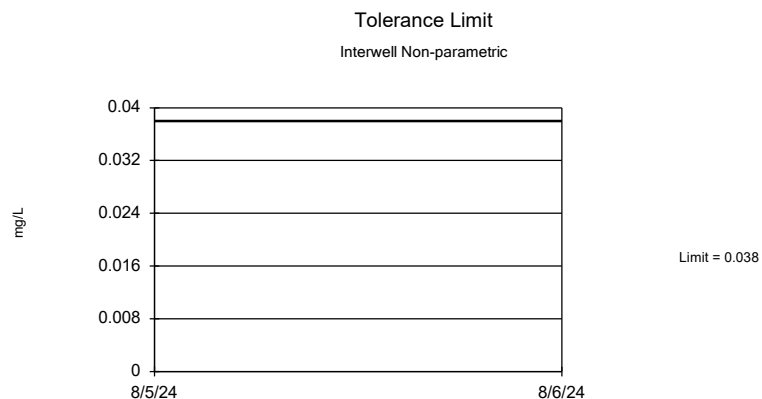
Non-parametric test used in lieu of parametric tolerance limit because censored data exceeded 50%. Limit is highest of 125 background values. 88% NDs. 96.29% coverage at alpha=0.01; 97.46% coverage at alpha=0.05; 99.41% coverage at alpha=0.5. Report alpha = 0.001642.

Constituent: Cadmium Analysis Run 10/22/2024 11:46 AM View: Appendix IV - UTLs
Plant Hammond Client: Southern Company Data: Hammond AP-3



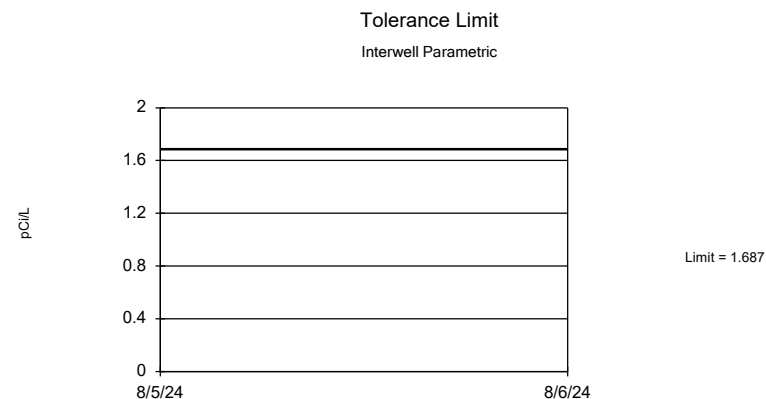
Non-parametric test used in lieu of parametric tolerance limit because censored data exceeded 50%. Limit is highest of 129 background values. 82.95% NDs. 96.68% coverage at alpha=0.01; 97.85% coverage at alpha=0.05; 99.41% coverage at alpha=0.5. Report alpha = 0.001338.

Constituent: Chromium Analysis Run 10/22/2024 11:46 AM View: Appendix IV - UTLs
Plant Hammond Client: Southern Company Data: Hammond AP-3



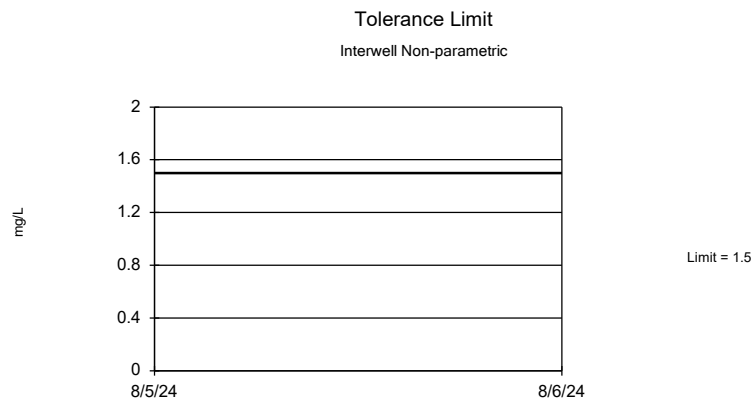
Non-parametric test used in lieu of parametric tolerance limit because censored data exceeded 50%. Limit is highest of 135 background values. 77.78% NDs. 96.68% coverage at alpha=0.01; 97.85% coverage at alpha=0.05; 99.41% coverage at alpha=0.5. Report alpha = 0.0009833.

Constituent: Cobalt Analysis Run 10/22/2024 11:46 AM View: Appendix IV - UTLs
Plant Hammond Client: Southern Company Data: Hammond AP-3



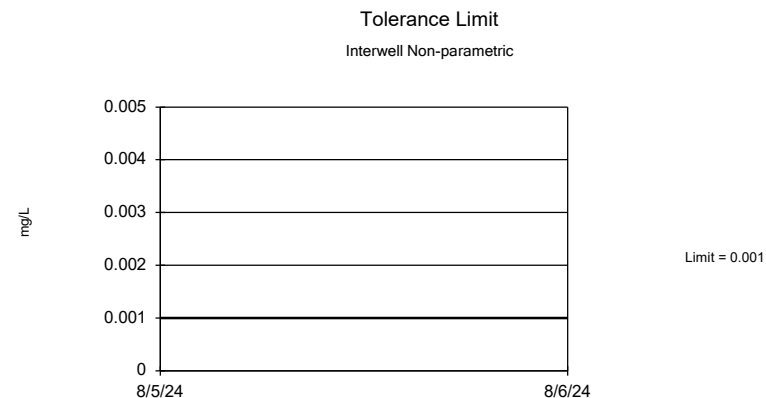
95% coverage. Background Data Summary (based on square root transformation): Mean=0.7903, Std. Dev.=0.2693, n=128. Normality test: Chi Squared @alpha = 0.01, calculated = 11.38, critical = 14.07. Report alpha = 0.05.

Constituent: Combined Radium 226 + 228 Analysis Run 10/22/2024 11:46 AM View: Appendix IV - UTLs
Plant Hammond Client: Southern Company Data: Hammond AP-3



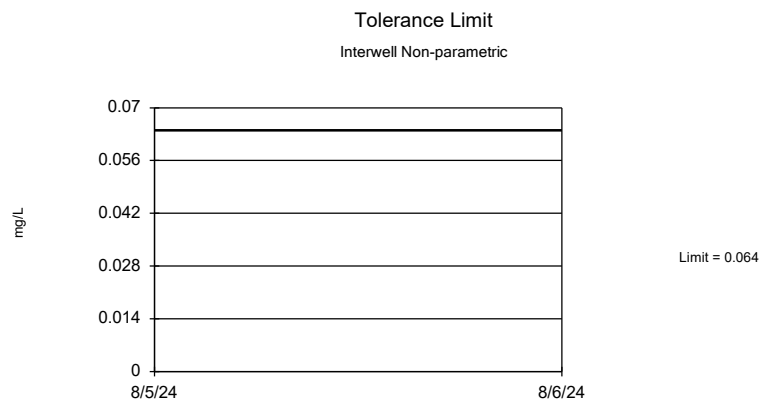
Non-parametric test used in lieu of parametric tolerance limit because the Chi Squared normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 142 background values. 20.42% NDs. 96.68% coverage at alpha=0.01; 97.85% coverage at alpha=0.05; 99.41% coverage at alpha=0.5. Report alpha = 0.0006867.

Constituent: Fluoride Analysis Run 10/22/2024 11:46 AM View: Appendix IV - UTLs
Plant Hammond Client: Southern Company Data: Hammond AP-3



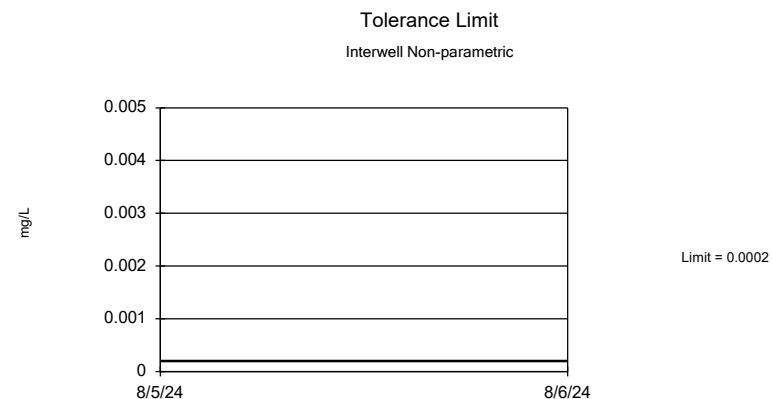
Non-parametric test used in lieu of parametric tolerance limit because censored data exceeded 50%. Limit is highest of 129 background values. 73.64% NDs. 96.68% coverage at alpha=0.01; 97.85% coverage at alpha=0.05; 99.41% coverage at alpha=0.5. Report alpha = 0.001338.

Constituent: Lead Analysis Run 10/22/2024 11:46 AM View: Appendix IV - UTLs
Plant Hammond Client: Southern Company Data: Hammond AP-3



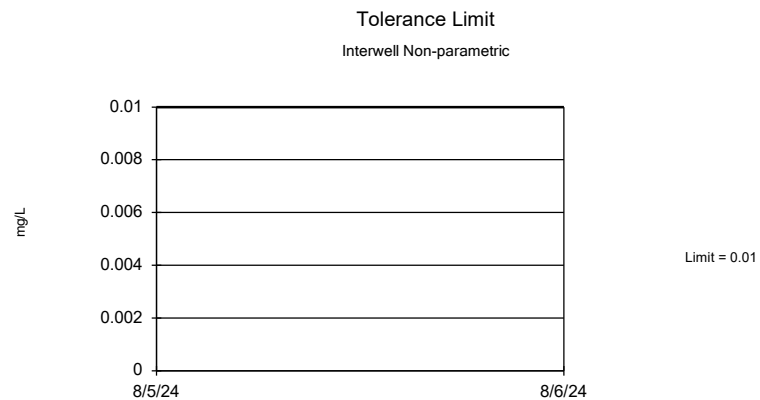
Non-parametric test used in lieu of parametric tolerance limit because the Chi Squared normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 132 background values. 31.82% NDs. 96.68% coverage at alpha=0.01; 97.85% coverage at alpha=0.05; 99.41% coverage at alpha=0.5. Report alpha = 0.001147.

Constituent: Lithium Analysis Run 10/22/2024 11:46 AM View: Appendix IV - UTLs
Plant Hammond Client: Southern Company Data: Hammond AP-3



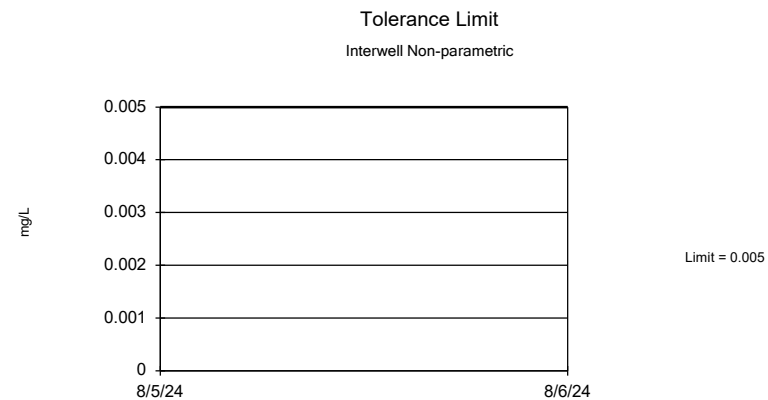
Non-parametric test used in lieu of parametric tolerance limit because censored data exceeded 50%. Limit is highest of 107 background values. 95.33% NDs. 95.9% coverage at alpha=0.01; 97.07% coverage at alpha=0.05; 99.41% coverage at alpha=0.5. Report alpha = 0.004135.

Constituent: Mercury Analysis Run 10/22/2024 11:46 AM View: Appendix IV - UTLs
Plant Hammond Client: Southern Company Data: Hammond AP-3



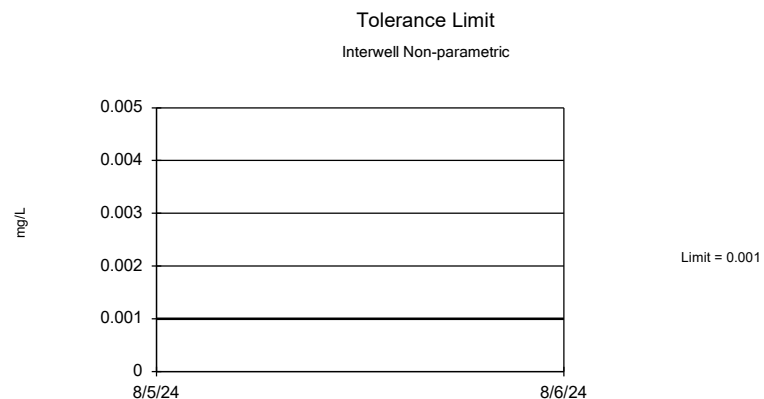
Non-parametric test used in lieu of parametric tolerance limit because censored data exceeded 50%. Limit is highest of 137 background values. 64.96% NDs. 96.68% coverage at alpha=0.01; 97.85% coverage at alpha=0.05; 99.41% coverage at alpha=0.5. Report alpha = 0.0008874.

Constituent: Molybdenum Analysis Run 10/22/2024 11:46 AM View: Appendix IV - UTLs
Plant Hammond Client: Southern Company Data: Hammond AP-3



Non-parametric test used in lieu of parametric tolerance limit because censored data exceeded 50%. Limit is highest of 125 background values. 94.4% NDs. 96.29% coverage at alpha=0.01; 97.46% coverage at alpha=0.05; 99.41% coverage at alpha=0.5. Report alpha = 0.001642.

Constituent: Selenium Analysis Run 10/22/2024 11:46 AM View: Appendix IV - UTLs
Plant Hammond Client: Southern Company Data: Hammond AP-3



Non-parametric test used in lieu of parametric tolerance limit because censored data exceeded 50%. Limit is highest of 125 background values. 99.2% NDs. 96.29% coverage at alpha=0.01; 97.46% coverage at alpha=0.05; 99.41% coverage at alpha=0.5. Report alpha = 0.001642.

Constituent: Thallium Analysis Run 10/22/2024 11:46 AM View: Appendix IV - UTLs
Plant Hammond Client: Southern Company Data: Hammond AP-3

FIGURE G.

PLANT HAMMOND AP-3 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		0.64	2
Beryllium, Total (mg/L)	0.004		0.0005	0.004
Cadmium, Total (mg/L)	0.005		0.0005	0.005
Chromium, Total (mg/L)	0.1		0.0079	0.1
Cobalt, Total (mg/L)	n/a	0.006	0.038	0.038
Combined Radium, Total (pCi/L)	5		1.69	5
Fluoride, Total (mg/L)	4		1.5	4
Lead, Total (mg/L)	n/a	0.015	0.001	0.015
Lithium, Total (mg/L)	n/a	0.040	0.064	0.064
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

*Grey cell indicates background is higher than MCL or CCR-Rule

*MCL = Maximum Contaminant Level

*CCR = Coal Combustion Residuals

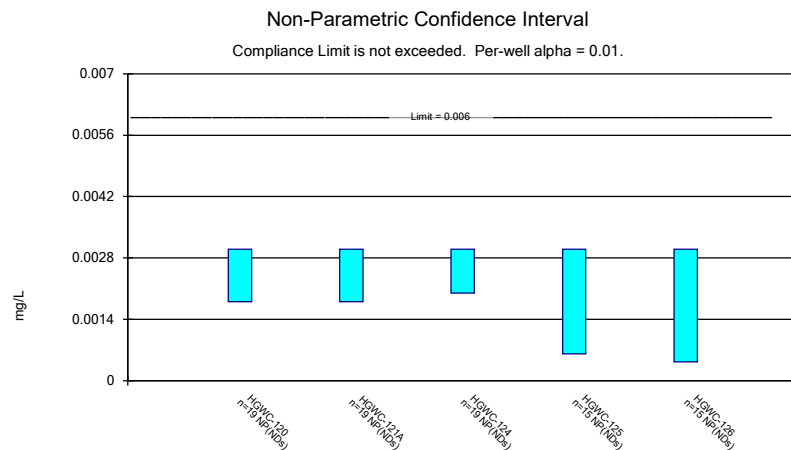
*GWPS = Groundwater Protection Standard

FIGURE H.

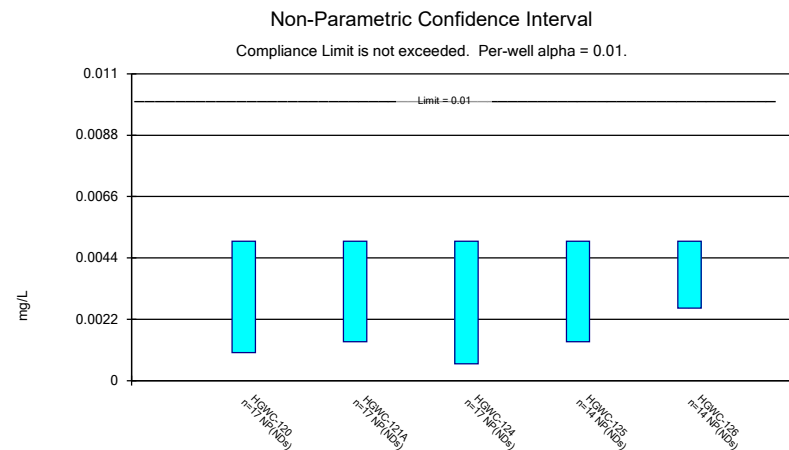
Appendix IV - Confidence Intervals - All Results (No Significant)

Plant Hammond Client: Southern Company Data: Hammond AP-3 Printed 10/22/2024, 11:50 AM

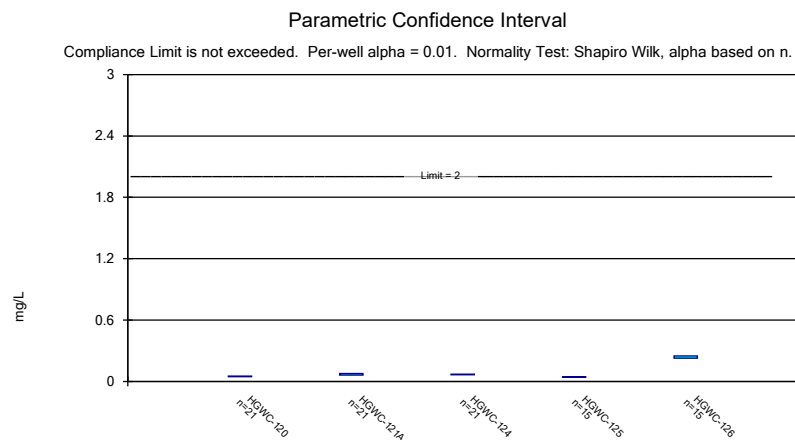
Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Antimony (mg/L)	HGWC-120	0.003	0.0018	0.006	No	19	0.002937	0.0002753	94.74	None	No	0.01	NP (NDs)
Antimony (mg/L)	HGWC-121A	0.003	0.0018	0.006	No	19	0.002863	0.0004112	89.47	None	No	0.01	NP (NDs)
Antimony (mg/L)	HGWC-124	0.003	0.002	0.006	No	19	0.002884	0.0003484	89.47	None	No	0.01	NP (NDs)
Antimony (mg/L)	HGWC-125	0.003	0.00061	0.006	No	15	0.002672	0.000866	86.67	None	No	0.01	NP (NDs)
Antimony (mg/L)	HGWC-126	0.003	0.00043	0.006	No	15	0.002655	0.0009096	86.67	None	No	0.01	NP (NDs)
Arsenic (mg/L)	HGWC-120	0.005	0.001	0.01	No	17	0.003639	0.001909	64.71	None	No	0.01	NP (NDs)
Arsenic (mg/L)	HGWC-121A	0.005	0.0014	0.01	No	17	0.004341	0.001469	82.35	None	No	0.01	NP (NDs)
Arsenic (mg/L)	HGWC-124	0.005	0.0006	0.01	No	17	0.004741	0.001067	94.12	None	No	0.01	NP (NDs)
Arsenic (mg/L)	HGWC-125	0.005	0.0014	0.01	No	14	0.004022	0.001691	71.43	None	No	0.01	NP (NDs)
Arsenic (mg/L)	HGWC-126	0.005	0.0026	0.01	No	14	0.00423	0.001583	78.57	None	No	0.01	NP (NDs)
Barium (mg/L)	HGWC-120	0.05111	0.04679	2	No	21	0.04895	0.00392	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-121A	0.07618	0.05996	2	No	21	0.06807	0.0147	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-124	0.07161	0.06538	2	No	21	0.06849	0.005646	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-125	0.04478	0.03935	2	No	15	0.04207	0.004008	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-126	0.2495	0.2278	2	No	15	0.2387	0.01598	0	None	No	0.01	Param.
Chromium (mg/L)	HGWC-120	0.005	0.0015	0.1	No	21	0.004422	0.001457	85.71	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-121A	0.005	0.0005	0.1	No	21	0.004786	0.000982	95.24	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-124	0.005	0.00051	0.1	No	21	0.00457	0.001358	90.48	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-125	0.005	0.00081	0.1	No	15	0.004127	0.001808	80	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-126	0.005	0.0014	0.1	No	15	0.004491	0.001347	86.67	None	No	0.01	NP (NDs)
Cobalt (mg/L)	HGWC-120	0.004816	0.003336	0.038	No	21	0.004076	0.001342	0	None	No	0.01	Param.
Cobalt (mg/L)	HGWC-121A	0.005	0.0005	0.038	No	21	0.004338	0.001662	85.71	None	No	0.01	NP (NDs)
Cobalt (mg/L)	HGWC-125	0.01206	0.007876	0.038	No	15	0.009967	0.003086	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-120	1.02	0.6588	5	No	20	0.8396	0.3184	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-121A	1.086	0.5125	5	No	20	0.7994	0.5051	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-124	0.8213	0.5294	5	No	20	0.6754	0.2571	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-125	1.249	0.6323	5	No	14	0.9408	0.4356	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-126	1.602	1.008	5	No	14	1.305	0.4191	0	None	No	0.01	Param.
Fluoride (mg/L)	HGWC-120	0.65	0.36	4	No	24	0.5875	0.3473	0	None	No	0.01	NP (normality)
Fluoride (mg/L)	HGWC-121A	0.19	0.15	4	No	22	0.2334	0.2364	0	None	No	0.01	NP (normality)
Fluoride (mg/L)	HGWC-124	0.11	0.078	4	No	22	0.1123	0.06373	45.45	None	No	0.01	NP (normality)
Fluoride (mg/L)	HGWC-125	0.1686	0.1247	4	No	15	0.1467	0.03244	0	None	No	0.01	Param.
Fluoride (mg/L)	HGWC-126	0.5053	0.4521	4	No	15	0.4787	0.03925	0	None	No	0.01	Param.
Lead (mg/L)	HGWC-120	0.001	0.0002	0.015	No	21	0.0008748	0.000315	85.71	None	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-121A	0.001	0.00036	0.015	No	21	0.0008848	0.0002931	85.71	None	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-124	0.001	0.000094	0.015	No	21	0.0007784	0.0004062	76.19	None	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-125	0.001	0.000092	0.015	No	15	0.0006969	0.0004444	66.67	None	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-126	0.001	0.000046	0.015	No	15	0.0008089	0.0003957	80	None	No	0.01	NP (NDs)
Lithium (mg/L)	HGWC-120	0.03055	0.02454	0.064	No	21	0.02755	0.005449	0	None	No	0.01	Param.
Lithium (mg/L)	HGWC-121A	0.00863	0.007266	0.064	No	21	0.007948	0.001236	0	None	No	0.01	Param.
Lithium (mg/L)	HGWC-124	0.03	0.0011	0.064	No	21	0.01073	0.01396	33.33	None	No	0.01	NP (normality)
Lithium (mg/L)	HGWC-125	0.005627	0.003956	0.064	No	15	0.00488	0.00141	0	None	ln(x)	0.01	Param.
Lithium (mg/L)	HGWC-126	0.004184	0.003469	0.064	No	15	0.003827	0.0005271	0	None	No	0.01	Param.
Mercury (mg/L)	HGWC-120	0.0002	0.00007	0.002	No	17	0.0001829	0.00004845	88.24	None	No	0.01	NP (NDs)
Mercury (mg/L)	HGWC-124	0.0002	0.000051	0.002	No	17	0.0001912	0.00003614	94.12	None	No	0.01	NP (NDs)
Molybdenum (mg/L)	HGWC-120	0.03664	0.02792	0.1	No	21	0.03228	0.007905	0	None	No	0.01	Param.
Molybdenum (mg/L)	HGWC-124	0.01	0.00091	0.1	No	21	0.00446	0.004456	38.1	None	No	0.01	NP (normality)
Molybdenum (mg/L)	HGWC-125	0.009185	0.001729	0.1	No	15	0.007759	0.007619	20	Kaplan-Meier	sqrt(x)	0.01	Param.
Selenium (mg/L)	HGWC-120	0.005	0.002	0.05	No	17	0.004824	0.0007276	94.12	None	No	0.01	NP (NDs)
Selenium (mg/L)	HGWC-121A	0.005	0.0011	0.05	No	17	0.004771	0.0009459	94.12	None	No	0.01	NP (NDs)
Selenium (mg/L)	HGWC-124	0.005	0.0014	0.05	No	17	0.004788	0.0008731	94.12	None	No	0.01	NP (NDs)



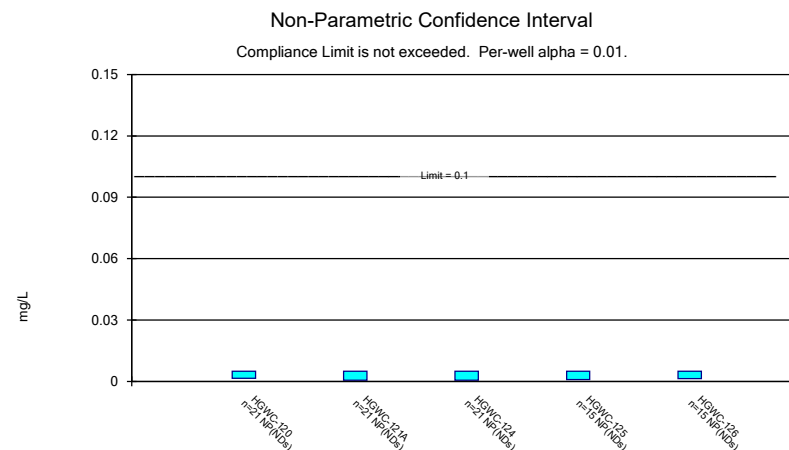
Constituent: Antimony Analysis Run 10/22/2024 11:49 AM View: Confidence Interval
Plant Hammond Client: Southern Company Data: Hammond AP-3



Constituent: Arsenic Analysis Run 10/22/2024 11:49 AM View: Confidence Interval
Plant Hammond Client: Southern Company Data: Hammond AP-3



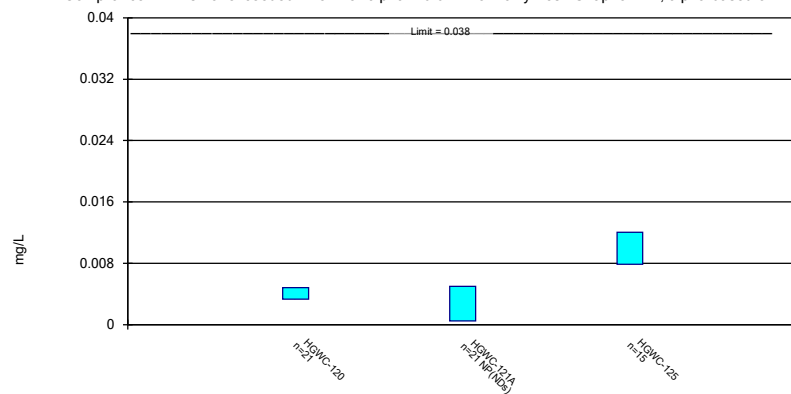
Constituent: Barium Analysis Run 10/22/2024 11:49 AM View: Confidence Interval
Plant Hammond Client: Southern Company Data: Hammond AP-3



Constituent: Chromium Analysis Run 10/22/2024 11:49 AM View: Confidence Interval
Plant Hammond Client: Southern Company Data: Hammond AP-3

Parametric and Non-Parametric (NP) Confidence Interval

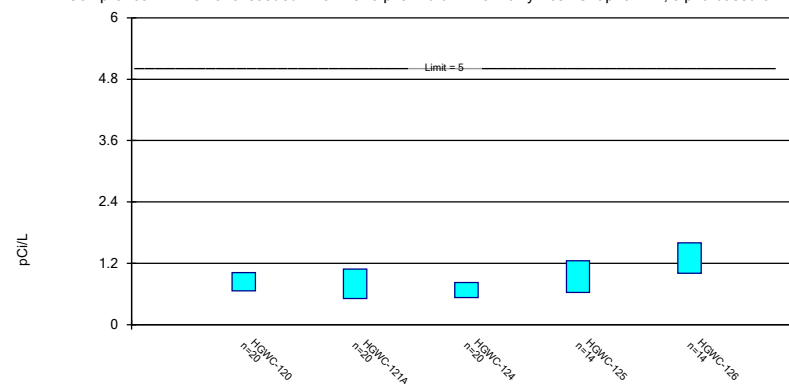
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cobalt Analysis Run 10/22/2024 11:49 AM View: Confidence Interval
Plant Hammond Client: Southern Company Data: Hammond AP-3

Parametric Confidence Interval

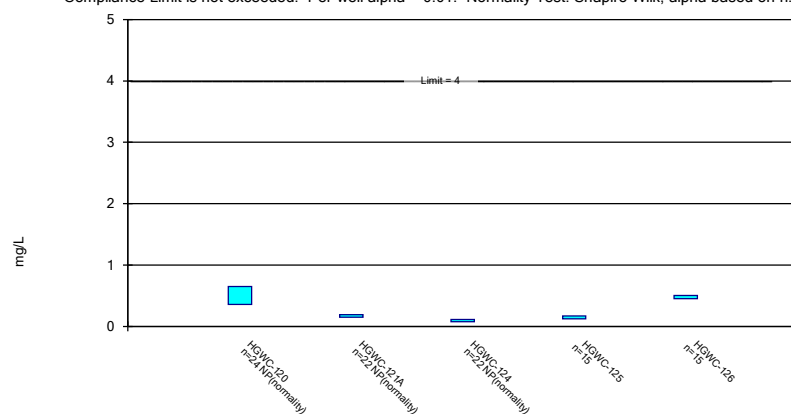
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Combined Radium 226 + 228 Analysis Run 10/22/2024 11:49 AM View: Confidence Interval
Plant Hammond Client: Southern Company Data: Hammond AP-3

Parametric and Non-Parametric (NP) Confidence Interval

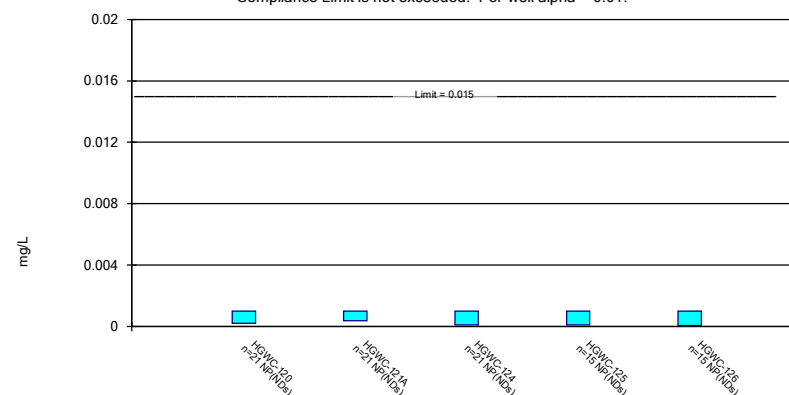
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Fluoride Analysis Run 10/22/2024 11:49 AM View: Confidence Interval
Plant Hammond Client: Southern Company Data: Hammond AP-3

Non-Parametric Confidence Interval

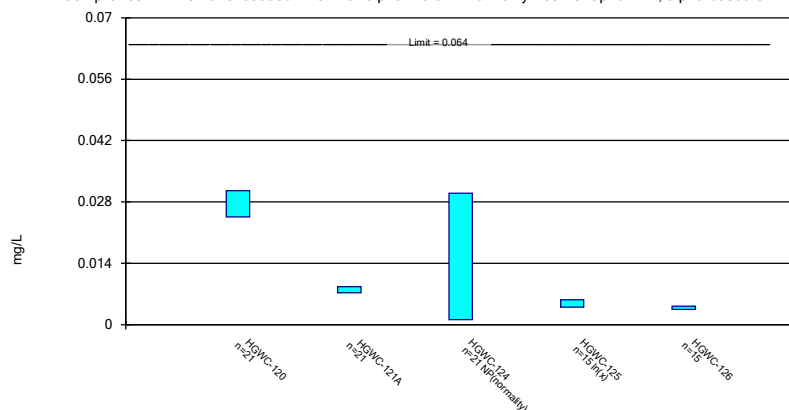
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Lead Analysis Run 10/22/2024 11:50 AM View: Confidence Interval
Plant Hammond Client: Southern Company Data: Hammond AP-3

Parametric and Non-Parametric (NP) Confidence Interval

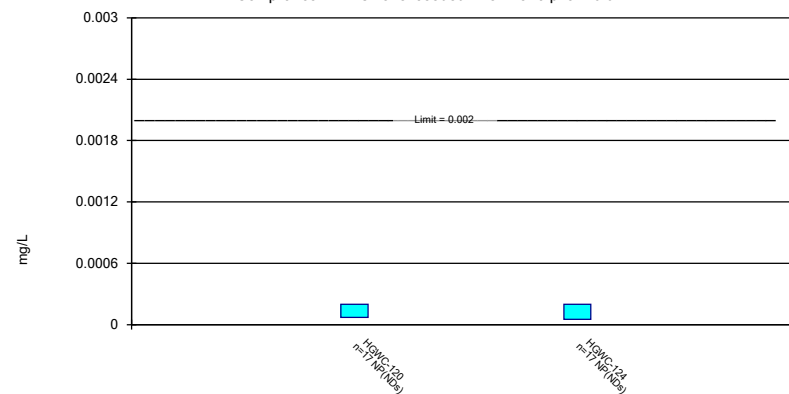
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Lithium Analysis Run 10/22/2024 11:50 AM View: Confidence Interval
Plant Hammond Client: Southern Company Data: Hammond AP-3

Non-Parametric Confidence Interval

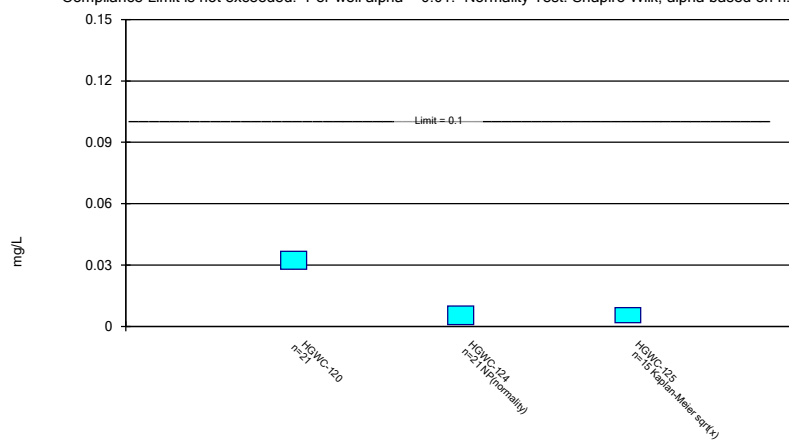
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Mercury Analysis Run 10/22/2024 11:50 AM View: Confidence Interval
Plant Hammond Client: Southern Company Data: Hammond AP-3

Parametric and Non-Parametric (NP) Confidence Interval

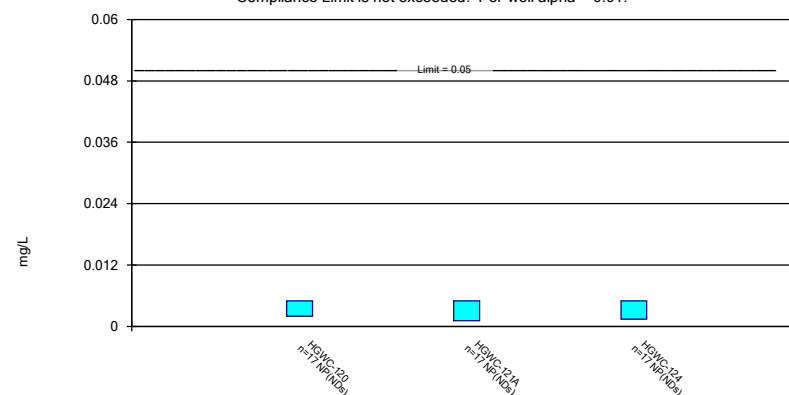
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Molybdenum Analysis Run 10/22/2024 11:50 AM View: Confidence Interval
Plant Hammond Client: Southern Company Data: Hammond AP-3

Non-Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Selenium Analysis Run 10/22/2024 11:50 AM View: Confidence Interval
Plant Hammond Client: Southern Company Data: Hammond AP-3

Confidence Interval

Constituent: Antimony (mg/L) Analysis Run 10/22/2024 11:50 AM View: Confidence Interval
 Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWC-120	HGWC-121A	HGWC-124	HGWC-125	HGWC-126
8/31/2016	<0.003	<0.003	<0.003		
10/26/2016	<0.003		<0.003		
11/7/2016		<0.003			
1/13/2017		<0.003			
1/27/2017	<0.003		<0.003		
5/25/2017	<0.003		<0.003		
6/3/2017		<0.003			
8/11/2017			<0.003		
10/2/2017	<0.003	<0.003			
11/15/2017	<0.003	<0.003	<0.003		
6/5/2018	<0.003	<0.003	<0.003		
10/2/2018	<0.003		<0.003		
10/5/2018		<0.003			
8/22/2019	<0.003	<0.003			
8/23/2019			<0.003		
5/22/2020				0.00047 (J)	<0.003
6/16/2020				<0.003	<0.003
8/25/2020				<0.003	<0.003
8/26/2020	<0.003	<0.003			
8/27/2020			<0.003		
9/18/2020					<0.003
9/21/2020	<0.003			<0.003	
9/28/2020		<0.003	<0.003		
11/11/2020					0.0004 (J)
11/12/2020				<0.003	
12/16/2020				<0.003	<0.003
1/20/2021				<0.003	<0.003
3/12/2021	0.0018 (J)			0.00061 (J)	0.00043 (J)
3/15/2021		<0.003	<0.003		
8/16/2021	<0.003	<0.003	<0.003		
8/19/2021				<0.003	<0.003
2/2/2022	<0.003	<0.003	<0.003		
2/3/2022				<0.003	<0.003
8/4/2022	<0.003	0.0016 (J)	<0.003	<0.003	<0.003
1/24/2023		<0.003	0.0018 (J)		
1/25/2023	<0.003			<0.003	<0.003
8/10/2023	<0.003	<0.003		<0.003	
8/11/2023			<0.003		<0.003
2/14/2024				<0.003	<0.003
2/15/2024	<0.003	<0.003			
2/16/2024			<0.003		
8/6/2024		0.0018 (J)			
8/7/2024	<0.003		0.002 (J)	<0.003	<0.003
Mean	0.002937	0.002863	0.002884	0.002672	0.002655
Std. Dev.	0.0002753	0.0004112	0.0003484	0.000866	0.0009096
Upper Lim.	0.003	0.003	0.003	0.003	0.003
Lower Lim.	0.0018	0.0018	0.002	0.00061	0.00043

Confidence Interval

Constituent: Arsenic (mg/L) Analysis Run 10/22/2024 11:50 AM View: Confidence Interval

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

	HGWC-120	HGWC-121A	HGWC-124	HGWC-125	HGWC-126
8/31/2016	<0.005	<0.005	<0.005		
10/26/2016	<0.005		<0.005		
11/7/2016		<0.005			
1/13/2017		<0.005			
1/27/2017	<0.005		<0.005		
5/25/2017	0.0014 (J)		0.0006 (J)		
6/3/2017		0.001 (J)			
8/11/2017			<0.005		
10/2/2017	0.0007 (J)	<0.005			
11/15/2017	<0.005	<0.005	<0.005		
6/5/2018	0.001 (J)	0.0014 (J)	<0.005		
10/2/2018	<0.005		<0.005		
10/5/2018		<0.005			
8/22/2019	<0.005	<0.005			
8/23/2019			<0.005		
5/22/2020				0.00081 (J)	0.00071 (J)
6/16/2020				0.0014 (J)	0.00091 (J)
8/25/2020				<0.005	<0.005
8/26/2020	<0.005	<0.005			
8/27/2020			<0.005		
9/18/2020					<0.005
9/21/2020				<0.005	
11/11/2020					<0.005
11/12/2020				<0.005	
12/16/2020				<0.005	<0.005
1/20/2021				<0.005	<0.005
8/16/2021	0.0015 (J)	0.0014 (J)	<0.005		
8/19/2021				<0.005	<0.005
2/2/2022	0.0014 (J)	<0.005	<0.005		
2/3/2022				0.0032 (J)	0.0026 (J)
8/4/2022	<0.005	<0.005	<0.005	<0.005	<0.005
1/24/2023		<0.005	<0.005		
1/25/2023	<0.005			<0.005	<0.005
8/10/2023	<0.005	<0.005		<0.005	
8/11/2023			<0.005		<0.005
2/14/2024				<0.005	<0.005
2/15/2024	0.00086 (J)	<0.005			
2/16/2024			<0.005		
8/6/2024		<0.005			
8/7/2024	<0.005		<0.005	0.0009 (J)	<0.005
Mean	0.003639	0.004341	0.004741	0.004022	0.00423
Std. Dev.	0.001909	0.001469	0.001067	0.001691	0.001583
Upper Lim.	0.005	0.005	0.005	0.005	0.005
Lower Lim.	0.001	0.0014	0.0006	0.0014	0.0026

Confidence Interval

Constituent: Barium (mg/L) Analysis Run 10/22/2024 11:50 AM View: Confidence Interval
Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWC-120	HGWC-121A	HGWC-124	HGWC-125	HGWC-126
8/31/2016	0.045	0.0782	0.0744		
10/26/2016	0.0462		0.0735		
11/7/2016		0.0764			
1/13/2017		0.0744			
1/27/2017	0.0451		0.0632		
5/25/2017	0.0488		0.0773		
6/3/2017		0.0933			
8/11/2017			0.0672		
10/2/2017	0.0479	0.0815			
11/15/2017	0.051	0.0807	0.0707		
6/5/2018	0.051	0.078	0.07		
10/2/2018	0.059		0.067		
10/5/2018		0.074			
8/22/2019	0.05	0.066			
8/23/2019			0.066		
10/21/2019		0.074	0.075		
10/22/2019	0.051				
3/24/2020			0.075		
3/25/2020	0.052	0.099			
5/22/2020				0.048	0.24
6/16/2020				0.049	0.24
8/25/2020				0.045	0.23
8/26/2020	0.041	0.057			
8/27/2020			0.062		
9/18/2020					0.21
9/21/2020	0.046			0.042	
9/28/2020		0.056	0.071		
11/11/2020					0.23
11/12/2020				0.042	
12/16/2020				0.041	0.24
1/20/2021				0.045	0.25
3/12/2021	0.047			0.043	0.27
3/15/2021		0.059	0.071		
8/16/2021	0.052	0.06	0.069		
8/19/2021				0.044	0.27
2/2/2022	0.054	0.064	0.072		
2/3/2022				0.043	0.24
8/4/2022	0.048	0.06	0.068	0.037	0.24
1/24/2023		0.059	0.068		
1/25/2023	0.051			0.042	0.24
8/10/2023	0.045	0.048		0.038	
8/11/2023			0.06		0.22
2/14/2024				0.037	0.23
2/15/2024	0.046	0.047			
2/16/2024			0.054		
8/6/2024		0.044			
8/7/2024	0.051		0.064	0.035	0.23
Mean	0.04895	0.06807	0.06849	0.04207	0.2387
Std. Dev.	0.00392	0.0147	0.005646	0.004008	0.01598
Upper Lim.	0.05111	0.07618	0.07161	0.04478	0.2495
Lower Lim.	0.04679	0.05996	0.06538	0.03935	0.2278

Confidence Interval

Constituent: Chromium (mg/L) Analysis Run 10/22/2024 11:50 AM View: Confidence Interval

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

	HGWC-120	HGWC-121A	HGWC-124	HGWC-125	HGWC-126
8/31/2016	<0.005	<0.005	<0.005		
10/26/2016	<0.005		<0.005		
11/7/2016		<0.005			
1/13/2017		<0.005			
1/27/2017	<0.005		<0.005		
5/25/2017	<0.005		<0.005		
6/3/2017		<0.005			
8/11/2017			<0.005		
10/2/2017	<0.005	<0.005			
11/15/2017	<0.005	<0.005	<0.005		
6/5/2018	<0.005	<0.005	<0.005		
10/2/2018	<0.005		<0.005		
10/5/2018		<0.005			
8/22/2019	0.00072 (J)	<0.005			
8/23/2019			<0.005		
10/21/2019		<0.005	0.00046 (J)		
10/22/2019	<0.005				
3/24/2020			0.00051 (J)		
3/25/2020	0.0015 (J)	0.0005 (J)			
5/22/2020				0.00058 (J)	<0.005
6/16/2020				0.00052 (J)	<0.005
8/25/2020				<0.005	0.00096 (J)
8/26/2020	<0.005	<0.005			
8/27/2020			<0.005		
9/18/2020					<0.005
9/21/2020	0.00065 (J)			<0.005	
9/28/2020		<0.005	<0.005		
11/11/2020					<0.005
11/12/2020				<0.005	
12/16/2020				<0.005	<0.005
1/20/2021				0.00081 (J)	<0.005
3/12/2021	<0.005			<0.005	<0.005
3/15/2021		<0.005	<0.005		
8/16/2021	<0.005	<0.005	<0.005		
8/19/2021				<0.005	<0.005
2/2/2022	<0.005	<0.005	<0.005		
2/3/2022				<0.005	<0.005
8/4/2022	<0.005	<0.005	<0.005	<0.005	<0.005
1/24/2023		<0.005	<0.005		
1/25/2023	<0.005			<0.005	0.0014 (J)
8/10/2023	<0.005	<0.005		<0.005	
8/11/2023			<0.005		<0.005
2/14/2024				<0.005	<0.005
2/15/2024	<0.005	<0.005			
2/16/2024			<0.005		
8/6/2024		<0.005			
8/7/2024	<0.005		<0.005	<0.005	<0.005
Mean	0.004422	0.004786	0.00457	0.004127	0.004491
Std. Dev.	0.001457	0.000982	0.001358	0.001808	0.001347
Upper Lim.	0.005	0.005	0.005	0.005	0.005
Lower Lim.	0.0015	0.0005	0.00051	0.00081	0.0014

Confidence Interval

Constituent: Cobalt (mg/L) Analysis Run 10/22/2024 11:50 AM View: Confidence Interval
Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWC-120	HGWC-121A	HGWC-125
8/31/2016	0.0052 (J)	<0.005	
10/26/2016	0.0041 (J)		
11/7/2016		<0.005	
1/13/2017		<0.005	
1/27/2017	0.0034 (J)		
5/25/2017	0.0035 (J)		
6/3/2017		0.0005 (J)	
10/2/2017	0.0036 (J)	0.0003 (J)	
11/15/2017	0.0032 (J)	0.0003 (J)	
6/5/2018	0.0031 (J)	<0.005	
10/2/2018	0.0025 (J)		
10/5/2018		<0.005	
8/22/2019	0.0028 (J)	<0.005	
10/21/2019		<0.005	
10/22/2019	0.0031 (J)		
3/25/2020	0.0036 (J)	<0.005	
5/22/2020			0.01
6/16/2020			0.0096
8/25/2020			0.0087
8/26/2020	0.0023 (J)	<0.005	
9/21/2020	0.0041 (J)		0.012
9/28/2020		<0.005	
11/12/2020			0.012
12/16/2020			0.0055
1/20/2021			0.012
3/12/2021	0.0027 (J)		0.014
3/15/2021		<0.005	
8/16/2021	0.0037 (J)	<0.005	
8/19/2021			0.0054
2/2/2022	0.0072	<0.005	
2/3/2022			0.0086
8/4/2022	0.0058	<0.005	0.014
1/24/2023		<0.005	
1/25/2023	0.0055		0.0097
8/10/2023	0.0048 (J)	<0.005	0.012
2/14/2024			0.004 (J)
2/15/2024	0.005 (J)	<0.005	
8/6/2024		<0.005	
8/7/2024	0.0064		0.012
Mean	0.004076	0.004338	0.009967
Std. Dev.	0.001342	0.001662	0.003086
Upper Lim.	0.004816	0.005	0.01206
Lower Lim.	0.003336	0.0005	0.007876

Confidence Interval

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 10/22/2024 11:50 AM View: Confidence Interval

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

	HGWC-120	HGWC-121A	HGWC-124	HGWC-125	HGWC-126
8/31/2016	1.47	1.57	1.22		
10/26/2016	0.864 (U)		0.637 (U)		
11/7/2016		0.739 (U)			
1/13/2017		0.744 (U)			
1/27/2017	0.521 (U)		0.795 (U)		
5/25/2017	0.681 (U)		0.896 (U)		
6/3/2017		0 (U)			
8/11/2017			0.828 (U)		
10/2/2017	0.632 (U)	0.68 (U)			
11/15/2017	1.3	0.911 (U)	0.478 (U)		
6/5/2018	1.26 (U)	0.948 (U)	0.947 (U)		
10/2/2018	0.572 (U)		0.617 (U)		
10/5/2018		1.17 (U)			
8/22/2019	1.35	1.3			
8/23/2019			0.834		
10/21/2019		0.393 (U)	1.11 (U)		
10/22/2019	0.76 (U)				
3/24/2020			0.796 (U)		
3/25/2020	0.696 (U)	0.505 (U)			
5/22/2020			1.1 (U)	1.82	
6/16/2020			1.62	1.82	
8/25/2020			1.65	1.82	
8/26/2020	0.357 (U)	1.96			
8/27/2020			0.494 (U)		
9/18/2020					0.841 (U)
9/21/2020	0.553 (U)			1.45	
9/28/2020		0.761 (U)	0.477 (U)		
11/11/2020					0.837 (U)
11/12/2020				0.633 (U)	
12/16/2020				0.818 (U)	1.26 (U)
1/20/2021				1.01 (U)	0.985 (U)
8/16/2021	1.25	0.192 (U)	0.734 (U)		
8/19/2021				0.721 (U)	1.11
2/2/2022	0.816 (U)	0.254 (U)	0.564 (U)		
2/3/2022				0.257 (U)	1.51
8/4/2022	0.687 (U)	1.16 (U)	0.16 (U)	0.971 (U)	1.34 (U)
1/24/2023		0.757 (U)	0.601 (U)		
1/25/2023	0.992			1.11	1.91
8/10/2023	0.682 (U)	0.585 (U)		0.953 (U)	
8/11/2023			0.449 (U)		1.34
2/14/2024				0.275 (U)	1.01 (U)
2/15/2024	0.669 (U)	0.0885 (U)			
2/16/2024			0.448 (U)		
8/6/2024		1.27			
8/7/2024	0.679 (U)		0.422 (U)	0.603 (U)	0.662 (U)
Mean	0.8396	0.7994	0.6754	0.9408	1.305
Std. Dev.	0.3184	0.5051	0.2571	0.4356	0.4191
Upper Lim.	1.02	1.086	0.8213	1.249	1.602
Lower Lim.	0.6588	0.5125	0.5294	0.6323	1.008

Confidence Interval

Constituent: Fluoride (mg/L) Analysis Run 10/22/2024 11:50 AM View: Confidence Interval
Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWC-120	HGWC-121A	HGWC-124	HGWC-125	HGWC-126
8/31/2016	0.65	0.14 (J)	0.15 (J)		
10/26/2016	0.6		0.3		
11/7/2016		0.18 (J)			
1/13/2017		0.14 (J)			
1/27/2017	1.2		0.3		
5/25/2017	1.4		0.05 (J)		
6/3/2017		0.15 (J)			
8/11/2017			0.1 (J)		
10/2/2017	1	1.2			
11/15/2017	1.3	0.6	<0.1		
6/5/2018	0.48	0.19 (J)	0.078 (J)		
10/2/2018	0.34		0.078 (J)		
10/5/2018		0.23 (J)			
4/2/2019	0.47				
4/3/2019		0.14 (J)	0.089 (J)		
6/17/2019	1.2				
8/22/2019	0.3 (J)	0.2 (J)			
8/23/2019			0.11 (J)		
10/21/2019		0.18 (J)	0.073 (J)		
10/22/2019	0.53				
3/24/2020			<0.1		
3/25/2020	0.43	0.095 (J)			
5/22/2020				0.1 (J)	0.46
6/15/2020	0.37				
6/16/2020				0.12	0.44
8/25/2020				0.16	0.52
8/26/2020	0.48	0.16			
8/27/2020			<0.1		
9/18/2020					0.43
9/21/2020	0.33			0.11	
9/28/2020		0.15	<0.1		
11/11/2020					0.45
11/12/2020				0.12	
12/16/2020				0.2	0.49
1/20/2021				0.13	0.44
3/12/2021	0.42			0.12	0.46
3/15/2021		0.16	<0.1		
8/16/2021	0.39	0.15	<0.1		
8/19/2021				0.17	0.43
2/2/2022	0.36	0.15	<0.1		
2/3/2022				0.18	0.51
8/4/2022	0.38	0.18	0.074 (J)	0.15	0.5
1/24/2023		0.18	0.068 (J)		
1/25/2023	0.42			0.17	0.57
8/10/2023	0.36	0.18		0.15	
8/11/2023			<0.1		0.49
2/14/2024				0.2	0.49
2/15/2024	0.35	0.18			
2/16/2024			<0.1		
8/6/2024		0.2			
8/7/2024	0.34		<0.1	0.12	0.5
Mean	0.5875	0.2334	0.1123	0.1467	0.4787

Confidence Interval

Constituent: Fluoride (mg/L) Analysis Run 10/22/2024 11:50 AM View: Confidence Interval
Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWC-120	HGWC-121A	HGWC-124	HGWC-125	HGWC-126
Std. Dev.	0.3473	0.2364	0.06373	0.03244	0.03925
Upper Lim.	0.65	0.19	0.11	0.1686	0.5053
Lower Lim.	0.36	0.15	0.078	0.1247	0.4521

Confidence Interval

Constituent: Lead (mg/L) Analysis Run 10/22/2024 11:50 AM View: Confidence Interval

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

	HGWC-120	HGWC-121A	HGWC-124	HGWC-125	HGWC-126
8/31/2016	<0.001	<0.001	<0.001		
10/26/2016	0.0002 (J)		<0.001		
11/7/2016		<0.001			
1/13/2017		<0.001			
1/27/2017	<0.001		<0.001		
5/25/2017	9E-05 (J)		<0.001		
6/3/2017		7E-05 (J)			
8/11/2017			8E-05 (J)		
10/2/2017	8E-05 (J)	<0.001			
11/15/2017	<0.001	<0.001	<0.001		
6/5/2018	<0.001	0.00036 (J)	<0.001		
10/2/2018	<0.001		<0.001		
10/5/2018		<0.001			
8/22/2019	<0.001	<0.001			
8/23/2019			4.9E-05 (J)		
10/21/2019		<0.001	4.9E-05 (J)		
10/22/2019	<0.001				
3/24/2020			9.4E-05 (J)		
3/25/2020	<0.001	<0.001			
5/22/2020				0.00014 (J)	<0.001
6/16/2020				0.00013 (J)	<0.001
8/25/2020				<0.001	4.5E-05 (J)
8/26/2020	<0.001	<0.001			
8/27/2020			<0.001		
9/18/2020					<0.001
9/21/2020	<0.001			<0.001	
9/28/2020		<0.001	7.5E-05 (J)		
11/11/2020					4.2E-05 (J)
11/12/2020				4.7E-05 (J)	
12/16/2020				<0.001	<0.001
1/20/2021				9.2E-05 (J)	<0.001
3/12/2021	<0.001			4.4E-05 (J)	4.6E-05 (J)
3/15/2021		0.00015 (J)	<0.001		
8/16/2021	<0.001	<0.001	<0.001		
8/19/2021				<0.001	<0.001
2/2/2022	<0.001	<0.001	<0.001		
2/3/2022				<0.001	<0.001
8/4/2022	<0.001	<0.001	<0.001	<0.001	<0.001
1/24/2023		<0.001	<0.001		
1/25/2023	<0.001			<0.001	<0.001
8/10/2023	<0.001	<0.001		<0.001	
8/11/2023			<0.001		<0.001
2/14/2024				<0.001	<0.001
2/15/2024	<0.001	<0.001			
2/16/2024			<0.001		
8/6/2024		<0.001			
8/7/2024	<0.001		<0.001	<0.001	<0.001
Mean	0.0008748	0.0008848	0.0007784	0.0006969	0.0008089
Std. Dev.	0.000315	0.0002931	0.0004062	0.0004444	0.0003957
Upper Lim.	0.001	0.001	0.001	0.001	0.001
Lower Lim.	0.0002	0.00036	9.4E-05	9.2E-05	4.6E-05

Confidence Interval

Constituent: Lithium (mg/L) Analysis Run 10/22/2024 11:50 AM View: Confidence Interval

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

	HGWC-120	HGWC-121A	HGWC-124	HGWC-125	HGWC-126
8/31/2016	0.0333 (J)	0.0077 (J)	<0.03		
10/26/2016	0.0352 (J)		<0.03		
11/7/2016		0.0089 (J)			
1/13/2017		0.0091 (J)			
1/27/2017	0.0329 (J)		<0.03		
5/25/2017	0.0347 (J)		0.0011 (J)		
6/3/2017		0.0104 (J)			
8/11/2017			<0.03		
10/2/2017	0.0337 (J)	0.0095 (J)			
11/15/2017	0.0347 (J)	0.0086 (J)	<0.03		
6/5/2018	0.033 (J)	0.0092 (J)	0.0012 (J)		
10/2/2018	0.031 (J)		0.0012 (J)		
10/5/2018		0.0091 (J)			
8/22/2019	0.029 (J)	0.0084 (J)			
8/23/2019			0.0011 (J)		
10/21/2019		0.009 (J)	0.0011 (J)		
10/22/2019	0.03 (J)				
3/24/2020			0.0012 (J)		
3/25/2020	0.024 (J)	0.0066 (J)			
5/22/2020				0.0052 (J)	0.0046 (J)
6/16/2020				0.0053 (J)	0.0045 (J)
8/25/2020				0.0037 (J)	0.0037 (J)
8/26/2020	0.023 (J)	0.0071 (J)			
8/27/2020			0.00091 (J)		
9/18/2020					0.0035 (J)
9/21/2020	0.023 (J)			0.0038 (J)	
9/28/2020		0.0076 (J)	0.0011 (J)		
11/11/2020					0.0032 (J)
11/12/2020				0.0038 (J)	
12/16/2020				0.0055 (J)	0.0029 (J)
1/20/2021				0.0046 (J)	0.0038 (J)
3/12/2021	0.023 (J)			0.0039 (J)	0.0038 (J)
3/15/2021		0.0077 (J)	0.001 (J)		
8/16/2021	0.025 (J)	0.0075 (J)	0.0011 (J)		
8/19/2021				0.0074 (J)	0.0032 (J)
2/2/2022	0.025 (J)	0.0082 (J)	0.0012 (J)		
2/3/2022				0.0057 (J)	0.0038 (J)
8/4/2022	0.023 (J)	0.0069 (J)	0.0011 (J)	0.0035 (J)	0.0034 (J)
1/24/2023		0.0066 (J)	0.0011 (J)		
1/25/2023	0.018 (J)			0.0045 (J)	0.0046 (J)
8/10/2023	0.023 (J)	0.0069 (J)		0.0042 (J)	
8/11/2023			0.00097 (J)		0.0041 (J)
2/14/2024				0.0083 (J)	0.0041 (J)
2/15/2024	0.021 (J)	0.0056 (J)			
2/16/2024			<0.03		
8/6/2024		0.0063 (J)			
8/7/2024	0.023 (J)		<0.03	0.0038 (J)	0.0042 (J)
Mean	0.02755	0.007948	0.01073	0.00488	0.003827
Std. Dev.	0.005449	0.001236	0.01396	0.00141	0.0005271
Upper Lim.	0.03055	0.00863	0.03	0.005627	0.004184
Lower Lim.	0.02454	0.007266	0.0011	0.003956	0.003469

Confidence Interval

Constituent: Mercury (mg/L) Analysis Run 10/22/2024 11:50 AM View: Confidence Interval
Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWC-120	HGWC-124
8/31/2016	4E-05 (J)	<0.0002
10/26/2016	<0.0002	<0.0002
1/27/2017	<0.0002	<0.0002
5/25/2017	7E-05 (J)	5.1E-05 (J)
8/11/2017		<0.0002
10/2/2017	<0.0002	
11/15/2017	<0.0002	<0.0002
6/5/2018	<0.0002	<0.0002
10/2/2018	<0.0002	<0.0002
8/22/2019	<0.0002	
8/23/2019		<0.0002
8/26/2020	<0.0002	
8/27/2020		<0.0002
8/16/2021	<0.0002	<0.0002
2/2/2022	<0.0002	<0.0002
8/4/2022	<0.0002	<0.0002
1/24/2023		<0.0002
1/25/2023	<0.0002	
8/10/2023	<0.0002	
8/11/2023		<0.0002
2/15/2024	<0.0002	
2/16/2024		<0.0002
8/7/2024	<0.0002	<0.0002
Mean	0.0001829	0.0001912
Std. Dev.	4.845E-05	3.614E-05
Upper Lim.	0.0002	0.0002
Lower Lim.	7E-05	5.1E-05

Confidence Interval

Constituent: Molybdenum (mg/L) Analysis Run 10/22/2024 11:50 AM View: Confidence Interval

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

	HGWC-120	HGWC-124	HGWC-125
8/31/2016	0.0176	<0.01	
10/26/2016	0.0187	<0.01	
1/27/2017	0.0214	<0.01	
5/25/2017	0.0231	0.0009 (J)	
8/11/2017		0.0013 (J)	
10/2/2017	0.0259		
11/15/2017	0.0281	0.0012 (J)	
6/5/2018	0.033	<0.01	
10/2/2018	0.036	<0.01	
8/22/2019	0.039		
8/23/2019		0.0014 (J)	
10/21/2019		0.0013 (J)	
10/22/2019	0.04		
3/24/2020		0.001 (J)	
3/25/2020	0.034		
5/22/2020			<0.01
6/16/2020			<0.01
8/25/2020			0.00099 (J)
8/26/2020	0.05		
8/27/2020		0.00091 (J)	
9/21/2020	0.043		<0.01
9/28/2020		0.0009 (J)	
11/12/2020			0.0017 (J)
12/16/2020			0.014
1/20/2021			0.0013 (J)
3/12/2021	0.033		0.0012 (J)
3/15/2021		0.00092 (J)	
8/16/2021	0.035	0.00091 (J)	
8/19/2021			0.021
2/2/2022	0.034	0.001 (J)	
2/3/2022			0.0067 (J)
8/4/2022	0.032	<0.01	0.0023 (J)
1/24/2023		<0.01	
1/25/2023	0.03		0.0053 (J)
8/10/2023	0.035		0.0031 (J)
8/11/2023		<0.01	
2/14/2024			0.026
2/15/2024	0.033		
2/16/2024		0.00072 (J)	
8/7/2024	0.036	0.0012 (J)	0.0028 (J)
Mean	0.03228	0.00446	0.007759
Std. Dev.	0.007905	0.004456	0.007619
Upper Lim.	0.03664	0.01	0.009185
Lower Lim.	0.02792	0.00091	0.001729

Confidence Interval

Constituent: Selenium (mg/L) Analysis Run 10/22/2024 11:50 AM View: Confidence Interval
Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWC-120	HGWC-121A	HGWC-124
8/31/2016	<0.005	<0.005	<0.005
10/26/2016	<0.005		<0.005
11/7/2016		<0.005	
1/13/2017		0.0011 (J)	
1/27/2017	<0.005		<0.005
5/25/2017	<0.005		<0.005
6/3/2017		<0.005	
8/11/2017			<0.005
10/2/2017	0.002 (J)	<0.005	
11/15/2017	<0.005	<0.005	<0.005
6/5/2018	<0.005	<0.005	<0.005
10/2/2018	<0.005		0.0014 (J)
10/5/2018		<0.005	
8/22/2019	<0.005	<0.005	
8/23/2019			<0.005
8/26/2020	<0.005	<0.005	
8/27/2020			<0.005
8/16/2021	<0.005	<0.005	<0.005
2/2/2022	<0.005	<0.005	<0.005
8/4/2022	<0.005	<0.005	<0.005
1/24/2023		<0.005	<0.005
1/25/2023	<0.005		
8/10/2023	<0.005	<0.005	
8/11/2023			<0.005
2/15/2024	<0.005	<0.005	
2/16/2024			<0.005
8/6/2024		<0.005	
8/7/2024	<0.005		<0.005
Mean	0.004824	0.004771	0.004788
Std. Dev.	0.0007276	0.0009459	0.0008731
Upper Lim.	0.005	0.005	0.005
Lower Lim.	0.002	0.0011	0.0014