



*Prepared for*

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

# **2021 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT**

## **PLANT HAMMOND ASH POND 2 (AP-2)**

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### CERTIFICATION STATEMENT

This 2021 Annual Groundwater Monitoring and Corrective Action Report, Plant Hammond – Ash Pond 2 (AP-2) has been prepared in compliance with the United States Environmental Protection Agency Coal Combustion Residual Rule [40 Code of Federal Regulations 257 Subpart D], specifically § 257.90(e), and the Georgia Environmental Protection Division Rules for Solid Waste Management 391-3-4-.10 by a qualified groundwater scientist or engineer with Geosyntec Consultants.



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January 31, 2022  
Date



## SUMMARY

This summary of the *2021 Annual Groundwater Monitoring and Corrective Action Report* provides the status of the groundwater monitoring and corrective action program for the reporting period of January through December 2021 (referred to herein as the 2021 reporting period) at Georgia Power Company’s (Georgia Power’s) Plant Hammond Ash Pond 2 (AP-2) (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 6<sup>1</sup> of the United States Environmental Protection Agency (USEPA) Coal Combustion Residual Rule (federal CCR Rule) (40 Code of Federal Regulations [CFR] 257 Subpart D).

Plant Hammond is located at 5963 Alabama Highway SW, approximately 10 miles west of Rome in Floyd County, Georgia. Plant Hammond is a four-unit, coal-fired electric generating facility. All four units at Plant Hammond were decommissioned in July 2019 and no longer produce electricity. Dewatered ash from AP-2 is excavated and transported to the nearby Huffaker Road facility, a



Plant Hammond and the Site

permitted solid waste disposal location owned and operated by Georgia Power. The Site is located on the southwestern portion of the Plant Hammond property. The Georgia Environmental Protection Division (GA EPD) approved Closure permit No. 057-024D(CCR) for AP-2 on June 22, 2020.

Groundwater at the Site is monitored using a comprehensive monitoring well network that meet federal and state monitoring requirements. Routine sampling and reporting began after the background groundwater conditions were established between May 2016 and May 2017. Based on groundwater conditions at the Site, an assessment monitoring program and assessment of corrective measures program were established in January 2018 and January 2019, respectively. During the 2021 reporting period, the Site remained in assessment monitoring as corrective measures are being evaluated.

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

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During the 2021 reporting period, Geosyntec conducted three groundwater sampling events in February, March, and August 2021. Groundwater samples were submitted to Pace Analytical Services, LLC, for analysis. Per the federal CCR Rule, groundwater data from the March and August 2021 events were evaluated in accordance with the certified statistical methods. That evaluation showed statistically significant values of Appendix III<sup>2</sup> and Appendix IV<sup>3</sup> constituents in excess of state and federal groundwater protection standards in select monitoring wells, as summarized in the table below for the 2021 reporting period.

Based on review of the Appendix III and Appendix IV statistical results completed for the groundwater monitoring and corrective action program for the 2021 reporting period, the Site will continue in assessment monitoring. Georgia Power will continue routine groundwater monitoring and reporting at the Site. Reports will be posted to Georgia Power's CCR Rule Compliance website and provided to GA EPD semiannually.

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

<sup>3</sup> Antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, fluoride, lead, lithium, mercury, molybdenum, selenium, thallium, and combined radium 226 + 228

<b>Appendix III Constituent</b>	<b>March 2021</b>	<b>August 2021</b>
Boron	HGWC-14, HGWC-15, HGWC-16, HGWC-17, HGWC-18	HGWC-14, HGWC-15, HGWC-16, HGWC-17, HGWC-18
Calcium	HGWC-14, HGWC-15, HGWC-16, HGWC-17, HGWC-18	HGWC-14, HGWC-15, HGWC-16, HGWC-17, HGWC-18
Chloride	HGWC-14, HGWC-15, HGWC-16, HGWC-17, HGWC-18	HGWC-14, HGWC-15, HGWC-16, HGWC-17, HGWC-18
pH	HGWC-14, HGWC-18	HGWC-18
Sulfate	HGWC-14, HGWC-15, HGWC-16, HGWC-17, HGWC-18	HGWC-14, HGWC-15, HGWC-16, HGWC-17, HGWC-18
Total Dissolved Solids	HGWC-14, HGWC-16, HGWC-17, HGWC-18	HGWC-14, HGWC-15, HGWC-16, HGWC-17, HGWC-18
<b>Appendix IV Constituent<sup>4</sup></b>	<b>March 2021</b>	<b>August 2021</b>
Cobalt	<i>Federal and State:</i> HGWC-18, MW- 33, MW-35	<i>Federal and State:</i> HGWC- 18, MW-33, MW-35
Lead	<i>State only:</i> HGWC-14, HCWC-18, MW-33	<i>State only:</i> HGWC-14, HCWC-18, MW-33
Molybdenum	<i>State only:</i> MW-21D	<i>State only:</i> MW-21D

<sup>4</sup> A state statistically significant level (SSL)-related constituent is determined by comparing the confidence intervals developed to either the constituent's maximum contaminant level (MCL), if available, or the calculated background interwell tolerance limit. A federal SSL-related constituent is determined by comparing the confidence intervals developed to either the constituent's MCL, if available, the USEPA Regional Screening Level, if no MCL is available, or the calculated background interwell tolerance limit.

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**LIST OF ACRONYMS AND ABBREVIATIONS**

ACM	Assessment of Corrective Measures
AP-2	Ash Pond 2
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-20	Georgia Highway 20
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
$K_h$	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
Unified Guidance	Statistical Analysis of Groundwater Data at RCRA Facilities Unified Guidance
USEPA	United States Environmental Protection Agency

## 1.0 INTRODUCTION

In accordance with the United States Environmental Protection Agency (USEPA) Coal Combustion Residual Rule (federal CCR Rule) [40 Code of Federal Regulations (CFR) Part 257, Subpart D] and the Georgia Environmental Protection Division (GA EPD) Rules for Solid Waste Management 391-3-4-.10, Geosyntec Consultants, Inc. (Geosyntec) has prepared this *2021 Annual Groundwater Monitoring and Corrective Action Report* to document groundwater monitoring activities conducted at Georgia Power Company (Georgia Power) Plant Hammond (Site) Ash Pond 2 (AP-2) for the reporting period of January through December 2021 (referred to herein as the 2021 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 Rule is cited within this report in lieu of citing both sets of regulations.

Due to statistically significant levels (SSLs) of cobalt identified in the *2018 Annual Groundwater Monitoring and Corrective Action Report* (Geosyntec, 2019a), Georgia Power initiated an assessment of corrective measures (ACM) program for AP-2 in January 2019. Since 2018, SSLs of molybdenum and lead were identified in 2020 and 2021, respectively (Geosyntec, 2021a and 2021b). Pursuant to § 257.96(b), Georgia Power continues to monitor groundwater associated with AP-2 in accordance with the assessment monitoring program established for the unit in 2018, including annual and semiannual monitoring and reporting pursuant to § 257.90 through § 257.95 of the federal CCR Rule, and GA EPD Rules for Solid Waste Management 391-3-4-.10(6)(a). The groundwater data from the latest semiannual assessment monitoring event indicate that cobalt, molybdenum, and lead concentrations are delineated to below their corresponding groundwater protection standards (GWPS).

### 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 is 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-2 is a 21-acre surface impoundment. Dewatered ash from AP-2 is excavated and transported to the nearby Huffaker Road facility, a permitted solid waste disposal location owned and operated by Georgia Power. Georgia Power will close AP-2 through removal of the CCR material from the CCR unit. The Closure Plan submitted to GA EPD as part of the closure permit application package describes the closure activities and requirements in accordance with § 257.102. The proposed closure by removal approach provides a source control measure that reduces the potential for migration of CCR constituents to groundwater. Details of the closure approach are provided in the Initial Written Closure Plan and published in 2016 to Georgia Power's CCR Rule Compliance website. Closure permit No. 057-024D(CCR) was approved by GA EPD on June 22, 2020.

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

The following section summarizes the geologic and hydrogeologic conditions at AP-2 as described in the *Hydrogeologic Assessment Report Revision 01 – AP-2* (HAR Rev 01) submitted to GA EPD in December 2019 in support of the AP-2 solid waste handling permit (Geosyntec, 2019c).

### **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-2 is underlain by the lower units of the Cambrian age Conasauga Formation, consisting of mostly calcareous shale. Based on review of subsurface investigations at AP-2, the bedrock was identified as predominantly calcareous shale and fissile black shale. AP-2 is underlain primarily by five lithologic units: (i) terrace alluvium; (ii) colluvium; (iii) residuum; (iv) partially weathered shale bedrock; and (v) unweathered shale bedrock.

Based on subsurface investigations, the alluvial deposits generally grade from a silt and silty clay to a clayey sand and silty sand to a sand and gravelly sand at depth. The colluvium consists of silty sand, silty clay with angular and sub-rounded chert fragments, and dolomite, sandstone, and shale fragments. Residual or native soils have been derived



from the in-place weathering of the shale bedrock. The residuum is generally described as brown to yellow brown firm clayey silt with weathered shale fragments. The partially weathered shale zone occurs as an intermediate weathering stage between the residuum and the unweathered shale bedrock. The weathered material is described as black to dark gray to dark red hard, fissile shale and claystone. The unweathered shale bedrock was not encountered or directly observed in the historical borings advanced at the Site. However, based on geologic conditions in the region, weathering, fracturing and jointing decreases with depth, and the weathered rock material grades into competent bedrock.

### **1.2.2 Hydrogeologic Setting**

The uppermost aquifer at AP-2 is a regional groundwater aquifer that occurs primarily in the residuum and within the weathered and fractured bedrock. Based on observations of residuum soil types and horizontal conductivity values, the movement of groundwater in the soil can be characterized as low-to moderate permeability, porous media flow. The groundwater flow in the shallow underlying bedrock is characterized as fracture flow, and due to the preponderance of shale beneath AP-2, is expected to be very low permeability. The regional groundwater flow direction is expected to be from north to south; however, the local flow direction beneath AP-2 is predominantly east to west with an additional southerly component.

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

In accordance with § 257.91, a groundwater monitoring system was installed at AP-2 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 units (i.e., background conditions) and passing the waste boundary of the units. The number, spacing, and depths of the groundwater monitoring wells were selected based on the characterization of site-specific hydrogeologic conditions.

As part of the assessment monitoring program, delineation wells have been installed since 2018 to characterize the nature and extent of cobalt and molybdenum in groundwater downgradient of AP-2. Pursuant to § 257.95(g)(1)(iv), the wells classified as “delineation wells” will continue to be sampled concurrently with the compliance monitoring well network as part of the ongoing assessment groundwater monitoring program.

An on-site network of piezometers is used to gauge water levels to define groundwater flow direction and gradients. The piezometers may be sampled as needed to support the ACM program.

The locations of the compliance monitoring wells, delineation wells, and piezometers are shown on **Figure 2**; well and piezometer construction details are listed in **Table 1**.

## 2.0 GROUNDWATER MONITORING ACTIVITIES

In accordance with § 257.90(e), the following describes monitoring-related activities performed during the 2021 reporting period and discusses any change in status of the monitoring program. Groundwater sampling was performed in accordance with § 257.93.

### 2.1 Monitoring Well Installation and Maintenance

One piezometer (MW-51) was installed in July 2021 to provide additional data to characterize groundwater quality and flow conditions downgradient of AP-2. A well installation report that includes detailed boring and well construction logs for the installation of MW-51 is provided in **Appendix A**. The installation report was submitted to GA EPD under separate cover in September 2021 (Geosyntec, 2021c).

The well and piezometer networks are inspected semiannually to determine if any repairs or corrective actions are necessary to meet the requirements of the Georgia Water Well Standards Act (O.C.G.A. § 12-5-134(5)(d)(vii)). In March and August 2021, the networks were inspected, necessary corrective actions were identified and subsequently completed, as documented in **Appendix B**. This documentation will serve as the required five year well inspection and was performed under the direction of a professional geologist or engineer registered in the State of Georgia.

### 2.2 Assessment Monitoring

Georgia Power initiated an assessment monitoring program for groundwater at AP-2 in January 2018. Statistical analyses of the 2018 assessment monitoring groundwater data identified SSLs of cobalt in AP-2 compliance wells HGWC-15 and HGWC-18 in excess of the associated state GWPS.

Pursuant to § 257.96, an ACM was initiated for AP-2 in January 2019. An *Assessment of Corrective Measures Report – Plant Hammond Ash Pond 1 (AP-1)* (ACM Report) was subsequently prepared for AP-2 (Geosyntec, 2019b) and submitted to GA EPD in June 2019 and posted to Georgia Power’s CCR Rule Compliance website in July 2019. In accordance with § 257.96(b), groundwater continues to be monitored at AP-2 under the assessment monitoring program while the ACM phase is implemented.

Regarding the routine assessment monitoring program, the annual Appendix IV sampling event for this reporting period was conducted in February 2021, with the semiannual assessment monitoring events occurring in March and August 2021. The number of

groundwater samples collected for analysis and the dates the samples were collected at AP-2 during this reporting period are summarized in **Table 2**.

During this reporting period, samples were collected in January 2021 from HGWA-42D, HGWA-43D, and HGWA-44D to characterize background groundwater conditions, as shown in **Table 2**. For this event, the samples were analyzed for the complete list of Appendix III and Appendix IV constituents. A similar sampling event was conducted in December 2020 at these three background wells, but the laboratory report was not received in time to include in the previous annual groundwater monitoring report (Geosyntec, 2021a). The laboratory reports associated with both the December 2020 and January 2021 groundwater sampling events are provided in **Appendix C**.

### **2.3 Additional Groundwater and Surface Water Sampling**

Supplemental groundwater sampling events were also conducted in February, March, and May 2021 to collect data in support of the continued evaluation of corrective measures as presented in the ACM Report. The supplemental data will be used to evaluate attenuation mechanisms and rates and aquifer capacity for attenuation and conduct geochemical evaluations of the groundwater relative to source water. The scope of these additional efforts and associated results are presented in the *Semiannual Remedy Selection and Design Progress Report* provided in **Appendix D**.

Due to the presence of surface water features immediately downgradient of select wells reporting SSLs, Georgia Power collected surface water samples in March and September 2021 from three locations in the unnamed creek west of AP-2 (AP2-Up, AP2-Mid, AP2-Down) and three locations in the Coosa River (H+0.25, H+0.35, H+0.75), as shown on **Figure 2**, to horizontally delineate identified SSLs of Appendix IV constituents in groundwater at AP-2. In March 2021, surface water samples were also collected from four additional locations upstream of AP-2, which are not shown on **Figure 2** (i.e., Up Stream, Down Stream, H-0.5, and H-2). The laboratory reports associated with the sampling events are provided in **Appendix C**. Georgia Power will continue collecting the surface water samples semiannually to support assessment of corrective measures.

### **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-2 during the 2021 reporting period.

#### **3.1 Groundwater and Surface Water Level Measurement**

A synoptic round of depth-to-groundwater-level measurements were recorded from the AP-2 wells and piezometers during the three 2021 site-wide assessment monitoring events and used to calculate the corresponding groundwater elevations, which are presented in **Table 3**. The February, March, and August 2021 elevations reported are generally representative of the groundwater elevations reported for prior monitoring events.

Surface water elevations were recorded from a surveyed measuring point located midway across the service bridge, located midway along the unnamed creek west of AP-2 ('Unnamed Creek' location), and at the Coosa River staff gauge located downgradient of AP-1, as shown in **Figure 2**.

The groundwater and surface water elevation data were used to prepare potentiometric surface maps for the February, March, and August 2021 events, which are presented on **Figures 3, 4 and 5**, respectively. Groundwater in the AP-2 area flows under the influence of topography from higher elevations on the northern and eastern side of the Site in a westerly direction beneath AP-2 with a southerly flow component.

#### **3.2 Groundwater Gradient and Flow Velocity**

The horizontal groundwater hydraulic gradient within the uppermost aquifer beneath AP-2 was calculated using the groundwater elevation data from the February, March, and August 2021 events. The hydraulic gradient is commonly calculated between two points along the groundwater flow path perpendicular to groundwater elevation contours. Ideally, this flow path originates and concludes with groundwater elevations reported for two wells, but this may not be feasible and still remain perpendicular to the contours. The hydraulic gradients in this report were calculated between upgradient and downgradient wells selected to provide the most accurate alignment possible relative to the interpreted groundwater flow path. Hydraulic gradients were calculated across the central portion of AP-2 between MW-18 and HGWC-17. The supporting calculations are presented in **Table 4**. The table also presents the average hydraulic gradient calculated from the three

measurement events. The general trajectory of the flow paths used in the calculations and associated potentiometric contour lines are shown on **Figures 3, 4, and 5**. The average hydraulic gradient along the westerly flow path lines for the 2021 reporting period is 0.008 feet per foot (ft/ft).

The approximate horizontal flow velocity associated with AP-2 was calculated using the following derivative of Darcy's Law. The calculation is presented in **Table 4**.

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

where:

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

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

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

$h_1$  and  $h_2$  = Groundwater elevation at location 1 and 2

$L$  = distance between location 1 and 2

$n_e$  = Effective porosity

The horizontal hydraulic conductivity ( $K_h$ ) measurements were calculated from slug test data collected in AP-2 wells and piezometers. As presented in the HAR Rev 01, results were broadly grouped based on the lithology in which the wells or piezometers were screened. The geometric mean of the  $K_h$  values of the alluvium, colluvium, residuum, and partially weathered shale bedrock were used to represent the overall hydraulic conductivity at AP-2 of  $5.17 \times 10^{-4}$  centimeters per second (cm/sec) [1.47 feet per day (ft/day)] (Geosyntec, 2019c). An effective porosity value of 0.15 was used to represent average lithologic conditions at AP-2, derived based on review of literature (Kresic, 2007), observed site lithology, and professional judgement. Applying these values and the average hydraulic gradient, the average groundwater flow velocity underneath AP-2 for the 2021 reporting period was calculated as 0.079 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, and peristaltic pumps. For wells

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

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

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

Following purging, and once stabilization was achieved, unfiltered samples were collected into appropriately preserved laboratory-supplied sample containers. Sample bottles were placed in ice-packed coolers and submitted to Pace Analytical Services, LLC. (Pace Analytical) in Norcross, Georgia following chain-of-custody protocol. The field sampling and equipment calibration forms generated during the monitoring events conducted in December 2020 and throughout the 2021 reporting period are provided in **Appendix C**.

### **3.4 Laboratory Analyses**

Laboratory analyses were performed by Pace Analytical, which is accredited by the National Environmental Laboratory Accreditation Program (NELAP). Pace Analytical maintains a NELAP certification for the Appendix III and Appendix IV constituents analyzed for this project. Analytical methods used for groundwater sample analyses are listed in the analytical laboratory reports included in **Appendix C**.

The groundwater results from the 2021 assessment monitoring events, and the supplementary sampling of HGWA-42D, HGWA-43D, and HGWA-44D in December 2020 and January 2021, are summarized in **Table 5**. Surface water analytical results from the March and September 2021 monitoring event are summarized in **Table 6**. The Pace Analytical laboratory reports associated with the results presented in **Tables 5** and **6** are provided in **Appendix C**.

### **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, 2021d), and included the following: field duplicates, equipment blanks, and field blank samples. QA/QC samples were collected in appropriately preserved laboratory-provided containers and submitted under the same chain of custody as the primary samples for analysis of the same constituents by Pace Analytical.

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



## 4.0 STATISTICAL ANALYSIS

The following section summarizes the statistical analysis of Appendix III groundwater monitoring data performed pursuant to § 257.93. In addition, pursuant to § 257.95(d)(2), Georgia Power established GWPS for the Appendix IV constituents and completed statistical analyses of the Appendix IV groundwater monitoring data obtained during the 2021 reporting period. The data were analyzed by Groundwater Stats Consulting (GSC); the reports generated from the analyses are provided in **Appendix E**.

### 4.1 Statistical Methods

Groundwater data from the 2021 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 evaluate if Appendix III constituents have returned to background levels. Appendix IV constituents were evaluated to evaluate if concentrations statistically exceeded the established state and federal GWPS. Detailed statistical methods used for Appendix III and Appendix IV constituents are discussed in statistical analysis package provided in **Appendix E** and summarized in Sections 4.1.1 and 4.1.2. The GWPS were finalized pursuant to § 257.95(d)(2) and presented in **Table 7**.

#### 4.1.1 Appendix III Statistical Methods

Based on guidance from GA EPD, statistical tests used to evaluate the groundwater monitoring data consist of interwell prediction limits (PLs) combined with a 1-of-2 verification resample plan for each of the Appendix III constituents. Interwell PLs pool upgradient well data to establish a background limit for an individual constituent, and the most recent sample from each downgradient well is compared to the same limit for each constituent. The most recent sample from each downgradient well is compared to the background limit to assess whether there are significant statistical increases (SSIs). An "initial exceedance" occurs when an Appendix III constituent reported in the groundwater of a downgradient compliance monitoring well exceeds the constituent's associated PL. The 1-of-2 resample plan allows for collection of an independent resample. A confirmed exceedance is noted only when the resample confirms the initial exceedance by also

exceeding the statistical limit. If the resample falls within its respective prediction limit, no exceedance is declared.

#### 4.1.2 Appendix IV Statistical Methods

To statistically compare groundwater data to GWPS, confidence intervals are constructed for each of the detected Appendix IV constituents in each downgradient compliance and delineation 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. Due to non-routine (or ACM investigation) sampling, some Appendix IV constituents at a well location have differing number of analytical data points.

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

USEPA revised the federal CCR Rule on July 30, 2018, updating GWPS for cobalt, lead, lithium, and molybdenum. As described in § 257.95(h)(1-3), the GWPS is:

- (1) The maximum contaminant level (MCL) established under § 141.62 and § 141.66.
- (2) Where an MCL has not been established:
  - (i) Cobalt 0.006 mg/L;
  - (ii) Lead 0.015 mg/L;
  - (iii) Lithium 0.040 mg/L; and
  - (iv) Molybdenum 0.10 mg/L.
- (3) Background levels for constituents where the background level is higher than the MCL or rule-specified GWPS.

USEPA's updated GWPS have not yet been incorporated under GA EPD's CCR Rule. The GA EPD CCR Rule GWPS is:

- (1) The federally established MCL.

- (2) Where an MCL has not been established, the background concentration.
- (3) Background levels for constituents where the background level is higher than the MCL.

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

## **4.2 Statistical Analyses Results**

Based on review of the Appendix III statistical analyses presented in **Appendix E**, groundwater conditions have not returned to background and assessment monitoring should continue. Based on review of the statistical analyses, the following Appendix IV constituents exceeded the state or federal GWPS during the 2021 reporting period:

### **4.2.1 March 2021 Semiannual Event**

AP-2 (Federal CCR Rule):

- Cobalt: HGWC-18, MW-33, and MW-35

AP-2 (GA EPD CCR Rule):

- Cobalt: HGWC-18, MW-33, and MW-35
- Lead: HGWC-14, HGWC-18, and MW-33
- Molybdenum: MW-21D

A groundwater exceedance notification acknowledging the March 2021 SSLs for cobalt, lead, and molybdenum was placed in the Operating Record on July 30, 2021, pursuant to § 257.95(g).

### **4.2.2 August 2021 Semiannual Event**

AP-2 (Federal CCR Rule):

- Cobalt: HGWC-18, MW-33, and MW-35

AP-2 (GA EPD CCR Rule):

- Cobalt: HGWC-18, MW-33, and MW-35

- Lead: HGWC-14, HGWC-18, and MW-33
- Molybdenum: MW-21D

A groundwater exceedance notification acknowledging the August 2021 SSLs for cobalt, lead, and molybdenum was placed in the Operating Record on January 31, 2022, pursuant to § 257.95(g).

#### **4.2.3 Summary of Statistical Analyses**

The SSLs identified for the 2021 reporting period are generally consistent with previous reporting periods, with the following exceptions:

- The SSL of cobalt in MW-35 above the site derived GWPS was first identified after the March 2021 semiannual event.
- The SSLs of lead in HGWC-14 HGWC-18, and MW-33 were first identified after the March 2021 semiannual event. The SSLs are likely the result of a decrease in the laboratory reporting limit, which the laboratory applied beginning in 2021, and background limit for lead from 0.005 mg/L to 0.001 mg/L, and is used as the state GWPS for applicable confidence intervals.

## 5.0 NATURE AND EXTENT

Based on the groundwater data presented herein, the cobalt, lead, and molybdenum SSLs in wells identified in Section 4.2 have been horizontally and vertically delineated to below the state and federal GWPS. The following presents delineation results for the observed SSLs.

### 5.1 Cobalt

The cobalt SSLs are horizontally and vertically delineated to below the site specific GWPS (0.038 mg/L) in HGWC-18, MW-33, and MW-35. On the northwest side of AP-2, HGWC-18 is vertically delineated by MW-21D. The conceptual site model on the south side of the pond consists of southerly groundwater flow through alluvium toward the Coosa River. MW-33 is vertically delineated by MW-34D upgradient of the river. However, as groundwater nears the Coosa River, it begins to flow upward and join the Coosa River. As such, to properly characterize the deeper groundwater south of MW-34D as it migrates downgradient, MW-51 was installed with a shallower screen interval to not only horizontally delineate cobalt at MW-35 but also to account for the upward movement of groundwater adjacent to the river. The cobalt groundwater concentration reported for MW-51 (0.030 mg/L) for the August 2021 semiannual event delineates the horizontal extent of the SSLs of cobalt in MW-33 and MW-35 and the vertical extent of cobalt in MW-35 to below the site derived GWPS. Delineation wells MW-34D and MW-51 will continue to be sampled to support cobalt delineation, and the data will be statistically evaluated after collecting a minimum of four independent samples.

Due to the presence of a surface water feature (unnamed creek) west of AP-2 in the downgradient direction of HGWC-18 (refer to **Figure 2**), installation of additional wells to horizontally characterize this area is infeasible. For this reason, Georgia Power proactively began collecting surface water samples in July 2020. Cobalt was not detected above the laboratory reporting limit (0.0050 mg/L) in surface water samples collected in March and September 2021 from the three locations in the unnamed creek (AP2-Up, AP2-Mid, AP2-Down) shown on **Figure 2**. No cobalt impacts to surface water have been detected and cobalt observed in HGWC-18 is horizontally delineated.

Surface water samples were collected from the Coosa River in March 2021 and September 2021. Of the seven sample locations along the Coosa River, three (i.e., H+0.25, H+0.35, H+0.75) are in the vicinity of MW-33 and MW-35 and relevant to conditions at AP-2. These three locations are shown on **Figure 2**. Cobalt was not detected above the laboratory reporting limit (0.0050 mg/L) in any of the Coosa River samples. The Coosa River will continue to be sampled until sufficient data is available

to statistically evaluate MW-51 and then only if necessary, based on results of the statistical evaluation. The 2021 data associated with the unnamed creek and the Coosa River surface water sampling events are presented in **Table 6** and the laboratory reports are included in **Appendix C**.

## 5.2 Lead

The newly identified state SSLs for lead in HGWC-14, HGWC-18, and MW-33 are likely the result of a decrease in the laboratory reporting limit, and thereby the background limit for the applicable state GWPS, for lead from 0.005 mg/L to 0.001 mg/L. Vertical and horizontal delineation to below the state GWPS (0.001 mg/L) has been achieved in both areas of the unit. The SSL in HGWC-18 is horizontally delineated by the non-detect surface water results in the unnamed creek and is vertically delineated by non-detect results in MW-21D. For HGWC-14 and MW-33, the identified SSLs are horizontally delineated by non-detect results in MW-35 and vertically delineated by MW-34D.

## 5.3 Molybdenum

The molybdenum concentration in MW-21D is horizontally delineated by surface water samples from the unknown creek west of AP-2 and vertically delineated by MW-37D. Molybdenum was not detected above the laboratory reporting limit (0.010 mg/L) in the three unnamed creek water samples collected in March and August 2021 (**Table 6**). Therefore, no molybdenum impacts to surface water have been detected and horizontal delineation is complete for MW-21D. Additionally, MW-21D has exhibited a steadily decreasing trend since the state SSL was identified in 2019.

## 6.0 MONITORING PROGRAM STATUS

### 6.1 Assessment Monitoring Status

Pursuant to § 257.96(b), Georgia Power will continue to monitor the groundwater at AP-2 in accordance with the assessment monitoring program regulations of § 257.95 while ACM efforts continue to be evaluated. Pursuant to § 257.95(g)(1)(iv), the delineation wells will continue to be sampled as part of the ongoing assessment groundwater monitoring program.

### 6.2 Assessment of Corrective Measures

The ACM efforts completed during the reporting period covered by this groundwater monitoring and corrective action report are presented in the *Semiannual Remedy Selection and Design Progress Report* provided in **Appendix D**. The Semiannual Progress Report summarizes:

- (i) the current conceptual site model applicable to evaluating groundwater corrective measures proposed in the ACM Report (Geosyntec, 2019b);
- (ii) the analytical data obtained during supplemental ACM-specific field investigations;
- (iii) the status of evaluating applicable corrective measures; and
- (iv) the planned activities and anticipated schedule for the following semi-annual reporting period.

Georgia Power will include future semiannual progress reports with each groundwater monitoring and corrective action report.

## 7.0 CONCLUSIONS AND FUTURE ACTIONS

This *2021 Annual Groundwater Monitoring and Corrective Action Report* for Plant Hammond AP-2 was prepared to fulfill the requirements of the federal CCR Rule and GA EPD Rules for Solid Waste Management 391-3-4-.10. Statistical evaluations of the groundwater monitoring data for the AP-2 well network confirmed during the 2021 reporting period: (i) the continued presence of an SSL of cobalt in HGWC-18 and MW-33 and a new cobalt SSL in MW-35, with groundwater concentrations above the site specific GWPS in all three wells; (ii) the continued SSL of molybdenum in MW-21D above the state GWPS; and (iii) the new identification of SSLs of lead in HGWC-14, HGWC-18, and MW-33 above the state GWPS. The evaluation of the 2021 data indicates the cobalt, molybdenum, and lead SSLs are delineated to below their corresponding GWPS.

Georgia Power will continue to monitor AP-2 groundwater under the assessment monitoring program and proceed with the evaluation of remedies presented in the ACM Report (Geosyntec, 2019b). The next routine semiannual assessment monitoring event for AP-1 is scheduled for February 2022. The February 2022 assessment monitoring event will be a combined event to meet the requirements of § 257.95(b) and § 257.95(d)(1) and will include sampling and analysis of all Appendix III and IV constituents.



## 8.0 REFERENCES

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# TABLES

**Table 1**  
Monitoring Well Network Summary  
Plant Hammond AP-2, Floyd County, Georgia

Well ID	Hydraulic Location	Installation Date	Northing <sup>(1)</sup>	Easting <sup>(1)</sup>	Ground Surface Elevation (ft)	Top of Casing Elevation <sup>(2)</sup> (ft)	Top of Screen Elevation <sup>(2)</sup> (ft)	Bottom of Screen Elevation <sup>(2)</sup> (ft)	Well Depth (ft BTOC) <sup>(3)</sup>	Screen Interval Length (ft)
<b>Compliance Monitoring Well</b>										
HGWA-1	Upgradient	12/3/2014	1550423.32	1940770.00	592.32	595.21	573.12	563.12	32.49	10
HGWA-2	Upgradient	12/2/2015	1549796.87	1939845.15	585.29	587.92	570.29	560.29	27.95	10
HGWA-3	Upgradient	12/2/2015	1549794.41	1939833.39	585.23	587.74	553.23	543.23	44.51	10
HGWA-4	Upgradient	12/3/2014	1549930.45	1939385.45	584.94	587.60	572.24	562.24	25.76	10
HGWA-5	Upgradient	12/10/2015	1548633.33	1937184.17	580.52	583.24	564.92	554.92	28.72	10
HGWA-6	Upgradient	12/11/2015	1548636.35	1937177.73	580.72	583.38	543.72	533.72	49.66	10
HGWA-42D	Upgradient	8/27/2020	1549363.72	1938443.86	583.39	586.17	528.39	518.39	65.25	10
HGWA-43D	Upgradient	8/26/2020	1550422.85	1940753.81	592.08	595.08	544.08	534.08	61.25	10
HGWA-44D	Upgradient	8/25/2020	1550409.13	1940756.19	592.01	594.79	491.76	481.76	113.50	10
HGWC-14	Downgradient	10/16/2014	1547998.96	1938406.27	594.67	597.25	564.67	554.67	42.98	10
HGWC-15	Downgradient	10/20/2014	1547875.33	1937854.92	578.73	581.49	553.93	543.93	37.96	10
HGWC-16	Downgradient	10/21/2014	1548209.83	1937540.33	577.36	580.02	557.36	547.36	33.06	10
HGWC-17	Downgradient	10/22/2014	1548449.71	1937538.98	581.51	584.30	566.91	556.91	27.79	10
HGWC-18	Downgradient	10/22/2014	1548821.27	1937558.32	581.36	584.18	566.86	556.86	27.71	10
<b>Piezometer</b>										
MW-8	Downgradient	10/29/2014	1548171.86	1940016.70	584.25	586.93	565.05	555.05	32.28	10
MW-9	Downgradient	10/29/2014	1548131.38	1938922.16	588.42	590.95	569.12	559.12	32.95	10
MW-12	Downgradient	10/21/2014	1547853.78	1937525.46	580.59	583.27	555.84	545.84	37.83	10
MW-16	Downgradient	10/27/2014	1549104.17	1937940.06	571.70	574.22	562.20	552.20	23.42	10
MW-17	Downgradient	10/28/2014	1549163.28	1938345.81	583.68	586.78	568.98	558.98	29.09	10
MW-18	Downgradient	10/29/2014	1548984.15	1938712.73	589.75	592.28	571.05	561.05	32.42	10
MW-33	Downgradient	11/21/2019	1547973.50	1938412.13	591.19	593.92	566.60	556.60	37.72	10
MW-34D	Downgradient	5/6/2020	1547996.82	1938392.20	593.83	596.51	530.48	520.48	73.68	10
MW-35	Downgradient	5/13/2020	1547905.33	1938417.82	571.88	574.40	558.70	548.70	23.52	10
MW-36D	Downgradient	5/7/2020	1548435.43	1937538.19	581.44	584.10	534.12	524.12	57.65	10
MW-51	Downgradient	7/22/2021	1547872.35	1938421.46	571.57	574.54	556.47	546.47	25.40	10
<b>Delineation Monitoring Well</b>										
MW-21D	Downgradient	11/19/2018	1548814.86	1937555.78	581.16	583.84	542.36	532.36	51.88	10
MW-22	Downgradient	11/15/2018	1547854.68	1937832.04	576.05	578.51	551.45	541.45	37.47	10
MW-23D	Downgradient	11/15/2018	1547876.55	1937843.89	579.06	581.30	529.46	519.46	62.24	10
MW-37D	Downgradient	5/8/2020	1548803.01	1937551.05	580.95	583.58	514.65	504.65	76.63	10

Notes:

ft = feet

BTOC = below top of casing

(1) Coordinates in North American Datum (NAD) 1983, State Plane, Georgia-West, feet. Survey completed by GEL Solutions dated May 19, 2020 and September 10, 2020 (for wells HGWA-42D, HGWA-43D, and HGWA-44D) and September 8, 2021 (for well MW-51).

(2) Elevations referenced to the North American Vertical Datum of 1988 (NAVD88). Survey completed by GEL Solutions dated May 19, 2020 and September 10, 2020 (for wells HGWA-42D, HGWA-43D, and HGWA-44D) and September 8, 2021 (for well MW-51).

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

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

Well ID	Hydraulic Location	December 15, 2020	January 19-20, 2021	February 8-16, 2021	March 10-18, 2021	August 11-19, 2021	Status of Monitoring Well
Purpose of Sampling Event:		Supplemental	Supplemental	App. IV Annual	Assessment	Assessment	
<b><i>Compliance Monitoring Well</i></b>							
HGWA-1	Upgradient	--	--	X	X	X	Assessment
HGWA-2	Upgradient	--	--	X	X	X	Assessment
HGWA-3	Upgradient	--	--	X	X	X	Assessment
HGWA-4	Upgradient	--	--	X	X	X	Assessment
HGWA-5	Upgradient	--	--	X	X	X	Assessment
HGWA-6	Upgradient	--	--	X	X	X	Assessment
HGWA-42D	Upgradient	X	X	X	X	X	Assessment
HGWA-43D	Upgradient	X	X	X	X	X	Assessment
HGWA-44D	Upgradient	X	X	X	X	X	Assessment
HGWC-14	Downgradient	--	--	X	X	X	Assessment
HGWC-15	Downgradient	--	--	X	X	X	Assessment
HGWC-16	Downgradient	--	--	X	X	X	Assessment
HGWC-17	Downgradient	--	--	X	X	X	Assessment
HGWC-18	Downgradient	--	--	X	X	X	Assessment
<b><i>Piezometer</i></b>							
MW-33	Downgradient	--	--	X	X	X	Assessment
MW-35	Downgradient	--	--	X	X	X	Assessment
MW-51	Downgradient	--	--	--	--	X	Assessment
<b><i>Delineation Monitoring Well</i></b>							
MW-21D	Downgradient	--	--	X	X	X	Assessment
MW-22	Downgradient	--	--	X	X	X	Assessment
MW-23D	Downgradient	--	--	X	X	X	Assessment
MW-37D	Downgradient	--	--	X	X	X	Assessment

**Table 3**  
**Summary of Groundwater and Surface Water Elevations**  
**Plant Hammond AP-2, Floyd County, Georgia**

Well ID	Top of Casing Elevation <sup>(1)</sup> (ft)	February 8, 2021		March 10, 2021		August 11, 2021	
		Depth to Water (ft BTOC)	Groundwater Elevation <sup>(1)</sup> (ft)	Depth to Water (ft BTOC)	Groundwater Elevation <sup>(1)</sup> (ft)	Depth to Water (ft BTOC)	Groundwater Elevation <sup>(1)</sup> (ft)
<b>Compliance Monitoring Wells</b>							
HGWA-1	595.21	13.76	581.45	10.94	584.27	18.86	576.35
HGWA-2	587.92	8.10	579.82	7.08	580.84	10.72	577.20
HGWA-3	587.74	7.71	580.03	6.68	581.06	10.41	577.33
HGWA-4	587.60	6.23	581.37	5.70	581.90	9.08	578.52
HGWA-5	583.24	5.53	577.71	4.73	578.51	5.92	577.32
HGWA-6	583.38	5.02	578.36	4.03	579.35	5.66	577.72
HGWA-42D	586.17	10.46	575.71	10.58	575.59	12.27	573.90
HGWA-43D	595.08	13.71	581.37	10.85	584.23	18.66	576.42
HGWA-44D	594.79	13.60	581.19	11.18	583.61	18.12	576.67
HGWC-14	597.25	28.30	568.95	27.20	570.05	28.76	568.49
HGWC-15	581.49	17.40	564.09	15.95	565.54	16.76	564.73
HGWC-16	580.02	14.60	565.42	11.94	568.08	12.09	567.93
HGWC-17	584.30	17.70	566.60	17.6	566.70	18.48	565.82
HGWC-18	584.18	17.69	566.49	17.69	566.49	18.74	565.44
<b>Piezometers</b>							
MW-8	586.93	20.30	566.63	19.02	567.91	19.35	567.58
MW-9	590.95	16.25	574.70	14.05	576.90	16.48	574.47
MW-12	583.27	11.63	571.64	-- <sup>(2)</sup>	--	18.35	564.92
MW-16	574.22	9.18	565.04	5.84	568.38	7.07	567.15
MW-17	586.78	4.50	582.28	9.54	577.24	10.89	575.89
MW-18	592.28	14.2	578.08	17.73	574.55	14.47	577.81
MW-33	593.92	25.50	568.42	24.35	569.57	25.83	568.09
MW-34D	596.51	31.66	564.85	31.85	564.66	30.39	566.12
MW-35	574.40	10.3	564.10	8.29	566.11	8.98	565.42
MW-36D	584.10	16.82	567.28	16.60	567.50	17.41	566.69
MW-51	574.54	--	--	--	--	9.43	565.11
<b>Delineation Monitoring Wells</b>							
MW-21D	583.84	16.58	567.26	16.51	567.33	17.81	566.03
MW-22	578.51	14.60	563.91	13.80	564.71	13.83	564.68
MW-23D	581.30	18.90	562.40	17.00	564.30	16.53	564.77
MW-37D	583.58	16.37	567.21	16.27	567.31	17.53	566.05
<b>Surface Water Level Gauge Point</b>							
Coosa River <sup>(3)</sup>	--	--	561.30	--	563.10	--	565.70
Unnamed Creek	580.14 <sup>(4)</sup>	8.40 <sup>(5)</sup>	571.74	-- <sup>(2)</sup>	--	15.13	565.01

Notes:

-- = not measured or not applicable

ft = feet

BTOC = below top of casing

(1) Elevations referenced to the North American Vertical Datum of 1988 (NAVD88). Survey data dated May 19, 2020, September 10, 2020 (for wells HGWA-42D, HGWA-43D, and HGWA-44D) and September 8, 2021 (for well MW-51).

(2) Water elevation not available due to missing field records.

(3) Coosa River staff gauge located approximately 3, 250 feet upstream of the confluence of the Unnamed Creek with the Coosa River.

(4) Surveyed reference point located midway across the service bridge located immediately west of AP-2 (Figure 2). The value presented in the "Depth to Water" column represents the measured distance from the bridge to the top of water, in feet.

(5) Measurement considered to be in error based on the calculated water level of the Unnamed Creek relative to the reported Coosa River gauge elevation.

**Table 4**  
Horizontal Groundwater Gradient and Flow Velocity Calculations  
Plant Hammond AP-2, Floyd County, Georgia

Flow Path Direction <sup>(1)</sup>	February 8, 2021				March 10, 2021				August 11, 2021				Average i (ft/ft)
	h <sub>1</sub> (ft)	h <sub>2</sub> (ft)	L (ft)	i (ft/ft)	h <sub>1</sub> (ft)	h <sub>2</sub> (ft)	L (ft)	i (ft/ft)	h <sub>1</sub> (ft)	h <sub>2</sub> (ft)	L (ft)	i (ft/ft)	
Westerly Flow Path (MW-18 to HGWC-17)	578.08	566.60	1,300	0.009	574.55	566.70	1,300	0.006	577.81	565.82	1,300	0.009	0.008

Flow Path Direction <sup>(1)</sup>	Averaged for 2021			
	K <sub>h</sub> (ft/d)	n <sub>e</sub>	i (ft/ft)	V (ft/d) <sup>(2)</sup>
Westerly Flow Path (MW-18 to HGWC-17)	1.47	0.15	0.008	0.079

Notes:

ft = feet

ft/day = feet per day

ft/ft = feet per foot

h<sub>1</sub> and h<sub>2</sub> = groundwater elevation at location 1 and 2

i = h<sub>1</sub>-h<sub>2</sub>/L = horizontal hydraulic gradient

K<sub>h</sub> = horizontal hydraulic conductivity

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

n<sub>e</sub> = effective porosity

V = groundwater flow velocity

(1) Flow path direction relative to the orientation of AP-2 and illustrated on Figures 3, 4 and 5 of associated report.

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

**Table 5**  
**Summary of Groundwater Analytical Data**  
**Plant Hammond AP-2, Floyd County, Georgia**

Well ID:	HGWA-1	HGWA-1	HGWA-1	HGWA-2	HGWA-2	HGWA-2	HGWA-3	HGWA-3	HGWA-3	HGWA-4	HGWA-4	HGWA-4	HGWA-5	HGWA-5	HGWA-5	
Sample Date:	2/8/2021	3/10/2021	8/11/2021	2/9/2021	3/11/2021	8/12/2021	2/9/2021	3/11/2021	8/12/2021	2/8/2021	3/10/2021	8/12/2021	2/9/2021	3/11/2021	8/12/2021	
Parameter (1,2,3)																
<b>APPENDIX III</b>	<b>Boron</b>	--	0.015 J	0.020 J	--	0.056	0.044	--	0.015 J	<0.0086	--	0.012 J	0.014 J	--	0.0075 J	0.0092 J
	<b>Calcium</b>	--	111	113	--	43.8	21.9	--	83.8	84.0	--	5.9	5.4	--	28.3	32.0
	<b>Chloride</b>	--	7.4	9.6	--	5.1	5.2	--	5.9	4.8	--	2.9	2.4	--	1.4	1.4
	<b>Fluoride</b>	--	0.079 J	0.058 J	--	0.10	<0.050	--	<0.050	<0.050	--	<0.050	<0.050	--	0.060 J	<0.050
	<b>pH</b>	7.11	6.95	6.98	5.42	5.80	5.05	7.23	7.33	7.31	4.94	5.28	5.26	6.35	6.48	6.46
	<b>Sulfate</b>	--	49.6	48.9	--	52.9	47.4	--	50.4	38.6	--	1.2	1.1	--	22.7	17.4
	<b>TDS</b>	--	348	366	--	169	118	--	267	265	--	53.0	55.0	--	118	158
<b>APPENDIX IV</b>	<b>Antimony</b>	<0.00028	<0.00028	<0.00078	0.00062 J	<0.00028	<0.00078	0.00031 J	<0.00028	<0.00078	<0.00028	<0.00028	<0.00078	<0.00028	<0.00028	0.0014 J
	<b>Arsenic</b>	<0.00078	<0.00078	<0.0011	<0.00078	<0.00078	<0.0011	<0.00078	<0.00078	<0.0011	<0.00078	<0.00078	<0.0011	<0.00078	<0.00078	<0.0011
	<b>Barium</b>	0.032	0.030	0.030	0.12	0.070	0.12	0.13	0.13	0.11	0.040	0.036	0.034	0.046	0.044	0.044
	<b>Beryllium</b>	<0.000046	<0.000046	<0.000054	0.00014 J	0.000086 J	0.00014 J	<0.000046	0.015 J	<0.000054	0.00023 J	0.00017 J	0.00021 J	<0.000046	<0.000046	<0.000054
	<b>Cadmium</b>	<0.00012	<0.00012	<0.00011	0.00016 J	<0.00012	0.00014 J	<0.00012	<0.00012	<0.00011	<0.00012	<0.00012	<0.00011	<0.00012	<0.00012	<0.00011
	<b>Chromium</b>	<0.00055	<0.00055	<0.0011	<0.00055	<0.00055	<0.0011	<0.00055	<0.00055	<0.0011	<0.00055	<0.00055	<0.0011	<0.00055	0.0011 J	<0.0011
	<b>Cobalt</b>	<0.00038	<0.00038	<0.00039	0.020	0.013	0.022	<0.00038	<0.00038	<0.00039	0.00074 J	0.00065 J	0.00070 J	0.00071 J	0.0013 J	<0.00039
	<b>Fluoride</b>	0.078 J	0.079 J	0.058 J	<0.050	0.10	<0.050	0.074 J	<0.050	<0.050	<0.050	<0.050	<0.050	0.053 J	0.060 J	<0.050
	<b>Lead</b>	0.000058 J	<0.000036	<0.00089	0.000094 J	0.000076 J	<0.00089	<0.00036	<0.00036	<0.00089	0.00024 J	0.00016 J	<0.00089	<0.000036	<0.000036	<0.00089
	<b>Lithium</b>	0.00086 J	0.00090 J	0.00078 J	0.0012 J	0.0011 J	0.0012 J	0.0032 J	0.0035 J	0.0028 J	0.0013 J	0.0011 J	0.0013 J	0.0030 J	0.0037 J	0.0032 J
	<b>Mercury</b>	<0.000078	--	--	<0.000078	--	--	<0.000078	--	--	<0.000078	--	--	<0.000078	--	--
	<b>Molybdenum</b>	<0.00069	<0.00069	<0.00074	<0.00069	<0.00069	<0.00074	<0.00069	<0.00069	<0.00074	<0.00069	<0.00069	<0.00074	<0.00069	<0.00069	<0.00074
	<b>Comb. Radium 226/228</b>	0.223 U	0.00 U	0.115 U	0.721 U	0.737 U	0.746 U	0.447 U	0.128 U	0.389 U	0.558 U	0.281 U	0.359 U	0.370 U	1.07 U	0.922 U
	<b>Selenium</b>	<0.0016	0.0047 J	<0.0014	<0.0016	<0.0016	<0.0014	<0.0016	<0.0016	<0.0014	<0.0016	<0.0016	<0.0014	<0.0016	<0.0016	<0.0014
<b>Thallium</b>	<0.00014	<0.00014	<0.00018	<0.00014	<0.00014	<0.00018	<0.00014	<0.00014	<0.00018	<0.00014	<0.00014	<0.00018	<0.00014	<0.00014	<0.00018	

Notes:

-- = Parameter was not analyzed

TDS = Total dissolved solids

< = Indicates the parameter was not detected above the analytical MDL.

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

U = Indicates the parameter was not detected above the analytical MDL (Specific to combined radium).

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

(2) Metals were analyzed by EPA Method 6020B, mercury was analyzed by EPA Method 7470A, anions were analyzed by EPA Method 300.0, TDS was analyzed by SM2540C, and combined radium by EPA Methods 9315/9320.

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

(4) Monitoring wells HGWA-42D, HGWA-43D, and HGWA-44D were analyzed for the complete list of Appendix III and Appendix IV constituents to establish background groundwater quality conditions.



**Table 5**  
**Summary of Groundwater Analytical Data**  
**Plant Hammond AP-2, Floyd County, Georgia**

Well ID:	HGWA-6	HGWA-6	HGWA-6	HGWA-42D <sup>(4)</sup>	HGWA-42D <sup>(4)</sup>	HGWA-42D	HGWA-42D	HGWA-42D	HGWA-43D <sup>(4)</sup>	HGWA-43D <sup>(4)</sup>	HGWA-43D	HGWA-43D	HGWA-43D	HGWA-44D <sup>(4)</sup>	HGWA-44D <sup>(4)</sup>	HGWA-44D	HGWA-44D	HGWA-44D	
Sample Date:	2/9/2021	3/11/2021	8/12/2021	12/15/2020	1/20/2021	2/8/2021	3/10/2021	8/12/2021	12/15/2020	1/19/2021	2/9/2021	3/11/2021	8/11/2021	12/15/2020	1/19/2021	2/9/2021	3/10/2021	8/13/2021	
Parameter <sup>(1,2,3)</sup>																			
<b>APPENDIX III</b>	<b>Boron</b>	--	0.018 J	0.014 J	0.043 J	0.045 J	--	0.048	0.044	0.052 J	0.049 J	--	0.060	0.042	0.31	0.40	--	0.39	0.31
	<b>Calcium</b>	--	53.1	54.7	47.3	41.8	--	43.4	43.6	62.6	60.1	--	59.6	61.0	28.7	33.0	--	18.3	28.9
	<b>Chloride</b>	--	1.2	0.94 J	3.2	2.8	--	3.0	2.6	4.7	4.1	--	4.5	3.5	9.4	9.5	--	12.3	39.9
	<b>Fluoride</b>	--	0.17	<0.050	0.11	0.082 J	--	0.11	0.079 J	0.21	0.16	--	0.20	0.15	0.67	0.74	--	0.65	0.87
	<b>pH</b>	7.40	7.56	7.47	7.64	7.68	7.64	7.70	7.70	7.39	7.39	7.44	7.46	7.40	7.87	7.86	7.84	7.92	7.77
	<b>Sulfate</b>	--	35.5	28.6	10.9	9.8	--	10.8	7.8	38.8	37.3	--	38.6	30.5	6.7	7.4	--	<0.50	56.1
	<b>TDS</b>	--	215	229	193	158	--	163	179	289	270	--	279	277	295	278	--	289	436
<b>APPENDIX IV</b>	<b>Antimony</b>	<0.00028	<0.00028	<0.00078	0.00035 J	<0.00028	0.0019 J	<0.00028	<0.00078	0.00031 J	0.00029 J	0.00037 J	0.00057 J	<0.00078	0.00047 J	0.00067 J	0.00042 J	0.00037 J	<0.00078
	<b>Arsenic</b>	<0.00078	<0.00078	<0.0011	<0.00078	<0.00078	<0.00078	<0.00078	<0.0011	<0.00078	0.0011 J	0.0017 J	0.0013 J	0.0015 J	<0.00078	<0.00078	0.00083 J	<0.00078	<0.0011
	<b>Barium</b>	0.21	0.21	0.18	0.19	0.20	0.19	0.18	0.18	0.29	0.32	0.34	0.32	0.28	0.39	0.41	0.46	0.26	0.22
	<b>Beryllium</b>	<0.000046	<0.000046	<0.000054	<0.000046	<0.000046	<0.000046	<0.000046	<0.000054	<0.000046	<0.000046	<0.000046	<0.000046	<0.000054	<0.000046	<0.000046	<0.000046	<0.000046	<0.000054
	<b>Cadmium</b>	<0.00012	<0.00012	<0.00011	<0.00012	<0.00012	<0.00012	<0.00012	<0.00011	<0.00012	<0.00012	<0.00012	<0.00012	<0.00011	<0.00012	<0.00012	<0.00012	<0.00012	<0.00011
	<b>Chromium</b>	<0.00055	<0.00055	<0.0011	0.0025 J	<0.00055	0.00078 J	<0.00055	<0.0011	<0.00055	<0.00055	0.00095 J	<0.00055	<0.0011	0.00072 J	0.0011 J	0.00066 J	<0.00055	0.0016 J
	<b>Cobalt</b>	<0.00038	<0.00038	<0.00039	0.00049 J	<0.00038	<0.00038	<0.00038	<0.00039	<0.00038	<0.00038	<0.00038	<0.00038	<0.00039	<0.00038	<0.00038	<0.00038	<0.00038	<0.00039
	<b>Fluoride</b>	<0.050	0.17	<0.050	0.11	0.082 J	0.096 J	0.11	0.079 J	0.21	0.16	0.19	0.20	0.15	0.67	0.74	0.44	0.65	0.87
	<b>Lead</b>	<0.000036	<0.000036	<0.00089	0.00045 J	<0.000036	0.000081 J	<0.000036	<0.00089	0.000082 J	0.000044 J	0.00029 J	0.000094 J	<0.00089	0.00011 J	0.00019 J	0.00010 J	<0.000036	<0.00089
	<b>Lithium</b>	0.010 J	0.012 J	0.0094 J	0.0080 J	0.010 J	0.0098 J	0.0094 J	0.0096 J	0.0019 J	0.0025 J	0.0026 J	0.0022 J	0.0024 J	0.028 J	0.034	0.026 J	0.030	0.032
	<b>Mercury</b>	<0.000078	--	--	<0.000078	<0.000078	<0.000078	--	--	<0.000078	<0.000078	<0.000078	--	--	<0.000078	<0.000078	<0.000078	--	--
	<b>Molybdenum</b>	<0.00069	<0.00069	<0.00074	0.00082 J	<0.00069	<0.00069	<0.00069	<0.00074	0.0044 J	0.0038 J	0.0045 J	0.0064 J	0.0034 J	0.0019 J	0.0035 J	0.0038 J	0.0019 J	0.0051 J
	<b>Comb. Radium 226/228</b>	0.324 U	0.601 U	0.0804 U	0.261 U	0.845 U	0.429 U	1.21	0.110 U	1.04 U	0.685 U	0.138 U	1.51 U	0.394 U	0.700 U	0.790 U	0.486 U	0.811 U	1.20
	<b>Selenium</b>	<0.0016	<0.0016	<0.0014	<0.0016	<0.0016	<0.0016	<0.0016	<0.0014	<0.0016	<0.0016	<0.0016	<0.0016	<0.0014	<0.0016	<0.0016	<0.0016	<0.0016	<0.0014
<b>Thallium</b>	<0.00014	<0.00014	<0.00018	<0.00014	<0.00014	<0.00014	<0.00014	<0.00018	<0.00014	<0.00014	<0.00014	<0.00014	<0.00018	<0.00014	<0.00014	<0.00014	<0.00014	<0.00018	

**Table 5**  
**Summary of Groundwater Analytical Data**  
**Plant Hammond AP-2, Floyd County, Georgia**

Well ID:		HGWC-14	HGWC-14	HGWC-14	HGWC-15	HGWC-15	HGWC-15	HGWC-16	HGWC-16	HGWC-16	HGWC-17	HGWC-17	HGWC-17	HGWC-18	HGWC-18	HGWC-18
Sample Date:		2/11/2021	3/17/2021	8/18/2021	2/12/2021	3/16/2021	8/19/2021	2/10/2021	3/17/2021	8/19/2021	2/11/2021	3/18/2021	8/18/2021	2/11/2021	3/18/2021	8/19/2021
Parameter <sup>(1,2,3)</sup>																
APPENDIX III	Boron	--	11.8	8.6	--	2.4	2.1	--	2.7	2.5	--	6.8	5.3	--	8.9	8.6
	Calcium	--	572	583	--	196	203	--	198	207	--	266	281	--	407	416
	Chloride	--	233	141	--	103	89.9	--	93.8	90.1	--	138	90.7	--	90.2	95.8
	Fluoride	--	0.076 J	<0.050	--	<0.050	<0.050	--	<0.050	<0.050	--	0.057 J	0.062 J	--	0.64	0.31
	pH	4.84	4.72	4.90	5.99	6.08	6.18	7.08	7.19	7.04	6.31	6.43	6.43	4.53	4.54	4.43
	Sulfate	--	1300	768	--	379	223	--	250	228	--	447	280	--	1050	934
	TDS	--	1640	2350	--	92.0	958	--	768	816	--	1020	1290	--	1390	1750
APPENDIX IV	Antimony	0.00043 J	<0.00028	<0.00078	<0.00028	<0.00028	<0.00078	<0.00028	<0.00028	<0.00078	<0.00028	<0.00028	<0.00078	<0.00028	<0.00028	0.00080 J
	Arsenic	0.0062	<0.0039	0.0035 J	<0.00078	<0.00078	<0.0011	0.0012 J	<0.00078	<0.0011	0.0012 J	<0.00078	<0.0011	0.0069	0.0083 J	0.0045 J
	Barium	0.020	0.023	0.018	0.014	0.012	0.010	0.11	0.12	0.10	0.025	0.027	0.022	0.030	0.031	0.031
	Beryllium	0.00044 J	0.00058	0.00039 J	<0.000046	<0.000046	<0.000054	<0.000046	<0.000046	<0.000054	0.000067 J	0.000048 J	<0.000054	0.0036	0.0038	0.0034
	Cadmium	<0.00012	<0.00012	0.00013 J	0.0014 J	0.0011	0.0012	<0.00012	<0.00012	<0.00011	<0.00012	<0.00012	<0.00011	0.0016 J	0.0015	0.0014
	Chromium	<0.00055	<0.0028	<0.0011	<0.00055	0.0012 J	<0.0011	<0.00055	<0.00055	<0.0011	0.00074 J	0.00069 J	<0.0011	<0.00055	<0.0028	<0.0011
	Cobalt	0.033	0.034	0.033	0.019	0.018	0.011	<0.00038	<0.00038	<0.00039	0.012	0.012	0.0090	0.14	0.14	0.15
	Fluoride	0.059 J	0.076 J	<0.050	0.053 J	<0.050	<0.050	0.21	<0.050	<0.050	0.058 J	0.057 J	0.062 J	0.71	0.64	0.31
	Lead	0.0015 J	0.0019	0.0015	<0.000036	<0.000036	<0.00089	0.000094 J	0.000058 J	<0.00089	0.00018 J	0.000088 J	<0.00089	0.00098 J	0.00096 J	0.0013
	Lithium	<0.00081	<0.00081	<0.00073	0.036	0.032	0.0058 J	0.0038 J	0.0048 J	0.0042 J	0.0013 J	0.0014 J	0.0012 J	0.011 J	0.013 J	0.013 J
	Mercury	<0.000078	--	--	<0.000078	--	--	<0.000078	--	--	<0.000078	--	--	<0.000078	--	--
	Molybdenum	<0.00069	<0.00069	<0.00074	<0.00069	<0.00069	<0.00074	<0.00069	<0.00069	<0.00074	<0.00069	<0.00069	<0.00074	<0.00069	<0.00069	<0.00074
	Comb. Radium 226/228	0.730 U	1.84	0.858 U	1.65	0.801 U	0.527 U	0.773 U	0.228 U	0.668 U	0.831 U	0.856 U	0.548 U	1.11	1.63	1.45
	Selenium	0.0072 J	0.010 J	0.0077	<0.0016	<0.0016	<0.0014	<0.0016	<0.0016	<0.0014	<0.0016	<0.0016	<0.0014	0.023	0.019 J	0.010
Thallium	0.00026 J	0.00034 J	0.00027 J	<0.00014	<0.00014	<0.00018	<0.00014	<0.00014	<0.00018	<0.00014	<0.00014	<0.00018	<0.00014	0.00016 J	0.00020 J	

**Table 5**  
**Summary of Groundwater Analytical Data**  
**Plant Hammond AP-2, Floyd County, Georgia**

Well ID:	MW-21D	MW-21D	MW-21D	MW-22	MW-22	MW-22	MW-23D	MW-23D	MW-23D	MW-33	MW-33	MW-33	MW-34D	MW-35	MW-35	MW-35	
Sample Date:	2/11/2021	3/18/2021	8/19/2021	2/15/2021	3/17/2021	8/19/2021	2/12/2021	3/17/2021	8/19/2021	2/12/2021	3/18/2021	8/18/2021	8/16/2021	2/15/2021	3/19/2021	8/18/2021	
Parameter <sup>(1,2,3)</sup>																	
<b>APPENDIX III</b>	<b>Boron</b>	--	5.7	5.4	--	2.7	2.5	--	3.4	3.4	--	10.2	9.1	8.2	--	11.9	11.2
	<b>Calcium</b>	--	382	365	--	200	203	--	341	307	--	574	549	554	--	552	546
	<b>Chloride</b>	--	208	173	--	127	118	--	151	137	--	199	118	264	--	250	149
	<b>Fluoride</b>	--	<0.050	<0.050	--	<0.050	<0.050	--	<0.050	<0.050	--	0.40	0.16	0.066 J	--	0.082 J	0.052 J
	<b>pH</b>	6.87	6.95	6.85	5.48	5.57	6.05	6.80	6.86	6.72	4.40	4.27	4.42	7.05	4.82	4.89	4.89
	<b>Sulfate</b>	--	829	724	--	461	412	--	486	432	--	1360	740	987	--	1220	789
	<b>TDS</b>	--	1390	1920	--	998	1030	--	990	1440	--	1790	3690	2340	--	1690	2390
<b>APPENDIX IV</b>	<b>Antimony</b>	<0.00028	<0.00028	<0.00078	<0.00028	<0.00028	0.0016 J	<0.00028	<0.00028	<0.00078	0.00046 J	<0.00028	<0.00078	<0.00078	0.00041 J	<0.00028	<0.00078
	<b>Arsenic</b>	0.0010 J	<0.00078	<0.0011	<0.00078	<0.00078	<0.0011	0.0010 J	<0.00078	<0.0011	0.0059	0.0054 J	0.0058	0.0024 J	0.0050	<0.0039	0.0043 J
	<b>Barium</b>	0.044	0.047	0.042	0.017	0.018	0.018	0.056	0.058	0.050	0.025	0.029	0.025	0.035	0.026	0.032	0.025
	<b>Beryllium</b>	<0.000046	<0.000046	<0.000054	0.000062 J	0.000082 J	0.000070 J	<0.000046	<0.000046	<0.000054	0.0010 J	0.0011	0.00097	<0.000054	0.00060 J	0.00061	0.00061
	<b>Cadmium</b>	<0.00012	<0.00012	<0.00011	0.0020 J	0.0022	0.0021	0.00045 J	0.00057	0.00012 J	0.00017 J	0.00019 J	0.00017 J	0.00023 J	0.0017 J	0.0018	0.0015
	<b>Chromium</b>	<0.00055	0.00074 J	<0.0011	<0.00055	0.00075 J	<0.0011	<0.00055	0.00083 J	<0.0011	<0.00055	<0.0028	<0.0011	<0.0011	<0.00055	0.00083 J	<0.0011
	<b>Cobalt</b>	<0.00038	<0.00038	<0.00039	0.038	0.039	0.022	0.0010 J	0.0011 J	0.00089 J	0.055	0.057	0.054	0.0093	0.095	0.10	0.085
	<b>Fluoride</b>	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.25	0.40	0.16	0.066 J	0.093 J	0.082 J	0.052 J
	<b>Lead</b>	0.00066 J	0.000073 J	<0.00089	0.000036 J	<0.000036	<0.00089	<0.000036	<0.000036	<0.00089	0.0018 J	0.0017	0.0016	<0.00089	0.00055 J	0.00066 J	<0.00089
	<b>Lithium</b>	0.021 J	0.026 J	0.022 J	0.0011 J	0.0012 J	0.0012 J	0.0023 J	0.0024 J	0.0022 J	0.0011 J	0.0012 J	0.00097 J	0.0010 J	0.0043 J	0.0045 J	0.0036 J
	<b>Mercury</b>	<0.000078	--	--	<0.000078	--	--	<0.000078	--	--	<0.000078	--	--	--	<0.000078	--	--
	<b>Molybdenum</b>	0.016	0.016	0.018	<0.00069	<0.00069	<0.00074	0.0039 J	0.0034 J	0.0034 J	<0.00069	<0.00069	<0.00074	<0.00074	<0.00069	<0.00069	<0.00074
	<b>Comb. Radium 226/228</b>	0.317 U	0.500 U	1.17	0.215 U	0.981 U	0.689 U	1.21 U	0.579 U	0.690 U	2.26	0.733 U	1.77	0.693 U	1.52	0.524 U	1.67
	<b>Selenium</b>	<0.0016	<0.0016	<0.0014	<0.0016	<0.0016	<0.0014	<0.0016	<0.0016	<0.0014	0.011	0.028	0.014	<0.0014	0.010	0.016 J	0.014
<b>Thallium</b>	<0.00014	<0.00014	<0.00018	<0.00014	<0.00014	<0.00018	<0.00014	<0.00014	<0.00018	0.00025 J	0.00031 J	0.00040 J	<0.00018	<0.00014	<0.00014	<0.00018	

**Table 5**  
 Summary of Groundwater Analytical Data  
 Plant Hammond AP-2, Floyd County, Georgia

Well ID:		MW-37D	MW-37D	MW-37D	MW-51
Sample Date:		2/11/2021	3/12/2021	8/18/2021	8/18/2021
Parameter <sup>(1,2,3)</sup>					
<b>APPENDIX III</b>	<b>Boron</b>	--	0.15	0.20	9.7
	<b>Calcium</b>	--	170	180	532
	<b>Chloride</b>	--	124	122	123
	<b>Fluoride</b>	--	0.061 J	0.050 J	0.072 J
	<b>pH</b>	7.42	7.50	7.52	6.19
	<b>Sulfate</b>	--	237	207	757
	<b>TDS</b>	--	890	950	2610
<b>APPENDIX IV</b>	<b>Antimony</b>	0.00079 J	<0.00028	<0.00078	<0.00078
	<b>Arsenic</b>	0.0023 J	<0.00078	<0.0011	0.0020 J
	<b>Barium</b>	0.14	0.12	0.12	0.032
	<b>Beryllium</b>	<0.000046	<0.000046	<0.000054	0.00042 J
	<b>Cadmium</b>	<0.00012	<0.00012	<0.00011	0.00094
	<b>Chromium</b>	0.0014 J	<0.00055	<0.0011	<0.0011
	<b>Cobalt</b>	0.00048 J	<0.00038	<0.00039	0.030
	<b>Fluoride</b>	0.077 J	0.061 J	0.050 J	0.072 J
	<b>Lead</b>	0.00039 J	<0.000036	<0.00089	<0.00089
	<b>Lithium</b>	0.034	0.035	0.030	0.0022 J
	<b>Mercury</b>	<0.000078	--	--	--
	<b>Molybdenum</b>	0.019	0.014	0.0083 J	<0.00074
	<b>Comb. Radium 226/228</b>	0.120 U	0.578 U	1.31	0.973 U
	<b>Selenium</b>	<0.0016	<0.0016	<0.0014	0.0040 J
<b>Thallium</b>	<0.00014	<0.00014	<0.00018	<0.00018	

**Table 6**  
 Summary of Surface Water Sampling Analytica Data  
 Plant Hammond AP-2, Floyd County, Georgia

Sample ID:		Unnamed Creek Sample Locations <sup>(3)</sup>			Coosa River Sample Locations <sup>(3)</sup>						
		AP2-Up	AP2-Mid	AP2-Down	H-2	H-0.5	Up Stream	Down Stream	H+0.25	H+0.35	H+0.75
Sample Date:		3/8/2021	3/8/2021	3/8/2021	3/8/2021	3/8/2021	3/8/2021	3/8/2021	3/8/2021	3/8/2021	3/8/2021
Parameter <sup>(1,2)</sup>											
APP. III	Boron	<0.040	0.049	0.044	0.05	0.044	0.044	<0.040	0.043	0.041	<0.040
	Calcium	25.1	26.3	25.4	16.0	15.3	15.6	15.3	16.3	16.1	15.7
	Chloride	1.1	2.0	1.9	4.7	4.4	4.3	4.2	4.2	4.1	4.0
	Fluoride	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
	pH	7.4	7.5	7.5	7.2	7.1	7.6	7.6	7.6	7.6	7.5
	Sulfate	5.6	10.8	9.8	4.3	4.3	4.3	4.8	14.3	9.1	5.6
	TDS	68.0	94.0	81.0	66.0	77.0	42.0	54.0	76.0	67.0	78.0
APP. IV	Cobalt	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	Fluoride	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
	Lithium	--	--	--	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030
	Lead	--	--	--	--	--	--	--	--	--	--
	Molybdenum	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
GEOCHEM	Bicarbonate Alkalinity	68.3	66.3	65.0	51.5	51.1	50.8	50.9	54.2	52.1	51.1
	Carbonate Alkalinity	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
	Total Alkalinity	68.3	66.6	65.0	51.5	51.1	50.8	50.9	54.2	52.1	51.1
	Magnesium	2.6	2.8	2.8	4.4	4.2	4.3	4.2	4.3	4.3	4.3
	Potassium	0.65	0.73	0.66	1.4	1.3	1.4	1.4	1.6	1.5	1.4
	Sodium	1.8	1.9	1.9	3.2	3.1	3.1	3.3	8.8	5.8	3.8

Notes:

< = Indicates the parameter was not detected above the analytical reporting limit (RL).

-- = Not measured or not applicable.

TDS = Total dissolved solids

(1) Appendix (App.) III/IV parameter per 40 CFR 257 Subpart D. Parameters are reported in units of milligrams per liter (mg/L).

(2) Metals were analyzed by EPA Method 6010D/6020B, anions were analyzed by EPA Method 300.0, and TDS was analyzed by SM2540C.

(3) Refer to included Figure 2 for locations. Sample locations are presented as positioned relative to the plant, beginning with upstream locations.

**Table 6**  
 Summary of Surface Water Sampling Analytica Data  
 Plant Hammond AP-2, Floyd County, Georgia

		Unnamed Creek Sample Locations <sup>(3)</sup>			Coosa River Sample Locations <sup>(3)</sup>			
Sample ID:		AP2-Up	AP2-Mid	AP2-Down	H-0.5	H+0.25	H+0.35	H+0.75
Sample Date:		9/13/2021	9/13/2021	9/13/2021	9/13/2021	9/13/2021	9/13/2021	9/13/2021
Parameter <sup>(1,2)</sup>								
APP. III	Boron	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040
	Calcium	42.7	43.7	17.8	15.8	16.1	16.4	15.8
	Chloride	1.2	1.9	3.0	3.1	3.2	3.3	3.2
	Fluoride	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
	pH	--	--	--	--	--	--	--
	Sulfate	5.8	10.7	11.1	3.2	8.6	10.4	10.0
	TDS	139	143	74.0	58.0	78.0	74.0	81.0
APP. IV	Cobalt	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	Fluoride	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
	Lithium	--	--	--	--	--	--	--
	Lead	<0.0010	<0.0010	<0.0010	--	--	--	--
	Molybdenum	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
GEOCHEM	Bicarbonate Alkalinity	129	125	60.2	56.7	57.7	57.7	58.2
	Carbonate Alkalinity	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<0.50
	Total Alkalinity	129	125	60.2	56.7	57.7	57.7	58.2
	Magnesium	4.1	4.3	4.2	4.2	4.1	4.1	4.0
	Potassium	0.66	0.65	1.9	1.7	1.8	1.8	1.9
	Sodium	2.0	1.9	7.5	3.2	5.4	6.1	6.6

**Table 7**  
**Summary of Background Concentrations and Groundwater Protection Standards**  
**Plant Hammond AP-2, Floyd County, Georgia**

Analyte	Units	Background <sup>(1)</sup>	Federal GWPS <sup>(2)</sup>	State GWPS <sup>(3)</sup>
Antimony	mg/L	0.003	0.006	0.006
Arsenic	mg/L	0.005	0.01	0.01
Barium	mg/L	0.46	2	2
Beryllium	mg/L	0.0005	0.004	0.004
Cadmium	mg/L	0.0005	0.005	0.005
Chromium	mg/L	0.0019	0.1	0.1
Cobalt	mg/L	0.038	0.038	0.038
Fluoride	mg/L	0.74, 0.87	4	4
Lead	mg/L	0.001	0.015	0.001
Lithium	mg/L	0.034	0.04	0.034
Mercury	mg/L	0.0005	0.002	0.002
Molybdenum	mg/L	0.01	0.1	0.01
Selenium	mg/L	0.01, 0.005	0.05	0.05
Thallium	mg/L	0.001	0.002	0.002
Combined Radium-226/228	pCi/L	1.68, 1.67	5	5

Notes:

mg/L = milligrams per liter

pCi/L = picocuries per liter

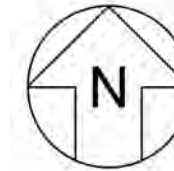
Statistical analyses were performed per semiannual assessment monitoring event conducted during the reporting period.

Background limits and groundwater protection standards (GWPS) are applicable to the March 2021 and August 2021 events.


- (1) The background limits were used when determining the GWPS under 40 CFR §257.95(h) and Georgia Environmental Protection Division (GA EPD) Rule 391-3-4-.10(6)(a). A cell with two values denotes that different background concentrations were calculated per semiannual event, presented in the order of the events.
- (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 is used; or (iii) background concentrations for constituents where the background level is higher than the MCL or rule-specified GWPS.
- (3) Under the existing GA EPD rules, the GWPS is: (i) the MCL, (ii) where the MCL is not established, the background concentration, or (iii) background concentrations for constituents where the background level is higher than the MCL.

# FIGURES





**Legend**

 Plant Hammond Property Boundary



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



**SITE LOCATION MAP**

GEORGIA POWER COMPANY  
PLANT HAMMOND AP-2  
FLOYD COUNTY, GEORGIA

Prepared For:  Georgia Power

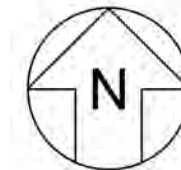
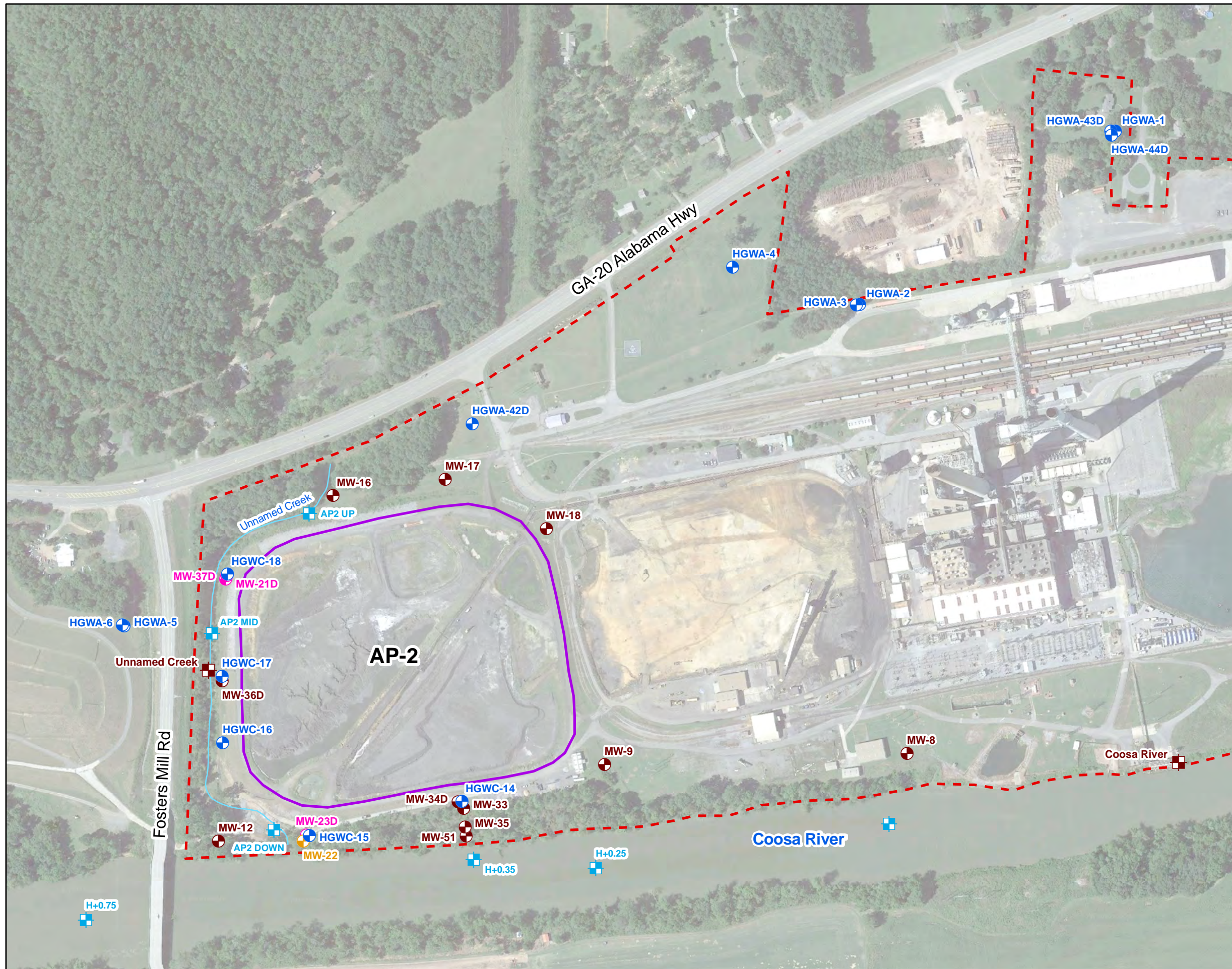
Prepared By:  Geosyntec  
consultants

KENNESAW, GA

JANUARY 2022

**FIGURE**  
**1**





- LEGEND**
- Compliance Monitoring Well
  - Horizontal Delineation Well
  - Vertical Delineation Well
  - Piezometer
  - Surface Water Level Gauge Point
  - Surface Water Sample Point
  - Unnamed Creek
  - Approximate AP-2 Boundary
  - Plant Hammond Property Boundary

Notes:  
 1. Four upstream Coosa River surface water sampling locations, Downstream, Upstream, H-0.5, and H-2, are not shown on the figure, and are located at (1939949.33, 1547880.85), (1941929.29, 1548194.63), (1942375.24, 1548207.69), and (1943448.96, 1543373.73), respectively.  
 2. Aerial photograph source: Google Earth Pro, August 2019.

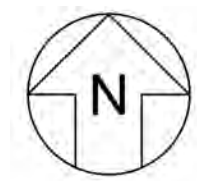
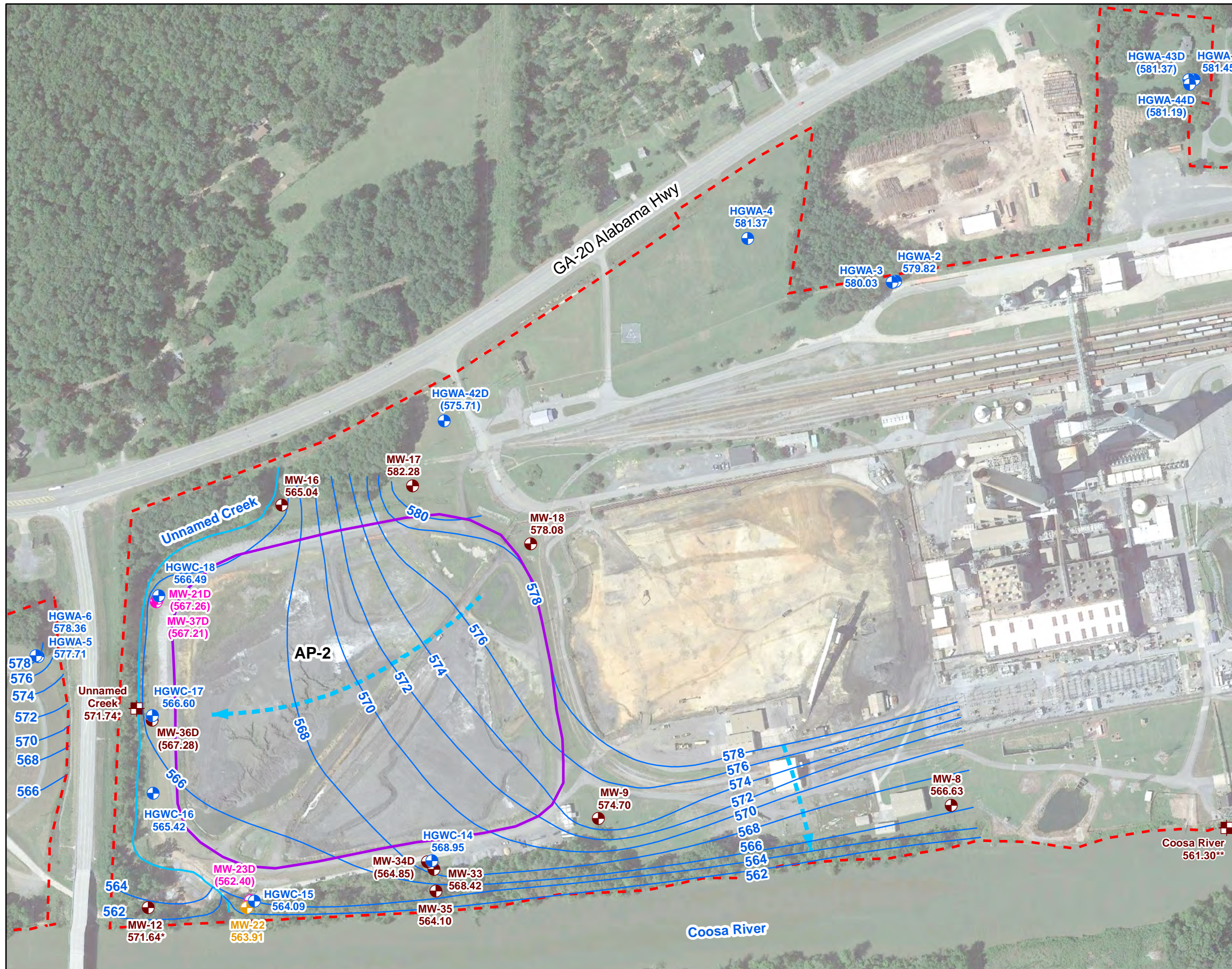


**MONITORING WELL NETWORK AND SAMPLING LOCATION MAP**  
 GEORGIA POWER COMPANY  
 PLANT HAMMOND AP-2  
 ROME, FLOYD COUNTY, GEORGIA

Prepared For: Georgia Power  
 Prepared By: Geosyntec consultants  
 KENNESAW, GA JANUARY 2022

**FIGURE 2**





- LEGEND**
- Compliance Monitoring Well
  - Horizontal Delineation Well
  - Vertical Delineation Well
  - Piezometer
  - Surface Water Level Gauge Point
  - Groundwater Elevation Iso-Contour
  - Unnamed Creek
  - Approximate Groundwater Flow
  - Approximate AP-2
  - Plant Hammond Property Boundary

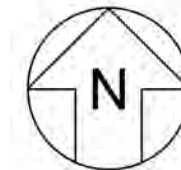
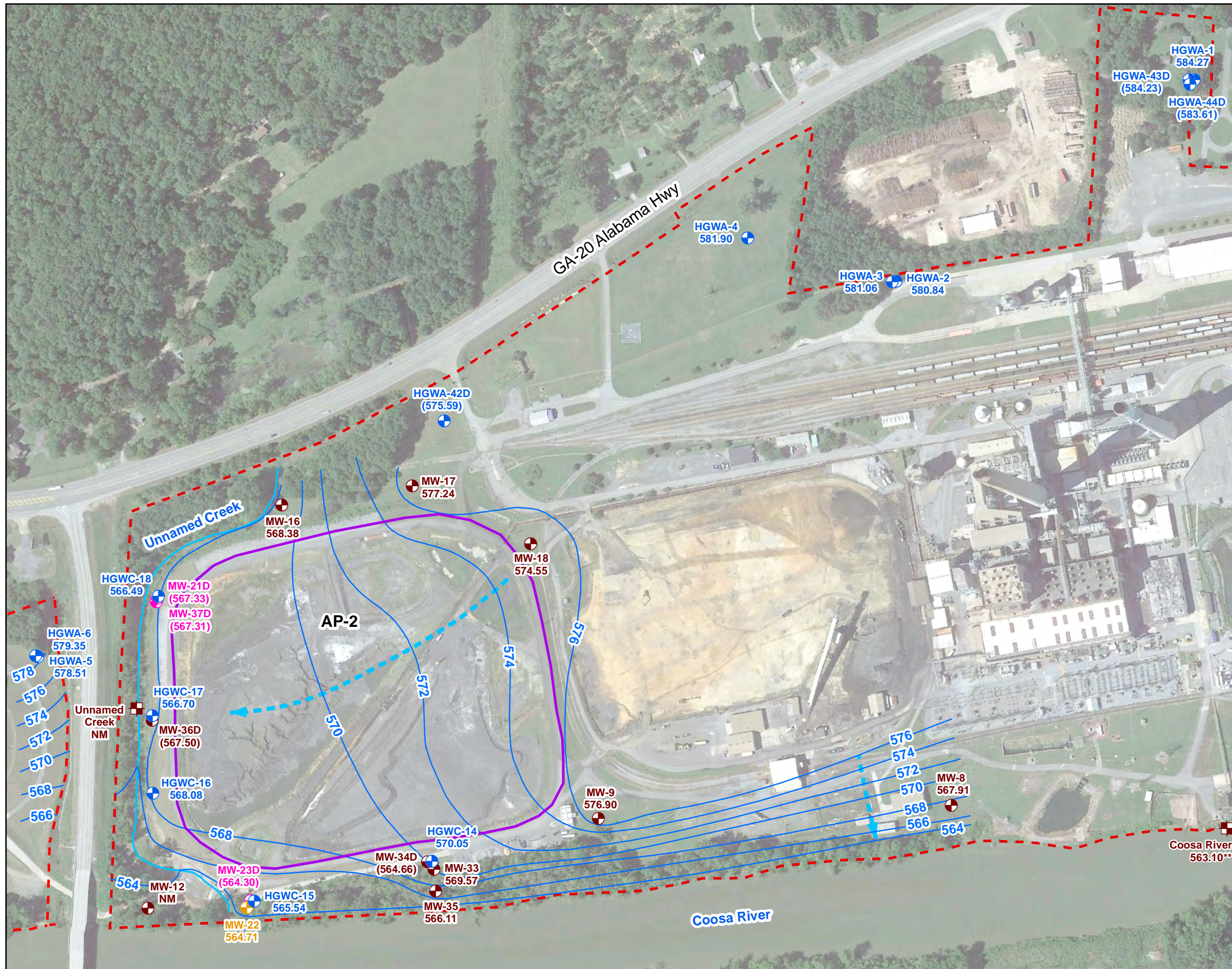
- Notes:**
1. Water level elevation recorded on February 8, 2021. Elevation provided in feet (ft) referenced to the North American Vertical Datum (NAVD) 88.
  2. Groundwater elevation in parentheses were not used in development of groundwater contours due to wells being screened at a different elevation in the formation/aquifer.
  3. An asterisk (\*) denotes that groundwater elevation for MW-12 and surface water elevation at Unnamed Creek appear erroneous and were not used in development of groundwater contours.
  4. A double asterisk (\*\*) denotes the water level for the Coosa River gauged approximately 950 feet upstream of MW-8 at the staff gauge near AP-1.
  5. Aerial photograph source: Google Earth Pro, August 2019.



**POTENTIOMETRIC SURFACE CONTOUR MAP - FEBRUARY 2021**  
 GEORGIA POWER COMPANY  
 PLANT HAMMOND AP-2  
 ROME, FLOYD COUNTY, GEORGIA

Prepared For:	Georgia Power	<b>FIGURE</b> <b>3</b>
Prepared By:	Geosyntec consultants	
KENNESAW, GA	JANUARY 2022	





**LEGEND**

- Compliance Monitoring Well
- Horizontal Delineation Well
- Vertical Delineation Well
- Piezometer
- Surface Water Level Gauge Point
- Groundwater Elevation Iso-Contour
- Unnamed Creek
- Approximate Groundwater Flow Direction
- Approximate AP-2
- Plant Hammond Property Boundary

**Notes:**

1. Water level elevation recorded on March 10, 2021. Elevation provided in feet (ft) referenced to the North American Vertical Datum (NAVD) 88.
2. Groundwater elevation in parentheses were not used in development of groundwater contours due to wells being screened at a different elevation in the formation/aquifer.
3. NM - water elevation data not measured.
4. A double asterisk (\*\*) denotes the water level for the Coosa River gauged approximately 950 feet upstream of MW-8 at the staff gauge near AP-1.
5. Aerial photograph source: Google Earth Pro, August 2019.



SCALE IN FEET



**POTENTIOMETRIC SURFACE CONTOUR MAP - MARCH 2021**

GEORGIA POWER COMPANY  
PLANT HAMMOND AP-2  
ROME, FLOYD COUNTY, GEORGIA

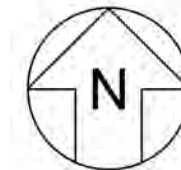
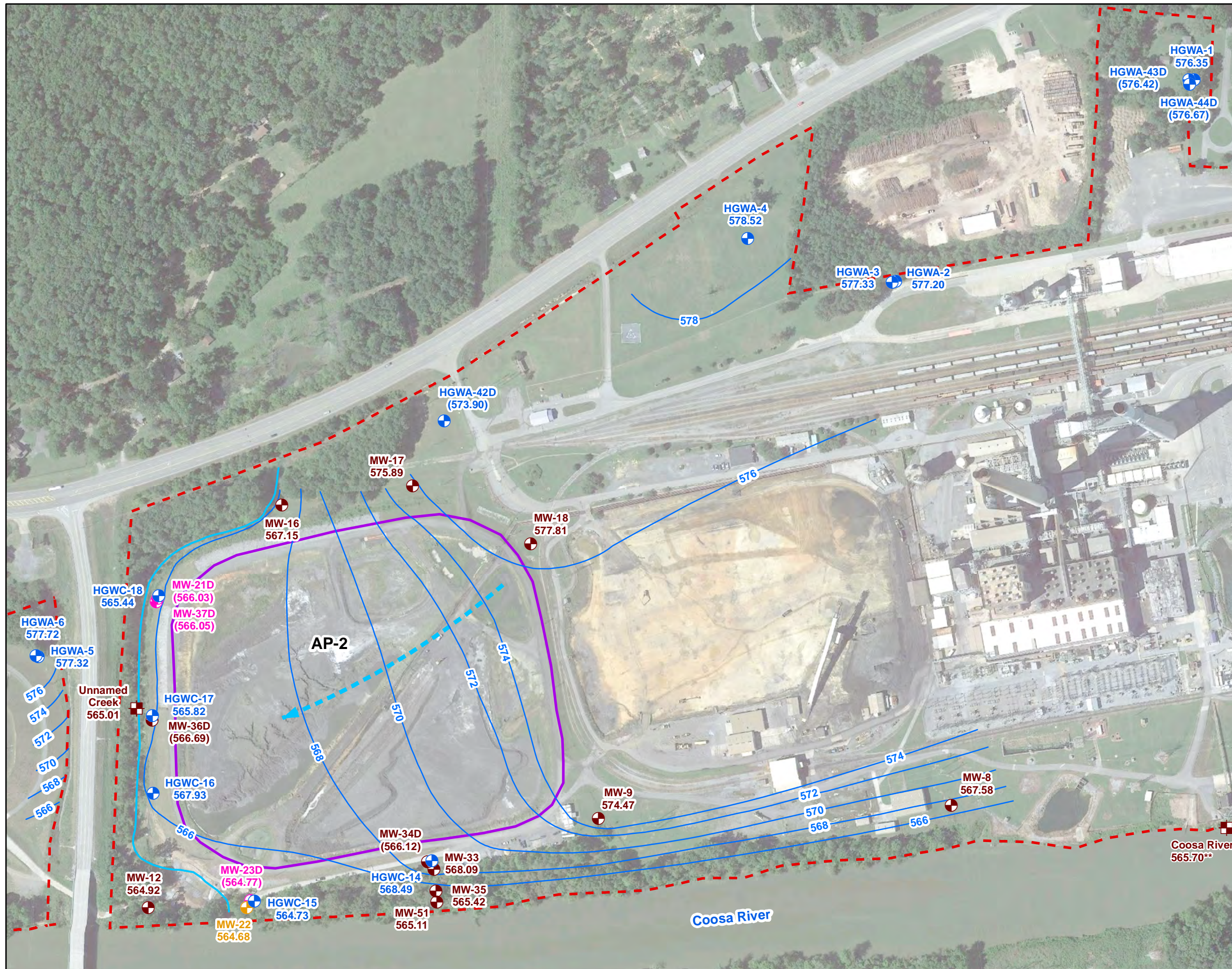
Prepared For: Georgia Power

Prepared By: Geosyntec consultants

KENNESAW, GA      JANUARY 2021

**FIGURE**  
**4**





**LEGEND**

- Compliance Monitoring Well
- Horizontal Delineation Well
- Vertical Delineation Well
- Piezometer
- Surface Water Level Gauge Point
- Groundwater Elevation Iso-Contour
- Approximate Groundwater Flow Direction
- Approximate AP-2 Boundary
- Plant Hammond Property Boundary

**Notes:**

1. Water level elevation recorded on August 11, 2021. Elevation provided in feet (ft) referenced to the North American Vertical Datum of 1988 (NAVD 88).
2. 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. A double asterisk (\*\*) denotes the water level for the Coosa River was gauged approximately 950 feet upstream of MW-8 at the staff gauge near AP-1.
4. Aerial photograph source: Google Earth Pro, August 2019.



SCALE IN FEET



**POTENTIOMETRIC SURFACE CONTOUR  
MAP - AUGUST 2021**

GEORGIA POWER COMPANY  
PLANT HAMMOND  
ROME, FLOYD COUNTY, GEORGIA

Prepared For: Georgia Power

Prepared By: Geosyntec  
consultants

**FIGURE  
5**

KENNESAW, GA    JANUARY 2022



## APPENDIX A

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



*Prepared for*

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

# **WELL DESIGN, INSTALLATION, AND DEVELOPMENT REPORT - ADDENDUM**

**No. 4**

**PLANT HAMMOND ASH POND 2  
(AP-2)**

*Prepared by*

**Geosyntec**   
consultants

engineers | scientists | innovators

1255 Roberts Boulevard, Suite 200  
Kennesaw, Georgia 30144

Project Number GW6581B

September 2021



**WELL DESIGN, INSTALLATION, AND DEVELOPMENT  
REPORT – ADDENDUM No. 4**

Plant Hammond

Ash Pond 2

September 17, 2021



---

Whitney Law, P.E.

Georgia Professional Engineer No. 36641

*Project Manager*

*Geosyntec Consultants*



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2.2	Screened Interval .....	2
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2.4	Well Intake Design .....	3
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Appendix B	Boring and Well Construction Log
Appendix C	Well Development Form
Appendix D	Certified Well Survey Data

## LIST OF ACRONYMS

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

## 1. INTRODUCTION

This report provides details regarding the design, installation, and development of one groundwater monitoring well to supplement the current groundwater monitoring system at Georgia Power Company (Georgia Power) Plant Hammond (Site) Ash Pond 2 (AP-2). The report was prepared as an addendum to previously submitted well design, installation, development and decommissioning reports issued for the Site (ERM, 2017, Geosyntec, 2019b, Geosyntec, 2020a, and Geosyntec, 2020b), and meets the requirements promulgated in the United States Environmental Protection Agency (US EPA) coal combustion residual (CCR) rule [40 Code of Federal Regulations (CFR) Part 257, Subpart D], specifically 40 CFR §257.91(e)(1) and Georgia Environmental Protection Division (GA EPD) Rules for Solid Waste Management 391-3-4-.10.

Plant Hammond is located in Floyd County, approximately 10 miles west of Rome, Georgia. The current groundwater monitoring system at AP-2 includes 14 wells associated with the CCR compliance monitoring well network and a network of secondary groundwater monitoring wells and groundwater level monitoring piezometers. The locations of these wells and piezometers are shown on **Figure 1**.

## 2. DRILLING AND WELL INSTALLATION

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

This report presents the details for the installation and development of AP-2 well MW-51. The location of this well is shown on **Figure 1**. Well construction details are provided in **Table 1**; boring and well construction logs are included in **Appendix B**.

### 2.1 Drilling Method

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

### 2.2 Screened Interval

Details regarding the well screened interval are provided in **Table 1**. The well is screened in the uppermost water bearing unit of the Site. MW-51 is screened from approximately 556.47 to 546.47 feet (referenced to the North American Vertical Datum of 1988). MW-51 is constructed with a 10 foot well screen segment.

### 2.3 Well Casings and Screens

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

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

#### **2.4 Well Intake Design**

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

#### **2.5 Filter Pack**

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

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

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

## **2.6 Annular Seal**

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

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

## **2.7 Cap and Protective Casing**

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

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

### 3. WELL DEVELOPMENT

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

#### 4. SURVEY

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



## 5. REFERENCES

- Environmental Resources Management (ERM), 2017. *Well Design, Installation, Development, and Decommissioning Report – Plant Hammond Ash Ponds 1 and 2*. October 2017.
- Georgia Environmental Protection Division (GA EPD), Georgia Department of Natural Resources, 1991. *Manual for Groundwater Monitoring*. September 1991.
- Geosyntec Consultants, 2019b. Well Design, Installation and Development Report – Addendum, Plant Hammond Ash Ponds 1 and 2 (AP-1 and AP-2). June 2019.
- Geosyntec Consultants, 2020a. Well Design, Installation and Development Report – Addendum No 2, Plant Hammond Ash Ponds 2. July 2020.
- Geosyntec Consultants, 2020b. Well Design, Installation and Development Report – Addendum No 3, Plant Hammond Ash Ponds 2. November 2020.
- United States Environmental Protection Agency. 2015a. Federal Register. Volume 80. No. 74. Friday April 17, 2015. Part II. Environmental Protection Agency. 40 CFR Parts 257 and 261. Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals from Electric Utilities; Final Rule. [EPA-HQ-RCRA–2009–0640; FRL–9919–44–OSWER]. RIN–2050–AE81, April 2015

# TABLE

**Table 1**  
 Summary of Well Construction Details  
 Plant Hammond AP-2, Floyd County, Georgia

<b>Well ID</b>	<b>Purpose</b>	<b>Installation Date</b>	<b>Northing <sup>(1)</sup></b>	<b>Easting <sup>(1)</sup></b>	<b>Ground Surface Elevation <sup>(2)</sup> (ft NAVD88)</b>	<b>Top of Casing Elevation (ft NAVD88)</b>	<b>Top of Screen Elevation (ft NAVD88)</b>	<b>Bottom of Screen Elevation (ft NAVD88)</b>	<b>Well Depth (ft bgs) <sup>(3)</sup></b>
MW-51	Piezometer	7/22/2021	1547872.35	1938421.46	571.57	574.54	556.47	546.47	25.40

Notes:

ft bgs = feet below ground surface.

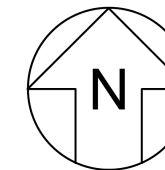
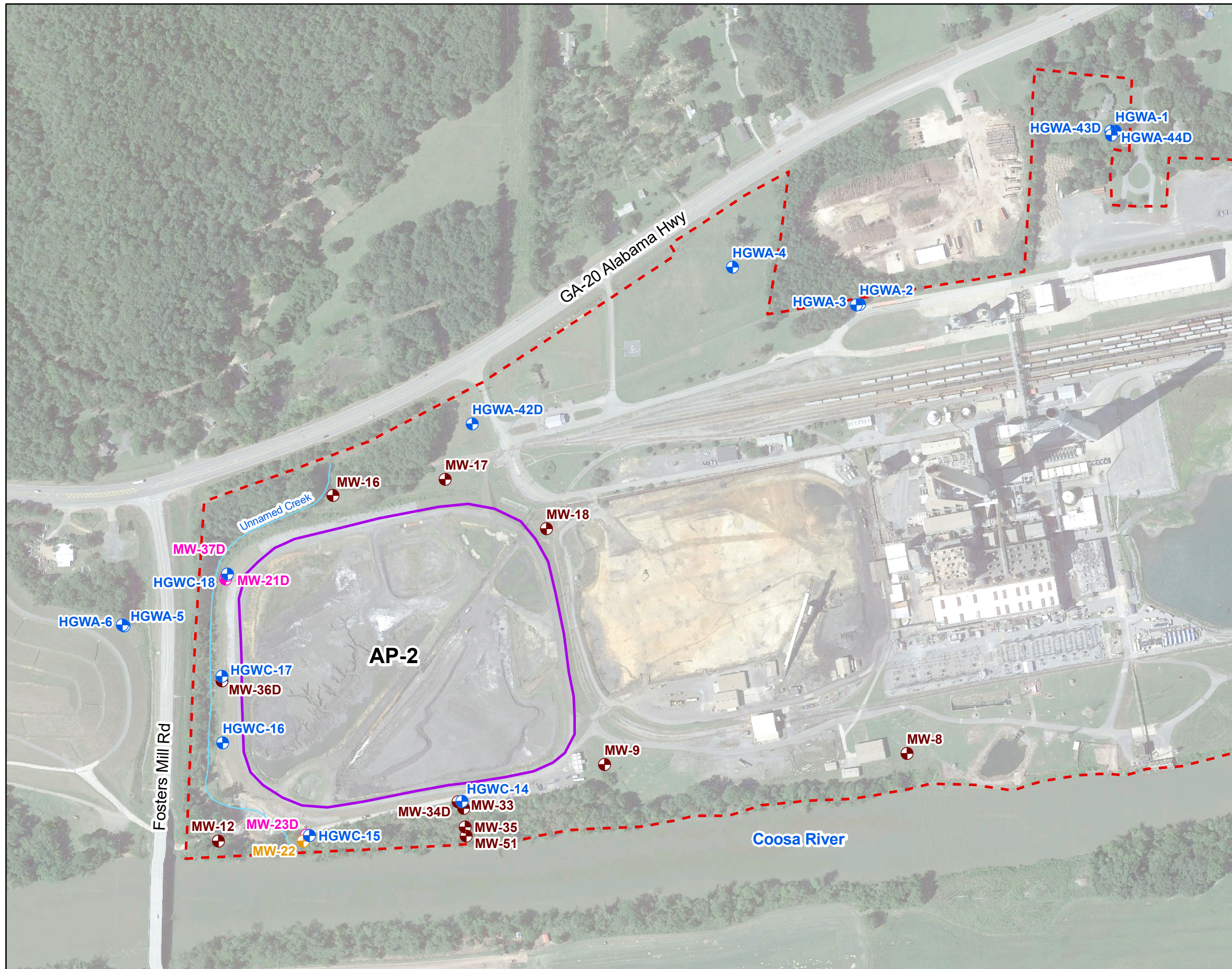
(1) Coordinates in North American Datum (NAD) 1983, State Plane, Georgia-West, feet. Survey was completed by GEL Solutions and certified September 8, 2021.

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

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

FIGURE





- LEGEND**
- Compliance Monitoring Well
  - Horizontal Delineation Well
  - Vertical Delineation Well
  - Piezometer
  - Unnamed Creek
  - Approximate AP-2 Boundary
  - Plant Hammond Property Boundary



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



**GROUNDWATER MONITORING NETWORK MAP**  
GEORGIA POWER COMPANY  
PLANT HAMMOND AP-2  
ROME, FLOYD COUNTY, GEORGIA

Prepared For: Georgia Power  
Prepared By: Geosyntec consultants

**FIGURE 1**

KENNESAW, GA SEPTEMBER 2021



## APPENDIX A

### Well Driller Performance Bonds

CONTINUATION  
CERTIFICATE

SAFECO Insurance Company of America

, Surety upon

a certain Bond No. **4993104**

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

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

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

does hereby continue said bond in force for the further period

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

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

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

Description of bond Water Well Contractors & Drillers

Premium: \$100.00

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

Signed and dated on 05/06/2021  
(MONTH-DAY-YEAR)  
SAFECO Insurance Company of America  
175 Berkeley Street, Boston, MA 02116

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

McGriff Insurance Services, Inc.  
Agent

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

(205) 252-9871  
Telephone Number of Agent



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

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

Certificate No: 8205019-016032

POWER OF ATTORNEY

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

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

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



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

By: [Signature]
David M. Carey, Assistant Secretary

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

State of PENNSYLVANIA ss
County of MONTGOMERY

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

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



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

By: [Signature]
Teresa Pastella, Notary Public

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

ARTICLE IV - OFFICERS: Section 12. Power of Attorney.

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

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

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

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

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



By: [Signature]
Renee C. Llewellyn, Assistant Secretary

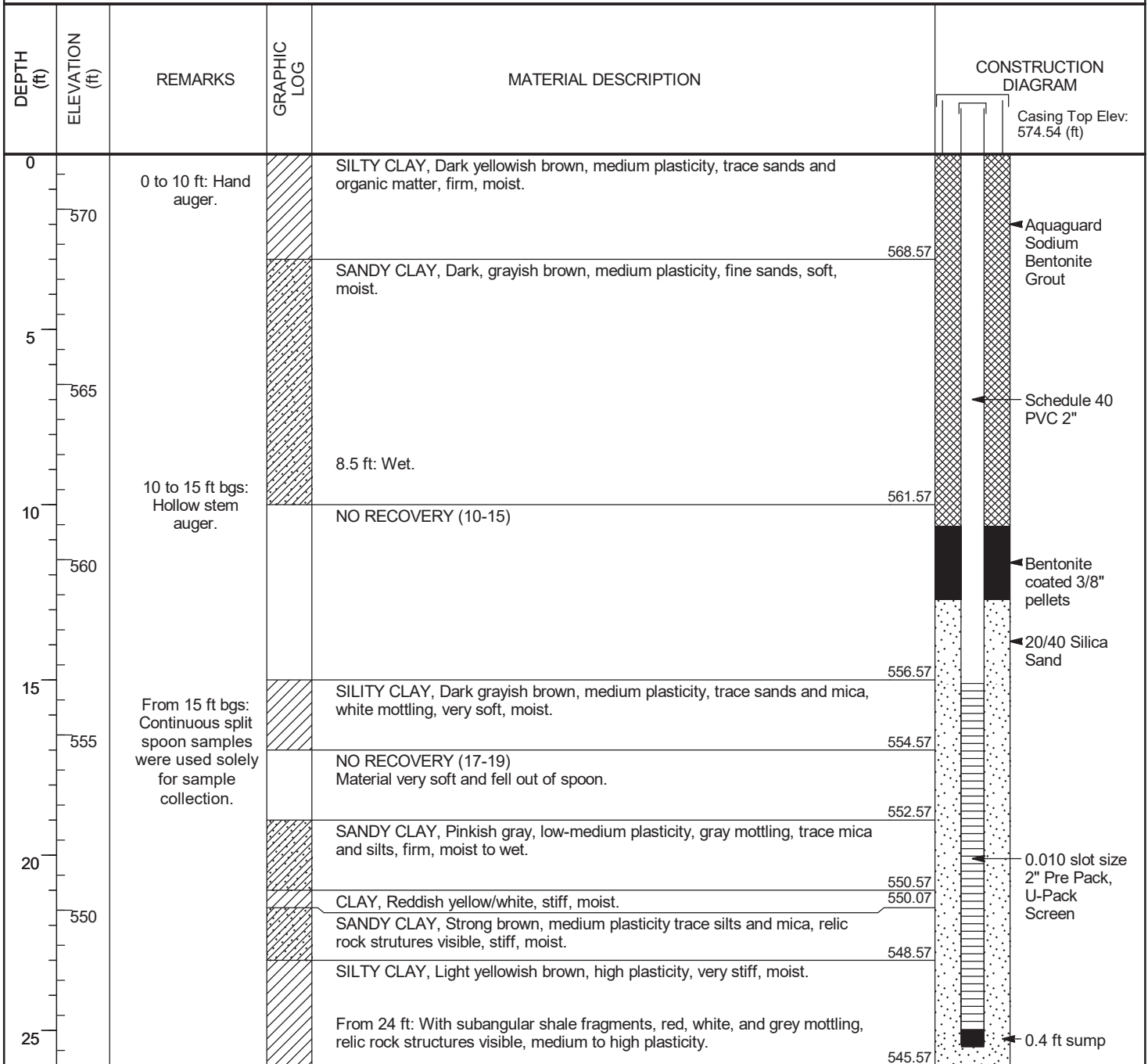
For bond and/or Power of Attorney (POA) verification inquiries, please call 610-832-8240 or email HOSUR@libertymutual.com.



## APPENDIX B

### Boring and Well Construction Log

<b>CLIENT</b> Southern Company Services	<b>PROJECT NAME</b> Plant Hammond Well Installation
<b>PROJECT NUMBER</b> GW6581B	<b>PROJECT LOCATION</b> Plant Hammond
<b>DATE STARTED</b> 7/22/21	<b>COMPLETED</b> 7/22/21
<b>DRILLER</b> Sean Denty, Civil Field Services	<b>NORTHING</b> 1547872.35 ft
<b>DRILLING METHOD</b> Hollow Stem Auger	<b>EASTING</b> 1938421.46 ft
<b>SAMPLING METHOD</b> Split spoon	<b>GROUND ELEVATION</b> 571.57 ft
<b>RIG TYPE</b> Geoprobe 7822DT	<b>BORING DIAMETER</b> 6 in
	<b>TOP OF CASING ELEVATION</b> 574.54 ft
	<b>GEOPHYSICAL CONTRACTOR</b> ---
	<b>LOGGED BY</b> T. Kessler
	<b>CHECKED BY</b> J. Ivanowski



Bottom of borehole at 26.0 feet.

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

# APPENDIX C

## Well Development Form

WELL DEVELOPMENT LOG SHEET

pg 1 of 2

Client: SCS  
 Site: Plant + Hammered  
 Well ID: 1100-S1  
 Total Depth (ft) (after purge): 28.9  
 Depth to Water (ft): 8.18'  
 Well Diameter (in): 2  
 Well Volume (gal) = 0.041d<sub>2</sub>h: 3.39  
 Well Volume (L) = gal \* 3.785: 12.86

Project No.: C4WGS81  
 Location: AP-2  
 Pump Type/Model: manson  
 Tubing Material: Poly  
 Pump Intake Depth (ft): 28.7  
 Start/Stop Purge Time: 0931  
 Purge Rate (mL/min): 1500  
 Total Purge Volume (L): 252.5

Development Date: 7/28/2021  
 Field Personnel Name: Therese/Heider

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

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

Time	pH (SU)	Spec. Cond. (µS/cm)	ORP (mV)	DO (mg/L)	Temp. (°C)	Turbidity (NTUs)	DTW (ft btoc)	Purge Rate (mL/min)	Purged Volume (L)	Notes (Purge method, water clarity, odor, purge rate, issues with pump/well/weather/etc.)
0931	6.44	2433.5	89.2	3.46	19.68	478	14.20	<del>2000</del>	7.5	
0936	6.62	<del>2433.5</del>	77.4	1.54	17.94	649	17.25	<del>2000</del>	<del>1500</del> 15	25600 = Spec. Cond
	6.67	2627.5	72.6	1.16	18.24	57.9	17.85	<del>2000</del>	27.5	increase purge rate /
	6.72	<del>2627.5</del>	70.9	2.19	18.17	3357	20.7	<del>2000</del>	30	purge / surge
	6.71	2957.2	70.0	2.00	17.74	2772	22.35	<del>2000</del>	27.5	
	6.67	2627.7	70.6	2.12	17.83	40	22.80	<del>2000</del>	45	
					<del>18.00</del>		18.00		52.5	purge dry, allow 15 min
					<del>17.00</del>		17.00		62.5	recharge
							17.00	<del>3000</del>	70	purge dry, allow 15 min
1006	6.64	2738.1	88.4	0.77	18.26	1638	18.00	<del>3000</del> 1500	77.5	recharge
1011	6.63	2699.5	65.4	2.42	18.17	1476	21.30	1600	85	
1016	6.64	2699.5	65.4	2.42	18.17	759	21.47	1500	92.5	purge / surge ↓
1021	6.63	2708.6	80.3	2.00	18.21	40	21.60	1500	100	
1026	6.64	2730.2	79.0	1.54	18.26	45.9	21.60	1500	107.5	
1031	6.64	2711.7	77.1	1.06	18.20	81.7	21.6	1500	115	
1036	6.58	2672.4	79.6	1.64	18.13	39.5	21.6	1500	122.5	
1041	6.62	2693.0	79.1	1.45	18.39	44.5	21.9	1500	130	
1046	6.62	2693.0	79.1	1.45	18.34	36.2	21.6	1500	137.5	
1049										purge dry, allow 15 min
										recharge
Stabilizing Criteria	+/- 0.1 SU	+/- 5%		0.2 mg/L or 10% for DO > 0.5 mg/L (whichever is greater)		< 5 NTUs				

WELL DEVELOPMENT LOG SHEET

pg 2 of 2

Client: SS  
 Site: Plant Hammond  
 Well ID: mw-S1  
 Total Depth (ft) (after purge): 28.9  
 Depth to Water (ft): 8.18  
 Well Diameter (in): 2  
 Well Volume (gal) = 0.041d<sub>2</sub>h: 3.39  
 Well Volume (L) = gal \* 3.785: 12.86

Project No.: Calver-SS1  
 Location: AP-2  
 Pump Type/Model: monsoon  
 Tubing Material: poly  
 Pump Intake Depth (ft): 28.7  
 Start/Stop Purge Time: 0931/1310  
 Purge Rate (mL/min): 1500  
 Total Purge Volume (L): 252.5

Development Date: 12/28/2011  
 Field Personnel Name: Thomas Kessler

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

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

Time	pH (SU)	Spec. Cond. (µS/cm)	ORP (mV)	DO (mg/L)	Temp. (°C)	Turbidity (NTUs)	DTW (ft btoc)	Purge Rate (mL/min)	Purged Volume (L)	Notes (Purge method, water clarity, odor, purge rate, issues with pump/well/weather/etc.)
1106	6.72	2674.8	105.4	0.75	19.11	768	20.45	1500	145	
1111	6.66	2710.8	78.7	0.75	18.55	1689	20.60	1500	157.5	
1116	6.65	2726.2	44.5	0.75	18.63	1186	20.40	1500	162.5	
1121	6.53	2637.3	123.1	2.46	17.92	occurrence	-	5000	170	
1215	7.12	179.64	94.7	6.74	23.25	1053	16.82	1500	177.5	High purge to clear out tail
1220	6.57	2711.7	94.6	1.43	18.35	1819	20.75	1500	185	purge only, 15 min recharge
1230	6.55	2666.7	74.0	1.79	18.36	682	21.1	1500	192	
1235	6.57	2700.2	69.8	1.20	18.30	70.8	21.2	1500	226.0	
1240	6.58	2704.5	81.8	1.42	18.52	38.4	21.25	1500	202.5	
1245	6.58	2705.2	90.9	0.82	18.46	19.1	21.30	1500	207.5	
1250	6.54	2691.3	82.2	0.78	18.38	13.01	21.41	1500	222.5	
1255	6.57	2694.6	82.6	0.64	18.44	8.58	21.42	1500	230	
1300	6.53	2706.3	81.0	0.62	18.44	7.53	21.32	1500	237.5	
1305	6.52	2702.8	74.3	0.40	18.52	4.54	21.40	1500	245	multi sample here
1310	6.57	2697.0	78.7	0.32	18.52	4.07	21.30	1500	252.5	
1315										
										end purge allow for 1 hour
<b>Stabilizing Criteria</b>	+/- 0.1 SU	+/- 5%		0.2 mg/L or 10% for DO > 0.5 mg/L (whichever is greater)		< 5 NTUs				

## APPENDIX D

### Certified Well Survey Data

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

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

*Derek Bradner*

9/8/2021



COA - LS003119  
Exp. 06/30/2022

## APPENDIX B

# Well Maintenance and Repair Documentation Memorandum



**MEMORANDUM**

**DATE:** November 19, 2021

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

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

**FROM:** Geosyntec Consultants

**SUBJECT: Plant Hammond Ash Pond 2 (AP-2) – Well Maintenance and Repair Documentation, Georgia Power Company**

Geosyntec Consultants has prepared this memorandum to provide documentation of groundwater monitoring well maintenance and/or repair performed at Plant Hammond AP-2 during the 2021 annual reporting period. All repairs and maintenance were completed in accordance with the Georgia Environmental Protection Division (GA EPD) guidance on routine visual inspections of groundwater monitoring wells. Documentation of the well inspections are provided as an attachment to this memorandum.

<b>Georgia Power Site/Unit</b>	<b>Date Performed</b>	<b>Well ID</b>	<b>Maintenance/ Repair Performed</b>
Hammond/AP-2	8/4/2021	HGWC-16, MW-36D, MW-33	Added additional pea gravel.
Hammond/AP-2	8/4/2021	HGWC-15, MW-33, MW-34D, MW-36D, MW-37D,	Verified survey marker on well casing.
Hammond/AP-2	8/4/2021	All Wells	Checked and cleared weep holes of debris.
Hammond/AP-2	8/4/2021	MW-34D, MW36-D, MW-37D, MW-51	Added stick on well labels.

# ATTACHMENT

## Well Inspection Forms

February 2021

**Groundwater Monitoring Well Integrity Form**

Site Name Hammond  
 Permit Number \_\_\_\_\_  
 Well ID HCWA-1  
 Date, field conditions 2/18/21 50°F sunny

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

7 Corrective actions as needed, by date:

\_\_\_\_\_

Signature and Seal of PE/PG responsible for inspection

\_\_\_\_\_

**Groundwater Monitoring Well Integrity Form**

Site Name Plant Hammond AP 112  
 Permit Number \_\_\_\_\_  
 Well ID HGW-4-2  
 Date, field conditions 2/9/21 cold, sunny

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

7 Corrective actions as needed, by date:  
 \_\_\_\_\_  
 \_\_\_\_\_

Signature and Seal of PE/PG responsible for inspection

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**Groundwater Monitoring Well Integrity Form**

Site Name Plant Hammond  
 Permit Number \_\_\_\_\_  
 Well ID HGW 4-3  
 Date, field conditions 2/12/21, COLD sunny

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

7 Corrective actions as needed, by date:  
 \_\_\_\_\_  
 \_\_\_\_\_

Signature and Seal of PE/PG responsible for inspection

\_\_\_\_\_

## Groundwater Monitoring Well Integrity Form

Site Name Plant Hammond  
 Permit Number \_\_\_\_\_  
 Well ID HGWA-4  
 Date, field conditions 2-8-2021 Dry

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

7 Corrective actions as needed, by date:

None at this time.

Signature and Seal of PE/PG responsible for inspection

### Groundwater Monitoring Well Integrity Form

Site Name Plant Hammond AP-2  
 Permit Number \_\_\_\_\_  
 Well ID HGVA-5  
 Date, field conditions 2-9-2021 Dry

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

7 Corrective actions as needed, by date:  
None at this time.

Signature and Seal of PE/PG responsible for inspection



### Groundwater Monitoring Well Integrity Form

Site Name Plant Hammond AP-2  
 Permit Number \_\_\_\_\_  
 Well ID HGVA-6  
 Date, field conditions 2-9-2021 Dry

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

7 Corrective actions as needed, by date:  
None at this time

Signature and Seal of PE/PG responsible for inspection

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## Groundwater Monitoring Well Integrity Form

Site Name \_\_\_\_\_  
 Permit Number \_\_\_\_\_  
 Well ID HGWA-42D  
 Date, field conditions 2/8/21 sunny cold

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

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Signature and Seal of PE/PG responsible for inspection

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## Groundwater Monitoring Well Integrity Form

Site Name \_\_\_\_\_  
 Permit Number Hammond  
 Well ID NGWA-LDD  
 Date, field conditions 2/9/21 60°F SUNNY

	yes	no	n/a
<b>1 Location/Identification</b>			
a Is the well visible and accessible?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the well properly identified with the correct well ID?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well in a high traffic area and does the well require protection from traffic?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>2 Protective Casing</b>			
a Is the protective casing free from apparent damage and able to be secured?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the casing free of degradation or deterioration?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Does the casing have a functioning weep hole?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the well locked and is the lock in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>3 Surface pad</b>			
a Is the well pad in good condition (not cracked or broken)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the well pad sloped away from the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well pad in complete contact with the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the pad surface clean (not covered with sediment or debris)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>4 Internal casing</b>			
a Does the cap prevent entry of foreign material into the well?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Is the well properly vented for equilibration of air pressure?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Is the survey point clearly marked on the inner casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Is the depth of the well consistent with the original well log?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>5 Sampling: Groundwater Wells Only:</b>			
a Does well recharge adequately when purged?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c Does the well require redevelopment (low flow, turbid)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>6 Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?</b>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>7 Corrective actions as needed, by date:</b>			

\_\_\_\_\_  
 Signature and Seal of PE/PG responsible for inspection

### Groundwater Monitoring Well Integrity Form

Site Name Hammond  
 Permit Number \_\_\_\_\_  
 Well ID NCWA-44D  
 Date, field conditions 2/9/11 60°F Sunny

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

7 Corrective actions as needed, by date:

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) Signature and Seal of PE/PG responsible for inspection

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**Groundwater Monitoring Well Integrity Form**

Site Name Plant Hammond AP-2  
 Permit Number \_\_\_\_\_  
 Well ID H6VC-14  
 Date, field conditions 2-11-2021 Wet Rain

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

7 Corrective actions as needed, by date:  
None at this time

Signature and Seal of PE/PG responsible for inspection

### Groundwater Monitoring Well Integrity Form

Site Name Hammond  
 Permit Number \_\_\_\_\_  
 Well ID NGWC-15  
 Date, field conditions 4/22/11 450F cloudy

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

7 Corrective actions as needed, by date:

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) Signature and Seal of PE/PG responsible for inspection

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**Groundwater Monitoring Well Integrity Form**

Site Name Plant Hammond AP-2  
 Permit Number \_\_\_\_\_  
 Well ID H64C-16  
 Date, field conditions 2-10-2021

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

7 Corrective actions as needed, by date:

None at this time

Signature and Seal of PE/PG responsible for inspection

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### Groundwater Monitoring Well Integrity Form

Site Name Plant Hammond AP-2  
 Permit Number \_\_\_\_\_  
 Well ID HGWC-17  
 Date, field conditions 2-11-21 wet Rain

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

7 Corrective actions as needed, by date:

None at this time.

Signature and Seal of PE/PG responsible for inspection

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**Groundwater Monitoring Well Integrity Form**

Site Name Hammond  
 Permit Number \_\_\_\_\_  
 Well ID HGMZ-18  
 Date, field conditions 2/10/21 OVP SURVEY

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

7 Corrective actions as needed, by date:

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) Signature and Seal of PE/PG responsible for inspection

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**Groundwater Monitoring Well Integrity Form**

Site Name Plant Hammond  
 Permit Number \_\_\_\_\_  
 Well ID MW-8  
 Date, field conditions 2-8-21

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

7 Corrective actions as needed, by date:  
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 \_\_\_\_\_

Signature and Seal of PE/PG responsible for inspection  
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## Groundwater Monitoring Well Integrity Form

Site Name Plant Hammond  
 Permit Number \_\_\_\_\_  
 Well ID MW 9  
 Date, field conditions Sunny 2/8/21

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

) Signature and Seal of PE/PG responsible for inspection

**Groundwater Monitoring Well Integrity Form**

Site Name Plant Hummer  
 Permit Number \_\_\_\_\_  
 Well ID mw 12  
 Date, field conditions Sunny 2/18/21

		yes	no	n/a
<b>1 Location/Identification</b>				
a	Is the well visible and accessible?	<u>/</u>	_____	_____
b	Is the well properly identified with the correct well ID?	<u>/</u>	_____	_____
c	Is the well in a high traffic area and does the well require protection from traffic?	<u>X</u>	_____	<u>/</u>
d	Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<u>/</u>	_____	_____
<b>2 Protective Casing</b>				
a	Is the protective casing free from apparent damage and able to be secured?	<u>/</u>	_____	_____
b	Is the casing free of degradation or deterioration?	<u>/</u>	_____	_____
c	Does the casing have a functioning weep hole?	<u>/</u>	_____	_____
d	Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	<u>/</u>	_____	_____
e	Is the well locked and is the lock in good condition?	<u>/</u>	_____	_____
<b>3 Surface pad</b>				
a	Is the well pad in good condition (not cracked or broken)?	<u>/</u>	_____	_____
b	Is the well pad sloped away from the protective casing?	<u>/</u>	_____	_____
c	Is the well pad in complete contact with the protective casing?	<u>/</u>	_____	_____
d	Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)	<u>/</u>	_____	_____
e	Is the pad surface clean (not covered with sediment or debris)?	<u>/</u>	_____	_____
<b>4 Internal casing</b>				
a	Does the cap prevent entry of foreign material into the well?	<u>/</u>	_____	_____
b	Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<u>/</u>	_____	_____
c	Is the well properly vented for equilibration of air pressure?	<u>/</u>	_____	_____
d	Is the survey point clearly marked on the inner casing?	<u>/</u>	_____	_____
e	Is the depth of the well consistent with the original well log?	<u>/</u>	_____	_____
f	Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<u>/</u>	_____	_____
<b>5 Sampling: Groundwater Wells Only:</b>				
a	Does well recharge adequately when purged?	_____	_____	<u>/</u>
b	If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?	_____	_____	_____
c	Does the well require redevelopment (low flow, turbid)?	_____	_____	_____
<b>6 Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?</b>				
		<u>/</u>	_____	_____
<b>7 Corrective actions as needed, by date:</b>				
_____				
_____				

Signature and Seal of PE/PG responsible for inspection

\_\_\_\_\_

**Groundwater Monitoring Well Integrity Form**

Site Name Plant Hammond  
 Permit Number \_\_\_\_\_  
 Well ID MW 16  
 Date, field conditions 2/8/21, Sunny

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

Signature and Seal of PE/PG responsible for inspection

\_\_\_\_\_

**Groundwater Monitoring Well Integrity Form**

Site Name Plant Hammer  
 Permit Number \_\_\_\_\_  
 Well ID ms 17  
 Date, field conditions 2/8/21, Sunny

		yes	no	n/a
<b>1 Location/Identification</b>				
a	Is the well visible and accessible?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b	Is the well properly identified with the correct well ID?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c	Is the well in a high traffic area and does the well require protection from traffic?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d	Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>2 Protective Casing</b>				
a	Is the protective casing free from apparent damage and able to be secured?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b	Is the casing free of degradation or deterioration?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c	Does the casing have a functioning weep hole?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d	Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e	Is the well locked and is the lock in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>3 Surface pad</b>				
a	Is the well pad in good condition (not cracked or broken)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b	Is the well pad sloped away from the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c	Is the well pad in complete contact with the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d	Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e	Is the pad surface clean (not covered with sediment or debris)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>4 Internal casing</b>				
a	Does the cap prevent entry of foreign material into the well?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b	Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c	Is the well properly vented for equilibration of air pressure?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d	Is the survey point clearly marked on the inner casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e	Is the depth of the well consistent with the original well log?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f	Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>5 Sampling: Groundwater Wells Only:</b>				
a	Does well recharge adequately when purged?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b	If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c	Does the well require redevelopment (low flow, turbid)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>6 Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?</b>				
		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>7 Corrective actions as needed, by date:</b>				
_____				
_____				

) Signature and Seal of PE/PG responsible for inspection

\_\_\_\_\_

### Groundwater Monitoring Well Integrity Form

Site Name Plant Hammond  
 Permit Number ✓  
 Well ID M12-18  
 Date, field conditions 2/8/21

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

7 Corrective actions as needed, by date:  
some concrete pushed out of bollards

) Signature and Seal of PE/PG responsible for inspection

\_\_\_\_\_



## Groundwater Monitoring Well Integrity Form

Site Name Plant Hammond AP-2  
 Permit Number \_\_\_\_\_  
 Well ID MV-33  
 Date, field conditions 2-12-2021 Rain and wet

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

7 Corrective actions as needed, by date:

None at this time.

Signature and Seal of PE/PG responsible for inspection



**Groundwater Monitoring Well Integrity Form**

Site Name Plant Hammond  
 Permit Number \_\_\_\_\_  
 Well ID MW-3417  
 Date, field conditions 2/8/21

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

7 Corrective actions as needed, by date:

\_\_\_\_\_

\_\_\_\_\_

Signature and Seal of PE/PG responsible for inspection

\_\_\_\_\_

### Groundwater Monitoring Well Integrity Form

Site Name Hammond  
 Permit Number \_\_\_\_\_  
 Well ID MW-35  
 Date, field conditions 2/15/21 4:30+ raining

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

Signature and Seal of PE/PG responsible for inspection

\_\_\_\_\_

**Groundwater Monitoring Well Integrity Form**

Site Name Plant Hammond  
 Permit Number \_\_\_\_\_  
 Well ID MW-36D  
 Date, field conditions 2/6/21

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

7 Corrective actions as needed, by date:

\_\_\_\_\_

Signature and Seal of PE/PG responsible for inspection

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**Groundwater Monitoring Well Integrity Form**

Site Name Hammond  
 Permit Number \_\_\_\_\_  
 Well ID MW-21D  
 Date, field conditions 2-11/24 50°F raining

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

Signature and Seal of PE/PG responsible for inspection

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**Groundwater Monitoring Well Integrity Form**

Site Name plant Hammond  
 Permit Number \_\_\_\_\_  
 Well ID MW-22  
 Date, field conditions 2/15/21, cloudy, 61°

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

7 Corrective actions as needed, by date:  
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 \_\_\_\_\_

) Signature and Seal of PE/PG responsible for inspection

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**Groundwater Monitoring Well Integrity Form**

Site Name Hammond  
 Permit Number \_\_\_\_\_  
 Well ID rw-23D  
 Date, field conditions 2/12/11 45°F cloudy

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

7 Corrective actions as needed, by date:

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Signature and Seal of PE/PG responsible for inspection

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### Groundwater Monitoring Well Integrity Form

Site Name Plant Hammond AP-2  
 Permit Number \_\_\_\_\_  
 Well ID MV-37D  
 Date, field conditions 2-11-2021 Rain wet

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

7 Corrective actions as needed, by date:  
Needs well tag stickers

Signature and Seal of PE/PG responsible for inspection

March 2021



**Groundwater Monitoring Well Integrity Form**

Site Name Hammann A  
 Permit Number \_\_\_\_\_  
 Well ID H6W2-1  
 Date, field conditions 3/10/2020 6:50P- SUNNY

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

7 Corrective actions as needed, by date:

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Signature and Seal of PE/PG responsible for inspection

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**Groundwater Monitoring Well Integrity Form**

Site Name Hammond  
 Permit Number \_\_\_\_\_  
 Well ID NGWA-2  
 Date, field conditions 3/10/2021 6:58P Sunny

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

7 Corrective actions as needed, by date:

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Signature and Seal of PE/PG responsible for inspection

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### Groundwater Monitoring Well Integrity Form

Site Name Hammond  
 Permit Number \_\_\_\_\_  
 Well ID HGWA-3  
 Date, field conditions 3/10/2024 65°F Sunny

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

7 Corrective actions as needed, by date:

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Signature and Seal of PE/PG responsible for inspection

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**Groundwater Monitoring Well Integrity Form**

3-10-2024

Site Name HAMMOND AP-2  
 Permit Number \_\_\_\_\_  
 Well ID HGWA-4  
 Date, field conditions SUNNY, 37°F

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

7 Corrective actions as needed, by date:  
N/A

Signature and Seal of PE/PG responsible for inspection

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### Groundwater Monitoring Well Integrity Form

Site Name Plant Hammond AP-2  
 Permit Number \_\_\_\_\_  
 Well ID HGW 4-5  
 Date, field conditions 3/10/21 700, sunny

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

7 Corrective actions as needed, by date:  
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Signature and Seal of PE/PG responsible for inspection

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**Groundwater Monitoring Well Integrity Form**

Site Name Plant Hammond AP-42  
 Permit Number \_\_\_\_\_  
 Well ID HGW4-G  
 Date, field conditions 2/10/21 40° sunny

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

7 Corrective actions as needed, by date:  
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Signature and Seal of PE/PG responsible for inspection

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3-10-2024

Groundwater Monitoring Well Integrity Form

Site Name HAMMOND AP-2  
Permit Number \_\_\_\_\_  
Well ID HGMWA-420 / MW-420  
Date, field conditions SUNNY, 60°F

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

7 Corrective actions as needed, by date:  
N/A

Signature and Seal of PE/PG responsible for inspection

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### Groundwater Monitoring Well Integrity Form

Site Name Hammond  
 Permit Number \_\_\_\_\_  
 Well ID IGWA-43D  
 Date, field conditions 3/10/2024 65°F cloudy

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

7 Corrective actions as needed, by date:

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Signature and Seal of PE/PG responsible for inspection

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### Groundwater Monitoring Well Integrity Form

Site Name Hammond  
 Permit Number \_\_\_\_\_  
 Well ID 11GWA-44D  
 Date, field conditions 3/10/2021 65°F sunny

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

7 Corrective actions as needed, by date:

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Signature and Seal of PE/PG responsible for inspection

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**Groundwater Monitoring Well Integrity Form**

3-10-2021

Site Name HAMMOND AP-2  
 Permit Number \_\_\_\_\_  
 Well ID HGMIC-14  
 Date, field conditions SONNY, 3:00P

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

7 Corrective actions as needed, by date:

N/A

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Signature and Seal of PE/PG responsible for inspection

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**Groundwater Monitoring Well Integrity Form**

03-10-2021

Site Name HARMOND AP-2  
 Permit Number \_\_\_\_\_  
 Well ID HGMW-15  
 Date, field conditions 5/11/21, 3:30P

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

7 Corrective actions as needed, by date:  
NEED SURVEY MARKER ON CASING

Signature and Seal of PE/PG responsible for inspection

\_\_\_\_\_

**Groundwater Monitoring Well Integrity Form**

3-10-2024

Site Name HAMMOND AP-2  
 Permit Number \_\_\_\_\_  
 Well ID HGM-C-1b  
 Date, field conditions SUNNY, 39F

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

7 Corrective actions as needed, by date:

N/A

Signature and Seal of PE/PG responsible for inspection

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**Groundwater Monitoring Well Integrity Form**

3-10-2021

Site Name HARMOND A9-2  
 Permit Number \_\_\_\_\_  
 Well ID HGM/C-17  
 Date, field conditions SUNNY, 39°F

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

7 Corrective actions as needed, by date:  
N/A

Signature and Seal of PE/PG responsible for inspection

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**Groundwater Monitoring Well Integrity Form**

3/10/2021

Site Name HAMMOND AP-2  
 Permit Number \_\_\_\_\_  
 Well ID HGWC 18D HGWC-18 (TJ)  
 Date, field conditions SUNNY, 40°F

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

7 Corrective actions as needed, by date:

N/A

Signature and Seal of PE/PG responsible for inspection

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**Groundwater Monitoring Well Integrity Form**

3-10-2024

Site Name HAMMOND A1-2  
 Permit Number \_\_\_\_\_  
 Well ID MW-8  
 Date, field conditions SUNNY, 60°F

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

7 Corrective actions as needed, by date:

N/A

Signature and Seal of PE/PG responsible for inspection

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**Groundwater Monitoring Well Integrity Form**

3-10-2021

Site Name HAMMOND AP-2  
 Permit Number \_\_\_\_\_  
 Well ID MW-9  
 Date, field conditions SUNNY, 62°F

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

7 Corrective actions as needed, by date:

NEED TO CLEAN CONCRETE PAD

Signature and Seal of PE/PG responsible for inspection

\_\_\_\_\_



**Groundwater Monitoring Well Integrity Form**

3-10-2024

Site Name Hammond AP-2  
 Permit Number \_\_\_\_\_  
 Well ID MW-16  
 Date, field conditions SUNNY, 50°F

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

7 Corrective actions as needed, by date:

N/A

Signature and Seal of PE/PG responsible for inspection

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3-10-2021

Groundwater Monitoring Well Integrity Form

Site Name HAMMOND AP-2
Permit Number
Well ID RW-17
Date, field conditions SUNNY, 40°F

Table with 4 columns: Question ID, Question Text, yes, no, n/a. Contains sections 1-7 with various well integrity questions and checkmarks.

7 Corrective actions as needed, by date: N/A

Signature and Seal of PE/PG responsible for inspection

**Groundwater Monitoring Well Integrity Form**

3-10-2024

Site Name HAMMOND AP-2  
 Permit Number \_\_\_\_\_  
 Well ID MW-18  
 Date, field conditions SHINY, 50°F

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

7 Corrective actions as needed, by date:

N/A

Signature and Seal of PE/PG responsible for inspection

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**Groundwater Monitoring Well Integrity Form**

3-10-2021

Site Name HAMMOND AP-2  
 Permit Number \_\_\_\_\_  
 Well ID MW-330  
 Date, field conditions SWANN, 37°F

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

7 Corrective actions as needed, by date:  
NEED SURVEY MARKING ON INNER CASING

Signature and Seal of PE/PG responsible for inspection

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**Groundwater Monitoring Well Integrity Form**

3-10-2021

Site Name HAWKWOOD TP-2  
 Permit Number \_\_\_\_\_  
 Well ID MW-340  
 Date, field conditions CLOUDY, 37°F

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

WELL ID "MW-340"  
 \*NOT VISIBLE FROM  
 FAR.

7 Corrective actions as needed, by date:  
NEED VISIBLE TAG "MW-340"  
NEED SURVEY MARKER ON INNER CASING

Signature and Seal of PE/PG responsible for inspection  
 \_\_\_\_\_

**Groundwater Monitoring Well Integrity Form**

3-10-2024

Site Name HAMMOND AP-2  
 Permit Number \_\_\_\_\_  
 Well ID MW-35  
 Date, field conditions SWIMY, 45°F

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

7 Corrective actions as needed, by date:

N/A

Signature and Seal of PE/PG responsible for inspection

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**Groundwater Monitoring Well Integrity Form**

03-10-2024

Site Name HARRISON AP-2  
 Permit Number \_\_\_\_\_  
 Well ID MW-360  
 Date, field conditions SUNNY, 39F

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

TAG FOR MW-360  
 \* NOT VISIBLE FROM  
 AFAP.

7 Corrective actions as needed, by date:  
NEED VISIBLE TAG "MW-360"  
NEED SURVEY POINT ON INNER CASING

Signature and Seal of PE/PG responsible for inspection  
 \_\_\_\_\_

### Groundwater Monitoring Well Integrity Form

Site Name HAMMOND AP-2  
 Permit Number \_\_\_\_\_  
 Well ID DW-210  
 Date, field conditions SUNDAY, 40°F

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

7 Corrective actions as needed, by date:  
N/A

Signature and Seal of PE/PG responsible for inspection

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**Groundwater Monitoring Well Integrity Form**

03-10-2024

Site Name Hammond AP-2  
 Permit Number \_\_\_\_\_  
 Well ID MW-27  
 Date, field conditions SUNNY, 39°F

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

7 Corrective actions as needed, by date:

N/A

Signature and Seal of PE/PG responsible for inspection

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**Groundwater Monitoring Well Integrity Form**

03-10-2021

Site Name HAMMOND, AP-2  
 Permit Number \_\_\_\_\_  
 Well ID MW-230  
 Date, field conditions SWANN, 3 9 21

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

7 Corrective actions as needed, by date:  
N/A

Signature and Seal of PE/PG responsible for inspection

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**Groundwater Monitoring Well Integrity Form**

3/10/2021

Site Name HAMMOND AP-2  
 Permit Number \_\_\_\_\_  
 Well ID MW-37D  
 Date, field conditions SUNNY, 39°F

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

\*NO VISIBLE TAG  
"MW-37D"

7 Corrective actions as needed, by date:  
NEED VISIBLE TAG "MW-37D"  
NEED SURVEY MARKER

Signature and Seal of PE/PG responsible for inspection

\_\_\_\_\_

August 2021

### Groundwater Monitoring Well Integrity Form

Site Name Plant Hammond  
 Permit Number \_\_\_\_\_  
 Well ID HGWA-1  
 Date, field conditions 8/11/21 sunny 92°F

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

Signature and Seal of PE/PG responsible for inspection

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**Groundwater Monitoring Well Integrity Form**

Site Name Plant Hammond  
 Permit Number \_\_\_\_\_  
 Well ID HGWA-2  
 Date, field conditions 8/11/21 8/12/21

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

7 Corrective actions as needed, by date:  
none

Signature and Seal of PE/PG responsible for inspection

### Groundwater Monitoring Well Integrity Form

Site Name Plant Hammond  
 Permit Number \_\_\_\_\_  
 Well ID HGWA-3  
 Date, field conditions 8/12/21

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

\_\_\_\_\_  
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Signature and Seal of PE/PG responsible for inspection

\_\_\_\_\_

### Groundwater Monitoring Well Integrity Form

Site Name Plant Hammond  
 Permit Number \_\_\_\_\_  
 Well ID HGWA-4  
 Date, field conditions 8/11/21 8/12/21

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

7 Corrective actions as needed, by date:  
None

Signature and Seal of PE/PG responsible for inspection

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### Groundwater Monitoring Well Integrity Form

Site Name Plant Hammond  
 Permit Number \_\_\_\_\_  
 Well ID HGWA-5  
 Date, field conditions 8/12/21

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

Signature and Seal of PE/PG responsible for inspection

**Groundwater Monitoring Well Integrity Form**

Site Name Plant Hammond  
 Permit Number \_\_\_\_\_  
 Well ID HGWA-6  
 Date, field conditions 8/12/21

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

7 Corrective actions as needed, by date:

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Signature and Seal of PE/PG responsible for inspection

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**Groundwater Monitoring Well Integrity Form**

Site Name plant hammond  
 Permit Number \_\_\_\_\_  
 Well ID HGWA-48D  
 Date, field conditions 8/11/21 8/12/21

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

7 Corrective actions as needed, by date:  
none

Signature and Seal of PE/PG responsible for inspection

\_\_\_\_\_

### Groundwater Monitoring Well Integrity Form

Site Name Plant Hammerd  
 Permit Number \_\_\_\_\_  
 Well ID EG HGWA 43D  
 Date, field conditions 8/9, sunny, hot 8/9/2021

(TJ)

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

7 Corrective actions as needed, by date:

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Signature and Seal of PE/PG responsible for inspection

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### Groundwater Monitoring Well Integrity Form

Site Name Pump Mammone  
 Permit Number \_\_\_\_\_  
 Well ID 2K61W4-4415  
 Date, field conditions 8/9/2021 (TJ)

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

7 Corrective actions as needed, by date:

Pump Broken

Signature and Seal of PE/PG responsible for inspection

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**Groundwater Monitoring Well Integrity Form**

Site Name Plant Hammond  
 Permit Number \_\_\_\_\_  
 Well ID HR-14  
 Date, field conditions 8/11/21 sunny, hot 8/11/2021

(TJ)

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

Signature and Seal of PE/PG responsible for inspection

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 \_\_\_\_\_



### Groundwater Monitoring Well Integrity Form

Site Name Plant Hammond  
 Permit Number \_\_\_\_\_  
 Well ID HGMW-15  
 Date, field conditions 8/11/21 8/11/21

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

7 Corrective actions as needed, by date:  
none.

Signature and Seal of PE/PG responsible for inspection

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### Groundwater Monitoring Well Integrity Form

Site Name plant hammond  
 Permit Number \_\_\_\_\_  
 Well ID HGWC-16  
 Date, field conditions 8/11/21 8/19/21

		yes	no	n/a
<b>1 Location/Identification</b>				
a	Is the well visible and accessible?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b	Is the well properly identified with the correct well ID?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c	Is the well in a high traffic area and does the well require protection from traffic?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d	Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>2 Protective Casing</b>				
a	Is the protective casing free from apparent damage and able to be secured?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b	Is the casing free of degradation or deterioration?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c	Does the casing have a functioning weep hole?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d	Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e	Is the well locked and is the lock in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>3 Surface pad</b>				
a	Is the well pad in good condition (not cracked or broken)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b	Is the well pad sloped away from the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c	Is the well pad in complete contact with the protective casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d	Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e	Is the pad surface clean (not covered with sediment or debris)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>4 Internal casing</b>				
a	Does the cap prevent entry of foreign material into the well?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b	Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c	Is the well properly vented for equilibration of air pressure?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d	Is the survey point clearly marked on the inner casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e	Is the depth of the well consistent with the original well log?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f	Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>5 Sampling: Groundwater Wells Only:</b>				
a	Does well recharge adequately when purged?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b	If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c	Does the well require redevelopment (low flow, turbid)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6	Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7	Corrective actions as needed, by date: <u>none.</u>			

Signature and Seal of PE/PG responsible for inspection

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### Groundwater Monitoring Well Integrity Form

Site Name Polk Co. (Hammock)  
 Permit Number \_\_\_\_\_  
 Well ID HGL-17  
 Date, field conditions 2/14/21 sunny, hot 8/11/2021

(TJ)

		yes	no	n/a
<b>1 Location/Identification</b>				
a	Is the well visible and accessible?	/		
b	Is the well properly identified with the correct well ID?	/		
c	Is the well in a high traffic area and does the well require protection from traffic?	/		
d	Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	/		
<b>2 Protective Casing</b>				
a	Is the protective casing free from apparent damage and able to be secured?	/		
b	Is the casing free of degradation or deterioration?	/		
c	Does the casing have a functioning weep hole?	/		
d	Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	/		
e	Is the well locked and is the lock in good condition?	/		
<b>3 Surface pad</b>				
a	Is the well pad in good condition (not cracked or broken)?	/		
b	Is the well pad sloped away from the protective casing?	/		
c	Is the well pad in complete contact with the protective casing?	/		
d	Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)	/		
e	Is the pad surface clean (not covered with sediment or debris)?	/		
<b>4 Internal casing</b>				
a	Does the cap prevent entry of foreign material into the well?	/		
b	Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	/		
c	Is the well properly vented for equilibration of air pressure?	/		
d	Is the survey point clearly marked on the inner casing?	/		
e	Is the depth of the well consistent with the original well log?	/		
f	Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	/		
<b>5 Sampling: Groundwater Wells Only:</b>				
a	Does well recharge adequately when purged?	/		
b	If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?	/		
c	Does the well require redevelopment (low flow, turbid)?		/	
<b>6 Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?</b>				
		/		
<b>7 Corrective actions as needed, by date:</b>				
_____				
_____				

Signature and Seal of PE/PG responsible for inspection

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### Groundwater Monitoring Well Integrity Form

Site Name plant hammond  
 Permit Number \_\_\_\_\_  
 Well ID HGWC-18  
 Date, field conditions 8/11/21 8/19/21

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

7 Corrective actions as needed, by date:

none.

Signature and Seal of PE/PG responsible for inspection

**Groundwater Monitoring Well Integrity Form**

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

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

7 Corrective actions as needed, by date:  
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Signature and Seal of PE/PG responsible for inspection

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**Groundwater Monitoring Well Integrity Form**

Site Name Plant Hammond  
 Permit Number \_\_\_\_\_  
 Well ID MW-9  
 Date, field conditions 8/11/21

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

7 Corrective actions as needed, by date:  
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Signature and Seal of PE/PG responsible for inspection

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## Groundwater Monitoring Well Integrity Form

Site Name Plant Hamman  
 Permit Number \_\_\_\_\_  
 Well ID MW-12  
 Date, field conditions 8/11/21

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

7 Corrective actions as needed, by date:

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Signature and Seal of PE/PG responsible for inspection

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## Groundwater Monitoring Well Integrity Form

Site Name Plant Hammond  
 Permit Number \_\_\_\_\_  
 Well ID MW-16  
 Date, field conditions 8/11/21

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

7 Corrective actions as needed, by date:

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## Groundwater Monitoring Well Integrity Form

Site Name Plant Hammond  
 Permit Number \_\_\_\_\_  
 Well ID MW-17  
 Date, field conditions 8/11/21

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

7 Corrective actions as needed, by date:

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Signature and Seal of PE/PG responsible for inspection

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## Groundwater Monitoring Well Integrity Form

Site Name Plant Hammond  
 Permit Number \_\_\_\_\_  
 Well ID MW-18  
 Date, field conditions 8/11/21

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

7 Corrective actions as needed, by date:

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Signature and Seal of PE/PG responsible for inspection

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**Groundwater Monitoring Well Integrity Form**

Site Name Plan 7 Hammond  
 Permit Number \_\_\_\_\_  
 Well ID WW-33  
 Date, field conditions 8/11/2021 sunny hot TJ

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

7 Corrective actions as needed, by date:  
 \_\_\_\_\_  
 \_\_\_\_\_

Signature and Seal of PE/PG responsible for inspection

\_\_\_\_\_

### Groundwater Monitoring Well Integrity Form

Site Name Plant Memorial  
 Permit Number \_\_\_\_\_  
 Well ID MW-34D  
 Date, field conditions 8/11/2021 sunny, Hot

(TJ)

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

7 Corrective actions as needed, by date:

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Signature and Seal of PE/PG responsible for inspection

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### Groundwater Monitoring Well Integrity Form

Site Name Plains Hummer  
 Permit Number \_\_\_\_\_  
 Well ID MW-38 D  
 Date, field conditions Site All sunny, hot 8/11/2021

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

7 Corrective actions as needed, by date:

\_\_\_\_\_

Signature and Seal of PE/PG responsible for inspection

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### Groundwater Monitoring Well Integrity Form

Site Name Plant Hammond  
 Permit Number \_\_\_\_\_  
 Well ID MW-36D  
 Date, field conditions 8/11/21

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

7 Corrective actions as needed, by date:

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Signature and Seal of PE/PG responsible for inspection

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### Groundwater Monitoring Well Integrity Form

Site Name Plant Hummer, J  
 Permit Number \_\_\_\_\_  
 Well ID MW-51  
 Date, field conditions 8/11/21 Sunny, Hot

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

7 Corrective actions as needed, by date:

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Signature and Seal of PE/PG responsible for inspection

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**Groundwater Monitoring Well Integrity Form**

Site Name platt hammond  
 Permit Number \_\_\_\_\_  
 Well ID MW-21D  
 Date, field conditions 8/11/21 8/19/21

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

7 Corrective actions as needed, by date:

none

Signature and Seal of PE/PG responsible for inspection

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**Groundwater Monitoring Well Integrity Form**

Site Name Plant Hammond  
 Permit Number \_\_\_\_\_  
 Well ID MU-22  
 Date, field conditions Site Safety Summary, West 8/11/2021 (TJ)

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

7 Corrective actions as needed, by date:  
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 \_\_\_\_\_

Signature and Seal of PE/PG responsible for inspection

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### Groundwater Monitoring Well Integrity Form

Site Name Plant Hammond  
 Permit Number \_\_\_\_\_  
 Well ID MW-23D  
 Date, field conditions 8/19/21 (cloudy 84°F)

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

Signature and Seal of PE/PG responsible for inspection

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### Groundwater Monitoring Well Integrity Form

Site Name Plant (Commercial)  
 Permit Number \_\_\_\_\_  
 Well ID MW-37D  
 Date, field conditions 8/11/2021 Sunny TJ

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

Signature and Seal of PE/PG responsible for inspection

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# APPENDIX C

## Laboratory Analytical and Field Sampling Reports

# LABORATORY ANALYTICAL RESULTS

December 2020

January 11, 2021

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

RE: Project: HAMMOND AP-2 BKG 03 RADS  
Pace Project No.: 92512541

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on December 17, 2020. 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,



Kevin Herring  
kevin.herring@pacelabs.com  
1(704)875-9092  
HORIZON Database Administrator

Enclosures

cc: Christine Hug, Geosyntec Consultants, Inc.  
Kristen Jurinko  
Thomas Kessler, Geosyntec  
Whitney Law, Geosyntec Consultants  
Noelia Muskus, Geosyntec Consultants  
Ms. Lauren Petty, Southern Co. Services  
Nardos Tilahun, GeoSyntec  
Dawit Yifru, Geosyntec Consultants, Inc.



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: HAMMOND AP-2 BKG 03 RADS  
Pace Project No.: 92512541

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### **Pace Analytical Services Pennsylvania**

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

Missouri Certification #: 235  
Montana Certification #: Cert0082  
Nebraska Certification #: NE-OS-29-14  
Nevada Certification #: PA014572018-1  
New Hampshire/TNI Certification #: 297617  
New Jersey/TNI Certification #: PA051  
New Mexico Certification #: PA01457  
New York/TNI Certification #: 10888  
North Carolina Certification #: 42706  
North Dakota Certification #: R-190  
Ohio EPA Rad Approval: #41249  
Oregon/TNI Certification #: PA200002-010  
Pennsylvania/TNI Certification #: 65-00282  
Puerto Rico Certification #: PA01457  
Rhode Island Certification #: 65-00282  
South Dakota Certification  
Tennessee Certification #: 02867  
Texas/TNI Certification #: T104704188-17-3  
Utah/TNI Certification #: PA014572017-9  
USDA Soil Permit #: P330-17-00091  
Vermont Dept. of Health: ID# VT-0282  
Virgin Island/PADEP Certification  
Virginia/VELAP Certification #: 9526  
Washington Certification #: C868  
West Virginia DEP Certification #: 143  
West Virginia DHHR Certification #: 9964C  
Wisconsin Approve List for Rad  
Wyoming Certification #: 8TMS-L

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## SAMPLE SUMMARY

Project: HAMMOND AP-2 BKG 03 RADS

Pace Project No.: 92512541

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92512541001	HGWA-43D	Water	12/15/20 12:25	12/17/20 08:48
92512541002	HGWA-44D	Water	12/15/20 16:18	12/17/20 08:48
92512541003	EB-01	Water	12/15/20 18:02	12/17/20 08:48
92512541004	HGWA-42D	Water	12/15/20 16:35	12/17/20 08:48

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: HAMMOND AP-2 BKG 03 RADS

Pace Project No.: 92512541

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92512541001	HGWA-43D	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92512541002	HGWA-44D	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92512541003	EB-01	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92512541004	HGWA-42D	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: HAMMOND AP-2 BKG 03 RADS  
Pace Project No.: 92512541

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>92512541001</b>	<b>HGWA-43D</b>					
EPA 9315	Radium-226	0.162 ± 0.236 (0.511) C:88% T:NA	pCi/L		01/06/21 07:00	
EPA 9320	Radium-228	0.879 ± 0.484 (0.887) C:69% T:83%	pCi/L		01/05/21 13:26	
Total Radium Calculation	Total Radium	1.04 ± 0.720 (1.40)	pCi/L		01/06/21 14:34	
<b>92512541002</b>	<b>HGWA-44D</b>					
EPA 9315	Radium-226	0.359 ± 0.268 (0.453) C:92% T:NA	pCi/L		01/06/21 07:27	
EPA 9320	Radium-228	0.341 ± 0.410 (0.868) C:68% T:86%	pCi/L		01/05/21 13:26	
Total Radium Calculation	Total Radium	0.700 ± 0.678 (1.32)	pCi/L		01/06/21 14:34	
<b>92512541003</b>	<b>EB-01</b>					
EPA 9315	Radium-226	0.0278 ± 0.302 (0.765) C:89% T:NA	pCi/L		01/06/21 07:00	
EPA 9320	Radium-228	0.226 ± 0.391 (0.853) C:72% T:88%	pCi/L		01/05/21 13:26	
Total Radium Calculation	Total Radium	0.254 ± 0.693 (1.62)	pCi/L		01/06/21 14:34	
<b>92512541004</b>	<b>HGWA-42D</b>					
EPA 9315	Radium-226	0.0287 ± 0.234 (0.607) C:82% T:NA	pCi/L		01/06/21 06:59	
EPA 9320	Radium-228	0.232 ± 0.407 (0.889) C:74% T:73%	pCi/L		01/05/21 13:26	
Total Radium Calculation	Total Radium	0.261 ± 0.641 (1.50)	pCi/L		01/06/21 14:34	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 BKG 03 RADS

Pace Project No.: 92512541

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: HGWA-43D</b> <b>Lab ID: 92512541001</b> Collected: 12/15/20 12:25      Received: 12/17/20 08:48      Matrix: Water PWS:      Site ID:      Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	<b>0.162 ± 0.236 (0.511)</b> <b>C:88% T:NA</b>	pCi/L	01/06/21 07:00	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>0.879 ± 0.484 (0.887)</b> <b>C:69% T:83%</b>	pCi/L	01/05/21 13:26	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>1.04 ± 0.720 (1.40)</b>	pCi/L	01/06/21 14:34	7440-14-4	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 BKG 03 RADS

Pace Project No.: 92512541

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: HGWA-44D</b> <b>Lab ID: 92512541002</b> Collected: 12/15/20 16:18      Received: 12/17/20 08:48      Matrix: Water PWS:      Site ID:      Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	<b>0.359 ± 0.268 (0.453)</b> <b>C:92% T:NA</b>	pCi/L	01/06/21 07:27	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>0.341 ± 0.410 (0.868)</b> <b>C:68% T:86%</b>	pCi/L	01/05/21 13:26	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>0.700 ± 0.678 (1.32)</b>	pCi/L	01/06/21 14:34	7440-14-4	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 BKG 03 RADS

Pace Project No.: 92512541

**Sample: EB-01**      **Lab ID: 92512541003**      Collected: 12/15/20 18:02      Received: 12/17/20 08:48      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	<b>0.0278 ± 0.302 (0.765)</b> <b>C:89% T:NA</b>	pCi/L	01/06/21 07:00	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>0.226 ± 0.391 (0.853)</b> <b>C:72% T:88%</b>	pCi/L	01/05/21 13:26	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>0.254 ± 0.693 (1.62)</b>	pCi/L	01/06/21 14:34	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 BKG 03 RADS

Pace Project No.: 92512541

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: HGWA-42D</b> <b>Lab ID: 92512541004</b> Collected: 12/15/20 16:35      Received: 12/17/20 08:48      Matrix: Water PWS:      Site ID:      Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	<b>0.0287 ± 0.234 (0.607)</b> <b>C:82% T:NA</b>	pCi/L	01/06/21 06:59	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>0.232 ± 0.407 (0.889)</b> <b>C:74% T:73%</b>	pCi/L	01/05/21 13:26	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>0.261 ± 0.641 (1.50)</b>	pCi/L	01/06/21 14:34	7440-14-4	

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-2 BKG 03 RADS

Pace Project No.: 92512541

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QC Batch:	428750	Analysis Method:	EPA 9320
QC Batch Method:	EPA 9320	Analysis Description:	9320 Radium 228
		Laboratory:	Pace Analytical Services - Greensburg

Associated Lab Samples: 92512541001, 92512541002, 92512541003, 92512541004

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METHOD BLANK:	2071922	Matrix:	Water
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Associated Lab Samples: 92512541001, 92512541002, 92512541003, 92512541004

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.694 ± 0.380 (0.676) C:79% T:80%	pCi/L	01/05/21 13:26	

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

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-2 BKG 03 RADS  
Pace Project No.: 92512541

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QC Batch: 429175	Analysis Method: EPA 9315
QC Batch Method: EPA 9315	Analysis Description: 9315 Total Radium
	Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92512541001, 92512541002, 92512541003, 92512541004

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METHOD BLANK: 2073293 Matrix: Water  
Associated Lab Samples: 92512541001, 92512541002, 92512541003, 92512541004

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.176 ± 0.138 (0.246) C:97% T:NA	pCi/L	01/05/21 17:40	

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## QUALIFIERS

Project: HAMMOND AP-2 BKG 03 RADS

Pace Project No.: 92512541

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### DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

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

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

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-2 BKG 03 RADS  
Pace Project No.: 92512541

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92512541001	HGWA-43D	EPA 9315	429175		
92512541002	HGWA-44D	EPA 9315	429175		
92512541003	EB-01	EPA 9315	429175		
92512541004	HGWA-42D	EPA 9315	429175		
92512541001	HGWA-43D	EPA 9320	428750		
92512541002	HGWA-44D	EPA 9320	428750		
92512541003	EB-01	EPA 9320	428750		
92512541004	HGWA-42D	EPA 9320	428750		
92512541001	HGWA-43D	Total Radium Calculation	429861		
92512541002	HGWA-44D	Total Radium Calculation	429861		
92512541003	EB-01	Total Radium Calculation	429861		
92512541004	HGWA-42D	Total Radium Calculation	429861		

**REPORT OF LABORATORY ANALYSIS**

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

**Laboratory receiving samples:**

Asheville  Eden  Greenwood  Huntersville  Raleigh  Mechanicsville  Atlanta  Kernersville

Sample Condition Upon Receipt

Client Name: GA Power

Project #: **WO# : 92512541**



92512541

Courier:  Fed Ex  UPS  USPS  Client  
 Commercial  Pace  Other: \_\_\_\_\_

Date/Initials Person Examining Contents: 2/17/15

Custody Seal Present?  Yes  No Seals Intact?  Yes  No

Packing Material:  Bubble Wrap  Bubble Bags  None  Other

Biological Tissue Frozen?

Thermometer:  IR Gun ID: 214 Type of Ice:  Wet  Blue  None

Yes  No  N/A

Cooler Temp: 4.2 Correction Factor: Add/Subtract (°C) 0.1

Temp should be above freezing to 6°C

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

Cooler Temp Corrected (°C): 4.3

USDA Regulated Soil ( N/A, water sample)

Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)?

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

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: <u>W</u>			
Headspace In VOA Vials (>5-6mm)?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A		10.
Trip Blank Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A		11.
Trip Blank Custody Seals Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A		

COMMENTS/SAMPLE DISCREPANCY

Field Data Required?  Yes  No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

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

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

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

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

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

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

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

Project

**WO# : 92512541**

PM: KLH1

Due Date: 01/11/21

CLIENT: GA-GA Power

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)	BP4C-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	AG3A(DG3A)-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unp (N/A)	DG9P-40 mL VOA H3PO4 (N/A)	VOAK (6 vials per kit)-5035 kit (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)	BP3A-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved vials (N/A)	VSGU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)			
1		✓	✓			✓																								
2																														
3																														
4																														
5																														
6																														
7																														
8																														
9																														
10																														
11																														
12																														

**pH Adjustment Log for Preserved Samples**

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

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





# CHAIN-OF-CUSTODY / Analytical Request Document

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

Page: 1 of 1

<b>Section A</b> Required Client Information: Company: GA Power Address: Atlanta, GA	<b>Section B</b> Required Project Information: Report to: SCS Contacts Copy To: Geosynlec Contacts	<b>Section C</b> Invoice Information: Attention: Southern Co. Address: Company Name: Reference: Pace Project Manager: Pace Project #: 10839-4	<b>REGULATORY AGENCY</b> <input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input checked="" type="checkbox"/> DRINKING WATER <input type="checkbox"/> OTHER
Email To: SCS Contacts Phone: Fax Requested Due Date/TIME: 10 Day	Purchase Order No.: Project Name: Plant Hammond AP-2 BKG 03 Project Number: GWS5818	Address: Company Name: Reference: Pace Project Manager: Pace Project #: 10839-4	Site Location: STATE: GA

ITEM #	Section D Required Client Information	Valid Matrix Codes MATERIALS DOMESTIC WATER WATER WASTE WATER SOIL SLURRY SIL OIL WIRE AIR OTHER TISSUE	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives	Analysis Test	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	pH = 7.39 pH = 7.87	Pace Project No./ Lab ID.
					DATE	TIME								
1	HGWA-43D		WT G	G	12/15	0225	-	5	2	3	X	X	X	
2	HGWA-43D		WT G	G	12/15	1618	-	5	2	3	X	X	X	
3	HGWA-44D		WT G	G	12/15	1802	-	5	2	3	X	X	X	
4	EB-01		WT G	G	12/15	1802	-	5	2	3	X	X	X	
5														
6														
7														
8														
9														
10														
11														
12														

ADDITIONAL COMMENTS: Please note dry wets; finish through any wets not sampled, and note when the last sample for the event has been taken. Full App. III & IV Metals-Sr, As, Ba, Be, B, Cd, Ca, Cr, Co, Pb, U, Hg, Mo, Se, Ti One sample set submitted for HGWA-43D and HGWA-44D but they will be reported for AP-1/2/3 SDGS One sample set submitted for EB-01 but it will be reported for AP-1/2/3/4 SDGS	RELINQUISHED BY / AFFILIATION: Thomas Hessler Pace	DATE: 12/11/12	TIME: 0616	ACCEPTED BY / AFFILIATION: Kevin Herring Pace	DATE: 12/14/12	TIME: 0818	SAMPLER NAME AND SIGNATURE: Thomas Hessler	DATE Signed (MANDATORY): 12/15/12	Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
--	--	-------------------	---------------	---	-------------------	---------------	---	--------------------------------------	------------	-----------------------	-----------------------------	----------------------

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

FALL-Q-020REV.07 15-Feb-2007



# Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-226  
Analyst: LAL  
Date: 1/5/2021  
Worklist: 58138  
Matrix: DW

Method Blank Assessment	
MB Sample ID	2073293
MB Concentration:	0.176
M/B Counting Uncertainty:	0.135
MB MDC:	0.246
MB Numerical Performance Indicator:	2.55
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment		LCSD (Y or N)?	N
		LCSD58138	LCSD58138
Count Date:		1/6/2021	
Spike I.D.:		19-033	
Decay Corrected Spike Concentration (pCi/mL):		24.041	
Volume Used (mL):		0.10	
Aliquot Volume (L, g, F):		0.515	
Target Conc. (pCi/L, g, F):		4.669	
Uncertainty (Calculated):		0.056	
Result (pCi/L, g, F):		4.726	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):		0.782	
Numerical Performance Indicator:		0.14	
Percent Recovery:		101.21%	
Status vs Numerical Indicator:		N/A	
Status vs Recovery:		Pass	
Upper % Recovery Limits:		125%	
Lower % Recovery Limits:		75%	

Duplicate Sample Assessment	
Sample I.D.:	92512557001
Duplicate Sample I.D.:	92512557001DUP
Sample Result (pCi/L, g, F):	0.259
Sample Duplicate Result (pCi/L, g, F):	0.248
Sample Result Counting Uncertainty (pCi/L, g, F):	0.181
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.219
Are sample and/or duplicate results below RL?	See Below ##
Duplicate Numerical Performance Indicator:	35.10%
Duplicate RPD:	0.458
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Fail***
% RPD Limit:	25%

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

Comments:

\*\*\*Batch must be re-prepped due to unacceptable precision. N/A

VAS  
1-6-2021  
VAM116121

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

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

VAM116121

# Quality Control Sample Performance Assessment



Analyst: Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-226  
Analyst: LAL  
Date: 1/5/2021  
Worklist: 58138  
Matrix: DW

Method Blank Assessment	
MB Sample ID	2073293
MB concentration:	0.176
MB Counting Uncertainty:	0.135
MB MDC:	0.246
MB Numerical Performance Indicator:	2.55
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment		Y
Count Date:	1/6/2021	LCS58138
Spike ID:	19.083	19.083
Decay Corrected Spike Concentration (pCi/mL):	24.041	24.041
Volume Used (mL):	0.10	0.10
Aliquot Volume (L, g, F):	0.507	0.507
Target Conc. (pCi/L, g, F):	4.869	4.743
Uncertainty (Calculated):	0.055	0.057
Result (pCi/L, g, F):	4.725	4.173
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.782	0.736
Numerical Performance Indicator:	0.14	-1.51
Percent Recovery:	101.21%	87.98%
Status vs Numerical Indicator:	N/A	N/A
Status vs Recovery:	Pass	Pass
Upper % Recovery Limits:	125%	125%
Lower % Recovery Limits:	75%	75%

Duplicate Sample Assessment		Y
Sample I.D.:	LCS58138	LCS58138
Duplicate Sample I.D.:	LCS58138	19.083
Sample Result (pCi/L, g, F):	4.725	24.041
Sample Result Counting Uncertainty (pCi/L, g, F):	0.782	0.10
Sample Duplicate Result (pCi/L, g, F):	4.173	0.507
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.736	4.743
Are sample and/or duplicate results below RL?	NO	0.057
Duplicate Numerical Performance Indicator:	1.009	4.173
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	13.95%	0.736
Duplicate Status vs Numerical Indicator:	N/A	0.057
Duplicate Status vs RPD:	Pass	4.173
% RPD Limit:	25%	0.736

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

Comments:

1-6-2021  
ESM

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

WAM 1/6/21

# Quality Control Sample Performance Assessment



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

Test: Ra-228  
Analyst: VAL  
Date: 12/31/2020  
Worklist: 58095  
Matrix: WT

Method Blank Assessment	
MB Sample ID	2071922
MB concentration:	0.694
MB 2 Sigma CSU:	0.380
MB MDC:	0.676
MB Numerical Performance Indicator:	3.58
MB Status vs Numerical Indicator:	Fail*
MB Status vs. MDC:	See Comment*

Laboratory Control Sample Assessment	
LCSID (Y or N)?	Y
LCS58095	1/5/2021
LCS58095	20-030
LCS58095	37.002
Count Date:	1/5/2021
Spike I.D.:	20-030
Decay Corrected Spike Concentration (pCi/mL):	37.002
Volume Used (mL):	0.10
Aliquot Volume (L, g, F):	0.801
Target Conc. (pCi/L, g, F):	4.617
Uncertainty (Calculated):	0.226
Result (pCi/L, g, F):	5.412
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	1.220
Numerical Performance Indicator:	1.25
Percent Recovery:	117.21%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass
Upper % Recovery Limits:	135%
Lower % Recovery Limits:	60%

Duplicate Sample Assessment	
Sample I.D.:	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.:	
Sample Result (pCi/L, g, F):	
Sample Result 2 Sigma CSU (pCi/L, g, F):	
Sample Duplicate Result (pCi/L, g, F):	
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	
Ave sample and/or duplicate results below RL?:	NO
Duplicate Numerical Performance Indicator:	0.190
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	3.25%
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:  
\*The method blank result is below the reporting limit for this analysis and is acceptable.

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

January 04, 2021

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

RE: Project: HAMMOND AP-2 BKG 03  
Pace Project No.: 92512574

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on December 17, 2020. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

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

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

Sincerely,



Kevin Herring  
kevin.herring@pacelabs.com  
1(704)875-9092  
HORIZON Database Administrator

Enclosures

cc: Christine Hug, Geosyntec Consultants, Inc.  
Kristen Jurinko  
Thomas Kessler, Geosyntec  
Whitney Law, Geosyntec Consultants  
Noelia Muskus, Geosyntec Consultants  
Ms. Lauren Petty, Southern Co. Services  
Nardos Tilahun, GeoSyntec  
Dawit Yifru, Geosyntec Consultants, Inc.



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: HAMMOND AP-2 BKG 03

Pace Project No.: 92512574

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### **Pace Analytical Services Charlotte**

9800 Kinsey Ave. Ste 100, Huntersville, NC 28078  
Louisiana/NELAP Certification # LA170028  
North Carolina Drinking Water Certification #: 37706  
North Carolina Field Services Certification #: 5342  
North Carolina Wastewater Certification #: 12

South Carolina Certification #: 99006001  
Florida/NELAP Certification #: E87627  
Kentucky UST Certification #: 84  
Virginia/VELAP Certification #: 460221

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### **Pace Analytical Services Asheville**

2225 Riverside Drive, Asheville, NC 28804  
Florida/NELAP Certification #: E87648  
North Carolina Drinking Water Certification #: 37712

North Carolina Wastewater Certification #: 40  
South Carolina Certification #: 99030001  
Virginia/VELAP Certification #: 460222

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

110 Technology Pkwy, Peachtree Corners, GA 30092  
Florida DOH Certification #: E87315  
Georgia DW Inorganics Certification #: 812

North Carolina Certification #: 381  
South Carolina Certification #: 98011001

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: HAMMOND AP-2 BKG 03

Pace Project No.: 92512574

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92512574001	HGWA-43D	Water	12/15/20 12:25	12/17/20 08:48
92512574002	HGWA-44D	Water	12/15/20 16:18	12/17/20 08:48
92512574003	EB-01	Water	12/15/20 18:02	12/17/20 08:48
92512574004	HGWA-42D	Water	12/15/20 16:35	12/17/20 08:48

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: HAMMOND AP-2 BKG 03

Pace Project No.: 92512574

Lab ID	Sample ID	Method	Analysts	Analytes Reported
92512574001	HGWA-43D	EPA 6010D	KH	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92512574002	HGWA-44D	EPA 6010D	KH	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92512574003	EB-01	EPA 6010D	KH	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92512574004	HGWA-42D	EPA 6010D	KH	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3

PASI-A = Pace Analytical Services - Asheville

PASI-C = Pace Analytical Services - Charlotte

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

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: HAMMOND AP-2 BKG 03

Pace Project No.: 92512574

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
<b>92512574001</b>	<b>HGWA-43D</b>					
	Performed by	CUSTOME			01/04/21 15:35	
		R				
	pH	7.39	Std. Units		01/04/21 15:35	
EPA 6010D	Calcium	62.6	mg/L	1.0	12/24/20 23:57	
EPA 6020B	Antimony	0.00031J	mg/L	0.0030	12/28/20 17:38	
EPA 6020B	Barium	0.29	mg/L	0.010	12/28/20 17:38	
EPA 6020B	Boron	0.052J	mg/L	0.10	12/28/20 17:38	
EPA 6020B	Lead	0.000082J	mg/L	0.0050	12/28/20 17:38	
EPA 6020B	Lithium	0.0019J	mg/L	0.030	12/28/20 17:38	
EPA 6020B	Molybdenum	0.0044J	mg/L	0.010	12/28/20 17:38	
SM 2450C-2011	Total Dissolved Solids	289	mg/L	10.0	12/19/20 12:19	
EPA 300.0 Rev 2.1 1993	Chloride	4.7	mg/L	1.0	12/23/20 19:30	
EPA 300.0 Rev 2.1 1993	Fluoride	0.21	mg/L	0.10	12/23/20 19:30	
EPA 300.0 Rev 2.1 1993	Sulfate	38.8	mg/L	1.0	12/23/20 19:30	
<b>92512574002</b>	<b>HGWA-44D</b>					
	Performed by	CUSTOME			01/04/21 15:35	
		R				
	pH	7.87	Std. Units		01/04/21 15:35	
EPA 6010D	Calcium	28.7	mg/L	1.0	12/25/20 00:03	
EPA 6020B	Antimony	0.00047J	mg/L	0.0030	12/28/20 17:43	
EPA 6020B	Barium	0.39	mg/L	0.010	12/28/20 17:43	
EPA 6020B	Boron	0.31	mg/L	0.10	12/28/20 17:43	
EPA 6020B	Chromium	0.00072J	mg/L	0.010	12/28/20 17:43	
EPA 6020B	Lead	0.00011J	mg/L	0.0050	12/28/20 17:43	
EPA 6020B	Lithium	0.028J	mg/L	0.030	12/28/20 17:43	
EPA 6020B	Molybdenum	0.0019J	mg/L	0.010	12/28/20 17:43	
SM 2450C-2011	Total Dissolved Solids	295	mg/L	10.0	12/19/20 12:19	
EPA 300.0 Rev 2.1 1993	Chloride	9.4	mg/L	1.0	12/23/20 19:45	
EPA 300.0 Rev 2.1 1993	Fluoride	0.67	mg/L	0.10	12/23/20 19:45	
EPA 300.0 Rev 2.1 1993	Sulfate	6.7	mg/L	1.0	12/23/20 19:45	
<b>92512574003</b>	<b>EB-01</b>					
EPA 6010D	Calcium	0.12J	mg/L	1.0	12/25/20 00:28	
<b>92512574004</b>	<b>HGWA-42D</b>					
	Performed by	CUSTOME			01/04/21 15:35	
		R				
	pH	7.64	Std. Units		01/04/21 15:35	
EPA 6010D	Calcium	47.3	mg/L	1.0	12/25/20 00:34	
EPA 6020B	Antimony	0.00035J	mg/L	0.0030	12/29/20 10:26	
EPA 6020B	Barium	0.19	mg/L	0.010	12/29/20 10:26	
EPA 6020B	Boron	0.043J	mg/L	0.10	12/29/20 10:26	
EPA 6020B	Chromium	0.0025J	mg/L	0.010	12/29/20 10:26	
EPA 6020B	Cobalt	0.00049J	mg/L	0.0050	12/29/20 10:26	
EPA 6020B	Lead	0.00045J	mg/L	0.0050	12/29/20 10:26	
EPA 6020B	Lithium	0.0080J	mg/L	0.030	12/29/20 10:26	
EPA 6020B	Molybdenum	0.00082J	mg/L	0.010	12/29/20 10:26	
SM 2450C-2011	Total Dissolved Solids	193	mg/L	10.0	12/19/20 12:21	

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: HAMMOND AP-2 BKG 03

Pace Project No.: 92512574

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>92512574004</b>	<b>HGWA-42D</b>					
EPA 300.0 Rev 2.1 1993	Chloride	3.2	mg/L	1.0	12/23/20 20:14	
EPA 300.0 Rev 2.1 1993	Fluoride	0.11	mg/L	0.10	12/23/20 20:14	
EPA 300.0 Rev 2.1 1993	Sulfate	10.9	mg/L	1.0	12/23/20 20:14	

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### ANALYTICAL RESULTS

Project: HAMMOND AP-2 BKG 03  
Pace Project No.: 92512574

Sample: <b>HGWA-43D</b>		Lab ID: <b>92512574001</b>		Collected: 12/15/20 12:25		Received: 12/17/20 08:48		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		01/04/21 15:35		
pH	<b>7.39</b>	Std. Units			1		01/04/21 15:35		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	<b>62.6</b>	mg/L	1.0	0.070	1	12/24/20 13:26	12/24/20 23:57	7440-70-2	
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	<b>0.00031J</b>	mg/L	0.0030	0.00028	1	12/24/20 10:19	12/28/20 17:38	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	12/24/20 10:19	12/28/20 17:38	7440-38-2	
Barium	<b>0.29</b>	mg/L	0.010	0.00071	1	12/24/20 10:19	12/28/20 17:38	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	12/24/20 10:19	12/28/20 17:38	7440-41-7	
Boron	<b>0.052J</b>	mg/L	0.10	0.0052	1	12/24/20 10:19	12/28/20 17:38	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	12/24/20 10:19	12/28/20 17:38	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	12/24/20 10:19	12/28/20 17:38	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	12/24/20 10:19	12/28/20 17:38	7440-48-4	
Lead	<b>0.000082J</b>	mg/L	0.0050	0.000036	1	12/24/20 10:19	12/28/20 17:38	7439-92-1	
Lithium	<b>0.0019J</b>	mg/L	0.030	0.00081	1	12/24/20 10:19	12/28/20 17:38	7439-93-2	
Molybdenum	<b>0.0044J</b>	mg/L	0.010	0.00069	1	12/24/20 10:19	12/28/20 17:38	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	12/24/20 10:19	12/28/20 17:38	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	12/24/20 10:19	12/28/20 17:38	7440-28-0	
<b>7470 Mercury</b>									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00050	0.000078	1	12/22/20 07:10	12/22/20 12:57	7439-97-6	
<b>2540C Total Dissolved Solids</b>									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	<b>289</b>	mg/L	10.0	10.0	1		12/19/20 12:19		
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	<b>4.7</b>	mg/L	1.0	0.60	1		12/23/20 19:30	16887-00-6	
Fluoride	<b>0.21</b>	mg/L	0.10	0.050	1		12/23/20 19:30	16984-48-8	
Sulfate	<b>38.8</b>	mg/L	1.0	0.50	1		12/23/20 19:30	14808-79-8	

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### ANALYTICAL RESULTS

Project: HAMMOND AP-2 BKG 03  
Pace Project No.: 92512574

Sample: <b>HGWA-44D</b>		Lab ID: <b>92512574002</b>		Collected: 12/15/20 16:18		Received: 12/17/20 08:48		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		01/04/21 15:35		
pH	<b>7.87</b>	Std. Units			1		01/04/21 15:35		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	<b>28.7</b>	mg/L	1.0	0.070	1	12/24/20 13:26	12/25/20 00:03	7440-70-2	
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	<b>0.00047J</b>	mg/L	0.0030	0.00028	1	12/24/20 10:19	12/28/20 17:43	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	12/24/20 10:19	12/28/20 17:43	7440-38-2	
Barium	<b>0.39</b>	mg/L	0.010	0.00071	1	12/24/20 10:19	12/28/20 17:43	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	12/24/20 10:19	12/28/20 17:43	7440-41-7	
Boron	<b>0.31</b>	mg/L	0.10	0.0052	1	12/24/20 10:19	12/28/20 17:43	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	12/24/20 10:19	12/28/20 17:43	7440-43-9	
Chromium	<b>0.00072J</b>	mg/L	0.010	0.00055	1	12/24/20 10:19	12/28/20 17:43	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	12/24/20 10:19	12/28/20 17:43	7440-48-4	
Lead	<b>0.00011J</b>	mg/L	0.0050	0.000036	1	12/24/20 10:19	12/28/20 17:43	7439-92-1	
Lithium	<b>0.028J</b>	mg/L	0.030	0.00081	1	12/24/20 10:19	12/28/20 17:43	7439-93-2	
Molybdenum	<b>0.0019J</b>	mg/L	0.010	0.00069	1	12/24/20 10:19	12/28/20 17:43	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	12/24/20 10:19	12/28/20 17:43	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	12/24/20 10:19	12/28/20 17:43	7440-28-0	
<b>7470 Mercury</b>									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00050	0.000078	1	12/22/20 07:10	12/22/20 13:00	7439-97-6	
<b>2540C Total Dissolved Solids</b>									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	<b>295</b>	mg/L	10.0	10.0	1		12/19/20 12:19		
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	<b>9.4</b>	mg/L	1.0	0.60	1		12/23/20 19:45	16887-00-6	
Fluoride	<b>0.67</b>	mg/L	0.10	0.050	1		12/23/20 19:45	16984-48-8	
Sulfate	<b>6.7</b>	mg/L	1.0	0.50	1		12/23/20 19:45	14808-79-8	

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### ANALYTICAL RESULTS

Project: HAMMOND AP-2 BKG 03  
Pace Project No.: 92512574

Sample: EB-01		Lab ID: 92512574003		Collected: 12/15/20 18:02	Received: 12/17/20 08:48	Matrix: Water				
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
<b>6010D ATL ICP</b>		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Calcium	<b>0.12J</b>	mg/L	1.0	0.070	1	12/24/20 13:26	12/25/20 00:28	7440-70-2		
<b>6020 MET ICPMS</b>		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00028	1	12/24/20 10:19	12/29/20 10:21	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.00078	1	12/24/20 10:19	12/29/20 10:21	7440-38-2		
Barium	ND	mg/L	0.010	0.00071	1	12/24/20 10:19	12/29/20 10:21	7440-39-3		
Beryllium	ND	mg/L	0.0030	0.000046	1	12/24/20 10:19	12/29/20 10:21	7440-41-7		
Boron	ND	mg/L	0.10	0.0052	1	12/24/20 10:19	12/29/20 10:21	7440-42-8		
Cadmium	ND	mg/L	0.0025	0.00012	1	12/24/20 10:19	12/29/20 10:21	7440-43-9		
Chromium	ND	mg/L	0.010	0.00055	1	12/24/20 10:19	12/29/20 10:21	7440-47-3		
Cobalt	ND	mg/L	0.0050	0.00038	1	12/24/20 10:19	12/29/20 10:21	7440-48-4		
Lead	ND	mg/L	0.0050	0.000036	1	12/24/20 10:19	12/29/20 10:21	7439-92-1		
Lithium	ND	mg/L	0.030	0.00081	1	12/24/20 10:19	12/29/20 10:21	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.00069	1	12/24/20 10:19	12/29/20 10:21	7439-98-7		
Selenium	ND	mg/L	0.010	0.0016	1	12/24/20 10:19	12/29/20 10:21	7782-49-2		
Thallium	ND	mg/L	0.0010	0.00014	1	12/24/20 10:19	12/29/20 10:21	7440-28-0		
<b>7470 Mercury</b>		Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00050	0.000078	1	12/22/20 07:10	12/22/20 13:02	7439-97-6		
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	ND	mg/L	10.0	10.0	1		12/19/20 12:19			
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	ND	mg/L	1.0	0.60	1		12/23/20 20:00	16887-00-6		
Fluoride	ND	mg/L	0.10	0.050	1		12/23/20 20:00	16984-48-8		
Sulfate	ND	mg/L	1.0	0.50	1		12/23/20 20:00	14808-79-8		

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### ANALYTICAL RESULTS

Project: HAMMOND AP-2 BKG 03  
Pace Project No.: 92512574

Sample: <b>HGWA-42D</b>		Lab ID: <b>92512574004</b>		Collected: 12/15/20 16:35		Received: 12/17/20 08:48		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		01/04/21 15:35		
pH	<b>7.64</b>	Std. Units			1		01/04/21 15:35		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	<b>47.3</b>	mg/L	1.0	0.070	1	12/24/20 13:26	12/25/20 00:34	7440-70-2	
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	<b>0.00035J</b>	mg/L	0.0030	0.00028	1	12/24/20 10:19	12/29/20 10:26	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	12/24/20 10:19	12/29/20 10:26	7440-38-2	
Barium	<b>0.19</b>	mg/L	0.010	0.00071	1	12/24/20 10:19	12/29/20 10:26	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	12/24/20 10:19	12/29/20 10:26	7440-41-7	
Boron	<b>0.043J</b>	mg/L	0.10	0.0052	1	12/24/20 10:19	12/29/20 10:26	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	12/24/20 10:19	12/29/20 10:26	7440-43-9	
Chromium	<b>0.0025J</b>	mg/L	0.010	0.00055	1	12/24/20 10:19	12/29/20 10:26	7440-47-3	
Cobalt	<b>0.00049J</b>	mg/L	0.0050	0.00038	1	12/24/20 10:19	12/29/20 10:26	7440-48-4	
Lead	<b>0.00045J</b>	mg/L	0.0050	0.000036	1	12/24/20 10:19	12/29/20 10:26	7439-92-1	
Lithium	<b>0.0080J</b>	mg/L	0.030	0.00081	1	12/24/20 10:19	12/29/20 10:26	7439-93-2	
Molybdenum	<b>0.00082J</b>	mg/L	0.010	0.00069	1	12/24/20 10:19	12/29/20 10:26	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	12/24/20 10:19	12/29/20 10:26	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	12/24/20 10:19	12/29/20 10:26	7440-28-0	
<b>7470 Mercury</b>									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00050	0.000078	1	12/22/20 07:10	12/22/20 13:04	7439-97-6	
<b>2540C Total Dissolved Solids</b>									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	<b>193</b>	mg/L	10.0	10.0	1		12/19/20 12:21		
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	<b>3.2</b>	mg/L	1.0	0.60	1		12/23/20 20:14	16887-00-6	
Fluoride	<b>0.11</b>	mg/L	0.10	0.050	1		12/23/20 20:14	16984-48-8	
Sulfate	<b>10.9</b>	mg/L	1.0	0.50	1		12/23/20 20:14	14808-79-8	

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### QUALITY CONTROL DATA

Project: HAMMOND AP-2 BKG 03  
Pace Project No.: 92512574

QC Batch: 589396 Analysis Method: EPA 6010D  
QC Batch Method: EPA 3010A Analysis Description: 6010D ATL  
Laboratory: Pace Analytical Services - Peachtree Corners, GA  
Associated Lab Samples: 92512574001, 92512574002, 92512574003, 92512574004

METHOD BLANK: 3113409 Matrix: Water  
Associated Lab Samples: 92512574001, 92512574002, 92512574003, 92512574004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	0.070	12/24/20 23:39	

LABORATORY CONTROL SAMPLE: 3113410

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: 3113411 3113412

Parameter	Units	3113411		3113412		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Calcium	mg/L	28.7	1	1	30.4	29.3	173	61	75-125	4	20 M1

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### QUALITY CONTROL DATA

Project: HAMMOND AP-2 BKG 03

Pace Project No.: 92512574

QC Batch: 589337 Analysis Method: EPA 6020B  
 QC Batch Method: EPA 3005A Analysis Description: 6020 MET  
 Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92512574001, 92512574002, 92512574003, 92512574004

METHOD BLANK: 3113101 Matrix: Water  
 Associated Lab Samples: 92512574001, 92512574002, 92512574003, 92512574004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00028	12/28/20 16:52	
Arsenic	mg/L	ND	0.0050	0.00078	12/28/20 16:52	
Barium	mg/L	ND	0.010	0.00071	12/28/20 16:52	
Beryllium	mg/L	ND	0.0030	0.000046	12/28/20 16:52	
Boron	mg/L	ND	0.10	0.0052	12/28/20 16:52	
Cadmium	mg/L	ND	0.0025	0.00012	12/28/20 16:52	
Chromium	mg/L	ND	0.010	0.00055	12/28/20 16:52	
Cobalt	mg/L	ND	0.0050	0.00038	12/28/20 16:52	
Lead	mg/L	ND	0.0050	0.000036	12/28/20 16:52	
Lithium	mg/L	ND	0.030	0.00081	12/28/20 16:52	
Molybdenum	mg/L	ND	0.010	0.00069	12/28/20 16:52	
Selenium	mg/L	ND	0.010	0.0016	12/28/20 16:52	
Thallium	mg/L	ND	0.0010	0.00014	12/28/20 16:52	

LABORATORY CONTROL SAMPLE: 3113102

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.10	101	80-120	
Arsenic	mg/L	0.1	0.094	94	80-120	
Barium	mg/L	0.1	0.095	95	80-120	
Beryllium	mg/L	0.1	0.095	95	80-120	
Boron	mg/L	1	0.91	91	80-120	
Cadmium	mg/L	0.1	0.098	98	80-120	
Chromium	mg/L	0.1	0.097	97	80-120	
Cobalt	mg/L	0.1	0.095	95	80-120	
Lead	mg/L	0.1	0.097	97	80-120	
Lithium	mg/L	0.1	0.096	96	80-120	
Molybdenum	mg/L	0.1	0.10	100	80-120	
Selenium	mg/L	0.1	0.094	94	80-120	
Thallium	mg/L	0.1	0.097	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3113103 3113104

Parameter	Units	92512103004 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	MS Result	Spike Conc.	MSD Result						
Antimony	mg/L	ND	0.1	0.1	0.099	0.099	99	99	75-125	0	20	
Arsenic	mg/L	ND	0.1	0.1	0.092	0.092	92	92	75-125	0	20	

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### QUALITY CONTROL DATA

Project: HAMMOND AP-2 BKG 03

Pace Project No.: 92512574

Parameter	Units	3113103		3113104		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92512103004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result								
Barium	mg/L	ND	0.1	0.1	0.094	0.094	94	94	75-125	0	20		
Beryllium	mg/L	ND	0.1	0.1	0.095	0.096	95	96	75-125	1	20		
Boron	mg/L	ND	1	1	0.92	0.95	91	95	75-125	3	20		
Cadmium	mg/L	ND	0.1	0.1	0.095	0.096	95	96	75-125	1	20		
Chromium	mg/L	ND	0.1	0.1	0.093	0.096	93	96	75-125	3	20		
Cobalt	mg/L	ND	0.1	0.1	0.094	0.093	94	93	75-125	1	20		
Lead	mg/L	ND	0.1	0.1	0.092	0.095	92	95	75-125	3	20		
Lithium	mg/L	ND	0.1	0.1	0.094	0.099	94	99	75-125	4	20		
Molybdenum	mg/L	ND	0.1	0.1	0.097	0.096	97	96	75-125	1	20		
Selenium	mg/L	ND	0.1	0.1	0.089	0.091	89	91	75-125	2	20		
Thallium	mg/L	ND	0.1	0.1	0.091	0.094	91	94	75-125	3	20		

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**QUALITY CONTROL DATA**

Project: HAMMOND AP-2 BKG 03

Pace Project No.: 92512574

QC Batch: 588542	Analysis Method: EPA 7470A
QC Batch Method: EPA 7470A	Analysis Description: 7470 Mercury
	Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92512574001, 92512574002, 92512574003, 92512574004

METHOD BLANK: 3109729 Matrix: Water  
Associated Lab Samples: 92512574001, 92512574002, 92512574003, 92512574004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00050	0.000078	12/22/20 12:50	

LABORATORY CONTROL SAMPLE: 3109730

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	0.0025	0.0025	100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3109731 3109732

Parameter	Units	3109731		3109732		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Mercury	mg/L	ND	0.0025	0.0022	0.0023	89	90	75-125	1	20	

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

**REPORT OF LABORATORY ANALYSIS**

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### QUALITY CONTROL DATA

Project: HAMMOND AP-2 BKG 03

Pace Project No.: 92512574

QC Batch:	588373	Analysis Method:	SM 2450C-2011
QC Batch Method:	SM 2450C-2011	Analysis Description:	2540C Total Dissolved Solids
		Laboratory:	Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92512574001, 92512574002, 92512574003, 92512574004

METHOD BLANK: 3109057 Matrix: Water  
Associated Lab Samples: 92512574001, 92512574002, 92512574003, 92512574004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	12/19/20 12:17	

LABORATORY CONTROL SAMPLE: 3109058

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	408	102	84-108	

SAMPLE DUPLICATE: 3109059

Parameter	Units	92512397001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	65.0	70.0	7	10	

SAMPLE DUPLICATE: 3109063

Parameter	Units	92512574004 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	193	183	5	10	

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

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: HAMMOND AP-2 BKG 03  
Pace Project No.: 92512574

QC Batch: 589104 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: 92512574001, 92512574002, 92512574003, 92512574004

METHOD BLANK: 3112052 Matrix: Water  
Associated Lab Samples: 92512574001, 92512574002, 92512574003, 92512574004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	12/23/20 16:31	
Fluoride	mg/L	ND	0.10	0.050	12/23/20 16:31	
Sulfate	mg/L	ND	1.0	0.50	12/23/20 16:31	

LABORATORY CONTROL SAMPLE: 3112053

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	51.6	103	90-110	
Fluoride	mg/L	2.5	2.5	102	90-110	
Sulfate	mg/L	50	52.0	104	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3112054 3112055

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92513456002	Result	Spike Conc.	Spike Conc.								
Chloride	mg/L	409	50	50	471	456	125	94	90-110	3	10	M6	
Fluoride	mg/L	0.14	2.5	2.5	2.1	2.1	77	79	90-110	2	10	M1	
Sulfate	mg/L	403	50	50	466	450	126	93	90-110	4	10	M6	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3112056 3112057

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92512580004	Result	Spike Conc.	Spike Conc.								
Chloride	mg/L	3.4	50	50	57.4	57.5	108	108	90-110	0	10		
Fluoride	mg/L	0.18	2.5	2.5	2.7	2.7	102	102	90-110	0	10		
Sulfate	mg/L	11.3	50	50	65.5	65.6	108	109	90-110	0	10		

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

### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: HAMMOND AP-2 BKG 03

Pace Project No.: 92512574

---

### 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.

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

TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

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

M6 Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.

## REPORT OF LABORATORY ANALYSIS

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**QUALITY CONTROL DATA CROSS REFERENCE TABLE**

Project: HAMMOND AP-2 BKG 03  
Pace Project No.: 92512574

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92512574001	HGWA-43D				
92512574002	HGWA-44D				
92512574004	HGWA-42D				
92512574001	HGWA-43D	EPA 3010A	589396	EPA 6010D	589429
92512574002	HGWA-44D	EPA 3010A	589396	EPA 6010D	589429
92512574003	EB-01	EPA 3010A	589396	EPA 6010D	589429
92512574004	HGWA-42D	EPA 3010A	589396	EPA 6010D	589429
92512574001	HGWA-43D	EPA 3005A	589337	EPA 6020B	589405
92512574002	HGWA-44D	EPA 3005A	589337	EPA 6020B	589405
92512574003	EB-01	EPA 3005A	589337	EPA 6020B	589405
92512574004	HGWA-42D	EPA 3005A	589337	EPA 6020B	589405
92512574001	HGWA-43D	EPA 7470A	588542	EPA 7470A	588758
92512574002	HGWA-44D	EPA 7470A	588542	EPA 7470A	588758
92512574003	EB-01	EPA 7470A	588542	EPA 7470A	588758
92512574004	HGWA-42D	EPA 7470A	588542	EPA 7470A	588758
92512574001	HGWA-43D	SM 2450C-2011	588373		
92512574002	HGWA-44D	SM 2450C-2011	588373		
92512574003	EB-01	SM 2450C-2011	588373		
92512574004	HGWA-42D	SM 2450C-2011	588373		
92512574001	HGWA-43D	EPA 300.0 Rev 2.1 1993	589104		
92512574002	HGWA-44D	EPA 300.0 Rev 2.1 1993	589104		
92512574003	EB-01	EPA 300.0 Rev 2.1 1993	589104		
92512574004	HGWA-42D	EPA 300.0 Rev 2.1 1993	589104		

**REPORT OF LABORATORY ANALYSIS**

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

**Laboratory receiving samples:**

Asheville  Eden  Greenwood  Huntersville  Raleigh  Mechanicsville  Atlanta  Kernersville

Sample Condition Upon Receipt

Client Name: GA Power

Project # **WO# : 92512574**



92512574

Courier:  Fed Ex  UPS  USPS  Client  
 Commercial  Pace  Other: \_\_\_\_\_

Custody Seal Present?  Yes  No Seals Intact?  Yes  No

Date/Initials Person Examining Contents: 2/17/15

Packing Material:  Bubble Wrap  Bubble Bags  None  Other

Biological Tissue Frozen?

Thermometer:  IR Gun ID: 214 Type of Ice:  Wet  Blue  None

Yes  No  N/A

Cooler Temp: 4.2 Correction Factor: Add/Subtract (°C) 0.1

Temp should be above freezing to 6°C

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

Cooler Temp Corrected (°C): 4.3

USDA Regulated Soil ( N/A, water sample)

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

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

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

COMMENTS/SAMPLE DISCREPANCY

Field Data Required?  Yes  No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

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

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

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

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

\*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

Projer

**WO# : 92512574**

PM: KLH1

Due Date: 01/04/21

CLIENT: GA-GA Power

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)	BP4C-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	AG3A(DG3A)-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unp (N/A)	DG9P-40 mL VOA H3PO4 (N/A)	VOAK (6 vials per kit)-5035 kit (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)	BP3A-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved vials (N/A)	VSGU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)			
1		✓	✓			✓																								
2																														
3																														
4																														
5																														
6																														
7																														
8																														
9																														
10																														
11																														
12																														

**pH Adjustment Log for Preserved Samples**

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

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



### CHAIN-OF-CUSTODY / Analytical Request Document

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

Page: 1 of 1

<b>Section A</b> Required Client Information: Company: GA Power Address: Atlanta, GA		<b>Section B</b> Required Project Information: Report for: SCS Contacts Copy To: Geosyntec Contacts		<b>Section C</b> Invoice Information: Attention: Southern Co. Company Name:	
Email To: SCS Contacts Phone: Fax Requested Due Date/TIME: 10 Day		Purchase Order No.: Project Name: Plant Hammond AP-2 BKG 03 Project Number: GW65818		Address: Page Quote Reference: Kevin Herring Project Manager Fax Phone #: 10838-4	
<b>REGULATORY AGENCY</b> <input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input checked="" type="checkbox"/> OTHER (see)			Site Location: GA STATE:		

ITEM #	Section B Required Client Information	Valid Matrix Codes MATRIX CODE <small>           DOMESTIC WATER CW            WASTE WATER WW            WASTEWATER WWT            FUEL OIL FO            FUEL OIL SOLID FOS            WASTE OIL WO            AIR APT            OTHER OT            TISSUE TS         </small>	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives	Analysis Test	Requested Analysis Filtered (Y/N)				Residual Chlorine (Y/N)	pH	
					DATE	TIME					DATE	TIME	Chloride, Fluoride, Sulfate	TDS			Full App. III&IV Metals 6010/6020*
1	HGWA-440		WT G					5	2	3							
2	HGWA-43D		WT G	12/15	1225			17	5	2	3						
3	HGWA-44D		WT G	12/15	1415			16	5	2	3						
4	EB-01		WT G	12/15	1805			5	5	2	3						
5																	
6																	
7																	
8																	
9																	
10																	
11																	
12																	

**ADDITIONAL COMMENTS**  
 Please note dry weirs, strike through any wells not sampled, and note when the last sample for the event has been taken.  
 Full App. III & IV Metals-SS, As, Ba, Be, B, Cd, Cr, Co, Pb, U, Hg, Mo, Se, Ti  
 One sample set submitted for HGWA-43D and HGWA-44D but they will be reported for AP-1/2/3 SDGS  
 One sample set submitted for EB-01 but it will be reported for AP-1/2/3 SDGS

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
Thomas Kessler / Southern Co.	12/17	0616	Kevin Herring / Face Project	12/17	8:48A	
Thomas Kessler / Southern Co.	12/17/12	1102	Kevin Herring / Face Project	12/17/12	1102	

**SAMPLER NAME AND SIGNATURE**

PRINT Name of SAMPLER: Thomas Kessler  
 SIGNATURE of SAMPLER: *Thomas Kessler*  
 DATE Signed (MANDATORY): 12/15/12

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

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



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

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

**Section B** Required Project Information:  
Report To: SCS Contacts  
Color To: Geosyntec Contacts

**Section C** Invoice Information:  
Attention: Southern Co.  
Company Name:  
Address:  
Purchase Order No.:  
Plant Name: Plant Hammond AP-2 BKG 03  
Project Number: GWS5818

Page: 1 of 2

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

**Section B** Required Project Information:  
Report To: SCS Contacts  
Color To: Geosyntec Contacts

**Section C** Invoice Information:  
Attention: Southern Co.  
Company Name:  
Address:  
Purchase Order No.:  
Plant Name: Plant Hammond AP-2 BKG 03  
Project Number: GWS5818

**REGULATORY AGENCY**  
 NPDES  GROUND WATER  DRINKING WATER  
 UST  RCRA  
 Site Location: \_\_\_\_\_ STATE: GA

**Requested Due Date/TAT:** to Day

ITEM #	Section D Required Client Information	Valid Matrix Codes MATRIX	CODE	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.				
												Unpreserved	H <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>	HCl	NaOH	Na <sub>2</sub> S <sub>2</sub> O <sub>5</sub>	Methanol	Other	Chloride, Fluoride, Sulfate	TDS	Full App. III&IV Metals 6010/6020*				RAD 220/228			
1	HQWA-42D	DISTURBED WASTE WATER	WT	G	G	12/15/20	1:15	12/15/20	8:15		5	2	3							X	N	N	N						
2	HQWA-43D	DISTURBED WASTE WATER	WT	G	G	12/15/20	1:35	12/15/20	8:15		5	2	3							X	N	N	N						
3	HQWA-44D	DISTURBED WASTE WATER	WT	G	G	12/15/20	1:35	12/15/20	8:15		5	2	3							X	N	N	N						
4	EB-01	OTHER	WT	G	G	12/15/20	1:35	12/15/20	8:15		5	2	3							X	N	N	N						
5																													
6																													
7																													
8																													
9																													
10																													
11																													
12																													

**ADDITIONAL COMMENTS**  
Please note dry wells, strike through any wells not sampled, and note when the last sample for the event has been taken.  
Full App. III & IV Metals-Sp. Ar. Ba. Be. B. Cd. Ca. Cr. Co. Pb. Li. Hg. Mo. Se. Tl.  
One sample set submitted for HQWA-43D and HQWA-44D but they will be reported for AP-112/3 SDGs  
One sample set submitted for EB-01 but it will be reported for AP-112/3 SDGs

**RELINQUISHED BY / AFFILIATION**  
Shawn Lin / Geosyntec  
Thomas Messinger / Geo

**DATE**  
12/15/20

**TIME**  
8:15

**ACCEPTED BY / AFFILIATION**  
Thomas Messinger / Geo  
Derek Pearce / Pace

**DATE**  
12/15/20

**TIME**  
8:15

**SAMPLER NAME AND SIGNATURE**  
PRINT Name of SAMPLER: Shawn Lin  
SIGNATURE of SAMPLER: Shawn Lin  
DATE Signed (MM/DD/YY): 12/15/20

**Temp in °C**

**Received on ice (Y/N)**

**Custody Sealed Cooler (Y/N)**

**Samples intact (Y/N)**

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

F-ALL-Q-20rev.07 15-F-08-2007

January 2021



February 15, 2021

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

RE: Project: HAMMOND AP-2 BKG 04 RADS  
Pace Project No.: 92517863

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on January 21, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

- Pace Analytical Services - Greensburg

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

Sincerely,



Kevin Herring  
kevin.herring@pacelabs.com  
1(704)875-9092  
HORIZON Database Administrator

Enclosures

cc: Christine Hug, Geosyntec Consultants, Inc.  
Kristen Jurinko  
Thomas Kessler, Geosyntec  
Whitney Law, Geosyntec Consultants  
Noelia Muskus, Geosyntec Consultants  
Ms. Lauren Petty, Southern Co. Services  
Nardos Tilahun, GeoSyntec  
Dawit Yifru, Geosyntec Consultants, Inc.



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: HAMMOND AP-2 BKG 04 RADS

Pace Project No.: 92517863

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### **Pace Analytical Services Pennsylvania**

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

ANAB DOD-ELAP Rad Accreditation #: L2417

Alabama Certification #: 41590

Arizona Certification #: AZ0734

Arkansas Certification

California Certification #: 04222CA

Colorado Certification #: PA01547

Connecticut Certification #: PH-0694

Delaware Certification

EPA Region 4 DW Rad

Florida/TNI Certification #: E87683

Georgia Certification #: C040

Florida: Cert E871149 SEKS WET

Guam Certification

Hawaii Certification

Idaho Certification

Illinois Certification

Indiana Certification

Iowa Certification #: 391

Kansas/TNI Certification #: E-10358

Kentucky Certification #: KY90133

KY WW Permit #: KY0098221

KY WW Permit #: KY0000221

Louisiana DHH/TNI Certification #: LA180012

Louisiana DEQ/TNI Certification #: 4086

Maine Certification #: 2017020

Maryland Certification #: 308

Massachusetts Certification #: M-PA1457

Michigan/PADEP Certification #: 9991

Missouri Certification #: 235

Montana Certification #: Cert0082

Nebraska Certification #: NE-OS-29-14

Nevada Certification #: PA014572018-1

New Hampshire/TNI Certification #: 297617

New Jersey/TNI Certification #: PA051

New Mexico Certification #: PA01457

New York/TNI Certification #: 10888

North Carolina Certification #: 42706

North Dakota Certification #: R-190

Ohio EPA Rad Approval: #41249

Oregon/TNI Certification #: PA200002-010

Pennsylvania/TNI Certification #: 65-00282

Puerto Rico Certification #: PA01457

Rhode Island Certification #: 65-00282

South Dakota Certification

Tennessee Certification #: 02867

Texas/TNI Certification #: T104704188-17-3

Utah/TNI Certification #: PA014572017-9

USDA Soil Permit #: P330-17-00091

Vermont Dept. of Health: ID# VT-0282

Virgin Island/PADEP Certification

Virginia/VELAP Certification #: 9526

Washington Certification #: C868

West Virginia DEP Certification #: 143

West Virginia DHHR Certification #: 9964C

Wisconsin Approve List for Rad

Wyoming Certification #: 8TMS-L

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: HAMMOND AP-2 BKG 04 RADS

Pace Project No.: 92517863

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92517863001	HGWA-42D	Water	01/20/21 10:15	01/21/21 11:30
92517863002	HGWA-43D	Water	01/19/21 16:45	01/21/21 11:30
92517863003	HGWA-44D	Water	01/19/21 17:42	01/21/21 11:30
92517863004	EB-01	Water	01/20/21 14:00	01/21/21 11:30

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: HAMMOND AP-2 BKG 04 RADS

Pace Project No.: 92517863

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92517863001	HGWA-42D	EPA 9315	JJY	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92517863002	HGWA-43D	EPA 9315	JJY	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92517863003	HGWA-44D	EPA 9315	JJY	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92517863004	EB-01	EPA 9315	JJY	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: HAMMOND AP-2 BKG 04 RADS  
Pace Project No.: 92517863

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>92517863001</b>	<b>HGWA-42D</b>					
EPA 9315	Radium-226	0.143 ± 0.250 (0.565) C:82% T:NA	pCi/L		02/09/21 08:43	
EPA 9320	Radium-228	0.702 ± 0.395 (0.726) C:71% T:93%	pCi/L		02/12/21 11:38	
Total Radium Calculation	Total Radium	0.845 ± 0.645 (1.29)	pCi/L		02/12/21 14:52	
<b>92517863002</b>	<b>HGWA-43D</b>					
EPA 9315	Radium-226	0.203 ± 0.224 (0.445) C:90% T:NA	pCi/L		02/09/21 07:43	
EPA 9320	Radium-228	0.482 ± 0.373 (0.741) C:82% T:84%	pCi/L		02/04/21 11:54	
Total Radium Calculation	Total Radium	0.685 ± 0.597 (1.19)	pCi/L		02/10/21 10:25	
<b>92517863003</b>	<b>HGWA-44D</b>					
EPA 9315	Radium-226	0.259 ± 0.225 (0.402) C:101% T:NA	pCi/L		02/09/21 07:43	
EPA 9320	Radium-228	0.531 ± 0.589 (1.24) C:73% T:80%	pCi/L		02/04/21 14:43	
Total Radium Calculation	Total Radium	0.790 ± 0.814 (1.64)	pCi/L		02/10/21 10:25	
<b>92517863004</b>	<b>EB-01</b>					
EPA 9315	Radium-226	0.0391 ± 0.180 (0.466) C:86% T:NA	pCi/L		02/09/21 07:43	
EPA 9320	Radium-228	0.365 ± 0.434 (0.916) C:78% T:72%	pCi/L		02/04/21 14:59	
Total Radium Calculation	Total Radium	0.404 ± 0.614 (1.38)	pCi/L		02/10/21 10:25	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 BKG 04 RADS

Pace Project No.: 92517863

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: HGWA-42D</b> <b>Lab ID: 92517863001</b> Collected: 01/20/21 10:15      Received: 01/21/21 11:30      Matrix: Water PWS:      Site ID:      Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	<b>0.143 ± 0.250 (0.565)</b> <b>C:82% T:NA</b>	pCi/L	02/09/21 08:43	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>0.702 ± 0.395 (0.726)</b> <b>C:71% T:93%</b>	pCi/L	02/12/21 11:38	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>0.845 ± 0.645 (1.29)</b>	pCi/L	02/12/21 14:52	7440-14-4	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 BKG 04 RADS

Pace Project No.: 92517863

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: HGWA-43D</b> <b>Lab ID: 92517863002</b> Collected: 01/19/21 16:45      Received: 01/21/21 11:30      Matrix: Water PWS:      Site ID:      Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	<b>0.203 ± 0.224 (0.445)</b> <b>C:90% T:NA</b>	pCi/L	02/09/21 07:43	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>0.482 ± 0.373 (0.741)</b> <b>C:82% T:84%</b>	pCi/L	02/04/21 11:54	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>0.685 ± 0.597 (1.19)</b>	pCi/L	02/10/21 10:25	7440-14-4	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 BKG 04 RADS

Pace Project No.: 92517863

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: HGWA-44D</b> <b>Lab ID: 92517863003</b> Collected: 01/19/21 17:42      Received: 01/21/21 11:30      Matrix: Water PWS:      Site ID:      Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	<b>0.259 ± 0.225 (0.402)</b> <b>C:101% T:NA</b>	pCi/L	02/09/21 07:43	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>0.531 ± 0.589 (1.24)</b> <b>C:73% T:80%</b>	pCi/L	02/04/21 14:43	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>0.790 ± 0.814 (1.64)</b>	pCi/L	02/10/21 10:25	7440-14-4	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 BKG 04 RADS

Pace Project No.: 92517863

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: EB-01</b> <b>Lab ID: 92517863004</b> Collected: 01/20/21 14:00      Received: 01/21/21 11:30      Matrix: Water PWS:      Site ID:      Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	<b>0.0391 ± 0.180 (0.466)</b> <b>C:86% T:NA</b>	pCi/L	02/09/21 07:43	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>0.365 ± 0.434 (0.916)</b> <b>C:78% T:72%</b>	pCi/L	02/04/21 14:59	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>0.404 ± 0.614 (1.38)</b>	pCi/L	02/10/21 10:25	7440-14-4	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-2 BKG 04 RADS

Pace Project No.: 92517863

QC Batch: 433216

Analysis Method: EPA 9320

QC Batch Method: EPA 9320

Analysis Description: 9320 Radium 228

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92517863001

METHOD BLANK: 2091814

Matrix: Water

Associated Lab Samples: 92517863001

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.138 ± 0.326 (0.726) C:71% T:81%	pCi/L	02/12/21 11:39	

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

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-2 BKG 04 RADS

Pace Project No.: 92517863

QC Batch:	432561	Analysis Method:	EPA 9320
QC Batch Method:	EPA 9320	Analysis Description:	9320 Radium 228
		Laboratory:	Pace Analytical Services - Greensburg

Associated Lab Samples: 92517863002, 92517863003, 92517863004

METHOD BLANK: 2088957 Matrix: Water

Associated Lab Samples: 92517863002, 92517863003, 92517863004

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.423 ± 0.354 (0.709) C:81% T:84%	pCi/L	02/04/21 14:59	

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

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-2 BKG 04 RADS

Pace Project No.: 92517863

QC Batch: 433326

Analysis Method: EPA 9315

QC Batch Method: EPA 9315

Analysis Description: 9315 Total Radium

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92517863001, 92517863002, 92517863003, 92517863004

METHOD BLANK: 2092294

Matrix: Water

Associated Lab Samples: 92517863001, 92517863002, 92517863003, 92517863004

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.150 ± 0.194 (0.397) C:92% T:NA	pCi/L	02/09/21 07:43	

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

### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: HAMMOND AP-2 BKG 04 RADS

Pace Project No.: 92517863

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### DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

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

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

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-2 BKG 04 RADS

Pace Project No.: 92517863

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92517863001	HGWA-42D	EPA 9315	433326		
92517863002	HGWA-43D	EPA 9315	433326		
92517863003	HGWA-44D	EPA 9315	433326		
92517863004	EB-01	EPA 9315	433326		
92517863001	HGWA-42D	EPA 9320	433216		
92517863002	HGWA-43D	EPA 9320	432561		
92517863003	HGWA-44D	EPA 9320	432561		
92517863004	EB-01	EPA 9320	432561		
92517863001	HGWA-42D	Total Radium Calculation	434825		
92517863002	HGWA-43D	Total Radium Calculation	434357		
92517863003	HGWA-44D	Total Radium Calculation	434357		
92517863004	EB-01	Total Radium Calculation	434357		

### REPORT OF LABORATORY ANALYSIS

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

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

Sample Condition Upon Receipt: \_\_\_\_\_ Client Name: GA Power Project #: **WO#: 92517863**

Courier:  Fed Ex  UPS  USPS  Client  
 Commercial  Pace  Other: \_\_\_\_\_



Custody Seal Present?  Yes  No Seals Intact?  Yes  No

Date/Initials Person Examining Contents: 12/21/20 CS

Packing Material:  Bubble Wrap  Bubble Bags  None  Other \_\_\_\_\_  
 Thermometer: \_\_\_\_\_ Type of Ice:  Wet  Blue  None  
 Biological Tissue Frozen?  Yes  No  N/A

Cooler Temp: 4.1 Correction Factor: Add/Subtract (°C) -0.2 Temp should be above freezing to 6°C  
 Samples out of temp criteria. Samples on ice, cooling process has begun

Cooler Temp Corrected (°C) 3.9  
 USDA Regulated Soil ( N/A, water sample)  
 Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)?  Yes  No  
 Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)?  Yes  No

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

COMMENTS/SAMPLE DISCREPANCY \_\_\_\_\_ Field Data Required?  Yes  No

Lot ID of split containers: \_\_\_\_\_

Person contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

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

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



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

Project #

**WO# : 92517863**

PM: KLH1 Due Date: 02/11/21

CLIENT: GA-GA Power

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

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

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic Zn Acetate & NaOH (>9)	BP4C-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass Jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	AG3A(DG3A)-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unp (N/A)	DG9P-40 mL VOA H3PO4 (N/A)	VOAK (6 vials per kit)-5035 kit (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)	BP3A-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG6U-100 mL Amber Unpreserved vials (N/A)	VSGU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)		
1																													
2																													
3																													
4																													
5																													
6																													
7																													
8																													
9																													
10																													
11																													
12																													

**pH Adjustment Log for Preserved Samples**

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

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



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

<b>Section A</b> Required Client Information: Company: GA Power Address: Atlanta, GA		<b>Section B</b> Required Project Information: Report for: SCS Contacts Copy To: Geosyntec Contacts		<b>Section C</b> Invoice Information: Attention: Southern Co. Address: Pace Gate Reference: Pace Project Reference: Kevin Herring Pace Project #: 10839-4	
Email To: SCS Contacts Phone: _____ Requested Due Date/TAT: 10 Day		Purchase Order No.: _____ Project Name: Plant Hammond AP-2 BKG 04 Project Number: GW6581B		Company Name: _____ Address: _____ State: _____	
Regulatory Agency: _____ <input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER		Site Location: _____ STATE: GA			

ITEM #	Section D Required Client Information	Valid Matrix Codes MATRIX CODE	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives		Analysis Test	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)	
				DATE	TIME			DATE	TIME								H <sub>2</sub> SO <sub>4</sub>
1	HGWA-42D	WT	G	1/20/21	11:15	7.68	5	2	3	X	X	X	X				
2	HGWA-43D	WT	G	1/18/21	11:45	7.39	5	2	3	X	X	X	X				
3	HGWA-44D	WT	G							X	X	X	X				
4	EB-01	WT	G							X	X	X	X				
5										X	X	X	X				
6										X	X	X	X				
7										X	X	X	X				
8										X	X	X	X				
9										X	X	X	X				
10										X	X	X	X				
11										X	X	X	X				
12										X	X	X	X				

**ADDITIONAL COMMENTS**  
Please note dry wells, strike through any wells not sampled, and note when the last sample for the event has been taken.  
Full App. III & IV Metals=Sb, As, Ba, Be, B, Cd, Cr, Co, Pb, Li, Hg, Mo, Se, Tl  
One sample set submitted for HGWA-43D and HGWA-44D but they will be reported for AP-172/3 SDGs  
One sample set submitted for EB-01 but it will be reported for AP-172/4 SDGs

**RELIQUISHED BY / AFFILIATION**  
Date: 1/21/21 Time: 11:30  
Signature: [Signature]

**ACCEPTED BY / AFFILIATION**  
Date: 1/21/21 Time: 11:30  
Signature: [Signature]

**SAMPLER NAME AND SIGNATURE**  
PRINT Name of SAMPLER: [Name]  
SIGNATURE of SAMPLER: [Signature]  
DATE Signed: 1/20/21

**REGULATORY AGENCY**  
 NPDES  GROUND WATER  DRINKING WATER  
 UST  RCRA  OTHER

\*Important Note: By signing this form, you are accepting Pace's NET 30 day payment terms and agreeing to the charges of 1.5% per month for any invoices not paid within 30 days.  
F-ALL-C-020rev.07, 15-Feb-2007





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

<b>Section A</b> Required Client Information Company: GA Power Address: Atlanta, GA		<b>Section B</b> Required Project Information Report To: SCS Contacts Copy To: Geosyntec Contacts		<b>Section C</b> Invoicing Information Attention: Southern Co. Company Name:	
Email To: SCS Contacts Phone:		Purchase Order No.: Project Name: Plant Hammond AP-2 BKG 04 Project Number: GW6581B		Address: Page Quote: Reference: Invoice Project: Kevin Herring Invoice Number: Pace Profile #: 10839.4	
Requested Due Date/TAT: To Day				REGULATORY AGENCY <input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input checked="" type="checkbox"/> OTHER (specify)	
		Site Location STATE: GA			

ITEM #	Section D Required Client Information	Valid Matrix Codes MATRIX CODE DIV WATER WASTE WATER SLURRY SOLIDIFIED LIQ OIL WIRE AIR OTHER TISSUE	MATRIX CODE (See valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives							Analysis Test	Requested Analysis Filled (Y/N)	Residual Chlorine (Y/N)	pH	pH = 7.86
					DATE	TIME			DATE	TIME	Unpreserved	H <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>	HCl	NaOH					
1	HGWA-42D		WT G	G				5	2	3										
2	HGWA-43D		WT G	G				5	2	3										
3	HGWA-44D		WT G	G	1/19	1742	19	5	2	3										
4	EB-01		WT G	G				5	2	3										
5																				
6																				
7																				
8																				
9																				
10																				
11																				
12																				

**ADDITIONAL COMMENTS:**

Please note dry wells. Strike through any wells not sampled, and note when the last sample for the event has been taken.

Full App. III & IV Metals=Su. As. Ba. Be. B. Cd. Cr. Co. Pb. U. Hg. Mn. Se. Tl

One sample set submitted for HGWA-43D and HGWA-44D but they will be reported for AP-1/2/3 SDGs

One sample set submitted for EB-01 but it will be reported for AP-1/2/3 SDGs

RELINQUISHED BY / AFFILIATION		DATE	TIME	ACCEPTED BY / AFFILIATION		DATE	TIME
[Signature]		1/20/12	1600	[Signature]		1/21/12	1600
[Signature]		1/21/12	1130	[Signature]		1/21/12	1130
[Signature]		1/21/12	1320	[Signature]		1/21/12	1320

**SAMPLER NAME AND SIGNATURE**

PRINT Name of SAMPLER: Chad Kutz

SIGNATURE of SAMPLER: [Signature]

DATE Signed (MM/DD/YY): 1/19/12

Temp in °C

Recovery (Y/N)

Custody Sealed/Chlor (Y/N)

Samples intact (Y/N)



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

Page: 3 of 3

<b>Section A</b> Required Client Information:		<b>Section B</b> Required Project Information:		<b>Section C</b> Invoice Information:	
Company: GA Power	Address: Atlanta, GA	Report To: SCS Contacts	Copy To: Geosyntec Contacts	Attention: Southern Co.	Company Name: Southern Co.
Email To: SCS Contacts	Phone: Fax	Purchase Order No.:	Project Name: Plant Hammond AP-2 BKG 04	Price Quote	Price Project
Requested Due Date/TAT: 10 Day	Project Number: GW6581B	Price Profile #	10839-4	Reference:	Kevin Herzig
REGULATORY AGENCY		REGULATORY AGENCY		REGULATORY AGENCY	
<input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER:		<input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER:		<input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER:	
Site Location		Site Location		Site Location	
STATE: GA		STATE: GA		STATE: GA	

ITEM #	Section D Required Client Information	Valid Matrix Codes MATERIAL CODE DOMESTIC WATER DW WASTE WATER WW WATER WWT PRODUCT P SOLID/SLURRY SL SOIL/SUBSTRATE SS WASTE WASTE AIR AT OTHER OT TSS TS	MATRIX CODE (See valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives						Analysis Test	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	pH
					DATE	TIME			DATE	TIME	H <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>	HCl	NaOH				
1	HGWA-42D		WT G					5	2	3								
2	HGWA-43D		WT G					5	2	3								
3	HGWA-74D		WT G					5	2	3								
4	EB-01		WT G	1/20	ADD			5	2	3								
5																		
6																		
7																		
8																		
9																		
10																		
11																		
12																		

**ADDITIONAL COMMENTS**

Please note dry wells, sinks through any wells not sampled, and note when the last sample for the event has been taken.  
Full App. III & IV Metals-Sb, As, Ba, Br, B, Cd, Ca, Cr, Co, Cu, Pb, U, Hg, Mn, Se, Ti

One sample set submitted for HGWA-43D and HGWA-44D but they will be reported for AP-1/2/3 SDCs  
One sample set submitted for EB-01 but it will be reported for AP-1/2/3 SDCs

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
<i>[Signature]</i> / Pace	1/20/21	1300	<i>[Signature]</i> / Pace	1/21/21	1130
<i>[Signature]</i> / Pace	1/21/21	1320	<i>[Signature]</i> / Pace	1/21/21	1130

**SAMPLER NAME AND SIGNATURE**

PRINT Name of SAMPLER: *[Signature]* E556

SIGNATURE of SAMPLER: *[Signature]*

DATE Signed: 1/21/21

Temp in °C

Received on ice (Y/N)

Custody Sealed Cooler (Y/N)

Samples Intact (Y/N)

# Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-228  
Analyst: VAL  
Date: 2/10/2021  
Worklist: 58611  
Matrix: WT

Method Blank Assessment	
MB Sample ID	2091814
MB concentration:	0.138
MB 2 Sigma CSU:	0.326
MB MDC:	0.726
MB Numerical Performance Indicator:	0.83
MB Status vs Numerical Indicator:	Pass
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCS (Y or N)?	
	LCS58611	Y
Count Date:	2/12/2021	LCS58611
Spike I.D.:	21-003	2/12/2021
Decay Corrected Spike Concentration (pCi/mL):	38.853	21-003
Volume Used (L, g, F):	0.10	38.853
Aliquot Volume (L, g, F):	0.806	0.10
Target Conc. (pCi/L, g, F):	4.818	0.812
Uncertainty (Calculated):	0.236	4.785
Result (pCi/L, g, F):	5.366	0.234
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	1.169	4.659
Numerical Performance Indicator:	0.90	1.056
Percent Recovery:	111.36%	-0.23
Status vs Numerical Indicator:	N/A	97.38%
Status vs Recovery:	Pass	N/A
Upper % Recovery Limits:	135%	Pass
Lower % Recovery Limits:	60%	135%
		60%

Duplicate Sample Assessment	LCS58611	Y
Sample I.D.:	LCS58611	2/12/2021
Duplicate Sample I.D.:	5.366	21-003
Sample Result (pCi/L, g, F):	1.169	38.853
Sample Duplicate Result (pCi/L, g, F):	4.659	0.10
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	1.056	0.812
Are sample and/or duplicate results below RL?	NO	4.785
Duplicate Numerical Performance Indicator:	0.879	0.234
Duplicate (Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	13.40%	4.659
Duplicate Status vs Numerical Indicator:	Pass	1.056
Duplicate Status vs RPD:	Pass	NO
% RPD Limit:	36%	0.879

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

Comments:

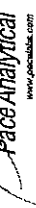
2-12-21  
JW

Sample Matrix Spike Control Assessment	MS/MSD 1	MS/MSD 2
Sample Collection Date:		
Sample I.D.:		
Sample MS I.D.:		
Sample MSD I.D.:		
Spike I.D.:		
MS/MSD Decay Corrected Spike Concentration (pCi/mL):		
Spike Volume Used in MS (mL):		
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 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:		
MS 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:
Duplicate (Based on the Percent Recoveries) MS/MSD Duplicate RPD:
MS/MSD Duplicate Status vs Numerical Indicator:
MS/MSD Duplicate Status vs RPD:
% RPD Limit:

M 2/12/21

# Quality Control Sample Performance Assessment



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

Test: Ra-226  
 Analyst: JJY  
 Date: 2/8/2021  
 Worklist: 58638  
 Matrix: DW

Method Blank Assessment	
MB Sample ID	2092294
MB concentration:	0.150
M/B Counting Uncertainty:	0.192
MB MDC:	0.397
MB Numerical Performance Indicator:	1.53
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCS/D (Y or N)?	
	LCS58638	LCS58638
Count Date:	2/9/2021	2/9/2021
Spike I.D.:	19-033	19-033
Decay Corrected Spike Concentration (pCi/mL):	24.040	24.040
Volume Used (mL):	0.10	0.10
Aliquot Volume (L, g, F):	0.505	0.507
Target Conc. (pCi/L, g, F):	4.765	4.742
Uncertainty (Calculated):	0.057	0.057
Result (pCi/L, g, F):	4.773	5.375
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.808	0.863
Numerical Performance Indicator:	0.02	1.44
Percent Recovery:	100.16%	113.37%
Status vs Numerical Indicator:	N/A	N/A
Status vs Recovery:	Pass	Pass
Upper % Recovery Limits:	125%	125%
Lower % Recovery Limits:	75%	75%

Duplicate Sample Assessment	Enter Duplicate sample IDs if other than LCS/LCSD in the space below:
Sample I.D.:	LCS58638
Duplicate Sample I.D.:	LCS58638
Sample Result (pCi/L, g, F):	4.773
Sample Duplicate Result (pCi/L, g, F):	0.808
Sample Duplicate Counting Uncertainty (pCi/L, g, F):	5.375
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.863
Are sample and/or duplicate results below RL?	NO
Duplicate Numerical Performance Indicator:	-0.999
Duplicate (Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	12.37%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Pass
% RPD Limit:	25%

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

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

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

Comments:

*Handwritten signature/initials*



# Quality Control Sample Performance Assessment



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

Test: Ra-226  
Analyst: JJY  
Date: 2/8/2021  
Worklist: 58638  
Matrix: DW

Method Blank Assessment	
MB Sample ID	2092294
MB Concentration:	0.150
M/B Counting Uncertainty:	0.192
MB MDC:	0.397
MB Numerical Performance Indicator:	1.53
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCS/D Y or N?	
	LGS58638	LCS058638
Count Date:	2/9/2021	
Spike I.D.:	19-033	
Decay Corrected Spike Concentration (pCi/mL):	24.040	
Volume Used (mL):	0.10	
Aliquot Volume (L, g, F):	0.505	
Target Conc. (pCi/L, g, F):	4.765	
Uncertainty (Calculated):	0.057	
Result (pCi/L, g, F):	4.773	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.808	
Numerical Performance Indicator:	0.02	
Percent Recovery:	100.16%	
Status vs Numerical Indicator:	N/A	
Status vs Recovery:	Pass	
Upper % Recovery Limits:	125%	
Lower % Recovery Limits:	75%	

Duplicate Sample Assessment	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Sample I.D.:	92517856001
Duplicate Sample I.D.:	92517856001DUP
Sample Result (pCi/L, g, F):	0.203
Sample Duplicate Result (pCi/L, g, F):	0.222
Sample Duplicate Counting Uncertainty (pCi/L, g, F):	0.681
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.370
Are sample and/or duplicate results below RL?	See Below ##
Duplicate Numerical Performance Indicator:	-2.171
Duplicate RPD:	108.17%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Fail***
% RPD Limit:	25%

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

Comments:

NI 33 acceptable  
M 2/9/21

JJY  
2-9-21

# Quality Control Sample Performance Assessment

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

Test: Ra-228  
Analyst: VAL  
Date: 2/2/2021  
Worklist: 58538  
Matrix: WT



Method Blank Assessment	
MB Sample ID	2086957
MB concentration:	0.423
M/B 2 Sigma CSU:	0.354
MB MDC:	0.709
MB Numerical Performance Indicator:	2.34
MB Status vs Numerical Indicator:	Warning
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment		LCSD (Y or N)?	Y
Count Date:	2/4/2021	LCSD58538	2/4/2021
Spike I.D.:	20-030		20-030
Decay Corrected Spike Concentration (pCi/mL):	36.635		36.635
Volume Used (mL):	0.10		0.10
Aliquot Volume (L, g, F):	0.806		0.806
Target Conc. (pCi/L, g, F):	4.563		4.543
Uncertainty (Calculated):	0.224		0.223
Result (pCi/L, g, F):	2.734		3.105
LCSD/LCSD 2 Sigma CSU (pCi/L, g, F):	0.942		0.887
Numerical Performance Indicator:	-3.70		-3.08
Percent Recovery:	59.92%		68.36%
Status vs Numerical Indicator:	Fail**		N/A
Status vs Recovery:	Fail Low**		Pass
Upper % Recovery Limits:	135%		135%
Lower % Recovery Limits:	60%		60%

Duplicate Sample Assessment		LCSD (Y or N)?	Y
Sample I.D.:	LCS58538		
Duplicate Sample I.D.:	LCSD58538		
Sample Result (pCi/L, g, F):	2.734		
Sample Result 2 Sigma CSU (pCi/L, g, F):	0.942		
Sample Duplicate Result (pCi/L, g, F):	3.105		
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	0.887		
Are sample and/or duplicate results below RL?	NO		
Duplicate Numerical Performance Indicator:	-0.563		
(Based on the LCSD/LCSD Percent Recoveries) Duplicate RPD:	13.15%		
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:

\*\*Batch must be re-prepped due to LCS failure.

*2/3/21*

Sample Matrix Spike Control Assessment	MS/MSD 1	MS/MSD 2
<p>Sample Collection Date: Sample I.D. Sample MS I.D. Sample MSD I.D. Spike I.D.:</p> <p>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):</p> <p>Sample Result: Sample Result 2 Sigma CSU (pCi/L, g, F): Sample Matrix Spike Result: Sample Matrix Spike Result: Sample Matrix Spike Duplicate Result: Sample Matrix Spike Duplicate Result: 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:</p>		

Matrix Spike/Matrix Spike Duplicate Sample Assessment
<p>Sample I.D. Sample MS I.D. Sample MSD I.D.</p> <p>Sample Matrix Spike Result: 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:</p>

# Quality Control Sample Performance Assessment

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

Test: Ra-228  
Analyst: VAL  
Date: 2/5/2021  
Worklist: 58538  
Matrix:



**Method Blank Assessment**

MB Sample ID  
MB concentration:  
MB MDC:  
MB Numerical Performance Indicator:  
MB Status vs Numerical Indicator:  
MB Status vs. MDC:

LCSID (Y or N)?	Y	
	LCS58538	2/8/2021
Count Date:	2/8/2021	LCS58538
Spike I.D.:	20-030	20-030
Decay Corrected Spike Concentration (pCi/mL):	36.590	36.590
Volume Used (mL):	0.10	0.10
Aliquot Volume (L, g, F):	0.803	0.806
Target Conc. (pCi/L, g, F):	4.557	4.538
Uncertainty (Calculated):	0.223	0.222
Result (pCi/L, g, F):	4.275	4.409
Numerical Performance Indicator:	1.024	1.024
Percent Recovery:	-0.53	-0.24
Status vs Numerical Indicator:	93.80%	97.18%
Upper % Recovery Limits:	N/A	N/A
Lower % Recovery Limits:	Pass	Pass
	135%	135%
	60%	60%

**Duplicate Sample Assessment**

Sample I.D.:	LCS58538
Duplicate Sample I.D.:	LCS58538
Sample Result (pCi/L, g, F):	4.275
Sample Duplicate Result (pCi/L, g, F):	1.024
Are sample and/or duplicate results below RL?	NO
Duplicate Numerical Performance Indicator:	-0.182
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	3.63%
Duplicate Status vs Numerical Indicator:	Pass
Duplicate Status vs RPD:	Pass
% RPD Limit:	36%

Enter Duplicate sample IDs if other than LCS/LCSD in the space below.

2/9/21

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

Comments:

*Ma 2/9/21*

Sample Matrix Spike Control Assessment	MS/MSD 1	MS/MSD 2
<p>Sample Collection Date: Sample I.D. Sample MS I.D. Sample MSD I.D. Spike I.D.:</p> <p>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:</p> <p>Sample Matrix Spike Result:</p> <p>Sample Matrix Spike Duplicate Result:</p> <p>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:</p>		

**Matrix Spiker/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:
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:	

February 04, 2021

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

RE: Project: HAMMOND AP-2 BKG 04  
Pace Project No.: 92517891

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on January 21, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

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

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

Sincerely,



Kevin Herring  
kevin.herring@pacelabs.com  
1(704)875-9092  
HORIZON Database Administrator

Enclosures

cc: Christine Hug, Geosyntec Consultants, Inc.  
Kristen Jurinko  
Thomas Kessler, Geosyntec  
Whitney Law, Geosyntec Consultants  
Noelia Muskus, Geosyntec Consultants  
Ms. Lauren Petty, Southern Co. Services  
Nardos Tilahun, GeoSyntec  
Dawit Yifru, Geosyntec Consultants, Inc.



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: HAMMOND AP-2 BKG 04

Pace Project No.: 92517891

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### **Pace Analytical Services Charlotte**

9800 Kinsey Ave. Ste 100, Huntersville, NC 28078

Louisiana/NELAP Certification # LA170028

North Carolina Drinking Water Certification #: 37706

North Carolina Field Services Certification #: 5342

North Carolina Wastewater Certification #: 12

South Carolina Certification #: 99006001

Florida/NELAP Certification #: E87627

Kentucky UST Certification #: 84

Virginia/VELAP Certification #: 460221

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### **Pace Analytical Services Asheville**

2225 Riverside Drive, Asheville, NC 28804

Florida/NELAP Certification #: E87648

North Carolina Drinking Water Certification #: 37712

North Carolina Wastewater Certification #: 40

South Carolina Certification #: 99030001

Virginia/VELAP Certification #: 460222

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

110 Technology Pkwy, Peachtree Corners, GA 30092

Florida DOH Certification #: E87315

Georgia DW Inorganics Certification #: 812

North Carolina Certification #: 381

South Carolina Certification #: 98011001

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: HAMMOND AP-2 BKG 04

Pace Project No.: 92517891

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92517891001	HGWA-42D	Water	01/20/21 10:15	01/21/21 11:30
92517891002	HGWA-43D	Water	01/19/21 16:45	01/21/21 11:30
92517891003	HGWA-44D	Water	01/19/21 17:42	01/21/21 11:30
92517891004	EB-01	Water	01/20/21 14:00	01/21/21 11:30

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: HAMMOND AP-2 BKG 04  
Pace Project No.: 92517891

Lab ID	Sample ID	Method	Analysts	Analytes Reported
92517891001	HGWA-42D	EPA 6010D	DRB	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2450C-2011	AW1	1
		EPA 300.0 Rev 2.1 1993	JLH	3
92517891002	HGWA-43D	EPA 6010D	DRB	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2450C-2011	AW1	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92517891003	HGWA-44D	EPA 6010D	DRB	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2450C-2011	AW1	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92517891004	EB-01	EPA 6010D	DRB	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2450C-2011	AW1	1
		EPA 300.0 Rev 2.1 1993	CDC	3

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

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### SUMMARY OF DETECTION

Project: HAMMOND AP-2 BKG 04

Pace Project No.: 92517891

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
<b>92517891001</b>	<b>HGWA-42D</b>					
	Performed by	CUSTOME			02/04/21 09:43	
		R				
	pH	7.68	Std. Units		02/04/21 09:43	
EPA 6010D	Calcium	41.8	mg/L	1.0	02/02/21 14:43	
EPA 6020B	Barium	0.20	mg/L	0.010	02/02/21 19:40	
EPA 6020B	Boron	0.045J	mg/L	0.10	02/02/21 19:40	
EPA 6020B	Lithium	0.010J	mg/L	0.030	02/02/21 19:40	
SM 2450C-2011	Total Dissolved Solids	158	mg/L	10.0	01/22/21 16:44	
EPA 300.0 Rev 2.1 1993	Chloride	2.8	mg/L	1.0	01/26/21 21:54	
EPA 300.0 Rev 2.1 1993	Fluoride	0.082J	mg/L	0.10	01/26/21 21:54	
EPA 300.0 Rev 2.1 1993	Sulfate	9.8	mg/L	1.0	01/26/21 21:54	
<b>92517891002</b>	<b>HGWA-43D</b>					
	Performed by	CUSTOME			02/04/21 09:43	
		R				
	pH	7.39	Std. Units		02/04/21 09:43	
EPA 6010D	Calcium	60.1	mg/L	1.0	02/02/21 09:19	
EPA 6020B	Antimony	0.00029J	mg/L	0.0030	02/02/21 19:23	B
EPA 6020B	Arsenic	0.0011J	mg/L	0.0050	02/02/21 19:23	
EPA 6020B	Barium	0.32	mg/L	0.010	02/02/21 19:23	
EPA 6020B	Boron	0.049J	mg/L	0.10	02/02/21 19:23	
EPA 6020B	Lead	0.000044J	mg/L	0.0050	02/02/21 19:23	
EPA 6020B	Lithium	0.0025J	mg/L	0.030	02/02/21 19:23	
EPA 6020B	Molybdenum	0.0038J	mg/L	0.010	02/02/21 19:23	
SM 2450C-2011	Total Dissolved Solids	270	mg/L	10.0	01/22/21 09:38	
EPA 300.0 Rev 2.1 1993	Chloride	4.1	mg/L	1.0	01/24/21 23:50	
EPA 300.0 Rev 2.1 1993	Fluoride	0.16	mg/L	0.10	01/24/21 23:50	
EPA 300.0 Rev 2.1 1993	Sulfate	37.3	mg/L	1.0	01/24/21 23:50	
<b>92517891003</b>	<b>HGWA-44D</b>					
	Performed by	CUSTOME			02/04/21 09:43	
		R				
	pH	7.86	Std. Units		02/04/21 09:43	
EPA 6010D	Calcium	33.0	mg/L	1.0	02/02/21 14:34	
EPA 6020B	Antimony	0.00067J	mg/L	0.0030	02/02/21 19:29	B
EPA 6020B	Barium	0.41	mg/L	0.010	02/02/21 19:29	
EPA 6020B	Boron	0.40	mg/L	0.10	02/02/21 19:29	
EPA 6020B	Chromium	0.0011J	mg/L	0.010	02/02/21 19:29	
EPA 6020B	Lead	0.00019J	mg/L	0.0050	02/02/21 19:29	
EPA 6020B	Lithium	0.034	mg/L	0.030	02/02/21 19:29	
EPA 6020B	Molybdenum	0.0035J	mg/L	0.010	02/02/21 19:29	
SM 2450C-2011	Total Dissolved Solids	278	mg/L	10.0	01/22/21 09:39	
EPA 300.0 Rev 2.1 1993	Chloride	9.5	mg/L	1.0	01/25/21 00:04	
EPA 300.0 Rev 2.1 1993	Fluoride	0.74	mg/L	0.10	01/25/21 00:04	
EPA 300.0 Rev 2.1 1993	Sulfate	7.4	mg/L	1.0	01/25/21 00:04	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: HAMMOND AP-2 BKG 04  
Pace Project No.: 92517891

Sample: <b>HGWA-42D</b>		Lab ID: <b>92517891001</b>		Collected: 01/20/21 10:15		Received: 01/21/21 11:30		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		02/04/21 09:43		
pH	<b>7.68</b>	Std. Units			1		02/04/21 09:43		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	<b>41.8</b>	mg/L	1.0	0.070	1	02/01/21 11:28	02/02/21 14:43	7440-70-2	
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	02/02/21 09:23	02/02/21 19:40	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	02/02/21 09:23	02/02/21 19:40	7440-38-2	
Barium	<b>0.20</b>	mg/L	0.010	0.00071	1	02/02/21 09:23	02/02/21 19:40	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	02/02/21 09:23	02/02/21 19:40	7440-41-7	
Boron	<b>0.045J</b>	mg/L	0.10	0.0052	1	02/02/21 09:23	02/02/21 19:40	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	02/02/21 09:23	02/02/21 19:40	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	02/02/21 09:23	02/02/21 19:40	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	02/02/21 09:23	02/02/21 19:40	7440-48-4	
Lead	ND	mg/L	0.0050	0.000036	1	02/02/21 09:23	02/02/21 19:40	7439-92-1	
Lithium	<b>0.010J</b>	mg/L	0.030	0.00081	1	02/02/21 09:23	02/02/21 19:40	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	02/02/21 09:23	02/02/21 19:40	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	02/02/21 09:23	02/02/21 19:40	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	02/02/21 09:23	02/02/21 19:40	7440-28-0	
<b>7470 Mercury</b>									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00050	0.000078	1	01/26/21 07:45	01/26/21 10:40	7439-97-6	
<b>2540C Total Dissolved Solids</b>									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	<b>158</b>	mg/L	10.0	10.0	1		01/22/21 16:44		
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	<b>2.8</b>	mg/L	1.0	0.60	1		01/26/21 21:54	16887-00-6	
Fluoride	<b>0.082J</b>	mg/L	0.10	0.050	1		01/26/21 21:54	16984-48-8	
Sulfate	<b>9.8</b>	mg/L	1.0	0.50	1		01/26/21 21:54	14808-79-8	

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### ANALYTICAL RESULTS

Project: HAMMOND AP-2 BKG 04  
Pace Project No.: 92517891

Sample: <b>HGWA-43D</b>		Lab ID: <b>92517891002</b>		Collected: 01/19/21 16:45		Received: 01/21/21 11:30		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		02/04/21 09:43		
pH	<b>7.39</b>	Std. Units			1		02/04/21 09:43		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	<b>60.1</b>	mg/L	1.0	0.070	1	02/01/21 11:28	02/02/21 09:19	7440-70-2	
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	<b>0.00029J</b>	mg/L	0.0030	0.00028	1	02/02/21 09:23	02/02/21 19:23	7440-36-0	B
Arsenic	<b>0.0011J</b>	mg/L	0.0050	0.00078	1	02/02/21 09:23	02/02/21 19:23	7440-38-2	
Barium	<b>0.32</b>	mg/L	0.010	0.00071	1	02/02/21 09:23	02/02/21 19:23	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	02/02/21 09:23	02/02/21 19:23	7440-41-7	
Boron	<b>0.049J</b>	mg/L	0.10	0.0052	1	02/02/21 09:23	02/02/21 19:23	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	02/02/21 09:23	02/02/21 19:23	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	02/02/21 09:23	02/02/21 19:23	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	02/02/21 09:23	02/02/21 19:23	7440-48-4	
Lead	<b>0.000044J</b>	mg/L	0.0050	0.000036	1	02/02/21 09:23	02/02/21 19:23	7439-92-1	
Lithium	<b>0.0025J</b>	mg/L	0.030	0.00081	1	02/02/21 09:23	02/02/21 19:23	7439-93-2	
Molybdenum	<b>0.0038J</b>	mg/L	0.010	0.00069	1	02/02/21 09:23	02/02/21 19:23	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	02/02/21 09:23	02/02/21 19:23	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	02/02/21 09:23	02/02/21 19:23	7440-28-0	
<b>7470 Mercury</b>									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00050	0.000078	1	01/26/21 07:45	01/26/21 10:33	7439-97-6	
<b>2540C Total Dissolved Solids</b>									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	<b>270</b>	mg/L	10.0	10.0	1		01/22/21 09:38		
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	<b>4.1</b>	mg/L	1.0	0.60	1		01/24/21 23:50	16887-00-6	
Fluoride	<b>0.16</b>	mg/L	0.10	0.050	1		01/24/21 23:50	16984-48-8	
Sulfate	<b>37.3</b>	mg/L	1.0	0.50	1		01/24/21 23:50	14808-79-8	

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### ANALYTICAL RESULTS

Project: HAMMOND AP-2 BKG 04  
Pace Project No.: 92517891

Sample: <b>HGWA-44D</b>		Lab ID: <b>92517891003</b>		Collected: 01/19/21 17:42		Received: 01/21/21 11:30		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		02/04/21 09:43		
pH	<b>7.86</b>	Std. Units			1		02/04/21 09:43		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	<b>33.0</b>	mg/L	1.0	0.070	1	02/01/21 11:28	02/02/21 14:34	7440-70-2	
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	<b>0.00067J</b>	mg/L	0.0030	0.00028	1	02/02/21 09:23	02/02/21 19:29	7440-36-0	B
Arsenic	ND	mg/L	0.0050	0.00078	1	02/02/21 09:23	02/02/21 19:29	7440-38-2	
Barium	<b>0.41</b>	mg/L	0.010	0.00071	1	02/02/21 09:23	02/02/21 19:29	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	02/02/21 09:23	02/02/21 19:29	7440-41-7	
Boron	<b>0.40</b>	mg/L	0.10	0.0052	1	02/02/21 09:23	02/02/21 19:29	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	02/02/21 09:23	02/02/21 19:29	7440-43-9	
Chromium	<b>0.0011J</b>	mg/L	0.010	0.00055	1	02/02/21 09:23	02/02/21 19:29	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	02/02/21 09:23	02/02/21 19:29	7440-48-4	
Lead	<b>0.00019J</b>	mg/L	0.0050	0.000036	1	02/02/21 09:23	02/02/21 19:29	7439-92-1	
Lithium	<b>0.034</b>	mg/L	0.030	0.00081	1	02/02/21 09:23	02/02/21 19:29	7439-93-2	
Molybdenum	<b>0.0035J</b>	mg/L	0.010	0.00069	1	02/02/21 09:23	02/02/21 19:29	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	02/02/21 09:23	02/02/21 19:29	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	02/02/21 09:23	02/02/21 19:29	7440-28-0	
<b>7470 Mercury</b>									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00050	0.000078	1	01/26/21 07:45	01/26/21 10:35	7439-97-6	
<b>2540C Total Dissolved Solids</b>									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	<b>278</b>	mg/L	10.0	10.0	1		01/22/21 09:39		
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	<b>9.5</b>	mg/L	1.0	0.60	1		01/25/21 00:04	16887-00-6	
Fluoride	<b>0.74</b>	mg/L	0.10	0.050	1		01/25/21 00:04	16984-48-8	
Sulfate	<b>7.4</b>	mg/L	1.0	0.50	1		01/25/21 00:04	14808-79-8	

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### ANALYTICAL RESULTS

Project: HAMMOND AP-2 BKG 04  
Pace Project No.: 92517891

Sample: EB-01		Lab ID: 92517891004		Collected: 01/20/21 14:00		Received: 01/21/21 11:30		Matrix: Water		
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
<b>6010D ATL ICP</b>		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Calcium	ND	mg/L	1.0	0.070	1	02/01/21 11:28	02/02/21 14:39	7440-70-2		
<b>6020 MET ICPMS</b>		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00028	1	02/02/21 09:23	02/02/21 19:34	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.00078	1	02/02/21 09:23	02/02/21 19:34	7440-38-2		
Barium	ND	mg/L	0.010	0.00071	1	02/02/21 09:23	02/02/21 19:34	7440-39-3		
Beryllium	ND	mg/L	0.0030	0.000046	1	02/02/21 09:23	02/02/21 19:34	7440-41-7		
Boron	ND	mg/L	0.10	0.0052	1	02/02/21 09:23	02/02/21 19:34	7440-42-8		
Cadmium	ND	mg/L	0.0025	0.00012	1	02/02/21 09:23	02/02/21 19:34	7440-43-9		
Chromium	ND	mg/L	0.010	0.00055	1	02/02/21 09:23	02/02/21 19:34	7440-47-3		
Cobalt	ND	mg/L	0.0050	0.00038	1	02/02/21 09:23	02/02/21 19:34	7440-48-4		
Lead	ND	mg/L	0.0050	0.000036	1	02/02/21 09:23	02/02/21 19:34	7439-92-1		
Lithium	ND	mg/L	0.030	0.00081	1	02/02/21 09:23	02/02/21 19:34	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.00069	1	02/02/21 09:23	02/02/21 19:34	7439-98-7		
Selenium	ND	mg/L	0.010	0.0016	1	02/02/21 09:23	02/02/21 19:34	7782-49-2		
Thallium	ND	mg/L	0.0010	0.00014	1	02/02/21 09:23	02/02/21 19:34	7440-28-0		
<b>7470 Mercury</b>		Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00050	0.000078	1	01/26/21 07:45	01/26/21 10:38	7439-97-6		
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	ND	mg/L	10.0	10.0	1		01/22/21 16:44			
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	ND	mg/L	1.0	0.60	1		01/25/21 00:19	16887-00-6		
Fluoride	ND	mg/L	0.10	0.050	1		01/25/21 00:19	16984-48-8		
Sulfate	ND	mg/L	1.0	0.50	1		01/25/21 00:19	14808-79-8		

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: HAMMOND AP-2 BKG 04  
Pace Project No.: 92517891

QC Batch: 596653 Analysis Method: EPA 6010D  
QC Batch Method: EPA 3010A Analysis Description: 6010D ATL  
Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92517891001, 92517891002, 92517891003, 92517891004

METHOD BLANK: 3146677 Matrix: Water  
Associated Lab Samples: 92517891001, 92517891002, 92517891003, 92517891004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	0.070	02/01/21 20:01	

LABORATORY CONTROL SAMPLE: 3146678

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3146679 3146681

Parameter	Units	92517740001		3146681		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result						
Calcium	mg/L	157	1	1	159	152	244	-497	75-125	5	20 M1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3146682 3146683

Parameter	Units	92517909002		3146683		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result						
Calcium	mg/L	177	1	1	182	183	421	522	75-125	1	20 M1

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: HAMMOND AP-2 BKG 04  
Pace Project No.: 92517891

QC Batch: 596887 Analysis Method: EPA 6020B  
QC Batch Method: EPA 3005A Analysis Description: 6020 MET  
Laboratory: Pace Analytical Services - Peachtree Corners, GA  
Associated Lab Samples: 92517891001, 92517891002, 92517891003, 92517891004

METHOD BLANK: 3147679 Matrix: Water  
Associated Lab Samples: 92517891001, 92517891002, 92517891003, 92517891004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	0.00049J	0.0030	0.00028	02/02/21 18:08	
Arsenic	mg/L	ND	0.0050	0.00078	02/02/21 18:08	
Barium	mg/L	ND	0.010	0.00071	02/02/21 18:08	
Beryllium	mg/L	ND	0.0030	0.000046	02/02/21 18:08	
Boron	mg/L	ND	0.10	0.0052	02/02/21 18:08	
Cadmium	mg/L	ND	0.0025	0.00012	02/02/21 18:08	
Chromium	mg/L	ND	0.010	0.00055	02/02/21 18:08	
Cobalt	mg/L	ND	0.0050	0.00038	02/02/21 18:08	
Lead	mg/L	ND	0.0050	0.000036	02/02/21 18:08	
Lithium	mg/L	ND	0.030	0.00081	02/02/21 18:08	
Molybdenum	mg/L	ND	0.010	0.00069	02/02/21 18:08	
Selenium	mg/L	ND	0.010	0.0016	02/02/21 18:08	
Thallium	mg/L	ND	0.0010	0.00014	02/02/21 18:08	

LABORATORY CONTROL SAMPLE: 3147680

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.11	111	80-120	
Arsenic	mg/L	0.1	0.10	100	80-120	
Barium	mg/L	0.1	0.10	100	80-120	
Beryllium	mg/L	0.1	0.11	106	80-120	
Boron	mg/L	1	1.1	108	80-120	
Cadmium	mg/L	0.1	0.099	99	80-120	
Chromium	mg/L	0.1	0.10	103	80-120	
Cobalt	mg/L	0.1	0.10	102	80-120	
Lead	mg/L	0.1	0.10	102	80-120	
Lithium	mg/L	0.1	0.11	108	80-120	
Molybdenum	mg/L	0.1	0.10	103	80-120	
Selenium	mg/L	0.1	0.095	95	80-120	
Thallium	mg/L	0.1	0.10	102	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3147681 3147682

Parameter	Units	92517740002 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	MS Result	Spike Conc.	MSD Result						
Antimony	mg/L	0.00068J	0.1	0.1	0.1	0.11	107	111	75-125	3	20	
Arsenic	mg/L	ND	0.1	0.1	0.098	0.10	98	101	75-125	4	20	

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### QUALITY CONTROL DATA

Project: HAMMOND AP-2 BKG 04

Pace Project No.: 92517891

Parameter	Units	3147681		3147682		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92517740002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result								
Barium	mg/L	0.058	0.1	0.1	0.15	0.16	96	102	75-125	4	20		
Beryllium	mg/L	ND	0.1	0.1	0.099	0.10	99	102	75-125	3	20		
Boron	mg/L	0.022J	1	1	1.0	1.0	99	100	75-125	1	20		
Cadmium	mg/L	ND	0.1	0.1	0.094	0.096	94	96	75-125	2	20		
Chromium	mg/L	0.00061J	0.1	0.1	0.10	0.10	102	103	75-125	2	20		
Cobalt	mg/L	ND	0.1	0.1	0.10	0.10	100	101	75-125	1	20		
Lead	mg/L	0.000072J	0.1	0.1	0.094	0.097	94	97	75-125	3	20		
Lithium	mg/L	ND	0.1	0.1	0.098	0.10	98	101	75-125	4	20		
Molybdenum	mg/L	ND	0.1	0.1	0.10	0.10	101	101	75-125	0	20		
Selenium	mg/L	ND	0.1	0.1	0.093	0.094	92	93	75-125	2	20		
Thallium	mg/L	ND	0.1	0.1	0.095	0.097	95	97	75-125	2	20		

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### REPORT OF LABORATORY ANALYSIS

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**QUALITY CONTROL DATA**

Project: HAMMOND AP-2 BKG 04

Pace Project No.: 92517891

QC Batch: 594784	Analysis Method: EPA 7470A
QC Batch Method: EPA 7470A	Analysis Description: 7470 Mercury
	Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92517891001, 92517891002, 92517891003, 92517891004

METHOD BLANK: 3138045 Matrix: Water  
Associated Lab Samples: 92517891001, 92517891002, 92517891003, 92517891004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00050	0.000078	01/26/21 10:28	

LABORATORY CONTROL SAMPLE: 3138046

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: 3138047 3138048

Parameter	Units	3138047		3138048		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Mercury	mg/L	ND	0.0025	0.0024	0.0027	94	106	75-125	12	20	

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### QUALITY CONTROL DATA

Project: HAMMOND AP-2 BKG 04

Pace Project No.: 92517891

QC Batch: 594633

Analysis Method: SM 2450C-2011

QC Batch Method: SM 2450C-2011

Analysis Description: 2540C Total Dissolved Solids

Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92517891002, 92517891003

METHOD BLANK: 3137200

Matrix: Water

Associated Lab Samples: 92517891002, 92517891003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	01/22/21 09:32	

LABORATORY CONTROL SAMPLE: 3137201

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	398	100	84-108	

SAMPLE DUPLICATE: 3137203

Parameter	Units	92517894003 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	131	126	4	10	

SAMPLE DUPLICATE: 3137350

Parameter	Units	92517894002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	64.0	67.0	5	10	

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### QUALITY CONTROL DATA

Project: HAMMOND AP-2 BKG 04

Pace Project No.: 92517891

QC Batch: 594779

Analysis Method: SM 2450C-2011

QC Batch Method: SM 2450C-2011

Analysis Description: 2540C Total Dissolved Solids

Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92517891001, 92517891004

METHOD BLANK: 3137995

Matrix: Water

Associated Lab Samples: 92517891001, 92517891004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	01/22/21 16:40	

LABORATORY CONTROL SAMPLE: 3137996

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	394	98	84-108	

SAMPLE DUPLICATE: 3137997

Parameter	Units	92517969001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	ND	ND		10	

SAMPLE DUPLICATE: 3138171

Parameter	Units	92517909004 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	289	270	7	10	

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: HAMMOND AP-2 BKG 04  
Pace Project No.: 92517891

QC Batch: 594878 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: 92517891002, 92517891003, 92517891004

METHOD BLANK: 3138480 Matrix: Water  
Associated Lab Samples: 92517891002, 92517891003, 92517891004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	01/24/21 21:50	
Fluoride	mg/L	ND	0.10	0.050	01/24/21 21:50	
Sulfate	mg/L	ND	1.0	0.50	01/24/21 21:50	

LABORATORY CONTROL SAMPLE: 3138481

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	52.9	106	90-110	
Fluoride	mg/L	2.5	2.4	95	90-110	
Sulfate	mg/L	50	54.7	109	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3138482 3138483

Parameter	Units	92517740005		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	Conc.	Spike Conc.	Spike Conc.								
Chloride	mg/L	ND	50	50	53.9	53.4	108	107	90-110	1	10		
Fluoride	mg/L	ND	2.5	2.5	2.6	2.5	103	98	90-110	5	10		
Sulfate	mg/L	ND	50	50	55.4	54.9	111	110	90-110	1	10	M1	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3138484 3138485

Parameter	Units	92517704001		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	Conc.	Spike Conc.	Spike Conc.								
Chloride	mg/L	377	50	50	439	424	124	93	90-110	3	10	M6	
Fluoride	mg/L	0.23	2.5	2.5	ND	ND	-9	-9	90-110		10	M1	
Sulfate	mg/L	597	50	50	676	646	158	99	90-110	4	10	M6	

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### QUALITY CONTROL DATA

Project: HAMMOND AP-2 BKG 04  
Pace Project No.: 92517891

QC Batch: 595172 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: 92517891001

METHOD BLANK: 3139608 Matrix: Water  
Associated Lab Samples: 92517891001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	01/26/21 18:25	
Fluoride	mg/L	ND	0.10	0.050	01/26/21 18:25	
Sulfate	mg/L	ND	1.0	0.50	01/26/21 18:25	

LABORATORY CONTROL SAMPLE: 3139609

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	49.7	99	90-110	
Fluoride	mg/L	2.5	2.3	93	90-110	
Sulfate	mg/L	50	51.5	103	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3139610 3139611

Parameter	Units	92517999001		3139610		3139611		% Rec	% Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Chloride	mg/L	6.1	50	50	58.6	58.9	105	106	90-110	1	10		
Fluoride	mg/L	ND	2.5	2.5	2.6	2.6	102	102	90-110	0	10		
Sulfate	mg/L	5.0	50	50	59.1	59.4	108	109	90-110	1	10		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3139612 3139613

Parameter	Units	92517909004		3139612		3139613		% Rec	% Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Chloride	mg/L	3.5	50	50	56.5	56.6	106	106	90-110	0	10		
Fluoride	mg/L	0.22	2.5	2.5	2.5	2.5	92	93	90-110	0	10		
Sulfate	mg/L	14.2	50	50	67.4	67.7	106	107	90-110	1	10		

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## QUALIFIERS

Project: HAMMOND AP-2 BKG 04

Pace Project No.: 92517891

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### DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

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

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

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

TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

B Analyte was detected in the associated method blank.

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

M6 Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: HAMMOND AP-2 BKG 04  
Pace Project No.: 92517891

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92517891001	HGWA-42D				
92517891002	HGWA-43D				
92517891003	HGWA-44D				
92517891001	HGWA-42D	EPA 3010A	596653	EPA 6010D	596772
92517891002	HGWA-43D	EPA 3010A	596653	EPA 6010D	596772
92517891003	HGWA-44D	EPA 3010A	596653	EPA 6010D	596772
92517891004	EB-01	EPA 3010A	596653	EPA 6010D	596772
92517891001	HGWA-42D	EPA 3005A	596887	EPA 6020B	597015
92517891002	HGWA-43D	EPA 3005A	596887	EPA 6020B	597015
92517891003	HGWA-44D	EPA 3005A	596887	EPA 6020B	597015
92517891004	EB-01	EPA 3005A	596887	EPA 6020B	597015
92517891001	HGWA-42D	EPA 7470A	594784	EPA 7470A	595259
92517891002	HGWA-43D	EPA 7470A	594784	EPA 7470A	595259
92517891003	HGWA-44D	EPA 7470A	594784	EPA 7470A	595259
92517891004	EB-01	EPA 7470A	594784	EPA 7470A	595259
92517891001	HGWA-42D	SM 2450C-2011	594779		
92517891002	HGWA-43D	SM 2450C-2011	594633		
92517891003	HGWA-44D	SM 2450C-2011	594633		
92517891004	EB-01	SM 2450C-2011	594779		
92517891001	HGWA-42D	EPA 300.0 Rev 2.1 1993	595172		
92517891002	HGWA-43D	EPA 300.0 Rev 2.1 1993	594878		
92517891003	HGWA-44D	EPA 300.0 Rev 2.1 1993	594878		
92517891004	EB-01	EPA 300.0 Rev 2.1 1993	594878		

### REPORT OF LABORATORY ANALYSIS

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

**Laboratory receiving samples:**

Asheville  Eden  Greenwood  Huntersville  Raleigh  Mechanicsville  Atlanta  Kernersville

Sample Condition Upon Receipt

Client Name: GA Power

Project #: **WO# : 92517891**



92517891

Courier:  Fed Ex  UPS  USPS  Client  
 Commercial  Pace  Other: \_\_\_\_\_

Custody Seal Present?  Yes  No Seals Intact?  Yes  No

Date/Initials Person Examining Contents: 11/21/21 CS

Packing Material:  Bubble Wrap  Bubble Bags  None  Other

Biological Tissue Frozen?  Yes  No  N/A

Thermometer:  IR Gun ID: 233 Type of Ice:  Wet  Blue  None

Cooler Temp: 4.1 Correction Factor: Add/Subtract (°C) -0.2

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

Cooler Temp Corrected (°C) 3.9

USDA Regulated Soil ( N/A, water sample)

Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)?  Yes  No  
 Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)?  Yes  No

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

COMMENTS/SAMPLE DISCREPANCY

Field Data Required?  Yes  No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

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

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



Document Name:  
Sample Condition Upon Receipt(SCUR)

Document No.:  
F-CAR-CS-033-Rev.07

Document Revised: October 28, 2020  
Page 2 of 2

Issuing Authority:  
Pace Carolinas Quality Office

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

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

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

Project #

**WO# : 92517891**

PM: KLH1

Due Date: 02/04/21

CLIENT: GA-GA Power

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)	BP4C-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFLU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	AG3A(DG3A)-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unp (N/A)	DG9P-40 mL VOA H3PO4 (N/A)	VOAK (6 vials per kit)-5035 kit (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)	BP3A-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved vials (N/A)	VSGU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)	
1	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
2	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
3	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
4	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
5	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
6	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
7	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
8	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
9	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
10	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
11	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
12	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/

**pH Adjustment Log for Preserved Samples**

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

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



# CHAIN-OF-CUSTODY / Analytical Request Document

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

<b>Section A</b> Required Client Information	<b>Section B</b> Required Project Information
Company: GA Power	Report To: SCS Contacts
Address: Atlanta, GA	Copy To: Geosyntec Contacts
Email To: SCS Contacts	Purchase Order No.:
Phone: Fax	Project Name: Plant Hammond AP-2 BKG 04
Requested Due Date/TAT: 10 Day	Project Number: GW6561B
<b>Section C</b> Invoice Information	<b>REGULATORY AGENCY</b>
Attention: Southern Co.	<input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER
Company Name: Southern Co.	<input type="checkbox"/> UST <input type="checkbox"/> RCRA <input checked="" type="checkbox"/> OTHER
Address:	Site Location: GA
State: Southern Co.	STATE: GA
Reference: Kevin Herring	
Manager: Kevin Herring	
Pace Profile # 10839-4	

<b>Section D</b> Required Client Information	<b>Valid Matrix Codes</b>
<b>SAMPLE ID</b> (A-Z, 0-9 / -) Sample IDs MUST BE UNIQUE	DRAINAGE WATER DW WASTE WATER WW PRODUCT P SOIL/SOLID S OIL OL WPE WP AIR AR OTHER OT TISSUE TS
ITEM #	MATRIX CODE (see valid codes to left)
1	DATE 1/20/21 TIME 11:15
2	DATE 1/14/21 TIME 16:45
3	DATE 1/14/21 TIME 16:45
4	DATE 1/14/21 TIME 16:45
5	DATE 1/14/21 TIME 16:45
6	DATE 1/14/21 TIME 16:45
7	DATE 1/14/21 TIME 16:45
8	DATE 1/14/21 TIME 16:45
9	DATE 1/14/21 TIME 16:45
10	DATE 1/14/21 TIME 16:45
11	DATE 1/14/21 TIME 16:45
12	DATE 1/14/21 TIME 16:45

ITEM #	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives							Analysis Test	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	pH = 7.68 pH = 7.39 pH =	
			DATE	TIME			H <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>	HCl	NaOH	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>	Methanol	Other					Chloride, Fluoride, Sulfate
1	HQWA-42D	G	1/20/21	11:15	16.5	5	2	3										
2	HQWA-43D	G	1/14/21	16:45	16.5	5	2	3										
3	HQWA-44D	G	1/14/21	16:45	16.5	5	2	3										
4	EB-01	G	1/14/21	16:45	16.5	5	2	3										
5																		
6																		
7																		
8																		
9																		
10																		
11																		
12																		

<b>ADDITIONAL COMMENTS</b>	<b>RELINQUISHED BY / AFFILIATION</b>						
Please note dry wells, strike through any wells not sampled, and note when the last sample for the event has been taken. *Full App. III & IV Metals=Sh. As. Ba. Be. S. Cd. Ca. Cr. Co. Pb. Li. Hg. Mo. Se. Tl. One sample set submitted for HQWA-43D and HQWA-44D but they will be reported for AP-42/3 SDGs One sample set submitted for EB-01 but it will be reported for AP-1/2/4 SDGs	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th>DATE</th> <th>TIME</th> <th>ACCEPTED BY / AFFILIATION</th> </tr> <tr> <td>1/21/21</td> <td>11:30</td> <td>Kevin Herring / Pace</td> </tr> </table>	DATE	TIME	ACCEPTED BY / AFFILIATION	1/21/21	11:30	Kevin Herring / Pace
DATE	TIME	ACCEPTED BY / AFFILIATION					
1/21/21	11:30	Kevin Herring / Pace					

<b>SAMPLER NAME AND SIGNATURE</b>	
PRINT Name of SAMPLER: CONROY SAIV	DATE Signed: 1/20/21
SIGNATURE of SAMPLER: <i>[Signature]</i>	DATE Signed: 1/20/21





# CHAIN-OF-CUSTODY / Analytical Request Document

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

<b>Section A</b> Required Client Information		<b>Section B</b> Required Project Information		<b>Section C</b> Invoice Information	
Company: GA Power	Address: Atlanta, GA	Report To: SCS Contacts	Copy To: Geosyntec Contacts	Attention: Southern Co.	Company Name: Southern Co.
Email To: SCS Contacts	Phone: Fax	Project Name: Plant Hammond AP-2 BKG 04	Purchase Order No:	Address:	Reference:
Requested Due Date/TAT: 10 Day	Project Number: GW6581B	Page Project Manager: Kevin Herring	Page Profile #: 10839.4	Site Location STATE: GA	Requested Analysis Filtered (Y/N)

ITEM #	Section D Required Client Information  Valid Matrix Codes MATRIX CODE DRINKING WATER WASTE WATER GROUNDWATER SURFICIAL OIL WASTE AIR OTHER TISSUE Sample IDs MUST BE UNIQUE (A-Z, 0-9, / -)	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				Residual Chlorine (Y/N)				
										Unpreserved	H <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>	HCl	NaOH	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>	Methanol	Other	Chloride	Fluoride		Sulfate	IDS	Full App. III&IV Metals (60100020*)	RAD 226/228
1	HGWA-42D	WT G							5	2	3													
2	HGWA-43D	WT G							5	2	3													
3	HGWA-44D	WT G	1/19	1742				19	5	2	3													
4	EB-01	WT G							5	2	3													
5																								
6																								
7																								
8																								
9																								
10																								
11																								
12																								

**ADDITIONAL COMMENTS**

Please note dry wells - strike through any wells not sampled and note when the last sample for the event has been taken.  
\*Full App III & IV Metals-50 As, Ba, Bi, Cd, Ca, Cr, Co, Pb, Li, Hg, Mo, Se, Ti

One sample set submitted for HGWA-43D and HGWA-44D but they will be reported for AP-12/23 SDGS  
One sample set submitted for EB-01 but it will be reported for AP-12/24 SDGS

**RELINQUISHED BY / AFFILIATION**

<i>[Signature]</i>	1/20/14	1600	<i>[Signature]</i>	1/21/14	1130
<i>[Signature]</i>	1/21/14	1320	<i>[Signature]</i>	1/21/14	1130

**ACCEPTED BY / AFFILIATION**

<i>[Signature]</i>	1/21/14	1600
<i>[Signature]</i>	1/21/14	1130

**SAMPLER NAME AND SIGNATURE**

PRINT NAME OF SAMPLER: *Chad Russo*

SIGNATURE OF SAMPLER: *[Signature]*

DATE SIGNED (MM/DD/YYYY): 1/19/14

Temp in °C

Received on site (Y/N)

Custody Sealed Color (Y/N)

Samples Intact (Y/N)

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

F-ALL-Q-020/rev 07.15-Feb-2007



# CHAIN-OF-CUSTODY / Analytical Request Document

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

<b>Section A</b> Required Client Information:		<b>Section B</b> Required Project Information:		<b>Section C</b> Invoice Information:	
Company: GA Power	Address: Atlanta, GA	Report To: SCS Contacts	Copy To: Geosyntec Contacts	Attention: Southern Co.	Company Name: Southern Co.
Requested Due Date/TAT: 10 Day	Project Name: Plant Hammond AP-2 BKG 04	Purchase Order No.:	Address:	Preservative:	Company Name:
Phone:	Project Number: GW6581B	Requested Due Date/TAT: 10 Day	Price Quote:	H <sub>2</sub> SO <sub>4</sub>	Address:
Fax:			Reference:	HNO <sub>3</sub>	Price Quote:
			Project Manager:	HCl	Reference:
			Price Profile #:	NaOH	Project Manager: Kevin Herring
				Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>	Price Profile # 10939-4
				Methanol	
				Other	

ITEM #	Section D Required Client Information	Valid Matrix Codes MATRIX CODE	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives	Analysis Test	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)
					DATE	TIME						
1	HGWA-42D	WT G						3				
2	HGWA-43D	WT G						3				
3	HGWA-44D	WT G						3				
4	EB-01	WT G	1/20	1400				2				
5								3				
6								3				
7								3				
8								3				
9								3				
10								3				
11								3				
12								3				

ADDITIONAL COMMENTS		REINQUISHED BY / AFFILIATION		DATE		TIME		ACCEPTED BY / AFFILIATION		DATE		TIME	
Please note dry wells, strike through any wells not sampled and note when the last sample for the event has been taken.		[Signature]		1/20/11		6:00		[Signature]		1/20/11		6:00	
*Full App. III & IV Metals-Se, As, Ba, Bi, B, Cd, Ca, Cr, Co, Pb, U, Hg, Mo, Se, Tl		[Signature]		1/21/11		11:30		[Signature]		1/21/11		11:30	
One sample set submitted for HGWA-43D and HGWA-44D but they will be reported for AP-1/2/3 SDGS		[Signature]		1/21/11		13:20		[Signature]		1/21/11		13:20	
One sample set submitted for EB-01 but it will be reported for AP-1/2/3 SDGS		[Signature]		1/21/11		13:20		[Signature]		1/21/11		13:20	

SAMPLER NAME AND SIGNATURE		DATE SIGNED	
PRINT Name of SAMPLER: [Signature]	DATE Signed: 1/20/11		
SIGNATURE of SAMPLER: [Signature]	DATE Signed: 1/20/11		

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

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

February 2021



March 12, 2021

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

RE: Project: HAMMOND AP-2 APP IV RADS  
Pace Project No.: 92521125

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory between February 09, 2021 and February 17, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

- Pace Analytical Services - Greensburg

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

Sincerely,



Kevin Herring  
kevin.herring@pacelabs.com  
1(704)875-9092  
HORIZON Database Administrator

Enclosures

cc: Christine Hug, Geosyntec Consultants, Inc.  
Kristen Jurinko  
Thomas Kessler, Geosyntec  
Whitney Law, Geosyntec Consultants  
Noelia Muskus, Geosyntec Consultants  
Ms. Lauren Petty, Southern Co. Services  
Nardos Tilahun, GeoSyntec  
Dawit Yifru, Geosyntec Consultants, Inc.



## REPORT OF LABORATORY ANALYSIS

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without the written consent of Pace Analytical Services, LLC.

## CERTIFICATIONS

Project: HAMMOND AP-2 APP IV RADS

Pace Project No.: 92521125

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### **Pace Analytical Services Pennsylvania**

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

ANAB DOD-ELAP Rad Accreditation #: L2417

Alabama Certification #: 41590

Arizona Certification #: AZ0734

Arkansas Certification

California Certification #: 04222CA

Colorado Certification #: PA01547

Connecticut Certification #: PH-0694

Delaware Certification

EPA Region 4 DW Rad

Florida/TNI Certification #: E87683

Georgia Certification #: C040

Florida: Cert E871149 SEKS WET

Guam Certification

Hawaii Certification

Idaho Certification

Illinois Certification

Indiana Certification

Iowa Certification #: 391

Kansas/TNI Certification #: E-10358

Kentucky Certification #: KY90133

KY WW Permit #: KY0098221

KY WW Permit #: KY0000221

Louisiana DHH/TNI Certification #: LA180012

Louisiana DEQ/TNI Certification #: 4086

Maine Certification #: 2017020

Maryland Certification #: 308

Massachusetts Certification #: M-PA1457

Michigan/PADEP Certification #: 9991

Missouri Certification #: 235

Montana Certification #: Cert0082

Nebraska Certification #: NE-OS-29-14

Nevada Certification #: PA014572018-1

New Hampshire/TNI Certification #: 297617

New Jersey/TNI Certification #: PA051

New Mexico Certification #: PA01457

New York/TNI Certification #: 10888

North Carolina Certification #: 42706

North Dakota Certification #: R-190

Ohio EPA Rad Approval: #41249

Oregon/TNI Certification #: PA200002-010

Pennsylvania/TNI Certification #: 65-00282

Puerto Rico Certification #: PA01457

Rhode Island Certification #: 65-00282

South Dakota Certification

Tennessee Certification #: 02867

Texas/TNI Certification #: T104704188-17-3

Utah/TNI Certification #: PA014572017-9

USDA Soil Permit #: P330-17-00091

Vermont Dept. of Health: ID# VT-0282

Virgin Island/PADEP Certification

Virginia/VELAP Certification #: 9526

Washington Certification #: C868

West Virginia DEP Certification #: 143

West Virginia DHHR Certification #: 9964C

Wisconsin Approve List for Rad

Wyoming Certification #: 8TMS-L

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: HAMMOND AP-2 APP IV RADS  
Pace Project No.: 92521125

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92521125001	HGWA-1	Water	02/08/21 16:13	02/09/21 12:33
92521125002	HGWA-4	Water	02/08/21 15:54	02/09/21 12:33
92521125003	HGWA-42D	Water	02/08/21 17:36	02/09/21 12:33
92521125004	HGWA-2	Water	02/09/21 10:38	02/10/21 09:56
92521125005	HGWA-3	Water	02/09/21 11:56	02/10/21 09:56
92521125006	HGWA-5	Water	02/09/21 10:46	02/10/21 09:56
92521125007	HGWA-6	Water	02/09/21 12:00	02/10/21 09:56
92521125008	HGWA-43D	Water	02/09/21 17:58	02/10/21 09:56
92521125009	HGWA-44D	Water	02/09/21 13:09	02/10/21 09:56
92521125010	HGWC-16	Water	02/10/21 15:02	02/11/21 09:19
92521125011	HGWC-18	Water	02/11/21 12:57	02/12/21 09:36
92521125012	MW-21D	Water	02/11/21 14:53	02/12/21 09:36
92521125013	DUP-2	Water	02/11/21 00:00	02/12/21 09:36
92521125014	HGWC-14	Water	02/11/21 15:12	02/12/21 09:36
92521125015	HGWC-17	Water	02/11/21 11:30	02/12/21 09:36
92521125016	MW-37D	Water	02/11/21 13:09	02/12/21 09:36
92521125017	FB-2	Water	02/11/21 08:45	02/12/21 09:36
92521125018	HGWC-15	Water	02/12/21 15:01	02/15/21 09:45
92521125019	MW-23D	Water	02/12/21 13:54	02/15/21 09:45
92521125020	MW-33	Water	02/12/21 10:32	02/15/21 09:45
92521125021	EB-1	Water	02/12/21 15:35	02/15/21 09:45
92521125022	MW-22	Water	02/15/21 15:43	02/17/21 11:54
92521125023	MW-35	Water	02/15/21 11:35	02/17/21 11:54

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: HAMMOND AP-2 APP IV RADS  
Pace Project No.: 92521125

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92521125001	HGWA-1	EPA 9315	JJY	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92521125002	HGWA-4	EPA 9315	JJY	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92521125003	HGWA-42D	EPA 9315	JJY	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92521125004	HGWA-2	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92521125005	HGWA-3	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92521125006	HGWA-5	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92521125007	HGWA-6	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92521125008	HGWA-43D	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92521125009	HGWA-44D	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92521125010	HGWC-16	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92521125011	HGWC-18	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92521125012	MW-21D	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92521125013	DUP-2	EPA 9315	LAL	1	PASI-PA

### REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: HAMMOND AP-2 APP IV RADS

Pace Project No.: 92521125

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92521125014	HGWC-14	EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
92521125015	HGWC-17	Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92521125016	MW-37D	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
92521125017	FB-2	EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
92521125018	HGWC-15	Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92521125019	MW-23D	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
92521125020	MW-33	EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
92521125021	EB-1	Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92521125022	MW-22	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
92521125023	MW-35	EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg

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### SUMMARY OF DETECTION

Project: HAMMOND AP-2 APP IV RADS  
Pace Project No.: 92521125

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>92521125001</b>	<b>HGWA-1</b>					
EPA 9315	Radium-226	0.0455 ± 0.0937 (0.218) C:84% T:NA	pCi/L		03/02/21 07:38	
EPA 9320	Radium-228	0.177 ± 0.371 (0.820) C:77% T:86%	pCi/L		02/24/21 15:30	
Total Radium Calculation	Total Radium	0.223 ± 0.465 (1.04)	pCi/L		03/02/21 16:35	
<b>92521125002</b>	<b>HGWA-4</b>					
EPA 9315	Radium-226	0.167 ± 0.126 (0.227) C:94% T:NA	pCi/L		03/02/21 07:38	
EPA 9320	Radium-228	0.391 ± 0.353 (0.715) C:77% T:90%	pCi/L		02/24/21 15:30	
Total Radium Calculation	Total Radium	0.558 ± 0.479 (0.942)	pCi/L		03/02/21 16:35	
<b>92521125003</b>	<b>HGWA-42D</b>					
EPA 9315	Radium-226	0.0896 ± 0.0987 (0.196) C:83% T:NA	pCi/L		03/02/21 07:38	
EPA 9320	Radium-228	0.339 ± 0.323 (0.656) C:74% T:87%	pCi/L		02/24/21 15:30	
Total Radium Calculation	Total Radium	0.429 ± 0.422 (0.852)	pCi/L		03/02/21 16:35	
<b>92521125004</b>	<b>HGWA-2</b>					
EPA 9315	Radium-226	0.465 ± 0.189 (0.205) C:80% T:NA	pCi/L		03/08/21 08:33	
EPA 9320	Radium-228	0.256 ± 0.375 (0.807) C:77% T:89%	pCi/L		03/02/21 15:44	
Total Radium Calculation	Total Radium	0.721 ± 0.564 (1.01)	pCi/L		03/08/21 12:26	

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### SUMMARY OF DETECTION

Project: HAMMOND AP-2 APP IV RADS

Pace Project No.: 92521125

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>92521125005</b>	<b>HGWA-3</b>					
EPA 9315	Radium-226	0.161 ± 0.133 (0.248)	pCi/L		03/08/21 08:34	
EPA 9320	Radium-228	C:80% T:NA 0.286 ± 0.395 (0.847)	pCi/L		03/02/21 15:44	
Total Radium Calculation	Total Radium	C:75% T:86% 0.447 ± 0.528 (1.10)	pCi/L		03/08/21 12:26	
<b>92521125006</b>	<b>HGWA-5</b>					
EPA 9315	Radium-226	0.181 ± 0.139 (0.252)	pCi/L		03/08/21 08:33	
EPA 9320	Radium-228	C:78% T:NA 0.189 ± 0.359 (0.788)	pCi/L		03/02/21 15:44	
Total Radium Calculation	Total Radium	C:81% T:88% 0.370 ± 0.498 (1.04)	pCi/L		03/08/21 12:26	
<b>92521125007</b>	<b>HGWA-6</b>					
EPA 9315	Radium-226	0.0318 ± 0.0942 (0.231)	pCi/L		03/08/21 08:34	
EPA 9320	Radium-228	C:78% T:NA 0.292 ± 0.351 (0.744)	pCi/L		03/02/21 11:23	
Total Radium Calculation	Total Radium	C:75% T:86% 0.324 ± 0.445 (0.975)	pCi/L		03/08/21 12:26	
<b>92521125008</b>	<b>HGWA-43D</b>					
EPA 9315	Radium-226	0.138 ± 0.105 (0.176)	pCi/L		03/08/21 08:14	
EPA 9320	Radium-228	C:87% T:NA -0.0292 ± 0.272 (0.643)	pCi/L		03/02/21 11:24	
Total Radium Calculation	Total Radium	C:77% T:86% 0.138 ± 0.377 (0.819)	pCi/L		03/08/21 12:26	

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### SUMMARY OF DETECTION

Project: HAMMOND AP-2 APP IV RADS  
Pace Project No.: 92521125

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>92521125009</b>	<b>HGWA-44D</b>					
EPA 9315	Radium-226	0.171 ± 0.126 (0.217) C:84% T:NA	pCi/L		03/08/21 08:28	
EPA 9320	Radium-228	0.315 ± 0.398 (0.849) C:77% T:81%	pCi/L		03/02/21 11:24	
Total Radium Calculation	Total Radium	0.486 ± 0.524 (1.07)	pCi/L		03/08/21 12:26	
<b>92521125010</b>	<b>HGWC-16</b>					
EPA 9315	Radium-226	0.133 ± 0.110 (0.195) C:88% T:NA	pCi/L		03/08/21 08:07	
EPA 9320	Radium-228	0.640 ± 0.370 (0.674) C:75% T:87%	pCi/L		03/02/21 11:24	
Total Radium Calculation	Total Radium	0.773 ± 0.480 (0.869)	pCi/L		03/08/21 12:26	
<b>92521125011</b>	<b>HGWC-18</b>					
EPA 9315	Radium-226	0.729 ± 0.225 (0.179) C:82% T:NA	pCi/L		03/11/21 09:58	
EPA 9320	Radium-228	0.379 ± 0.381 (0.789) C:80% T:84%	pCi/L		03/03/21 16:04	
Total Radium Calculation	Total Radium	1.11 ± 0.606 (0.968)	pCi/L		03/11/21 12:05	
<b>92521125012</b>	<b>MW-21D</b>					
EPA 9315	Radium-226	0.0461 ± 0.0797 (0.179) C:90% T:NA	pCi/L		03/11/21 08:13	
EPA 9320	Radium-228	0.271 ± 0.360 (0.768) C:77% T:84%	pCi/L		03/03/21 16:04	
Total Radium Calculation	Total Radium	0.317 ± 0.440 (0.947)	pCi/L		03/11/21 12:05	

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### SUMMARY OF DETECTION

Project: HAMMOND AP-2 APP IV RADS  
Pace Project No.: 92521125

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>92521125013</b>	<b>DUP-2</b>					
EPA 9315	Radium-226	0.0950 ± 0.100 (0.198) C:89% T:NA	pCi/L		03/11/21 08:14	
EPA 9320	Radium-228	0.678 ± 0.580 (1.18) C:79% T:83%	pCi/L		03/03/21 19:09	
Total Radium Calculation	Total Radium	0.773 ± 0.680 (1.38)	pCi/L		03/11/21 12:05	
<b>92521125014</b>	<b>HGWC-14</b>					
EPA 9315	Radium-226	0.211 ± 0.148 (0.268) C:92% T:NA	pCi/L		03/11/21 08:14	
EPA 9320	Radium-228	0.519 ± 0.631 (1.34) C:81% T:73%	pCi/L		03/03/21 19:09	
Total Radium Calculation	Total Radium	0.730 ± 0.779 (1.61)	pCi/L		03/11/21 12:05	
<b>92521125015</b>	<b>HGWC-17</b>					
EPA 9315	Radium-226	0.249 ± 0.147 (0.235) C:86% T:NA	pCi/L		03/11/21 08:14	
EPA 9320	Radium-228	0.582 ± 0.643 (1.35) C:79% T:70%	pCi/L		03/03/21 19:09	
Total Radium Calculation	Total Radium	0.831 ± 0.790 (1.59)	pCi/L		03/11/21 12:05	
<b>92521125016</b>	<b>MW-37D</b>					
EPA 9315	Radium-226	0.120 ± 0.0993 (0.172) C:88% T:NA	pCi/L		03/11/21 08:14	
EPA 9320	Radium-228	-0.00471 ± 0.555 (1.28) C:81% T:76%	pCi/L		03/03/21 19:09	
Total Radium Calculation	Total Radium	0.120 ± 0.654 (1.45)	pCi/L		03/11/21 12:05	

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### SUMMARY OF DETECTION

Project: HAMMOND AP-2 APP IV RADS

Pace Project No.: 92521125

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>92521125017</b>	<b>FB-2</b>					
EPA 9315	Radium-226	0.0191 ± 0.0760 (0.192) C:86% T:NA	pCi/L		03/11/21 08:14	
EPA 9320	Radium-228	0.943 ± 0.566 (1.06) C:82% T:87%	pCi/L		03/03/21 19:09	
Total Radium Calculation	Total Radium	0.962 ± 0.642 (1.25)	pCi/L		03/11/21 12:05	
<b>92521125018</b>	<b>HGWC-15</b>					
EPA 9315	Radium-226	0.0642 ± 0.0865 (0.182) C:83% T:NA	pCi/L		03/11/21 08:14	
EPA 9320	Radium-228	1.59 ± 0.818 (1.47) C:80% T:67%	pCi/L		03/03/21 19:10	
Total Radium Calculation	Total Radium	1.65 ± 0.905 (1.65)	pCi/L		03/11/21 12:05	
<b>92521125019</b>	<b>MW-23D</b>					
EPA 9315	Radium-226	0.0716 ± 0.0829 (0.165) C:89% T:NA	pCi/L		03/11/21 08:14	
EPA 9320	Radium-228	1.14 ± 0.727 (1.38) C:77% T:67%	pCi/L		03/03/21 19:10	
Total Radium Calculation	Total Radium	1.21 ± 0.810 (1.55)	pCi/L		03/11/21 12:05	
<b>92521125020</b>	<b>MW-33</b>					
EPA 9315	Radium-226	0.376 ± 0.154 (0.161) C:88% T:NA	pCi/L		03/11/21 08:15	
EPA 9320	Radium-228	1.88 ± 0.788 (1.27) C:76% T:76%	pCi/L		03/03/21 19:10	
Total Radium Calculation	Total Radium	2.26 ± 0.942 (1.43)	pCi/L		03/11/21 12:05	

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### SUMMARY OF DETECTION

Project: HAMMOND AP-2 APP IV RADS

Pace Project No.: 92521125

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>92521125021</b>	<b>EB-1</b>					
EPA 9315	Radium-226	0.0746 ± 0.100 (0.213) C:80% T:NA	pCi/L		03/11/21 08:15	
EPA 9320	Radium-228	2.12 ± 0.734 (1.06) C:81% T:90%	pCi/L		03/03/21 19:10	
Total Radium Calculation	Total Radium	2.19 ± 0.834 (1.27)	pCi/L		03/11/21 12:05	
<b>92521125022</b>	<b>MW-22</b>					
EPA 9315	Radium-226	0.0625 ± 0.0842 (0.178) C:91% T:NA	pCi/L		03/11/21 08:21	
EPA 9320	Radium-228	0.152 ± 0.350 (0.779) C:78% T:82%	pCi/L		03/04/21 15:09	
Total Radium Calculation	Total Radium	0.215 ± 0.434 (0.957)	pCi/L		03/11/21 10:51	
<b>92521125023</b>	<b>MW-35</b>					
EPA 9315	Radium-226	0.456 ± 0.182 (0.221) C:88% T:NA	pCi/L		03/11/21 08:21	
EPA 9320	Radium-228	1.06 ± 0.435 (0.684) C:78% T:92%	pCi/L		03/04/21 15:09	
Total Radium Calculation	Total Radium	1.52 ± 0.617 (0.905)	pCi/L		03/11/21 10:51	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 APP IV RADS

Pace Project No.: 92521125

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: HGWA-1</b> <b>Lab ID: 92521125001</b> Collected: 02/08/21 16:13      Received: 02/09/21 12:33      Matrix: Water PWS:      Site ID:      Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	<b>0.0455 ± 0.0937 (0.218)</b> <b>C:84% T:NA</b>	pCi/L	03/02/21 07:38	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>0.177 ± 0.371 (0.820)</b> <b>C:77% T:86%</b>	pCi/L	02/24/21 15:30	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>0.223 ± 0.465 (1.04)</b>	pCi/L	03/02/21 16:35	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 APP IV RADS

Pace Project No.: 92521125

**Sample: HGWA-4**      **Lab ID: 92521125002**      Collected: 02/08/21 15:54      Received: 02/09/21 12:33      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	<b>0.167 ± 0.126 (0.227)</b> <b>C:94% T:NA</b>	pCi/L	03/02/21 07:38	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>0.391 ± 0.353 (0.715)</b> <b>C:77% T:90%</b>	pCi/L	02/24/21 15:30	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>0.558 ± 0.479 (0.942)</b>	pCi/L	03/02/21 16:35	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 APP IV RADS

Pace Project No.: 92521125

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: HGWA-42D</b> <b>Lab ID: 92521125003</b> Collected: 02/08/21 17:36      Received: 02/09/21 12:33      Matrix: Water PWS:      Site ID:      Sample Type:						
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	<b>0.0896 ± 0.0987 (0.196)</b> <b>C:83% T:NA</b>	pCi/L	03/02/21 07:38	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>0.339 ± 0.323 (0.656)</b> <b>C:74% T:87%</b>	pCi/L	02/24/21 15:30	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>0.429 ± 0.422 (0.852)</b>	pCi/L	03/02/21 16:35	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 APP IV RADS

Pace Project No.: 92521125

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: HGWA-2</b> <b>Lab ID: 92521125004</b> Collected: 02/09/21 10:38      Received: 02/10/21 09:56      Matrix: Water PWS:      Site ID:      Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	<b>0.465 ± 0.189 (0.205)</b> <b>C:80% T:NA</b>	pCi/L	03/08/21 08:33	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>0.256 ± 0.375 (0.807)</b> <b>C:77% T:89%</b>	pCi/L	03/02/21 15:44	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>0.721 ± 0.564 (1.01)</b>	pCi/L	03/08/21 12:26	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 APP IV RADS

Pace Project No.: 92521125

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: HGWA-3</b> <b>Lab ID: 92521125005</b> Collected: 02/09/21 11:56      Received: 02/10/21 09:56      Matrix: Water PWS:      Site ID:      Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	<b>0.161 ± 0.133 (0.248)</b> <b>C:80% T:NA</b>	pCi/L	03/08/21 08:34	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>0.286 ± 0.395 (0.847)</b> <b>C:75% T:86%</b>	pCi/L	03/02/21 15:44	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>0.447 ± 0.528 (1.10)</b>	pCi/L	03/08/21 12:26	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 APP IV RADS

Pace Project No.: 92521125

**Sample: HGWA-5**      **Lab ID: 92521125006**      Collected: 02/09/21 10:46      Received: 02/10/21 09:56      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	<b>0.181 ± 0.139 (0.252)</b> <b>C:78% T:NA</b>	pCi/L	03/08/21 08:33	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>0.189 ± 0.359 (0.788)</b> <b>C:81% T:88%</b>	pCi/L	03/02/21 15:44	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>0.370 ± 0.498 (1.04)</b>	pCi/L	03/08/21 12:26	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 APP IV RADS

Pace Project No.: 92521125

**Sample: HGWA-6**      **Lab ID: 92521125007**      Collected: 02/09/21 12:00      Received: 02/10/21 09:56      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	<b>0.0318 ± 0.0942 (0.231)</b> <b>C:78% T:NA</b>	pCi/L	03/08/21 08:34	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>0.292 ± 0.351 (0.744)</b> <b>C:75% T:86%</b>	pCi/L	03/02/21 11:23	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>0.324 ± 0.445 (0.975)</b>	pCi/L	03/08/21 12:26	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 APP IV RADS

Pace Project No.: 92521125

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: HGWA-43D</b> <b>Lab ID: 92521125008</b> Collected: 02/09/21 17:58      Received: 02/10/21 09:56      Matrix: Water PWS:      Site ID:      Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	<b>0.138 ± 0.105 (0.176)</b> <b>C:87% T:NA</b>	pCi/L	03/08/21 08:14	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>-0.0292 ± 0.272 (0.643)</b> <b>C:77% T:86%</b>	pCi/L	03/02/21 11:24	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>0.138 ± 0.377 (0.819)</b>	pCi/L	03/08/21 12:26	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 APP IV RADS

Pace Project No.: 92521125

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: HGWA-44D</b> <b>Lab ID: 92521125009</b> Collected: 02/09/21 13:09      Received: 02/10/21 09:56      Matrix: Water PWS:      Site ID:      Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	<b>0.171 ± 0.126 (0.217)</b> <b>C:84% T:NA</b>	pCi/L	03/08/21 08:28	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>0.315 ± 0.398 (0.849)</b> <b>C:77% T:81%</b>	pCi/L	03/02/21 11:24	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>0.486 ± 0.524 (1.07)</b>	pCi/L	03/08/21 12:26	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 APP IV RADS

Pace Project No.: 92521125

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: HGWC-16</b> <b>Lab ID: 92521125010</b> Collected: 02/10/21 15:02      Received: 02/11/21 09:19      Matrix: Water PWS:      Site ID:      Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	<b>0.133 ± 0.110 (0.195)</b> <b>C:88% T:NA</b>	pCi/L	03/08/21 08:07	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>0.640 ± 0.370 (0.674)</b> <b>C:75% T:87%</b>	pCi/L	03/02/21 11:24	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>0.773 ± 0.480 (0.869)</b>	pCi/L	03/08/21 12:26	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 APP IV RADS

Pace Project No.: 92521125

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: HGWC-18</b> <b>Lab ID: 92521125011</b> Collected: 02/11/21 12:57      Received: 02/12/21 09:36      Matrix: Water PWS:      Site ID:      Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	<b>0.729 ± 0.225 (0.179)</b> <b>C:82% T:NA</b>	pCi/L	03/11/21 09:58	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>0.379 ± 0.381 (0.789)</b> <b>C:80% T:84%</b>	pCi/L	03/03/21 16:04	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>1.11 ± 0.606 (0.968)</b>	pCi/L	03/11/21 12:05	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 APP IV RADS

Pace Project No.: 92521125

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: MW-21D</b> <b>Lab ID: 92521125012</b> Collected: 02/11/21 14:53      Received: 02/12/21 09:36      Matrix: Water PWS:      Site ID:      Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	<b>0.0461 ± 0.0797 (0.179)</b> <b>C:90% T:NA</b>	pCi/L	03/11/21 08:13	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>0.271 ± 0.360 (0.768)</b> <b>C:77% T:84%</b>	pCi/L	03/03/21 16:04	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>0.317 ± 0.440 (0.947)</b>	pCi/L	03/11/21 12:05	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 APP IV RADS

Pace Project No.: 92521125

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: DUP-2</b> <b>Lab ID: 92521125013</b> Collected: 02/11/21 00:00      Received: 02/12/21 09:36      Matrix: Water PWS:      Site ID:      Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	<b>0.0950 ± 0.100 (0.198)</b> <b>C:89% T:NA</b>	pCi/L	03/11/21 08:14	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>0.678 ± 0.580 (1.18)</b> <b>C:79% T:83%</b>	pCi/L	03/03/21 19:09	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>0.773 ± 0.680 (1.38)</b>	pCi/L	03/11/21 12:05	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 APP IV RADS

Pace Project No.: 92521125

**Sample: HGWC-14**      **Lab ID: 92521125014**      Collected: 02/11/21 15:12      Received: 02/12/21 09:36      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	<b>0.211 ± 0.148 (0.268)</b> <b>C:92% T:NA</b>	pCi/L	03/11/21 08:14	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>0.519 ± 0.631 (1.34)</b> <b>C:81% T:73%</b>	pCi/L	03/03/21 19:09	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>0.730 ± 0.779 (1.61)</b>	pCi/L	03/11/21 12:05	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 APP IV RADS

Pace Project No.: 92521125

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: HGWC-17</b> <b>Lab ID: 92521125015</b> Collected: 02/11/21 11:30      Received: 02/12/21 09:36      Matrix: Water PWS:      Site ID:      Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	<b>0.249 ± 0.147 (0.235)</b> <b>C:86% T:NA</b>	pCi/L	03/11/21 08:14	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>0.582 ± 0.643 (1.35)</b> <b>C:79% T:70%</b>	pCi/L	03/03/21 19:09	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>0.831 ± 0.790 (1.59)</b>	pCi/L	03/11/21 12:05	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 APP IV RADS

Pace Project No.: 92521125

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: MW-37D</b> <b>Lab ID: 92521125016</b> Collected: 02/11/21 13:09      Received: 02/12/21 09:36      Matrix: Water PWS:      Site ID:      Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	<b>0.120 ± 0.0993 (0.172)</b> <b>C:88% T:NA</b>	pCi/L	03/11/21 08:14	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>-0.00471 ± 0.555 (1.28)</b> <b>C:81% T:76%</b>	pCi/L	03/03/21 19:09	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>0.120 ± 0.654 (1.45)</b>	pCi/L	03/11/21 12:05	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 APP IV RADS

Pace Project No.: 92521125

**Sample: FB-2**      **Lab ID: 92521125017**      Collected: 02/11/21 08:45      Received: 02/12/21 09:36      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	<b>0.0191 ± 0.0760 (0.192)</b> <b>C:86% T:NA</b>	pCi/L	03/11/21 08:14	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>0.943 ± 0.566 (1.06)</b> <b>C:82% T:87%</b>	pCi/L	03/03/21 19:09	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>0.962 ± 0.642 (1.25)</b>	pCi/L	03/11/21 12:05	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 APP IV RADS

Pace Project No.: 92521125

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: HGWC-15</b> <b>Lab ID: 92521125018</b> Collected: 02/12/21 15:01      Received: 02/15/21 09:45      Matrix: Water PWS:      Site ID:      Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	<b>0.0642 ± 0.0865 (0.182)</b> <b>C:83% T:NA</b>	pCi/L	03/11/21 08:14	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>1.59 ± 0.818 (1.47)</b> <b>C:80% T:67%</b>	pCi/L	03/03/21 19:10	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>1.65 ± 0.905 (1.65)</b>	pCi/L	03/11/21 12:05	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 APP IV RADS

Pace Project No.: 92521125

**Sample: MW-23D**      **Lab ID: 92521125019**      Collected: 02/12/21 13:54      Received: 02/15/21 09:45      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	<b>0.0716 ± 0.0829 (0.165)</b> <b>C:89% T:NA</b>	pCi/L	03/11/21 08:14	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>1.14 ± 0.727 (1.38)</b> <b>C:77% T:67%</b>	pCi/L	03/03/21 19:10	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>1.21 ± 0.810 (1.55)</b>	pCi/L	03/11/21 12:05	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 APP IV RADS

Pace Project No.: 92521125

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: MW-33</b> <b>Lab ID: 92521125020</b> Collected: 02/12/21 10:32      Received: 02/15/21 09:45      Matrix: Water PWS:      Site ID:      Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	<b>0.376 ± 0.154 (0.161)</b> <b>C:88% T:NA</b>	pCi/L	03/11/21 08:15	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>1.88 ± 0.788 (1.27)</b> <b>C:76% T:76%</b>	pCi/L	03/03/21 19:10	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>2.26 ± 0.942 (1.43)</b>	pCi/L	03/11/21 12:05	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 APP IV RADS

Pace Project No.: 92521125

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: EB-1</b> <b>Lab ID: 92521125021</b> Collected: 02/12/21 15:35      Received: 02/15/21 09:45      Matrix: Water PWS:      Site ID:      Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	<b>0.0746 ± 0.100 (0.213)</b> <b>C:80% T:NA</b>	pCi/L	03/11/21 08:15	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>2.12 ± 0.734 (1.06)</b> <b>C:81% T:90%</b>	pCi/L	03/03/21 19:10	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>2.19 ± 0.834 (1.27)</b>	pCi/L	03/11/21 12:05	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 APP IV RADS

Pace Project No.: 92521125

**Sample: MW-22**      **Lab ID: 92521125022**      Collected: 02/15/21 15:43      Received: 02/17/21 11:54      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	<b>0.0625 ± 0.0842 (0.178)</b> <b>C:91% T:NA</b>	pCi/L	03/11/21 08:21	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>0.152 ± 0.350 (0.779)</b> <b>C:78% T:82%</b>	pCi/L	03/04/21 15:09	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>0.215 ± 0.434 (0.957)</b>	pCi/L	03/11/21 10:51	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 APP IV RADS

Pace Project No.: 92521125

**Sample: MW-35**      **Lab ID: 92521125023**      Collected: 02/15/21 11:35      Received: 02/17/21 11:54      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	<b>0.456 ± 0.182 (0.221)</b> <b>C:88% T:NA</b>	pCi/L	03/11/21 08:21	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>1.06 ± 0.435 (0.684)</b> <b>C:78% T:92%</b>	pCi/L	03/04/21 15:09	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>1.52 ± 0.617 (0.905)</b>	pCi/L	03/11/21 10:51	7440-14-4	

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-2 APP IV RADS

Pace Project No.: 92521125

QC Batch: 435459

Analysis Method: EPA 9315

QC Batch Method: EPA 9315

Analysis Description: 9315 Total Radium

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92521125001, 92521125002, 92521125003

METHOD BLANK: 2102227

Matrix: Water

Associated Lab Samples: 92521125001, 92521125002, 92521125003

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.276 ± 0.140 (0.180) C:89% T:NA	pCi/L	03/02/21 07:53	

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-2 APP IV RADS

Pace Project No.: 92521125

QC Batch: 435786

Analysis Method: EPA 9315

QC Batch Method: EPA 9315

Analysis Description: 9315 Total Radium

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92521125004, 92521125005, 92521125006, 92521125007, 92521125008, 92521125009, 92521125010

METHOD BLANK: 2103744

Matrix: Water

Associated Lab Samples: 92521125004, 92521125005, 92521125006, 92521125007, 92521125008, 92521125009, 92521125010

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	-0.0425 ± 0.0687 (0.225) C:93% T:NA	pCi/L	03/08/21 08:35	

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-2 APP IV RADS

Pace Project No.: 92521125

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QC Batch:	435116	Analysis Method:	EPA 9320
QC Batch Method:	EPA 9320	Analysis Description:	9320 Radium 228
		Laboratory:	Pace Analytical Services - Greensburg

Associated Lab Samples: 92521125001, 92521125002, 92521125003

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METHOD BLANK: 2100680 Matrix: Water

Associated Lab Samples: 92521125001, 92521125002, 92521125003

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.356 ± 0.369 (0.763) C:72% T:87%	pCi/L	02/24/21 15:29	

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-2 APP IV RADS

Pace Project No.: 92521125

QC Batch: 435836

Analysis Method: EPA 9320

QC Batch Method: EPA 9320

Analysis Description: 9320 Radium 228

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92521125011, 92521125012, 92521125013, 92521125014, 92521125015, 92521125016, 92521125017, 92521125018, 92521125019, 92521125020, 92521125021

METHOD BLANK: 2103905

Matrix: Water

Associated Lab Samples: 92521125011, 92521125012, 92521125013, 92521125014, 92521125015, 92521125016, 92521125017, 92521125018, 92521125019, 92521125020, 92521125021

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.253 ± 0.323 (0.687) C:83% T:83%	pCi/L	03/03/21 16:05	

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-2 APP IV RADS

Pace Project No.: 92521125

QC Batch: 435838

Analysis Method: EPA 9320

QC Batch Method: EPA 9320

Analysis Description: 9320 Radium 228

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92521125022, 92521125023

METHOD BLANK: 2103907

Matrix: Water

Associated Lab Samples: 92521125022, 92521125023

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.298 ± 0.350 (0.738) C:76% T:86%	pCi/L	03/04/21 11:53	

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-2 APP IV RADS

Pace Project No.: 92521125

QC Batch: 435837

Analysis Method: EPA 9315

QC Batch Method: EPA 9315

Analysis Description: 9315 Total Radium

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92521125022, 92521125023

METHOD BLANK: 2103906

Matrix: Water

Associated Lab Samples: 92521125022, 92521125023

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.144 ± 0.106 (0.177) C:91% T:NA	pCi/L	03/11/21 08:18	

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**QUALITY CONTROL - RADIOCHEMISTRY**

Project: HAMMOND AP-2 APP IV RADS  
Pace Project No.: 92521125

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QC Batch:	435835	Analysis Method:	EPA 9315
QC Batch Method:	EPA 9315	Analysis Description:	9315 Total Radium
		Laboratory:	Pace Analytical Services - Greensburg

Associated Lab Samples: 92521125011, 92521125012, 92521125013, 92521125014, 92521125015, 92521125016, 92521125017, 92521125018, 92521125019, 92521125020, 92521125021

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METHOD BLANK:	2103903	Matrix:	Water
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Associated Lab Samples: 92521125011, 92521125012, 92521125013, 92521125014, 92521125015, 92521125016, 92521125017, 92521125018, 92521125019, 92521125020, 92521125021

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0385 ± 0.0817 (0.191) C:95% T:NA	pCi/L	03/11/21 08:12	

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-2 APP IV RADS

Pace Project No.: 92521125

QC Batch: 435787

Analysis Method: EPA 9320

QC Batch Method: EPA 9320

Analysis Description: 9320 Radium 228

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92521125004, 92521125005, 92521125006, 92521125007, 92521125008, 92521125009, 92521125010

METHOD BLANK: 2103745

Matrix: Water

Associated Lab Samples: 92521125004, 92521125005, 92521125006, 92521125007, 92521125008, 92521125009, 92521125010

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.345 ± 0.339 (0.700) C:84% T:79%	pCi/L	03/02/21 12:33	

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.

### REPORT OF LABORATORY ANALYSIS

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without the written consent of Pace Analytical Services, LLC.



## QUALIFIERS

Project: HAMMOND AP-2 APP IV RADS

Pace Project No.: 92521125

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### DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

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

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

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-2 APP IV RADS

Pace Project No.: 92521125

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92521125001	HGWA-1	EPA 9315	435459		
92521125002	HGWA-4	EPA 9315	435459		
92521125003	HGWA-42D	EPA 9315	435459		
92521125004	HGWA-2	EPA 9315	435786		
92521125005	HGWA-3	EPA 9315	435786		
92521125006	HGWA-5	EPA 9315	435786		
92521125007	HGWA-6	EPA 9315	435786		
92521125008	HGWA-43D	EPA 9315	435786		
92521125009	HGWA-44D	EPA 9315	435786		
92521125010	HGWC-16	EPA 9315	435786		
92521125011	HGWC-18	EPA 9315	435835		
92521125012	MW-21D	EPA 9315	435835		
92521125013	DUP-2	EPA 9315	435835		
92521125014	HGWC-14	EPA 9315	435835		
92521125015	HGWC-17	EPA 9315	435835		
92521125016	MW-37D	EPA 9315	435835		
92521125017	FB-2	EPA 9315	435835		
92521125018	HGWC-15	EPA 9315	435835		
92521125019	MW-23D	EPA 9315	435835		
92521125020	MW-33	EPA 9315	435835		
92521125021	EB-1	EPA 9315	435835		
92521125022	MW-22	EPA 9315	435837		
92521125023	MW-35	EPA 9315	435837		
92521125001	HGWA-1	EPA 9320	435116		
92521125002	HGWA-4	EPA 9320	435116		
92521125003	HGWA-42D	EPA 9320	435116		
92521125004	HGWA-2	EPA 9320	435787		
92521125005	HGWA-3	EPA 9320	435787		
92521125006	HGWA-5	EPA 9320	435787		
92521125007	HGWA-6	EPA 9320	435787		
92521125008	HGWA-43D	EPA 9320	435787		
92521125009	HGWA-44D	EPA 9320	435787		
92521125010	HGWC-16	EPA 9320	435787		
92521125011	HGWC-18	EPA 9320	435836		
92521125012	MW-21D	EPA 9320	435836		
92521125013	DUP-2	EPA 9320	435836		
92521125014	HGWC-14	EPA 9320	435836		
92521125015	HGWC-17	EPA 9320	435836		
92521125016	MW-37D	EPA 9320	435836		
92521125017	FB-2	EPA 9320	435836		
92521125018	HGWC-15	EPA 9320	435836		
92521125019	MW-23D	EPA 9320	435836		
92521125020	MW-33	EPA 9320	435836		
92521125021	EB-1	EPA 9320	435836		
92521125022	MW-22	EPA 9320	435838		

### REPORT OF LABORATORY ANALYSIS

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without the written consent of Pace Analytical Services, LLC.

### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: HAMMOND AP-2 APP IV RADS  
Pace Project No.: 92521125

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92521125023	MW-35	EPA 9320	435838		
92521125001	HGWA-1	Total Radium Calculation	436928		
92521125002	HGWA-4	Total Radium Calculation	436928		
92521125003	HGWA-42D	Total Radium Calculation	436928		
92521125004	HGWA-2	Total Radium Calculation	437634		
92521125005	HGWA-3	Total Radium Calculation	437634		
92521125006	HGWA-5	Total Radium Calculation	437634		
92521125007	HGWA-6	Total Radium Calculation	437634		
92521125008	HGWA-43D	Total Radium Calculation	437634		
92521125009	HGWA-44D	Total Radium Calculation	437634		
92521125010	HGWC-16	Total Radium Calculation	437634		
92521125011	HGWC-18	Total Radium Calculation	438252		
92521125012	MW-21D	Total Radium Calculation	438252		
92521125013	DUP-2	Total Radium Calculation	438252		
92521125014	HGWC-14	Total Radium Calculation	438252		
92521125015	HGWC-17	Total Radium Calculation	438252		
92521125016	MW-37D	Total Radium Calculation	438252		
92521125017	FB-2	Total Radium Calculation	438252		
92521125018	HGWC-15	Total Radium Calculation	438252		
92521125019	MW-23D	Total Radium Calculation	438252		
92521125020	MW-33	Total Radium Calculation	438252		
92521125021	EB-1	Total Radium Calculation	438252		
92521125022	MW-22	Total Radium Calculation	438242		
92521125023	MW-35	Total Radium Calculation	438242		

### REPORT OF LABORATORY ANALYSIS

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Laboratory receiving samples:

Ashville  Eden  Greenwood  Huntersville  Raleigh  Mechanicsville  Atlanta  Kernersville

Sample Condition Upon Receipt

Client Name: GA Power

Project #: **WO# : 92521125**



Courier:  Commercial  Fed Ex  UPS  USPS  Client  Pace  Other: \_\_\_\_\_

Custody Seal Present?  Yes  No    Seals Intact?  Yes  No

Date/initials Person Examining Contents: MP 2/11/21

Packing Material:  Bubble Wrap  Bubble Bags  None  Other

Biological Tissue Frozen?  Yes  No  N/A

Thermometer:  IR Gun ID: 233    Type of Ice:  Wet  Blue  None

Cooler Temp: 3.6    Correction Factor: Add/Subtract (°C) ± 0.4

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

Cooler Temp Corrected (°C): 4.0

USDA Regulated Soil (  N/A, water sample)

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

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

Comments/Discrepancy:

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

COMMENTS/SAMPLE DISCREPANCY

Field Data Required?  Yes  No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted:

Date/Time:

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

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

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

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



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

<b>Section A</b> Requested Client Information: Company: GA Power Address: Atlanta, GA	<b>Section B</b> Requested Project Information: Report To: SCS Contacts Copy To: Geosynetics Contacts	<b>Section C</b> Invoice Information: Attention: Southern Co. Company Name: Southern Co. Address: [blank] Purchase Order No.: [blank] Project Name: Plant Hammond AP-2 App. IV Scan Project Number: GW6591B Requested Due Date/AT: 10 Day
Email To: SCS Contacts Phone: [blank] Requested Due Date/AT: 10 Day	Purchase Order No.: [blank] Project Name: Plant Hammond AP-2 App. IV Scan Project Number: GW6591B	Address: [blank] Purchase Order Reference: [blank] Project Manager: Kevin Herring Face Profile # [blank]
		Requested Analysis Filtered (Y/N): [blank]
		REGULATORY AGENCY: <input type="checkbox"/> NPOES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER [blank]
		Site Location STATE: GA

ITEM #	Section D Requested Client Information	Valid Matrix Codes MATRIX CODE	SCS CODE	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)	pH = 7.11 Face Project No./ Lab ID: 42521125	
												Unpreserved	H <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>	HCl	NaOH	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>	Methanol	Other	Fluents				Full App. IV Metals 6020/7470*
1	HGWA-1				G	1/29/21	6:17				4	1												
2	HGWA-2				G						4	1												
3	HGWA-3				G						4	1												
4	HGWA-4				G						4	1												
5	HGWA-5				G						4	1												
6	HGWA-6				G						4	1												
7	HGWA-42D				G						4	1												
8	HGWA-43D				G						4	1												
9	HGWA-44D				G						4	1												
10	HGWA-14				G						4	1												
11	HGWA-15				G						4	1												
12	HGWA-16				G						4	1												

<b>ADDITIONAL COMMENTS</b>	<b>REINQUISHED BY / AFFILIATION</b>	<b>DATE</b>	<b>TIME</b>	<b>ACCEPTED BY / AFFILIATION</b>	<b>DATE</b>	<b>TIME</b>	<b>SAMPLE CONDITIONS</b>
Please note dry wells. Either through any wells not sampled, and note when the last sample for the event has been taken. Full App. IV Metals-Sb, As, Ba, Be, Cd, Cr, Co, Pb, U, Hg, Mo, Se, Tl One sample set submitted for HGWA-12/23/43/44/4D and EG-1 but they will be received for AP-12 SDCS	[Signature]	2/9/21	12:30	[Signature]	2/9/21	12:33	Temp in °C: [blank] Received on Ice (Y/N): [blank] Custody Sealed Cooler (Y/N): [blank] Samples Intact (Y/N): [blank]

\*Important Note: By signing this form you are accepting Face's NET 30 day payment terms and agreeing to the charges of 1.5% per month for any invoices not paid within 30 days.  
F-ALL-Q-020REV. 07.15-Feb-2007

**Section A**  
Required Client Information:

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

**Section B**  
Required Project Information:

Report To: **SCS Contacts**  
Copy To: **Geosyntec Contacts**  
Purchase Order No.:  
Project Name: **Plant Hammond AP-2 App. IV Scan**  
Project Number: **GW6581B**

**Section C**  
Invoice Information:

Attention: **Southern Co.**  
Company Name:  
Address:  
Pace Quote Reference Manager: **Kevin Herring**  
Pace Print #:

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

ITEM #	Section D Required Client Information	Valid Matrix Codes MATRIX CODE DRAINAGE WATER WATER WASTE WATER PRODUCT SOLID/SOLID WASTE AIR OTHER TISSUE	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives Unpreserved H <sub>2</sub> SO <sub>4</sub> HNO <sub>3</sub> HCl NaOH Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> Methanol Other	Analysis Test Fluoride Full App.IV Metals 6020/7470° RAD 226/228	Requested Analyte Filtered (Y/N)			Residual Chlorine (Y/N)	pH =
					DATE	TIME					DATE	TIME	Y		
1	HQWA-1														
2	HQWA-2														
3	HQWA-3														
4	HQWA-4			2-28-21	1554		4	1			X	X	X		
5	HQWA-5						4	1			X	X	X		
6	HQWA-6						4	1			X	X	X		
7	HQWA-7						4	1			X	X	X		
8	HQWA-8						4	1			X	X	X		
9	HQWA-9						4	1			X	X	X		
10	HQWA-10						4	1			X	X	X		
11	HQWA-11						4	1			X	X	X		
12	HQWA-12						4	1			X	X	X		

REINQUIRED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
<i>[Signature]</i>	2/21/21	1231	<i>[Signature]</i>	2/22/21	1233	Temp in °C Received on Ice (Y/N) Custody Sealed Cooler (Y/N) Samples Intact (Y/N)
<i>[Signature]</i>	2/24/21	1545	<i>[Signature]</i>	2/24/21	1545	

**ADDITIONAL COMMENTS:**  
Please note dry wells, strike through any wells not sampled, and note when the last sample for the event has been taken.  
Full App. IV Metals-Sub. As, Ba, Bi, Cd, Cr, Co, Pb, V, Hg, Mn, Se, Tl.  
One sample set submitted for HQWA-123456789 and ES-1 but they will be reported for AP-42 SDGS.

**SAMPLER NAME AND SIGNATURE:**  
PRINT Name of SAMPLER: **Daron Redder**  
SIGNATURE of SAMPLER: *[Signature]*  
DATE Signed (MM/DD/YYYY): **02/08/2021**

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

Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.  
FALL-Q-020(rev.07.15)-Fdb-2007



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

Page: **3** of **3**

<b>Section A</b> Requested Client Information: Company: GA Power Address: Atlanta, GA	<b>Section B</b> Requested Project Information: Report To: SCS Contacts Copy To: Geosyntec Contacts	<b>Section C</b> Invoicing Information: Attention: Southern Co. Company Name: Address:
Email To: SCS Contacts Phone: _____ Requested Due Date/TAT: 16 Day	Purchase Order No.: _____ Project Name: Plant Hammond AP-2 App. IV Scan Project Number: GW6581B	Reference: _____ Face Project Manager: Kevin Herring Pace Profile # _____
<b>REGULATORY AGENCY</b> <input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER <input type="checkbox"/>		
<b>SITE LOCATION</b> STATE: <u>GA</u>		

ITEM #	Section D Requested Client Information	Valid Matrix Codes MATRIX CODE	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)	pH =					
											Unpreserved	H <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>	HCl	NaOH	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>					Methanol	Other	Fluoride	Full App. IV Metals 6020/7470*	RAD 228/228
1	HQWA-1	WT G	WT G	WT G						4	1														
2	HQWA-2	WT G	WT G	WT G						4	1														
3	HQWA-3	WT G	WT G	WT G						4	1														
4	HQWA-4	WT G	WT G	WT G						4	1														
5	HQWA-5	WT G	WT G	WT G						4	1														
6	HQWA-6	WT G	WT G	WT G						4	1														
7	HQWA-42D	WT G	WT G	WT G						4	1														
8	HQWA-43D	WT G	WT G	WT G						4	1														
9	HQWA-44D	WT G	WT G	WT G						4	1														
10	HQWA-17	WT G	WT G	WT G						4	1														
11	HQWA-15	WT G	WT G	WT G						4	1														
12	HQWA-16	WT G	WT G	WT G						4	1														

**ADDITIONAL COMMENTS**

Please note dry wells - strike through any wells not sampled, and note when the last sample for the event has been taken.  
 \*Full App. IV Metals-Sb, As, Ba, Be, Cd, Cr, Co, Pb, U, Hg, Mo, Se, Tl  
 One sample per submitted for HQWA-123X/43D/44D and EG-1 but they will be recored for AP-12 SDGS

**REQUISITIONED BY / AFFILIATION**: Thomas Keller Land  
**DATE**: 2/9/21  
**TIME**: 12:31  
**ACCEPTED BY / AFFILIATION**: [Signature]  
**DATE**: 2/9/21  
**TIME**: 12:33

**SAMPLER NAME AND SIGNATURE**: Thomas Keller Land  
**DATE SIGNED**: 2/9/21

**TEMPERATURE**: 3.6  
**RECEIVED ON ICE**: Y  
**CUSTODY SEALED COOLER**: N  
**SAMPLES INTACT**: Y

**LABORATORY**: Pace Analytical  
**PROJECT NO. / LAB ID**: 42521125

\*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to the charges of 1.5% per month for any invoices not paid within 30 days.  
 F-ALL-Q-020rev.07.15-Feb-2007







# CHAIN-OF-CUSTODY / Analytical Request Document

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

### Section A

Required Client Information:

Company: GA Power

Address: Atlanta, GA

Email To: SCS Contacts

Phone: Fax:

Requested Due Date/TAT: 10 Day

### Section B

Required Project Information:

Report To: SCS Contacts

Copy To: Geosyntec Contacts

Purchase Order No.

Project Name: Plant Hammond AP-2 App. IV Scan

Project Number: GW65818

### Section C

Facility Information:

Attention: Southern Co.

Company Name:

Address:

Phone:

Fax:

Project Manager:

Project Name:

### REGULATORY AGENCY

NPDES  GROUND WATER  DRINKING WATER

UST  RCRA  OTHER (see- )

Site Location: GA

STATE:

Page: 2 of 3

ITEM #	Section D Required Client Information	Valid Matrix Codes MATRIX CODE	Matrix Code (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED			SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives							Analysis Test	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	pH =				
					DATE	TIME	DATE			TIME	DATE	TIME	H <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>	HCl	NaOH					Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>	Methanol	Other	
1	HGWA-1	WT G	WT G	G	-	-	-	-	4	1	3													
2	HGWA-2	WT G	WT G	G	-	-	-	-	4	1	3													
3	HGWA-3	WT G	WT G	G	-	-	-	-	4	1	3													
4	HGWA-4	WT G	WT G	G	-	-	-	-	4	1	3													
5	HGWA-5	WT G	WT G	G	2-9-21	1046	-	-	4	1	3													
6	HGWA-6	WT G	WT G	G	2-9-21	1200	-	-	4	1	3													
7	HGWA-42D	WT G	WT G	G	-	-	-	-	4	1	3													
8	HGWA-43D	WT G	WT G	G	-	-	-	-	4	1	3													
9	HGWA-44D	WT G	WT G	G	-	-	-	-	4	1	3													
10	HGWA-14	WT G	WT G	G	-	-	-	-	4	1	3													
11	HGWA-15	WT G	WT G	G	-	-	-	-	4	1	3													
12	HGWA-16	WT G	WT G	G	-	-	-	-	4	1	3													

**ADDITIONAL COMMENTS:**  
Please note dry wells, states through any wells not sampled, and note when the last sample for the event has been taken.  
Full App. IV Metals - Se. A6, B9, B8, C4, C7, C8, F8, U, H9, M9, S6, 11  
One sample set submitted for HGWA-12&13&14&15 and EG-1 but they will be rechecked for AP-12 SDGs.

**RELINQUISHED BY / AFFILIATION:** [Signature] Sampler

**ACCEPTED BY / AFFILIATION:** [Signature] Receiver

**DATE:** 2/10/21 0833

**DATE:** 2/10/21 0835

**DATE:** 2/10/21 0936

**DATE:** 2/10/21 1230

**DATE:** 2/10/21 1230

**TEMPERATURE:** 4

**RESIDUAL CHLORINE:** 6.35

**PH:** 7.40

**SAMPLER NAME AND SIGNATURE:** [Signature]

**PRINT NAME OF SAMPLER:** Aaron Reeler

**SIGNATURE OF SAMPLER:** [Signature]

**DATE SIGNED (MM/DD/YYYY):** 02/10/2021

**TEMPERATURE IN °C:**

**RECEIVED ON ICE (Y/N):**

**CUSTODY SEALED COOLER (Y/N):**

**SAMPLES INTACT (Y/N):**



# CHAIN-OF-CUSTODY / Analytical Request Document

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

### Section A

Required Client Information:  
 Company: GA Power  
 Address: Atlanta, GA  
 Email To: SCS Contacts  
 Phone: [blank]  
 Requested Due Date/TAT: 10 Day

Required Project Information:  
 Report To: SCS Contacts  
 Copy To: Geosynthetic Contacts  
 Project Name: Plant Hammond AP-2 App. IV Scan  
 Project Number: GW66818

Invoice Information:  
 Attention: Southern Co.  
 Company Name:  
 Address:  
 City/State:  
 Project Name: Kevin Herring  
 Project Number:  
 Special Phone #:

REGULATORY AGENCY  
 NPDES  GROUND WATER  DRINKING WATER  
 UST  RCRA  OTHER: none  
 Site Location: [blank]  
 STATE: GA

Page: 3 of 3

### Section B

ITEM #	Matrix Code		DATE	TIME	DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives	Analysis Test	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	pH=
	MATRIX	CODE											
1	HGWA-1	WT G	2/19/12	1738	1738	1738	17	4	H <sub>2</sub> SO <sub>4</sub> HNO <sub>3</sub> HCl NaOH Na <sub>2</sub> S <sub>2</sub> O <sub>5</sub> Methanol Other	Fluoride Full App.IV Metals 6020/7470* RAD 228/226	N N N N	N	
2	HGWA-2	WT G						1					
3	HGWA-3	WT G						1					
4	HGWA-4	WT G						1					
5	HGWA-5	WT G						1					
6	HGWA-6	WT G						1					
7	HGWA-12D	WT G	2/17/12	1758	1758	1758	16	4					
8	HGWA-43D	WT G	2/17/12	1758	1758	1758	16	4					
9	HGWA-44D	WT G	2/19/12	1304	1304	1304	17	4					
10	HGWC-14	WT G						4					
11	HGWC-15	WT G						4					
12	HGWC-16	WT G	2/19/12					4					

Pace Project No./ Lab ID. 92521125

Section D  
 Required Client Information:  
 Matrix: [blank]  
 Date: [blank]  
 Time: [blank]  
 Sample ID: SAMPLE ID  
 Sample ID MUST BE UNIQUE  
 Matrix Code: [blank]  
 Sample Type: (G=GRAB C=COMP)

Additional Comments:  
 Relinquished By / Affiliation: [blank]  
 Date: 2/19/12  
 Time: 1738  
 Accepted By / Affiliation: [blank]  
 Date: 2/19/12  
 Time: 1738

Temperature:  
 Temp in °C: [blank]  
 Received on (N/Y): [blank]  
 Custody Sealed Cooler (Y/N): [blank]  
 Samples Intact (Y/N): [blank]

SAMPLER NAME AND SIGNATURE:  
 PRINT Name of SAMPLER: Chad Russo  
 SIGNATURE of SAMPLER: [Signature]  
 DATE Signed (MM/DD/YYYY): 2/19/12



# CHAIN-OF-CUSTODY / Analytical Request Document

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

<b>Section A</b> Required Client Information: Company: GA Power Address: Atlanta, GA		<b>Section B</b> Required Project Information: Report to: SCS Contacts Copy to: Geosyntec Contacts		<b>Section C</b> Invoice Information: Attention: Southern Co. Company Name:	
Email to: SCS Contacts Phone:		Purchase Order No.: Project Name: Plant Hammond AP-2 App. IV Scan Project Number: GW65818		Address: POC Name: Kevin Herring POC Phone:	
Requested Due Date/TIME: 10 Day		Requested Analysis Filtered (Y/N):		REGULATORY AGENCY: <input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input checked="" type="checkbox"/> OTHER	
Requested Date/Time: 10 Day		Site Location: GA		Page: 1 of 1	

ITEM #	Section B Required Client Information	Valid Matrix Codes MATRIX CODE WATER WASTE WATER PRODUCT SOIL/SOILP SIL WASTE AIR OTHER	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED			SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives					Analysis Test	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	pH = 7.08
					DATE	TIME	DATE			TIME	Unpreserved	H <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>	HCl				
1	HQWA-1	WT	G					4	1	3								
2	HQWA-2	WT	G					4	1	3								
3	HQWA-3	WT	G					4	1	3								
4	HQWA-4	WT	G					4	1	3								
5	HQWA-5	WT	G					4	1	3								
6	HQWA-6	WT	G					4	1	3								
7	HQWA-42D	WT	G					4	1	3								
8	HQWA-43D	WT	G					4	1	3								
9	HQWA-44D	WT	G					4	1	3								
10	HQWC-14	WT	G					4	1	3								
11	HQWC-15	WT	G					4	1	3								
12	HQWC-16	WT	G					4	1	3								

ADDITIONAL COMMENTS:  
 Please note dry wells, unless through any wells not sampled and date when the last sample for the event has been taken.  
 Full App. IV Metals - Sb, As, Ba, Be, Cd, Cr, Co, Pb, Li, Hg, Mo, Se, Tl  
 One sample set submitted for HQWA-12/24/03/04/05 and EB-1 but they will be reported for AP-1/2 SDGS

REQUISITIONED BY / AFFILIATION: [Signature]  
 DATE: 2/1/01  
 TIME: 0830

ACCEPTED BY / AFFILIATION: [Signature]  
 DATE: 2/1/01  
 TIME: 1320

DATE SIGNED: 02/10/2001

DATE: 2/1/01  
 TIME: 0830

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

Important Note: By signing this form you are accepting Face's NEI 30 day payment terms and agreeing to fees charges of 1.5% per month for any balances not paid within 30 days.  
 F-ALL-Q-020rev.07 15-Feb-2007



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

<b>Section A</b> Required Client Information: Company: GA Power Address: Atlanta, GA		<b>Section B</b> Required Project Information: Report to: SCS Contacts Copy to: Geosynthetic Contacts		<b>Section C</b> Invoice Information: Attention: Southern Co. Company Name: Address: City/State: Reference: Kevin Herring Name of Project: Plant Hammond AP-2 App. IV Scan Date Sampled: Pace Sample #:	
Email to: SCS Contacts	Fax:	Purchase Order No.:	Project Name:	Plant Hammond AP-2 App. IV Scan	Project Number:
Requested Due Date/TAT: 10 Day	Requested Date/TAT: 10 Day	Requested Analysis Filtered (Y/N):	<input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input checked="" type="checkbox"/> OTHER CORP	REGULATORY AGENCY	Site Location: GA

ITEM #	Section B Requester Client Information	Valid Matrix Codes MATRIX CODE DW WT WW P SI SL WP AR AR OT TS	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives							Requested Analysis Filtered (Y/N)			Residual Chlorine (Y/N)	pH	pH													
					DATE	TIME			DATE	TIME	Unpreserved	H <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>	HCl	NaOH	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>	Methanol	Other				Fluoride	Full App.IV Metals 6020/7470*	RAD 226/228										
1	HQWC-18		G	G	2/11/21	10:57	-	4	4	1	1	3	X	X	X	X	X	X	X	X	X	X												
2	HQWC-18		G	G	2/11/21	11:53	-	4	4	1	1	3	X	X	X	X	X	X	X	X	X	X												
3	MW-21D		G	G	2/11/21	11:53	-	4	4	1	1	3	X	X	X	X	X	X	X	X	X	X												
4	MW-21D		G	G	2/11/21	11:53	-	4	4	1	1	3	X	X	X	X	X	X	X	X	X	X												
5	MW-21D		G	G	2/11/21	11:53	-	4	4	1	1	3	X	X	X	X	X	X	X	X	X	X												
6	MW-21D		G	G	2/11/21	11:53	-	4	4	1	1	3	X	X	X	X	X	X	X	X	X	X												
7	MW-21D		G	G	2/11/21	11:53	-	4	4	1	1	3	X	X	X	X	X	X	X	X	X	X												
8	MW-21D		G	G	2/11/21	11:53	-	4	4	1	1	3	X	X	X	X	X	X	X	X	X	X												
9	MW-21D		G	G	2/11/21	11:53	-	4	4	1	1	3	X	X	X	X	X	X	X	X	X	X												
10	MW-21D		G	G	2/11/21	11:53	-	4	4	1	1	3	X	X	X	X	X	X	X	X	X	X												
11	MW-21D		G	G	2/11/21	11:53	-	4	4	1	1	3	X	X	X	X	X	X	X	X	X	X												
12	MW-21D		G	G	2/11/21	11:53	-	4	4	1	1	3	X	X	X	X	X	X	X	X	X	X												

**ADDITIONAL COMMENTS**  
 Please note dry wells, sitting through any wells not sampled, and note when the last sample for the event has been taken.  
 Full App. IV Metals-Ss, As, Ba, Be, Cd, Cr, Cu, Pb, Li, Hg, Mo, Se, H  
 One sample set submitted for HQWA-12/23/20/21 and EB-1 but they will be reported for AP-12 SDGS

**RELINQUISHED BY / AFFILIATION**: Pace  
 DATE: 2/12/21 TIME: 0936  
 ACCEPTED BY / AFFILIATION: Pace  
 DATE: 2/11/2021 TIME: 1352

**SAMPLER NAME AND SIGNATURE**: Pace  
 PRINT NAME OF SAMPLER: Chad KUSSB  
 SIGNATURE OF SAMPLER: [Signature]

DATE Signed (MM/DD/YYYY): 2/11/2021

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





# CHAIN-OF-CUSTODY / Analytical Request Document

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

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

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

**Section C** Invoice Information: Company Name: Southern Co. Address:

**REGULATORY AGENCY**  
 NPDES  GROUND WATER  DRINKING WATER  
 UST  RCRA  OTHER

**Requested Due Date/TIME:** 10 Day

**Project Name:** Plant Hammond AP-2 App. IV Scan  
**Project Number:** GW65818

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

**Site Location:** STATE: GA

ITEM #	Section D Required Client Information	Valid Matrix Codes MATRIX CODES DRAINAGE WATER WATER WASTE WATER PRODUCTS SOLVENTS OIL WASTE AIR OTHER TISSUE	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED			SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives	Analysis Test	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	PH					
					DATE	TIME	DATE												
1	HGWA-1		WT G	G					4	1	3	X	X	X					
2	HGWA-2		WT G	G					4	1	3	X	X	X					
3	HGWA-3		WT G	G					4	1	3	X	X	X					
4	HGWA-4		WT G	G					4	1	3	X	X	X					
5	HGWA-5		WT G	G					4	1	3	X	X	X					
6	HGWA-6		WT G	G					4	1	3	X	X	X					
7	HGWA-42D		WT G	G					4	1	3	X	X	X					
8	HGWA-43D		WT G	G					4	1	3	X	X	X					
9	HGWA-44D		WT G	G					4	1	3	X	X	X					
10	HGWA-14		WT G	G	2-11-21	1512			4	1	3	X	X	X					
11	HGWA-15		WT G	G					4	1	3	X	X	X					
12	HGWA-16		WT G	G					4	1	3	X	X	X					

**ADDITIONAL COMMENTS:** Please note dry wells strike through any wells not sampled, and note when the last sample for the event has been taken. Full App IV Metals=St. As, Ba, Be, Cd, Cr, Co, Pb, Li, Hg, Mo, Se, Tl

**RELINQUISHED BY / AFFILIATION:** DATE: 2-12-21 TIME: 0845

**ACCEPTED BY / AFFILIATION:** DATE: 2/12/21 TIME: 0845

**REGULATORY AGENCY:** NPDES  GROUND WATER  DRINKING WATER

**U.S. Environmental Protection Agency**

**REGULATORY AGENCY:** NPDES  GROUND WATER  DRINKING WATER

**U.S. Environmental Protection Agency**

**REGULATORY AGENCY:** NPDES  GROUND WATER  DRINKING WATER

**U.S. Environmental Protection Agency**

**Important Note:** By signing this form you are accepting Pace's NET 36 day payment terms and agreeing to fee charges of 1.5% per month for any invoices not paid within 30 days.

FALL-0-020rev.07, 15-Feb-2007



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

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

Section B
Requested Project Information:
Report to: SCS Contacts
Copy to: Geosynthetic Contacts

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

Requested Client Information:
Purchase Order No.:
Project Name: Plant Hammond AP-2 App. IV Scan
Requested Due Date/TIME: 10 Day

Requested Project Information:
Project Number: GW65818

Requested Project Information:
Site Location:
State: GA

REGULATORY AGENCY:
NPDDES GROUND WATER DRINKING WATER
UST RCRA OTHER CASE

Page: 3 of 3

Table with columns: ITEM #, SAMPLE ID, MATRIX CODE, SAMPLE TYPE, DATE, TIME, SAMPLE TEMP AT COLLECTION, # OF CONTAINERS, Preservatives, Analysis Test, Requested Analysis Filtered (Y/N), Residual Chlorine (Y/N), pH, Temp in °C, Received on Ice (Y/N), Custody Sealed Cooler (Y/N), Samples Intact (Y/N). Includes handwritten entries for sample IDs like HGWC-17, MW-22, MW-33, MW-35, MW-37D, ER-1, FB-2.

Additional fields for SAMPLER NAME AND SIGNATURE, DATE SIGNED, and SIGNATURE OF SAMPLER.





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

Page: 1 of 3

<b>Section A</b> Required Client Information Company: GA Power Address: Atlanta, GA Email To: SCS Contacts Phone: _____ Fax: _____ Requested Date/DAT: 10 Day		<b>Section B</b> Required Project Information Report To: SCS Contacts Copy To: Geophysical Contacts Purchase Order No.: _____ Project Name: Plant Hammond AP-2 App. IV Scan Project Number: GW65818		<b>Section C</b> Facility Information Attention: Southern Co. Company Name: _____ Address: _____ Spec Date: _____ Spec Project: Kevin Herring Material: _____ Pestic Pesticide #: _____	
Requested Agency: _____ NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER <input type="checkbox"/> State: GA		Residual Chlorine (Y/N) _____ pH = _____ Temperature _____			

ITEM #	Section D Required Client Information Valid Matrix Codes MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB G=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives							Analysis Test	Residual Chlorine (Y/N)	pH =	Temp in °C	
			DATE	TIME			H <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>	HCl	NaOH	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>	Methanol	Other					Fluoride
1	HGWA-1	G				4	1	3										
2	HGWA-2	G				4	1	3										
3	HGWA-3	G				4	1	3										
4	HGWA-4	G				4	1	3										
5	HGWA-5	G				4	1	3										
6	HGWA-6	G				4	1	3										
7	HGWA-42D	G				4	1	3										
8	HGWA-43D	G				4	1	3										
9	HGWA-44D	G				4	1	3										
10	HGWC-14	G				4	1	3										
11	HGWC-15	G				4	1	3										
12	HGWC-16	G				4	1	3										

**ADDITIONAL COMMENTS:**  
 Please note dry wells, strike through any wells not sampled, and note when the last sample for the event has been taken.  
 Full App. IV Metals—So. As. Bai. Be. Cd. Cr. Co. Pb. U. Hg. Mo. Se. Tl.  
 One sample set submitted for HGWA-12/23/43/44/4D and EB-1 but they will be reported for AP-12 SDG3

**RELINQUISHED BY / AFFILIATION:** [Signature] / [Affiliation]

**ACCEPTED BY / AFFILIATION:** [Signature] / [Affiliation]

**SAMPLER NAME AND SIGNATURE:** [Signature]

**PRINT Name of SAMPLER:** Carol Rosta

**SIGNATURE of SAMPLER:** [Signature]

**DATE Signed (MM/DD/YY):** 2/12/21

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

FALL-D-020 Rev 07, 15-FR-2007



## CHAIN-OF-CUSTODY / Analytical Request Document

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

Page: 2 of 3

**Section A**  
Requested Client Information:  
Company: GA Power  
Address: Atlanta, GA

Phone: \_\_\_\_\_  
Fax: \_\_\_\_\_  
Requested Date/Date/TIME: \_\_\_\_\_ to \_\_\_\_\_ Day

Project Name: Plant Hammond AP-2 App. IV Scan  
Project Number: GW6581B

**Section B**  
Requested Project Information:  
Report to: SCS Contacts  
Copy to: Geosyncer Contacts

Purchase Order No.: \_\_\_\_\_  
Project Name: Plant Hammond AP-2 App. IV Scan  
Project Number: GW6581B

**Section C**  
Invoice Information:  
Attention: Southern Co.  
Company Name: \_\_\_\_\_  
Address: \_\_\_\_\_  
City: \_\_\_\_\_  
State: \_\_\_\_\_  
Zip: \_\_\_\_\_

Personnel:  
Site Supervisor: \_\_\_\_\_  
Site Analyst: \_\_\_\_\_  
Site Collector: \_\_\_\_\_  
Site Recorder: \_\_\_\_\_  
Site Project Manager: Kevin Herring  
Site Profile #: \_\_\_\_\_

REGULATORY AGENCY:  
 NPDES  GROUND WATER  DRINKING WATER  
 UST  RCRA  OTHER: \_\_\_\_\_

State: GA

Residual Chlorine (Y/N): \_\_\_\_\_

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

**Section D**  
Requested Client Information  
Valid Matrix Codes  
MATRIX CODE (see valid codes to left)  
SAMPLE TYPE (G=GRAB C=COMP)DATE  
TIME  
DATE  
TIME  
SAMPLE TEMP AT COLLECTION  
# OF CONTAINERS

ITEM #	MATRIX CODE	SAMPLE TYPE	DATE	TIME	DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>	HCl	NaOH	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>	Methanol	Other	Analysis Test	Fluoride	Full App. IV Metals 6020/7470*	RAD 226/228	Residual Chlorine (Y/N)	pH =
1	HGWC-17	WT G						4										X	X	X		
2	HGWC-18	WT G						4										X	X	X		
3	MW-21D	WT G						4										X	X	X		
4	MW-22	WT G						4										X	X	X		
5	MW-23D	WT G						4										X	X	X		
6	MW-33	WT G	2/12/11	15:41			16	4										X	X	X		6.80
7	MW-36	WT G						4										X	X	X		
8	MW-37D	WT G						4										X	X	X		
9	Dup-2	WT G						4										X	X	X		
10	EB-1	WT G						4										X	X	X		
11	EB-2	WT G						4										X	X	X		
12		WT G						4										X	X	X		

**ADDITIONAL COMMENTS**  
Please note dry wells. State through any wells not sampled, and note when the last sample for the event has been taken.  
Full App. IV Metals=So, As, Br, Be, Cd, Cr, Co, Pb, Li, Rb, Mo, Se, Tl

One sample set submitted for HGWA-1223463244D and EB-1 but they will be reported for AP-12 SDGS

REQUISISHED BY / AFFILIATION: ASB TIME: 0945 DATE: 2/12/11 TIME: 0945

ACCEPTED BY / AFFILIATION: pac DATE: 2/12/11 TIME: 0945

**SAMPLER NAME AND SIGNATURE**  
PRINT NAME of SAMPLER: Chad Kisko  
SIGNATURE of SAMPLER: [Signature]  
DATE Signed (MM/DD/YYYY): 2/12/11

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

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



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

Page: 3 of 4 3

<b>Section A</b> Requested Client Information: Company: <u>GA Power</u> Address: <u>Atlanta, GA</u>		<b>Section B</b> Requested Project Information: Report to: <u>SCS Contacts</u> Copy To: <u>Geosyntec Contacts</u>		<b>Section C</b> Invoicing Information: Attention: <u>Southern Co.</u> Company Name: Address: State:	
Email To: <u>SCS Contacts</u> Phone: <u>Fax</u> Requested Due Date/TIME: <u>10 Day</u>		Purchase Order No.: Project Name: <u>Plant Hammond AP-2-App. IV Scan</u> Project Number: <u>GW65818</u>		Reference: Project Manager: <u>Kevin Herring</u> Field Profile #: State: <u>GA</u>	

ITEM #	Section D Required Client Information	Matrix Code	Sample Type (G=GRAB C=COMP)	DATE	TIME	DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives						Fluoride	Full App.IV Metals 6020/7470*	RAD 226/228	Residual Chlorine (Y/N)	pH =	pH =	pH =	pH =	pH =	pH =	pH =	pH =
										H <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>	HCl	NaOH	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>	Methanol												
1	HQWC-17	WT G							4	X	X	X	X	X	X	X	X	N	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2
2	HQWC-18	WT G							4	X	X	X	X	X	X	X	X	N	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	
3	MW-21D	WT G							4	X	X	X	X	X	X	X	X	N	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	
4	MW-22	WT G							4	X	X	X	X	X	X	X	X	N	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	
5	MW-23D	WT G							4	X	X	X	X	X	X	X	X	N	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	
6	MW-33	WT G							4	X	X	X	X	X	X	X	X	N	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	
7	MW-35	WT G							4	X	X	X	X	X	X	X	X	N	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	
8	MW-37D	WT G							4	X	X	X	X	X	X	X	X	N	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	
9	Dup-2	WT G							4	X	X	X	X	X	X	X	X	N	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	
10	EB-1	WT G							4	X	X	X	X	X	X	X	X	N	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	
11	EB-2	WT G							4	X	X	X	X	X	X	X	X	N	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	

<b>Section D</b> Relinquished by Affiliation: Name: <u>Angela Samper</u> Date: <u>2/12/21</u> Signature: <u>[Signature]</u>		Accepted by Affiliation: Name: <u>[Signature]</u> Date: <u>2/12/21</u> Signature: <u>[Signature]</u>	
<b>Section E</b> Sampler Name and Signature: Name: <u>Aaron Ricker</u> Signature: <u>[Signature]</u>		Date Signed (MM/DD/YYYY): <u>02/12/2021</u>	

\*Optional Note: By signing this form you are accepting Pace's MET 20 099 200/Normal Terms and Conditions. In this ranges of 1.5% per cent for any invoices not paid within 30 days.

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



### CHAIN-OF-CUSTODY / Analytical Request Document

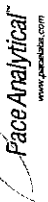
The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

<b>Section A</b> Required Client Information: Company: GA Power Address: Atlanta, GA Email To: SCS Contacts Phone: <input type="checkbox"/> Fax: <input type="checkbox"/> Requested Due Date/TAT: 18 Day		<b>Section B</b> Required Project Information: Report To: SCS Contacts Copy To: Geosynetic Contacts Purchase Order No.: Project Name: Plant Hammond AP-2-App. IV Scan Project Number: GW6851B		<b>Section C</b> Invoice Information: Attention: Southern Co. Company Name: Address: PACE QUOTE Reference: Pace Project Kevin Herring Manager: Fax Profile #: Regulatory Agency: <input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input checked="" type="checkbox"/> OTHER ORS-	
--	--	---	--	--	--

ITEM #	Section D Required Client Information	Valid Matrix Codes MATRIX CODES WATER WASTE WATER PRODUCT SOIL/SOLID OIL WIFE AIR OTHER TISSE 15	Section B MATRIX CODE (see matrix codes to left)	Section B SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		DATE	TIME	DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives							Analysis Test	Requested Analysis Filtered (Y/N)			Residual Chlorine (Y/N)	Section E Pace Project No./ Lab ID.
					DATE	TIME							H <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>	HCl	NaOH	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>	Methanol	Other		Fluoride	Full App.IV Metals 6020/7470*	RAD 228/228		
1	HQWC-17		WT G	G								1													
2	HQWC-17		WT G	G								1													
3	MMW-21D		WT G	G								1													
4	MMW-22		WT G	G								1													
5	MMW-29B		WT G	G								1													
6	MMW-29B		WT G	G								1													
7	MMW-35		WT G	G								1													
8	MMW-35B		WT G	G								1													
9	MMW-35B		WT G	G								1													
10	EB-1		WT G	G								1													
11	EB-2		WT G	G								1													
12	EB-1		WT G	G								1													

<b>ADDITIONAL COMMENTS</b> Please note dry works, strike through any wells not sampled and note when the last sample for the event has been taken. *Full App. IV Metals-36 As, Ba, Be, Cd, Cr, Co, Pb, U, Hg, Mo, Se, Tl One sample set submitted for HGMW-1/2/3/4/5/6/7 and EB-1 but they will be reported for AP-1/2 SDCs		<b>RELINQUISHED BY / AFFILIATION</b> Date: 2/10/21 Time: 11:54 Signature: [Signature]		<b>ACCEPTED BY / AFFILIATION</b> Date: 2/11/21 Time: 16:05 Signature: [Signature]		<b>DATE SIGNED (MANDATORY)</b> 2/15/2021		Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
--	--	---	--	---	--	---	--	------------	-----------------------	-----------------------------	----------------------

# Quality Control Sample Performance Assessment



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

Test: Ra-226  
Analyst: JJY  
Date: 2/19/2021  
Worklist: 58877  
Matrix: DW

Method Blank Assessment	
MB Sample ID	2102227
MB concentration:	0.276
M/B Counting Uncertainty:	0.134
MB MDC:	0.180
MB Numerical Performance Indicator:	4.05
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	See Comment

Laboratory Control Sample Assessment		LCSD (Y or N)?	Y
Count Date:	3/2/2021	LCSD58877	
Spike I.D.:	19-033		19-033
Decay Corrected Spike Concentration (pCi/mL):	24.040		24.040
Volume Used (mL):	0.10		0.10
Aliquot Volume (L, g, F):	0.502		0.501
Target Conc. (pCi/L, g, F):	4.789		4.798
Uncertainty (Calculated):	0.057		0.058
Result (pCi/L, g, F):	5.300		4.626
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.555		0.517
Numerical Performance Indicator:	1.80		-0.65
Percent Recovery:	110.67%		96.42%
Status vs Numerical Indicator:	N/A		N/A
Status vs Recovery:	Pass		Pass
Upper % Recovery Limits:	125%		125%
Lower % Recovery Limits:	75%		75%

Duplicate Sample Assessment	
Sample I.D.:	LCS58877
Duplicate Sample I.D.:	LCSD58877
Sample Result (pCi/L, g, F):	5.300
Sample Result Counting Uncertainty (pCi/L, g, F):	0.555
Sample Duplicate Result (pCi/L, g, F):	4.626
Sample Duplicate Counting Uncertainty (pCi/L, g, F):	0.517
Are sample and/or duplicate results below RL?	NO
Duplicate Numerical Performance Indicator:	1.742
Duplicate (Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	13.77%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Pass
% RPD Limit:	25%

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

Comments:  
The method blank result is below the reporting limit for this analysis and is acceptable.

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

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

*Handwritten notes:*  
Matrix Spike  
LCS58877  
MS/MSD

# Quality Control Sample Performance Assessment

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



Test: Ra-226  
Analyst: JJY  
Date: 2/19/2021  
Worklist: 58877  
Matrix: DW

Method Blank Assessment	
MB Sample ID	2102227
MB Concentration:	0.276
M/B Counting Uncertainty:	0.134
MB MDC:	0.180
MB Numerical Performance Indicator:	4.05
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	See Comment*

Laboratory Control Sample Assessment		LCS#	Y or N?	N
		LCS58877		LCS58877
Count Date:	3/2/2021			
Decay Corrected Spike Concentration (pCi/mL):	19.033			
Volume Used (mL):	24.040			
Aliquot Volume (L, g, F):	0.10			
Target Conc. (pCi/L, g, F):	0.502			
Uncertainty (Calculated):	4.789			
Result (pCi/L, g, F):	0.087			
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	5.300			
Numerical Performance Indicator:	0.555			
Percent Recovery:	1.80			
Status vs Numerical Indicator:	110.67%			
Status vs Recovery:	Pass			
Upper % Recovery Limits:	N/A			
Lower % Recovery Limits:	125%			
	75%			

Duplicate Sample Assessment	
Sample I.D.:	92520873006
Duplicate Sample I.D.:	92520873006DUP
Sample Result (pCi/L, g, F):	0.162
Sample Result Counting Uncertainty (pCi/L, g, F):	0.140
Sample Duplicate Result (pCi/L, g, F):	0.006
Sample Duplicate Counting Uncertainty (pCi/L, g, F):	0.075
Are sample and/or duplicate results below RL?	See Below #
Duplicate Numerical Performance Indicator:	1.924
Duplicate RPD:	185.80%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Fail***
% RPD Limit:	25%

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

Comments:  
\*The method blank result is below the reporting limit for this analysis and is acceptable.

\*\*\*Batch must be re-prepped due to unacceptable precision: N/A WAM 3/2/21

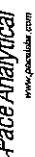
Sample Matrix Spike Control Assessment	MS/MSD 1	MS/MSD 2
<p>Sample Collection Date:</p> <p>Sample I.D.</p> <p>Sample MS I.D.</p> <p>Sample MSD I.D.</p> <p>Spike I.D.:</p> <p>MS/MSD Decay Corrected Spike Concentration (pCi/mL):</p> <p>Spike Volume Used in MS (mL):</p> <p>Spike Volume Used in MSD (mL):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

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

WAM 3/2/21

WAM 3/2/21

# Quality Control Sample Performance Assessment



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

Test: Ra-228  
Analyst: VAL  
Date: 2/22/2021  
Worklist: 58851  
Matrix: WT

Method Blank Assessment	
MB Sample ID	2100680
MB concentration:	0.356
M/B 2 Sigma CSU:	0.369
MB MDC:	0.763
MB Numerical Performance Indicator:	1.89
MB Status vs Numerical Indicator:	Pass
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	
LCS/D (Y or N)?	Y
LCS58851	LCS58851
2/24/2021	2/24/2021
21-003	21-003
38.698	38.698
0.10	0.10
0.813	0.821
4.759	4.711
0.233	0.231
4.358	5.382
1.031	1.179
-0.74	1.09
91.58%	114.23%
N/A	N/A
Pass	Pass
135%	135%
60%	60%

Duplicate Sample Assessment	
Sample I.D.:	Sample I.D.:
Duplicate Sample I.D.:	Duplicate Sample I.D.:
Sample Result (pCi/L, g, F):	Sample Result (pCi/L, g, F):
Sample Duplicate Result (pCi/L, g, F):	Sample Duplicate Result (pCi/L, g, F):
Sample Result 2 Sigma CSU (pCi/L, g, F):	Sample Result 2 Sigma CSU (pCi/L, g, F):
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):
Are sample and/or duplicate results below RL?	Are sample and/or duplicate results below RL?
Duplicate Numerical Performance Indicator:	Duplicate Numerical Performance Indicator:
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:
Duplicate Status vs Numerical Indicator:	Duplicate Status vs Numerical Indicator:
Duplicate Status vs RPD:	Duplicate Status vs RPD:
% RPD Limit:	% RPD Limit:
36%	36%

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

1701510  
M



March 04, 2021

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

RE: Project: HAMMOND AP-2 APP IV  
Pace Project No.: 92521143

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory between February 09, 2021 and February 17, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

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

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

Sincerely,



Kevin Herring  
kevin.herring@pacelabs.com  
1(704)875-9092  
HORIZON Database Administrator

Enclosures

cc: Christine Hug, Geosyntec Consultants, Inc.  
Kristen Jurinko  
Thomas Kessler, Geosyntec  
Whitney Law, Geosyntec Consultants  
Noelia Muskus, Geosyntec Consultants  
Ms. Lauren Petty, Southern Co. Services  
Nardos Tilahun, GeoSyntec  
Dawit Yifru, Geosyntec Consultants, Inc.



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: HAMMOND AP-2 APP IV

Pace Project No.: 92521143

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### **Pace Analytical Services Charlotte**

9800 Kinsey Ave. Ste 100, Huntersville, NC 28078  
Louisiana/NELAP Certification # LA170028  
North Carolina Drinking Water Certification #: 37706  
North Carolina Field Services Certification #: 5342  
North Carolina Wastewater Certification #: 12

South Carolina Certification #: 99006001  
Florida/NELAP Certification #: E87627  
Kentucky UST Certification #: 84  
Virginia/VELAP Certification #: 460221

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### **Pace Analytical Services Asheville**

2225 Riverside Drive, Asheville, NC 28804  
Florida/NELAP Certification #: E87648  
North Carolina Drinking Water Certification #: 37712

North Carolina Wastewater Certification #: 40  
South Carolina Certification #: 99030001  
Virginia/VELAP Certification #: 460222

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

110 Technology Pkwy, Peachtree Corners, GA 30092  
Florida DOH Certification #: E87315  
Georgia DW Inorganics Certification #: 812

North Carolina Certification #: 381  
South Carolina Certification #: 98011001

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: HAMMOND AP-2 APP IV  
Pace Project No.: 92521143

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92521143001	HGWA-1	Water	02/08/21 16:13	02/09/21 12:33
92521143002	HGWA-4	Water	02/08/21 15:54	02/09/21 12:33
92521143003	HGWA-42D	Water	02/08/21 17:36	02/09/21 12:33
92521143004	HGWA-2	Water	02/09/21 10:38	02/10/21 09:56
92521143005	HGWA-3	Water	02/09/21 11:56	02/10/21 09:56
92521143006	HGWA-5	Water	02/09/21 10:46	02/10/21 09:56
92521143007	HGWA-6	Water	02/09/21 12:00	02/10/21 09:56
92521143008	HGWA-43D	Water	02/09/21 17:58	02/10/21 09:56
92521143009	HGWA-44D	Water	02/09/21 13:09	02/10/21 09:56
92521143010	HGWC-16	Water	02/10/21 15:02	02/11/21 09:19
92521143011	HGWC-18	Water	02/11/21 12:57	02/12/21 09:36
92521143012	MW-21D	Water	02/11/21 14:53	02/12/21 09:36
92521143013	DUP-2	Water	02/11/21 00:00	02/12/21 09:36
92521143014	HGWC-14	Water	02/11/21 15:12	02/12/21 09:36
92521143015	HGWC-17	Water	02/11/21 11:30	02/12/21 09:36
92521143016	MW-37D	Water	02/11/21 13:09	02/12/21 09:36
92521143017	FB-2	Water	02/11/21 08:45	02/12/21 09:36
92521143018	HGWC-15	Water	02/12/21 15:01	02/15/21 09:45
92521143019	MW-23D	Water	02/12/21 13:54	02/15/21 09:45
92521143020	MW-33	Water	02/12/21 10:32	02/15/21 09:45
92521143021	EB-1	Water	02/12/21 15:35	02/15/21 09:45
92521143022	MW-22	Water	02/15/21 15:43	02/17/21 11:54
92521143023	MW-35	Water	02/15/21 11:35	02/17/21 11:54

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: HAMMOND AP-2 APP IV  
Pace Project No.: 92521143

Lab ID	Sample ID	Method	Analysts	Analytes Reported
92521143001	HGWA-1	EPA 6020B	CW1	12
		EPA 7470A	VB	1
		EPA 300.0 Rev 2.1 1993	JLH	1
92521143002	HGWA-4	EPA 6020B	CW1	12
		EPA 7470A	VB	1
		EPA 300.0 Rev 2.1 1993	JLH	1
92521143003	HGWA-42D	EPA 6020B	CW1	12
		EPA 7470A	VB	1
		EPA 300.0 Rev 2.1 1993	JLH	1
92521143004	HGWA-2	EPA 6020B	CW1	12
		EPA 7470A	VB	1
		EPA 300.0 Rev 2.1 1993	CDC	1
92521143005	HGWA-3	EPA 6020B	CW1	12
		EPA 7470A	VB	1
		EPA 300.0 Rev 2.1 1993	CDC	1
92521143006	HGWA-5	EPA 6020B	CW1	12
		EPA 7470A	VB	1
		EPA 300.0 Rev 2.1 1993	CDC	1
92521143007	HGWA-6	EPA 6020B	CW1	12
		EPA 7470A	VB	1
		EPA 300.0 Rev 2.1 1993	CDC	1
92521143008	HGWA-43D	EPA 6020B	CW1	12
		EPA 7470A	VB	1
		EPA 300.0 Rev 2.1 1993	CDC	1
92521143009	HGWA-44D	EPA 6020B	CW1	12
		EPA 7470A	VB	1
		EPA 300.0 Rev 2.1 1993	CDC	1
92521143010	HGWC-16	EPA 6020B	CW1	12
		EPA 7470A	VB	1
		EPA 300.0 Rev 2.1 1993	CDC	1
92521143011	HGWC-18	EPA 6020B	CW1	12
		EPA 7470A	VB	1
		EPA 300.0 Rev 2.1 1993	JLH	1
92521143012	MW-21D	EPA 6020B	CW1	12
		EPA 7470A	VB	1
		EPA 300.0 Rev 2.1 1993	JLH	1
92521143013	DUP-2	EPA 6020B	CW1	12

### REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: HAMMOND AP-2 APP IV  
Pace Project No.: 92521143

Lab ID	Sample ID	Method	Analysts	Analytes Reported
92521143014	HGWC-14	EPA 7470A	VB	1
		EPA 300.0 Rev 2.1 1993	JLH	1
		EPA 6020B	CW1	12
92521143015	HGWC-17	EPA 7470A	VB	1
		EPA 300.0 Rev 2.1 1993	JLH	1
		EPA 6020B	CW1	12
92521143016	MW-37D	EPA 7470A	VB	1
		EPA 300.0 Rev 2.1 1993	JLH	1
		EPA 6020B	CW1	12
92521143017	FB-2	EPA 7470A	VB	1
		EPA 300.0 Rev 2.1 1993	JLH	1
		EPA 6020B	CW1	12
92521143018	HGWC-15	EPA 7470A	VB	1
		EPA 300.0 Rev 2.1 1993	JLH	1
		EPA 6020B	CW1	12
92521143019	MW-23D	EPA 7470A	VB	1
		EPA 300.0 Rev 2.1 1993	JLH	1
		EPA 6020B	CW1	12
92521143020	MW-33	EPA 7470A	VB	1
		EPA 300.0 Rev 2.1 1993	JLH	1
		EPA 6020B	CW1	12
92521143021	EB-1	EPA 7470A	VB	1
		EPA 300.0 Rev 2.1 1993	JLH	1
		EPA 6020B	CW1	12
92521143022	MW-22	EPA 7470A	VB	1
		EPA 300.0 Rev 2.1 1993	JLH	1
		EPA 6020B	CW1	12
92521143023	MW-35	EPA 7470A	VB	1
		EPA 300.0 Rev 2.1 1993	CDC	1
		EPA 6020B	CW1	12
		EPA 7470A	VB	1
		EPA 300.0 Rev 2.1 1993	CDC	1

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

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### SUMMARY OF DETECTION

Project: HAMMOND AP-2 APP IV

Pace Project No.: 92521143

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
<b>92521143001</b>	<b>HGWA-1</b>					
	Performed by	CUSTOMER			02/24/21 07:43	
	pH	7.11	Std. Units		02/24/21 07:43	
EPA 6020B	Barium	0.032	mg/L	0.010	02/23/21 18:06	
EPA 6020B	Lead	0.00058J	mg/L	0.0050	02/23/21 18:06	
EPA 6020B	Lithium	0.00086J	mg/L	0.030	02/23/21 18:06	
EPA 300.0 Rev 2.1 1993	Fluoride	0.078J	mg/L	0.10	02/10/21 17:59	
<b>92521143002</b>	<b>HGWA-4</b>					
	Performed by	CUSTOMER			02/24/21 07:43	
	pH	4.94	Std. Units		02/24/21 07:43	
EPA 6020B	Barium	0.040	mg/L	0.010	02/23/21 18:12	
EPA 6020B	Beryllium	0.00023J	mg/L	0.0030	02/23/21 18:12	
EPA 6020B	Cobalt	0.00074J	mg/L	0.0050	02/23/21 18:12	
EPA 6020B	Lead	0.00024J	mg/L	0.0050	02/23/21 18:12	
EPA 6020B	Lithium	0.0013J	mg/L	0.030	02/23/21 18:12	
<b>92521143003</b>	<b>HGWA-42D</b>					
	Performed by	CUSTOMER			02/24/21 07:43	
	pH	7.64	Std. Units		02/24/21 07:43	
EPA 6020B	Antimony	0.0019J	mg/L	0.0030	02/23/21 18:35	B
EPA 6020B	Barium	0.19	mg/L	0.010	02/23/21 18:35	
EPA 6020B	Chromium	0.00078J	mg/L	0.010	02/23/21 18:35	
EPA 6020B	Lead	0.000081J	mg/L	0.0050	02/23/21 18:35	
EPA 6020B	Lithium	0.0098J	mg/L	0.030	02/23/21 18:35	
EPA 300.0 Rev 2.1 1993	Fluoride	0.096J	mg/L	0.10	02/10/21 18:14	
<b>92521143004</b>	<b>HGWA-2</b>					
	Performed by	CUSTOMER			02/24/21 07:43	
	pH	5.42	Std. Units		02/24/21 07:43	
EPA 6020B	Antimony	0.00062J	mg/L	0.0030	02/23/21 18:41	B
EPA 6020B	Barium	0.12	mg/L	0.010	02/23/21 18:41	
EPA 6020B	Beryllium	0.00014J	mg/L	0.0030	02/23/21 18:41	
EPA 6020B	Cadmium	0.00016J	mg/L	0.0025	02/23/21 18:41	
EPA 6020B	Cobalt	0.020	mg/L	0.0050	02/23/21 18:41	
EPA 6020B	Lead	0.000094J	mg/L	0.0050	02/23/21 18:41	
EPA 6020B	Lithium	0.0012J	mg/L	0.030	02/23/21 18:41	
<b>92521143005</b>	<b>HGWA-3</b>					
	Performed by	CUSTOMER			02/24/21 07:43	
	pH	7.23	Std. Units		02/24/21 07:43	
EPA 6020B	Antimony	0.00031J	mg/L	0.0030	02/23/21 18:46	B
EPA 6020B	Barium	0.13	mg/L	0.010	02/23/21 18:46	
EPA 6020B	Lithium	0.0032J	mg/L	0.030	02/23/21 18:46	
EPA 300.0 Rev 2.1 1993	Fluoride	0.074J	mg/L	0.10	02/11/21 18:16	

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### SUMMARY OF DETECTION

Project: HAMMOND AP-2 APP IV

Pace Project No.: 92521143

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
<b>92521143006</b>	<b>HGWA-5</b>					
	Performed by	CUSTOME			02/24/21 07:43	
		R				
	pH	6.35	Std. Units		02/24/21 07:43	
EPA 6020B	Barium	0.046	mg/L	0.010	02/23/21 19:04	
EPA 6020B	Cobalt	0.00071J	mg/L	0.0050	02/23/21 19:04	
EPA 6020B	Lithium	0.0030J	mg/L	0.030	02/23/21 19:04	
EPA 300.0 Rev 2.1 1993	Fluoride	0.053J	mg/L	0.10	02/11/21 18:32	
<b>92521143007</b>	<b>HGWA-6</b>					
	Performed by	CUSTOME			02/24/21 07:43	
		R				
	pH	7.40	Std. Units		02/24/21 07:43	
EPA 6020B	Barium	0.21	mg/L	0.010	02/23/21 19:09	
EPA 6020B	Lithium	0.010J	mg/L	0.030	02/23/21 19:09	
<b>92521143008</b>	<b>HGWA-43D</b>					
	Performed by	CUSTOME			02/24/21 07:43	
		R				
	pH	7.44	Std. Units		02/24/21 07:43	
EPA 6020B	Antimony	0.00037J	mg/L	0.0030	02/23/21 19:15	B
EPA 6020B	Arsenic	0.0017J	mg/L	0.0050	02/23/21 19:15	B
EPA 6020B	Barium	0.34	mg/L	0.010	02/23/21 19:15	
EPA 6020B	Chromium	0.00095J	mg/L	0.010	02/23/21 19:15	
EPA 6020B	Lead	0.00029J	mg/L	0.0050	02/23/21 19:15	
EPA 6020B	Lithium	0.0026J	mg/L	0.030	02/23/21 19:15	
EPA 6020B	Molybdenum	0.0045J	mg/L	0.010	02/23/21 19:15	
EPA 300.0 Rev 2.1 1993	Fluoride	0.19	mg/L	0.10	02/11/21 19:36	
<b>92521143009</b>	<b>HGWA-44D</b>					
	Performed by	CUSTOME			02/24/21 07:43	
		R				
	pH	7.84	Std. Units		02/24/21 07:43	
EPA 6020B	Antimony	0.00042J	mg/L	0.0030	02/23/21 19:21	B
EPA 6020B	Arsenic	0.00083J	mg/L	0.0050	02/23/21 19:21	B
EPA 6020B	Barium	0.46	mg/L	0.010	02/23/21 19:21	
EPA 6020B	Chromium	0.00066J	mg/L	0.010	02/23/21 19:21	
EPA 6020B	Lead	0.00010J	mg/L	0.0050	02/23/21 19:21	
EPA 6020B	Lithium	0.026J	mg/L	0.030	02/23/21 19:21	
EPA 6020B	Molybdenum	0.0038J	mg/L	0.010	02/23/21 19:21	
EPA 300.0 Rev 2.1 1993	Fluoride	0.44	mg/L	0.10	02/11/21 19:52	
<b>92521143010</b>	<b>HGWC-16</b>					
	Performed by	CUSTOME			02/24/21 07:43	
		R				
	pH	7.08	Std. Units		02/24/21 07:43	
EPA 6020B	Arsenic	0.0012J	mg/L	0.0050	02/23/21 19:27	B
EPA 6020B	Barium	0.11	mg/L	0.010	02/23/21 19:27	
EPA 6020B	Lead	0.000094J	mg/L	0.0050	02/23/21 19:27	
EPA 6020B	Lithium	0.0038J	mg/L	0.030	02/23/21 19:27	
EPA 300.0 Rev 2.1 1993	Fluoride	0.21	mg/L	0.10	02/12/21 22:35	M1

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: HAMMOND AP-2 APP IV  
Pace Project No.: 92521143

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
<b>92521143011</b>	<b>HGWC-18</b>					
	Performed by	CUSTOME			02/24/21 07:43	
		R				
	pH	4.53	Std. Units		02/24/21 07:43	
EPA 6020B	Arsenic	0.0069	mg/L	0.0050	02/23/21 19:32	B
EPA 6020B	Barium	0.030	mg/L	0.010	02/23/21 19:32	
EPA 6020B	Beryllium	0.0036	mg/L	0.0030	02/23/21 19:32	
EPA 6020B	Cadmium	0.0016J	mg/L	0.0025	02/23/21 19:32	
EPA 6020B	Cobalt	0.14	mg/L	0.0050	02/23/21 19:32	
EPA 6020B	Lead	0.00098J	mg/L	0.0050	02/23/21 19:32	
EPA 6020B	Lithium	0.011J	mg/L	0.030	02/23/21 19:32	
EPA 6020B	Selenium	0.023	mg/L	0.010	02/23/21 19:32	
EPA 300.0 Rev 2.1 1993	Fluoride	0.71	mg/L	0.10	02/16/21 11:21	
<b>92521143012</b>	<b>MW-21D</b>					
	Performed by	CUSTOME			02/24/21 07:43	
		R				
	pH	6.87	Std. Units		02/24/21 07:43	
EPA 6020B	Arsenic	0.0010J	mg/L	0.0050	02/23/21 19:38	B
EPA 6020B	Barium	0.044	mg/L	0.010	02/23/21 19:38	
EPA 6020B	Lead	0.00066J	mg/L	0.0050	02/23/21 19:38	
EPA 6020B	Lithium	0.021J	mg/L	0.030	02/23/21 19:38	
EPA 6020B	Molybdenum	0.016	mg/L	0.010	02/23/21 19:38	
<b>92521143013</b>	<b>DUP-2</b>					
EPA 6020B	Arsenic	0.00095J	mg/L	0.0050	02/23/21 19:44	B
EPA 6020B	Barium	0.043	mg/L	0.010	02/23/21 19:44	
EPA 6020B	Lithium	0.022J	mg/L	0.030	02/23/21 19:44	
EPA 6020B	Molybdenum	0.016	mg/L	0.010	02/23/21 19:44	
<b>92521143014</b>	<b>HGWC-14</b>					
	Performed by	CUSTOME			02/24/21 07:43	
		R				
	pH	4.84	Std. Units		02/24/21 07:43	
EPA 6020B	Antimony	0.00043J	mg/L	0.0030	02/23/21 19:49	B
EPA 6020B	Arsenic	0.0062	mg/L	0.0050	02/23/21 19:49	B
EPA 6020B	Barium	0.020	mg/L	0.010	02/23/21 19:49	
EPA 6020B	Beryllium	0.00044J	mg/L	0.0030	02/23/21 19:49	
EPA 6020B	Cobalt	0.033	mg/L	0.0050	02/23/21 19:49	
EPA 6020B	Lead	0.0015J	mg/L	0.0050	02/23/21 19:49	
EPA 6020B	Selenium	0.0072J	mg/L	0.010	02/23/21 19:49	
EPA 6020B	Thallium	0.00026J	mg/L	0.0010	02/23/21 19:49	
EPA 300.0 Rev 2.1 1993	Fluoride	0.059J	mg/L	0.10	02/16/21 12:04	
<b>92521143015</b>	<b>HGWC-17</b>					
	Performed by	CUSTOME			02/24/21 07:43	
		R				
	pH	6.31	Std. Units		02/24/21 07:43	
EPA 6020B	Arsenic	0.0012J	mg/L	0.0050	02/23/21 19:55	B
EPA 6020B	Barium	0.025	mg/L	0.010	02/23/21 19:55	
EPA 6020B	Beryllium	0.000067J	mg/L	0.0030	02/23/21 19:55	

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**SUMMARY OF DETECTION**

Project: HAMMOND AP-2 APP IV  
Pace Project No.: 92521143

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>92521143015</b>	<b>HGWC-17</b>					
EPA 6020B	Chromium	0.00074J	mg/L	0.010	02/23/21 19:55	
EPA 6020B	Cobalt	0.012	mg/L	0.0050	02/23/21 19:55	
EPA 6020B	Lead	0.00018J	mg/L	0.0050	02/23/21 19:55	
EPA 6020B	Lithium	0.0013J	mg/L	0.030	02/23/21 19:55	
EPA 300.0 Rev 2.1 1993	Fluoride	0.058J	mg/L	0.10	02/16/21 12:47	
<b>92521143016</b>	<b>MW-37D</b>					
	Performed by	CUSTOMER			02/24/21 07:43	
	pH	7.42	Std. Units		02/24/21 07:43	
EPA 6020B	Antimony	0.00079J	mg/L	0.0030	02/24/21 15:16	
EPA 6020B	Arsenic	0.0023J	mg/L	0.0050	02/24/21 15:16	
EPA 6020B	Barium	0.14	mg/L	0.010	02/24/21 15:16	
EPA 6020B	Chromium	0.0014J	mg/L	0.010	02/24/21 15:16	
EPA 6020B	Cobalt	0.00048J	mg/L	0.0050	02/24/21 15:16	
EPA 6020B	Lead	0.00039J	mg/L	0.0050	02/24/21 15:16	
EPA 6020B	Lithium	0.034	mg/L	0.030	02/24/21 15:16	
EPA 6020B	Molybdenum	0.019	mg/L	0.010	02/24/21 15:16	
EPA 300.0 Rev 2.1 1993	Fluoride	0.077J	mg/L	0.10	02/16/21 13:02	
<b>92521143017</b>	<b>FB-2</b>					
EPA 6020B	Arsenic	0.00091J	mg/L	0.0050	02/24/21 15:22	
<b>92521143018</b>	<b>HGWC-15</b>					
	Performed by	CUSTOMER			02/24/21 07:43	
	pH	5.99	Std. Units		02/24/21 07:43	
EPA 6020B	Barium	0.014	mg/L	0.010	02/24/21 15:45	
EPA 6020B	Cadmium	0.0014J	mg/L	0.0025	02/24/21 15:45	
EPA 6020B	Cobalt	0.019	mg/L	0.0050	02/24/21 15:45	
EPA 6020B	Lithium	0.036	mg/L	0.030	02/24/21 15:45	
EPA 300.0 Rev 2.1 1993	Fluoride	0.053J	mg/L	0.10	02/16/21 20:31	
<b>92521143019</b>	<b>MW-23D</b>					
	Performed by	CUSTOMER			02/24/21 07:43	
	pH	6.80	Std. Units		02/24/21 07:43	
EPA 6020B	Arsenic	0.0010J	mg/L	0.0050	02/24/21 15:51	
EPA 6020B	Barium	0.056	mg/L	0.010	02/24/21 15:51	
EPA 6020B	Cadmium	0.00045J	mg/L	0.0025	02/24/21 15:51	
EPA 6020B	Cobalt	0.0010J	mg/L	0.0050	02/24/21 15:51	
EPA 6020B	Lithium	0.0023J	mg/L	0.030	02/24/21 15:51	
EPA 6020B	Molybdenum	0.0039J	mg/L	0.010	02/24/21 15:51	
<b>92521143020</b>	<b>MW-33</b>					
	Performed by	CUSTOMER			02/24/21 07:43	
	pH	4.40	Std. Units		02/24/21 07:43	
EPA 6020B	Antimony	0.00046J	mg/L	0.0030	02/24/21 15:57	
EPA 6020B	Arsenic	0.0059	mg/L	0.0050	02/24/21 15:57	

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### SUMMARY OF DETECTION

Project: HAMMOND AP-2 APP IV  
Pace Project No.: 92521143

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
<b>92521143020</b>	<b>MW-33</b>					
EPA 6020B	Barium	0.025	mg/L	0.010	02/24/21 15:57	
EPA 6020B	Beryllium	0.0010J	mg/L	0.0030	02/24/21 15:57	
EPA 6020B	Cadmium	0.00017J	mg/L	0.0025	02/24/21 15:57	
EPA 6020B	Cobalt	0.055	mg/L	0.0050	02/24/21 15:57	
EPA 6020B	Lead	0.0018J	mg/L	0.0050	02/24/21 15:57	
EPA 6020B	Lithium	0.0011J	mg/L	0.030	02/24/21 15:57	
EPA 6020B	Selenium	0.011	mg/L	0.010	02/24/21 15:57	
EPA 6020B	Thallium	0.00025J	mg/L	0.0010	02/24/21 15:57	
EPA 300.0 Rev 2.1 1993	Fluoride	0.25	mg/L	0.10	02/16/21 21:00	
<b>92521143022</b>	<b>MW-22</b>					
	Performed by	CUSTOMER			02/24/21 07:43	
	pH	5.48	Std. Units		02/24/21 07:43	
EPA 6020B	Barium	0.017	mg/L	0.010	02/24/21 17:26	
EPA 6020B	Beryllium	0.000062J	mg/L	0.0030	02/24/21 17:26	
EPA 6020B	Cadmium	0.0020J	mg/L	0.0025	02/24/21 17:26	
EPA 6020B	Cobalt	0.038	mg/L	0.0050	02/24/21 17:26	
EPA 6020B	Lead	0.000036J	mg/L	0.0050	02/24/21 17:26	
EPA 6020B	Lithium	0.0011J	mg/L	0.030	02/24/21 17:26	
<b>92521143023</b>	<b>MW-35</b>					
	Performed by	CUSTOMER			02/24/21 07:43	
	pH	4.82	Std. Units		02/24/21 07:43	
EPA 6020B	Antimony	0.00041J	mg/L	0.0030	02/24/21 17:32	
EPA 6020B	Arsenic	0.0050	mg/L	0.0050	02/24/21 17:32	
EPA 6020B	Barium	0.026	mg/L	0.010	02/24/21 17:32	
EPA 6020B	Beryllium	0.00060J	mg/L	0.0030	02/24/21 17:32	
EPA 6020B	Cadmium	0.0017J	mg/L	0.0025	02/24/21 17:32	
EPA 6020B	Cobalt	0.095	mg/L	0.0050	02/24/21 17:32	
EPA 6020B	Lead	0.00055J	mg/L	0.0050	02/24/21 17:32	
EPA 6020B	Lithium	0.0043J	mg/L	0.030	02/24/21 17:32	
EPA 6020B	Selenium	0.010	mg/L	0.010	02/24/21 17:32	
EPA 300.0 Rev 2.1 1993	Fluoride	0.093J	mg/L	0.10	02/20/21 17:59	

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### ANALYTICAL RESULTS

Project: HAMMOND AP-2 APP IV  
Pace Project No.: 92521143

Sample: HGWA-1		Lab ID: 92521143001		Collected: 02/08/21 16:13		Received: 02/09/21 12:33		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		02/24/21 07:43		
pH	<b>7.11</b>	Std. Units			1		02/24/21 07:43		
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	02/23/21 11:55	02/23/21 18:06	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	02/23/21 11:55	02/23/21 18:06	7440-38-2	
Barium	<b>0.032</b>	mg/L	0.010	0.00071	1	02/23/21 11:55	02/23/21 18:06	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	02/23/21 11:55	02/23/21 18:06	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00012	1	02/23/21 11:55	02/23/21 18:06	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	02/23/21 11:55	02/23/21 18:06	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	02/23/21 11:55	02/23/21 18:06	7440-48-4	
Lead	<b>0.00058J</b>	mg/L	0.0050	0.000036	1	02/23/21 11:55	02/23/21 18:06	7439-92-1	
Lithium	<b>0.00086J</b>	mg/L	0.030	0.00081	1	02/23/21 11:55	02/23/21 18:06	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	02/23/21 11:55	02/23/21 18:06	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	02/23/21 11:55	02/23/21 18:06	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	02/23/21 11:55	02/23/21 18:06	7440-28-0	
<b>7470 Mercury</b>									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00050	0.000078	1	02/17/21 15:30	02/18/21 12:38	7439-97-6	
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Fluoride	<b>0.078J</b>	mg/L	0.10	0.050	1		02/10/21 17:59	16984-48-8	

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### ANALYTICAL RESULTS

Project: HAMMOND AP-2 APP IV  
Pace Project No.: 92521143

Sample: <b>HGWA-4</b> Lab ID: <b>92521143002</b> Collected: 02/08/21 15:54 Received: 02/09/21 12:33 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		02/24/21 07:43		
pH	<b>4.94</b>	Std. Units			1		02/24/21 07:43		
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	02/23/21 11:55	02/23/21 18:12	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	02/23/21 11:55	02/23/21 18:12	7440-38-2	
Barium	<b>0.040</b>	mg/L	0.010	0.00071	1	02/23/21 11:55	02/23/21 18:12	7440-39-3	
Beryllium	<b>0.00023J</b>	mg/L	0.0030	0.000046	1	02/23/21 11:55	02/23/21 18:12	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00012	1	02/23/21 11:55	02/23/21 18:12	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	02/23/21 11:55	02/23/21 18:12	7440-47-3	
Cobalt	<b>0.00074J</b>	mg/L	0.0050	0.00038	1	02/23/21 11:55	02/23/21 18:12	7440-48-4	
Lead	<b>0.00024J</b>	mg/L	0.0050	0.000036	1	02/23/21 11:55	02/23/21 18:12	7439-92-1	
Lithium	<b>0.0013J</b>	mg/L	0.030	0.00081	1	02/23/21 11:55	02/23/21 18:12	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	02/23/21 11:55	02/23/21 18:12	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	02/23/21 11:55	02/23/21 18:12	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	02/23/21 11:55	02/23/21 18:12	7440-28-0	
<b>7470 Mercury</b>									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00050	0.000078	1	02/17/21 15:30	02/18/21 12:52	7439-97-6	
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Fluoride	ND	mg/L	0.10	0.050	1		02/16/21 01:29	16984-48-8	

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### ANALYTICAL RESULTS

Project: HAMMOND AP-2 APP IV  
Pace Project No.: 92521143

Sample: <b>HGWA-42D</b> Lab ID: <b>92521143003</b> Collected: 02/08/21 17:36 Received: 02/09/21 12:33 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		02/24/21 07:43		
pH	<b>7.64</b>	Std. Units			1		02/24/21 07:43		
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	<b>0.0019J</b>	mg/L	0.0030	0.00028	1	02/23/21 11:55	02/23/21 18:35	7440-36-0	B
Arsenic	ND	mg/L	0.0050	0.00078	1	02/23/21 11:55	02/23/21 18:35	7440-38-2	
Barium	<b>0.19</b>	mg/L	0.010	0.00071	1	02/23/21 11:55	02/23/21 18:35	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	02/23/21 11:55	02/23/21 18:35	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00012	1	02/23/21 11:55	02/23/21 18:35	7440-43-9	
Chromium	<b>0.00078J</b>	mg/L	0.010	0.00055	1	02/23/21 11:55	02/23/21 18:35	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	02/23/21 11:55	02/23/21 18:35	7440-48-4	
Lead	<b>0.000081J</b>	mg/L	0.0050	0.000036	1	02/23/21 11:55	02/23/21 18:35	7439-92-1	
Lithium	<b>0.0098J</b>	mg/L	0.030	0.00081	1	02/23/21 11:55	02/23/21 18:35	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	02/23/21 11:55	02/23/21 18:35	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	02/23/21 11:55	02/23/21 18:35	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	02/23/21 11:55	02/23/21 18:35	7440-28-0	
<b>7470 Mercury</b>									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00050	0.000078	1	02/17/21 15:30	02/18/21 12:54	7439-97-6	
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Fluoride	<b>0.096J</b>	mg/L	0.10	0.050	1		02/10/21 18:14	16984-48-8	

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### ANALYTICAL RESULTS

Project: HAMMOND AP-2 APP IV  
Pace Project No.: 92521143

Sample: <b>HGWA-2</b> Lab ID: <b>92521143004</b> Collected: 02/09/21 10:38 Received: 02/10/21 09:56 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		02/24/21 07:43		
pH	<b>5.42</b>	Std. Units			1		02/24/21 07:43		
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	<b>0.00062J</b>	mg/L	0.0030	0.00028	1	02/23/21 11:55	02/23/21 18:41	7440-36-0	B
Arsenic	ND	mg/L	0.0050	0.00078	1	02/23/21 11:55	02/23/21 18:41	7440-38-2	
Barium	<b>0.12</b>	mg/L	0.010	0.00071	1	02/23/21 11:55	02/23/21 18:41	7440-39-3	
Beryllium	<b>0.00014J</b>	mg/L	0.0030	0.000046	1	02/23/21 11:55	02/23/21 18:41	7440-41-7	
Cadmium	<b>0.00016J</b>	mg/L	0.0025	0.00012	1	02/23/21 11:55	02/23/21 18:41	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	02/23/21 11:55	02/23/21 18:41	7440-47-3	
Cobalt	<b>0.020</b>	mg/L	0.0050	0.00038	1	02/23/21 11:55	02/23/21 18:41	7440-48-4	
Lead	<b>0.000094J</b>	mg/L	0.0050	0.000036	1	02/23/21 11:55	02/23/21 18:41	7439-92-1	
Lithium	<b>0.0012J</b>	mg/L	0.030	0.00081	1	02/23/21 11:55	02/23/21 18:41	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	02/23/21 11:55	02/23/21 18:41	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	02/23/21 11:55	02/23/21 18:41	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	02/23/21 11:55	02/23/21 18:41	7440-28-0	
<b>7470 Mercury</b>									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00050	0.000078	1	02/17/21 15:30	02/18/21 12:57	7439-97-6	
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Fluoride	ND	mg/L	0.10	0.050	1		02/11/21 17:28	16984-48-8	

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### ANALYTICAL RESULTS

Project: HAMMOND AP-2 APP IV  
Pace Project No.: 92521143

Sample: HGWA-3		Lab ID: 92521143005		Collected: 02/09/21 11:56		Received: 02/10/21 09:56		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		02/24/21 07:43		
pH	<b>7.23</b>	Std. Units			1		02/24/21 07:43		
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	<b>0.00031J</b>	mg/L	0.0030	0.00028	1	02/23/21 11:55	02/23/21 18:46	7440-36-0	B
Arsenic	ND	mg/L	0.0050	0.00078	1	02/23/21 11:55	02/23/21 18:46	7440-38-2	
Barium	<b>0.13</b>	mg/L	0.010	0.00071	1	02/23/21 11:55	02/23/21 18:46	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	02/23/21 11:55	02/23/21 18:46	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00012	1	02/23/21 11:55	02/23/21 18:46	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	02/23/21 11:55	02/23/21 18:46	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	02/23/21 11:55	02/23/21 18:46	7440-48-4	
Lead	ND	mg/L	0.0050	0.000036	1	02/23/21 11:55	02/23/21 18:46	7439-92-1	
Lithium	<b>0.0032J</b>	mg/L	0.030	0.00081	1	02/23/21 11:55	02/23/21 18:46	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	02/23/21 11:55	02/23/21 18:46	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	02/23/21 11:55	02/23/21 18:46	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	02/23/21 11:55	02/23/21 18:46	7440-28-0	
<b>7470 Mercury</b>									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00050	0.000078	1	02/17/21 15:30	02/18/21 12:59	7439-97-6	
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Fluoride	<b>0.074J</b>	mg/L	0.10	0.050	1		02/11/21 18:16	16984-48-8	

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### ANALYTICAL RESULTS

Project: HAMMOND AP-2 APP IV

Pace Project No.: 92521143

**Sample: HGWA-5**      **Lab ID: 92521143006**      Collected: 02/09/21 10:46      Received: 02/10/21 09:56      Matrix: Water

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

Analytical Method:  
Pace Analytical Services - Charlotte

Performed by	<b>CUSTOMER</b>				1		02/24/21 07:43		
pH	<b>6.35</b>	Std. Units			1		02/24/21 07:43		

**6020 MET ICPMS**

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

Antimony	ND	mg/L	0.0030	0.00028	1	02/23/21 11:55	02/23/21 19:04	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	02/23/21 11:55	02/23/21 19:04	7440-38-2	
Barium	<b>0.046</b>	mg/L	0.010	0.00071	1	02/23/21 11:55	02/23/21 19:04	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	02/23/21 11:55	02/23/21 19:04	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00012	1	02/23/21 11:55	02/23/21 19:04	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	02/23/21 11:55	02/23/21 19:04	7440-47-3	
Cobalt	<b>0.00071J</b>	mg/L	0.0050	0.00038	1	02/23/21 11:55	02/23/21 19:04	7440-48-4	
Lead	ND	mg/L	0.0050	0.000036	1	02/23/21 11:55	02/23/21 19:04	7439-92-1	
Lithium	<b>0.0030J</b>	mg/L	0.030	0.00081	1	02/23/21 11:55	02/23/21 19:04	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	02/23/21 11:55	02/23/21 19:04	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	02/23/21 11:55	02/23/21 19:04	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	02/23/21 11:55	02/23/21 19:04	7440-28-0	

**7470 Mercury**

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

Mercury	ND	mg/L	0.00050	0.000078	1	02/17/21 15:30	02/18/21 13:02	7439-97-6	
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**300.0 IC Anions 28 Days**

Analytical Method: EPA 300.0 Rev 2.1 1993  
Pace Analytical Services - Asheville

Fluoride	<b>0.053J</b>	mg/L	0.10	0.050	1		02/11/21 18:32	16984-48-8	
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### ANALYTICAL RESULTS

Project: HAMMOND AP-2 APP IV  
Pace Project No.: 92521143

Sample: HGWA-6		Lab ID: 92521143007		Collected: 02/09/21 12:00		Received: 02/10/21 09:56		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		02/24/21 07:43		
pH	<b>7.40</b>	Std. Units			1		02/24/21 07:43		
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	02/23/21 11:55	02/23/21 19:09	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	02/23/21 11:55	02/23/21 19:09	7440-38-2	
Barium	<b>0.21</b>	mg/L	0.010	0.00071	1	02/23/21 11:55	02/23/21 19:09	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	02/23/21 11:55	02/23/21 19:09	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00012	1	02/23/21 11:55	02/23/21 19:09	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	02/23/21 11:55	02/23/21 19:09	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	02/23/21 11:55	02/23/21 19:09	7440-48-4	
Lead	ND	mg/L	0.0050	0.000036	1	02/23/21 11:55	02/23/21 19:09	7439-92-1	
Lithium	<b>0.010J</b>	mg/L	0.030	0.00081	1	02/23/21 11:55	02/23/21 19:09	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	02/23/21 11:55	02/23/21 19:09	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	02/23/21 11:55	02/23/21 19:09	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	02/23/21 11:55	02/23/21 19:09	7440-28-0	
<b>7470 Mercury</b>									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00050	0.000078	1	02/17/21 15:30	02/18/21 13:04	7439-97-6	
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Fluoride	ND	mg/L	0.10	0.050	1		02/11/21 18:48	16984-48-8	

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### ANALYTICAL RESULTS

Project: HAMMOND AP-2 APP IV  
Pace Project No.: 92521143

Sample: <b>HGWA-43D</b> Lab ID: <b>92521143008</b> Collected: 02/09/21 17:58 Received: 02/10/21 09:56 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		02/24/21 07:43		
pH	<b>7.44</b>	Std. Units			1		02/24/21 07:43		
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	<b>0.00037J</b>	mg/L	0.0030	0.00028	1	02/23/21 11:55	02/23/21 19:15	7440-36-0	B
Arsenic	<b>0.0017J</b>	mg/L	0.0050	0.00078	1	02/23/21 11:55	02/23/21 19:15	7440-38-2	B
Barium	<b>0.34</b>	mg/L	0.010	0.00071	1	02/23/21 11:55	02/23/21 19:15	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	02/23/21 11:55	02/23/21 19:15	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00012	1	02/23/21 11:55	02/23/21 19:15	7440-43-9	
Chromium	<b>0.00095J</b>	mg/L	0.010	0.00055	1	02/23/21 11:55	02/23/21 19:15	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	02/23/21 11:55	02/23/21 19:15	7440-48-4	
Lead	<b>0.00029J</b>	mg/L	0.0050	0.000036	1	02/23/21 11:55	02/23/21 19:15	7439-92-1	
Lithium	<b>0.0026J</b>	mg/L	0.030	0.00081	1	02/23/21 11:55	02/23/21 19:15	7439-93-2	
Molybdenum	<b>0.0045J</b>	mg/L	0.010	0.00069	1	02/23/21 11:55	02/23/21 19:15	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	02/23/21 11:55	02/23/21 19:15	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	02/23/21 11:55	02/23/21 19:15	7440-28-0	
<b>7470 Mercury</b>									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00050	0.000078	1	02/17/21 15:30	02/18/21 13:06	7439-97-6	
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Fluoride	<b>0.19</b>	mg/L	0.10	0.050	1		02/11/21 19:36	16984-48-8	

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### ANALYTICAL RESULTS

Project: HAMMOND AP-2 APP IV  
Pace Project No.: 92521143

Sample: <b>HGWA-44D</b> Lab ID: <b>92521143009</b> Collected: 02/09/21 13:09 Received: 02/10/21 09:56 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		02/24/21 07:43		
pH	<b>7.84</b>	Std. Units			1		02/24/21 07:43		
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	<b>0.00042J</b>	mg/L	0.0030	0.00028	1	02/23/21 11:55	02/23/21 19:21	7440-36-0	B
Arsenic	<b>0.00083J</b>	mg/L	0.0050	0.00078	1	02/23/21 11:55	02/23/21 19:21	7440-38-2	B
Barium	<b>0.46</b>	mg/L	0.010	0.00071	1	02/23/21 11:55	02/23/21 19:21	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	02/23/21 11:55	02/23/21 19:21	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00012	1	02/23/21 11:55	02/23/21 19:21	7440-43-9	
Chromium	<b>0.00066J</b>	mg/L	0.010	0.00055	1	02/23/21 11:55	02/23/21 19:21	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	02/23/21 11:55	02/23/21 19:21	7440-48-4	
Lead	<b>0.00010J</b>	mg/L	0.0050	0.000036	1	02/23/21 11:55	02/23/21 19:21	7439-92-1	
Lithium	<b>0.026J</b>	mg/L	0.030	0.00081	1	02/23/21 11:55	02/23/21 19:21	7439-93-2	
Molybdenum	<b>0.0038J</b>	mg/L	0.010	0.00069	1	02/23/21 11:55	02/23/21 19:21	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	02/23/21 11:55	02/23/21 19:21	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	02/23/21 11:55	02/23/21 19:21	7440-28-0	
<b>7470 Mercury</b>									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00050	0.000078	1	02/17/21 15:30	02/18/21 13:09	7439-97-6	
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Fluoride	<b>0.44</b>	mg/L	0.10	0.050	1		02/11/21 19:52	16984-48-8	

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### ANALYTICAL RESULTS

Project: HAMMOND AP-2 APP IV  
Pace Project No.: 92521143

Sample: <b>HGWC-16</b> Lab ID: <b>92521143010</b> Collected: 02/10/21 15:02 Received: 02/11/21 09:19 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		02/24/21 07:43		
pH	<b>7.08</b>	Std. Units			1		02/24/21 07:43		
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	02/23/21 11:55	02/23/21 19:27	7440-36-0	
Arsenic	<b>0.0012J</b>	mg/L	0.0050	0.00078	1	02/23/21 11:55	02/23/21 19:27	7440-38-2	B
Barium	<b>0.11</b>	mg/L	0.010	0.00071	1	02/23/21 11:55	02/23/21 19:27	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	02/23/21 11:55	02/23/21 19:27	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00012	1	02/23/21 11:55	02/23/21 19:27	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	02/23/21 11:55	02/23/21 19:27	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	02/23/21 11:55	02/23/21 19:27	7440-48-4	
Lead	<b>0.000094J</b>	mg/L	0.0050	0.000036	1	02/23/21 11:55	02/23/21 19:27	7439-92-1	
Lithium	<b>0.0038J</b>	mg/L	0.030	0.00081	1	02/23/21 11:55	02/23/21 19:27	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	02/23/21 11:55	02/23/21 19:27	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	02/23/21 11:55	02/23/21 19:27	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	02/23/21 11:55	02/23/21 19:27	7440-28-0	
<b>7470 Mercury</b>									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00050	0.000078	1	02/17/21 15:30	02/18/21 13:11	7439-97-6	
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Fluoride	<b>0.21</b>	mg/L	0.10	0.050	1		02/12/21 22:35	16984-48-8	M1

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### ANALYTICAL RESULTS

Project: HAMMOND AP-2 APP IV  
Pace Project No.: 92521143

Sample: <b>HGWC-18</b> Lab ID: <b>92521143011</b> Collected: 02/11/21 12:57 Received: 02/12/21 09:36 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		02/24/21 07:43		
pH	<b>4.53</b>	Std. Units			1		02/24/21 07:43		
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	02/23/21 11:55	02/23/21 19:32	7440-36-0	
Arsenic	<b>0.0069</b>	mg/L	0.0050	0.00078	1	02/23/21 11:55	02/23/21 19:32	7440-38-2	B
Barium	<b>0.030</b>	mg/L	0.010	0.00071	1	02/23/21 11:55	02/23/21 19:32	7440-39-3	
Beryllium	<b>0.0036</b>	mg/L	0.0030	0.000046	1	02/23/21 11:55	02/23/21 19:32	7440-41-7	
Cadmium	<b>0.0016J</b>	mg/L	0.0025	0.00012	1	02/23/21 11:55	02/23/21 19:32	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	02/23/21 11:55	02/23/21 19:32	7440-47-3	
Cobalt	<b>0.14</b>	mg/L	0.0050	0.00038	1	02/23/21 11:55	02/23/21 19:32	7440-48-4	
Lead	<b>0.00098J</b>	mg/L	0.0050	0.000036	1	02/23/21 11:55	02/23/21 19:32	7439-92-1	
Lithium	<b>0.011J</b>	mg/L	0.030	0.00081	1	02/23/21 11:55	02/23/21 19:32	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	02/23/21 11:55	02/23/21 19:32	7439-98-7	
Selenium	<b>0.023</b>	mg/L	0.010	0.0016	1	02/23/21 11:55	02/23/21 19:32	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	02/23/21 11:55	02/23/21 19:32	7440-28-0	
<b>7470 Mercury</b>									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00050	0.000078	1	02/17/21 15:30	02/18/21 13:18	7439-97-6	
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Fluoride	<b>0.71</b>	mg/L	0.10	0.050	1		02/16/21 11:21	16984-48-8	

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### ANALYTICAL RESULTS

Project: HAMMOND AP-2 APP IV  
Pace Project No.: 92521143

Sample: MW-21D      Lab ID: 92521143012      Collected: 02/11/21 14:53      Received: 02/12/21 09:36      Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		02/24/21 07:43		
pH	<b>6.87</b>	Std. Units			1		02/24/21 07:43		
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B      Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	02/23/21 11:55	02/23/21 19:38	7440-36-0	
Arsenic	<b>0.0010J</b>	mg/L	0.0050	0.00078	1	02/23/21 11:55	02/23/21 19:38	7440-38-2	B
Barium	<b>0.044</b>	mg/L	0.010	0.00071	1	02/23/21 11:55	02/23/21 19:38	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	02/23/21 11:55	02/23/21 19:38	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00012	1	02/23/21 11:55	02/23/21 19:38	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	02/23/21 11:55	02/23/21 19:38	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	02/23/21 11:55	02/23/21 19:38	7440-48-4	
Lead	<b>0.00066J</b>	mg/L	0.0050	0.000036	1	02/23/21 11:55	02/23/21 19:38	7439-92-1	
Lithium	<b>0.021J</b>	mg/L	0.030	0.00081	1	02/23/21 11:55	02/23/21 19:38	7439-93-2	
Molybdenum	<b>0.016</b>	mg/L	0.010	0.00069	1	02/23/21 11:55	02/23/21 19:38	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	02/23/21 11:55	02/23/21 19:38	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	02/23/21 11:55	02/23/21 19:38	7440-28-0	
<b>7470 Mercury</b>									
Analytical Method: EPA 7470A      Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00050	0.000078	1	02/17/21 15:30	02/18/21 13:21	7439-97-6	
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Fluoride	ND	mg/L	0.10	0.050	1		02/16/21 11:35	16984-48-8	

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### ANALYTICAL RESULTS

Project: HAMMOND AP-2 APP IV  
Pace Project No.: 92521143

Sample: DUP-2      Lab ID: 92521143013      Collected: 02/11/21 00:00      Received: 02/12/21 09:36      Matrix: Water										
Parameters	Results	Units	Report Limit		MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6020 MET ICPMS</b>										
Analytical Method: EPA 6020B    Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA										
Antimony	ND	mg/L	0.0030	0.00028	1	02/23/21 11:55	02/23/21 19:44	7440-36-0		
Arsenic	<b>0.00095J</b>	mg/L	0.0050	0.00078	1	02/23/21 11:55	02/23/21 19:44	7440-38-2	B	
Barium	<b>0.043</b>	mg/L	0.010	0.00071	1	02/23/21 11:55	02/23/21 19:44	7440-39-3		
Beryllium	ND	mg/L	0.0030	0.000046	1	02/23/21 11:55	02/23/21 19:44	7440-41-7		
Cadmium	ND	mg/L	0.0025	0.00012	1	02/23/21 11:55	02/23/21 19:44	7440-43-9		
Chromium	ND	mg/L	0.010	0.00055	1	02/23/21 11:55	02/23/21 19:44	7440-47-3		
Cobalt	ND	mg/L	0.0050	0.00038	1	02/23/21 11:55	02/23/21 19:44	7440-48-4		
Lead	ND	mg/L	0.0050	0.000036	1	02/23/21 11:55	02/23/21 19:44	7439-92-1		
Lithium	<b>0.022J</b>	mg/L	0.030	0.00081	1	02/23/21 11:55	02/23/21 19:44	7439-93-2		
Molybdenum	<b>0.016</b>	mg/L	0.010	0.00069	1	02/23/21 11:55	02/23/21 19:44	7439-98-7		
Selenium	ND	mg/L	0.010	0.0016	1	02/23/21 11:55	02/23/21 19:44	7782-49-2		
Thallium	ND	mg/L	0.0010	0.00014	1	02/23/21 11:55	02/23/21 19:44	7440-28-0		
<b>7470 Mercury</b>										
Analytical Method: EPA 7470A    Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA										
Mercury	ND	mg/L	0.00050	0.000078	1	02/17/21 15:30	02/18/21 13:23	7439-97-6		
<b>300.0 IC Anions 28 Days</b>										
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville										
Fluoride	ND	mg/L	0.10	0.050	1		02/16/21 11:49	16984-48-8		

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### ANALYTICAL RESULTS

Project: HAMMOND AP-2 APP IV

Pace Project No.: 92521143

Sample: HGWC-14		Lab ID: 92521143014		Collected: 02/11/21 15:12		Received: 02/12/21 09:36		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		02/24/21 07:43		
pH	<b>4.84</b>	Std. Units			1		02/24/21 07:43		
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	<b>0.00043J</b>	mg/L	0.0030	0.00028	1	02/23/21 11:55	02/23/21 19:49	7440-36-0	B
Arsenic	<b>0.0062</b>	mg/L	0.0050	0.00078	1	02/23/21 11:55	02/23/21 19:49	7440-38-2	B
Barium	<b>0.020</b>	mg/L	0.010	0.00071	1	02/23/21 11:55	02/23/21 19:49	7440-39-3	
Beryllium	<b>0.00044J</b>	mg/L	0.0030	0.000046	1	02/23/21 11:55	02/23/21 19:49	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00012	1	02/23/21 11:55	02/23/21 19:49	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	02/23/21 11:55	02/23/21 19:49	7440-47-3	
Cobalt	<b>0.033</b>	mg/L	0.0050	0.00038	1	02/23/21 11:55	02/23/21 19:49	7440-48-4	
Lead	<b>0.0015J</b>	mg/L	0.0050	0.000036	1	02/23/21 11:55	02/23/21 19:49	7439-92-1	
Lithium	ND	mg/L	0.030	0.00081	1	02/23/21 11:55	02/23/21 19:49	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	02/23/21 11:55	02/23/21 19:49	7439-98-7	
Selenium	<b>0.0072J</b>	mg/L	0.010	0.0016	1	02/23/21 11:55	02/23/21 19:49	7782-49-2	
Thallium	<b>0.00026J</b>	mg/L	0.0010	0.00014	1	02/23/21 11:55	02/23/21 19:49	7440-28-0	
<b>7470 Mercury</b>									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00050	0.000078	1	02/17/21 15:30	02/18/21 13:25	7439-97-6	
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Fluoride	<b>0.059J</b>	mg/L	0.10	0.050	1		02/16/21 12:04	16984-48-8	

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### ANALYTICAL RESULTS

Project: HAMMOND AP-2 APP IV  
Pace Project No.: 92521143

Sample: <b>HGWC-17</b>		Lab ID: <b>92521143015</b>		Collected: 02/11/21 11:30	Received: 02/12/21 09:36	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		02/24/21 07:43		
pH	<b>6.31</b>	Std. Units			1		02/24/21 07:43		
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	02/23/21 11:55	02/23/21 19:55	7440-36-0	
Arsenic	<b>0.0012J</b>	mg/L	0.0050	0.00078	1	02/23/21 11:55	02/23/21 19:55	7440-38-2	B
Barium	<b>0.025</b>	mg/L	0.010	0.00071	1	02/23/21 11:55	02/23/21 19:55	7440-39-3	
Beryllium	<b>0.00067J</b>	mg/L	0.0030	0.000046	1	02/23/21 11:55	02/23/21 19:55	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00012	1	02/23/21 11:55	02/23/21 19:55	7440-43-9	
Chromium	<b>0.00074J</b>	mg/L	0.010	0.00055	1	02/23/21 11:55	02/23/21 19:55	7440-47-3	
Cobalt	<b>0.012</b>	mg/L	0.0050	0.00038	1	02/23/21 11:55	02/23/21 19:55	7440-48-4	
Lead	<b>0.00018J</b>	mg/L	0.0050	0.000036	1	02/23/21 11:55	02/23/21 19:55	7439-92-1	
Lithium	<b>0.0013J</b>	mg/L	0.030	0.00081	1	02/23/21 11:55	02/23/21 19:55	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	02/23/21 11:55	02/23/21 19:55	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	02/23/21 11:55	02/23/21 19:55	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	02/23/21 11:55	02/23/21 19:55	7440-28-0	
<b>7470 Mercury</b>									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00050	0.000078	1	02/17/21 15:30	02/18/21 13:28	7439-97-6	
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Fluoride	<b>0.058J</b>	mg/L	0.10	0.050	1		02/16/21 12:47	16984-48-8	

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### ANALYTICAL RESULTS

Project: HAMMOND AP-2 APP IV  
Pace Project No.: 92521143

Sample: MW-37D      Lab ID: 92521143016      Collected: 02/11/21 13:09      Received: 02/12/21 09:36      Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		02/24/21 07:43		
pH	<b>7.42</b>	Std. Units			1		02/24/21 07:43		
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B      Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	<b>0.00079J</b>	mg/L	0.0030	0.00028	1	02/23/21 13:13	02/24/21 15:16	7440-36-0	
Arsenic	<b>0.0023J</b>	mg/L	0.0050	0.00078	1	02/23/21 13:13	02/24/21 15:16	7440-38-2	
Barium	<b>0.14</b>	mg/L	0.010	0.00071	1	02/23/21 13:13	02/24/21 15:16	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	02/23/21 13:13	02/24/21 15:16	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00012	1	02/23/21 13:13	02/24/21 15:16	7440-43-9	
Chromium	<b>0.0014J</b>	mg/L	0.010	0.00055	1	02/23/21 13:13	02/24/21 15:16	7440-47-3	
Cobalt	<b>0.00048J</b>	mg/L	0.0050	0.00038	1	02/23/21 13:13	02/24/21 15:16	7440-48-4	
Lead	<b>0.00039J</b>	mg/L	0.0050	0.000036	1	02/23/21 13:13	02/24/21 15:16	7439-92-1	
Lithium	<b>0.034</b>	mg/L	0.030	0.00081	1	02/23/21 13:13	02/24/21 15:16	7439-93-2	
Molybdenum	<b>0.019</b>	mg/L	0.010	0.00069	1	02/23/21 13:13	02/24/21 15:16	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	02/23/21 13:13	02/24/21 15:16	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	02/23/21 13:13	02/24/21 15:16	7440-28-0	
<b>7470 Mercury</b>									
Analytical Method: EPA 7470A      Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00050	0.000078	1	02/22/21 02:15	02/23/21 14:11	7439-97-6	
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Fluoride	<b>0.077J</b>	mg/L	0.10	0.050	1		02/16/21 13:02	16984-48-8	

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### ANALYTICAL RESULTS

Project: HAMMOND AP-2 APP IV  
Pace Project No.: 92521143

Sample: <b>FB-2</b> Lab ID: <b>92521143017</b> Collected: 02/11/21 08:45      Received: 02/12/21 09:36      Matrix: Water										
Parameters	Results	Units	Report Limit		MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6020 MET ICPMS</b>										
Analytical Method: EPA 6020B    Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA										
Antimony	ND	mg/L	0.0030	0.00028	1	02/23/21 13:13	02/24/21 15:22	7440-36-0		
Arsenic	<b>0.00091J</b>	mg/L	0.0050	0.00078	1	02/23/21 13:13	02/24/21 15:22	7440-38-2		
Barium	ND	mg/L	0.010	0.00071	1	02/23/21 13:13	02/24/21 15:22	7440-39-3		
Beryllium	ND	mg/L	0.0030	0.000046	1	02/23/21 13:13	02/24/21 15:22	7440-41-7		
Cadmium	ND	mg/L	0.0025	0.00012	1	02/23/21 13:13	02/24/21 15:22	7440-43-9		
Chromium	ND	mg/L	0.010	0.00055	1	02/23/21 13:13	02/24/21 15:22	7440-47-3		
Cobalt	ND	mg/L	0.0050	0.00038	1	02/23/21 13:13	02/24/21 15:22	7440-48-4		
Lead	ND	mg/L	0.0050	0.000036	1	02/23/21 13:13	02/24/21 15:22	7439-92-1		
Lithium	ND	mg/L	0.030	0.00081	1	02/23/21 13:13	02/24/21 15:22	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.00069	1	02/23/21 13:13	02/24/21 15:22	7439-98-7		
Selenium	ND	mg/L	0.010	0.0016	1	02/23/21 13:13	02/24/21 15:22	7782-49-2		
Thallium	ND	mg/L	0.0010	0.00014	1	02/23/21 13:13	02/24/21 15:22	7440-28-0		
<b>7470 Mercury</b>										
Analytical Method: EPA 7470A    Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA										
Mercury	ND	mg/L	0.00050	0.000078	1	02/22/21 02:15	02/23/21 14:14	7439-97-6		
<b>300.0 IC Anions 28 Days</b>										
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville										
Fluoride	ND	mg/L	0.10	0.050	1		02/16/21 17:46	16984-48-8		

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### ANALYTICAL RESULTS

Project: HAMMOND AP-2 APP IV  
Pace Project No.: 92521143

Sample: <b>HGWC-15</b> Lab ID: <b>92521143018</b> Collected: 02/12/21 15:01      Received: 02/15/21 09:45      Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		02/24/21 07:43		
pH	<b>5.99</b>	Std. Units			1		02/24/21 07:43		
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B      Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	02/23/21 13:13	02/24/21 15:45	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	02/23/21 13:13	02/24/21 15:45	7440-38-2	
Barium	<b>0.014</b>	mg/L	0.010	0.00071	1	02/23/21 13:13	02/24/21 15:45	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	02/23/21 13:13	02/24/21 15:45	7440-41-7	
Cadmium	<b>0.0014J</b>	mg/L	0.0025	0.00012	1	02/23/21 13:13	02/24/21 15:45	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	02/23/21 13:13	02/24/21 15:45	7440-47-3	
Cobalt	<b>0.019</b>	mg/L	0.0050	0.00038	1	02/23/21 13:13	02/24/21 15:45	7440-48-4	
Lead	ND	mg/L	0.0050	0.000036	1	02/23/21 13:13	02/24/21 15:45	7439-92-1	
Lithium	<b>0.036</b>	mg/L	0.030	0.00081	1	02/23/21 13:13	02/24/21 15:45	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	02/23/21 13:13	02/24/21 15:45	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	02/23/21 13:13	02/24/21 15:45	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	02/23/21 13:13	02/24/21 15:45	7440-28-0	
<b>7470 Mercury</b>									
Analytical Method: EPA 7470A      Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00050	0.000078	1	02/22/21 02:15	02/23/21 14:16	7439-97-6	
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Fluoride	<b>0.053J</b>	mg/L	0.10	0.050	1		02/16/21 20:31	16984-48-8	

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### ANALYTICAL RESULTS

Project: HAMMOND AP-2 APP IV  
Pace Project No.: 92521143

Sample: MW-23D		Lab ID: 92521143019		Collected: 02/12/21 13:54		Received: 02/15/21 09:45		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		02/24/21 07:43		
pH	<b>6.80</b>	Std. Units			1		02/24/21 07:43		
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	02/23/21 13:13	02/24/21 15:51	7440-36-0	
Arsenic	<b>0.0010J</b>	mg/L	0.0050	0.00078	1	02/23/21 13:13	02/24/21 15:51	7440-38-2	
Barium	<b>0.056</b>	mg/L	0.010	0.00071	1	02/23/21 13:13	02/24/21 15:51	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	02/23/21 13:13	02/24/21 15:51	7440-41-7	
Cadmium	<b>0.00045J</b>	mg/L	0.0025	0.00012	1	02/23/21 13:13	02/24/21 15:51	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	02/23/21 13:13	02/24/21 15:51	7440-47-3	
Cobalt	<b>0.0010J</b>	mg/L	0.0050	0.00038	1	02/23/21 13:13	02/24/21 15:51	7440-48-4	
Lead	ND	mg/L	0.0050	0.000036	1	02/23/21 13:13	02/24/21 15:51	7439-92-1	
Lithium	<b>0.0023J</b>	mg/L	0.030	0.00081	1	02/23/21 13:13	02/24/21 15:51	7439-93-2	
Molybdenum	<b>0.0039J</b>	mg/L	0.010	0.00069	1	02/23/21 13:13	02/24/21 15:51	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	02/23/21 13:13	02/24/21 15:51	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	02/23/21 13:13	02/24/21 15:51	7440-28-0	
<b>7470 Mercury</b>									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00050	0.000078	1	02/22/21 02:15	02/23/21 14:19	7439-97-6	
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Fluoride	ND	mg/L	0.10	0.050	1		02/16/21 20:45	16984-48-8	

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### ANALYTICAL RESULTS

Project: HAMMOND AP-2 APP IV  
Pace Project No.: 92521143

Sample: MW-33		Lab ID: 92521143020		Collected: 02/12/21 10:32		Received: 02/15/21 09:45		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		02/24/21 07:43		
pH	<b>4.40</b>	Std. Units			1		02/24/21 07:43		
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	<b>0.00046J</b>	mg/L	0.0030	0.00028	1	02/23/21 13:13	02/24/21 15:57	7440-36-0	
Arsenic	<b>0.0059</b>	mg/L	0.0050	0.00078	1	02/23/21 13:13	02/24/21 15:57	7440-38-2	
Barium	<b>0.025</b>	mg/L	0.010	0.00071	1	02/23/21 13:13	02/24/21 15:57	7440-39-3	
Beryllium	<b>0.0010J</b>	mg/L	0.0030	0.000046	1	02/23/21 13:13	02/24/21 15:57	7440-41-7	
Cadmium	<b>0.00017J</b>	mg/L	0.0025	0.00012	1	02/23/21 13:13	02/24/21 15:57	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	02/23/21 13:13	02/24/21 15:57	7440-47-3	
Cobalt	<b>0.055</b>	mg/L	0.0050	0.00038	1	02/23/21 13:13	02/24/21 15:57	7440-48-4	
Lead	<b>0.0018J</b>	mg/L	0.0050	0.000036	1	02/23/21 13:13	02/24/21 15:57	7439-92-1	
Lithium	<b>0.0011J</b>	mg/L	0.030	0.00081	1	02/23/21 13:13	02/24/21 15:57	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	02/23/21 13:13	02/24/21 15:57	7439-98-7	
Selenium	<b>0.011</b>	mg/L	0.010	0.0016	1	02/23/21 13:13	02/24/21 15:57	7782-49-2	
Thallium	<b>0.00025J</b>	mg/L	0.0010	0.00014	1	02/23/21 13:13	02/24/21 15:57	7440-28-0	
<b>7470 Mercury</b>									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00050	0.000078	1	02/22/21 02:15	02/23/21 14:21	7439-97-6	
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Fluoride	<b>0.25</b>	mg/L	0.10	0.050	1		02/16/21 21:00	16984-48-8	

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### ANALYTICAL RESULTS

Project: HAMMOND AP-2 APP IV

Pace Project No.: 92521143

Sample: EB-1		Lab ID: 92521143021		Collected: 02/12/21 15:35	Received: 02/15/21 09:45	Matrix: Water				
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual	
<b>6020 MET ICPMS</b>		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00028	1	02/23/21 13:13	02/24/21 16:02	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.00078	1	02/23/21 13:13	02/24/21 16:02	7440-38-2		
Barium	ND	mg/L	0.010	0.00071	1	02/23/21 13:13	02/24/21 16:02	7440-39-3		
Beryllium	ND	mg/L	0.0030	0.000046	1	02/23/21 13:13	02/24/21 16:02	7440-41-7		
Cadmium	ND	mg/L	0.0025	0.00012	1	02/23/21 13:13	02/24/21 16:02	7440-43-9		
Chromium	ND	mg/L	0.010	0.00055	1	02/23/21 13:13	02/24/21 16:02	7440-47-3		
Cobalt	ND	mg/L	0.0050	0.00038	1	02/23/21 13:13	02/24/21 16:02	7440-48-4		
Lead	ND	mg/L	0.0050	0.000036	1	02/23/21 13:13	02/24/21 16:02	7439-92-1		
Lithium	ND	mg/L	0.030	0.00081	1	02/23/21 13:13	02/24/21 16:02	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.00069	1	02/23/21 13:13	02/24/21 16:02	7439-98-7		
Selenium	ND	mg/L	0.010	0.0016	1	02/23/21 13:13	02/24/21 16:02	7782-49-2		
Thallium	ND	mg/L	0.0010	0.00014	1	02/23/21 13:13	02/24/21 16:02	7440-28-0		
<b>7470 Mercury</b>		Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00050	0.000078	1	02/22/21 09:50	02/22/21 13:46	7439-97-6		
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Fluoride	ND	mg/L	0.10	0.050	1		02/16/21 21:15	16984-48-8		

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### ANALYTICAL RESULTS

Project: HAMMOND AP-2 APP IV  
Pace Project No.: 92521143

Sample: MW-22		Lab ID: 92521143022		Collected: 02/15/21 15:43	Received: 02/17/21 11:54	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		02/24/21 07:43		
pH	<b>5.48</b>	Std. Units			1		02/24/21 07:43		
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	02/23/21 13:13	02/24/21 17:26	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	02/23/21 13:13	02/24/21 17:26	7440-38-2	
Barium	<b>0.017</b>	mg/L	0.010	0.00071	1	02/23/21 13:13	02/24/21 17:26	7440-39-3	
Beryllium	<b>0.00062J</b>	mg/L	0.0030	0.000046	1	02/23/21 13:13	02/24/21 17:26	7440-41-7	
Cadmium	<b>0.0020J</b>	mg/L	0.0025	0.00012	1	02/23/21 13:13	02/24/21 17:26	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	02/23/21 13:13	02/24/21 17:26	7440-47-3	
Cobalt	<b>0.038</b>	mg/L	0.0050	0.00038	1	02/23/21 13:13	02/24/21 17:26	7440-48-4	
Lead	<b>0.000036J</b>	mg/L	0.0050	0.000036	1	02/23/21 13:13	02/24/21 17:26	7439-92-1	
Lithium	<b>0.0011J</b>	mg/L	0.030	0.00081	1	02/23/21 13:13	02/24/21 17:26	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	02/23/21 13:13	02/24/21 17:26	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	02/23/21 13:13	02/24/21 17:26	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	02/23/21 13:13	02/24/21 17:26	7440-28-0	
<b>7470 Mercury</b>									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00050	0.000078	1	02/22/21 09:50	02/22/21 14:01	7439-97-6	
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Fluoride	ND	mg/L	0.10	0.050	1		02/20/21 17:14	16984-48-8	

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### ANALYTICAL RESULTS

Project: HAMMOND AP-2 APP IV  
Pace Project No.: 92521143

Sample: MW-35      Lab ID: 92521143023      Collected: 02/15/21 11:35      Received: 02/17/21 11:54      Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		02/24/21 07:43		
pH	<b>4.82</b>	Std. Units			1		02/24/21 07:43		
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B      Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	<b>0.00041J</b>	mg/L	0.0030	0.00028	1	02/23/21 13:13	02/24/21 17:32	7440-36-0	
Arsenic	<b>0.0050</b>	mg/L	0.0050	0.00078	1	02/23/21 13:13	02/24/21 17:32	7440-38-2	
Barium	<b>0.026</b>	mg/L	0.010	0.00071	1	02/23/21 13:13	02/24/21 17:32	7440-39-3	
Beryllium	<b>0.00060J</b>	mg/L	0.0030	0.000046	1	02/23/21 13:13	02/24/21 17:32	7440-41-7	
Cadmium	<b>0.0017J</b>	mg/L	0.0025	0.00012	1	02/23/21 13:13	02/24/21 17:32	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	02/23/21 13:13	02/24/21 17:32	7440-47-3	
Cobalt	<b>0.095</b>	mg/L	0.0050	0.00038	1	02/23/21 13:13	02/24/21 17:32	7440-48-4	
Lead	<b>0.00055J</b>	mg/L	0.0050	0.000036	1	02/23/21 13:13	02/24/21 17:32	7439-92-1	
Lithium	<b>0.0043J</b>	mg/L	0.030	0.00081	1	02/23/21 13:13	02/24/21 17:32	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	02/23/21 13:13	02/24/21 17:32	7439-98-7	
Selenium	<b>0.010</b>	mg/L	0.010	0.0016	1	02/23/21 13:13	02/24/21 17:32	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	02/23/21 13:13	02/24/21 17:32	7440-28-0	
<b>7470 Mercury</b>									
Analytical Method: EPA 7470A      Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00050	0.000078	1	02/22/21 09:50	02/22/21 14:03	7439-97-6	
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Fluoride	<b>0.093J</b>	mg/L	0.10	0.050	1		02/20/21 17:59	16984-48-8	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: HAMMOND AP-2 APP IV  
Pace Project No.: 92521143

QC Batch: 601892 Analysis Method: EPA 6020B  
QC Batch Method: EPA 3005A Analysis Description: 6020 MET  
Laboratory: Pace Analytical Services - Peachtree Corners, GA  
Associated Lab Samples: 92521143001, 92521143002, 92521143003, 92521143004, 92521143005, 92521143006, 92521143007, 92521143008, 92521143009, 92521143010, 92521143011, 92521143012, 92521143013, 92521143014, 92521143015

METHOD BLANK: 3171327 Matrix: Water  
Associated Lab Samples: 92521143001, 92521143002, 92521143003, 92521143004, 92521143005, 92521143006, 92521143007, 92521143008, 92521143009, 92521143010, 92521143011, 92521143012, 92521143013, 92521143014, 92521143015

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	0.00030J	0.0030	0.00028	02/23/21 17:55	
Arsenic	mg/L	0.00094J	0.0050	0.00078	02/23/21 17:55	
Barium	mg/L	ND	0.010	0.00071	02/23/21 17:55	
Beryllium	mg/L	ND	0.0030	0.000046	02/23/21 17:55	
Cadmium	mg/L	ND	0.0025	0.00012	02/23/21 17:55	
Chromium	mg/L	ND	0.010	0.00055	02/23/21 17:55	
Cobalt	mg/L	ND	0.0050	0.00038	02/23/21 17:55	
Lead	mg/L	ND	0.0050	0.000036	02/23/21 17:55	
Lithium	mg/L	ND	0.030	0.00081	02/23/21 17:55	
Molybdenum	mg/L	ND	0.010	0.00069	02/23/21 17:55	
Selenium	mg/L	ND	0.010	0.0016	02/23/21 17:55	
Thallium	mg/L	ND	0.0010	0.00014	02/23/21 17:55	

LABORATORY CONTROL SAMPLE: 3171328

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.11	108	80-120	
Arsenic	mg/L	0.1	0.096	96	80-120	
Barium	mg/L	0.1	0.10	100	80-120	
Beryllium	mg/L	0.1	0.098	98	80-120	
Cadmium	mg/L	0.1	0.10	102	80-120	
Chromium	mg/L	0.1	0.10	102	80-120	
Cobalt	mg/L	0.1	0.10	101	80-120	
Lead	mg/L	0.1	0.10	101	80-120	
Lithium	mg/L	0.1	0.097	97	80-120	
Molybdenum	mg/L	0.1	0.10	102	80-120	
Selenium	mg/L	0.1	0.094	94	80-120	
Thallium	mg/L	0.1	0.098	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3171329 3171330

Parameter	Units	MS Result	MSD Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	mg/L	ND	0.1	0.1	0.11	0.10	108	104	75-125	3	20	

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**QUALITY CONTROL DATA**

Project: HAMMOND AP-2 APP IV

Pace Project No.: 92521143

Parameter	Units	3171329		3171330		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92521143002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result								
Arsenic	mg/L	ND	0.1	0.1	0.097	0.093	97	93	75-125	5	20		
Barium	mg/L	0.040	0.1	0.1	0.14	0.14	99	96	75-125	2	20		
Beryllium	mg/L	0.00023J	0.1	0.1	0.095	0.090	95	90	75-125	6	20		
Cadmium	mg/L	ND	0.1	0.1	0.10	0.098	101	98	75-125	3	20		
Chromium	mg/L	ND	0.1	0.1	0.10	0.098	101	98	75-125	3	20		
Cobalt	mg/L	0.00074J	0.1	0.1	0.10	0.098	100	97	75-125	3	20		
Lead	mg/L	0.00024J	0.1	0.1	0.10	0.098	101	98	75-125	3	20		
Lithium	mg/L	0.0013J	0.1	0.1	0.094	0.091	93	89	75-125	4	20		
Molybdenum	mg/L	ND	0.1	0.1	0.10	0.099	103	99	75-125	4	20		
Selenium	mg/L	ND	0.1	0.1	0.093	0.091	93	91	75-125	3	20		
Thallium	mg/L	ND	0.1	0.1	0.098	0.095	98	95	75-125	3	20		

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### QUALITY CONTROL DATA

Project: HAMMOND AP-2 APP IV  
Pace Project No.: 92521143

QC Batch: 601924 Analysis Method: EPA 6020B  
QC Batch Method: EPA 3005A Analysis Description: 6020 MET  
Laboratory: Pace Analytical Services - Peachtree Corners, GA  
Associated Lab Samples: 92521143016, 92521143017, 92521143018, 92521143019, 92521143020, 92521143021, 92521143022, 92521143023

METHOD BLANK: 3171451 Matrix: Water  
Associated Lab Samples: 92521143016, 92521143017, 92521143018, 92521143019, 92521143020, 92521143021, 92521143022, 92521143023

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00028	02/24/21 14:31	
Arsenic	mg/L	ND	0.0050	0.00078	02/24/21 14:31	
Barium	mg/L	ND	0.010	0.00071	02/24/21 14:31	
Beryllium	mg/L	ND	0.0030	0.000046	02/24/21 14:31	
Cadmium	mg/L	ND	0.0025	0.00012	02/24/21 14:31	
Chromium	mg/L	ND	0.010	0.00055	02/24/21 14:31	
Cobalt	mg/L	ND	0.0050	0.00038	02/24/21 14:31	
Lead	mg/L	ND	0.0050	0.000036	02/24/21 14:31	
Lithium	mg/L	ND	0.030	0.00081	02/24/21 14:31	
Molybdenum	mg/L	ND	0.010	0.00069	02/24/21 14:31	
Selenium	mg/L	ND	0.010	0.0016	02/24/21 14:31	
Thallium	mg/L	ND	0.0010	0.00014	02/24/21 14:31	

LABORATORY CONTROL SAMPLE: 3171452

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.11	107	80-120	
Arsenic	mg/L	0.1	0.094	94	80-120	
Barium	mg/L	0.1	0.10	100	80-120	
Beryllium	mg/L	0.1	0.099	99	80-120	
Cadmium	mg/L	0.1	0.098	98	80-120	
Chromium	mg/L	0.1	0.097	97	80-120	
Cobalt	mg/L	0.1	0.098	98	80-120	
Lead	mg/L	0.1	0.098	98	80-120	
Lithium	mg/L	0.1	0.10	101	80-120	
Molybdenum	mg/L	0.1	0.10	102	80-120	
Selenium	mg/L	0.1	0.093	93	80-120	
Thallium	mg/L	0.1	0.097	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3171453 3171454

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92521151006 Result	Spike Conc.	Spike Conc.	Conc.								
Antimony	mg/L	ND	0.1	0.1	0.10	0.10	102	104	75-125	2	20		
Arsenic	mg/L	ND	0.1	0.1	0.098	0.10	98	101	75-125	3	20		
Barium	mg/L	0.069	0.1	0.1	0.16	0.17	95	96	75-125	1	20		

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### QUALITY CONTROL DATA

Project: HAMMOND AP-2 APP IV

Pace Project No.: 92521143

Parameter	Units	3171453		3171454		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	RPD	Qual
		92521151006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result								
Beryllium	mg/L	0.000081J	0.1	0.1	0.093	0.096	93	96	75-125	4	20		
Cadmium	mg/L	ND	0.1	0.1	0.097	0.10	97	101	75-125	4	20		
Chromium	mg/L	0.0014J	0.1	0.1	0.099	0.10	98	99	75-125	1	20		
Cobalt	mg/L	0.00081J	0.1	0.1	0.096	0.099	95	98	75-125	2	20		
Lead	mg/L	0.00056J	0.1	0.1	0.095	0.096	95	95	75-125	1	20		
Lithium	mg/L	0.0032J	0.1	0.1	0.098	0.10	95	98	75-125	3	20		
Molybdenum	mg/L	0.051	0.1	0.1	0.15	0.15	101	99	75-125	1	20		
Selenium	mg/L	ND	0.1	0.1	0.093	0.098	92	98	75-125	6	20		
Thallium	mg/L	ND	0.1	0.1	0.093	0.094	93	94	75-125	2	20		

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### QUALITY CONTROL DATA

Project: HAMMOND AP-2 APP IV

Pace Project No.: 92521143

QC Batch: 600377 Analysis Method: EPA 7470A  
 QC Batch Method: EPA 7470A Analysis Description: 7470 Mercury  
 Laboratory: Pace Analytical Services - Peachtree Corners, GA  
 Associated Lab Samples: 92521143001, 92521143002, 92521143003, 92521143004, 92521143005, 92521143006, 92521143007,  
 92521143008, 92521143009, 92521143010, 92521143011, 92521143012, 92521143013, 92521143014,  
 92521143015

METHOD BLANK: 3164783 Matrix: Water  
 Associated Lab Samples: 92521143001, 92521143002, 92521143003, 92521143004, 92521143005, 92521143006, 92521143007,  
 92521143008, 92521143009, 92521143010, 92521143011, 92521143012, 92521143013, 92521143014,  
 92521143015

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00050	0.000078	02/18/21 12:33	

LABORATORY CONTROL SAMPLE: 3164784

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	0.0025	0.0024	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3164785 3164786

Parameter	Units	3164785		3164786		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92521143001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result						
Mercury	mg/L	ND	0.0025	0.0025	0.0025	0.0026	99	104	75-125	5	20

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**QUALITY CONTROL DATA**

Project: HAMMOND AP-2 APP IV

Pace Project No.: 92521143

QC Batch:	601295	Analysis Method:	EPA 7470A
QC Batch Method:	EPA 7470A	Analysis Description:	7470 Mercury
		Laboratory:	Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92521143016, 92521143017, 92521143018, 92521143019, 92521143020

METHOD BLANK: 3168813 Matrix: Water  
Associated Lab Samples: 92521143016, 92521143017, 92521143018, 92521143019, 92521143020

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00050	0.000078	02/23/21 13:14	

LABORATORY CONTROL SAMPLE: 3168814

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	0.0025	0.0023	92	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3168815 3168816

Parameter	Units	3168815		3168816		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Mercury	mg/L	ND	0.0025	0.0022	0.0022	88	89	75-125	1	20	

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### QUALITY CONTROL DATA

Project: HAMMOND AP-2 APP IV  
Pace Project No.: 92521143

QC Batch: 601590 Analysis Method: EPA 7470A  
QC Batch Method: EPA 7470A Analysis Description: 7470 Mercury  
Laboratory: Pace Analytical Services - Peachtree Corners, GA  
Associated Lab Samples: 92521143021, 92521143022, 92521143023

METHOD BLANK: 3170068 Matrix: Water  
Associated Lab Samples: 92521143021, 92521143022, 92521143023

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00050	0.000078	02/22/21 13:27	

LABORATORY CONTROL SAMPLE: 3170069

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3170070 3170071

Parameter	Units	92521143021		3170071		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Mercury	mg/L	ND	0.0025	0.0022	0.0023	85	90	75-125	6	20	

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### QUALITY CONTROL DATA

Project: HAMMOND AP-2 APP IV  
Pace Project No.: 92521143

QC Batch: 598903 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: 92521143001, 92521143003

METHOD BLANK: 3157390 Matrix: Water  
Associated Lab Samples: 92521143001, 92521143003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Fluoride	mg/L	ND	0.10	0.050	02/10/21 16:04	

LABORATORY CONTROL SAMPLE: 3157391

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3157392 3157393

Parameter	Units	92520887002		3157392		3157393		% Rec	% Rec	Limits	RPD	Max RPD	Qual
		MS Result	MSD Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Fluoride	mg/L	0.42	0.42	2.5	2.5	2.9	2.9	100	98	90-110	1	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3157394 3157395

Parameter	Units	92521223018		3157394		3157395		% Rec	% Rec	Limits	RPD	Max RPD	Qual
		MS Result	MSD Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Fluoride	mg/L	ND	ND	2.5	2.5	2.2	2.2	85	88	90-110	2	10 M1	

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### QUALITY CONTROL DATA

Project: HAMMOND AP-2 APP IV  
Pace Project No.: 92521143

QC Batch: 599257 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: 92521143004, 92521143005, 92521143006, 92521143007, 92521143008, 92521143009

METHOD BLANK: 3159217 Matrix: Water  
Associated Lab Samples: 92521143004, 92521143005, 92521143006, 92521143007, 92521143008, 92521143009

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Fluoride	mg/L	ND	0.10	0.050	02/11/21 13:11	

LABORATORY CONTROL SAMPLE: 3159218

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Fluoride	mg/L	2.5	2.6	105	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3159221 3159222

Parameter	Units	92521143004		3159221		3159222		% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.				
Fluoride	mg/L	ND	2.5	2.5	2.3	2.4	93	96	90-110	4	10

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3159223 3159224

Parameter	Units	92521359001		3159223		3159224		% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.				
Fluoride	mg/L	2.1	2.5	2.5	4.4	4.4	92	91	90-110	0	10

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### QUALITY CONTROL DATA

Project: HAMMOND AP-2 APP IV

Pace Project No.: 92521143

QC Batch: 599664

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: 92521143010

METHOD BLANK: 3161257

Matrix: Water

Associated Lab Samples: 92521143010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Fluoride	mg/L	ND	0.10	0.050	02/12/21 15:24	

LABORATORY CONTROL SAMPLE: 3161258

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Fluoride	mg/L	2.5	2.6	103	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3161259 3161260

Parameter	Units	92521578009		3161259		3161260		% Rec	% Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Fluoride	mg/L	0.066J	0.066J	2.5	2.5	2.4	2.5	93	99	90-110	6	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3161575 3161576

Parameter	Units	92521143010		3161575		3161576		% Rec	% Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Fluoride	mg/L	0.21	0.21	2.5	2.5	2.3	2.5	84	91	90-110	7	10 M1	

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### QUALITY CONTROL DATA

Project: HAMMOND AP-2 APP IV  
Pace Project No.: 92521143

QC Batch: 599863 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: 92521143002

METHOD BLANK: 3162426 Matrix: Water  
Associated Lab Samples: 92521143002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Fluoride	mg/L	ND	0.10	0.050	02/15/21 22:21	

LABORATORY CONTROL SAMPLE: 3162427

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Fluoride	mg/L	2.5	2.6	105	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3162428 3162429

Parameter	Units	3162428		3162429		% Rec	% Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.						
Fluoride	mg/L	0.41	2.5	2.7	2.8	93	95	90-110	2	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3162430 3162431

Parameter	Units	3162430		3162431		% Rec	% Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.						
Fluoride	mg/L	0.15	2.5	2.7	2.6	102	97	90-110	5	10	

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**QUALITY CONTROL DATA**

Project: HAMMOND AP-2 APP IV

Pace Project No.: 92521143

QC Batch: 599864 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: 92521143011, 92521143012, 92521143013, 92521143014, 92521143015, 92521143016

METHOD BLANK: 3162432 Matrix: Water  
 Associated Lab Samples: 92521143011, 92521143012, 92521143013, 92521143014, 92521143015, 92521143016

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Fluoride	mg/L	ND	0.10	0.050	02/16/21 05:34	

LABORATORY CONTROL SAMPLE: 3162433

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3162434 3162435

Parameter	Units	3162434		3162435		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Fluoride	mg/L	92521875004 ND	2.5	2.5	2.6	2.6	104	104	90-110	1	10

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3162436 3162437

Parameter	Units	3162436		3162437		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Fluoride	mg/L	92522062001 219 ug/L	2.5	2.5	3.2	3.2	119	121	90-110	1	10 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.

**REPORT OF LABORATORY ANALYSIS**

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**QUALITY CONTROL DATA**

Project: HAMMOND AP-2 APP IV

Pace Project No.: 92521143

QC Batch: 600235 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: 92521143017, 92521143018, 92521143019, 92521143020, 92521143021

METHOD BLANK: 3164171 Matrix: Water  
 Associated Lab Samples: 92521143017, 92521143018, 92521143019, 92521143020, 92521143021

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Fluoride	mg/L	ND	0.10	0.050	02/16/21 14:16	

LABORATORY CONTROL SAMPLE: 3164172

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Fluoride	mg/L	2.5	2.4	97	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3164173 3164174

Parameter	Units	3164173		3164174		% Rec	% Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.						
Fluoride	mg/L	92522138001 ND	2.5	2.4	2.5	95	97	90-110	2	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3164175 3164176

Parameter	Units	3164175		3164176		% Rec	% Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.						
Fluoride	mg/L	92521578011 0.068J	2.5	2.6	2.6	100	100	90-110	1	10	

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

**REPORT OF LABORATORY ANALYSIS**

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### QUALITY CONTROL DATA

Project: HAMMOND AP-2 APP IV  
Pace Project No.: 92521143

QC Batch: 601397 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: 92521143022, 92521143023

METHOD BLANK: 3169354 Matrix: Water  
Associated Lab Samples: 92521143022, 92521143023

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Fluoride	mg/L	ND	0.10	0.050	02/20/21 16:44	

LABORATORY CONTROL SAMPLE: 3169355

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3169356 3169357

Parameter	Units	92521143022		3169357		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result							MSD Result
Fluoride	mg/L	ND	2.5	2.5	2.6	2.7	104	105	90-110	1	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3169358 3169359

Parameter	Units	92521151025		3169359		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result							MSD Result
Fluoride	mg/L	0.071J	2.5	2.5	2.4	2.4	95	95	90-110	0	10	

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

### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: HAMMOND AP-2 APP IV

Pace Project No.: 92521143

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### DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

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

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

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

TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

B Analyte was detected in the associated method blank.

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-2 APP IV  
Pace Project No.: 92521143

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92521143001	HGWA-1				
92521143002	HGWA-4				
92521143003	HGWA-42D				
92521143004	HGWA-2				
92521143005	HGWA-3				
92521143006	HGWA-5				
92521143007	HGWA-6				
92521143008	HGWA-43D				
92521143009	HGWA-44D				
92521143010	HGWC-16				
92521143011	HGWC-18				
92521143012	MW-21D				
92521143014	HGWC-14				
92521143015	HGWC-17				
92521143016	MW-37D				
92521143018	HGWC-15				
92521143019	MW-23D				
92521143020	MW-33				
92521143022	MW-22				
92521143023	MW-35				
92521143001	HGWA-1	EPA 3005A	601892	EPA 6020B	601999
92521143002	HGWA-4	EPA 3005A	601892	EPA 6020B	601999
92521143003	HGWA-42D	EPA 3005A	601892	EPA 6020B	601999
92521143004	HGWA-2	EPA 3005A	601892	EPA 6020B	601999
92521143005	HGWA-3	EPA 3005A	601892	EPA 6020B	601999
92521143006	HGWA-5	EPA 3005A	601892	EPA 6020B	601999
92521143007	HGWA-6	EPA 3005A	601892	EPA 6020B	601999
92521143008	HGWA-43D	EPA 3005A	601892	EPA 6020B	601999
92521143009	HGWA-44D	EPA 3005A	601892	EPA 6020B	601999
92521143010	HGWC-16	EPA 3005A	601892	EPA 6020B	601999
92521143011	HGWC-18	EPA 3005A	601892	EPA 6020B	601999
92521143012	MW-21D	EPA 3005A	601892	EPA 6020B	601999
92521143013	DUP-2	EPA 3005A	601892	EPA 6020B	601999
92521143014	HGWC-14	EPA 3005A	601892	EPA 6020B	601999
92521143015	HGWC-17	EPA 3005A	601892	EPA 6020B	601999
92521143016	MW-37D	EPA 3005A	601924	EPA 6020B	602022
92521143017	FB-2	EPA 3005A	601924	EPA 6020B	602022
92521143018	HGWC-15	EPA 3005A	601924	EPA 6020B	602022
92521143019	MW-23D	EPA 3005A	601924	EPA 6020B	602022
92521143020	MW-33	EPA 3005A	601924	EPA 6020B	602022
92521143021	EB-1	EPA 3005A	601924	EPA 6020B	602022
92521143022	MW-22	EPA 3005A	601924	EPA 6020B	602022
92521143023	MW-35	EPA 3005A	601924	EPA 6020B	602022
92521143001	HGWA-1	EPA 7470A	600377	EPA 7470A	600865
92521143002	HGWA-4	EPA 7470A	600377	EPA 7470A	600865
92521143003	HGWA-42D	EPA 7470A	600377	EPA 7470A	600865
92521143004	HGWA-2	EPA 7470A	600377	EPA 7470A	600865

**REPORT OF LABORATORY ANALYSIS**

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: HAMMOND AP-2 APP IV


Pace Project No.: 92521143

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92521143005	HGWA-3	EPA 7470A	600377	EPA 7470A	600865
92521143006	HGWA-5	EPA 7470A	600377	EPA 7470A	600865
92521143007	HGWA-6	EPA 7470A	600377	EPA 7470A	600865
92521143008	HGWA-43D	EPA 7470A	600377	EPA 7470A	600865
92521143009	HGWA-44D	EPA 7470A	600377	EPA 7470A	600865
92521143010	HGWC-16	EPA 7470A	600377	EPA 7470A	600865
92521143011	HGWC-18	EPA 7470A	600377	EPA 7470A	600865
92521143012	MW-21D	EPA 7470A	600377	EPA 7470A	600865
92521143013	DUP-2	EPA 7470A	600377	EPA 7470A	600865
92521143014	HGWC-14	EPA 7470A	600377	EPA 7470A	600865
92521143015	HGWC-17	EPA 7470A	600377	EPA 7470A	600865
92521143016	MW-37D	EPA 7470A	601295	EPA 7470A	601814
92521143017	FB-2	EPA 7470A	601295	EPA 7470A	601814
92521143018	HGWC-15	EPA 7470A	601295	EPA 7470A	601814
92521143019	MW-23D	EPA 7470A	601295	EPA 7470A	601814
92521143020	MW-33	EPA 7470A	601295	EPA 7470A	601814
92521143021	EB-1	EPA 7470A	601590	EPA 7470A	601621
92521143022	MW-22	EPA 7470A	601590	EPA 7470A	601621
92521143023	MW-35	EPA 7470A	601590	EPA 7470A	601621
92521143001	HGWA-1	EPA 300.0 Rev 2.1 1993	598903		
92521143002	HGWA-4	EPA 300.0 Rev 2.1 1993	599863		
92521143003	HGWA-42D	EPA 300.0 Rev 2.1 1993	598903		
92521143004	HGWA-2	EPA 300.0 Rev 2.1 1993	599257		
92521143005	HGWA-3	EPA 300.0 Rev 2.1 1993	599257		
92521143006	HGWA-5	EPA 300.0 Rev 2.1 1993	599257		
92521143007	HGWA-6	EPA 300.0 Rev 2.1 1993	599257		
92521143008	HGWA-43D	EPA 300.0 Rev 2.1 1993	599257		
92521143009	HGWA-44D	EPA 300.0 Rev 2.1 1993	599257		
92521143010	HGWC-16	EPA 300.0 Rev 2.1 1993	599664		
92521143011	HGWC-18	EPA 300.0 Rev 2.1 1993	599864		
92521143012	MW-21D	EPA 300.0 Rev 2.1 1993	599864		
92521143013	DUP-2	EPA 300.0 Rev 2.1 1993	599864		
92521143014	HGWC-14	EPA 300.0 Rev 2.1 1993	599864		
92521143015	HGWC-17	EPA 300.0 Rev 2.1 1993	599864		
92521143016	MW-37D	EPA 300.0 Rev 2.1 1993	599864		
92521143017	FB-2	EPA 300.0 Rev 2.1 1993	600235		
92521143018	HGWC-15	EPA 300.0 Rev 2.1 1993	600235		
92521143019	MW-23D	EPA 300.0 Rev 2.1 1993	600235		
92521143020	MW-33	EPA 300.0 Rev 2.1 1993	600235		
92521143021	EB-1	EPA 300.0 Rev 2.1 1993	600235		
92521143022	MW-22	EPA 300.0 Rev 2.1 1993	601397		
92521143023	MW-35	EPA 300.0 Rev 2.1 1993	601397		

### REPORT OF LABORATORY ANALYSIS

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

**Laboratory receiving samples:**

Achville  Eden  Greenwood  Huntersville  Raleigh  Mechanicsville  Atlanta  Kernersville

Sample Condition  
Upon Receipt

Client Name:

*G.A Power*

Project #:

**WO# : 92521143**



Courier:  Fed Ex  UPS  USPS  Client  
 Commercial  Pace  Other: \_\_\_\_\_

Custody Seal Present?  Yes  No    Seals Intact?  Yes  No

Date/Initials Person Examining Contents: *MP 2/14/21*

Packing Material:  Bubble Wrap  Bubble Bags  None  Other

Biological Tissue Frozen?

Thermometer:  IR Gun ID: 233    Type of Ice:  Wet  Blue  None

Yes  No  N/A

Cooler Temp: 3.6    Correction Factor: Add/Subtract (°C) ± 0.4

Temp should be above freezing to 6°C

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

Cooler Temp Corrected (°C): 4.0

USDA Regulated Soil (  N/A, water sample)

Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)?

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

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

COMMENTS/SAMPLE DISCREPANCY

Field Data Required?  Yes  No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted:

Date/Time:

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

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

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

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

# CHAIN-OF-CUSTODY / Analytical Request Document

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

Page: 1 of 3

### Section A

**Required Client Information:**  
 Company: GA Power  
 Address: Atlanta, GA  
 Email to: SCS Contacts  
 Phone: \_\_\_\_\_ Fax: \_\_\_\_\_  
 Requested Due Date/TIME: 10 Day

### Section B

**Required Project Information:**  
 Report To: SCS Contacts  
 Copy To: Geosynthetic Contacts  
 Purchase Order No.: \_\_\_\_\_  
 Project Name: Plant Hammond AP-2 App. IV Scan  
 Project Number: GW6581B

### Section C

**Invoice Information:**  
 Attention: Southern Co.  
 Company Name: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Project Name: \_\_\_\_\_  
 Reference: Kevin Herring  
 Pace Project: \_\_\_\_\_  
 Pace Profile #: \_\_\_\_\_

**REGULATORY AGENCY:**  
 NPDES  GROUND WATER  DRINKING WATER  
 UST  RCRA  OTHER (specify \_\_\_\_\_)  
 Site Location: \_\_\_\_\_ STATE: GA

ITEM #	Section D Required Client Information SAMPLE ID (A-Z, 0-9 / ) Sample IDs MUST BE UNIQUE	Valid Matrix Codes MATRIX CODE MATERIALS DUST WASTE WATER PRODUCT OIL WIRE AIR OTHER	Valid Matrix Codes CODE DUST WASTE WATER PRODUCT OIL WIRE AIR OTHER	MATRIX CODE (See valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives						Analysis Test	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)			
						DATE	TIME					Unpreserved	H <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>	HCl	NaOH	Na <sub>2</sub> S <sub>2</sub> O <sub>5</sub>				Methanol	Other	Fluoride
1	HGWA-1			WT G	G	4/9/01	6:17	17	4	1	3												
2	HGWA-2			WT G	G				4	1	3												
3	HGWA-3			WT G	G				4	1	3												
4	HGWA-4			WT G	G				4	1	3												
5	HGWA-5			WT G	G				4	1	3												
6	HGWA-6			WT G	G				4	1	3												
7	HGWA-42D			WT G	G				4	1	3												
8	HGWA-43D			WT G	G				4	1	3												
9	HGWA-44D			WT G	G				4	1	3												
10	HGWC-14			WT G	G				4	1	3												
11	HGWC-15			WT G	G				4	1	3												
12	HGWC-16			WT G	G				4	1	3												

**ADDITIONAL COMMENTS:**  
 Please note dry wells, which through any wells not sampled, and note when the last sample for the event has been taken.  
 \*Full App. IV Metals-Str. As, Ba, Be, Cd, Cr, Co, Pb, U, Hg, Mo, Se, Tl  
 One sample set submitted for HGWA-1/2/3/4/5/6/7/8/9/10/11 and EB-1 but they will be reported for AP-12 SOXS

**RELINQUISHED BY / AFFILIATION:** \_\_\_\_\_ DATE: 2/9/01 TIME: 15:45  
**ACCEPTED BY / AFFILIATION:** \_\_\_\_\_ DATE: 2/9/01 TIME: 12:33  
 Temp in °C: \_\_\_\_\_  
 Received on Ice (Y/N): Y  
 Custody Sealed Cooler (Y/N): N  
 Samples Intact (Y/N): Y

**SAMPLER NAME AND SIGNATURE:** \_\_\_\_\_  
 PRINT NAME OF SAMPLER: Chad K. 530  
 SIGNATURE OF SAMPLER: \_\_\_\_\_  
 DATE SIGNED (MM/DD/YYYY): 2/8/01

# CHAIN-OF-CUSTODY / Analytical Request Document

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



<b>Section A</b> Required Client Information: Company: GA Power Address: Atlanta, GA	<b>Section B</b> Required Project Information: Report To: SCS Contacts Copy To: Geosynthetic Contacts
<b>Section C</b> Invoice Information: Attention: Southern Co. Company Name: Southern Co. Address: _____	<b>REGULATORY AGENCY</b> <input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input checked="" type="checkbox"/> OTHER (see-) Site Location: _____ STATE: GA
Section D Required Client Information: Project Name: Plant Hammond A/P-2 App. IV Scan Project Number: GWS581B Requested Due Date/TIME: 10 Day Requested Analysis Filtered (Y/N): _____ Site Location: _____ STATE: GA	

ITEM #	Section D Required Client Information Valid Matrix Codes MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	DATE	TIME	DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved H <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>	HCl	NaOH	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>	Methanol	Other	Requested Analysis Filtered (Y/N)			Residual Chlorine (Y/N)	pH =	
																Fluoride	Full App. IV Metals 8320/7470*	RAD 226/228			
1	HGMWA-1	WT G																			
2	HGMWA-2	WT G																			
3	HGMWA-3	WT G																			
4	HGMWA-4	WT G	2/21	1554																	
5	HGMWA-5	WT G																			
6	HGMWA-6	WT G																			
7	HGMWA-7	WT G																			
8	HGMWA-8	WT G																			
9	HGMWA-9	WT G																			
10	HGMWA-10	WT G																			
11	HGMWA-11	WT G																			
12	HGMWA-12	WT G																			

<b>Section A</b> Required Client Information: Company: GA Power Address: Atlanta, GA	<b>Section B</b> Required Project Information: Report To: SCS Contacts Copy To: Geosynthetic Contacts
<b>Section C</b> Invoice Information: Attention: Southern Co. Company Name: Southern Co. Address: _____	
<b>Section D</b> Required Client Information: Project Name: Plant Hammond A/P-2 App. IV Scan Project Number: GWS581B Requester: _____ Requested Due Date/TIME: 10 Day	
<b>REGULATORY AGENCY</b> <input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input checked="" type="checkbox"/> OTHER (see-) Site Location: _____ STATE: GA	
Section D Required Client Information: Project Name: Plant Hammond A/P-2 App. IV Scan Project Number: GWS581B Requested Due Date/TIME: 10 Day Requested Analysis Filtered (Y/N): _____ Site Location: _____ STATE: GA	

Additional Comments: \_\_\_\_\_

REQUISITIONED BY / AFFILIATION: \_\_\_\_\_ DATE: 2/21/01 TIME: 1554

ACCEPTED BY / AFFILIATION: \_\_\_\_\_ DATE: 2/21/01 TIME: 1545

SAMPLER NAME AND SIGNATURE: \_\_\_\_\_

PRINT Name of SAMPLER: \_\_\_\_\_

SIGNATURE of SAMPLER: \_\_\_\_\_

DATE Signed (MM/DD/YYYY): 02/08/2001

Temp in °C: \_\_\_\_\_

Received on Ice (Y/N): \_\_\_\_\_

Custody Sealed Cooler (Y/N): \_\_\_\_\_

Samples Intact (Y/N): \_\_\_\_\_

Site Project No./ Lab I.D.: 92521140

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

F-ALL-Q-020(rev.07.15-Feb-2007)



# CHAIN-OF-CUSTODY / Analytical Request Document

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

Page: 3 of 3

### Section A Required Client Information

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

### Section B Required Project Information

Report For: SCS Contacts  
 Copy To: Geosynlec Contacts  
 Purchase Order No.:  
 Project Name: Plant Hammond AP-2 App. IV Scan  
 Project Number: GW85818

### Section C Invoice Information

Address: Southern Co.  
 Company Name:  
 Reference: Kevin Herring  
 Invoice Project:  
 Pace Project #

### REGULATORY AGENCY

NPDES  GROUND WATER  DRINKING WATER  
 UST  RCRA  OTHER   
 Site Location: GA

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

ITEM #	Section D Required Client Information	Valid Matrix Codes	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	Preservatives							Analysis Test	Requested Analysis to be Filtered (Y/N)	Residual Chlorine (Y/N)	Pace Project No./ Lab ID.	
					DATE	TIME				DATE	TIME	H <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>	HCl	NaOH	Na <sub>2</sub> S <sub>2</sub> O <sub>5</sub>					Methanol
1	HQWA-1	DATE	WT	G																	
2	HQWA-2	DATE	WT	G																	
3	HQWA-3	DATE	WT	G																	
4	HQWA-4	DATE	WT	G																	
5	HQWA-5	DATE	WT	G																	
6	HQWA-6	DATE	WT	G																	
7	HQWA-42D	DATE	WT	G																	
8	HQWA-43B	DATE	WT	G																	
9	HQWA-44D	DATE	WT	G																	
10	HQWA-14	DATE	WT	G																	
11	HQWA-15	DATE	WT	G																	
12	HQWA-16	DATE	WT	G																	

ADDITIONAL COMMENTS

REMOVED BY / AFFILIATION: Thomas Westford  
 DATE: 2/9/21  
 TIME: 12:31  
 ACCEPTED BY / AFFILIATION: [Signature]  
 DATE: 2/9/21  
 TIME: 12:33

### SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Thomas Westford  
 SIGNATURE of SAMPLER: [Signature]

DATE SIGNED LABORATORY: 2/8/21

Temp in °C: 36  
 Received on Ice (Y/N): Y  
 Custody Sealed Correct (Y/N): N  
 Samples Intact (Y/N): Y

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



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

**Section A**

Required Client Information:  
 Company: GA Power  
 Address: Atlanta, GA  
 Email To: SCS Contracts  
 Phone: \_\_\_\_\_ Fax: \_\_\_\_\_  
 Requested Due Date/TAT: 10 Day

**Section B**

Required Project Information:  
 Report To: SCS Contracts  
 Copy To: Geosynthetic Contacts  
 Purchase Order No.: \_\_\_\_\_  
 Project Name: Plant Hammond AP-2 App IV Scan  
 Project Number: GW65818

**Section C**

Invoice Information:  
 Attention: Southern Co.  
 Company Name: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 State: \_\_\_\_\_  
 City: \_\_\_\_\_  
 Zip: \_\_\_\_\_

REGULATORY AGENCY  
 NPDES  GROUND WATER  DRINKING WATER  
 UST  RCRA  OTHER USE

Page: 1 of 3

ITEM #	Section D Request Client Information  Valid Matrix Codes MATERIAL: DOMESTIC WATER, WASTE WATER, INDUSTRIAL WASTE, PRODUCT, SCOUR/SOLID, OIL, WIFE, AIR, OTHER CODE: DW, WT, WW, P, DL, WP, CR, TF	MATRIX CODE	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED			SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives					Analysis Test	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	pH
				DATE	TIME	DATE			TIME	UNPRESERVED	H <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>	HCl				
1	HQWA-1	WT G	G	2/19/21	1036	1036	19	1									
2	HQWA-2	WT G	G	2/19/21	1036	1036	19	1									
3	HQWA-3	WT G	G	2/19/21	1036	1036	19	1									
4	HQWA-4	WT G	G	2/19/21	1036	1036	19	1									
5	HQWA-5	WT G	G	2/19/21	1036	1036	19	1									
6	HQWA-6	WT G	G	2/19/21	1036	1036	19	1									
7	HQWA-7	WT G	G	2/19/21	1036	1036	19	1									
8	HQWA-8	WT G	G	2/19/21	1036	1036	19	1									
9	HQWA-9	WT G	G	2/19/21	1036	1036	19	1									
10	HQWA-10	WT G	G	2/19/21	1036	1036	19	1									
11	HQWA-11	WT G	G	2/19/21	1036	1036	19	1									
12	HQWA-12	WT G	G	2/19/21	1036	1036	19	1									

Additional Comments:  
 Please note dry wells - write through any wells not sampled, and note when the last sample for the event has been taken.  
 Full App IV Metals-5b, Ar, Ba, Be, Cd, Cr, Co, Pb, Li, Ni, Hg, Mn, Se, Ti  
 One sample set submitted for HQWA-12/23/24/25/26 and EB-1 but they will be reported for AP-12 SDGS

Requester Information:  
 Requested By: Sherry Lusk / Good  
 Date: 2/19/21 Time: 1759  
 Accepted By: [Signature]  
 Date: 2/19/21 Time: 1759  
 Requested By: [Signature]  
 Date: 2/19/21 Time: 0937  
 Accepted By: [Signature]  
 Date: 2/19/21 Time: 0936

Sampler Name and Signature:  
 Sampler Name: [Name]  
 Signature: [Signature]  
 Date Signed (MM/DD/YYYY): 2/19/21

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





CHAIN-OF-CUSTODY / Analytical Request Document

Section A

Requested Client Information: Company: GA Power, Address: Atlanta, GA

Section B

Requested Project Information: Report to: SCS Contacts, Project Name: Plant Hammond AP-2 App. IV Scan

Section C

Invoice Information: Attention: Southern Co., Company Name: Kevin Herring

REGULATORY AGENCY: NPDES, GROUND WATER, DRINKING WATER, UST, RCRA, OTHER

Main data table with columns: ITEM #, Section D, Valid Matrix Codes, MATRIX CODE, SAMPLE TYPE, DATE, TIME, SAMPLE TEMP AT COLLECTION, # OF CONTAINERS, Preservatives, Analysis Test, Requested Analysis Filtered (Y/N), Residual Chlorine (Y/N), pH =

SAMPLER NAME AND SIGNATURE: Aaron Reeder, DATE SIGNED: 02/09/2001

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



CHAIN-OF-CUSTODY / Analytical Request Document

Section A Required Client Information

Company: GA Power

Address: Atlanta, GA

Email To: SCS Contacts

Phone: Fax

Requested Due Date (TAT): 10 day

Section B Required Project Information

Report To: SCS Contacts

Copy To: Geosynthetic Contacts

Purchase Order No.

Project Name: Plant Hammond AP-2 App. IV Scan

Project Number: GW65818

Section C Invoice Information

Company Name: Southern Co.

Address:

Site Location: GA

REGULATORY AGENCY

NPDES  GROUND WATER  DRINKING WATER

UST  RCRA  OTHER

ITEM #	Section B Requested Client Information	Matrix Code	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		DATE	TIME	DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives							Analysis Test			Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	pH =
				SCAMP	SCAMP							Unpreserved	H <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>	HCl	NaOH	Na <sub>2</sub> S <sub>2</sub> O <sub>5</sub>	Methanol	Other	Fluoride	Full App. IV Metals 6020/7470*			
1	HGWA-1	WT G	G								4													
2	HGWA-2	WT G	G								4													
3	HGWA-3	WT G	G								4													
4	HGWA-4	WT G	G								4													
5	HGWA-5	WT G	G								4													
6	HGWA-6	WT G	G								4													
7	HGWA-7D	WT G	G								4													
8	HGWA-43D	WT G	G								4													
9	HGWA-44D	WT G	G								4													
10	HGWC-14	WT G	G								4													
11	HGWC-15	WT G	G								4													
12	HGWC-16	WT G	G								4													

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
<i>[Signature]</i>	2/10/21	093	<i>[Signature]</i>	2/11/21	0936
<i>[Signature]</i>	2/10/21	1304	<i>[Signature]</i>	2/11/21	0936
<i>[Signature]</i>	2/19/21	4:11	<i>[Signature]</i>		

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
PLEASE NOTE DRY WELLS, STRIKE THROUGH ANY WELLS NOT SAMPLED, AND NOTE WHEN THE LAST SAMPLE FOR THE EVENT HAS BEEN TAKEN.	<i>[Signature]</i>			<i>[Signature]</i>		
Full App. IV Metals: Sb, As, Ba, Be, Cd, Cr, Co, Pb, U, Hg, Mo, Se, Tl	<i>[Signature]</i>			<i>[Signature]</i>		
One sample set submitted for HGWA-12/24/30/40 and EB-1 but they will be reported for AP-1/2 SOCs	<i>[Signature]</i>			<i>[Signature]</i>		

SAMPLER NAME AND SIGNATURE		DATE SIGNED (MM/DD/YYYY)
PRINT Name of SAMPLER: Chad Russo	<i>[Signature]</i>	2/19/2021
SIGNATURE of SAMPLER:	<i>[Signature]</i>	2/19/2021

Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days. F-ALL-Q-020rev.07, 15-Feb-2007



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

**Section A** Required Client Information: Company: GA Power Address: Atlanta, GA  
**Section B** Required Project Information: Report To: SCS Contacts Copy To: Geosynthetic Contacts  
**Section C** Invoice Information: Attention: Southern Co. Company Name: Address: Project Name: Plant Hammond AP-2 App. IV Scan Project Number: GW655818  
 Reference: Kevin Herring  
 Project Manager: Kevin Herring  
 Project File #:  
**REGULATORY AGENCY**  
 NPDES  GROUND WATER  DRINKING WATER  
 UST  RCRA  OTHER  
 Site Location: STATE: GA

**Section D** Required Client Information: Valid Matrix Codes: WATER, WASTE WATER, PRODUCT, SOLE/SOLUS, OIL, WASTE, AIR, OTHER  
**Section E** Required Matrix Codes: CODE: DW, WT, WW, P, S, OIL, WASTE, AIR, OTHER  
 Matrix Code: WT G  
 Sample Type: (G=GRAB C=COMP)  
 Date: 2/11/04  
 Time: 1320  
 Sample Temp at Collection: 1320  
 # of Containers: 3  
 Unpreserved: 3  
 H<sub>2</sub>SO<sub>4</sub>: 3  
 HNO<sub>3</sub>: 3  
 HCl: 3  
 NaOH: 3  
 Na<sub>2</sub>S<sub>2</sub>O<sub>5</sub>: 3  
 Methanol: 3  
 Other: 3  
 Analysis Test: Fluoride (N), Full App. IV Metals 6020/7470 (N), RAD 226/228 (N)  
 Requested Analysis Filtered (Y/N)  
 Residual Chlorine (Y/N)  
 Pace Project Mol Lab ID: 62524143  
 pH = 7.08

ITEM #	MATRIX CODE	SAMPLE TYPE	DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>	HCl	NaOH	Na <sub>2</sub> S <sub>2</sub> O <sub>5</sub>	Methanol	Other	Analysis Test	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	pH =	
1	HGWA-1	WT G				4	1	3							X				
2	HGWA-2	WT G				4	1	3							X				
3	HGWA-3	WT G				4	1	3							X				
4	HGWA-4	WT G				4	1	3							X				
5	HGWA-5	WT G				4	1	3							X				
6	HGWA-6	WT G				4	1	3							X				
7	HGWA-42D	WT G				4	1	3							X				
8	HGWA-43D	WT G				4	1	3							X				
9	HGWA-44D	WT G				4	1	3							X				
10	HGWC-14	WT G				4	1	3							X				
11	HGWC-15	WT G				4	1	3							X				
12	HGWC-16	WT G				4	1	3							X				

**ADDITIONAL COMMENTS:** Please make dry wells, strike through any wells not sampled and date when the last sample for the event has been taken.  
 \*Full App. IV Metals-Sb, As, Ba, Be, Cd, Cr, Co, Pb, Li, Hg, Mo, Se, Tl  
 One sample set submitted for HGWA-12/24/03 and EB-1 but they will be reported for AP-1/2 SCS

**RELINQUISHED BY / AFFILIATION:** DATE: 2/11/04 TIME: 0830  
**ACCEPTED BY / AFFILIATION:** DATE: 2/11/04 TIME: 1320

**SAMPLER NAME AND SIGNATURE:** PRINT Name of SAMPLER: Signature of SAMPLER: DATE Signed (MM/DD/YYYY): 02/10/2004

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



<b>Section A</b> Required Client Information:		<b>Section B</b> Required Project Information:		<b>Section C</b> Invoice Information:	
Company: GA Power	Address: Atlanta, GA	Report For: SCS Contacts	Copy To: Geosyntec Contacts	Invoice Number: Southern Co.	Company Name: Southern Co.
Address: Atlanta, GA		Project Name: Plant Hammond AP-2 App. IV Scan	Purchase Order No.:	Address: Kevan Henning	Address: Kevan Henning
Email To: SCS Contacts	Phone: Fax	Requested Due Date/TAT: 10 Day	Project Number: GW65818	Project Name: Kevan Henning	Project Name: Kevan Henning
				Reference: Kevan Henning	Reference: Kevan Henning
				Project Manager: Kevan Henning	Project Manager: Kevan Henning

**Section D**  
 Required Client Information:  
 Valid Matrix Codes:  
 MATRIX CODE (see valid codes to left)  
 SAMPLE TYPE (G=GRAB C=COMP)  
 DATE TIME DATE TIME  
 SAMPLE TEMP AT COLLECTION  
 # OF CONTAINERS  
 Unpreserved  
 H<sub>2</sub>SO<sub>4</sub>  
 HNO<sub>3</sub>  
 HCl  
 NaOH  
 Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub>  
 Melhanol  
 Other  
 Analysis Test  
 Fluoride  
 Full App. IV Metals 6020/7470\*  
 RAD 226/228  
 Residual Chlorine (Y/N)  
 Temp (°C)  
 Received on Ice (Y/N)  
 Custody Sealed Cooler (Y/N)  
 Samples Intact (Y/N)

ITEM #	Valid Matrix Codes	MATRIX CODE	SAMPLE TYPE	DATE	TIME	DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>	HCl	NaOH	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>	Melhanol	Other	Analysis Test	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	Temp (°C)	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
1	HGMWC-18	WT G	G	2/11/21	1257	-	-	16	4	1	3	X	X	X	X	X	X	X	N	N	9.53	01C		
2	HGMWC-18	WT G	G	2/11/21	1753	-	-	17	4	1	3	X	X	X	X	X	X	X	N	N	6.87	012		
3	MM-21D	WT G	G	-	-	-	-	-	4	1	3	X	X	X	X	X	X	X	N	N	-	-		
4	MM-22	WT G	G	-	-	-	-	-	4	1	3	X	X	X	X	X	X	X	N	N	-	-		
5	MM-23	WT G	G	-	-	-	-	-	4	1	3	X	X	X	X	X	X	X	N	N	-	-		
6	MM-23	WT G	G	-	-	-	-	-	4	1	3	X	X	X	X	X	X	X	N	N	-	-		
7	MM-23	WT G	G	-	-	-	-	-	4	1	3	X	X	X	X	X	X	X	N	N	-	-		
8	MM-23	WT G	G	-	-	-	-	-	4	1	3	X	X	X	X	X	X	X	N	N	-	-		
9	MM-23	WT G	G	-	-	-	-	-	4	1	3	X	X	X	X	X	X	X	N	N	-	-		
10	Dup-2	WT G	G	-	-	-	-	-	4	1	3	X	X	X	X	X	X	X	N	N	-	-		
11	EB-1	WT G	G	-	-	-	-	-	4	1	3	X	X	X	X	X	X	X	N	N	-	-		
12	FB-2	WT G	G	-	-	-	-	-	4	1	3	X	X	X	X	X	X	X	N	N	-	-		

REINQUISHED BY / AFFILIATION: [Signature]  
 DATE: 2/11/21  
 TIME: 0936  
 ACCEPTED BY / AFFILIATION: [Signature]  
 DATE: 2/11/21  
 TIME: 0936  
 ADDITIONAL COMMENTS: [Handwritten notes]

SAMPLER NAME AND SIGNATURE: [Signature]  
 PRINT Name of SAMPLER: Chad Kussb  
 SIGNATURE of SAMPLER: [Signature]  
 DATE Signed (MM/DD/YYYY): 2/11/2021  
 Temp (°C):  
 Received on Ice (Y/N):  
 Custody Sealed Cooler (Y/N):  
 Samples Intact (Y/N):

Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days. F-ALL-Q-020rev.07. 15-Feb-2007



# CHAIN-OF-CUSTODY / Analytical Request Document

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

<b>Section A</b> Required Client Information: Company: GA Power Address: Atlanta, GA Email To: SCS Contacts Phone: <input type="checkbox"/> Fax Requested Due Date/Time: 18 Day		<b>Section B</b> Required Project Information: Report for: SCS Contacts Copy To: Geosynthetic Contacts Purchase Order No.: Project Name: Plant Hammond AP-2 App. IV Scan Project Number: GWB5818		<b>Section C</b> Invoice Information: Attention: Southern Co. Company Name: Address: POC Name: Reference: Kevin Henning Project Manager: POC Title:	
<b>REGULATORY AGENCY</b> <input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input checked="" type="checkbox"/> OTHER			Site Location STATE: GA		

ITEM #	Section D Required Client Information	Valid Matrix Codes MATRIX CODES DOMESTIC WATER WATER WASTEWATER WWT PRODUCTS SOLIDIFIED OIL WASTE AIR OTHER TISSUE	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives	Analysis Test	Requested Analysis Filtered (Y/N)			Residual Chlorine (Y/N)	pH
					DATE	TIME					Fluoride	Full App.IV Metals 6020/7470*	RAO 226/228		
1	HGWA-1	WT	G	WT	G			4	1	3	X	X	X	N	
2	HGWA-2	WT	G	WT	G			4	1	3	X	X	X	N	
3	HGWA-3	WT	G	WT	G			4	1	3	X	X	X	N	
4	HGWA-4	WT	G	WT	G			4	1	3	X	X	X	N	
5	HGWA-5	WT	G	WT	G			4	1	3	X	X	X	N	
6	HGWA-6	WT	G	WT	G			4	1	3	X	X	X	N	
7	HGWA-42D	WT	G	WT	G			4	1	3	X	X	X	N	
8	HGWA-43D	WT	G	WT	G			4	1	3	X	X	X	N	
9	HGWA-44D	WT	G	WT	G			4	1	3	X	X	X	N	
10	HGWA-14	WT	G	WT	G			4	1	3	X	X	X	N	
11	HGWC-15	WT	G	WT	G			4	1	3	X	X	X	N	
12	HGWC-16	WT	G	WT	G			4	1	3	X	X	X	N	

<b>ADDITIONAL COMMENTS</b> Please note dry wells, since thorough any wells not sampled, and note when the last sample for the event has been taken. *Full App. IV Metals-Sub. As. Bag. Bag. Cd. Cr. Co. Pb. U. Hg. Mn. Se. Tl. One sample set submitted for HGWA-123456789 and EG-1 but they will be rejected for AP-12 SDGS		<b>RELINQUISHED BY / AFFILIATION</b> DATE: 2-12-21 TIME: 08:15 Signature: [Signature]		<b>ACCEPTED BY / AFFILIATION</b> DATE: 2/12/21 TIME: 08:45 Signature: [Signature]	
<b>SAMPLER NAME AND SIGNATURE</b> PRINT Name of SAMPLER: [Signature] SIGNATURE of SAMPLER: [Signature]		DATE Signed: 02/11/2021		Temp in °C: _____ Received on Ice (Y/N): _____ Custody Sealed Cooler (Y/N): _____ Samples Intact (Y/N): _____	

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

F-ALL-Q-020rev.07.15-F-8b-2007



CHAIN-OF-CUSTODY / Analytical Request Document

Section A

Required Client Information: Company GA Power, Address Atlanta, GA, Email To SCS Contacts, Project Name Plant Hammond AP-2 App. IV Scan, Project Number GW65818

Section B

Required Project Information: Report To SCS Contacts, Copy To Geosynthetic Contacts, Purchase Order No., Requested Due Date/TIME 10 Day

Section C

Invoice Information: Attention Southern Co., Company Name, Address, Project Manager Kevin Herring

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

Page: 3 of 3

Section D Required Client Information: Matrix Codes (D, W, P, S, etc.), Matrix Code, Sample Type (G-GRAB, C-COMP)

Main data table with columns: ITEM #, MATRIX CODE, SAMPLE TYPE, DATE, TIME, SAMPLE TEMP AT COLLECTION, # OF CONTAINERS, Preservatives, Analysis Test, Requested Analyte Filtered (Y/N), Residual Chlorine (Y/N), pH, Temp in °C, Received on Ice (Y/N), Custody Sealed Cooler (Y/N), Samples Intact (Y/N)

ADDITIONAL COMMENTS, RELINQUISHED BY / AFFILIATION, ACCEPTED BY / AFFILIATION, SAMPLER NAME AND SIGNATURE, DATE SIGNED, SIGNATURE OF SAMPLER

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



### CHAIN-OF-CUSTODY / Analytical Request Document

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

<b>Section A</b> Required Client Information		<b>Section B</b> Required Project Information		<b>Section C</b> Invoice Information	
Company: GA Power		Report To: SCS Contacts		Attention: Southern Co.	
Address: Atlanta, GA		Copy To: Geosynthetic Contacts		Company Name:	
Email To: SCS Contacts		Purchase Order No.:		Address:	
Phone: Fax		Project Name: Plant Hammond AP-2 App. IV Scan		Page Name Reference: Kevin Herring	
Requested Date Date/AT: 10 Day		Project Number: GWS581B		Page Project Manager: Kevin Herring	
				Page Printer #:	
<input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER USE			REGULATOR AGENCY STATE: <u>GA</u>		
Page: 1 of 13					

ITEM #	Section B Required Client Information	Valid Matrix Codes			MATRIX CODE (see valid Codes to I&M)	SAMPLE TYPE (G=GRAB C=COMP)	DATE	TIME	DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	Preservatives								Analysis Test	Residual Chlorine (Y/N)	pH =			
		WATER	WASTE WATER	SLURRY										DISTILLATE	H <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>	HCl	NaOH	Na <sub>2</sub> S <sub>2</sub> O <sub>5</sub>	Methanol	Other				Fluoride	Full App. IV Metals 6020/7470*	RAD 226/228
1	HGWA-1				WT G							4	1	3													
2	HGWA-2				WT G							4	1	3													
3	HGWA-3				WT G							4	1	3													
4	HGWA-4				WT G							4	1	3													
5	HGWA-5				WT G							4	1	3													
6	HGWA-6				WT G							4	1	3													
7	HGWA-42D				WT G							4	1	3													
8	HGWA-43D				WT G							4	1	3													
9	HGWA-44D				WT G							4	1	3													
10	HGWC-14				WT G							4	1	3													
11	HGWC-15				WT G							4	1	3													
12	HGWC-16				WT G							4	1	3													

Additional Comments: 1500  
 Relinquished by: [Signature] Date: 2/15/21 Time: 0945  
 Accepted by: [Signature] Date: 2/16/21 Time: 0945

Sampler Name and Signature: [Signature]  
 Print Name of Sampler: Cord Russo  
 Signature of Sampler: [Signature] Date Signed: 2/12/21

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

Page Project No: 62521115

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

Face Analytical Q-020rev.07.15.Feb-2007



# CHAIN-OF-CUSTODY / Analytical Request Document

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

Page: 2 of 3

<b>Section A</b> Required Client Information: Company: GA Power Address: Atlanta, GA Email to: SCS Contacts Project Name: Plant Hammond AP-2 App. IV Scan Requested Date: 10 May Project Number: GWS5515	<b>Section B</b> Required Project Information: Request to: SCS Contacts Copy to: Geoplytec Contacts Purchased Order No.: Project Name: Plant Hammond AP-2 App. IV Scan Project Number: GWS5515
<b>Section C</b> Invoice Information: Attention: Southern Co. Company Name: Address: State: GA	<b>REGULATORY AGENCY</b> <input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input checked="" type="checkbox"/> OTHER State: GA

ITEM #	Required Client Information	Valid Matrix Codes	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	Fluoride	Full App./V Metals 6020/7470*	RAD 226/228	Residual Chlorine (Y/N)	pH =						
											Unpreserved	H <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>	HCl	NaOH	Na <sub>2</sub> S <sub>2</sub> O <sub>5</sub>	Methanol	Other							Y	N	Y	N	Y	N
1	HGWC-17	WT	G							4	1																			
2	HGWC-18	WT	G							4	1																			
3	MMW-21D	WT	G							4	1																			
4	MMW-22	WT	G							4	1																			
5	MMW-23D	WT	G							4	1																			
6	MMW-33	WT	G	2/12/11	1354			16		4	1																			
7	MMW-35	WT	G							4	1																			
8	MMW-37D	WT	G							4	1																			
9	Dup-2	WT	G							4	1																			
10	EB-1	WT	G							4	1																			
11	FB-2	WT	G							4	1																			
12		WT	G							4	1																			

Additional Comments: REINQUISHED BY / AFFILIATION DATE TIME ACCEPTED BY / AFFILIATION DATE TIME

Requester's Signature: [Signature] Date: 2/12/21

Sampler Name and Signature: [Signature] Date: 2/12/21

Print Name of Sampler: [Name]

Signature of Sampler: [Signature]

Date Signed (MM/DD/YYYY): 2/12/21

Temp in °C: [Blank]

Received on Ice (Y/N): [Blank]

Custody Sealed Cooler (Y/N): [Blank]

Samples Intact (Y/N): [Blank]

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

FALL-Q-02 (Rev. 07, 15; Feb-2007)



**CHAIN-OF-CUSTODY / Analytical Request Document**  
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Page: **3 of 43**

**Section A**  
 Required Client Information:  
 Company: **GA Power**  
 Address: **Atlanta GA**  
 Email to: **SCS Contacts**  
 Phone: **Fac**  
 Requested Date/Time: **10 Day**

**Section B**  
 Required Project Information:  
 Report to: **SCS Contacts**  
 Copy to: **Geosyntec Contacts**  
 Project Name: **Plant Hammond AP-2 App IV Scan**  
 Project Number: **GW65581B**  
 Purchase Order No.:

**Section C**  
 Invoice Information:  
 Attention: **Southern Co.**  
 Company Name:  
 Address:  
 Fax/Date:  
 Return:  
 Prod Project: **Kevin Fleming**  
 Manager:  
 Post Office B.:

**REGULATOR AGENCY**  
 NPDES  GROUND WATER  DRINKING WATER  
 UST  RCRA  OTHER O&P

State/Location: **GA**  
 City: **Atlanta**  
 Street Address: **GA**

Requester/Analyst Name: **SCM**

ITEM #	Section D Required Client Information Valid Matrix Codes MATERIAL CODE DM WATER WASTE WATER PRODUCT SOIL/SOLID SOLID AIR OTHER TABLET	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB, C=COMP)	COLLECTED		DATE	TIME	DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives						Analysis Test			Residual Chlorine (Y/N)	pH =	pH =	pH =	pH =	pH =						
				DATE	TIME							DATE	TIME	Unpreserved	H <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>	HCl	NaOH	Na <sub>2</sub> S <sub>2</sub> O <sub>5</sub>	Methanol							Other	Fluoride	Full App. IV Metals 6020/7470*	RAD 226/228		
1	HGMWC-17	WT G	G								4																					
2	HGMWC-18	WT G	G								4																					
3	MW-21D	WT G	G								4																					
4	MW-22	WT G	G								4																					
5	MW-23D	WT G	G								4																					
6	MW-33	WT G	G								4																					
7	MW-35	WT G	G								4																					
8	MW-37D	WT G	G								4																					
9	DUP-2	WT G	G								4																					
10	EB-1	WT G	G								4																					
11	EB-2	WT G	G								4																					

**ADDITIONAL COMMENTS:**  
 Please note this well, strike through any wells not sampled and note when the last sample for the well has been taken.  
 Full App IV Metals-50, 75, 84, 84, Cd, Cr, Co, Pb, Li, 179, Mo, SS, 11  
 One sample per submitted for HQWA-112/433440 and EB-1 but they will be reported for AP-12 SDOs

**REINQUISHED BY/AFFILIATION:**  
 Date: **2-18-21** Time: **1600**  
 Date: **2/15/21** Time: **0945**

**ACCEPTED BY/AFFILIATION:**  
 Date: **2/12/2021** Time: **1600**  
 Date: **2/15/21** Time: **0945**

**SAMPLER NAME AND SIGNATURE:**  
 PRINT Name of SAMPLER: **Arron Ricker**  
 SIGNATURE of SAMPLER: *Arron Ricker*

DATE Signed (MM/DD/YYYY): **02/12/2021**

Temp in °C: **42.5**

Received on Ice (Y/N): **N**

Custody Sealed Cooler (Y/N): **N**

Samples Intact (Y/N): **N**





# CHAIN-OF-CUSTODY / Analytical Request Document

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

<b>Section A</b> Required Client Information:		<b>Section B</b> Required Project Information:		<b>Section C</b> Invoice Information:	
Company: GA Power	Address: Atlanta, GA	Report To: SCS Contacts	Copy To: Geosyntec Contacts	Attention: Southern Co.	Company Name: Southern Co.
Project Name: SCS Contacts	Project Number: 10 Day	Purchase Order No.:	Project Name: Plant Hammond AP-2 App. IV Scan	Address:	Site Location: GA
Requested Due Date/TAT: 10 Day	Project Number: GW65818	Project Name: Plant Hammond AP-2 App. IV Scan	Requested Analysis Filtered (Y/N):	Requested Analysis Filtered (Y/N):	Requested Analysis Filtered (Y/N):

ITEM #	Section D Required Client Information	Section B Matrix Code	Section B Sample Type (G=GRAB C=COMP)	Section B Date	Section B Time	Section B Date	Section B Time	Section B Sample Temp at Collection	Section B # of Containers	Section C Preservatives							Section C Analysis Test			Section C Residual Chlorine (Y/N)	Section C pH						
										Unpreserved	H <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>	HCl	NaOH	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>	Methanol	Other	Fluoride	Full App. IV Metals 60207470*			RAD 228/228					
1	HGWC-17	WT G	G						4	1	3																
2	HGWC-18	WT G	G						4	1	3																
3	MW-21D	WT G	G						4	1	3																
4	MW-22	WT G	G	4/15/21	09:30			15	4	1	3																
5	MW-23D	WT G	G						4	1	3																
6	MW-23	WT G	G						4	1	3																
7	MW-35	WT G	G	2/15/21	11:35			15	4	1	3																
8	MW-37D	WT G	G						4	1	3																
9	DUP-2	WT G	G						4	1	3																
10	EB-1	WT G	G						4	1	3																
11	EB-2	WT G	G						4	1	3																
12		WT G	G						4	1	3																

<b>ADDITIONAL COMMENTS</b>		<b>REINQUISHED BY / AFFILIATION</b>		<b>DATE</b>		<b>TIME</b>		<b>ACCEPTED BY / AFFILIATION</b>		<b>DATE</b>		<b>TIME</b>		<b>SAMPLE CONDITIONS</b>	
Please note dry wells: strike through any wells not sampled, and note when the last sample for the event has been taken. Full App. IV Metals-So. As, Ba, Be, Cd, Cr, Co, Pb, U, Hg, Mo, Se, Tl One sample set submitted for HSWA-1/25/43DU440 and EB-1 but they will be reported for AP-1/2 SDCS		C. A. Lopez		2/10/21		11:59		C. A. Lopez		2/10/21		16:08		Temp in °C	
		C. A. Lopez		2/15/21		11:35		C. A. Lopez		2/15/21		16:08		Received on Ice (Y/N)	
		C. A. Lopez		2/15/21		11:35		C. A. Lopez		2/15/21		16:08		Custody Sealed Cooler (Y/N)	
		C. A. Lopez		2/15/21		11:35		C. A. Lopez		2/15/21		16:08		Samples Intact (Y/N)	

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

Face Analytical  
www.FaceAnalytical.com



March 2021

April 15, 2021

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

RE: Project: HAMMOND AP-2 SEMIANNUAL  
Pace Project No.: 92527256

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory between March 11, 2021 and March 22, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

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

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

Sincerely,



Kevin Herring  
kevin.herring@pacelabs.com  
1(704)875-9092  
HORIZON Database Administrator

Enclosures

cc: Christine Hug, Geosyntec Consultants, Inc.  
Kristen Jurinko  
Thomas Kessler, Geosyntec  
Whitney Law, Geosyntec Consultants  
Noelia Muskus, Geosyntec Consultants  
Ms. Lauren Petty, Southern Company  
Nardos Tilahun, GeoSyntec  
Dawit Yifru, Geosyntec Consultants, Inc.



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: HAMMOND AP-2 SEMIANNUAL

Pace Project No.: 92527256

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### **Pace Analytical Services Charlotte**

9800 Kincey Ave. Ste 100, Huntersville, NC 28078

Louisiana/NELAP Certification # LA170028

North Carolina Drinking Water Certification #: 37706

North Carolina Field Services Certification #: 5342

North Carolina Wastewater Certification #: 12

South Carolina Certification #: 99006001

Florida/NELAP Certification #: E87627

Kentucky UST Certification #: 84

Virginia/VELAP Certification #: 460221

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### **Pace Analytical Services Asheville**

2225 Riverside Drive, Asheville, NC 28804

Florida/NELAP Certification #: E87648

North Carolina Drinking Water Certification #: 37712

North Carolina Wastewater Certification #: 40

South Carolina Certification #: 99030001

Virginia/VELAP Certification #: 460222

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

110 Technology Pkwy, Peachtree Corners, GA 30092

Florida DOH Certification #: E87315

Georgia DW Inorganics Certification #: 812

North Carolina Certification #: 381

South Carolina Certification #: 98011001

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: HAMMOND AP-2 SEMIANNUAL  
Pace Project No.: 92527256

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92527256001	HGWA-1	Water	03/10/21 16:10	03/11/21 15:55
92527256002	HGWA-4	Water	03/10/21 16:21	03/11/21 15:55
92527256003	HGWA-42D	Water	03/10/21 14:23	03/11/21 15:55
92527256004	HGWA-44D	Water	03/10/21 14:30	03/11/21 15:55
92527256006	HGWA-2	Water	03/11/21 09:59	03/12/21 13:43
92527256007	HGWA-3	Water	03/11/21 11:25	03/12/21 13:43
92527256008	HGWA-5	Water	03/11/21 11:30	03/12/21 13:43
92527256009	HGWA-6	Water	03/11/21 12:39	03/12/21 13:43
92527256010	HGWA-43D	Water	03/11/21 09:57	03/12/21 13:43
92527256011	MW-37D	Water	03/12/21 10:20	03/15/21 12:00
92527256012	HGWC-15	Water	03/16/21 15:24	03/17/21 13:10
92527256013	HGWC-14	Water	03/17/21 14:28	03/18/21 13:17
92527256014	HGWC-16	Water	03/17/21 09:29	03/18/21 13:17
92527256015	MW-22	Water	03/17/21 10:00	03/18/21 13:17
92527256016	MW-23D	Water	03/17/21 11:49	03/18/21 13:17
92527256017	HGWC-17	Water	03/18/21 14:48	03/19/21 13:40
92527256018	HGWC-18	Water	03/18/21 10:01	03/19/21 13:40
92527256019	MW-21D	Water	03/18/21 12:08	03/19/21 13:40
92527256020	MW-33	Water	03/18/21 10:40	03/19/21 13:40
92527256021	DUP-2	Water	03/18/21 00:00	03/19/21 13:40
92527256022	EB-2	Water	03/18/21 12:50	03/19/21 13:40
92527256023	FB-2	Water	03/18/21 15:30	03/19/21 13:40
92527256024	MW-35	Water	03/19/21 12:48	03/22/21 15:41

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: HAMMOND AP-2 SEMIANNUAL  
Pace Project No.: 92527256

Lab ID	Sample ID	Method	Analysts	Analytes Reported
92527256001	HGWA-1	EPA 6010D	DRB	1
		EPA 6020B	CW1	13
		SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92527256002	HGWA-4	EPA 6010D	DRB	1
		EPA 6020B	CW1	13
		SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92527256003	HGWA-42D	EPA 6010D	DRB	1
		EPA 6020B	CW1	13
		SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92527256004	HGWA-44D	EPA 6010D	DRB	1
		EPA 6020B	CW1	13
		SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92527256006	HGWA-2	EPA 6010D	DRB	1
		EPA 6020B	CW1	13
		SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	JLH	3
92527256007	HGWA-3	EPA 6010D	DRB	1
		EPA 6020B	CW1	13
		SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	JLH	3
92527256008	HGWA-5	EPA 6010D	DRB	1
		EPA 6020B	KH	13
		SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	JLH	3
92527256009	HGWA-6	EPA 6010D	DRB	1
		EPA 6020B	KH	13
		SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	JLH	3
92527256010	HGWA-43D	EPA 6010D	DRB	1
		EPA 6020B	CW1	13
		SM 2450C-2011	AW1	1
		EPA 300.0 Rev 2.1 1993	JLH	3
92527256011	MW-37D	EPA 6010D	DRB	1

### REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: HAMMOND AP-2 SEMIANNUAL

Pace Project No.: 92527256

Lab ID	Sample ID	Method	Analysts	Analytes Reported
		EPA 6020B	KH	13
		SM 2450C-2011	AW1	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92527256012	HGWC-15	EPA 6010D	DRB	1
		EPA 6020B	KH	13
		SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	JLH	3
92527256013	HGWC-14	EPA 6010D	DRB	1
		EPA 6020B	CW1, KH	13
		SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92527256014	HGWC-16	EPA 6010D	DRB	1
		EPA 6020B	KH	13
		SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92527256015	MW-22	EPA 6010D	DRB	1
		EPA 6020B	CW1, KH	13
		SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92527256016	MW-23D	EPA 6010D	DRB	1
		EPA 6020B	CW1, KH	13
		SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92527256017	HGWC-17	EPA 6010D	DRB	1
		EPA 6020B	CW1, KH	13
		SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92527256018	HGWC-18	EPA 6010D	DRB	1
		EPA 6020B	CW1, KH	13
		SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92527256019	MW-21D	EPA 6010D	DRB	1
		EPA 6020B	CW1, KH	13
		SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92527256020	MW-33	EPA 6010D	DRB	1
		EPA 6020B	CW1, KH	13

### REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: HAMMOND AP-2 SEMIANNUAL

Pace Project No.: 92527256

Lab ID	Sample ID	Method	Analysts	Analytes Reported
92527256021	DUP-2	SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
		EPA 6010D	DRB	1
		EPA 6020B	CW1, KH	13
92527256022	EB-2	SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
		EPA 6010D	DRB	1
		EPA 6020B	KH	13
92527256023	FB-2	SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
		EPA 6010D	DRB	1
		EPA 6020B	CW1, KH	13
92527256024	MW-35	SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
		EPA 6010D	DRB	1
		EPA 6020B	CW1, KH	13
		SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3

PASI-A = Pace Analytical Services - Asheville

PASI-C = Pace Analytical Services - Charlotte

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

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: HAMMOND AP-2 SEMIANNUAL

Pace Project No.: 92527256

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
<b>92527256001</b>	<b>HGWA-1</b>					
	Performed by	CUSTOME			03/22/21 11:59	
		R				
	pH	6.95	Std. Units		03/22/21 11:59	
EPA 6010D	Calcium	111	mg/L	1.0	03/19/21 04:13	
EPA 6020B	Barium	0.030	mg/L	0.0050	03/16/21 15:56	
EPA 6020B	Boron	0.015J	mg/L	0.040	03/16/21 15:56	
EPA 6020B	Lithium	0.00090J	mg/L	0.030	03/16/21 15:56	
EPA 6020B	Selenium	0.0047J	mg/L	0.0050	03/16/21 15:56	
SM 2450C-2011	Total Dissolved Solids	348	mg/L	10.0	03/15/21 13:14	
EPA 300.0 Rev 2.1 1993	Chloride	7.4	mg/L	1.0	03/17/21 20:51	
EPA 300.0 Rev 2.1 1993	Fluoride	0.079J	mg/L	0.10	03/17/21 20:51	
EPA 300.0 Rev 2.1 1993	Sulfate	49.6	mg/L	1.0	03/17/21 20:51	M1
<b>92527256002</b>	<b>HGWA-4</b>					
	Performed by	CUSTOME			03/22/21 11:59	
		R				
	pH	5.28	Std. Units		03/22/21 11:59	
EPA 6010D	Calcium	5.9	mg/L	1.0	03/19/21 04:18	
EPA 6020B	Barium	0.036	mg/L	0.0050	03/16/21 16:01	
EPA 6020B	Beryllium	0.00017J	mg/L	0.00050	03/16/21 16:01	
EPA 6020B	Boron	0.012J	mg/L	0.040	03/16/21 16:01	
EPA 6020B	Cobalt	0.00065J	mg/L	0.0050	03/16/21 16:01	
EPA 6020B	Lead	0.00016J	mg/L	0.0010	03/16/21 16:01	
EPA 6020B	Lithium	0.0011J	mg/L	0.030	03/16/21 16:01	
SM 2450C-2011	Total Dissolved Solids	53.0	mg/L	10.0	03/15/21 13:15	
EPA 300.0 Rev 2.1 1993	Chloride	2.9	mg/L	1.0	03/17/21 21:33	
EPA 300.0 Rev 2.1 1993	Sulfate	1.2	mg/L	1.0	03/17/21 21:33	
<b>92527256003</b>	<b>HGWA-42D</b>					
	Performed by	CUSTOME			03/22/21 11:59	
		R				
	pH	7.70	Std. Units		03/22/21 11:59	
EPA 6010D	Calcium	43.4	mg/L	1.0	03/19/21 04:23	
EPA 6020B	Barium	0.18	mg/L	0.0050	03/16/21 16:07	
EPA 6020B	Boron	0.048	mg/L	0.040	03/16/21 16:07	
EPA 6020B	Lithium	0.0094J	mg/L	0.030	03/16/21 16:07	
SM 2450C-2011	Total Dissolved Solids	163	mg/L	10.0	03/15/21 13:15	
EPA 300.0 Rev 2.1 1993	Chloride	3.0	mg/L	1.0	03/17/21 22:14	
EPA 300.0 Rev 2.1 1993	Fluoride	0.11	mg/L	0.10	03/17/21 22:14	
EPA 300.0 Rev 2.1 1993	Sulfate	10.8	mg/L	1.0	03/17/21 22:14	
<b>92527256004</b>	<b>HGWA-44D</b>					
	Performed by	CUSTOME			03/22/21 11:59	
		R				
	pH	7.92	Std. Units		03/22/21 11:59	
EPA 6010D	Calcium	18.3	mg/L	1.0	03/19/21 04:28	
EPA 6020B	Antimony	0.00037J	mg/L	0.0030	03/16/21 16:13	B
EPA 6020B	Barium	0.26	mg/L	0.0050	03/16/21 16:13	
EPA 6020B	Boron	0.39	mg/L	0.040	03/16/21 16:13	
EPA 6020B	Lithium	0.030	mg/L	0.030	03/16/21 16:13	

### REPORT OF LABORATORY ANALYSIS

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**SUMMARY OF DETECTION**

Project: HAMMOND AP-2 SEMIANNUAL  
Pace Project No.: 92527256

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
<b>92527256004</b>	<b>HGWA-44D</b>					
EPA 6020B	Molybdenum	0.0019J	mg/L	0.010	03/16/21 16:13	
SM 2450C-2011	Total Dissolved Solids	289	mg/L	10.0	03/15/21 13:15	
EPA 300.0 Rev 2.1 1993	Chloride	12.3	mg/L	1.0	03/17/21 22:28	
EPA 300.0 Rev 2.1 1993	Fluoride	0.65	mg/L	0.10	03/17/21 22:28	
<b>92527256006</b>	<b>HGWA-2</b>					
	Performed by	CUSTOMER			03/22/21 11:59	
	pH	5.80	Std. Units		03/22/21 11:59	
EPA 6010D	Calcium	43.8	mg/L	1.0	03/22/21 20:09	M1
EPA 6020B	Barium	0.070	mg/L	0.0050	03/19/21 20:54	
EPA 6020B	Beryllium	0.000086J	mg/L	0.00050	03/19/21 20:54	
EPA 6020B	Boron	0.056	mg/L	0.040	03/19/21 20:54	
EPA 6020B	Cobalt	0.013	mg/L	0.0050	03/19/21 20:54	
EPA 6020B	Lead	0.000076J	mg/L	0.0010	03/19/21 20:54	
EPA 6020B	Lithium	0.0011J	mg/L	0.030	03/19/21 20:54	
SM 2450C-2011	Total Dissolved Solids	169	mg/L	10.0	03/16/21 15:08	
EPA 300.0 Rev 2.1 1993	Chloride	5.1	mg/L	1.0	03/20/21 02:14	
EPA 300.0 Rev 2.1 1993	Fluoride	0.10	mg/L	0.10	03/20/21 02:14	
EPA 300.0 Rev 2.1 1993	Sulfate	52.9	mg/L	1.0	03/20/21 02:14	
<b>92527256007</b>	<b>HGWA-3</b>					
	Performed by	CUSTOMER			03/22/21 11:59	
	pH	7.33	Std. Units		03/22/21 11:59	
EPA 6010D	Calcium	83.8	mg/L	1.0	03/22/21 20:29	
EPA 6020B	Barium	0.13	mg/L	0.0050	03/19/21 21:00	
EPA 6020B	Boron	0.015J	mg/L	0.040	03/19/21 21:00	
EPA 6020B	Lithium	0.0035J	mg/L	0.030	03/19/21 21:00	
SM 2450C-2011	Total Dissolved Solids	267	mg/L	10.0	03/16/21 15:08	
EPA 300.0 Rev 2.1 1993	Chloride	5.9	mg/L	1.0	03/20/21 02:29	
EPA 300.0 Rev 2.1 1993	Sulfate	50.4	mg/L	1.0	03/20/21 02:29	
<b>92527256008</b>	<b>HGWA-5</b>					
	Performed by	CUSTOMER			03/22/21 11:59	
	pH	6.48	Std. Units		03/22/21 11:59	
EPA 6010D	Calcium	28.3	mg/L	1.0	04/01/21 16:07	M1
EPA 6020B	Barium	0.044	mg/L	0.0050	04/05/21 22:19	
EPA 6020B	Boron	0.0075J	mg/L	0.040	04/05/21 22:19	
EPA 6020B	Chromium	0.0011J	mg/L	0.0050	04/05/21 22:19	
EPA 6020B	Cobalt	0.0013J	mg/L	0.0050	04/05/21 22:19	
EPA 6020B	Lithium	0.0037J	mg/L	0.030	04/05/21 22:19	
SM 2450C-2011	Total Dissolved Solids	118	mg/L	10.0	03/16/21 15:08	
EPA 300.0 Rev 2.1 1993	Chloride	1.4	mg/L	1.0	03/20/21 03:14	
EPA 300.0 Rev 2.1 1993	Fluoride	0.060J	mg/L	0.10	03/20/21 03:14	
EPA 300.0 Rev 2.1 1993	Sulfate	22.7	mg/L	1.0	03/20/21 03:14	

**REPORT OF LABORATORY ANALYSIS**

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### SUMMARY OF DETECTION

Project: HAMMOND AP-2 SEMIANNUAL

Pace Project No.: 92527256

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
<b>92527256009</b>	<b>HGWA-6</b>					
	Performed by	CUSTOME			03/22/21 11:59	
		R				
	pH	7.56	Std. Units		03/22/21 11:59	
EPA 6010D	Calcium	53.1	mg/L	1.0	04/01/21 16:26	
EPA 6020B	Barium	0.21	mg/L	0.0050	04/05/21 22:25	
EPA 6020B	Boron	0.018J	mg/L	0.040	04/05/21 22:25	
EPA 6020B	Lithium	0.012J	mg/L	0.030	04/05/21 22:25	
SM 2450C-2011	Total Dissolved Solids	215	mg/L	10.0	03/16/21 15:08	
EPA 300.0 Rev 2.1 1993	Chloride	1.2	mg/L	1.0	03/20/21 03:29	
EPA 300.0 Rev 2.1 1993	Fluoride	0.17	mg/L	0.10	03/20/21 03:29	
EPA 300.0 Rev 2.1 1993	Sulfate	35.5	mg/L	1.0	03/20/21 03:29	
<b>92527256010</b>	<b>HGWA-43D</b>					
	Performed by	CUSTOME			03/22/21 11:59	
		R				
	pH	7.46	Std. Units		03/22/21 11:59	
EPA 6010D	Calcium	59.6	mg/L	1.0	03/22/21 20:33	
EPA 6020B	Antimony	0.00057J	mg/L	0.0030	03/19/21 21:06	
EPA 6020B	Arsenic	0.0013J	mg/L	0.0050	03/19/21 21:06	
EPA 6020B	Barium	0.32	mg/L	0.0050	03/19/21 21:06	
EPA 6020B	Boron	0.060	mg/L	0.040	03/19/21 21:06	
EPA 6020B	Lead	0.000094J	mg/L	0.0010	03/19/21 21:06	
EPA 6020B	Lithium	0.0022J	mg/L	0.030	03/19/21 21:06	
EPA 6020B	Molybdenum	0.0064J	mg/L	0.010	03/19/21 21:06	
SM 2450C-2011	Total Dissolved Solids	279	mg/L	10.0	03/17/21 17:40	
EPA 300.0 Rev 2.1 1993	Chloride	4.5	mg/L	1.0	03/20/21 04:14	
EPA 300.0 Rev 2.1 1993	Fluoride	0.20	mg/L	0.10	03/20/21 04:14	
EPA 300.0 Rev 2.1 1993	Sulfate	38.6	mg/L	1.0	03/20/21 04:14	
<b>92527256011</b>	<b>MW-37D</b>					
	Performed by	CUSTOME			03/22/21 11:59	
		R				
	pH	7.50	Std. Units		03/22/21 11:59	
EPA 6010D	Calcium	170	mg/L	1.0	04/01/21 16:31	
EPA 6020B	Barium	0.12	mg/L	0.0050	04/05/21 22:48	
EPA 6020B	Boron	0.15	mg/L	0.040	04/05/21 22:48	
EPA 6020B	Lithium	0.035	mg/L	0.030	04/05/21 22:48	
EPA 6020B	Molybdenum	0.014	mg/L	0.010	04/05/21 22:48	
SM 2450C-2011	Total Dissolved Solids	890	mg/L	20.0	03/17/21 17:40	
EPA 300.0 Rev 2.1 1993	Chloride	124	mg/L	6.0	03/23/21 16:42	
EPA 300.0 Rev 2.1 1993	Fluoride	0.061J	mg/L	0.10	03/20/21 22:18	
EPA 300.0 Rev 2.1 1993	Sulfate	237	mg/L	6.0	03/23/21 16:42	
<b>92527256012</b>	<b>HGWC-15</b>					
	Performed by	CUSTOME			03/22/21 11:59	
		R				
	pH	6.08	Std. Units		03/22/21 11:59	
EPA 6010D	Calcium	196	mg/L	1.0	04/01/21 16:36	
EPA 6020B	Barium	0.012	mg/L	0.0050	04/05/21 22:54	
EPA 6020B	Boron	2.4	mg/L	0.040	04/05/21 22:54	

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### SUMMARY OF DETECTION

Project: HAMMOND AP-2 SEMIANNUAL

Pace Project No.: 92527256

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
<b>92527256012</b>	<b>HGWC-15</b>					
EPA 6020B	Cadmium	0.0011	mg/L	0.00050	04/05/21 22:54	
EPA 6020B	Chromium	0.0012J	mg/L	0.0050	04/05/21 22:54	
EPA 6020B	Cobalt	0.018	mg/L	0.0050	04/05/21 22:54	
EPA 6020B	Lithium	0.032	mg/L	0.030	04/05/21 22:54	
SM 2450C-2011	Total Dissolved Solids	92.0	mg/L	20.0	03/23/21 07:59	
EPA 300.0 Rev 2.1 1993	Chloride	103	mg/L	8.0	03/22/21 09:41	
EPA 300.0 Rev 2.1 1993	Sulfate	379	mg/L	8.0	03/22/21 09:41	
<b>92527256013</b>	<b>HGWC-14</b>					
	Performed by	CUSTOMER			04/06/21 16:57	
	pH	4.72	Std. Units		04/06/21 16:57	
EPA 6010D	Calcium	572	mg/L	10.0	04/02/21 14:00	
EPA 6020B	Barium	0.023	mg/L	0.0050	04/06/21 01:00	
EPA 6020B	Beryllium	0.00058	mg/L	0.00050	04/06/21 01:00	
EPA 6020B	Boron	11.8	mg/L	0.40	04/06/21 09:40	
EPA 6020B	Cobalt	0.034	mg/L	0.025	04/06/21 17:15	
EPA 6020B	Lead	0.0019	mg/L	0.0010	04/06/21 01:00	
EPA 6020B	Selenium	0.010J	mg/L	0.025	04/06/21 17:15	D3
EPA 6020B	Thallium	0.00034J	mg/L	0.0010	04/06/21 01:00	
SM 2450C-2011	Total Dissolved Solids	1640	mg/L	100	03/23/21 07:41	
EPA 300.0 Rev 2.1 1993	Chloride	233	mg/L	27.0	03/23/21 14:33	
EPA 300.0 Rev 2.1 1993	Fluoride	0.076J	mg/L	0.10	03/23/21 06:17	
EPA 300.0 Rev 2.1 1993	Sulfate	1300	mg/L	27.0	03/23/21 14:33	
<b>92527256014</b>	<b>HGWC-16</b>					
	Performed by	CUSTOMER			03/22/21 11:59	
	pH	7.19	Std. Units		03/22/21 11:59	
EPA 6010D	Calcium	198	mg/L	1.0	04/01/21 17:14	
EPA 6020B	Barium	0.12	mg/L	0.0050	04/05/21 22:59	
EPA 6020B	Boron	2.7	mg/L	0.040	04/05/21 22:59	
EPA 6020B	Lead	0.000058J	mg/L	0.0010	04/05/21 22:59	
EPA 6020B	Lithium	0.0048J	mg/L	0.030	04/05/21 22:59	
SM 2450C-2011	Total Dissolved Solids	768	mg/L	20.0	03/23/21 07:41	
EPA 300.0 Rev 2.1 1993	Chloride	93.8	mg/L	1.0	03/23/21 06:31	
EPA 300.0 Rev 2.1 1993	Sulfate	250	mg/L	5.0	03/23/21 14:48	
<b>92527256015</b>	<b>MW-22</b>					
	Performed by	CUSTOMER			03/22/21 11:59	
	pH	5.57	Std. Units		03/22/21 11:59	
EPA 6010D	Calcium	200	mg/L	1.0	04/01/21 17:19	
EPA 6020B	Barium	0.018	mg/L	0.0050	04/05/21 23:16	
EPA 6020B	Beryllium	0.000082J	mg/L	0.00050	04/05/21 23:16	
EPA 6020B	Boron	2.7	mg/L	0.20	04/06/21 09:46	
EPA 6020B	Cadmium	0.0022	mg/L	0.00050	04/05/21 23:16	
EPA 6020B	Chromium	0.00075J	mg/L	0.0050	04/05/21 23:16	
EPA 6020B	Cobalt	0.039	mg/L	0.0050	04/05/21 23:16	

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: HAMMOND AP-2 SEMIANNUAL

Pace Project No.: 92527256

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
<b>92527256015</b>	<b>MW-22</b>					
EPA 6020B	Lithium	0.0012J	mg/L	0.030	04/05/21 23:16	
SM 2450C-2011	Total Dissolved Solids	998	mg/L	20.0	03/23/21 07:41	
EPA 300.0 Rev 2.1 1993	Chloride	127	mg/L	10.0	03/23/21 15:02	
EPA 300.0 Rev 2.1 1993	Sulfate	461	mg/L	10.0	03/23/21 15:02	
<b>92527256016</b>	<b>MW-23D</b>					
	Performed by	CUSTOME			03/22/21 11:59	
		R				
	pH	6.86	Std. Units		03/22/21 11:59	
EPA 6010D	Calcium	341	mg/L	10.0	04/02/21 14:05	
EPA 6020B	Barium	0.058	mg/L	0.0050	04/05/21 23:22	
EPA 6020B	Boron	3.4	mg/L	0.20	04/06/21 09:52	
EPA 6020B	Cadmium	0.00057	mg/L	0.00050	04/05/21 23:22	
EPA 6020B	Chromium	0.00083J	mg/L	0.0050	04/05/21 23:22	
EPA 6020B	Cobalt	0.0011J	mg/L	0.0050	04/05/21 23:22	
EPA 6020B	Lithium	0.0024J	mg/L	0.030	04/05/21 23:22	
EPA 6020B	Molybdenum	0.0034J	mg/L	0.010	04/05/21 23:22	
SM 2450C-2011	Total Dissolved Solids	990	mg/L	100	03/23/21 07:41	
EPA 300.0 Rev 2.1 1993	Chloride	151	mg/L	10.0	03/23/21 15:16	
EPA 300.0 Rev 2.1 1993	Sulfate	486	mg/L	10.0	03/23/21 15:16	
<b>92527256017</b>	<b>HGWC-17</b>					
	Performed by	CUSTOME			03/22/21 11:59	
		R				
	pH	6.43	Std. Units		03/22/21 11:59	
EPA 6010D	Calcium	266	mg/L	1.0	04/01/21 17:29	
EPA 6020B	Barium	0.027	mg/L	0.0050	04/05/21 23:28	
EPA 6020B	Beryllium	0.000048J	mg/L	0.00050	04/05/21 23:28	
EPA 6020B	Boron	6.8	mg/L	0.20	04/06/21 09:58	
EPA 6020B	Chromium	0.00069J	mg/L	0.0050	04/05/21 23:28	
EPA 6020B	Cobalt	0.012	mg/L	0.0050	04/05/21 23:28	
EPA 6020B	Lead	0.000088J	mg/L	0.0010	04/05/21 23:28	
EPA 6020B	Lithium	0.0014J	mg/L	0.030	04/05/21 23:28	
SM 2450C-2011	Total Dissolved Solids	1020	mg/L	20.0	03/25/21 11:09	
EPA 300.0 Rev 2.1 1993	Chloride	138	mg/L	9.0	03/26/21 16:17	M6
EPA 300.0 Rev 2.1 1993	Fluoride	0.057J	mg/L	0.10	03/25/21 21:46	
EPA 300.0 Rev 2.1 1993	Sulfate	447	mg/L	9.0	03/26/21 16:17	M6
<b>92527256018</b>	<b>HGWC-18</b>					
	Performed by	CUSTOME			03/22/21 11:59	
		R				
	pH	4.54	Std. Units		03/22/21 11:59	
EPA 6010D	Calcium	407	mg/L	10.0	04/02/21 14:10	
EPA 6020B	Arsenic	0.0083J	mg/L	0.025	04/06/21 10:03	D3
EPA 6020B	Barium	0.031	mg/L	0.0050	04/05/21 23:34	
EPA 6020B	Beryllium	0.0038	mg/L	0.00050	04/05/21 23:34	
EPA 6020B	Boron	8.9	mg/L	0.20	04/06/21 10:03	
EPA 6020B	Cadmium	0.0015	mg/L	0.00050	04/05/21 23:34	
EPA 6020B	Cobalt	0.14	mg/L	0.025	04/06/21 10:03	

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: HAMMOND AP-2 SEMIANNUAL

Pace Project No.: 92527256

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
<b>92527256018</b>	<b>HGWC-18</b>					
EPA 6020B	Lead	0.00096J	mg/L	0.0010	04/05/21 23:34	
EPA 6020B	Lithium	0.013J	mg/L	0.030	04/05/21 23:34	
EPA 6020B	Selenium	0.019J	mg/L	0.025	04/06/21 10:03	D3
EPA 6020B	Thallium	0.00016J	mg/L	0.0010	04/05/21 23:34	
SM 2450C-2011	Total Dissolved Solids	1390	mg/L	100	03/25/21 11:09	
EPA 300.0 Rev 2.1 1993	Chloride	90.2	mg/L	22.0	03/26/21 17:00	
EPA 300.0 Rev 2.1 1993	Fluoride	0.64	mg/L	0.10	03/25/21 22:54	
EPA 300.0 Rev 2.1 1993	Sulfate	1050	mg/L	22.0	03/26/21 17:00	
<b>92527256019</b>	<b>MW-21D</b>					
	Performed by	CUSTOMER			03/22/21 11:59	
	pH	6.95	Std. Units		03/22/21 11:59	
EPA 6010D	Calcium	382	mg/L	10.0	04/02/21 14:14	
EPA 6020B	Barium	0.047	mg/L	0.0050	04/05/21 23:39	
EPA 6020B	Boron	5.7	mg/L	0.20	04/06/21 10:09	
EPA 6020B	Chromium	0.00074J	mg/L	0.0050	04/05/21 23:39	
EPA 6020B	Lead	0.000073J	mg/L	0.0010	04/05/21 23:39	
EPA 6020B	Lithium	0.026J	mg/L	0.030	04/05/21 23:39	
EPA 6020B	Molybdenum	0.016	mg/L	0.010	04/05/21 23:39	
SM 2450C-2011	Total Dissolved Solids	1390	mg/L	100	03/25/21 11:09	
EPA 300.0 Rev 2.1 1993	Chloride	208	mg/L	17.0	03/26/21 17:13	
EPA 300.0 Rev 2.1 1993	Sulfate	829	mg/L	17.0	03/26/21 17:13	
<b>92527256020</b>	<b>MW-33</b>					
	Performed by	CUSTOMER			04/06/21 16:57	
	pH	4.27	Std. Units		04/06/21 16:57	
EPA 6010D	Calcium	574	mg/L	10.0	04/02/21 14:19	
EPA 6020B	Arsenic	0.0054J	mg/L	0.025	04/06/21 17:20	D3
EPA 6020B	Barium	0.029	mg/L	0.0050	04/06/21 01:05	
EPA 6020B	Beryllium	0.0011	mg/L	0.00050	04/06/21 01:05	
EPA 6020B	Boron	10.2	mg/L	0.20	04/06/21 17:20	
EPA 6020B	Cadmium	0.00019J	mg/L	0.00050	04/06/21 01:05	
EPA 6020B	Cobalt	0.057	mg/L	0.025	04/06/21 17:20	
EPA 6020B	Lead	0.0017	mg/L	0.0010	04/06/21 01:05	
EPA 6020B	Lithium	0.0012J	mg/L	0.030	04/06/21 01:05	
EPA 6020B	Selenium	0.028	mg/L	0.025	04/06/21 17:20	
EPA 6020B	Thallium	0.00031J	mg/L	0.0010	04/06/21 01:05	
SM 2450C-2011	Total Dissolved Solids	1790	mg/L	100	03/25/21 11:09	
EPA 300.0 Rev 2.1 1993	Chloride	199	mg/L	29.0	03/26/21 17:27	
EPA 300.0 Rev 2.1 1993	Fluoride	0.40	mg/L	0.10	03/25/21 23:22	
EPA 300.0 Rev 2.1 1993	Sulfate	1360	mg/L	29.0	03/26/21 17:27	
<b>92527256021</b>	<b>DUP-2</b>					
EPA 6010D	Calcium	557	mg/L	10.0	04/02/21 14:24	
EPA 6020B	Arsenic	0.0062J	mg/L	0.025	04/06/21 17:26	D3
EPA 6020B	Barium	0.031	mg/L	0.0050	04/06/21 01:11	
EPA 6020B	Beryllium	0.0012	mg/L	0.00050	04/06/21 01:11	

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**SUMMARY OF DETECTION**

Project: HAMMOND AP-2 SEMIANNUAL

Pace Project No.: 92527256

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
<b>92527256021</b>	<b>DUP-2</b>					
EPA 6020B	Boron	10.8	mg/L	0.20	04/06/21 17:26	
EPA 6020B	Cadmium	0.00014J	mg/L	0.00050	04/06/21 01:11	
EPA 6020B	Cobalt	0.057	mg/L	0.025	04/06/21 17:26	
EPA 6020B	Lead	0.0018	mg/L	0.0010	04/06/21 01:11	
EPA 6020B	Lithium	0.0012J	mg/L	0.030	04/06/21 01:11	
EPA 6020B	Selenium	0.029	mg/L	0.025	04/06/21 17:26	
EPA 6020B	Thallium	0.00033J	mg/L	0.0010	04/06/21 01:11	
SM 2450C-2011	Total Dissolved Solids	1860	mg/L	100	03/25/21 11:09	
EPA 300.0 Rev 2.1 1993	Chloride	200	mg/L	29.0	03/26/21 18:09	
EPA 300.0 Rev 2.1 1993	Fluoride	0.47	mg/L	0.10	03/25/21 23:35	
EPA 300.0 Rev 2.1 1993	Sulfate	1370	mg/L	29.0	03/26/21 18:09	
<b>92527256022</b>	<b>EB-2</b>					
EPA 6020B	Boron	0.026J	mg/L	0.040	04/05/21 23:45	
<b>92527256023</b>	<b>FB-2</b>					
EPA 6020B	Boron	0.011J	mg/L	0.040	04/05/21 23:51	
<b>92527256024</b>	<b>MW-35</b>					
	Performed by	CUSTOMER			04/06/21 16:57	
	pH	4.89	Std. Units		04/06/21 16:57	
EPA 6010D	Calcium	552	mg/L	10.0	04/02/21 14:29	
EPA 6020B	Barium	0.032	mg/L	0.0050	04/05/21 23:57	
EPA 6020B	Beryllium	0.00061	mg/L	0.00050	04/05/21 23:57	
EPA 6020B	Boron	11.9	mg/L	0.20	04/06/21 17:37	
EPA 6020B	Cadmium	0.0018	mg/L	0.00050	04/05/21 23:57	
EPA 6020B	Chromium	0.00083J	mg/L	0.0050	04/05/21 23:57	
EPA 6020B	Cobalt	0.10	mg/L	0.0050	04/05/21 23:57	
EPA 6020B	Lead	0.00066J	mg/L	0.0010	04/05/21 23:57	
EPA 6020B	Lithium	0.0045J	mg/L	0.030	04/05/21 23:57	
EPA 6020B	Selenium	0.016J	mg/L	0.025	04/06/21 17:37	D3
SM 2450C-2011	Total Dissolved Solids	1690	mg/L	100	03/26/21 09:32	
EPA 300.0 Rev 2.1 1993	Chloride	250	mg/L	24.0	03/26/21 13:56	
EPA 300.0 Rev 2.1 1993	Fluoride	0.082J	mg/L	0.10	03/25/21 17:17	
EPA 300.0 Rev 2.1 1993	Sulfate	1220	mg/L	24.0	03/26/21 13:56	

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### ANALYTICAL RESULTS

Project: HAMMOND AP-2 SEMIANNUAL  
Pace Project No.: 92527256

Sample: HGWA-1		Lab ID: 92527256001		Collected: 03/10/21 16:10		Received: 03/11/21 15:55		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		03/22/21 11:59		
pH	<b>6.95</b>	Std. Units			1		03/22/21 11:59		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	<b>111</b>	mg/L	1.0	0.070	1	03/15/21 14:10	03/19/21 04:13	7440-70-2	
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	03/15/21 14:35	03/16/21 15:56	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	03/15/21 14:35	03/16/21 15:56	7440-38-2	
Barium	<b>0.030</b>	mg/L	0.0050	0.00071	1	03/15/21 14:35	03/16/21 15:56	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000046	1	03/15/21 14:35	03/16/21 15:56	7440-41-7	
Boron	<b>0.015J</b>	mg/L	0.040	0.0052	1	03/15/21 14:35	03/16/21 15:56	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00012	1	03/15/21 14:35	03/16/21 15:56	7440-43-9	
Chromium	ND	mg/L	0.0050	0.00055	1	03/15/21 14:35	03/16/21 15:56	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	03/15/21 14:35	03/16/21 15:56	7440-48-4	
Lead	ND	mg/L	0.0010	0.000036	1	03/15/21 14:35	03/16/21 15:56	7439-92-1	
Lithium	<b>0.00090J</b>	mg/L	0.030	0.00081	1	03/15/21 14:35	03/16/21 15:56	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	03/15/21 14:35	03/16/21 15:56	7439-98-7	
Selenium	<b>0.0047J</b>	mg/L	0.0050	0.0016	1	03/15/21 14:35	03/16/21 15:56	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/15/21 14:35	03/16/21 15:56	7440-28-0	
<b>2540C Total Dissolved Solids</b>									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	<b>348</b>	mg/L	10.0	10.0	1		03/15/21 13:14		
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	<b>7.4</b>	mg/L	1.0	0.60	1		03/17/21 20:51	16887-00-6	
Fluoride	<b>0.079J</b>	mg/L	0.10	0.050	1		03/17/21 20:51	16984-48-8	
Sulfate	<b>49.6</b>	mg/L	1.0	0.50	1		03/17/21 20:51	14808-79-8	M1

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### ANALYTICAL RESULTS

Project: HAMMOND AP-2 SEMIANNUAL  
Pace Project No.: 92527256

Sample: <b>HGWA-4</b> Lab ID: <b>92527256002</b> Collected: 03/10/21 16:21 Received: 03/11/21 15:55 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		03/22/21 11:59		
pH	<b>5.28</b>	Std. Units			1		03/22/21 11:59		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	<b>5.9</b>	mg/L	1.0	0.070	1	03/15/21 14:10	03/19/21 04:18	7440-70-2	
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	03/15/21 14:35	03/16/21 16:01	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	03/15/21 14:35	03/16/21 16:01	7440-38-2	
Barium	<b>0.036</b>	mg/L	0.0050	0.00071	1	03/15/21 14:35	03/16/21 16:01	7440-39-3	
Beryllium	<b>0.00017J</b>	mg/L	0.00050	0.000046	1	03/15/21 14:35	03/16/21 16:01	7440-41-7	
Boron	<b>0.012J</b>	mg/L	0.040	0.0052	1	03/15/21 14:35	03/16/21 16:01	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00012	1	03/15/21 14:35	03/16/21 16:01	7440-43-9	
Chromium	ND	mg/L	0.0050	0.00055	1	03/15/21 14:35	03/16/21 16:01	7440-47-3	
Cobalt	<b>0.00065J</b>	mg/L	0.0050	0.00038	1	03/15/21 14:35	03/16/21 16:01	7440-48-4	
Lead	<b>0.00016J</b>	mg/L	0.0010	0.000036	1	03/15/21 14:35	03/16/21 16:01	7439-92-1	
Lithium	<b>0.0011J</b>	mg/L	0.030	0.00081	1	03/15/21 14:35	03/16/21 16:01	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	03/15/21 14:35	03/16/21 16:01	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0016	1	03/15/21 14:35	03/16/21 16:01	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/15/21 14:35	03/16/21 16:01	7440-28-0	
<b>2540C Total Dissolved Solids</b>									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	<b>53.0</b>	mg/L	10.0	10.0	1		03/15/21 13:15		
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	<b>2.9</b>	mg/L	1.0	0.60	1		03/17/21 21:33	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		03/17/21 21:33	16984-48-8	M1
Sulfate	<b>1.2</b>	mg/L	1.0	0.50	1		03/17/21 21:33	14808-79-8	

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### ANALYTICAL RESULTS

Project: HAMMOND AP-2 SEMIANNUAL

Pace Project No.: 92527256

Sample: HGWA-42D		Lab ID: 92527256003		Collected: 03/10/21 14:23		Received: 03/11/21 15:55		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		03/22/21 11:59		
pH	<b>7.70</b>	Std. Units			1		03/22/21 11:59		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	<b>43.4</b>	mg/L	1.0	0.070	1	03/15/21 14:10	03/19/21 04:23	7440-70-2	
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	03/15/21 14:35	03/16/21 16:07	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	03/15/21 14:35	03/16/21 16:07	7440-38-2	
Barium	<b>0.18</b>	mg/L	0.0050	0.00071	1	03/15/21 14:35	03/16/21 16:07	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000046	1	03/15/21 14:35	03/16/21 16:07	7440-41-7	
Boron	<b>0.048</b>	mg/L	0.040	0.0052	1	03/15/21 14:35	03/16/21 16:07	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00012	1	03/15/21 14:35	03/16/21 16:07	7440-43-9	
Chromium	ND	mg/L	0.0050	0.00055	1	03/15/21 14:35	03/16/21 16:07	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	03/15/21 14:35	03/16/21 16:07	7440-48-4	
Lead	ND	mg/L	0.0010	0.000036	1	03/15/21 14:35	03/16/21 16:07	7439-92-1	
Lithium	<b>0.0094J</b>	mg/L	0.030	0.00081	1	03/15/21 14:35	03/16/21 16:07	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	03/15/21 14:35	03/16/21 16:07	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0016	1	03/15/21 14:35	03/16/21 16:07	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/15/21 14:35	03/16/21 16:07	7440-28-0	
<b>2540C Total Dissolved Solids</b>									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	<b>163</b>	mg/L	10.0	10.0	1		03/15/21 13:15		
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	<b>3.0</b>	mg/L	1.0	0.60	1		03/17/21 22:14	16887-00-6	
Fluoride	<b>0.11</b>	mg/L	0.10	0.050	1		03/17/21 22:14	16984-48-8	
Sulfate	<b>10.8</b>	mg/L	1.0	0.50	1		03/17/21 22:14	14808-79-8	

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### ANALYTICAL RESULTS

Project: HAMMOND AP-2 SEMIANNUAL  
Pace Project No.: 92527256

Sample: HGWA-44D		Lab ID: 92527256004		Collected: 03/10/21 14:30		Received: 03/11/21 15:55		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		03/22/21 11:59		
pH	<b>7.92</b>	Std. Units			1		03/22/21 11:59		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	<b>18.3</b>	mg/L	1.0	0.070	1	03/15/21 14:10	03/19/21 04:28	7440-70-2	
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	<b>0.00037J</b>	mg/L	0.0030	0.00028	1	03/15/21 14:35	03/16/21 16:13	7440-36-0	B
Arsenic	ND	mg/L	0.0050	0.00078	1	03/15/21 14:35	03/16/21 16:13	7440-38-2	
Barium	<b>0.26</b>	mg/L	0.0050	0.00071	1	03/15/21 14:35	03/16/21 16:13	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000046	1	03/15/21 14:35	03/16/21 16:13	7440-41-7	
Boron	<b>0.39</b>	mg/L	0.040	0.0052	1	03/15/21 14:35	03/16/21 16:13	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00012	1	03/15/21 14:35	03/16/21 16:13	7440-43-9	
Chromium	ND	mg/L	0.0050	0.00055	1	03/15/21 14:35	03/16/21 16:13	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	03/15/21 14:35	03/16/21 16:13	7440-48-4	
Lead	ND	mg/L	0.0010	0.000036	1	03/15/21 14:35	03/16/21 16:13	7439-92-1	
Lithium	<b>0.030</b>	mg/L	0.030	0.00081	1	03/15/21 14:35	03/16/21 16:13	7439-93-2	
Molybdenum	<b>0.0019J</b>	mg/L	0.010	0.00069	1	03/15/21 14:35	03/16/21 16:13	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0016	1	03/15/21 14:35	03/16/21 16:13	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/15/21 14:35	03/16/21 16:13	7440-28-0	
<b>2540C Total Dissolved Solids</b>									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	<b>289</b>	mg/L	10.0	10.0	1		03/15/21 13:15		
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	<b>12.3</b>	mg/L	1.0	0.60	1		03/17/21 22:28	16887-00-6	
Fluoride	<b>0.65</b>	mg/L	0.10	0.050	1		03/17/21 22:28	16984-48-8	
Sulfate	ND	mg/L	1.0	0.50	1		03/17/21 22:28	14808-79-8	

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### ANALYTICAL RESULTS

Project: HAMMOND AP-2 SEMIANNUAL  
Pace Project No.: 92527256

Sample: <b>HGWA-2</b> Lab ID: <b>92527256006</b> Collected: 03/11/21 09:59 Received: 03/12/21 13:43 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		03/22/21 11:59		
pH	<b>5.80</b>	Std. Units			1		03/22/21 11:59		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	<b>43.8</b>	mg/L	1.0	0.070	1	03/22/21 11:22	03/22/21 20:09	7440-70-2	M1
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	03/19/21 12:10	03/19/21 20:54	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	03/19/21 12:10	03/19/21 20:54	7440-38-2	
Barium	<b>0.070</b>	mg/L	0.0050	0.00071	1	03/19/21 12:10	03/19/21 20:54	7440-39-3	
Beryllium	<b>0.000086J</b>	mg/L	0.00050	0.000046	1	03/19/21 12:10	03/19/21 20:54	7440-41-7	
Boron	<b>0.056</b>	mg/L	0.040	0.0052	1	03/19/21 12:10	03/19/21 20:54	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00012	1	03/19/21 12:10	03/19/21 20:54	7440-43-9	
Chromium	ND	mg/L	0.0050	0.00055	1	03/19/21 12:10	03/19/21 20:54	7440-47-3	
Cobalt	<b>0.013</b>	mg/L	0.0050	0.00038	1	03/19/21 12:10	03/19/21 20:54	7440-48-4	
Lead	<b>0.000076J</b>	mg/L	0.0010	0.000036	1	03/19/21 12:10	03/19/21 20:54	7439-92-1	
Lithium	<b>0.0011J</b>	mg/L	0.030	0.00081	1	03/19/21 12:10	03/19/21 20:54	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	03/19/21 12:10	03/19/21 20:54	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0016	1	03/19/21 12:10	03/19/21 20:54	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/19/21 12:10	03/19/21 20:54	7440-28-0	
<b>2540C Total Dissolved Solids</b>									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	<b>169</b>	mg/L	10.0	10.0	1		03/16/21 15:08		
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	<b>5.1</b>	mg/L	1.0	0.60	1		03/20/21 02:14	16887-00-6	
Fluoride	<b>0.10</b>	mg/L	0.10	0.050	1		03/20/21 02:14	16984-48-8	
Sulfate	<b>52.9</b>	mg/L	1.0	0.50	1		03/20/21 02:14	14808-79-8	

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## ANALYTICAL RESULTS

Project: HAMMOND AP-2 SEMIANNUAL

Pace Project No.: 92527256

Sample: HGWA-3		Lab ID: 92527256007		Collected: 03/11/21 11:25		Received: 03/12/21 13:43		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		03/22/21 11:59		
pH	<b>7.33</b>	Std. Units			1		03/22/21 11:59		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Calcium	<b>83.8</b>	mg/L	1.0	0.070	1	03/22/21 11:22	03/22/21 20:29	7440-70-2	
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	03/19/21 12:10	03/19/21 21:00	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	03/19/21 12:10	03/19/21 21:00	7440-38-2	
Barium	<b>0.13</b>	mg/L	0.0050	0.00071	1	03/19/21 12:10	03/19/21 21:00	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000046	1	03/19/21 12:10	03/19/21 21:00	7440-41-7	
Boron	<b>0.015J</b>	mg/L	0.040	0.0052	1	03/19/21 12:10	03/19/21 21:00	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00012	1	03/19/21 12:10	03/19/21 21:00	7440-43-9	
Chromium	ND	mg/L	0.0050	0.00055	1	03/19/21 12:10	03/19/21 21:00	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	03/19/21 12:10	03/19/21 21:00	7440-48-4	
Lead	ND	mg/L	0.0010	0.000036	1	03/19/21 12:10	03/19/21 21:00	7439-92-1	
Lithium	<b>0.0035J</b>	mg/L	0.030	0.00081	1	03/19/21 12:10	03/19/21 21:00	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	03/19/21 12:10	03/19/21 21:00	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0016	1	03/19/21 12:10	03/19/21 21:00	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/19/21 12:10	03/19/21 21:00	7440-28-0	
<b>2540C Total Dissolved Solids</b>									
Analytical Method: SM 2450C-2011									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	<b>267</b>	mg/L	10.0	10.0	1		03/16/21 15:08		
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	<b>5.9</b>	mg/L	1.0	0.60	1		03/20/21 02:29	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		03/20/21 02:29	16984-48-8	
Sulfate	<b>50.4</b>	mg/L	1.0	0.50	1		03/20/21 02:29	14808-79-8	

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### ANALYTICAL RESULTS

Project: HAMMOND AP-2 SEMIANNUAL

Pace Project No.: 92527256

Sample: HGWA-5		Lab ID: 92527256008		Collected: 03/11/21 11:30		Received: 03/12/21 13:43		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		03/22/21 11:59		
pH	<b>6.48</b>	Std. Units			1		03/22/21 11:59		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	<b>28.3</b>	mg/L	1.0	0.070	1	04/01/21 10:32	04/01/21 16:07	7440-70-2	M1
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	04/01/21 10:34	04/05/21 22:19	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	04/01/21 10:34	04/05/21 22:19	7440-38-2	
Barium	<b>0.044</b>	mg/L	0.0050	0.00071	1	04/01/21 10:34	04/05/21 22:19	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000046	1	04/01/21 10:34	04/05/21 22:19	7440-41-7	
Boron	<b>0.0075J</b>	mg/L	0.040	0.0052	1	04/01/21 10:34	04/05/21 22:19	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00012	1	04/01/21 10:34	04/05/21 22:19	7440-43-9	
Chromium	<b>0.0011J</b>	mg/L	0.0050	0.00055	1	04/01/21 10:34	04/05/21 22:19	7440-47-3	
Cobalt	<b>0.0013J</b>	mg/L	0.0050	0.00038	1	04/01/21 10:34	04/05/21 22:19	7440-48-4	
Lead	ND	mg/L	0.0010	0.000036	1	04/01/21 10:34	04/05/21 22:19	7439-92-1	
Lithium	<b>0.0037J</b>	mg/L	0.030	0.00081	1	04/01/21 10:34	04/05/21 22:19	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	04/01/21 10:34	04/05/21 22:19	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0016	1	04/01/21 10:34	04/05/21 22:19	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	04/01/21 10:34	04/05/21 22:19	7440-28-0	
<b>2540C Total Dissolved Solids</b>									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	<b>118</b>	mg/L	10.0	10.0	1		03/16/21 15:08		
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	<b>1.4</b>	mg/L	1.0	0.60	1		03/20/21 03:14	16887-00-6	
Fluoride	<b>0.060J</b>	mg/L	0.10	0.050	1		03/20/21 03:14	16984-48-8	
Sulfate	<b>22.7</b>	mg/L	1.0	0.50	1		03/20/21 03:14	14808-79-8	

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### ANALYTICAL RESULTS

Project: HAMMOND AP-2 SEMIANNUAL

Pace Project No.: 92527256

Sample: HGWA-6		Lab ID: 92527256009		Collected: 03/11/21 12:39		Received: 03/12/21 13:43		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		03/22/21 11:59		
pH	<b>7.56</b>	Std. Units			1		03/22/21 11:59		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	<b>53.1</b>	mg/L	1.0	0.070	1	04/01/21 10:32	04/01/21 16:26	7440-70-2	
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	04/01/21 10:34	04/05/21 22:25	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	04/01/21 10:34	04/05/21 22:25	7440-38-2	
Barium	<b>0.21</b>	mg/L	0.0050	0.00071	1	04/01/21 10:34	04/05/21 22:25	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000046	1	04/01/21 10:34	04/05/21 22:25	7440-41-7	
Boron	<b>0.018J</b>	mg/L	0.040	0.0052	1	04/01/21 10:34	04/05/21 22:25	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00012	1	04/01/21 10:34	04/05/21 22:25	7440-43-9	
Chromium	ND	mg/L	0.0050	0.00055	1	04/01/21 10:34	04/05/21 22:25	7440-47-3	M1,R1
Cobalt	ND	mg/L	0.0050	0.00038	1	04/01/21 10:34	04/05/21 22:25	7440-48-4	
Lead	ND	mg/L	0.0010	0.000036	1	04/01/21 10:34	04/05/21 22:25	7439-92-1	
Lithium	<b>0.012J</b>	mg/L	0.030	0.00081	1	04/01/21 10:34	04/05/21 22:25	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	04/01/21 10:34	04/05/21 22:25	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0016	1	04/01/21 10:34	04/05/21 22:25	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	04/01/21 10:34	04/05/21 22:25	7440-28-0	
<b>2540C Total Dissolved Solids</b>									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	<b>215</b>	mg/L	10.0	10.0	1		03/16/21 15:08		
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	<b>1.2</b>	mg/L	1.0	0.60	1		03/20/21 03:29	16887-00-6	
Fluoride	<b>0.17</b>	mg/L	0.10	0.050	1		03/20/21 03:29	16984-48-8	
Sulfate	<b>35.5</b>	mg/L	1.0	0.50	1		03/20/21 03:29	14808-79-8	

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### ANALYTICAL RESULTS

Project: HAMMOND AP-2 SEMIANNUAL

Pace Project No.: 92527256

Sample: HGWA-43D		Lab ID: 92527256010		Collected: 03/11/21 09:57		Received: 03/12/21 13:43		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		03/22/21 11:59		
pH	<b>7.46</b>	Std. Units			1		03/22/21 11:59		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	<b>59.6</b>	mg/L	1.0	0.070	1	03/22/21 11:22	03/22/21 20:33	7440-70-2	
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	<b>0.00057J</b>	mg/L	0.0030	0.00028	1	03/19/21 12:10	03/19/21 21:06	7440-36-0	
Arsenic	<b>0.0013J</b>	mg/L	0.0050	0.00078	1	03/19/21 12:10	03/19/21 21:06	7440-38-2	
Barium	<b>0.32</b>	mg/L	0.0050	0.00071	1	03/19/21 12:10	03/19/21 21:06	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000046	1	03/19/21 12:10	03/19/21 21:06	7440-41-7	
Boron	<b>0.060</b>	mg/L	0.040	0.0052	1	03/19/21 12:10	03/19/21 21:06	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00012	1	03/19/21 12:10	03/19/21 21:06	7440-43-9	
Chromium	ND	mg/L	0.0050	0.00055	1	03/19/21 12:10	03/19/21 21:06	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	03/19/21 12:10	03/19/21 21:06	7440-48-4	
Lead	<b>0.000094J</b>	mg/L	0.0010	0.000036	1	03/19/21 12:10	03/19/21 21:06	7439-92-1	
Lithium	<b>0.0022J</b>	mg/L	0.030	0.00081	1	03/19/21 12:10	03/19/21 21:06	7439-93-2	
Molybdenum	<b>0.0064J</b>	mg/L	0.010	0.00069	1	03/19/21 12:10	03/19/21 21:06	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0016	1	03/19/21 12:10	03/19/21 21:06	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/19/21 12:10	03/19/21 21:06	7440-28-0	
<b>2540C Total Dissolved Solids</b>									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	<b>279</b>	mg/L	10.0	10.0	1		03/17/21 17:40		
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	<b>4.5</b>	mg/L	1.0	0.60	1		03/20/21 04:14	16887-00-6	
Fluoride	<b>0.20</b>	mg/L	0.10	0.050	1		03/20/21 04:14	16984-48-8	
Sulfate	<b>38.6</b>	mg/L	1.0	0.50	1		03/20/21 04:14	14808-79-8	

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## ANALYTICAL RESULTS

Project: HAMMOND AP-2 SEMIANNUAL  
Pace Project No.: 92527256

Sample: MW-37D		Lab ID: 92527256011		Collected: 03/12/21 10:20		Received: 03/15/21 12:00		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		03/22/21 11:59		
pH	<b>7.50</b>	Std. Units			1		03/22/21 11:59		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	<b>170</b>	mg/L	1.0	0.070	1	04/01/21 10:32	04/01/21 16:31	7440-70-2	
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	04/01/21 10:34	04/05/21 22:48	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	04/01/21 10:34	04/05/21 22:48	7440-38-2	
Barium	<b>0.12</b>	mg/L	0.0050	0.00071	1	04/01/21 10:34	04/05/21 22:48	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000046	1	04/01/21 10:34	04/05/21 22:48	7440-41-7	
Boron	<b>0.15</b>	mg/L	0.040	0.0052	1	04/01/21 10:34	04/05/21 22:48	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00012	1	04/01/21 10:34	04/05/21 22:48	7440-43-9	
Chromium	ND	mg/L	0.0050	0.00055	1	04/01/21 10:34	04/05/21 22:48	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	04/01/21 10:34	04/05/21 22:48	7440-48-4	
Lead	ND	mg/L	0.0010	0.000036	1	04/01/21 10:34	04/05/21 22:48	7439-92-1	
Lithium	<b>0.035</b>	mg/L	0.030	0.00081	1	04/01/21 10:34	04/05/21 22:48	7439-93-2	
Molybdenum	<b>0.014</b>	mg/L	0.010	0.00069	1	04/01/21 10:34	04/05/21 22:48	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0016	1	04/01/21 10:34	04/05/21 22:48	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	04/01/21 10:34	04/05/21 22:48	7440-28-0	
<b>2540C Total Dissolved Solids</b>									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	<b>890</b>	mg/L	20.0	20.0	1		03/17/21 17:40		
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	<b>124</b>	mg/L	6.0	3.6	6		03/23/21 16:42	16887-00-6	
Fluoride	<b>0.061J</b>	mg/L	0.10	0.050	1		03/20/21 22:18	16984-48-8	
Sulfate	<b>237</b>	mg/L	6.0	3.0	6		03/23/21 16:42	14808-79-8	

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### ANALYTICAL RESULTS

Project: HAMMOND AP-2 SEMIANNUAL  
Pace Project No.: 92527256

Sample: <b>HGWC-15</b> Lab ID: <b>92527256012</b> Collected: 03/16/21 15:24 Received: 03/17/21 13:10 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		03/22/21 11:59		
pH	<b>6.08</b>	Std. Units			1		03/22/21 11:59		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	<b>196</b>	mg/L	1.0	0.070	1	04/01/21 10:32	04/01/21 16:36	7440-70-2	
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	04/01/21 10:34	04/05/21 22:54	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	04/01/21 10:34	04/05/21 22:54	7440-38-2	
Barium	<b>0.012</b>	mg/L	0.0050	0.00071	1	04/01/21 10:34	04/05/21 22:54	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000046	1	04/01/21 10:34	04/05/21 22:54	7440-41-7	
Boron	<b>2.4</b>	mg/L	0.040	0.0052	1	04/01/21 10:34	04/05/21 22:54	7440-42-8	
Cadmium	<b>0.0011</b>	mg/L	0.00050	0.00012	1	04/01/21 10:34	04/05/21 22:54	7440-43-9	
Chromium	<b>0.0012J</b>	mg/L	0.0050	0.00055	1	04/01/21 10:34	04/05/21 22:54	7440-47-3	
Cobalt	<b>0.018</b>	mg/L	0.0050	0.00038	1	04/01/21 10:34	04/05/21 22:54	7440-48-4	
Lead	ND	mg/L	0.0010	0.000036	1	04/01/21 10:34	04/05/21 22:54	7439-92-1	
Lithium	<b>0.032</b>	mg/L	0.030	0.00081	1	04/01/21 10:34	04/05/21 22:54	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	04/01/21 10:34	04/05/21 22:54	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0016	1	04/01/21 10:34	04/05/21 22:54	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	04/01/21 10:34	04/05/21 22:54	7440-28-0	
<b>2540C Total Dissolved Solids</b>									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	<b>92.0</b>	mg/L	20.0	20.0	1		03/23/21 07:59		
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	<b>103</b>	mg/L	8.0	4.8	8		03/22/21 09:41	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		03/21/21 23:57	16984-48-8	
Sulfate	<b>379</b>	mg/L	8.0	4.0	8		03/22/21 09:41	14808-79-8	

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### ANALYTICAL RESULTS

Project: HAMMOND AP-2 SEMIANNUAL  
Pace Project No.: 92527256

Sample: <b>HGWC-14</b> Lab ID: <b>92527256013</b> Collected: 03/17/21 14:28      Received: 03/18/21 13:17      Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		04/06/21 16:57		
pH	<b>4.72</b>	Std. Units			1		04/06/21 16:57		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D      Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	<b>572</b>	mg/L	10.0	0.70	10	04/01/21 10:32	04/02/21 14:00	7440-70-2	
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B      Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	04/01/21 10:34	04/06/21 01:00	7440-36-0	
Arsenic	ND	mg/L	0.025	0.0039	5	04/01/21 10:34	04/06/21 17:15	7440-38-2	D3
Barium	<b>0.023</b>	mg/L	0.0050	0.00071	1	04/01/21 10:34	04/06/21 01:00	7440-39-3	
Beryllium	<b>0.00058</b>	mg/L	0.00050	0.000046	1	04/01/21 10:34	04/06/21 01:00	7440-41-7	
Boron	<b>11.8</b>	mg/L	0.40	0.052	10	04/01/21 10:34	04/06/21 09:40	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00012	1	04/01/21 10:34	04/06/21 01:00	7440-43-9	
Chromium	ND	mg/L	0.025	0.0028	5	04/01/21 10:34	04/06/21 17:15	7440-47-3	D3
Cobalt	<b>0.034</b>	mg/L	0.025	0.0019	5	04/01/21 10:34	04/06/21 17:15	7440-48-4	
Lead	<b>0.0019</b>	mg/L	0.0010	0.000036	1	04/01/21 10:34	04/06/21 01:00	7439-92-1	
Lithium	ND	mg/L	0.030	0.00081	1	04/01/21 10:34	04/06/21 01:00	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	04/01/21 10:34	04/06/21 01:00	7439-98-7	
Selenium	<b>0.010J</b>	mg/L	0.025	0.0078	5	04/01/21 10:34	04/06/21 17:15	7782-49-2	D3
Thallium	<b>0.00034J</b>	mg/L	0.0010	0.00014	1	04/01/21 10:34	04/06/21 01:00	7440-28-0	
<b>2540C Total Dissolved Solids</b>									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	<b>1640</b>	mg/L	100	100	1		03/23/21 07:41		
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	<b>233</b>	mg/L	27.0	16.2	27		03/23/21 14:33	16887-00-6	
Fluoride	<b>0.076J</b>	mg/L	0.10	0.050	1		03/23/21 06:17	16984-48-8	
Sulfate	<b>1300</b>	mg/L	27.0	13.5	27		03/23/21 14:33	14808-79-8	

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### ANALYTICAL RESULTS

Project: HAMMOND AP-2 SEMIANNUAL

Pace Project No.: 92527256

**Sample: HGWC-16**      **Lab ID: 92527256014**      Collected: 03/17/21 09:29      Received: 03/18/21 13:17      Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		03/22/21 11:59		
pH	<b>7.19</b>	Std. Units			1		03/22/21 11:59		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D      Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	<b>198</b>	mg/L	1.0	0.070	1	04/01/21 10:32	04/01/21 17:14	7440-70-2	
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B      Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	04/01/21 10:34	04/05/21 22:59	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	04/01/21 10:34	04/05/21 22:59	7440-38-2	
Barium	<b>0.12</b>	mg/L	0.0050	0.00071	1	04/01/21 10:34	04/05/21 22:59	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000046	1	04/01/21 10:34	04/05/21 22:59	7440-41-7	
Boron	<b>2.7</b>	mg/L	0.040	0.0052	1	04/01/21 10:34	04/05/21 22:59	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00012	1	04/01/21 10:34	04/05/21 22:59	7440-43-9	
Chromium	ND	mg/L	0.0050	0.00055	1	04/01/21 10:34	04/05/21 22:59	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	04/01/21 10:34	04/05/21 22:59	7440-48-4	
Lead	<b>0.000058J</b>	mg/L	0.0010	0.000036	1	04/01/21 10:34	04/05/21 22:59	7439-92-1	
Lithium	<b>0.0048J</b>	mg/L	0.030	0.00081	1	04/01/21 10:34	04/05/21 22:59	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	04/01/21 10:34	04/05/21 22:59	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0016	1	04/01/21 10:34	04/05/21 22:59	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	04/01/21 10:34	04/05/21 22:59	7440-28-0	
<b>2540C Total Dissolved Solids</b>									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	<b>768</b>	mg/L	20.0	20.0	1		03/23/21 07:41		
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	<b>93.8</b>	mg/L	1.0	0.60	1		03/23/21 06:31	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		03/23/21 06:31	16984-48-8	
Sulfate	<b>250</b>	mg/L	5.0	2.5	5		03/23/21 14:48	14808-79-8	

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### ANALYTICAL RESULTS

Project: HAMMOND AP-2 SEMIANNUAL

Pace Project No.: 92527256

Sample: MW-22		Lab ID: 92527256015		Collected: 03/17/21 10:00		Received: 03/18/21 13:17		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		03/22/21 11:59		
pH	<b>5.57</b>	Std. Units			1		03/22/21 11:59		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Calcium	<b>200</b>	mg/L	1.0	0.070	1	04/01/21 10:32	04/01/21 17:19	7440-70-2	
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	04/01/21 10:34	04/05/21 23:16	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	04/01/21 10:34	04/05/21 23:16	7440-38-2	
Barium	<b>0.018</b>	mg/L	0.0050	0.00071	1	04/01/21 10:34	04/05/21 23:16	7440-39-3	
Beryllium	<b>0.000082J</b>	mg/L	0.00050	0.000046	1	04/01/21 10:34	04/05/21 23:16	7440-41-7	
Boron	<b>2.7</b>	mg/L	0.20	0.026	5	04/01/21 10:34	04/06/21 09:46	7440-42-8	
Cadmium	<b>0.0022</b>	mg/L	0.00050	0.00012	1	04/01/21 10:34	04/05/21 23:16	7440-43-9	
Chromium	<b>0.00075J</b>	mg/L	0.0050	0.00055	1	04/01/21 10:34	04/05/21 23:16	7440-47-3	
Cobalt	<b>0.039</b>	mg/L	0.0050	0.00038	1	04/01/21 10:34	04/05/21 23:16	7440-48-4	
Lead	ND	mg/L	0.0010	0.000036	1	04/01/21 10:34	04/05/21 23:16	7439-92-1	
Lithium	<b>0.0012J</b>	mg/L	0.030	0.00081	1	04/01/21 10:34	04/05/21 23:16	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	04/01/21 10:34	04/05/21 23:16	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0016	1	04/01/21 10:34	04/05/21 23:16	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	04/01/21 10:34	04/05/21 23:16	7440-28-0	
<b>2540C Total Dissolved Solids</b>									
Analytical Method: SM 2450C-2011									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	<b>998</b>	mg/L	20.0	20.0	1		03/23/21 07:41		
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	<b>127</b>	mg/L	10.0	6.0	10		03/23/21 15:02	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		03/23/21 06:44	16984-48-8	
Sulfate	<b>461</b>	mg/L	10.0	5.0	10		03/23/21 15:02	14808-79-8	

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### ANALYTICAL RESULTS

Project: HAMMOND AP-2 SEMIANNUAL  
Pace Project No.: 92527256

Sample: MW-23D		Lab ID: 92527256016		Collected: 03/17/21 11:49		Received: 03/18/21 13:17		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		03/22/21 11:59		
pH	<b>6.86</b>	Std. Units			1		03/22/21 11:59		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	<b>341</b>	mg/L	10.0	0.70	10	04/01/21 10:32	04/02/21 14:05	7440-70-2	
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	04/01/21 10:34	04/05/21 23:22	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	04/01/21 10:34	04/05/21 23:22	7440-38-2	
Barium	<b>0.058</b>	mg/L	0.0050	0.00071	1	04/01/21 10:34	04/05/21 23:22	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000046	1	04/01/21 10:34	04/05/21 23:22	7440-41-7	
Boron	<b>3.4</b>	mg/L	0.20	0.026	5	04/01/21 10:34	04/06/21 09:52	7440-42-8	
Cadmium	<b>0.00057</b>	mg/L	0.00050	0.00012	1	04/01/21 10:34	04/05/21 23:22	7440-43-9	
Chromium	<b>0.00083J</b>	mg/L	0.0050	0.00055	1	04/01/21 10:34	04/05/21 23:22	7440-47-3	
Cobalt	<b>0.0011J</b>	mg/L	0.0050	0.00038	1	04/01/21 10:34	04/05/21 23:22	7440-48-4	
Lead	ND	mg/L	0.0010	0.000036	1	04/01/21 10:34	04/05/21 23:22	7439-92-1	
Lithium	<b>0.0024J</b>	mg/L	0.030	0.00081	1	04/01/21 10:34	04/05/21 23:22	7439-93-2	
Molybdenum	<b>0.0034J</b>	mg/L	0.010	0.00069	1	04/01/21 10:34	04/05/21 23:22	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0016	1	04/01/21 10:34	04/05/21 23:22	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	04/01/21 10:34	04/05/21 23:22	7440-28-0	
<b>2540C Total Dissolved Solids</b>									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	<b>990</b>	mg/L	100	100	1		03/23/21 07:41		
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	<b>151</b>	mg/L	10.0	6.0	10		03/23/21 15:16	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		03/23/21 06:58	16984-48-8	
Sulfate	<b>486</b>	mg/L	10.0	5.0	10		03/23/21 15:16	14808-79-8	

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### ANALYTICAL RESULTS

Project: HAMMOND AP-2 SEMIANNUAL

Pace Project No.: 92527256

Sample: HGWC-17		Lab ID: 92527256017		Collected: 03/18/21 14:48		Received: 03/19/21 13:40		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		03/22/21 11:59		
pH	<b>6.43</b>	Std. Units			1		03/22/21 11:59		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	<b>266</b>	mg/L	1.0	0.070	1	04/01/21 10:32	04/01/21 17:29	7440-70-2	
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	04/01/21 10:34	04/05/21 23:28	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	04/01/21 10:34	04/05/21 23:28	7440-38-2	
Barium	<b>0.027</b>	mg/L	0.0050	0.00071	1	04/01/21 10:34	04/05/21 23:28	7440-39-3	
Beryllium	<b>0.000048J</b>	mg/L	0.00050	0.000046	1	04/01/21 10:34	04/05/21 23:28	7440-41-7	
Boron	<b>6.8</b>	mg/L	0.20	0.026	5	04/01/21 10:34	04/06/21 09:58	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00012	1	04/01/21 10:34	04/05/21 23:28	7440-43-9	
Chromium	<b>0.00069J</b>	mg/L	0.0050	0.00055	1	04/01/21 10:34	04/05/21 23:28	7440-47-3	
Cobalt	<b>0.012</b>	mg/L	0.0050	0.00038	1	04/01/21 10:34	04/05/21 23:28	7440-48-4	
Lead	<b>0.000088J</b>	mg/L	0.0010	0.000036	1	04/01/21 10:34	04/05/21 23:28	7439-92-1	
Lithium	<b>0.0014J</b>	mg/L	0.030	0.00081	1	04/01/21 10:34	04/05/21 23:28	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	04/01/21 10:34	04/05/21 23:28	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0016	1	04/01/21 10:34	04/05/21 23:28	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	04/01/21 10:34	04/05/21 23:28	7440-28-0	
<b>2540C Total Dissolved Solids</b>									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	<b>1020</b>	mg/L	20.0	20.0	1		03/25/21 11:09		
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	<b>138</b>	mg/L	9.0	5.4	9		03/26/21 16:17	16887-00-6	M6
Fluoride	<b>0.057J</b>	mg/L	0.10	0.050	1		03/25/21 21:46	16984-48-8	
Sulfate	<b>447</b>	mg/L	9.0	4.5	9		03/26/21 16:17	14808-79-8	M6

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### ANALYTICAL RESULTS

Project: HAMMOND AP-2 SEMIANNUAL

Pace Project No.: 92527256

Sample: <b>HGWC-18</b>		Lab ID: <b>92527256018</b>		Collected: 03/18/21 10:01	Received: 03/19/21 13:40	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		03/22/21 11:59		
pH	<b>4.54</b>	Std. Units			1		03/22/21 11:59		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	<b>407</b>	mg/L	10.0	0.70	10	04/01/21 10:32	04/02/21 14:10	7440-70-2	
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	04/01/21 10:34	04/05/21 23:34	7440-36-0	
Arsenic	<b>0.0083J</b>	mg/L	0.025	0.0039	5	04/01/21 10:34	04/06/21 10:03	7440-38-2	D3
Barium	<b>0.031</b>	mg/L	0.0050	0.00071	1	04/01/21 10:34	04/05/21 23:34	7440-39-3	
Beryllium	<b>0.0038</b>	mg/L	0.00050	0.000046	1	04/01/21 10:34	04/05/21 23:34	7440-41-7	
Boron	<b>8.9</b>	mg/L	0.20	0.026	5	04/01/21 10:34	04/06/21 10:03	7440-42-8	
Cadmium	<b>0.0015</b>	mg/L	0.00050	0.00012	1	04/01/21 10:34	04/05/21 23:34	7440-43-9	
Chromium	ND	mg/L	0.025	0.0028	5	04/01/21 10:34	04/06/21 10:03	7440-47-3	D3
Cobalt	<b>0.14</b>	mg/L	0.025	0.0019	5	04/01/21 10:34	04/06/21 10:03	7440-48-4	
Lead	<b>0.00096J</b>	mg/L	0.0010	0.000036	1	04/01/21 10:34	04/05/21 23:34	7439-92-1	
Lithium	<b>0.013J</b>	mg/L	0.030	0.00081	1	04/01/21 10:34	04/05/21 23:34	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	04/01/21 10:34	04/05/21 23:34	7439-98-7	
Selenium	<b>0.019J</b>	mg/L	0.025	0.0078	5	04/01/21 10:34	04/06/21 10:03	7782-49-2	D3
Thallium	<b>0.00016J</b>	mg/L	0.0010	0.00014	1	04/01/21 10:34	04/05/21 23:34	7440-28-0	
<b>2540C Total Dissolved Solids</b>									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	<b>1390</b>	mg/L	100	100	1		03/25/21 11:09		
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	<b>90.2</b>	mg/L	22.0	13.2	22		03/26/21 17:00	16887-00-6	
Fluoride	<b>0.64</b>	mg/L	0.10	0.050	1		03/25/21 22:54	16984-48-8	
Sulfate	<b>1050</b>	mg/L	22.0	11.0	22		03/26/21 17:00	14808-79-8	

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### ANALYTICAL RESULTS

Project: HAMMOND AP-2 SEMIANNUAL

Pace Project No.: 92527256

Sample: MW-21D		Lab ID: 92527256019		Collected: 03/18/21 12:08		Received: 03/19/21 13:40		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		03/22/21 11:59		
pH	<b>6.95</b>	Std. Units			1		03/22/21 11:59		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Calcium	<b>382</b>	mg/L	10.0	0.70	10	04/01/21 10:32	04/02/21 14:14	7440-70-2	
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	04/01/21 10:34	04/05/21 23:39	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	04/01/21 10:34	04/05/21 23:39	7440-38-2	
Barium	<b>0.047</b>	mg/L	0.0050	0.00071	1	04/01/21 10:34	04/05/21 23:39	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000046	1	04/01/21 10:34	04/05/21 23:39	7440-41-7	
Boron	<b>5.7</b>	mg/L	0.20	0.026	5	04/01/21 10:34	04/06/21 10:09	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00012	1	04/01/21 10:34	04/05/21 23:39	7440-43-9	
Chromium	<b>0.00074J</b>	mg/L	0.0050	0.00055	1	04/01/21 10:34	04/05/21 23:39	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	04/01/21 10:34	04/05/21 23:39	7440-48-4	
Lead	<b>0.000073J</b>	mg/L	0.0010	0.000036	1	04/01/21 10:34	04/05/21 23:39	7439-92-1	
Lithium	<b>0.026J</b>	mg/L	0.030	0.00081	1	04/01/21 10:34	04/05/21 23:39	7439-93-2	
Molybdenum	<b>0.016</b>	mg/L	0.010	0.00069	1	04/01/21 10:34	04/05/21 23:39	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0016	1	04/01/21 10:34	04/05/21 23:39	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	04/01/21 10:34	04/05/21 23:39	7440-28-0	
<b>2540C Total Dissolved Solids</b>									
Analytical Method: SM 2450C-2011									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	<b>1390</b>	mg/L	100	100	1		03/25/21 11:09		
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	<b>208</b>	mg/L	17.0	10.2	17		03/26/21 17:13	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		03/25/21 23:08	16984-48-8	
Sulfate	<b>829</b>	mg/L	17.0	8.5	17		03/26/21 17:13	14808-79-8	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: HAMMOND AP-2 SEMIANNUAL  
Pace Project No.: 92527256

Sample: MW-33		Lab ID: 92527256020		Collected: 03/18/21 10:40		Received: 03/19/21 13:40		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		04/06/21 16:57		
pH	<b>4.27</b>	Std. Units			1		04/06/21 16:57		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	<b>574</b>	mg/L	10.0	0.70	10	04/01/21 10:32	04/02/21 14:19	7440-70-2	
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	04/01/21 10:34	04/06/21 01:05	7440-36-0	
Arsenic	<b>0.0054J</b>	mg/L	0.025	0.0039	5	04/01/21 10:34	04/06/21 17:20	7440-38-2	D3
Barium	<b>0.029</b>	mg/L	0.0050	0.00071	1	04/01/21 10:34	04/06/21 01:05	7440-39-3	
Beryllium	<b>0.0011</b>	mg/L	0.00050	0.000046	1	04/01/21 10:34	04/06/21 01:05	7440-41-7	
Boron	<b>10.2</b>	mg/L	0.20	0.026	5	04/01/21 10:34	04/06/21 17:20	7440-42-8	
Cadmium	<b>0.00019J</b>	mg/L	0.00050	0.00012	1	04/01/21 10:34	04/06/21 01:05	7440-43-9	
Chromium	ND	mg/L	0.025	0.0028	5	04/01/21 10:34	04/06/21 17:20	7440-47-3	D3
Cobalt	<b>0.057</b>	mg/L	0.025	0.0019	5	04/01/21 10:34	04/06/21 17:20	7440-48-4	
Lead	<b>0.0017</b>	mg/L	0.0010	0.000036	1	04/01/21 10:34	04/06/21 01:05	7439-92-1	
Lithium	<b>0.0012J</b>	mg/L	0.030	0.00081	1	04/01/21 10:34	04/06/21 01:05	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	04/01/21 10:34	04/06/21 01:05	7439-98-7	
Selenium	<b>0.028</b>	mg/L	0.025	0.0078	5	04/01/21 10:34	04/06/21 17:20	7782-49-2	
Thallium	<b>0.00031J</b>	mg/L	0.0010	0.00014	1	04/01/21 10:34	04/06/21 01:05	7440-28-0	
<b>2540C Total Dissolved Solids</b>									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	<b>1790</b>	mg/L	100	100	1		03/25/21 11:09		
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	<b>199</b>	mg/L	29.0	17.4	29		03/26/21 17:27	16887-00-6	
Fluoride	<b>0.40</b>	mg/L	0.10	0.050	1		03/25/21 23:22	16984-48-8	
Sulfate	<b>1360</b>	mg/L	29.0	14.5	29		03/26/21 17:27	14808-79-8	

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### ANALYTICAL RESULTS

Project: HAMMOND AP-2 SEMIANNUAL  
Pace Project No.: 92527256

Sample: DUP-2		Lab ID: 92527256021		Collected: 03/18/21 00:00		Received: 03/19/21 13:40		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Calcium	<b>557</b>	mg/L	10.0	0.70	10	04/01/21 10:32	04/02/21 14:24	7440-70-2	
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	04/01/21 10:34	04/06/21 01:11	7440-36-0	
Arsenic	<b>0.0062J</b>	mg/L	0.025	0.0039	5	04/01/21 10:34	04/06/21 17:26	7440-38-2	D3
Barium	<b>0.031</b>	mg/L	0.0050	0.00071	1	04/01/21 10:34	04/06/21 01:11	7440-39-3	
Beryllium	<b>0.0012</b>	mg/L	0.00050	0.000046	1	04/01/21 10:34	04/06/21 01:11	7440-41-7	
Boron	<b>10.8</b>	mg/L	0.20	0.026	5	04/01/21 10:34	04/06/21 17:26	7440-42-8	
Cadmium	<b>0.00014J</b>	mg/L	0.00050	0.00012	1	04/01/21 10:34	04/06/21 01:11	7440-43-9	
Chromium	ND	mg/L	0.025	0.0028	5	04/01/21 10:34	04/06/21 17:26	7440-47-3	D3
Cobalt	<b>0.057</b>	mg/L	0.025	0.0019	5	04/01/21 10:34	04/06/21 17:26	7440-48-4	
Lead	<b>0.0018</b>	mg/L	0.0010	0.000036	1	04/01/21 10:34	04/06/21 01:11	7439-92-1	
Lithium	<b>0.0012J</b>	mg/L	0.030	0.00081	1	04/01/21 10:34	04/06/21 01:11	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	04/01/21 10:34	04/06/21 01:11	7439-98-7	
Selenium	<b>0.029</b>	mg/L	0.025	0.0078	5	04/01/21 10:34	04/06/21 17:26	7782-49-2	
Thallium	<b>0.00033J</b>	mg/L	0.0010	0.00014	1	04/01/21 10:34	04/06/21 01:11	7440-28-0	
<b>2540C Total Dissolved Solids</b>									
Analytical Method: SM 2450C-2011									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	<b>1860</b>	mg/L	100	100	1		03/25/21 11:09		
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	<b>200</b>	mg/L	29.0	17.4	29		03/26/21 18:09	16887-00-6	
Fluoride	<b>0.47</b>	mg/L	0.10	0.050	1		03/25/21 23:35	16984-48-8	
Sulfate	<b>1370</b>	mg/L	29.0	14.5	29		03/26/21 18:09	14808-79-8	

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### ANALYTICAL RESULTS

Project: HAMMOND AP-2 SEMIANNUAL  
Pace Project No.: 92527256

Sample: EB-2		Lab ID: 92527256022		Collected: 03/18/21 12:50	Received: 03/19/21 13:40	Matrix: Water				
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
<b>6010D ATL ICP</b>		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Calcium	ND	mg/L	1.0	0.070	1	04/01/21 10:32	04/01/21 17:53	7440-70-2		
<b>6020 MET ICPMS</b>		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00028	1	04/01/21 10:34	04/05/21 23:45	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.00078	1	04/01/21 10:34	04/05/21 23:45	7440-38-2		
Barium	ND	mg/L	0.0050	0.00071	1	04/01/21 10:34	04/05/21 23:45	7440-39-3		
Beryllium	ND	mg/L	0.00050	0.000046	1	04/01/21 10:34	04/05/21 23:45	7440-41-7		
Boron	<b>0.026J</b>	mg/L	0.040	0.0052	1	04/01/21 10:34	04/05/21 23:45	7440-42-8		
Cadmium	ND	mg/L	0.00050	0.00012	1	04/01/21 10:34	04/05/21 23:45	7440-43-9		
Chromium	ND	mg/L	0.0050	0.00055	1	04/01/21 10:34	04/05/21 23:45	7440-47-3		
Cobalt	ND	mg/L	0.0050	0.00038	1	04/01/21 10:34	04/05/21 23:45	7440-48-4		
Lead	ND	mg/L	0.0010	0.000036	1	04/01/21 10:34	04/05/21 23:45	7439-92-1		
Lithium	ND	mg/L	0.030	0.00081	1	04/01/21 10:34	04/05/21 23:45	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.00069	1	04/01/21 10:34	04/05/21 23:45	7439-98-7		
Selenium	ND	mg/L	0.0050	0.0016	1	04/01/21 10:34	04/05/21 23:45	7782-49-2		
Thallium	ND	mg/L	0.0010	0.00014	1	04/01/21 10:34	04/05/21 23:45	7440-28-0		
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	ND	mg/L	10.0	10.0	1		03/25/21 11:10			
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	ND	mg/L	1.0	0.60	1		03/25/21 23:49	16887-00-6		
Fluoride	ND	mg/L	0.10	0.050	1		03/25/21 23:49	16984-48-8		
Sulfate	ND	mg/L	1.0	0.50	1		03/25/21 23:49	14808-79-8		

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## ANALYTICAL RESULTS

Project: HAMMOND AP-2 SEMIANNUAL

Pace Project No.: 92527256

Sample: FB-2		Lab ID: 92527256023		Collected: 03/18/21 15:30		Received: 03/19/21 13:40		Matrix: Water		
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
<b>6010D ATL ICP</b>		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Calcium	ND	mg/L	1.0	0.070	1	04/01/21 10:32	04/01/21 18:13	7440-70-2		
<b>6020 MET ICPMS</b>		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00028	1	04/01/21 10:34	04/05/21 23:51	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.00078	1	04/01/21 10:34	04/05/21 23:51	7440-38-2		
Barium	ND	mg/L	0.0050	0.00071	1	04/01/21 10:34	04/05/21 23:51	7440-39-3		
Beryllium	ND	mg/L	0.00050	0.000046	1	04/01/21 10:34	04/05/21 23:51	7440-41-7		
Boron	<b>0.011J</b>	mg/L	0.040	0.0052	1	04/01/21 10:34	04/05/21 23:51	7440-42-8		
Cadmium	ND	mg/L	0.00050	0.00012	1	04/01/21 10:34	04/05/21 23:51	7440-43-9		
Chromium	ND	mg/L	0.0050	0.00055	1	04/01/21 10:34	04/05/21 23:51	7440-47-3		
Cobalt	ND	mg/L	0.0050	0.00038	1	04/01/21 10:34	04/05/21 23:51	7440-48-4		
Lead	ND	mg/L	0.0010	0.000036	1	04/01/21 10:34	04/06/21 17:32	7439-92-1		
Lithium	ND	mg/L	0.030	0.00081	1	04/01/21 10:34	04/05/21 23:51	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.00069	1	04/01/21 10:34	04/05/21 23:51	7439-98-7		
Selenium	ND	mg/L	0.0050	0.0016	1	04/01/21 10:34	04/05/21 23:51	7782-49-2		
Thallium	ND	mg/L	0.0010	0.00014	1	04/01/21 10:34	04/06/21 17:32	7440-28-0		
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	ND	mg/L	10.0	10.0	1		03/25/21 11:10			
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	ND	mg/L	1.0	0.60	1		03/26/21 00:02	16887-00-6		
Fluoride	ND	mg/L	0.10	0.050	1		03/26/21 00:02	16984-48-8		
Sulfate	ND	mg/L	1.0	0.50	1		03/26/21 00:02	14808-79-8		

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### ANALYTICAL RESULTS

Project: HAMMOND AP-2 SEMIANNUAL

Pace Project No.: 92527256

Sample: MW-35		Lab ID: 92527256024		Collected: 03/19/21 12:48		Received: 03/22/21 15:41		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		04/06/21 16:57		
pH	<b>4.89</b>	Std. Units			1		04/06/21 16:57		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	<b>552</b>	mg/L	10.0	0.70	10	04/01/21 10:32	04/02/21 14:29	7440-70-2	
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	04/01/21 10:34	04/05/21 23:57	7440-36-0	
Arsenic	ND	mg/L	0.025	0.0039	5	04/01/21 10:34	04/06/21 17:37	7440-38-2	D3
Barium	<b>0.032</b>	mg/L	0.0050	0.00071	1	04/01/21 10:34	04/05/21 23:57	7440-39-3	
Beryllium	<b>0.00061</b>	mg/L	0.00050	0.000046	1	04/01/21 10:34	04/05/21 23:57	7440-41-7	
Boron	<b>11.9</b>	mg/L	0.20	0.026	5	04/01/21 10:34	04/06/21 17:37	7440-42-8	
Cadmium	<b>0.0018</b>	mg/L	0.00050	0.00012	1	04/01/21 10:34	04/05/21 23:57	7440-43-9	
Chromium	<b>0.00083J</b>	mg/L	0.0050	0.00055	1	04/01/21 10:34	04/05/21 23:57	7440-47-3	
Cobalt	<b>0.10</b>	mg/L	0.0050	0.00038	1	04/01/21 10:34	04/05/21 23:57	7440-48-4	
Lead	<b>0.00066J</b>	mg/L	0.0010	0.000036	1	04/01/21 10:34	04/05/21 23:57	7439-92-1	
Lithium	<b>0.0045J</b>	mg/L	0.030	0.00081	1	04/01/21 10:34	04/05/21 23:57	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	04/01/21 10:34	04/05/21 23:57	7439-98-7	
Selenium	<b>0.016J</b>	mg/L	0.025	0.0078	5	04/01/21 10:34	04/06/21 17:37	7782-49-2	D3
Thallium	ND	mg/L	0.0010	0.00014	1	04/01/21 10:34	04/05/21 23:57	7440-28-0	
<b>2540C Total Dissolved Solids</b>									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	<b>1690</b>	mg/L	100	100	1		03/26/21 09:32		
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	<b>250</b>	mg/L	24.0	14.4	24		03/26/21 13:56	16887-00-6	
Fluoride	<b>0.082J</b>	mg/L	0.10	0.050	1		03/25/21 17:17	16984-48-8	
Sulfate	<b>1220</b>	mg/L	24.0	12.0	24		03/26/21 13:56	14808-79-8	

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### QUALITY CONTROL DATA

Project: HAMMOND AP-2 SEMIANNUAL  
Pace Project No.: 92527256

QC Batch: 606634 Analysis Method: EPA 6010D  
QC Batch Method: EPA 3010A Analysis Description: 6010D ATL  
Laboratory: Pace Analytical Services - Peachtree Corners, GA  
Associated Lab Samples: 92527256001, 92527256002, 92527256003, 92527256004

METHOD BLANK: 3196175 Matrix: Water  
Associated Lab Samples: 92527256001, 92527256002, 92527256003, 92527256004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	0.070	03/19/21 03:10	

LABORATORY CONTROL SAMPLE: 3196176

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: 3196177 3196178

Parameter	Units	3196177		3196178		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92526031001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result						
Calcium	mg/L	207	1	1	209	202	181	-447	75-125	3	20 M1

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### QUALITY CONTROL DATA

Project: HAMMOND AP-2 SEMIANNUAL

Pace Project No.: 92527256

QC Batch: 608195	Analysis Method: EPA 6010D
QC Batch Method: EPA 3010A	Analysis Description: 6010D ATL
	Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92527256006, 92527256007, 92527256010

METHOD BLANK: 3204024 Matrix: Water

Associated Lab Samples: 92527256006, 92527256007, 92527256010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	0.070	03/22/21 19:59	

LABORATORY CONTROL SAMPLE: 3204025

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	mg/L	1	0.95J	95	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3204026 3204027

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Spike Conc.	Result	Spike Conc.	Result						
Calcium	mg/L	1	43.8	1	44.4	63	-72	75-125	3	20	M1

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### QUALITY CONTROL DATA

Project: HAMMOND AP-2 SEMIANNUAL  
Pace Project No.: 92527256

QC Batch: 610580 Analysis Method: EPA 6010D  
QC Batch Method: EPA 3010A Analysis Description: 6010D ATL  
Laboratory: Pace Analytical Services - Peachtree Corners, GA  
Associated Lab Samples: 92527256008, 92527256009, 92527256011, 92527256012, 92527256013, 92527256014, 92527256015, 92527256016, 92527256017, 92527256018, 92527256019, 92527256020, 92527256021, 92527256022, 92527256023, 92527256024

METHOD BLANK: 3215299 Matrix: Water  
Associated Lab Samples: 92527256008, 92527256009, 92527256011, 92527256012, 92527256013, 92527256014, 92527256015, 92527256016, 92527256017, 92527256018, 92527256019, 92527256020, 92527256021, 92527256022, 92527256023, 92527256024

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	0.070	04/01/21 15:57	

LABORATORY CONTROL SAMPLE: 3215300

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	mg/L	1	1.0	103	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3215301 3215302

Parameter	Units	3215301		3215302		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92527256008 Result	MS Spike Conc.	MSD Spike Conc.	MS Result						
Calcium	mg/L	28.3	1	1	28.4	29.3	7	102	75-125	3	20 M1

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### QUALITY CONTROL DATA

Project: HAMMOND AP-2 SEMIANNUAL  
Pace Project No.: 92527256

QC Batch: 606644 Analysis Method: EPA 6020B  
QC Batch Method: EPA 3005A Analysis Description: 6020 MET  
Laboratory: Pace Analytical Services - Peachtree Corners, GA  
Associated Lab Samples: 92527256001, 92527256002, 92527256003, 92527256004

METHOD BLANK: 3196234 Matrix: Water  
Associated Lab Samples: 92527256001, 92527256002, 92527256003, 92527256004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	0.00035J	0.0030	0.00028	03/16/21 14:38	
Arsenic	mg/L	ND	0.0050	0.00078	03/16/21 14:38	
Barium	mg/L	ND	0.0050	0.00071	03/16/21 14:38	
Beryllium	mg/L	ND	0.00050	0.000046	03/16/21 14:38	
Boron	mg/L	ND	0.040	0.0052	03/16/21 14:38	
Cadmium	mg/L	ND	0.00050	0.00012	03/16/21 14:38	
Chromium	mg/L	ND	0.0050	0.00055	03/16/21 14:38	
Cobalt	mg/L	ND	0.0050	0.00038	03/16/21 14:38	
Lead	mg/L	ND	0.0010	0.000036	03/16/21 14:38	
Lithium	mg/L	ND	0.030	0.00081	03/16/21 14:38	
Molybdenum	mg/L	ND	0.010	0.00069	03/16/21 14:38	
Selenium	mg/L	ND	0.0050	0.0016	03/16/21 14:38	
Thallium	mg/L	ND	0.0010	0.00014	03/16/21 14:38	

LABORATORY CONTROL SAMPLE: 3196235

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.096	96	80-120	
Arsenic	mg/L	0.1	0.096	96	80-120	
Barium	mg/L	0.1	0.095	95	80-120	
Beryllium	mg/L	0.1	0.098	98	80-120	
Boron	mg/L	1	1.0	103	80-120	
Cadmium	mg/L	0.1	0.097	97	80-120	
Chromium	mg/L	0.1	0.10	100	80-120	
Cobalt	mg/L	0.1	0.099	99	80-120	
Lead	mg/L	0.1	0.094	94	80-120	
Lithium	mg/L	0.1	0.096	96	80-120	
Molybdenum	mg/L	0.1	0.094	94	80-120	
Selenium	mg/L	0.1	0.090	90	80-120	
Thallium	mg/L	0.1	0.093	93	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3196236 3196237

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92526031002	Result	Spike Conc.	Spike Conc.								
Antimony	mg/L	0.00079J	0.1	0.1	0.098	0.099	98	98	75-125	0	20		
Arsenic	mg/L	ND	0.1	0.1	0.10	0.10	101	100	75-125	1	20		

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**QUALITY CONTROL DATA**

Project: HAMMOND AP-2 SEMIANNUAL

Pace Project No.: 92527256

Parameter	Units	3196236		3196237		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92526031002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result								
Barium	mg/L	0.016	0.1	0.1	0.11	0.11	96	95	75-125	1	20		
Beryllium	mg/L	0.000097J	0.1	0.1	0.083	0.080	82	80	75-125	3	20		
Boron	mg/L	0.36	1	1	1.2	1.2	84	83	75-125	1	20		
Cadmium	mg/L	0.017	0.1	0.1	0.11	0.11	96	95	75-125	1	20		
Chromium	mg/L	0.00080J	0.1	0.1	0.092	0.092	92	91	75-125	0	20		
Cobalt	mg/L	0.019	0.1	0.1	0.11	0.11	93	92	75-125	1	20		
Lead	mg/L	0.00017J	0.1	0.1	0.088	0.087	88	86	75-125	2	20		
Lithium	mg/L	0.026J	0.1	0.1	0.11	0.11	82	81	75-125	1	20		
Molybdenum	mg/L	ND	0.1	0.1	0.093	0.092	93	91	75-125	2	20		
Selenium	mg/L	ND	0.1	0.1	0.10	0.097	100	96	75-125	4	20		
Thallium	mg/L	ND	0.1	0.1	0.089	0.087	89	86	75-125	3	20		

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### QUALITY CONTROL DATA

Project: HAMMOND AP-2 SEMIANNUAL  
Pace Project No.: 92527256

QC Batch: 607964 Analysis Method: EPA 6020B  
QC Batch Method: EPA 3005A Analysis Description: 6020 MET  
Laboratory: Pace Analytical Services - Peachtree Corners, GA  
Associated Lab Samples: 92527256006, 92527256007, 92527256010

METHOD BLANK: 3202640 Matrix: Water  
Associated Lab Samples: 92527256006, 92527256007, 92527256010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00028	03/19/21 19:29	
Arsenic	mg/L	ND	0.0050	0.00078	03/19/21 19:29	
Barium	mg/L	ND	0.0050	0.00071	03/19/21 19:29	
Beryllium	mg/L	ND	0.00050	0.000046	03/19/21 19:29	
Boron	mg/L	ND	0.040	0.0052	03/19/21 19:29	
Cadmium	mg/L	ND	0.00050	0.00012	03/19/21 19:29	
Chromium	mg/L	ND	0.0050	0.00055	03/19/21 19:29	
Cobalt	mg/L	ND	0.0050	0.00038	03/19/21 19:29	
Lead	mg/L	ND	0.0010	0.000036	03/19/21 19:29	
Lithium	mg/L	ND	0.030	0.00081	03/19/21 19:29	
Molybdenum	mg/L	ND	0.010	0.00069	03/19/21 19:29	
Selenium	mg/L	ND	0.0050	0.0016	03/19/21 19:29	
Thallium	mg/L	ND	0.0010	0.00014	03/19/21 19:29	

LABORATORY CONTROL SAMPLE: 3202641

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.12	120	80-120	
Arsenic	mg/L	0.1	0.11	106	80-120	
Barium	mg/L	0.1	0.11	106	80-120	
Beryllium	mg/L	0.1	0.11	109	80-120	
Boron	mg/L	1	1.0	105	80-120	
Cadmium	mg/L	0.1	0.11	107	80-120	
Chromium	mg/L	0.1	0.10	104	80-120	
Cobalt	mg/L	0.1	0.10	102	80-120	
Lead	mg/L	0.1	0.11	108	80-120	
Lithium	mg/L	0.1	0.11	107	80-120	
Molybdenum	mg/L	0.1	0.11	105	80-120	
Selenium	mg/L	0.1	0.10	103	80-120	
Thallium	mg/L	0.1	0.10	103	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3202642 3202643

Parameter	Units	92526941001 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Antimony	mg/L	ND	0.1	0.1	0.12	0.12	118	118	75-125	0	20	
Arsenic	mg/L	ND	0.1	0.1	0.11	0.10	107	104	75-125	2	20	

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### QUALITY CONTROL DATA

Project: HAMMOND AP-2 SEMIANNUAL

Pace Project No.: 92527256

Parameter	Units	3202642		3202643		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92526941001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result								
Barium	mg/L	ND	0.1	0.1	0.11	0.11	107	106	75-125	1	20		
Beryllium	mg/L	ND	0.1	0.1	0.11	0.10	107	104	75-125	2	20		
Boron	mg/L	0.0052J	1	1	1.1	1.0	106	102	75-125	4	20		
Cadmium	mg/L	ND	0.1	0.1	0.10	0.10	105	104	75-125	1	20		
Chromium	mg/L	0.00062J	0.1	0.1	0.11	0.10	108	103	75-125	4	20		
Cobalt	mg/L	ND	0.1	0.1	0.11	0.10	106	101	75-125	5	20		
Lead	mg/L	ND	0.1	0.1	0.11	0.11	107	106	75-125	1	20		
Lithium	mg/L	ND	0.1	0.1	0.11	0.10	106	104	75-125	3	20		
Molybdenum	mg/L	ND	0.1	0.1	0.11	0.11	107	106	75-125	1	20		
Selenium	mg/L	ND	0.1	0.1	0.11	0.10	105	101	75-125	4	20		
Thallium	mg/L	ND	0.1	0.1	0.10	0.10	103	102	75-125	1	20		

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### QUALITY CONTROL DATA

Project: HAMMOND AP-2 SEMIANNUAL  
Pace Project No.: 92527256

QC Batch: 610582 Analysis Method: EPA 6020B  
QC Batch Method: EPA 3005A Analysis Description: 6020 MET  
Laboratory: Pace Analytical Services - Peachtree Corners, GA  
Associated Lab Samples: 92527256008, 92527256009, 92527256011, 92527256012, 92527256013, 92527256014, 92527256015, 92527256016, 92527256017, 92527256018, 92527256019, 92527256020, 92527256021, 92527256022, 92527256023, 92527256024

METHOD BLANK: 3215309 Matrix: Water  
Associated Lab Samples: 92527256008, 92527256009, 92527256011, 92527256012, 92527256013, 92527256014, 92527256015, 92527256016, 92527256017, 92527256018, 92527256019, 92527256020, 92527256021, 92527256022, 92527256023, 92527256024

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00028	04/05/21 22:08	
Arsenic	mg/L	ND	0.0050	0.00078	04/05/21 22:08	
Barium	mg/L	ND	0.0050	0.00071	04/05/21 22:08	
Beryllium	mg/L	ND	0.00050	0.000046	04/05/21 22:08	
Boron	mg/L	ND	0.040	0.0052	04/05/21 22:08	
Cadmium	mg/L	ND	0.00050	0.00012	04/05/21 22:08	
Chromium	mg/L	ND	0.0050	0.00055	04/05/21 22:08	
Cobalt	mg/L	ND	0.0050	0.00038	04/05/21 22:08	
Lead	mg/L	ND	0.0010	0.000036	04/05/21 22:08	
Lithium	mg/L	ND	0.030	0.00081	04/05/21 22:08	
Molybdenum	mg/L	ND	0.010	0.00069	04/05/21 22:08	
Selenium	mg/L	ND	0.0050	0.0016	04/05/21 22:08	
Thallium	mg/L	ND	0.0010	0.00014	04/05/21 22:08	

LABORATORY CONTROL SAMPLE: 3215310

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.12	116	80-120	
Arsenic	mg/L	0.1	0.10	102	80-120	
Barium	mg/L	0.1	0.10	103	80-120	
Beryllium	mg/L	0.1	0.10	105	80-120	
Boron	mg/L	1	1.0	104	80-120	
Cadmium	mg/L	0.1	0.11	107	80-120	
Chromium	mg/L	0.1	0.10	105	80-120	
Cobalt	mg/L	0.1	0.10	103	80-120	
Lead	mg/L	0.1	0.10	101	80-120	
Lithium	mg/L	0.1	0.11	106	80-120	
Molybdenum	mg/L	0.1	0.10	101	80-120	
Selenium	mg/L	0.1	0.10	100	80-120	
Thallium	mg/L	0.1	0.098	98	80-120	

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### QUALITY CONTROL DATA

Project: HAMMOND AP-2 SEMIANNUAL  
Pace Project No.: 92527256

Parameter	Units	3215311		3215312		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92527256009 Result	MS Spike Conc.	MSD Spike Conc.	MS Result								
Antimony	mg/L	ND	0.1	0.1	0.12	0.11	117	114	75-125	3	20		
Arsenic	mg/L	ND	0.1	0.1	0.10	0.10	104	103	75-125	2	20		
Barium	mg/L	0.21	0.1	0.1	0.31	0.31	103	102	75-125	0	20		
Beryllium	mg/L	ND	0.1	0.1	0.10	0.10	105	102	75-125	2	20		
Boron	mg/L	0.018J	1	1	1.0	1.0	102	102	75-125	0	20		
Cadmium	mg/L	ND	0.1	0.1	0.11	0.10	105	103	75-125	3	20		
Chromium	mg/L	ND	0.1	0.1	0.10	0.14	102	143	75-125	34	20	M1, R1	
Cobalt	mg/L	ND	0.1	0.1	0.10	0.10	102	104	75-125	3	20		
Lead	mg/L	ND	0.1	0.1	0.10	0.10	100	100	75-125	0	20		
Lithium	mg/L	0.012J	0.1	0.1	0.11	0.12	103	104	75-125	1	20		
Molybdenum	mg/L	ND	0.1	0.1	0.10	0.10	102	104	75-125	2	20		
Selenium	mg/L	ND	0.1	0.1	0.10	0.10	100	102	75-125	2	20		
Thallium	mg/L	ND	0.1	0.1	0.099	0.098	99	98	75-125	1	20		

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### QUALITY CONTROL DATA

Project: HAMMOND AP-2 SEMIANNUAL

Pace Project No.: 92527256

QC Batch:	606587	Analysis Method:	SM 2450C-2011
QC Batch Method:	SM 2450C-2011	Analysis Description:	2540C Total Dissolved Solids
		Laboratory:	Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92527256001, 92527256002, 92527256003, 92527256004

METHOD BLANK: 3195825 Matrix: Water  
Associated Lab Samples: 92527256001, 92527256002, 92527256003, 92527256004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	03/15/21 13:13	

LABORATORY CONTROL SAMPLE: 3195826

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	362	90	90-111	

SAMPLE DUPLICATE: 3195827

Parameter	Units	92527234005 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	2120	2390	12	10	D6

SAMPLE DUPLICATE: 3195998

Parameter	Units	92527273001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	223	190	16	10	D6

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### QUALITY CONTROL DATA

Project: HAMMOND AP-2 SEMIANNUAL

Pace Project No.: 92527256

QC Batch:	606868	Analysis Method:	SM 2450C-2011
QC Batch Method:	SM 2450C-2011	Analysis Description:	2540C Total Dissolved Solids
		Laboratory:	Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92527256006, 92527256007, 92527256008, 92527256009

METHOD BLANK: 3197215 Matrix: Water  
Associated Lab Samples: 92527256006, 92527256007, 92527256008, 92527256009

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	03/16/21 15:05	

LABORATORY CONTROL SAMPLE: 3197216

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	386	96	90-111	

SAMPLE DUPLICATE: 3197217

Parameter	Units	92527492010 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	43.0	52.0	19	10	D6

SAMPLE DUPLICATE: 3197218

Parameter	Units	92527234015 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	149	147	1	10	

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### QUALITY CONTROL DATA

Project: HAMMOND AP-2 SEMIANNUAL

Pace Project No.: 92527256

QC Batch: 607316

Analysis Method: SM 2450C-2011

QC Batch Method: SM 2450C-2011

Analysis Description: 2540C Total Dissolved Solids

Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92527256010, 92527256011

METHOD BLANK: 3199480

Matrix: Water

Associated Lab Samples: 92527256010, 92527256011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	03/17/21 17:40	

LABORATORY CONTROL SAMPLE: 3199481

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

SAMPLE DUPLICATE: 3199482

Parameter	Units	92527256010 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	279	278	0	10	

SAMPLE DUPLICATE: 3199483

Parameter	Units	92526996006 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	255	258	1	10	

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### QUALITY CONTROL DATA

Project: HAMMOND AP-2 SEMIANNUAL

Pace Project No.: 92527256

QC Batch: 608136

Analysis Method: SM 2450C-2011

QC Batch Method: SM 2450C-2011

Analysis Description: 2540C Total Dissolved Solids

Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92527256012

METHOD BLANK: 3203650

Matrix: Water

Associated Lab Samples: 92527256012

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	03/23/21 07:58	

LABORATORY CONTROL SAMPLE: 3203651

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	414	104	90-111	

SAMPLE DUPLICATE: 3203652

Parameter	Units	92527612006 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	99.0	97.0	2	10	

SAMPLE DUPLICATE: 3203653

Parameter	Units	92528339001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	952	1020	7	10	

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### QUALITY CONTROL DATA

Project: HAMMOND AP-2 SEMIANNUAL

Pace Project No.: 92527256

QC Batch:	608146	Analysis Method:	SM 2450C-2011
QC Batch Method:	SM 2450C-2011	Analysis Description:	2540C Total Dissolved Solids
		Laboratory:	Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92527256013, 92527256014, 92527256015, 92527256016

METHOD BLANK: 3203677 Matrix: Water  
Associated Lab Samples: 92527256013, 92527256014, 92527256015, 92527256016

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	03/23/21 07:38	

LABORATORY CONTROL SAMPLE: 3203678

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

SAMPLE DUPLICATE: 3203679

Parameter	Units	92527268006 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	490	502	2	10	H1

SAMPLE DUPLICATE: 3203680

Parameter	Units	92528629001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	158	72.0	75	10	D6

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### QUALITY CONTROL DATA

Project: HAMMOND AP-2 SEMIANNUAL  
Pace Project No.: 92527256

QC Batch: 608913      Analysis Method: SM 2450C-2011  
QC Batch Method: SM 2450C-2011      Analysis Description: 2540C Total Dissolved Solids  
Laboratory: Pace Analytical Services - Peachtree Corners, GA  
Associated Lab Samples: 92527256017, 92527256018, 92527256019, 92527256020, 92527256021, 92527256022, 92527256023

METHOD BLANK: 3207223      Matrix: Water  
Associated Lab Samples: 92527256017, 92527256018, 92527256019, 92527256020, 92527256021, 92527256022, 92527256023

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	03/25/21 11:08	

LABORATORY CONTROL SAMPLE: 3207224

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	377	94	90-111	

SAMPLE DUPLICATE: 3207225

Parameter	Units	92528809001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	1170	1110	5	10	

SAMPLE DUPLICATE: 3207226

Parameter	Units	92527612014 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	255	213	18	10	D6

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### QUALITY CONTROL DATA

Project: HAMMOND AP-2 SEMIANNUAL

Pace Project No.: 92527256

QC Batch: 609221	Analysis Method: SM 2450C-2011
QC Batch Method: SM 2450C-2011	Analysis Description: 2540C Total Dissolved Solids
	Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92527256024

METHOD BLANK: 3208754 Matrix: Water

Associated Lab Samples: 92527256024

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	03/26/21 09:30	

LABORATORY CONTROL SAMPLE: 3208755

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	385	96	90-111	

SAMPLE DUPLICATE: 3208757

Parameter	Units	92527612017 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	371	403	8	10	

SAMPLE DUPLICATE: 3208759

Parameter	Units	92528787009 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	250	243	3	10	

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### QUALITY CONTROL DATA

Project: HAMMOND AP-2 SEMIANNUAL  
Pace Project No.: 92527256

QC Batch: 607170 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: 92527256001, 92527256002, 92527256003, 92527256004

METHOD BLANK: 3198670 Matrix: Water  
Associated Lab Samples: 92527256001, 92527256002, 92527256003, 92527256004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	03/17/21 17:51	
Fluoride	mg/L	ND	0.10	0.050	03/17/21 17:51	
Sulfate	mg/L	ND	1.0	0.50	03/17/21 17:51	

LABORATORY CONTROL SAMPLE: 3198671

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	50.3	101	90-110	
Fluoride	mg/L	2.5	2.7	107	90-110	
Sulfate	mg/L	50	52.7	105	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3198672 3198673

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92527256001 Result	Spike Conc.	Spike Conc.	Conc.								
Chloride	mg/L	7.4	50	50	59.6	59.8	104	105	90-110	0	10		
Fluoride	mg/L	0.079J	2.5	2.5	2.7	2.7	106	107	90-110	0	10		
Sulfate	mg/L	49.6	50	50	94.1	95.1	89	91	90-110	1	10	M1	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3198674 3198675

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92527256002 Result	Spike Conc.	Spike Conc.	Conc.								
Chloride	mg/L	2.9	50	50	54.4	53.4	103	101	90-110	2	10		
Fluoride	mg/L	ND	2.5	2.5	3.0	2.8	118	112	90-110	6	10	M1	
Sulfate	mg/L	1.2	50	50	54.5	53.7	107	105	90-110	1	10		

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### QUALITY CONTROL DATA

Project: HAMMOND AP-2 SEMIANNUAL  
Pace Project No.: 92527256

QC Batch: 607751 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: 92527256006, 92527256007, 92527256008, 92527256009, 92527256010

METHOD BLANK: 3201757 Matrix: Water  
Associated Lab Samples: 92527256006, 92527256007, 92527256008, 92527256009, 92527256010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	03/19/21 17:15	
Fluoride	mg/L	ND	0.10	0.050	03/19/21 17:15	
Sulfate	mg/L	ND	1.0	0.50	03/19/21 17:15	

LABORATORY CONTROL SAMPLE: 3201758

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	50.2	100	90-110	
Fluoride	mg/L	2.5	2.3	91	90-110	
Sulfate	mg/L	50	50.2	100	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3201759 3201760

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92528475003 Result	Spike Conc.	Spike Conc.	Conc.								
Chloride	mg/L	2510	50	50	50	2520	2520	27	27	90-110	0	10	M6
Fluoride	mg/L	4.6	2.5	2.5	2.5	12.1	11.9	302	294	90-110	2	10	M6
Sulfate	mg/L	1530	50	50	50	1510	1480	-49	-112	90-110	2	10	M6

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3201761 3201762

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92527256007 Result	Spike Conc.	Spike Conc.	Conc.								
Chloride	mg/L	5.9	50	50	50	58.9	57.5	106	103	90-110	2	10	
Fluoride	mg/L	ND	2.5	2.5	2.5	2.3	2.3	91	90	90-110	1	10	
Sulfate	mg/L	50.4	50	50	50	102	101	103	101	90-110	1	10	

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### QUALITY CONTROL DATA

Project: HAMMOND AP-2 SEMIANNUAL  
Pace Project No.: 92527256

QC Batch: 607758 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: 92527256011

METHOD BLANK: 3201801 Matrix: Water  
Associated Lab Samples: 92527256011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	03/20/21 19:43	
Fluoride	mg/L	ND	0.10	0.050	03/20/21 19:43	
Sulfate	mg/L	ND	1.0	0.50	03/20/21 19:43	

LABORATORY CONTROL SAMPLE: 3201802

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	50.0	100	90-110	
Fluoride	mg/L	2.5	2.6	103	90-110	
Sulfate	mg/L	50	53.0	106	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3201803 3201804

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92526996007	Result	Spike Conc.	Spike Conc.								
Chloride	mg/L	8.0	50	50	57.8	58.5	99	101	90-110	1	10		
Fluoride	mg/L	0.058J	2.5	2.5	2.5	2.6	98	100	90-110	2	10		
Sulfate	mg/L	154	50	50	255	259	201	210	90-110	2	10	M6	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3201805 3201806

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92527261012	Result	Spike Conc.	Spike Conc.								
Chloride	mg/L	3.2	50	50	53.9	53.4	101	100	90-110	1	10		
Fluoride	mg/L	0.83	2.5	2.5	3.5	3.5	107	106	90-110	1	10		
Sulfate	mg/L	166	50	50	183	208	33	84	90-110	13	10	M1,R1	

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### QUALITY CONTROL DATA

Project: HAMMOND AP-2 SEMIANNUAL  
Pace Project No.: 92527256

QC Batch: 607984 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: 92527256012

METHOD BLANK: 3202745 Matrix: Water  
Associated Lab Samples: 92527256012

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	03/21/21 19:26	
Fluoride	mg/L	ND	0.10	0.050	03/21/21 19:26	
Sulfate	mg/L	ND	1.0	0.50	03/21/21 19:26	

LABORATORY CONTROL SAMPLE: 3202746

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	52.2	104	90-110	
Fluoride	mg/L	2.5	2.6	104	90-110	
Sulfate	mg/L	50	52.8	106	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3202747 3202748

Parameter	Units	92527234030		MS		MSD		% Rec	% Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	Conc.	Spike Conc.	Conc.	Result	Result						
Chloride	mg/L	ND	50	50	51.8	50.4	104	101	90-110	3	10		
Fluoride	mg/L	ND	2.5	2.5	2.6	2.5	104	101	90-110	3	10		
Sulfate	mg/L	ND	50	50	52.2	50.8	104	102	90-110	3	10		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3202749 3202750

Parameter	Units	92527612006		MS		MSD		% Rec	% Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	Conc.	Spike Conc.	Conc.	Result	Result						
Chloride	mg/L	1.6	50	50	52.6	51.8	102	100	90-110	1	10		
Fluoride	mg/L	0.18	2.5	2.5	2.7	2.7	99	102	90-110	2	10		
Sulfate	mg/L	7.7	50	50	57.9	57.5	100	100	90-110	1	10		

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### QUALITY CONTROL DATA

Project: HAMMOND AP-2 SEMIANNUAL  
Pace Project No.: 92527256

QC Batch: 608285 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: 92527256013, 92527256014, 92527256015, 92527256016

METHOD BLANK: 3204508 Matrix: Water  
Associated Lab Samples: 92527256013, 92527256014, 92527256015, 92527256016

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	03/23/21 04:02	
Fluoride	mg/L	ND	0.10	0.050	03/23/21 04:02	
Sulfate	mg/L	ND	1.0	0.50	03/23/21 04:02	

LABORATORY CONTROL SAMPLE: 3204509

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	50.7	101	90-110	
Fluoride	mg/L	2.5	2.5	100	90-110	
Sulfate	mg/L	50	51.8	104	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3204510 3204511

Parameter	Units	92528339002		MS		MSD		% Rec	% Rec	% Rec	Limits	RPD	Max RPD	Qual
		Result	Conc.	Spike Conc.	Conc.	Result	Result							
Chloride	mg/L	53.4	50	50	50	91.2	90.1	75	73	90-110	1	10	M6	
Fluoride	mg/L	0.74	2.5	2.5	2.5	3.3	3.2	102	100	90-110	2	10		
Sulfate	mg/L	457	50	50	50	503	503	93	93	90-110	0	10		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3204512 3204513

Parameter	Units	92527612010		MS		MSD		% Rec	% Rec	% Rec	Limits	RPD	Max RPD	Qual
		Result	Conc.	Spike Conc.	Conc.	Result	Result							
Chloride	mg/L	4.7	50	50	50	58.1	56.8	107	104	90-110	2	10		
Fluoride	mg/L	0.089J	2.5	2.5	2.5	2.8	2.7	107	104	90-110	2	10		
Sulfate	mg/L	28.3	50	50	50	80.9	79.7	105	103	90-110	2	10		

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### QUALITY CONTROL DATA

Project: HAMMOND AP-2 SEMIANNUAL  
Pace Project No.: 92527256

QC Batch: 608857 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: 92527256017, 92527256018, 92527256019, 92527256020, 92527256021, 92527256022, 92527256023

METHOD BLANK: 3206837 Matrix: Water  
Associated Lab Samples: 92527256017, 92527256018, 92527256019, 92527256020, 92527256021, 92527256022, 92527256023

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	03/25/21 18:48	
Fluoride	mg/L	ND	0.10	0.050	03/25/21 18:48	
Sulfate	mg/L	ND	1.0	0.50	03/25/21 18:48	

LABORATORY CONTROL SAMPLE: 3206838

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	52.4	105	90-110	
Fluoride	mg/L	2.5	2.7	107	90-110	
Sulfate	mg/L	50	53.8	108	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3206839 3206840

Parameter	Units	92527256017		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec					
Chloride	mg/L	138	50	50	182	183	88	90	90-110	1	10	M6	
Fluoride	mg/L	0.057J	2.5	2.5	2.8	2.8	108	108	90-110	0	10		
Sulfate	mg/L	447	50	50	490	492	86	91	90-110	0	10	M6	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3206841 3206842

Parameter	Units	92527612015		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec					
Chloride	mg/L	4.3	50	50	56.2	56.5	104	104	90-110	0	10		
Fluoride	mg/L	0.079J	2.5	2.5	2.7	2.7	105	106	90-110	1	10		
Sulfate	mg/L	87.8	50	50	128	129	81	82	90-110	0	10	M1	

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### QUALITY CONTROL DATA

Project: HAMMOND AP-2 SEMIANNUAL  
Pace Project No.: 92527256

QC Batch: 608960 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: 92527256024

METHOD BLANK: 3207640 Matrix: Water  
Associated Lab Samples: 92527256024

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	03/25/21 13:06	
Fluoride	mg/L	ND	0.10	0.050	03/25/21 13:06	
Sulfate	mg/L	ND	1.0	0.50	03/25/21 13:06	

LABORATORY CONTROL SAMPLE: 3207641

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	2.5	98	90-110	
Sulfate	mg/L	50	51.7	103	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3207642 3207643

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92529156001 Result	Spike Conc.	Spike Conc.	Conc.								
Chloride	mg/L	24.2	50	50	50	71.9	72.2	95	96	90-110	0	10	
Fluoride	mg/L	ND	2.5	2.5	2.5	2.5	2.5	98	98	90-110	0	10	
Sulfate	mg/L	ND	50	50	50	71.0	71.3	142	142	90-110	0	10 M1	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3207644 3207645

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92527612017 Result	Spike Conc.	Spike Conc.	Conc.								
Chloride	mg/L	24.9	50	50	50	76.4	76.6	103	103	90-110	0	10	
Fluoride	mg/L	ND	2.5	2.5	2.5	2.6	2.6	103	102	90-110	1	10	
Sulfate	mg/L	162	50	50	50	209	207	93	90	90-110	1	10	

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## QUALIFIERS

Project: HAMMOND AP-2 SEMIANNUAL  
Pace Project No.: 92527256

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### DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

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

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

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

TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

- |    |   |
|----|---|
| B  | Analyte was detected in the associated method blank.  |
| D3 | Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.    |
| D6 | The precision between the sample and sample duplicate exceeded laboratory control limits.                     |
| H1 | Analysis conducted outside the EPA method holding time.   |
| M1 | Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.   |
| M6 | Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution. |
| R1 | RPD value was outside control limits.   |

## REPORT OF LABORATORY ANALYSIS

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**QUALITY CONTROL DATA CROSS REFERENCE TABLE**

Project: HAMMOND AP-2 SEMIANNUAL  
Pace Project No.: 92527256

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92527256001	HGWA-1				
92527256002	HGWA-4				
92527256003	HGWA-42D				
92527256004	HGWA-44D				
92527256006	HGWA-2				
92527256007	HGWA-3				
92527256008	HGWA-5				
92527256009	HGWA-6				
92527256010	HGWA-43D				
92527256011	MW-37D				
92527256012	HGWC-15				
92527256013	HGWC-14				
92527256014	HGWC-16				
92527256015	MW-22				
92527256016	MW-23D				
92527256017	HGWC-17				
92527256018	HGWC-18				
92527256019	MW-21D				
92527256020	MW-33				
92527256024	MW-35				
92527256001	HGWA-1	EPA 3010A	606634	EPA 6010D	606723
92527256002	HGWA-4	EPA 3010A	606634	EPA 6010D	606723
92527256003	HGWA-42D	EPA 3010A	606634	EPA 6010D	606723
92527256004	HGWA-44D	EPA 3010A	606634	EPA 6010D	606723
92527256006	HGWA-2	EPA 3010A	608195	EPA 6010D	608261
92527256007	HGWA-3	EPA 3010A	608195	EPA 6010D	608261
92527256008	HGWA-5	EPA 3010A	610580	EPA 6010D	610784
92527256009	HGWA-6	EPA 3010A	610580	EPA 6010D	610784
92527256010	HGWA-43D	EPA 3010A	608195	EPA 6010D	608261
92527256011	MW-37D	EPA 3010A	610580	EPA 6010D	610784
92527256012	HGWC-15	EPA 3010A	610580	EPA 6010D	610784
92527256013	HGWC-14	EPA 3010A	610580	EPA 6010D	610784
92527256014	HGWC-16	EPA 3010A	610580	EPA 6010D	610784
92527256015	MW-22	EPA 3010A	610580	EPA 6010D	610784
92527256016	MW-23D	EPA 3010A	610580	EPA 6010D	610784
92527256017	HGWC-17	EPA 3010A	610580	EPA 6010D	610784
92527256018	HGWC-18	EPA 3010A	610580	EPA 6010D	610784
92527256019	MW-21D	EPA 3010A	610580	EPA 6010D	610784
92527256020	MW-33	EPA 3010A	610580	EPA 6010D	610784
92527256021	DUP-2	EPA 3010A	610580	EPA 6010D	610784
92527256022	EB-2	EPA 3010A	610580	EPA 6010D	610784
92527256023	FB-2	EPA 3010A	610580	EPA 6010D	610784
92527256024	MW-35	EPA 3010A	610580	EPA 6010D	610784
92527256001	HGWA-1	EPA 3005A	606644	EPA 6020B	606712
92527256002	HGWA-4	EPA 3005A	606644	EPA 6020B	606712
92527256003	HGWA-42D	EPA 3005A	606644	EPA 6020B	606712

**REPORT OF LABORATORY ANALYSIS**

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: HAMMOND AP-2 SEMIANNUAL

Pace Project No.: 92527256

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92527256004	HGWA-44D	EPA 3005A	606644	EPA 6020B	606712
92527256006	HGWA-2	EPA 3005A	607964	EPA 6020B	608044
92527256007	HGWA-3	EPA 3005A	607964	EPA 6020B	608044
92527256008	HGWA-5	EPA 3005A	610582	EPA 6020B	610877
92527256009	HGWA-6	EPA 3005A	610582	EPA 6020B	610877
92527256010	HGWA-43D	EPA 3005A	607964	EPA 6020B	608044
92527256011	MW-37D	EPA 3005A	610582	EPA 6020B	610877
92527256012	HGWC-15	EPA 3005A	610582	EPA 6020B	610877
92527256013	HGWC-14	EPA 3005A	610582	EPA 6020B	610877
92527256014	HGWC-16	EPA 3005A	610582	EPA 6020B	610877
92527256015	MW-22	EPA 3005A	610582	EPA 6020B	610877
92527256016	MW-23D	EPA 3005A	610582	EPA 6020B	610877
92527256017	HGWC-17	EPA 3005A	610582	EPA 6020B	610877
92527256018	HGWC-18	EPA 3005A	610582	EPA 6020B	610877
92527256019	MW-21D	EPA 3005A	610582	EPA 6020B	610877
92527256020	MW-33	EPA 3005A	610582	EPA 6020B	610877
92527256021	DUP-2	EPA 3005A	610582	EPA 6020B	610877
92527256022	EB-2	EPA 3005A	610582	EPA 6020B	610877
92527256023	FB-2	EPA 3005A	610582	EPA 6020B	610877
92527256024	MW-35	EPA 3005A	610582	EPA 6020B	610877
92527256001	HGWA-1	SM 2450C-2011	606587		
92527256002	HGWA-4	SM 2450C-2011	606587		
92527256003	HGWA-42D	SM 2450C-2011	606587		
92527256004	HGWA-44D	SM 2450C-2011	606587		
92527256006	HGWA-2	SM 2450C-2011	606868		
92527256007	HGWA-3	SM 2450C-2011	606868		
92527256008	HGWA-5	SM 2450C-2011	606868		
92527256009	HGWA-6	SM 2450C-2011	606868		
92527256010	HGWA-43D	SM 2450C-2011	607316		
92527256011	MW-37D	SM 2450C-2011	607316		
92527256012	HGWC-15	SM 2450C-2011	608136		
92527256013	HGWC-14	SM 2450C-2011	608146		
92527256014	HGWC-16	SM 2450C-2011	608146		
92527256015	MW-22	SM 2450C-2011	608146		
92527256016	MW-23D	SM 2450C-2011	608146		
92527256017	HGWC-17	SM 2450C-2011	608913		
92527256018	HGWC-18	SM 2450C-2011	608913		
92527256019	MW-21D	SM 2450C-2011	608913		
92527256020	MW-33	SM 2450C-2011	608913		
92527256021	DUP-2	SM 2450C-2011	608913		
92527256022	EB-2	SM 2450C-2011	608913		
92527256023	FB-2	SM 2450C-2011	608913		
92527256024	MW-35	SM 2450C-2011	609221		

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: HAMMOND AP-2 SEMIANNUAL  
Pace Project No.: 92527256

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92527256001	HGWA-1	EPA 300.0 Rev 2.1 1993	607170		
92527256002	HGWA-4	EPA 300.0 Rev 2.1 1993	607170		
92527256003	HGWA-42D	EPA 300.0 Rev 2.1 1993	607170		
92527256004	HGWA-44D	EPA 300.0 Rev 2.1 1993	607170		
92527256006	HGWA-2	EPA 300.0 Rev 2.1 1993	607751		
92527256007	HGWA-3	EPA 300.0 Rev 2.1 1993	607751		
92527256008	HGWA-5	EPA 300.0 Rev 2.1 1993	607751		
92527256009	HGWA-6	EPA 300.0 Rev 2.1 1993	607751		
92527256010	HGWA-43D	EPA 300.0 Rev 2.1 1993	607751		
92527256011	MW-37D	EPA 300.0 Rev 2.1 1993	607758		
92527256012	HGWC-15	EPA 300.0 Rev 2.1 1993	607984		
92527256013	HGWC-14	EPA 300.0 Rev 2.1 1993	608285		
92527256014	HGWC-16	EPA 300.0 Rev 2.1 1993	608285		
92527256015	MW-22	EPA 300.0 Rev 2.1 1993	608285		
92527256016	MW-23D	EPA 300.0 Rev 2.1 1993	608285		
92527256017	HGWC-17	EPA 300.0 Rev 2.1 1993	608857		
92527256018	HGWC-18	EPA 300.0 Rev 2.1 1993	608857		
92527256019	MW-21D	EPA 300.0 Rev 2.1 1993	608857		
92527256020	MW-33	EPA 300.0 Rev 2.1 1993	608857		
92527256021	DUP-2	EPA 300.0 Rev 2.1 1993	608857		
92527256022	EB-2	EPA 300.0 Rev 2.1 1993	608857		
92527256023	FB-2	EPA 300.0 Rev 2.1 1993	608857		
92527256024	MW-35	EPA 300.0 Rev 2.1 1993	608960		

### REPORT OF LABORATORY ANALYSIS

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**CHAIN-OF-CUSTODY / Analytical Request Do**  
 The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be complete.

**W0# : 92527256**



92527256

Section A Required Client Information: Company: GA Power Address: Atlanta, GA		Section B Required Project Information: Report To: SCS Contacts Copy To: Geosynthetic Contacts		Section C Invoicing Information: Atlanta: Southem Co.	
Email To: SCS Contacts Phone: Fax		Purchase Order No.: Project Name: Plant Hammond AP-2-Semiannual Project Number: GW6581B		Company Name: Address: Purchase Order Reference: Project Name: Kevin Henry Purchase Order # 10838-3	
Requested Due Date/TAT: 10 Day		REGULATORY AGENCY: <input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER (SPR-)		Site Location: GA STATE: GA	

ITEM #	Section B Required Client Information	Valid Matrix Codes CODE DW WT WW PL SL UR AR OT TS	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives	Analysis Test	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.			
					DATE	TIME										
1	HQWA-1	DW	WT G	G	3/10/12	1610	17	5	2	3	X	X	X	X	N	pH = 6.95
2	HQWA-2	DW	WT G	G	3/10/12	1610	17	5	2	3	X	X	X	X	N	pH = 6.95
3	HQWA-3	DW	WT G	G	3/10/12	1621	16	5	2	3	X	X	X	X	N	pH = 5.28
4	HQWA-4	DW	WT G	G	3/10/12	1621	16	5	2	3	X	X	X	X	N	pH = 5.28
5	HQWA-5	DW	WT G	G	3/10/12	1621	16	5	2	3	X	X	X	X	N	pH = 5.28
6	HQWA-6	DW	WT G	G	3/10/12	1623	16	5	2	3	X	X	X	X	N	pH = 7.70
7	HQWA-42D	DW	WT G	G	3/10/12	1623	16	5	2	3	X	X	X	X	N	pH = 7.70
8	HQWA-43D	DW	WT G	G	3/10/12	1623	16	5	2	3	X	X	X	X	N	pH = 7.92
9	HQWA-44D	DW	WT G	G	3/10/12	1623	16	5	2	3	X	X	X	X	N	pH = 7.92
10	HQWA-44	DW	WT G	G	3/10/12	1623	16	5	2	3	X	X	X	X	N	pH = 7.92
11	HQWA-15	DW	WT G	G	3/10/12	1623	16	5	2	3	X	X	X	X	N	pH = 7.92
12	HQWA-16	DW	WT G	G	3/10/12	1623	16	5	2	3	X	X	X	X	N	pH = 7.92

**ADDITIONAL COMMENTS**

Please note dry wells - strike through any wells not sampled, and note when the last sample for the event has been taken.  
 \*App. III & IV Metals = Sp, As, Ba, Be, B, Cd, Cr, Co, Cu, Pb, Li, Mo, Se, Ti  
 One sample set submitted for HQWA-1234567890 but they will be reported for AP-1234 SDCS

RELINQUISHED BY / AFFILIATION: Honors Kessler, Geosynthetic DATE: 3/10/12 TIME: 1730  
 ACCEPTED BY / AFFILIATION: Kevin Henry, Pace DATE: 3/11/12 TIME: 1040

SAMPLER NAME AND SIGNATURE: Honors Kessler  
 PRINT NAME OF SAMPLER: Honors Kessler  
 SIGNATURE OF SAMPLER: [Signature]  
 DATE SIGNED (MM/DD/YYYY): 03/10/12

Temp in °C: 21.0  
 Received on (Y/N): Y  
 Custody Sealed Cooler (Y/N): N  
 Samples Intact (Y/N): Y

F-ALL-Q-0207rev.07, 15-Feb-2007

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

**Section B Required Project Information:**  
 Report To: SCS Contacts  
 Copy To: Geosyntec Contacts  
 Purchase Order No.:  
 Project Name: Plant Hammond AP-2 Semianual  
 Project Number: GW65591B

**Section C Local Information:**  
 Address: Southern Co.  
 Company Name:  
 Reference: Kevin Herring  
 Price Code: 10839-3  
 Price Profile #:

**REGULATORY AGENCY:**  
 NPDES  GROUND WATER  DRINKING WATER  
 UST  RCRA  OTHER USE:

Site Location: \_\_\_\_\_ STATE: GA

Requested Analysis Filtered (Y/N)

ITEM #	Section D Required Client Information	Valid Matrix Codes MATRIX CODE DIBLING WATER DW WATER WWT WASTE WATER WW PRODUCT P SOIL/SOL ID SL DIR. DR. WIRE WWP AIR AR OTHER OT TIS	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED			SAMPLE TEMP AT COLLECTION	PRESERVATIVES							ANALYSIS TEST				Residual Chlorine (Y/N)	pH					
					DATE	TIME	DATE		TIME	DATE	TIME	DATE	TIME	DATE	TIME	DATE	TIME	DATE	TIME			DATE	TIME			
1	HGWA-1	WT	G	3/11/12	0854	-	-	6									X	X	X	X						
2	HGWA-2	WT	G	3/11/12	1125	-	-	7									X	X	X	X						
3	HGWA-3	WT	G	3/11/12	1130	-	-	7									X	X	X	X						
4	HGWA-4	WT	G	3/11/12	1239	-	-	7									X	X	X	X						
5	HGWA-5	WT	G	3/11/12	1239	-	-	7									X	X	X	X						
6	HGWA-6	WT	G	3/11/12	0957	-	-	8									X	X	X	X						
7	HGWA-43D	WT	G	3/11/12	0957	-	-	8									X	X	X	X						
8	HGWA-43D	WT	G	3/11/12	0957	-	-	8									X	X	X	X						
9	HGWA-43D	WT	G	3/11/12	0957	-	-	8									X	X	X	X						
10	HGWA-14	WT	G	3/12/12	1343	-	-	5									X	X	X	X						
11	HGWA-15	WT	G	3/12/12	1639	-	-	5									X	X	X	X						
12	HGWA-16	WT	G	3/12/12	1639	-	-	5									X	X	X	X						

**ADDITIONAL COMMENTS:**

Relinquished by Affiliation: Thomas Herring, 3/11/12, 1310, Station 1, 3/12/12, 810

Accepted by Affiliation: Kevin Herring, 3/12/12, 1343, Station 1, 3/12/12, 1639

Relinquished by Affiliation: Thomas Herring, 3/11/12, 1310, Station 1, 3/12/12, 810

Accepted by Affiliation: Kevin Herring, 3/12/12, 1343, Station 1, 3/12/12, 1639

**SAMPLER NAME AND SIGNATURE:**

PRINT Name of SAMPLER: Thomas Herring, Speed Russo, Washish Herring

SIGNATURE of SAMPLER: [Signatures]

DATE Signed (MANDATORY): 3/11/12

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

FALL-0-0210rev.07 16-Feb-2007





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

Section A Required Client Information

Company: GA Power
Address: Atlanta, GA
Requested Due Date/TAT: 10 Day

Section B Required Project Information

Report To: SCS Contacts
Copy To: Geosyntec Contacts
Purchase Order No.
Project Name: Plant Hammond AP-2 Semiannual
Project Number: GW6581B

Section C Invoice Information

Company Name: Southern Co.
Address
Purchase Order
Signature: Kevin Herring
Purchase Order # 10839-3

REGULATORY AGENCY

NPDES
GROUND WATER
UST
RCRA
OTHER
Site Location: GA
State: GA

SAMPLE ID
1A-2, 0A, 1A
Sample ID'S MUST BE UNIQUE

Main data table with columns: ITEM #, Section D Required Client Information, Valid Matrix Codes, MATRIX CODE, SAMPLE TYPE, DATE, TIME, SAMPLE TEMP AT COLLECTION, # OF CONTAINERS, Preservatives, Analysis Test, Residual Chlorine (Y/N), pH, Temp in °C, Received on Ice (Y/N), Custody Sealed Cooler (Y/N), Samples Intact (Y/N). Includes handwritten entries for items 1 through 12.

SAMPLER NAME AND SIGNATURE
PRINT NAME OF SAMPLER: Vashish, Goursoo
SIGNATURE OF SAMPLER: [Signature]
DATE SIGNED (MM/DD/YYYY): 3/12/21

\*Imprest Note: By signing this form you are accepting Face's NET 30 day payment terms and agreeing to two charges of 1.5% per month for any invoices not paid within 30 days. F-ALL-Q-020 Rev. 07, 15-Feb-2007





# CHAIN-OF-CUSTODY / Analytical Request Document

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

**Section A Required Client Information:**  
 Company: GA Power  
 Address: Atlanta, GA  
 Email To: SCS Contacts  
 Phone: [blank] Fax: [blank]  
 Requested Due Date/TAT: 18 Day

**Section B Required Project Information:**  
 Report To: SCS Contacts  
 Copy To: Geosyntec Contacts  
 Project Name: Plant Hammond AP-2 Semiarual  
 Project Number: GW65818  
 Purchase Order No.: [blank]

**Section C Invoice Information:**  
 Attention: Southern Co.  
 Company Name: Southern Co.  
 Address: [blank]  
 Contact: Kevin Herring  
 Phone: 10839-3  
 Fax: 10839-3  
 State: GA

**REGULATORY AGENCY:**  
 NPDES  GROUND WATER  DRINKING WATER  
 UST  RCRA  OTHER Cont-  
 Site Location: [blank] STATE: GA

ITEM #	Section D Required Chain Information MATRIX CODE (see valid codes to left)	Valid Matrix Codes MATRIX CODES DRAINAGE WATER WASTE WATER PRODUCT SOLUSOLID OIL WASTE AIR OTHER TISSUE	SAMPLE TYPE (G=GRAB C=COMP)	DATE	TIME	COLLECTED		DATE	TIME	SAMPLE TEMP AT COLLECTION		# OF CONTAINERS	Preservatives Unpreserved H <sub>2</sub> SO <sub>4</sub> HNO <sub>3</sub> HCl NaOH Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> Methanol Other	Analysis Test Y/N Chloride, Fluoride, Sulfate App. III & IV Metals* RAD 226/228 TDS	Requested Analyte Filtered (Y/N)	Residual Chlorine (Y/N)	Page Project No./ Lab ID.
						DATE	TIME			DATE	TIME						
1	HGWA-1		G									5	2				
2	HGWA-2		G									5	2				
3	HGWA-3		G									5	2				
4	HGWA-4		G									5	2				
5	HGWA-5		G									5	2				
6	HGWA-6		G									5	2				
7	HGWA-42D		G									5	2				
8	HGWA-43D		D									5	2				
9	HGWA-44D		D									5	2				
10	HGWA-14		G									5	2				
11	HGWA-15		G									5	2				
12	HGWA-16		G									5	2				

**REQUISITIONED BY / AFFILIATION:** Thomas Hecker  
**DATE:** 3/17/14  
**TIME:** 1510

**ACCEPTED BY / AFFILIATION:** [Signature]  
**DATE:** 3/17/14  
**TIME:** 1510

**ADDITIONAL COMMENTS:**  
 Please note dry wells, strike through any wells not sampled, and note when the last sample for the event has been taken.  
 \*App. III & IV Metals = Sb, As, Ba, Be, B, Cd, Cr, Cu, Pb, U, Mo, Se, Tl  
 One sample set submitted for HGWA-142344D44D but they will be reworked for AP-1423 SCS

**SAMPLER NAME AND SIGNATURE:**  
 Thomas Hecker  
 DATE SIGNED (MM/DD/YYYY): 3/17/14

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

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

<b>Section A</b> Required Client Information:		<b>Section B</b> Required Project Information		<b>Section C</b> Invoice Information:	
Company	GA Power	Report To:	SCS Contacts	Attention:	Southern Co.
Address	Atlanta, GA	Copy To:	Geosynlec Contacts	Company Name:	
		Purchase Order No.:		Address:	
Email To:	SCS Contacts	Project Name:	Plant Hammond AP-2 Semiannual	Site Location:	GA
Phone:		Project Number:	GW68818	State:	
Requested Due Date/Time:	16 Day				
Valid Matrix Codes		MATRIX CODE (see valid codes to left)		Preservatives	
DRAINAGE WATER WASTE WATER WASTE WATER PRODUCT SOIL/SOLID OIL WIFE AIR OTHER TISSUE		UNPRESERVED H <sub>2</sub> SO <sub>4</sub> HNO <sub>3</sub> HCl NaOH Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> Methanol Other		Analysis Test Chloride, Fluoride, Sulfate App. III & IV Metals* RAD 226/228 TDS	
SAMPLE ID AP-2-08/11 Sample IDs MUST BE UNIQUE		DATE TIME DATE TIME SAMPLE TEMP AT COLLECTION # OF CONTAINERS		Y/N N N N N N	
REGULATORY AGENCY <input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input checked="" type="checkbox"/> DRINKING WATER <input type="checkbox"/> OTHER		Residual Chlorine (Y/N)			

ITEM #	Section D Required Client Information	Valid Matrix Codes	CODE	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		DATE	TIME	DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives						Analysis Test				Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (N/A)	
						EQUIPMENT	SUPPORT							Unpreserved	H <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>	HCl	NaOH	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>	Methanol	Other	Chloride, Fluoride, Sulfate	App. III & IV Metals*					RAD 226/228
1	HGWA-1			WT G									5	2	3	X	X	X	X	X								
2	HGWA-2			WT G									5	2	3	X	X	X	X	X								
3	HGWA-3			WT G									5	2	3	X	X	X	X	X								
4	HGWA-4			WT G									5	2	3	X	X	X	X	X								
5	HGWA-5			WT G									5	2	3	X	X	X	X	X								
6	HGWA-6			WT G									5	2	3	X	X	X	X	X								
7	HGWA-42D			WT G									5	2	3	X	X	X	X	X								
8	HGWA-44D			WT G									5	2	3	X	X	X	X	X								
9	HGWA-14			WT G									5	2	3	X	X	X	X	X								
10	HGWS-16			WT G									5	2	3	X	X	X	X	X								
11	HGWC-16			WT G									5	2	3	X	X	X	X	X								
12	HGWC-16			WT G									5	2	3	X	X	X	X	X								

REINOURNED BY / AFFILIATION: Thomas Hester, Plant

ACCEPTED BY / AFFILIATION: Ben Williams, Plant

DATE: 3/18/12

**SAMPLER NAME AND SIGNATURE**  
 PRINT Name of SAMPLER: Thomas Hester, Plant  
 SIGNATURE OF SAMPLER: *Thomas Hester*  
 DATE Signed (MM/DD/YYYY): 3/16/12

**SAMPLER NAME AND SIGNATURE**  
 PRINT Name of SAMPLER: Ben Williams, Plant  
 SIGNATURE OF SAMPLER: *Ben Williams*  
 DATE Signed (MM/DD/YYYY): 3/18/12

ADDITIONAL COMMENTS

Please note dry wells, sink through any wells not sampled, and note when the last sample for the event has been taken.  
 \*App. III & IV Metals - Sr, As, Ba, Be, B, Cd, Cr, Co, Cu, Pb, U, Mo, Se, Tl.  
 One sample set submitted for HGWA-12/25/43/44D but they will be retested for AP-12/23 SDCs.



# CHAIN-OF-CUSTODY / Analytical Request Document

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

<b>Section A</b>	<b>Required Client Information:</b> Company: GA Power Address: Atlanta, GA Email To: SCS Contacts Phone: _____ Requested Due Date/TIME: _____ to Day	<b>Section B</b>	<b>Requested Project Information:</b> Report To: SCS Contacts Copy To: Geosyntec Contacts Purchase Order No: _____ Project Name: Plant Hammond AP-2 Semiannual Project Number: GW68818	<b>Section C</b>	<b>Invoice Information:</b> Attention: Southern Co. Company Name: _____ Address: _____ Site Name: _____ Reference: _____ Pace Project Manager: Kevin Herring File Prefix #: 10839-3																				
<b>REGULATORY AGENCY</b> <input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input checked="" type="checkbox"/> OTHER (See-- Site Location: _____ STATE: GA			<b>Requested Analyte Filtered (Y/N)</b> <table border="1"> <tr><td>Chloride, Fluoride, Sulfate</td><td>N</td><td>N</td><td>N</td><td>N</td></tr> <tr><td>App. III &amp; IV Metals*</td><td>N</td><td>N</td><td>N</td><td>N</td></tr> <tr><td>RAD 226/228</td><td>N</td><td>N</td><td>N</td><td>N</td></tr> <tr><td>TDS</td><td>N</td><td>N</td><td>N</td><td>N</td></tr> </table>			Chloride, Fluoride, Sulfate	N	N	N	N	App. III & IV Metals*	N	N	N	N	RAD 226/228	N	N	N	N	TDS	N	N	N	N
Chloride, Fluoride, Sulfate	N	N	N	N																					
App. III & IV Metals*	N	N	N	N																					
RAD 226/228	N	N	N	N																					
TDS	N	N	N	N																					

ITEM #	Section D Required Client Information  MATERIAL CODE GRAB SAMPLE MATERIAL TYPE PRODUCT SOIL/SUBSOIL OIL WPE AIR OTHER TSS/E	Valid Matrix Codes DW WT WP P SL OL WP AR AT TS	MATRIX CODE (see valid codes to R)	SAMPLE TYPE (G=GRAB C=COMP)	DATE	TIME	DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives							Analysis Test					Residual Chlorine (Y/N)	Pace Project No./ Lab ID.		
											Unpreserved	H <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>	HCl	NaOH	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>	Methanol	Other	Y	N	Y	N			Y	N
1	HGWC-17		WT G		3/17/21	1521	3/18/21	1521		5																
2	HGWC-18		WT G		3/17/21	1521	3/18/21	1521		5																
3	MMW-23D		WT G		3/17/21	1521	3/18/21	1521		5																
4	MMW-22		WT G		3/17/21	1521	3/18/21	1521		5																
5	MMW-23D		WT G		3/17/21	1521	3/18/21	1521		5																
6	MMW-35		WT G		3/17/21	1521	3/18/21	1521		5																
7	MMW-37D		WT G		3/17/21	1521	3/18/21	1521		5																
8	DUP-2		WT G		3/17/21	1521	3/18/21	1521		5																
9	EB-2		WT G		3/17/21	1521	3/18/21	1521		5																
10	FB-2		WT G		3/17/21	1521	3/18/21	1521		5																

<b>ADDITIONAL COMMENTS:</b> Please note dry wells, sticks through any wells not sampled, and use within the last sample for the event has been taken. *App III & IV Metals = 30, 74, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000			
<b>RELINQUISHED BY/ AFFILIATION:</b> Thomas W. Herring 3/17/21 1521	<b>ACCEPTED BY/ AFFILIATION:</b> William P. Pace 3/18/21 1521		
<b>SAMPLER NAME AND SIGNATURE:</b> THOMAS W. HERRING DATE SIGNED: 3/17/21	<b>SAMPLER NAME AND SIGNATURE:</b> WILLIAM P. PACE DATE SIGNED: 3/18/21		
Temp in °C: _____	Received on Ice (Y/N): _____	Custody Sealed Cooler (Y/N): _____	Samples intact (Y/N): _____



### CHAIN-OF-CUSTODY / Analytical Request Document

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

<b>Section A</b> Required Client Information	<b>Section B</b> Required Project Information	<b>Section C</b> Invoice Information
Company: GA Power Address: Atlanta, GA	Report To: SCS Contacts Copy To: Geosynthetic Contacts	Attention: Southern Co.
Entity To: SCS Contacts Phone: _____ Requested Date (DATE/TIME): 10 Day	Purchase Order No.: _____ Project Name: Plant Hammond AP-2-Semiannual Project Number: GWSS818	Company Name: _____ Address: _____ City/State: _____ Invoice #/Date: 10839-3
Requested Date (DATE/TIME): 10 Day	Project Name: Plant Hammond AP-2-Semiannual Project Number: GWSS818	Requested Analysis Filtered (Y/N)
<b>REGULATORY AGENCY</b>		<input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input checked="" type="checkbox"/> OTHER <small>See #</small>
Site Location: _____ STATE: GA		
Requested Analysis Filtered (Y/N)		

ITEM #	Section D Required Client Information	Valid Matrix Codes MATRIX	SCCS CODE	COLLECTED			DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives						Analysis Test	Residual Chlorine (Y/N)	pH = <u>6.43</u>	
				DATE	TIME	DATE					TIME	Unpreserved	H <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>	HCl	NaOH				Na <sub>2</sub> S <sub>2</sub> O <sub>5</sub>
1	HGWC-17	DRINKING WATER	DW	3/11/21	144K	-	19	5	2	3	X	X	X	X	X	X	X			
2	HGWC-18	WASTE WATER PRODUCT	WW	3/10/21	100L	-	16	5	2	3	X	X	X	X	X	X	X			
3	MW-21D	SOLVENT OIL	SL	3/10/21	1205	-	15	5	2	3	X	X	X	X	X	X	X			
4	MW-22	WASTE WATER PRODUCT	WW	3/10/21	1570	-	15	5	2	3	X	X	X	X	X	X	X			
5	MW-23B	WASTE WATER PRODUCT	WW	3/10/21	1670	-	19	5	2	3	X	X	X	X	X	X	X			
6	MW-33	WASTE WATER PRODUCT	WW	3/10/21	1670	-	19	5	2	3	X	X	X	X	X	X	X			
7	MW-35	WASTE WATER PRODUCT	WW	3/10/21	1670	-	19	5	2	3	X	X	X	X	X	X	X			
8	MW-37D	WASTE WATER PRODUCT	WW	3/10/21	1670	-	19	5	2	3	X	X	X	X	X	X	X			
9	DUP-2	WASTE WATER PRODUCT	WW	3/10/21	-	-	19	5	2	3	X	X	X	X	X	X	X			
10	EB-2	WASTE WATER PRODUCT	WW	3/10/21	1250	-	19	5	2	3	X	X	X	X	X	X	X			
11	FB-2	WASTE WATER PRODUCT	WW	3/10/21	1570	-	19	5	2	3	X	X	X	X	X	X	X			
12																				

ADDITIONAL COMMENTS		RELINQUISHED BY / AFFILIATION		DATE	TIME	ACCEPTED BY / AFFILIATION		DATE	TIME	SAMPLE CONDITIONS			
Please note dry wells. Sites through any wells not sampled and note when the last sample for the event has been taken. App. III & IV Metals = Sp. As, Ba, Be, B, Cd, Ca, Cr, Co, Pb, U, Mo, Se, Tl. One sample set submitted for HGWA-102343314AD but they will be reported for AP-1023 SDGs		Edward Macker Pesa W. Williams Pesa		3/10/21	1:50	W. Williams Pesa Pesa		3/14/21	1340	Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

**SAMPLER NAME AND SIGNATURE**

PRINT Name of SAMPLER: Edward Macker Pesa & Chad Russo  
 SIGNATURE of SAMPLER: [Signatures]

DATE Signed (MM/DD/YY): 3/10/21

Important Note: By signing this form you are accepting Face's NET 30 day payment terms and agreeing to pay charges at 1.5% per month for any late payments not paid within 30 days.  
 FALL-Q-02016rev.07, 15-Feb-2007



# CHAIN-OF-CUSTODY / Analytical Request Document

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

<b>Section A</b> Required Client Information Company: <u>GA Power</u> Address: <u>Atlanta, GA</u>		<b>Section B</b> Required Project Information Report To: <u>SCS Contacts</u> Copy To: <u>Geosynthetic Contacts</u>		<b>Section C</b> Service Information Attention: <u>Southern Co.</u> Company Name: _____ Address: _____ POC Name: _____ Reference: <u>Kevin Herring</u> Pace Project # <u>10838-3</u> Pace Profile # <u>10838-3</u>	
Email To: <u>SCS Contacts</u> Phone: _____ Requested Due Date/TIME: <u>10 Day</u>		Purchase Order No.: _____ Project Name: <u>Plant Hammond AP-2-Semiannual</u> Project Number: <u>GW65818</u>		Address: _____ POC Name: _____ Reference: <u>Kevin Herring</u> Pace Project # <u>10838-3</u> Pace Profile # <u>10838-3</u>	
Regulatory Agency: _____ <input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input checked="" type="checkbox"/> OTHER (see _____)		Site Location: _____ STATE: <u>GA</u>		Requested Analysis Filtered (Y/N)	

ITEM #	Section D Required Client Information  SAMPLE ID (A-Z, 0-9, -) Sample IDs MUST BE UNIQUE	VOID Matrix Codes MATRIX CODE (see void codes to left) MATRIX TYPE (G=GRAB CoCOMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives	Analysis Test	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.											
			DATE	TIME							DATE	TIME									
1	HGWC-17	WT G				5	2	3	X	X	X										
2	HGWC-18	WT G				4	2	3	X	X	X										
3	MW-21D	WT G				5	2	3	X	X	X										
4	MW-22	WT G				5	2	3	X	X	X										
5	MW-23D	WT G				5	2	3	X	X	X										
6	MW-33	WT G				5	2	3	X	X	X										
7	MW-35	WT G				5	2	3	X	X	X										
8	MW-37D	WT G				5	2	3	X	X	X										
9	Dup-2	WT G				5	2	3	X	X	X										
10	EB-2	WT G				5	2	3	X	X	X										
11	FB-2	WT G				5	2	3	X	X	X										
12																					

**ADDITIONAL COMMENTS**  
 Please note dry wells, strike through any wells not sampled, and note when the last sample for the event has been taken.  
 \*App III & IV Metals = Sb, As, Ba, Be, B, Cd, Ca, Cr, Cu, Pb, U, Mo, Se, Ti  
 One sample set submitted for HGWA-112943044D but they will be rejected for AP-12/3 SDGS.

**RELINQUISHED BY / AFFILIATION**  
Thomas Muehle/ Pace  
W. Williams / Pace

**DATE**  
3/27/01  
3/20/01

**TIME**  
1400  
1642

**ACCEPTED BY / AFFILIATION**  
Kevin Herring / Pace  
W. Williams / Pace

**DATE**  
3/26/01  
3/27/01

**TIME**  
1540  
1642

**Temp in °C**  
3.3

**Received on ice (Y/N)**  
Y

**Custody Sealed Cooler (Y/N)**  
N

**Samples Intact (Y/N)**  
Y

**SAMPLER NAME AND SIGNATURE**  
 PRINT Name of SAMPLER: Kevin Herring  
 SIGNATURE of SAMPLER: \_\_\_\_\_

**DATE signed (MM/DD/YY):** 3/16/01

April 16, 2021

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

RE: Project: HAMMOND AP-2 SEMIANNUAL RADS  
Pace Project No.: 92527258

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory between March 11, 2021 and March 22, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

- Pace Analytical Services - Greensburg

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

Sincerely,



Kevin Herring  
kevin.herring@pacelabs.com  
1(704)875-9092  
HORIZON Database Administrator

Enclosures

cc: Christine Hug, Geosyntec Consultants, Inc.  
Kristen Jurinko  
Thomas Kessler, Geosyntec  
Whitney Law, Geosyntec Consultants  
Noelia Muskus, Geosyntec Consultants  
Ms. Lauren Petty, Southern Company  
Nardos Tilahun, GeoSyntec  
Dawit Yifru, Geosyntec Consultants, Inc.



## REPORT OF LABORATORY ANALYSIS

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



## CERTIFICATIONS

Project: HAMMOND AP-2 SEMIANNUAL RAD5  
Pace Project No.: 92527258

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### **Pace Analytical Services Pennsylvania**

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

Missouri Certification #: 235  
Montana Certification #: Cert0082  
Nebraska Certification #: NE-OS-29-14  
Nevada Certification #: PA014572018-1  
New Hampshire/TNI Certification #: 297617  
New Jersey/TNI Certification #: PA051  
New Mexico Certification #: PA01457  
New York/TNI Certification #: 10888  
North Carolina Certification #: 42706  
North Dakota Certification #: R-190  
Ohio EPA Rad Approval: #41249  
Oregon/TNI Certification #: PA200002-010  
Pennsylvania/TNI Certification #: 65-00282  
Puerto Rico Certification #: PA01457  
Rhode Island Certification #: 65-00282  
South Dakota Certification  
Tennessee Certification #: 02867  
Texas/TNI Certification #: T104704188-17-3  
Utah/TNI Certification #: PA014572017-9  
USDA Soil Permit #: P330-17-00091  
Vermont Dept. of Health: ID# VT-0282  
Virgin Island/PADEP Certification  
Virginia/VELAP Certification #: 9526  
Washington Certification #: C868  
West Virginia DEP Certification #: 143  
West Virginia DHHR Certification #: 9964C  
Wisconsin Approve List for Rad  
Wyoming Certification #: 8TMS-L

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## REPORT OF LABORATORY ANALYSIS

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

## SAMPLE SUMMARY

Project: HAMMOND AP-2 SEMIANNUAL RADS

Pace Project No.: 92527258

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92527258001	HGWA-1	Water	03/10/21 16:10	03/11/21 15:55
92527258002	HGWA-4	Water	03/10/21 16:21	03/11/21 15:55
92527258003	HGWA-42D	Water	03/10/21 14:23	03/11/21 15:55
92527258004	HGWA-44D	Water	03/10/21 14:30	03/11/21 15:55
92527258005	HGWA-2	Water	03/11/21 09:59	03/12/21 13:43
92527258006	HGWA-3	Water	03/11/21 11:25	03/12/21 13:43
92527258007	HGWA-5	Water	03/11/21 11:30	03/12/21 13:43
92527258008	HGWA-6	Water	03/11/21 12:39	03/12/21 13:43
92527258009	HGWA-43D	Water	03/11/21 09:57	03/12/21 13:43
92527258010	MW-37D	Water	03/12/21 10:20	03/15/21 12:00
92527258011	HGWC-15	Water	03/16/21 15:24	03/17/21 13:10
92527258012	HGWC-14	Water	03/17/21 14:28	03/18/21 13:17
92527258013	HGWC-16	Water	03/17/21 09:29	03/18/21 13:17
92527258014	MW-22	Water	03/17/21 10:00	03/18/21 13:17
92527258015	MW-23D	Water	03/17/21 11:49	03/18/21 13:17
92527258016	HGWC-17	Water	03/18/21 14:48	03/19/21 13:40
92527258017	HGWC-18	Water	03/18/21 10:01	03/19/21 13:40
92527258018	MW-21D	Water	03/18/21 12:08	03/19/21 13:40
92527258019	MW-33	Water	03/18/21 10:40	03/19/21 13:40
92527258020	DUP-2	Water	03/18/21 00:00	03/19/21 13:40
92527258021	EB-2	Water	03/18/21 12:50	03/19/21 13:40
92527258022	FB-2	Water	03/18/21 15:30	03/19/21 13:40
92527258023	MW-35	Water	03/19/21 12:48	03/22/21 15:41

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: HAMMOND AP-2 SEMIANNUAL RADS  
Pace Project No.: 92527258

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92527258001	HGWA-1	EPA 9315	CLA	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92527258002	HGWA-4	EPA 9315	CLA	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92527258003	HGWA-42D	EPA 9315	CLA	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92527258004	HGWA-44D	EPA 9315	CLA	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92527258005	HGWA-2	EPA 9315	CLA	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92527258006	HGWA-3	EPA 9315	CLA	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92527258007	HGWA-5	EPA 9315	CLA	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92527258008	HGWA-6	EPA 9315	CLA	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92527258009	HGWA-43D	EPA 9315	CLA	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92527258010	MW-37D	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92527258011	HGWC-15	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92527258012	HGWC-14	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92527258013	HGWC-16	EPA 9315	LAL	1	PASI-PA

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### SAMPLE ANALYTE COUNT

Project: HAMMOND AP-2 SEMIANNUAL RADS  
Pace Project No.: 92527258

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92527258014	MW-22	EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
92527258015	MW-23D	Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92527258016	HGWC-17	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
92527258017	HGWC-18	EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
92527258018	MW-21D	Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92527258019	MW-33	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
92527258020	DUP-2	EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
92527258021	EB-2	Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92527258022	FB-2	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
92527258023	MW-35	EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	CLA	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg

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### SUMMARY OF DETECTION

Project: HAMMOND AP-2 SEMIANNUAL RADS

Pace Project No.: 92527258

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>92527258001</b>	<b>HGWA-1</b>					
EPA 9315	Radium-226	-0.0744 ± 0.0713 (0.306) C:76% T:NA	pCi/L		03/29/21 07:58	
EPA 9320	Radium-228	-0.473 ± 0.501 (1.24) C:75% T:67%	pCi/L		04/09/21 13:14	
Total Radium Calculation	Total Radium	0.000 ± 0.572 (1.55)	pCi/L		04/12/21 13:46	
<b>92527258002</b>	<b>HGWA-4</b>					
EPA 9315	Radium-226	0.0468 ± 0.144 (0.360) C:60% T:NA	pCi/L		03/29/21 07:58	
EPA 9320	Radium-228	0.234 ± 0.379 (0.823) C:73% T:91%	pCi/L		04/09/21 14:40	
Total Radium Calculation	Total Radium	0.281 ± 0.523 (1.18)	pCi/L		04/12/21 13:46	
<b>92527258003</b>	<b>HGWA-42D</b>					
EPA 9315	Radium-226	0.719 ± 0.297 (0.317) C:77% T:NA	pCi/L		03/29/21 07:58	
EPA 9320	Radium-228	0.493 ± 0.385 (0.765) C:75% T:87%	pCi/L		04/09/21 12:10	
Total Radium Calculation	Total Radium	1.21 ± 0.682 (1.08)	pCi/L		04/12/21 13:46	
<b>92527258004</b>	<b>HGWA-44D</b>					
EPA 9315	Radium-226	0.119 ± 0.127 (0.231) C:79% T:NA	pCi/L		03/29/21 07:58	
EPA 9320	Radium-228	0.692 ± 0.477 (0.922) C:63% T:82%	pCi/L		04/09/21 15:22	
Total Radium Calculation	Total Radium	0.811 ± 0.604 (1.15)	pCi/L		04/12/21 13:46	

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### SUMMARY OF DETECTION

Project: HAMMOND AP-2 SEMIANNUAL RADS

Pace Project No.: 92527258

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>92527258005</b>	<b>HGWA-2</b>					
EPA 9315	Radium-226	0.206 ± 0.172 (0.304)	pCi/L		03/29/21 07:58	
EPA 9320	Radium-228	C:81% T:NA 0.531 ± 0.488 (0.990)	pCi/L		04/09/21 15:22	
Total Radium Calculation	Total Radium	C:58% T:71% 0.737 ± 0.660 (1.29)	pCi/L		04/12/21 13:46	
<b>92527258006</b>	<b>HGWA-3</b>					
EPA 9315	Radium-226	0.128 ± 0.181 (0.393)	pCi/L		03/29/21 07:58	
EPA 9320	Radium-228	C:82% T:NA -0.0144 ± 0.302 (0.724)	pCi/L		04/09/21 15:22	
Total Radium Calculation	Total Radium	C:65% T:75% 0.128 ± 0.483 (1.12)	pCi/L		04/12/21 13:46	
<b>92527258007</b>	<b>HGWA-5</b>					
EPA 9315	Radium-226	0.150 ± 0.162 (0.312)	pCi/L		03/29/21 07:58	
EPA 9320	Radium-228	C:71% T:NA 0.920 ± 0.492 (0.877)	pCi/L		04/09/21 15:23	
Total Radium Calculation	Total Radium	C:65% T:79% 1.07 ± 0.654 (1.19)	pCi/L		04/13/21 11:06	
<b>92527258008</b>	<b>HGWA-6</b>					
EPA 9315	Radium-226	0.244 ± 0.186 (0.309)	pCi/L		03/29/21 07:58	
EPA 9320	Radium-228	C:77% T:NA 0.357 ± 0.743 (1.64)	pCi/L		04/09/21 19:20	
Total Radium Calculation	Total Radium	C:66% T:77% 0.601 ± 0.929 (1.95)	pCi/L		04/13/21 15:22	

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### SUMMARY OF DETECTION

Project: HAMMOND AP-2 SEMIANNUAL RADS  
Pace Project No.: 92527258

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>92527258009</b>	<b>HGWA-43D</b>					
EPA 9315	Radium-226	0.118 ± 0.160 (0.335)	pCi/L		03/29/21 07:58	
EPA 9320	Radium-228	C:68% T:NA 1.39 ± 0.825 (1.53)	pCi/L		04/09/21 19:20	
Total Radium Calculation	Total Radium	C:62% T:77% 1.51 ± 0.985 (1.87)	pCi/L		04/13/21 15:22	
<b>92527258010</b>	<b>MW-37D</b>					
EPA 9315	Radium-226	0.167 ± 0.110 (0.182)	pCi/L		04/05/21 12:44	
EPA 9320	Radium-228	C:85% T:NA 0.411 ± 0.479 (1.01)	pCi/L		04/09/21 15:21	
Total Radium Calculation	Total Radium	C:62% T:86% 0.578 ± 0.589 (1.19)	pCi/L		04/13/21 15:22	
<b>92527258011</b>	<b>HGWC-15</b>					
EPA 9315	Radium-226	-0.0152 ± 0.0752 (0.202)	pCi/L		04/05/21 12:44	
EPA 9320	Radium-228	C:79% T:NA 0.801 ± 0.584 (1.15)	pCi/L		04/09/21 14:40	
Total Radium Calculation	Total Radium	C:73% T:84% 0.801 ± 0.659 (1.35)	pCi/L		04/12/21 13:46	
<b>92527258012</b>	<b>HGWC-14</b>					
EPA 9315	Radium-226	0.386 ± 0.150 (0.179)	pCi/L		04/05/21 12:44	
EPA 9320	Radium-228	C:93% T:NA 1.45 ± 0.814 (1.50)	pCi/L		04/09/21 19:21	
Total Radium Calculation	Total Radium	C:63% T:85% 1.84 ± 0.964 (1.68)	pCi/L		04/13/21 15:22	

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### SUMMARY OF DETECTION

Project: HAMMOND AP-2 SEMIANNUAL RADS

Pace Project No.: 92527258

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>92527258013</b>	<b>HGWC-16</b>					
EPA 9315	Radium-226	0.228 ± 0.117 (0.159) C:86% T:NA	pCi/L		04/05/21 12:44	
EPA 9320	Radium-228	-0.286 ± 0.753 (1.78) C:62% T:84%	pCi/L		04/09/21 19:21	
Total Radium Calculation	Total Radium	0.228 ± 0.870 (1.94)	pCi/L		04/13/21 15:22	
<b>92527258014</b>	<b>MW-22</b>					
EPA 9315	Radium-226	0.263 ± 0.238 (0.469) C:83% T:NA	pCi/L		04/05/21 11:55	
EPA 9320	Radium-228	0.718 ± 0.603 (1.21) C:66% T:84%	pCi/L		04/09/21 19:21	
Total Radium Calculation	Total Radium	0.981 ± 0.841 (1.68)	pCi/L		04/13/21 15:22	
<b>92527258015</b>	<b>MW-23D</b>					
EPA 9315	Radium-226	0.0576 ± 0.0914 (0.197) C:79% T:NA	pCi/L		04/05/21 16:08	
EPA 9320	Radium-228	0.521 ± 0.620 (1.31) C:65% T:87%	pCi/L		04/09/21 19:10	
Total Radium Calculation	Total Radium	0.579 ± 0.711 (1.51)	pCi/L		04/13/21 15:22	
<b>92527258016</b>	<b>HGWC-17</b>					
EPA 9315	Radium-226	0.159 ± 0.114 (0.195) C:79% T:NA	pCi/L		04/05/21 16:08	
EPA 9320	Radium-228	0.697 ± 0.751 (1.57) C:62% T:76%	pCi/L		04/09/21 19:11	
Total Radium Calculation	Total Radium	0.856 ± 0.865 (1.77)	pCi/L		04/13/21 15:22	

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### SUMMARY OF DETECTION

Project: HAMMOND AP-2 SEMIANNUAL RADS  
Pace Project No.: 92527258

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>92527258017</b>	<b>HGWC-18</b>					
EPA 9315	Radium-226	0.580 ± 0.180 (0.159) C:88% T:NA	pCi/L		04/05/21 16:08	
EPA 9320	Radium-228	1.05 ± 0.658 (1.23) C:63% T:87%	pCi/L		04/09/21 19:11	
Total Radium Calculation	Total Radium	1.63 ± 0.838 (1.39)	pCi/L		04/13/21 15:22	
<b>92527258018</b>	<b>MW-21D</b>					
EPA 9315	Radium-226	0.0981 ± 0.0997 (0.196) C:86% T:NA	pCi/L		04/05/21 16:08	
EPA 9320	Radium-228	0.402 ± 0.650 (1.41) C:62% T:85%	pCi/L		04/09/21 19:12	
Total Radium Calculation	Total Radium	0.500 ± 0.750 (1.61)	pCi/L		04/13/21 15:22	
<b>92527258019</b>	<b>MW-33</b>					
EPA 9315	Radium-226	0.380 ± 0.148 (0.177) C:91% T:NA	pCi/L		04/05/21 16:08	
EPA 9320	Radium-228	0.353 ± 0.555 (1.20) C:62% T:86%	pCi/L		04/09/21 19:12	
Total Radium Calculation	Total Radium	0.733 ± 0.703 (1.38)	pCi/L		04/13/21 15:22	
<b>92527258020</b>	<b>DUP-2</b>					
EPA 9315	Radium-226	0.515 ± 0.281 (0.454) C:89% T:NA	pCi/L		04/05/21 07:54	
EPA 9320	Radium-228	0.981 ± 0.485 (0.859) C:73% T:88%	pCi/L		04/12/21 14:39	
Total Radium Calculation	Total Radium	1.50 ± 0.766 (1.31)	pCi/L		04/13/21 15:24	

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### SUMMARY OF DETECTION

Project: HAMMOND AP-2 SEMIANNUAL RADS

Pace Project No.: 92527258

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>92527258021</b>	<b>EB-2</b>					
EPA 9315	Radium-226	0.0433 ± 0.104 (0.250)	pCi/L		04/05/21 07:59	
EPA 9320	Radium-228	C:86% T:NA 0.00182 ± 0.296 (0.687) C:70% T:107%	pCi/L		04/12/21 14:39	
Total Radium Calculation	Total Radium	0.0451 ± 0.400 (0.937)	pCi/L		04/13/21 15:24	
<b>92527258022</b>	<b>FB-2</b>					
EPA 9315	Radium-226	0.0160 ± 0.107 (0.283)	pCi/L		04/05/21 07:59	
EPA 9320	Radium-228	C:89% T:NA 0.0823 ± 0.512 (1.16) C:67% T:75%	pCi/L		04/12/21 14:39	
Total Radium Calculation	Total Radium	0.0983 ± 0.619 (1.44)	pCi/L		04/13/21 15:24	
<b>92527258023</b>	<b>MW-35</b>					
EPA 9315	Radium-226	0.0487 ± 0.378 (0.928)	pCi/L		04/13/21 07:45	
EPA 9320	Radium-228	C:94% T:NA 0.475 ± 0.528 (1.11) C:63% T:83%	pCi/L		04/13/21 15:44	
Total Radium Calculation	Total Radium	0.524 ± 0.906 (2.04)	pCi/L		04/14/21 11:04	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 SEMIANNUAL RADS

Pace Project No.: 92527258

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: HGWA-1</b> <b>Lab ID: 92527258001</b> Collected: 03/10/21 16:10      Received: 03/11/21 15:55      Matrix: Water PWS:      Site ID:      Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	<b>-0.0744 ± 0.0713 (0.306)</b> <b>C:76% T:NA</b>	pCi/L	03/29/21 07:58	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>-0.473 ± 0.501 (1.24)</b> <b>C:75% T:67%</b>	pCi/L	04/09/21 13:14	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>0.000 ± 0.572 (1.55)</b>	pCi/L	04/12/21 13:46	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 SEMIANNUAL RADS

Pace Project No.: 92527258

**Sample: HGWA-4**      **Lab ID: 92527258002**      Collected: 03/10/21 16:21      Received: 03/11/21 15:55      Matrix: Water  
PWS:      Site ID:      Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	<b>0.0468 ± 0.144 (0.360)</b> <b>C:60% T:NA</b>	pCi/L	03/29/21 07:58	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>0.234 ± 0.379 (0.823)</b> <b>C:73% T:91%</b>	pCi/L	04/09/21 14:40	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>0.281 ± 0.523 (1.18)</b>	pCi/L	04/12/21 13:46	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 SEMIANNUAL RADS

Pace Project No.: 92527258

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: HGWA-42D</b> <b>Lab ID: 92527258003</b> Collected: 03/10/21 14:23      Received: 03/11/21 15:55      Matrix: Water PWS:      Site ID:      Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	<b>0.719 ± 0.297 (0.317)</b> <b>C:77% T:NA</b>	pCi/L	03/29/21 07:58	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>0.493 ± 0.385 (0.765)</b> <b>C:75% T:87%</b>	pCi/L	04/09/21 12:10	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>1.21 ± 0.682 (1.08)</b>	pCi/L	04/12/21 13:46	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 SEMIANNUAL RADS

Pace Project No.: 92527258

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: HGWA-44D</b> <b>Lab ID: 92527258004</b> Collected: 03/10/21 14:30      Received: 03/11/21 15:55      Matrix: Water PWS:      Site ID:      Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	<b>0.119 ± 0.127 (0.231)</b> <b>C:79% T:NA</b>	pCi/L	03/29/21 07:58	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>0.692 ± 0.477 (0.922)</b> <b>C:63% T:82%</b>	pCi/L	04/09/21 15:22	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>0.811 ± 0.604 (1.15)</b>	pCi/L	04/12/21 13:46	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 SEMIANNUAL RADS

Pace Project No.: 92527258

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: HGWA-2</b> <b>Lab ID: 92527258005</b> Collected: 03/11/21 09:59      Received: 03/12/21 13:43      Matrix: Water PWS:      Site ID:      Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	<b>0.206 ± 0.172 (0.304)</b> <b>C:81% T:NA</b>	pCi/L	03/29/21 07:58	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>0.531 ± 0.488 (0.990)</b> <b>C:58% T:71%</b>	pCi/L	04/09/21 15:22	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>0.737 ± 0.660 (1.29)</b>	pCi/L	04/12/21 13:46	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 SEMIANNUAL RADS

Pace Project No.: 92527258

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: HGWA-3</b> <b>Lab ID: 92527258006</b> Collected: 03/11/21 11:25      Received: 03/12/21 13:43      Matrix: Water PWS:      Site ID:      Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	<b>0.128 ± 0.181 (0.393)</b> <b>C:82% T:NA</b>	pCi/L	03/29/21 07:58	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>-0.0144 ± 0.302 (0.724)</b> <b>C:65% T:75%</b>	pCi/L	04/09/21 15:22	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>0.128 ± 0.483 (1.12)</b>	pCi/L	04/12/21 13:46	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 SEMIANNUAL RADS

Pace Project No.: 92527258

**Sample: HGWA-5**      **Lab ID: 92527258007**      Collected: 03/11/21 11:30      Received: 03/12/21 13:43      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	<b>0.150 ± 0.162 (0.312)</b> <b>C:71% T:NA</b>	pCi/L	03/29/21 07:58	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>0.920 ± 0.492 (0.877)</b> <b>C:65% T:79%</b>	pCi/L	04/09/21 15:23	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>1.07 ± 0.654 (1.19)</b>	pCi/L	04/13/21 11:06	7440-14-4	

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**ANALYTICAL RESULTS - RADIOCHEMISTRY**

Project: HAMMOND AP-2 SEMIANNUAL RADS

Pace Project No.: 92527258

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: HGWA-6</b> <b>Lab ID: 92527258008</b> Collected: 03/11/21 12:39      Received: 03/12/21 13:43      Matrix: Water PWS:      Site ID:      Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	<b>0.244 ± 0.186 (0.309)</b> <b>C:77% T:NA</b>	pCi/L	03/29/21 07:58	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>0.357 ± 0.743 (1.64)</b> <b>C:66% T:77%</b>	pCi/L	04/09/21 19:20	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>0.601 ± 0.929 (1.95)</b>	pCi/L	04/13/21 15:22	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 SEMIANNUAL RADS

Pace Project No.: 92527258

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: HGWA-43D</b> <b>Lab ID: 92527258009</b> Collected: 03/11/21 09:57      Received: 03/12/21 13:43      Matrix: Water PWS:      Site ID:      Sample Type:						
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	<b>0.118 ± 0.160 (0.335)</b> <b>C:68% T:NA</b>	pCi/L	03/29/21 07:58	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>1.39 ± 0.825 (1.53)</b> <b>C:62% T:77%</b>	pCi/L	04/09/21 19:20	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>1.51 ± 0.985 (1.87)</b>	pCi/L	04/13/21 15:22	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 SEMIANNUAL RADS

Pace Project No.: 92527258

**Sample: MW-37D**      **Lab ID: 92527258010**      Collected: 03/12/21 10:20      Received: 03/15/21 12:00      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	<b>0.167 ± 0.110 (0.182)</b> <b>C:85% T:NA</b>	pCi/L	04/05/21 12:44	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>0.411 ± 0.479 (1.01)</b> <b>C:62% T:86%</b>	pCi/L	04/09/21 15:21	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>0.578 ± 0.589 (1.19)</b>	pCi/L	04/13/21 15:22	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 SEMIANNUAL RADS

Pace Project No.: 92527258

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: HGWC-15</b> <b>Lab ID: 92527258011</b> Collected: 03/16/21 15:24      Received: 03/17/21 13:10      Matrix: Water PWS:      Site ID:      Sample Type:						
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	<b>-0.0152 ± 0.0752 (0.202)</b> <b>C:79% T:NA</b>	pCi/L	04/05/21 12:44	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>0.801 ± 0.584 (1.15)</b> <b>C:73% T:84%</b>	pCi/L	04/09/21 14:40	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>0.801 ± 0.659 (1.35)</b>	pCi/L	04/12/21 13:46	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 SEMIANNUAL RADS

Pace Project No.: 92527258

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: HGWC-14</b> <b>Lab ID: 92527258012</b> Collected: 03/17/21 14:28      Received: 03/18/21 13:17      Matrix: Water PWS:      Site ID:      Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	<b>0.386 ± 0.150 (0.179)</b> <b>C:93% T:NA</b>	pCi/L	04/05/21 12:44	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>1.45 ± 0.814 (1.50)</b> <b>C:63% T:85%</b>	pCi/L	04/09/21 19:21	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>1.84 ± 0.964 (1.68)</b>	pCi/L	04/13/21 15:22	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 SEMIANNUAL RADS

Pace Project No.: 92527258

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: HGWC-16</b> <b>Lab ID: 92527258013</b> Collected: 03/17/21 09:29      Received: 03/18/21 13:17      Matrix: Water PWS:      Site ID:      Sample Type:						
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	<b>0.228 ± 0.117 (0.159)</b> <b>C:86% T:NA</b>	pCi/L	04/05/21 12:44	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>-0.286 ± 0.753 (1.78)</b> <b>C:62% T:84%</b>	pCi/L	04/09/21 19:21	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>0.228 ± 0.870 (1.94)</b>	pCi/L	04/13/21 15:22	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 SEMIANNUAL RADS

Pace Project No.: 92527258

**Sample: MW-22**      **Lab ID: 92527258014**      Collected: 03/17/21 10:00      Received: 03/18/21 13:17      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	<b>0.263 ± 0.238 (0.469)</b> <b>C:83% T:NA</b>	pCi/L	04/05/21 11:55	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>0.718 ± 0.603 (1.21)</b> <b>C:66% T:84%</b>	pCi/L	04/09/21 19:21	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>0.981 ± 0.841 (1.68)</b>	pCi/L	04/13/21 15:22	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 SEMIANNUAL RADS

Pace Project No.: 92527258

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: MW-23D</b> <b>Lab ID: 92527258015</b> Collected: 03/17/21 11:49      Received: 03/18/21 13:17      Matrix: Water PWS:      Site ID:      Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	<b>0.0576 ± 0.0914 (0.197)</b> <b>C:79% T:NA</b>	pCi/L	04/05/21 16:08	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>0.521 ± 0.620 (1.31)</b> <b>C:65% T:87%</b>	pCi/L	04/09/21 19:10	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>0.579 ± 0.711 (1.51)</b>	pCi/L	04/13/21 15:22	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 SEMIANNUAL RADS

Pace Project No.: 92527258

**Sample: HGWC-17**      **Lab ID: 92527258016**      Collected: 03/18/21 14:48      Received: 03/19/21 13:40      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	<b>0.159 ± 0.114 (0.195)</b> <b>C:79% T:NA</b>	pCi/L	04/05/21 16:08	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>0.697 ± 0.751 (1.57)</b> <b>C:62% T:76%</b>	pCi/L	04/09/21 19:11	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>0.856 ± 0.865 (1.77)</b>	pCi/L	04/13/21 15:22	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 SEMIANNUAL RADS

Pace Project No.: 92527258

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: HGWC-18</b> <b>Lab ID: 92527258017</b> Collected: 03/18/21 10:01      Received: 03/19/21 13:40      Matrix: Water PWS:      Site ID:      Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	<b>0.580 ± 0.180 (0.159)</b> <b>C:88% T:NA</b>	pCi/L	04/05/21 16:08	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>1.05 ± 0.658 (1.23)</b> <b>C:63% T:87%</b>	pCi/L	04/09/21 19:11	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>1.63 ± 0.838 (1.39)</b>	pCi/L	04/13/21 15:22	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 SEMIANNUAL RADS

Pace Project No.: 92527258

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: MW-21D</b> <b>Lab ID: 92527258018</b> Collected: 03/18/21 12:08      Received: 03/19/21 13:40      Matrix: Water PWS:      Site ID:      Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	<b>0.0981 ± 0.0997 (0.196)</b> <b>C:86% T:NA</b>	pCi/L	04/05/21 16:08	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>0.402 ± 0.650 (1.41)</b> <b>C:62% T:85%</b>	pCi/L	04/09/21 19:12	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>0.500 ± 0.750 (1.61)</b>	pCi/L	04/13/21 15:22	7440-14-4	

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**ANALYTICAL RESULTS - RADIOCHEMISTRY**

Project: HAMMOND AP-2 SEMIANNUAL RADS

Pace Project No.: 92527258

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: MW-33</b> <b>Lab ID: 92527258019</b> Collected: 03/18/21 10:40      Received: 03/19/21 13:40      Matrix: Water PWS:      Site ID:      Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	<b>0.380 ± 0.148 (0.177)</b> <b>C:91% T:NA</b>	pCi/L	04/05/21 16:08	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>0.353 ± 0.555 (1.20)</b> <b>C:62% T:86%</b>	pCi/L	04/09/21 19:12	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>0.733 ± 0.703 (1.38)</b>	pCi/L	04/13/21 15:22	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 SEMIANNUAL RADS

Pace Project No.: 92527258

**Sample: DUP-2**      **Lab ID: 92527258020**      Collected: 03/18/21 00:00      Received: 03/19/21 13:40      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	<b>0.515 ± 0.281 (0.454)</b> <b>C:89% T:NA</b>	pCi/L	04/05/21 07:54	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>0.981 ± 0.485 (0.859)</b> <b>C:73% T:88%</b>	pCi/L	04/12/21 14:39	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>1.50 ± 0.766 (1.31)</b>	pCi/L	04/13/21 15:24	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 SEMIANNUAL RADS

Pace Project No.: 92527258

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: EB-2</b> <b>Lab ID: 92527258021</b> Collected: 03/18/21 12:50      Received: 03/19/21 13:40      Matrix: Water PWS:      Site ID:      Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	<b>0.0433 ± 0.104 (0.250)</b> <b>C:86% T:NA</b>	pCi/L	04/05/21 07:59	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>0.00182 ± 0.296 (0.687)</b> <b>C:70% T:107%</b>	pCi/L	04/12/21 14:39	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>0.0451 ± 0.400 (0.937)</b>	pCi/L	04/13/21 15:24	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 SEMIANNUAL RADS

Pace Project No.: 92527258

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: FB-2</b> <b>Lab ID: 92527258022</b> Collected: 03/18/21 15:30      Received: 03/19/21 13:40      Matrix: Water PWS:      Site ID:      Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	<b>0.0160 ± 0.107 (0.283)</b> <b>C:89% T:NA</b>	pCi/L	04/05/21 07:59	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>0.0823 ± 0.512 (1.16)</b> <b>C:67% T:75%</b>	pCi/L	04/12/21 14:39	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>0.0983 ± 0.619 (1.44)</b>	pCi/L	04/13/21 15:24	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 SEMIANNUAL RADS

Pace Project No.: 92527258

**Sample: MW-35**      **Lab ID: 92527258023**      Collected: 03/19/21 12:48      Received: 03/22/21 15:41      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	<b>0.0487 ± 0.378 (0.928)</b> <b>C:94% T:NA</b>	pCi/L	04/13/21 07:45	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>0.475 ± 0.528 (1.11)</b> <b>C:63% T:83%</b>	pCi/L	04/13/21 15:44	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>0.524 ± 0.906 (2.04)</b>	pCi/L	04/14/21 11:04	7440-14-4	

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-2 SEMIANNUAL RADS

Pace Project No.: 92527258

QC Batch: 441707

Analysis Method: EPA 9315

QC Batch Method: EPA 9315

Analysis Description: 9315 Total Radium

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92527258023

METHOD BLANK: 2132285

Matrix: Water

Associated Lab Samples: 92527258023

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0366 ± 0.210 (0.420) C:94% T:NA	pCi/L	04/12/21 19:14	

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-2 SEMIANNUAL RADS

Pace Project No.: 92527258

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QC Batch:	440499	Analysis Method:	EPA 9315
QC Batch Method:	EPA 9315	Analysis Description:	9315 Total Radium
		Laboratory:	Pace Analytical Services - Greensburg

Associated Lab Samples: 92527258010, 92527258011, 92527258012, 92527258013, 92527258014, 92527258015, 92527258016, 92527258017, 92527258018, 92527258019

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METHOD BLANK: 2126661 Matrix: Water

Associated Lab Samples: 92527258010, 92527258011, 92527258012, 92527258013, 92527258014, 92527258015, 92527258016, 92527258017, 92527258018, 92527258019

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0900 ± 0.196 (0.458) C:77% T:NA	pCi/L	04/05/21 10:10	

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

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-2 SEMIANNUAL RADS

Pace Project No.: 92527258

QC Batch:	440493	Analysis Method:	EPA 9320
QC Batch Method:	EPA 9320	Analysis Description:	9320 Radium 228
		Laboratory:	Pace Analytical Services - Greensburg

Associated Lab Samples: 92527258020, 92527258021, 92527258022

METHOD BLANK: 2126652 Matrix: Water

Associated Lab Samples: 92527258020, 92527258021, 92527258022

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.217 ± 0.303 (0.649) C:71% T:96%	pCi/L	04/12/21 11:35	

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

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-2 SEMIANNUAL RADS

Pace Project No.: 92527258

QC Batch: 442226

Analysis Method: EPA 9320

QC Batch Method: EPA 9320

Analysis Description: 9320 Radium 228

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92527258023

METHOD BLANK: 2134501

Matrix: Water

Associated Lab Samples: 92527258023

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.347 ± 0.339 (0.697) C:71% T:89%	pCi/L	04/13/21 12:39	

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

### REPORT OF LABORATORY ANALYSIS

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**QUALITY CONTROL - RADIOCHEMISTRY**

Project: HAMMOND AP-2 SEMIANNUAL RADS

Pace Project No.: 92527258

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QC Batch:	440490	Analysis Method:	EPA 9320
QC Batch Method:	EPA 9320	Analysis Description:	9320 Radium 228
		Laboratory:	Pace Analytical Services - Greensburg

Associated Lab Samples: 92527258001, 92527258002, 92527258003, 92527258011

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METHOD BLANK: 2126643 Matrix: Water

Associated Lab Samples: 92527258001, 92527258002, 92527258003, 92527258011

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.738 ± 0.321 (0.495) C:74% T:97%	pCi/L	04/09/21 12:06	

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

**REPORT OF LABORATORY ANALYSIS**

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-2 SEMIANNUAL RADS

Pace Project No.: 92527258

QC Batch:	440500	Analysis Method:	EPA 9315
QC Batch Method:	EPA 9315	Analysis Description:	9315 Total Radium
		Laboratory:	Pace Analytical Services - Greensburg

Associated Lab Samples: 92527258020, 92527258021, 92527258022

METHOD BLANK: 2126663 Matrix: Water

Associated Lab Samples: 92527258020, 92527258021, 92527258022

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.102 ± 0.173 (0.390) C:90% T:NA	pCi/L	04/05/21 07:54	

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

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-2 SEMIANNUAL RADS

Pace Project No.: 92527258

QC Batch: 440491

Analysis Method: EPA 9320

QC Batch Method: EPA 9320

Analysis Description: 9320 Radium 228

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92527258004, 92527258005, 92527258006, 92527258007, 92527258008, 92527258009, 92527258010, 92527258012, 92527258013, 92527258014, 92527258015, 92527258016, 92527258017, 92527258018, 92527258019

METHOD BLANK: 2126646

Matrix: Water

Associated Lab Samples: 92527258004, 92527258005, 92527258006, 92527258007, 92527258008, 92527258009, 92527258010, 92527258012, 92527258013, 92527258014, 92527258015, 92527258016, 92527258017, 92527258018, 92527258019

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.826 ± 0.447 (0.791) C:67% T:78%	pCi/L	04/09/21 15:22	

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

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-2 SEMIANNUAL RADS  
Pace Project No.: 92527258

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QC Batch:	439773	Analysis Method:	EPA 9315
QC Batch Method:	EPA 9315	Analysis Description:	9315 Total Radium
		Laboratory:	Pace Analytical Services - Greensburg

Associated Lab Samples: 92527258001, 92527258002, 92527258003, 92527258004, 92527258005, 92527258006, 92527258007, 92527258008, 92527258009

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METHOD BLANK: 2123469 Matrix: Water

Associated Lab Samples: 92527258001, 92527258002, 92527258003, 92527258004, 92527258005, 92527258006, 92527258007, 92527258008, 92527258009

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0133 ± 0.113 (0.309) C:70% T:NA	pCi/L	03/29/21 07:58	

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

### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: HAMMOND AP-2 SEMIANNUAL RADS

Pace Project No.: 92527258

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### DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

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

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

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-2 SEMIANNUAL RADS  
Pace Project No.: 92527258

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92527258001	HGWA-1	EPA 9315	439773		
92527258002	HGWA-4	EPA 9315	439773		
92527258003	HGWA-42D	EPA 9315	439773		
92527258004	HGWA-44D	EPA 9315	439773		
92527258005	HGWA-2	EPA 9315	439773		
92527258006	HGWA-3	EPA 9315	439773		
92527258007	HGWA-5	EPA 9315	439773		
92527258008	HGWA-6	EPA 9315	439773		
92527258009	HGWA-43D	EPA 9315	439773		
92527258010	MW-37D	EPA 9315	440499		
92527258011	HGWC-15	EPA 9315	440499		
92527258012	HGWC-14	EPA 9315	440499		
92527258013	HGWC-16	EPA 9315	440499		
92527258014	MW-22	EPA 9315	440499		
92527258015	MW-23D	EPA 9315	440499		
92527258016	HGWC-17	EPA 9315	440499		
92527258017	HGWC-18	EPA 9315	440499		
92527258018	MW-21D	EPA 9315	440499		
92527258019	MW-33	EPA 9315	440499		
92527258020	DUP-2	EPA 9315	440500		
92527258021	EB-2	EPA 9315	440500		
92527258022	FB-2	EPA 9315	440500		
92527258023	MW-35	EPA 9315	441707		
92527258001	HGWA-1	EPA 9320	440490		
92527258002	HGWA-4	EPA 9320	440490		
92527258003	HGWA-42D	EPA 9320	440490		
92527258004	HGWA-44D	EPA 9320	440491		
92527258005	HGWA-2	EPA 9320	440491		
92527258006	HGWA-3	EPA 9320	440491		
92527258007	HGWA-5	EPA 9320	440491		
92527258008	HGWA-6	EPA 9320	440491		
92527258009	HGWA-43D	EPA 9320	440491		
92527258010	MW-37D	EPA 9320	440491		
92527258011	HGWC-15	EPA 9320	440490		
92527258012	HGWC-14	EPA 9320	440491		
92527258013	HGWC-16	EPA 9320	440491		
92527258014	MW-22	EPA 9320	440491		
92527258015	MW-23D	EPA 9320	440491		
92527258016	HGWC-17	EPA 9320	440491		
92527258017	HGWC-18	EPA 9320	440491		
92527258018	MW-21D	EPA 9320	440491		
92527258019	MW-33	EPA 9320	440491		
92527258020	DUP-2	EPA 9320	440493		
92527258021	EB-2	EPA 9320	440493		
92527258022	FB-2	EPA 9320	440493		

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: HAMMOND AP-2 SEMIANNUAL RAD5  
Pace Project No.: 92527258

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92527258023	MW-35	EPA 9320	442226		
92527258001	HGWA-1	Total Radium Calculation	442893		
92527258002	HGWA-4	Total Radium Calculation	442893		
92527258003	HGWA-42D	Total Radium Calculation	442893		
92527258004	HGWA-44D	Total Radium Calculation	442893		
92527258005	HGWA-2	Total Radium Calculation	442893		
92527258006	HGWA-3	Total Radium Calculation	442893		
92527258007	HGWA-5	Total Radium Calculation	443029		
92527258008	HGWA-6	Total Radium Calculation	443120		
92527258009	HGWA-43D	Total Radium Calculation	443120		
92527258010	MW-37D	Total Radium Calculation	443120		
92527258011	HGWC-15	Total Radium Calculation	442893		
92527258012	HGWC-14	Total Radium Calculation	443120		
92527258013	HGWC-16	Total Radium Calculation	443120		
92527258014	MW-22	Total Radium Calculation	443120		
92527258015	MW-23D	Total Radium Calculation	443120		
92527258016	HGWC-17	Total Radium Calculation	443120		
92527258017	HGWC-18	Total Radium Calculation	443120		
92527258018	MW-21D	Total Radium Calculation	443120		
92527258019	MW-33	Total Radium Calculation	443120		
92527258020	DUP-2	Total Radium Calculation	443123		
92527258021	EB-2	Total Radium Calculation	443123		
92527258022	FB-2	Total Radium Calculation	443123		
92527258023	MW-35	Total Radium Calculation	443249		

### REPORT OF LABORATORY ANALYSIS

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### CHAIN-OF-CUSTODY / Analytical Request Do

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

# W0#: 92527256



92527256

**Section A**

Required Client Information:

Company: GA Power  
Address: Atlanta, GA

Request For: SCS Contacts  
Copy to: Geosyntec Contacts

Email To: SCS Contacts  
Project Name: Plant Hammond AP-2-Semianual  
Project Number: GW6581B

Requested Due Date/TIME: 10 Day

**Section B**

Required Project Information:

Project To: SCS Contacts  
Purchase Order No.:  
Reference:  
Purchase Project Name: Kevin Hermy  
Purchase Order # 10838-3

**Section C**

Agency Information:

Address: Southem Co.

Company Name:  
Address:  
Reference:  
Purchase Project Name:  
Purchase Order # 10838-3

**REGULATORY AGENCY:**  
 NPDES  GROUND WATER  DRINKING WATER  
 UST  RCRA  OTHER    
 State: GA

ITEM #	Section D Required Client Information	Valid Matrix Codes	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives	Requested Analysis Filtered (Y/N)				Residual Chlorine (Y/N)	Pace Project No./ Lab ID.
					DATE	TIME				DATE	TIME	Chloride, Fluoride, Sulfate	App. III & IV Metals*		
1	HGWA-1	DW WATER	WT G	G	3/10/12	1610	17	5	2	3	X	X	X	X	
2	HGWA-2	DW WATER	WT G	G	3/10/12	1610	17	5	2	3	X	X	X	X	
3	HGWA-3	DW WATER	WT G	G	3/10/12	1621	16	5	2	3	X	X	X	X	
4	HGWA-4	DW WATER	WT G	G	3/10/12	1621	16	5	2	3	X	X	X	X	
5	HGWA-5	DW WATER	WT G	G	3/10/12	1621	16	5	2	3	X	X	X	X	
6	HGWA-6	DW WATER	WT G	G	3/10/12	1623	16	5	2	3	X	X	X	X	
7	HGWA-42D	DW WATER	WT G	G	3/10/12	1623	16	5	2	3	X	X	X	X	
8	HGWA-43D	DW WATER	WT G	G	3/10/12	1630	16	5	2	3	X	X	X	X	
9	HGWA-44D	DW WATER	WT G	G	3/10/12	1630	16	5	2	3	X	X	X	X	
10	HGWA-44	DW WATER	WT G	G	3/10/12	1630	16	5	2	3	X	X	X	X	
11	HGWA-15	DW WATER	WT G	G	3/10/12	1630	16	5	2	3	X	X	X	X	
12	HGWA-16	DW WATER	WT G	G	3/10/12	1630	16	5	2	3	X	X	X	X	

**ADDITIONAL COMMENTS:**  
 Please note dry wells - strike through any wells not sampled, and code when the last sample for the event has been taken.  
 \*App. III & IV Metals = Stb. As. Ba. Be. B. Cd. Cr. Co. Pb. Li. Mo. Se. Tl

**RELINQUISHED BY / AFFILIATION:** *Homes Head Lines*

**ACCEPTED BY / AFFILIATION:** *Homes Head Lines*

**DATE:** 3/10/12

**DATE:** 3/10/12

**DATE:** 3/11/12

**DATE:** 3/14/12

**DATE:** 3/10/12

**DATE:** 3/11/12

**DATE:** 3/14/12

**DATE:** 3/10/12

**DATE:** 3/11/12

**DATE:** 3/14/12

**Temp in °C:** 21.0

**Received on (ce) (Y/N):** Y

**Custody Sealed Cooler (Y/N):** N

**Samples Intact (Y/N):** Y

**SAMPLER NAME AND SIGNATURE:** *Homes Head Lines*

**PRINT Name of SAMPLER:** Homes Head Lines

**SIGNATURE of SAMPLER:** *[Signature]*

**DATE SIGNED (MM/DD/YYYY):** 03/10/12

# 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:

**Section B**  
Required Project Information:

**Section C**  
Location Information:

Company: GA Power	Report to: SCS Contacts	Address: Atlanta, GA	Copy To: Geosyntec Contacts
Requested Client Information:	Report to: SCS Contacts	Address:	Copy To: Geosyntec Contacts
Email To: SCS Contacts	Purchase Order No.:	Address:	Copy To: Geosyntec Contacts
Phone: Far	Project Name: Plant Hammond AP-2 Semiannual	Address:	Copy To: Geosyntec Contacts
Requested Date Delivered: 10 Day	Project Number: GWR6591B	Address:	Copy To: Geosyntec Contacts
		Address:	Copy To: Geosyntec Contacts
		Address:	Copy To: Geosyntec Contacts
		Address:	Copy To: Geosyntec Contacts


ITEM #	Section D Required Client Information	Valid Matrix Codes MATRIX CODE	Sample Type (G=GRAB C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION		# OF CONTAINERS	Preservatives	Analysis Test			Residual Chlorine (Y/N)	pH =					
				DATE	TIME	DATE	TIME			Unpreserved	H <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>			HCl	NaOH	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>	Methanol	Other
1	HGWMA-1	WT	G	3/11/12	0854	-	-	5											
2	HGWMA-2	WT	G	3/11/12	1125	-	-	5											
3	HGWMA-3	WT	G	3/11/12	1125	-	-	5											
4	HGWMA-4	WT	G	3/11/12	1125	-	-	5											
5	HGWMA-5	WT	G	3/11/12	1125	-	-	5											
6	HGWMA-6	WT	G	3/11/12	1125	-	-	5											
7	HGWMA-7	WT	G	3/11/12	1125	-	-	5											
8	HGWMA-8	WT	G	3/11/12	1125	-	-	5											
9	HGWMA-9	WT	G	3/11/12	1125	-	-	5											
10	HGWMA-10	WT	G	3/11/12	1125	-	-	5											
11	HGWMA-11	WT	G	3/11/12	1125	-	-	5											
12	HGWMA-12	WT	G	3/11/12	1125	-	-	5											

\*App. II & IV Metals = Pb, Ag, Ba, Se, B, Cr, Cd, Cu, Cr, Co, Fe, Ni, Mn, Sr, Ti

One sample per submitted for HGWA-123456789 but they will be reported for AP-1234 SCS

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

RELEASING BY / AFFILIATION		DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
Thomas Kerkel / Fred		3/12/12	1310	Thomas Kerkel / Fred	3/12/12	1310
NASHUA TOWN / Fred		3/12/12	1343	NASHUA TOWN / Fred	3/12/12	1343
Port of Peace		3/12/12	1639	Port of Peace	3/12/12	1639

SAMPLER NAME AND SIGNATURE		DATE	TIME
PRINT Name of SAMPLER: Thomas Kerkel / Fred		3/11/12	
SIGNATURE of SAMPLER: 		3/11/12	

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



# CHAIN-OF-CUSTODY / Analytical Request Document

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

<b>Section A</b> Requested Client Information:		<b>Section B</b> Requested Project Information:		<b>Section C</b> Invoice Information:	
Company: GA Power	Address: Atlanta, GA	Report To: SCS Contacts	Copy To: Geosyntec Contacts	Attention: Southern Co.	Company Name:
Requested Due Date/TAT: 10 Day	Project Name: Plant Hammond AP-2 Semiannual	Purchase Order No.:	Project Number: GW6581B	Address:	Site Location: GA
Requested Date/TAT: 10 Day	Project Name: Plant Hammond AP-2 Semiannual	Purchase Order No.:	Project Number: GW6581B	Company Name:	REGULATORY AGENCY:
	Project Name: Plant Hammond AP-2 Semiannual	Purchase Order No.:	Project Number: GW6581B	Address:	<input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER
	Project Name: Plant Hammond AP-2 Semiannual	Purchase Order No.:	Project Number: GW6581B	Address:	<input type="checkbox"/> UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER
	Project Name: Plant Hammond AP-2 Semiannual	Purchase Order No.:	Project Number: GW6581B	Address:	State: GA

ITEM #	Section D Requested Client Information	Valid Matrix Codes MATRIX CODE	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)	pH =
											Unpreserved	H <sub>2</sub> SO <sub>4</sub>				
1	HQWC-17	WT G	WT G							5	2	3				
2	HQWC-18	WT G	WT G							5	2	3				
3	MMW-21D	WT G	WT G							5	2	3				
4	MMW-22	WT G	WT G							5	2	3				
5	MMW-23D	WT G	WT G							5	2	3				
6	MMW-33	WT G	WT G							5	2	3				
7	MMW-35	WT G	WT G							5	2	3				
8	MMW-37D	WT G	WT G							5	2	3				
9	Dup-2	WT G	WT G							5	2	3				
10	FB-2	WT G	WT G							5	2	3				
11	FB-2	WT G	WT G							5	2	3				
12		WT G	WT G							5	2	3				

<b>ADDITIONAL COMMENTS</b>		<b>RELINQUISHED BY / AFFILIATION</b>		<b>ACCEPTED BY / AFFILIATION</b>		<b>SAMPLE CONDITIONS</b>	
Please make dry wells, stone through any wells not sampled, and note when the last sample for the event has been taken. App. III & IV Metals = Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Pb, U, Mo, Se, Li		SASZL 3/15/21		SASZL 3/15/21		Temp in °C	
One sample set submitted for HGWA-1223456789 but they will be reported for AP-1/2/3 SDGs.		SASZL 3/15/21		SASZL 3/15/21		Received on Ice (Y/N)	
		SASZL 3/15/21		SASZL 3/15/21		Custody Sealed Cooler (Y/N)	
		SASZL 3/15/21		SASZL 3/15/21		Samples Intact (Y/N)	

# CHAIN-OF-CUSTODY / Analytical Request Document

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

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

Section B  
Required Project Information:  
Report To: SCS Contacts  
Copy To: Geosyntec Contacts  
Purchase Order No.:  
Project Name: Plant Hammond AP-2-Semiannual  
Project Number: GW658-1B

Section C  
Invoicing Information:  
Advertiser: Southern Co.  
Company Name:  
Address:  
Phone:  
Facsimile:  
Reference: Kevin Herring  
Pace Prepaid:  
Pace Prepaid #: 10839-3

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

ITEM #	Section D Required Chain Information Valid Matrix Codes WATER: drinking water, WASTE WATER, PRODUCT, SOLID, OTHER MATRIX CODE (see valid codes to left) SAMPLE TYPE (G=GRAB C=COMP) DATE TIME DATE TIME SAMPLE TEMP AT COLLECTION # OF CONTAINERS Unpreserved H <sub>2</sub> SO <sub>4</sub> HNO <sub>3</sub> HCl NaOH Na <sub>2</sub> S <sub>2</sub> O <sub>5</sub> Methanol Other Analysis Test Chloride, Fluoride, Sulfate App. III & IV Metals* RAD 226/228 TDS Residual Chlorine (Y/N) Page Project No./ Lab ID.	MATERIAL	CODES EW WW P SL WP AN OT	COLLECTED COMPOSITE	ACQUIRED BY / AFFILIATION		ACCEPTED BY / AFFILIATION		DATE	TIME	TEMP IN °C	RECEIVED ON ICE (Y/N)	CUSTODY SEALED CORRECT (Y/N)	SAMPLES INTACT (Y/N)
					DATE	TIME	DATE	TIME						
					DATE	TIME	DATE	TIME						
1	HGWA-1	WT	G											
2	HGWA-2	WT	G											
3	HGWA-3	WT	G											
4	HGWA-4	WT	G											
5	HGWA-5	WT	G											
6	HGWA-6	WT	G											
7	HGWA-42D	WT	G											
8	HGWA-43D	WT	G											
9	HGWA-44D	WT	G											
10	HGWA-14	WT	G											
11	HGWA-15	WT	G											
12	HGWA-10	WT	G											
ADDITIONAL COMMENTS				REQUISITIONED BY / AFFILIATION		ACCEPTED BY / AFFILIATION				SAMPLE CONDITIONS				

SAMPLER NAME AND SIGNATURE  
 PRINT NAME OF SAMPLER: Thomas Heeder  
 SIGNATURE OF SAMPLER:

DATE SIGNED (MM/DD/YYYY): 3/16/21

Temp in °C: 5.4  
 Received on Ice (Y/N): Y  
 Custody Sealed Correct (Y/N): Y  
 Samples Intact (Y/N): Y





# CHAIN-OF-CUSTODY / Analytical Request Document

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

<b>Section A</b> Required Client Information:		<b>Section B</b> Required Project Information		<b>Section C</b> Invoice Information:	
Company:	GA Power	Report To:	SCS Contacts	Attention:	Southern Co.
Address:	Atlanta, GA	Copy To:	Geosyntec Contacts	Company Name:	
		Purchase Order No.:		Address:	
Email To:	SCS Contacts	Project Name:	Plant Hammond AP-2 Semiannual	Site Location:	GA
Phone:		Project Number:	GW66818	State:	
Requested Due Date:	16 Day			Requested Analysis Filtered (Y/N):	
				REGULATORY AGENCY	<input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input checked="" type="checkbox"/> DRINKING WATER
				OTHER USE	<input type="checkbox"/> UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER USE

ITEM #	Section D Required Client Information	Valid Matrix Codes MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives					Analysis Test			Requested Analysis Filtered (Y/N)																								
				EQUIPMENT	SUPPORT					DATE	TIME	Unpreserved	H <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>	HCl	NaOH	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>	Methanol	Other	Chloride, Fluoride, Sulfate	App. III & IV Metals*	HAD 226/228	TDS																			
1	HQWA-1		G						5	2	3						X	X	X	X																						
2	HQWA-2		G						5	2	3						X	X	X	X																						
3	HQWA-3		G						5	2	3						X	X	X	X																						
4	HQWA-4		G						5	2	3						X	X	X	X																						
5	HQWA-5		G						5	2	3						X	X	X	X																						
6	HQWA-6		G						5	2	3						X	X	X	X																						
7	HQWA-42D		G						5	2	3						X	X	X	X																						
8	HQWA-44D		G						5	2	3						X	X	X	X																						
9	HQWC-14		G						5	2	3						X	X	X	X																						
10	HQWC-16		G						5	2	3						X	X	X	X																						
11	HQWC-16		G						5	2	3						X	X	X	X																						
12	HQWC-16		G						5	2	3						X	X	X	X																						

**ADDITIONAL COMMENTS:**

Please note dry wells since through any wells not sampled, and note when the last sample for the event has been taken.  
 \*App. III & IV Metals - Sr, As, Ba, Bi, Br, Cd, Ca, Cr, Co, Pb, U, Mo, Se, Ti  
 One sample set submitted for HQWA-12/54/30/40 but they will be reported for AP-12/54 SDOs.

**SAMPLER NAME AND SIGNATURE:**

PRINT Name of SAMPLER: Thomas Hester, Cheryl Russco  
 SIGNATURE of SAMPLER: *[Signature]* DATE Signed (MM/DD/YY): 3/16/12

**RECEIVED BY / AFFILIATION:** Thomas Hester / Pace  
 DATE: 3/16/12

**ACCEPTED BY / AFFILIATION:** Lynn Williams / Pace  
 DATE: 3/16/12

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

Residual Chlorine (Y/N): \_\_\_\_\_  
 Pace Project No./ Lab ID: \_\_\_\_\_  
 pH = \_\_\_\_\_  
 pH = \_\_\_\_\_  
 pH = \_\_\_\_\_  
 pH = \_\_\_\_\_  
 pH = \_\_\_\_\_  
 pH = \_\_\_\_\_  
 pH = \_\_\_\_\_  
 pH = \_\_\_\_\_  
 pH = \_\_\_\_\_  
 pH = \_\_\_\_\_  
 pH = 4.72  
 pH = \_\_\_\_\_  
 pH = 7.19

FALL-Q-020rev.07, 1S-Feb-2007



# CHAIN-OF-CUSTODY / Analytical Request Document

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

Page: 2 of 3

Section A Required Client Information Company: GA Power Address: Atlanta, GA Email To: SCS Contacts Phone: _____ Requested Due Date/TIME: _____ to Day		Section B Required Project Information Report To: SCS Contacts Copy To: Geosyntec Contacts Purchase Order No.: _____ Project Name: Plant Hammond AP-2 Semiannual Project Number: GW68818		Section C Invoice Information Attention: Southern Co. Company Name: _____ Address: _____ P.O. Box: _____ State: _____ City: _____ Zip: _____ Fax: _____ Purchase Order No.: 10839-3 Manager: Kevin Herring Phone Prefix: 10839-3	
--	--	--	--	--	--

ITEM #	Section D Required Client Information	VALID Matrix Codes MATERIALS: DOMESTIC WATER, WASTE WATER, INDUSTRIAL WASTE, FUEL OIL, AIR, OTHER CODES: DW, WT, WW, P, SL, OL, WP, AW, OT, TS	MATRIX CODE (see valid codes pg 10)		SAMPLE TYPE (G=GRAB C=COMP)		DATE	TIME	DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives						Analysis Test				Residual Chlorine (Y/N)	pH =			
			(G)	(C)	(G)	(C)							Unpreserved	H <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>	HCl	NaOH	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>	Methanol	Other	Y	N			Y	N	Y
1	HGWC-17		WT	G			3/17/21	1351	3/18/21	1521	5	2															
2	HGWC-18		WT	G			3/17/21	1351	3/18/21	1521	5	2															
3	MMW-21D		WT	G			3/17/21	1351	3/18/21	1521	5	2															
4	MMW-22		WT	G			3/17/21	1351	3/18/21	1521	5	2															
5	MMW-23D		WT	G			3/17/21	1351	3/18/21	1521	5	2															
6	MMW-33		WT	G			3/17/21	1351	3/18/21	1521	5	2															
7	MMW-35		WT	G			3/17/21	1351	3/18/21	1521	5	2															
8	MMW-37D		WT	G			3/17/21	1351	3/18/21	1521	5	2															
9	Dup-2		WT	G			3/17/21	1351	3/18/21	1521	5	2															
10	EB-2		WT	G			3/17/21	1351	3/18/21	1521	5	2															
11	FB-2		WT	G			3/17/21	1351	3/18/21	1521	5	2															
12			WT	G			3/17/21	1351	3/18/21	1521	5	2															

Additional Comments: Please note dry wells, wells though any wells not sampled, and note when the last sample for the client has been taken. App III & IV Metals = Sb, As, Ba, Be, Bi, Cd, Ca, Cr, Co, Pb, U, Mo, Se, Ti. One sample set submitted for HGWA-17343344D but they will be rejected for AP-1225 SOCs.

RELINQUISHED BY / AFFILIATION: Thomas Heisterkamp  
DATE: 3/18/21

ACCEPTED BY / AFFILIATION: William Pace  
DATE: 3/18/21

SAMPLER NAME AND SIGNATURE: Thomas Heisterkamp  
PRINT Name of SAMPLER: Thomas Heisterkamp  
SIGNATURE of SAMPLER: [Signature]

DATE Signed (MM/DD/YY): 3/18/21

DATE Signed (MM/DD/YY): 3/18/21

Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples intact (Y/N)
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# CHAIN-OF-CUSTODY / Analytical Request Document

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

Page: 1 of 1

Section A Requested Client Information Company: GA Power Address: Atlanta, GA		Section B Requested Project Information Report To: SCS Contacts Copy To: Geosyntec Contacts		Section C Invoice Information Attention: Southern Co. Company Name: _____ Address: _____	
Project Name: SCS Contacts	Fac: _____	Purchase Order No.:	Project Name: Plant Hammond AP-2 Semiannual	Project Date:	Project Profile: 10839-3
Requested Date (DATE): 10 Day	Project Number: GWSS818	Plant Name:	Plant Profile:	Plant Profile:	Plant Profile:
REGULATORY AGENCY			REGULATORY AGENCY		
<input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER (see --)			Site Location: _____ STATE: GA		

ITEM #	Section D Required Client Information	Valid Matrix Codes MATRIX DRAINAGE WATER WATER WASTE WATER PRODUCT SOIL/SOLID OIL WIPE AIR OTHER TSS	SCGS DW WT WW P SL OL WP AR OT TS	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED			SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives							Analysis Test			Residual Chlorine (Y/N)	pH = _____							
						DATE	TIME	DATE			TIME	UNPRESERVED	H <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>	HCl	NaOH	Na <sub>2</sub> S <sub>2</sub> O <sub>5</sub>	Methanol	Other	Chloride, Fluoride, Sulfate			App. III & IV Metals*	RAD 228/228	TDS				
1	HGWC-17			WT G	G	3/17/21	144K	19	5	2	3	X	X	X	X	X	X	X	X	X	X	X	X	X					
2	HGWC-18			WT G	G	3/18/21	120L	16	5	2	3	X	X	X	X	X	X	X	X	X	X	X	X	X					
3	MW-21D			WT G	G	3/17/21	120S	18	5	2	3	X	X	X	X	X	X	X	X	X	X	X	X	X					
4	MW-22			WT G	G				5	2	3	X	X	X	X	X	X	X	X	X	X	X	X	X					
5	MW-23B			WT G	G				5	2	3	X	X	X	X	X	X	X	X	X	X	X	X	X					
6	MW-33			WT G	G	3/18/21	164C	19	5	2	3	X	X	X	X	X	X	X	X	X	X	X	X	X					
7	MW-35			WT G	G				5	2	3	X	X	X	X	X	X	X	X	X	X	X	X	X					
8	MW-37D			WT G	G				5	2	3	X	X	X	X	X	X	X	X	X	X	X	X	X					
9	Dup-2			WT G	G	3/18/21		19	5	2	3	X	X	X	X	X	X	X	X	X	X	X	X	X					
10	EB-2			WT G	G	3/18/21	125C	19	5	2	3	X	X	X	X	X	X	X	X	X	X	X	X	X					
11	FB-2			WT G	G	3/18/21	157C	19	5	2	3	X	X	X	X	X	X	X	X	X	X	X	X	X					
12																													

Section D  
Additional Comments: \_\_\_\_\_  
Please note dry wells. Stir through any wells not sampled, and note when the last sample for the event has been taken.  
App. III & IV Metals = Sp. As, Ba, Be, B, Cd, Ca, Cr, Co, Pb, U, Mo, Se, Tl  
One sample set submitted for HGWA-102543314AD but they will be reported for AP-1023 SDGs

RELEASING BY / AFFILIATION: Edward Mader, P.E. DATE: 3/19/21 TIME: 1:30

ACCEPTED BY / AFFILIATION: Kevin Herring DATE: 3/19/21 TIME: 1:34

SAMPLER NAME AND SIGNATURE: \_\_\_\_\_

PRINT Name of SAMPLER: Edward Mader & Kevin Herring

SIGNATURE of SAMPLER: [Signature]

DATE Signed (MM/DD/YY): 3/19/21

Temp in °C: \_\_\_\_\_

Received on Ice (Y/N): \_\_\_\_\_

Custody Sealed Cooler (Y/N): \_\_\_\_\_

Samples Intact (Y/N): \_\_\_\_\_

FALL-Q-020/REV.07, 15-FEB-2007

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

Page: 1 of ( )

**Section A** Required Client Information  
Company: **GA Power**

**Section B** Required Project Information  
Report To: **SCS Contacts**

**Section C** Service Information  
Attention: **Southern Co.**

Address: **Atlanta, GA**

Copy To: **Geosynthetic Contacts**

Company Name: **Southern Co.**

Email To: **SCS Contacts**

Address: **Plant Hammond AP-2-Semiannual**

Phone: **SCS Contacts**

Requester Due Date/TIME: **10 Day**

Project Name: **Plant Hammond AP-2-Semiannual**

Project Number: **GW65818**

Address: **Plant Hammond**

Reference: **Kevin Herring**

Site Location: **Plant Hammond**

Pace Order #: **10838-3**

Requested Analysis Filtered (Y/N)

REGULATORY AGENCY

NPDES  GROUND WATER  DRINKING WATER  
 UST  RCRA  OTHER OR--

STATE: GA

ITEM #	Section D Required Client Information	VALID Matrix Codes MATRIX CODE	VOID Matrix Codes	DATE	TIME	DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives	Analysis Test	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	pH =
1	HGWC-17	WT G	WT G						5	2				
2	HGWC-18	WT G	WT G						5	2				
3	MW-21D	WT G	WT G						5	2				
4	MW-22	WT G	WT G						5	2				
5	MW-23D	WT G	WT G						5	2				
6	MW-33	WT G	WT G						5	2				
7	MW-35	WT G	WT G						5	2				
8	MW-37D	WT G	WT G						5	2				
9	Dup-2	WT G	WT G						5	2				
10	EB-2	WT G	WT G						5	2				
11	FB-2	WT G	WT G						5	2				
12														

**Section D** Required Client Information

**Section E** Void Matrix Codes

**Section F** Matrix Code

**Section G** Sample Type (G=GRAB Co=COMP)

**Section H** Date

**Section I** Time

**Section J** Date

**Section K** Time

**Section L** Sample Temp at Collection

**Section M** # of Containers

**Section N** Preservatives

**Section O** Analysis Test

**Section P** Requested Analysis Filtered (Y/N)

**Section Q** Residual Chlorine (Y/N)

**Section R** pH =

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

VOID Matrix Codes: DW, WT, MW, P, S, T, C, M, A, B, ST, TO

Matrix Code: **WT G**

Sample Type: **G**

Date: **3/17/01**

Time: **17:45**

Sample Temp: **16.6**

# of Containers: **5**

Preservatives: **None**

Analysis Test: **Chloride, Fluoride, Sulfate, App. III & IV Metals, RAD 226/228, TDS**

Requested Analysis Filtered: **N**

Residual Chlorine: **N**

pH = **4.89**

Pace Project No./ Lab I.D.: **1692**

**ADDITIONAL COMMENTS**

**RELINQUISHED BY / AFFILIATION**: **Thomas A. Kelly / Pace**

**DATE**: **3/27/01**

**TIME**: **14:00**

**ACCEPTED BY / AFFILIATION**: **Kevin Herring / Pace**

**DATE**: **3/27/01**

**TIME**: **15:40**

Temp in °C: **16.6**

Received on Ice (Y/N): **Y**

Custody Sealed Cooler (Y/N): **N**

Samples Intact (Y/N): **Y**

**SAMPLER NAME AND SIGNATURE**: **Kevin Herring**

**PRINT Name of SAMPLER**: **Kevin Herring**

**SIGNATURE of SAMPLER**: **[Signature]**

**DATE Signed (MM/DD/YY)**: **3/16/01**

**Temp in °C**: **16.6**

**Received on Ice (Y/N)**: **Y**

**Custody Sealed Cooler (Y/N)**: **N**

**Samples Intact (Y/N)**: **Y**

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

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

# Quality Control Sample Performance Assessment

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

Test: Ra-226  
Analyst: CLA  
Date: 3/26/2021  
Worklist: 59450  
Matrix: DW



Method Blank Assessment	
MB Sample ID	2123469
MB concentration:	0.013
M/B Counting Uncertainty:	0.113
MB MDIC:	0.309
MB Numerical Performance Indicator:	0.23
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCS/D (Y or N)?	
	LCS59450	Y
Count Date:	3/29/2021	LCS59450
Spike I.D.:	19-033	19-033
Decay Corrected Spike Concentration (pCi/mL):	24.039	24.039
Volume Used (mL):	0.10	0.10
Aliquot Volume (L, g, F):	0.505	0.504
Target Conc. (pCi/L, g, F):	4.763	4.773
Uncertainty (Calculated):	0.057	0.057
Result (pCi/L, g, F):	4.437	5.482
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.594	0.737
Numerical Performance Indicator:	-1.07	1.88
Percent Recovery:	93.15%	114.86%
Status vs Numerical Indicator:	N/A	N/A
Status vs Recovery:	Pass	Pass
Upper % Recovery Limits:	125%	125%
Lower % Recovery Limits:	75%	75%

Duplicate Sample Assessment	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Sample I.D.:	LCS59450
Duplicate Sample I.D.:	LCS59450
Sample Result (pCi/L, g, F):	4.437
Sample Duplicate Result (pCi/L, g, F):	0.594
Sample Duplicate Counting Uncertainty (pCi/L, g, F):	5.482
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.737
Are sample and/or duplicate results below RL?	NO
Duplicate Numerical Performance Indicator:	-2.166
Duplicate (Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	20.86%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Pass
% RPD Limit:	25%

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

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

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

Comments:

Am 3/29/21

# Quality Control Sample Performance Assessment



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

Test: Ra-226  
Analyst: CLA  
Date: 3/26/2021  
Worklist: 59450  
Matrix: DW

Method Blank Assessment	
MB Sample ID	2123469
MB concentration:	0.013
M/B Counting Uncertainty:	0.113
MB MDC:	0.309
MB Numerical Performance Indicator:	0.23
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment		LCS#	Y or N?	N
Count Date:		LCS59450		LCS059450
Spike I.D.:		3/29/2021		
Decay Corrected Spike Concentration (pCi/mL):		19-033		
Volume Used (mL):		24.039		
Aliquot Volume (L, g, F):		0.10		
Target Conc. (pCi/L, g, F):		0.505		
Uncertainty (Calculated):		4.763		
Result (pCi/L, g, F):		0.057		
LCS/LCSD Counting Uncertainty (pCi/L, g, F):		4.437		
Numerical Performance Indicator:		0.594		
Percent Recovery:		-1.07		
Status vs Numerical Indicator:		93.15%		
Upper % Recovery Limits:		N/A		
Lower % Recovery Limits:		Pass		
		125%		
		75%		

Duplicate Sample Assessment		Enter Duplicate sample IDs if other than LCS/LCSD in the space below.	
Sample I.D.:	92527258001	92527258001	92527258001
Duplicate Sample I.D.:	92527258001DUP		
Sample Result Counting Uncertainty (pCi/L, g, F):	-0.074		
Sample Duplicate Result (pCi/L, g, F):	0.070		
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.120		
Are sample and/or duplicate results below RL?	0.145		
Duplicate Numerical Performance Indicator:	See Below ##		
Duplicate RPD:	-2.367		
Duplicate Status vs Numerical Indicator:	852.72%		
Duplicate Status vs RPD:	N/A		
% RPD Limit:	Pass		
	25%		

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

Comments:

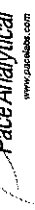
\*\*\*Batch must be re-prepped due to unacceptable precision. N/A LAM 3/29/21

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

Matrix Spike/Matrix Spike Duplicate Sample Assessment
Sample I.D. Sample MS I.D. Sample MSD I.D. Matrix Spike Result Counting Uncertainty (pCi/L, g, F): Sample Matrix Spike Duplicate Result: Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F): Duplicate Numerical Performance Indicator: 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:

*Handwritten:* OMS 3/29/21  
LAM 3/29/21

# Quality Control Sample Performance Assessment



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

Test: Ra-226  
Analyst: LAL  
Date: 4/5/2021  
Worklist: 59560  
Matrix: DW

Method Blank Assessment	
MB Sample ID	2126661
MB concentration:	0.090
M/B Counting Uncertainty:	0.196
MB MDC:	0.458
MB Numerical Performance Indicator:	0.90
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	
LCSID [Y or N]?	N
LCS59560	LCS59560
Count Date:	4/5/2021
Spike I.D.:	19-033
Decay Corrected Spike Concentration (pCi/mL):	24.039
Volume Used (mL):	0.10
Aliquot Volume (L, g, F):	0.504
Target Conc. (pCi/L, g, F):	4.771
Uncertainty (Calculated):	0.057
Result (pCi/L, g, F):	5.065
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.277
Numerical Performance Indicator:	2.04
Percent Recovery:	106.17%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass
Upper % Recovery Limits:	125%
Lower % Recovery Limits:	75%

Duplicate Sample Assessment	
Sample I.D.:	92527258011
Duplicate Sample I.D.:	92527258011DUP
Sample Result (pCi/L, g, F):	-0.015
Sample Duplicate Result (pCi/L, g, F):	0.075
Sample Duplicate Counting Uncertainty (pCi/L, g, F):	0.050
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.058
Are sample and/or duplicate results below RL?	See Below #
Duplicate Numerical Performance Indicator:	-1.338
Duplicate RPD:	375.86%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Fail***
% RPD Limit:	25%

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

Comments:

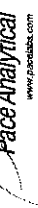
\*\*\*Batch must be re-prepped due to unacceptable precision. N/A

AM 4/16/21

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

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

# Quality Control Sample Performance Assessment



Test: Ra-226  
 Analyst: LAL  
 Date: 4/5/2021  
 Worklist: 59560  
 Matrix: DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	2128661
MB Concentration:	0.090
MB Counting Uncertainty:	0.196
MB MDC:	0.458
MB Numerical Performance Indicator:	0.90
MB Status vs. Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment		LCS (Y or N)?	
		LCSD59560	LCSD59560
Count Date:		4/5/2021	4/5/2021
Spike I.D.:		19-033	19-033
Decay Corrected Spike Concentration (pCi/mL):		24.039	24.039
Volume Used (mL):	0.10		0.10
Aliquot Volume (L, g, F):	0.504		0.518
Target Conc. (pCi/L, g, F):	4.771		4.641
Uncertainty (Calculated):	0.057		0.056
Result (pCi/L, g, F):	5.065		4.810
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.277		0.261
Numerical Performance Indicator:	2.04		1.24
Percent Recovery:	106.17%		103.65%
Status vs Numerical Indicator:	N/A		N/A
Status vs Recovery:	Pass		Pass
Upper % Recovery Limits:	125%		125%
Lower % Recovery Limits:	75%		75%

Duplicate Sample Assessment	
Sample I.D.:	LCSD59560
Duplicate Sample I.D.:	LCSD59560
Sample Result (pCi/L, g, F):	5.065
Sample Result Counting Uncertainty (pCi/L, g, F):	0.277
Sample Duplicate Result (pCi/L, g, F):	4.810
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.261
Are sample and/or duplicate results below RL?	NO
Duplicate Numerical Performance Indicator:	1.314
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	2.40%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Pass
% 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 I.D.:			
MS/MSD Decay Corrected Spike Concentration (pCi/mL):			
Spike Volume Used in MS (mL):			
Spike Volume Used in MSD (mL):			
MS Aliquot (L, g, F):			
MS Target Conc. (pCi/L, g, F):			
MSD Aliquot (L, g, F):			
MSD Target Conc. (pCi/L, g, F):			
MS Spike Uncertainty (calculated):			
MSD Spike Uncertainty (calculated):			
Sample Result:			
Sample Result Counting Uncertainty (pCi/L, g, F):			
Sample Matrix Spike Result:			
Sample Matrix Spike Counting Uncertainty (pCi/L, g, F):			
Sample Matrix Spike Duplicate Result:			
Sample Matrix Spike Duplicate Counting Uncertainty (pCi/L, g, F):			
MS Numerical Performance Indicator:			
MSD Numerical Performance Indicator:			
MS Percent Recovery:			
MSD Percent Recovery:			
MS Status vs Numerical Indicator:			
MSD Status vs Numerical Indicator:			
MS Status vs Recovery:			
MSD Status vs Recovery:			
MS/MSD Upper % Recovery Limits:			
MS/MSD Lower % Recovery Limits:			

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

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# Quality Control Sample Performance Assessment

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



Test: Ra-228  
Analyst: LAL  
Date: 4/1/2021  
Worklist: 59561  
Matrix: DW

Method Blank Assessment	
MB Sample ID	2126663
MB Concentration:	0.102
M/B Counting Uncertainty:	0.172
MB MDC:	0.390
MB Numerical Performance Indicator:	1.16
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment		LCSD (Y or N)?	Y
Count Date:	4/5/2021	LCS059561	4/5/2021
Spike I.D.:	19-033	LCS059561	19-033
Decay Corrected Spike Concentration (pCi/mL):	24.039		24.039
Volume Used (mL):	0.10		0.10
Aliquot Volume (L, g, F):	0.515		0.502
Target Conc. (pCi/L, g, F):	4.664		4.765
Uncertainty (Calculated):	0.056		0.057
Result (pCi/L, g, F):	4.047		4.762
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.578		0.617
Numerical Performance Indicator:	-2.08		-0.07
Percent Recovery:	86.77%		99.51%
Status vs Numerical Indicator:	N/A		N/A
Status vs Recovery:	Pass		Pass
Upper % Recovery Limits:	125%		125%
Lower % Recovery Limits:	75%		75%

Duplicate Sample Assessment		LCSD (Y or N)?	Y
Sample I.D.:	LCS059561		
Duplicate Sample I.D.:	LCS059561		
Sample Result (pCi/L, g, F):	4.047		
Sample Duplicate Result (pCi/L, g, F):	0.578		
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	4.762		
Are sample and/or duplicate results below RL?	NO		
Duplicate Numerical Performance Indicator:	-1.655		
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	13.67%		
Duplicate Status vs Numerical Indicator:	N/A		
Duplicate Status vs RPD:	Pass		
% RPD Limit:	25%		

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

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

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

Comments:

*Handwritten:* 15/21

# Quality Control Sample Performance Assessment

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



Test: Ra-226  
Analyst: CLA  
Date: 4/12/2021  
Worklist: 59709  
Matrix: DW

Method Blank Assessment	
MB Sample ID	2132285
MB concentration:	0.037
MB Counting Uncertainty:	0.210
MB MDC:	0.420
MB Numerical Performance Indicator:	0.34
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	
LCSD (Y or N)?	N
LCS59709	LCSD59709
Count Date:	4/13/2021
Spike I.D.:	19-033
Decay Corrected Spike Concentration (pCi/mL):	24.038
Volume Used (mL):	0.10
Aliquot Volume (L, g, F):	0.506
Target Conc. (pCi/L, g, F):	4.752
Uncertainty (Calculated):	0.057
Result (pCi/L, g, F):	4.586
LCSD Counting Uncertainty (pCi/L, g, F):	0.824
Numerical Performance Indicator:	-0.39
Percent Recovery:	96.50%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass
Upper % Recovery Limits:	125%
Lower % Recovery Limits:	75%

Duplicate Sample Assessment	
Sample I.D.:	92529896015
Duplicate Sample I.D.:	92529896015DUP
Sample Result (pCi/L, g, F):	0.581
Sample Result Counting Uncertainty (pCi/L, g, F):	0.304
Sample Duplicate Result (pCi/L, g, F):	0.779
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.400
Are sample and/or duplicate results below RL?	See Below ##
Duplicate Numerical Performance Indicator:	-0.771
Duplicate RPD:	98.07%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Fail***
% RPD Limit:	25%

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

Comments:

\*\*\*Batch must be re-prepared due to unacceptable precision\*\*\* N/A Lam 4/13/21

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

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

Lam 4/13/21



# Quality Control Sample Performance Assessment

Analyst Must Manually Enter All Fields Highlighted in Yellow.



Test: Ra-226  
Analyst: CLA  
Date: 4/12/2021  
Worklist: 59709  
Matrix: DW

Method Blank Assessment	
MB Sample ID	2132285
MB concentration:	0.037
MB Counting Uncertainty:	0.210
MB MDC:	0.420
MB Numerical Performance Indicator:	0.34
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCS/D (Y or N)?	
	LCS59709	Y
Count Date:	4/13/2021	LCS59709
Spike I.D.:	19-033	4/13/2021
Decay Corrected Spike Concentration (pCi/mL):	24.038	19-033
Volume Used (mL):	0.10	24.038
Aliquot Volume (L, g, F):	0.501	0.10
Target Conc. (pCi/L, g, F):	4.752	0.501
Uncertainty (Calculated):	0.057	4.802
Result (pCi/L, g, F):	4.586	0.058
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.824	4.997
Numerical Performance Indicator:	-0.39	4.997
Percent Recovery:	96.50%	0.47
Status vs Numerical Indicator:	N/A	104.05%
Upper % Recovery Limits:	Pass	N/A
Lower % Recovery Limits:	125%	Pass
	75%	75%

Duplicate Sample Assessment	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Sample I.D.:	LCS59709
Duplicate Sample I.D.:	LCS59709
Sample Result (pCi/L, g, F):	4.586
Sample Result Counting Uncertainty (pCi/L, g, F):	0.824
Sample Duplicate Result (pCi/L, g, F):	4.987
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.806
Are sample and/or duplicate results below RL?	NO
Duplicate Numerical Performance Indicator:	-0.699
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	7.53%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Pass
% RPD Limit:	25%

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

Comments:

*Handwritten:* RA 4/13/21

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

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

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# Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-228  
Analyst: VAL  
Date: 4/5/2021  
Worklist: 59551  
Matrix: WT

**Method Blank Assessment**

MB Sample ID: 2126643  
MB concentration: 0.738  
MB 2 Sigma CSU: 0.321  
MB MDC: 0.495  
MB Numerical Performance Indicator: 4.51  
MB Status vs Numerical Indicator: Fail\*  
MB Status vs. MDC: See Comment\*

Laboratory Control Sample Assessment		LCS (Y or N)?	Y
Count Date:		LCS59551	4/9/2021
Spike I.D.:		21-003	21-003
Decay Corrected Spike Concentration (pCi/mL):		38.142	38.142
Volume Used (mL):		0.10	0.10
Aliquot Volume (L, g, F):		0.804	0.812
Target Conc. (pCi/L, g, F):		4.743	4.697
Uncertainty (Calculated):		0.232	0.230
Result (pCi/L, g, F):		5.331	5.382
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):		1.169	1.184
Numerical Performance Indicator:		0.97	1.11
Percent Recovery:		112.40%	114.58%
Status vs Numerical Indicator:		N/A	N/A
Status vs Recovery:		Pass	Pass
Upper % Recovery Limits:		135%	135%
Lower % Recovery Limits:		69%	60%

**Duplicate Sample Assessment**

Sample I.D.: LCS59551  
Duplicate Sample I.D.: LCS59551

Sample Result (pCi/L, g, F): 5.331  
Sample Duplicate Result (pCi/L, g, F): 5.382  
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F): 1.184  
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F): 1.184

Are sample and/or duplicate results below RL? NO  
Duplicate Numerical Performance Indicator: -0.060  
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD: 1.92%

Duplicate Status vs Numerical Indicator: Pass  
Duplicate Status vs RPD: Pass  
% RPD Limit: 36%

Enter Duplicate sample IDs if other than LCS/LCSD in the space below:

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

**Matrix Spike/Matrix Spike Duplicate Sample Assessment**

Sample I.D.:

Sample MS I.D.:

Sample MSD I.D.:

Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):

Sample Matrix Spike Duplicate Result:

Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):

Duplicate Numerical Performance Indicator:

(Based on the Percent Recoveries) MS/MSD Duplicate RPD:

MS/MSD Duplicate Status vs Numerical Indicator:

MS/MSD Duplicate Status vs RPD:

% RPD Limit:

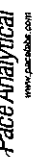
# Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:  
\*The method blank result is below the reporting limit for this analysis and is acceptable.

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# Quality Control Sample Performance Assessment



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

Test: Ra-228  
Analyst: VAL  
Date: 4/6/2021  
Worklist: 59552  
Matrix: WT

Method Blank Assessment	
MB Sample ID	2126646
MB concentration:	0.826
MB 2 Sigma CSU:	0.447
MB MDC:	0.791
MB Numerical Performance Indicator:	3.62
MB Status vs Numerical Indicator:	Fail*
MB Status vs. MDC:	See Comment*

Laboratory Control Sample Assessment	LCSD (Y or N)?	
	LCSD59552 4/9/2021	Y LCSD59552 4/9/2021
Count Date:	4/9/2021	
Spike I.D.:	21-003	38.140
Decay Corrected Spike Concentration (pCi/mL):	0.10	0.10
Volume Used (mL):	0.803	0.815
Aliquot Volume (L, g, F):	4.752	4.682
Target Conc. (pCi/L, g, F):	0.233	0.229
Uncertainty (Calculated):	4.576	4.583
Result (pCi/L, g, F):	1.088	1.068
LCSD/LCSD 2 Sigma CSU (pCi/L, g, F):	-0.31	-0.18
Numerical Performance Indicator:	96.30%	97.88%
Percent Recovery:	Pass	N/A
Status vs Numerical Indicator:	Pass	Pass
Upper % Recovery Limits:	135%	135%
Lower % Recovery Limits:	60%	60%

Duplicate Sample Assessment	Matrix Spike/Matrix Spike Duplicate Sample Assessment
Sample I.D.: Duplicate Sample I.D.: Sample Result (pCi/L, g, F): Sample Result 2 Sigma CSU (pCi/L, g, F): Sample Duplicate Result (pCi/L, g, F): Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F): Are sample and/or duplicate results below RL? Duplicate Numerical Performance Indicator: Duplicate (Based on the LCS/LCSD Percent Recoveries) Duplicate RPD: Duplicate Status vs Numerical Indicator: Duplicate Status vs RPD: % RPD Limit:	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: Duplicate (Based on the Percent Recoveries) MS/MSD Duplicate RPD: MS/MSD Duplicate Status vs Numerical Indicator: MS/MSD Duplicate Status vs RPD: % RPD Limit:
LCSD59552 LCSD59552 4.576 1.088 4.583 1.068 NO -0.008 1.62% Pass Pass 36%	Enter Duplicate sample I.D.s if other than LCS/LCSD in the space below.

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

Comments:

\*The method blank result is below the reporting limit for this analysis and is acceptable.

*Handwritten signature/initials*

# Quality Control Sample Performance Assessment



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

Test: Ra-228  
Analyst: VAL  
Date: 4/16/2021  
Worklist: 59554  
Matrix: WT

Method Blank Assessment	
MB Sample ID	2126652
MB concentration:	0.217
M/B 2 Sigma CSU:	0.303
MB MDC:	0.649
MB Numerical Performance Indicator:	1.40
MB Status vs Numerical Indicator:	Pass
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	
LCSID (Y or N)?	y
LCS59554	4/12/2021
LCS59554	21-003
Count Date:	4/12/2021
Spike I.D.:	21-003
Decay Corrected Spike Concentration (pCi/mL):	38.103
Volume Used (mL):	0.10
Aliquot Volume (L, g, F):	0.815
Target Conc. (pCi/L, g, F):	4.675
Uncertainty (Calculated):	0.227
Result (pCi/L, g, F):	4.143
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	0.989
Numerical Performance Indicator:	1.84
Percent Recovery:	-0.94
Status vs Numerical Indicator:	126.87%
Status vs Recovery:	N/A
Upper % Recovery Limits:	Pass
Lower % Recovery Limits:	135%
	60%

Duplicate Sample Assessment	
Sample I.D.:	LCS59554
Duplicate Sample I.D.:	LCS59554
Sample Result (pCi/L, g, F):	5.932
Sample Duplicate Result (pCi/L, g, F):	1.319
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	4.143
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	0.989
Are sample and/or duplicate results below RL?	NO
Duplicate Numerical Performance Indicator:	2.127
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	34.59%
Duplicate Status vs Numerical Indicator:	Warning
Duplicate Status vs RPD:	Pass
% RPD Limit:	36%

Sample Matrix Spike Control Assessment	
Sample Collection Date:	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
MS/MSD 1	MS/MSD 2
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):	
MSD Spike Uncertainty (calculated):	
MSD Spike Uncertainty (calculated):	
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:	

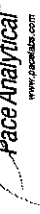
Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):	
Duplicate Numerical Performance Indicator:	
(Based on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

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

Comments:

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# Quality Control Sample Performance Assessment



Test: Ra-228  
Analyst: VAL  
Date: 4/8/2021  
Worklist: 59783  
Matrix: WT

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

Method Blank Assessment	
MB Sample ID	2134502
MB concentration:	0.347
M/B 2 Sigma CSU:	0.339
MB MDC:	0.697
MB Numerical Performance Indicator:	2.00
MB Status vs Numerical Indicator:	Warning
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment		LCSID (Y or N)?	Y
Count Date:	4/13/2021	LCSID59783	4/13/2021
Spike I.D.:	21-003	21-003	38.091
Decay Corrected Spike Concentration (pCi/mL):	38.091	0.10	0.10
Volume Used (mL):	0.814	4.680	4.705
Aliquot Volume (L, g, F):	0.229	4.309	0.231
Target Conc. (pCi/L, g, F):	0.978	0.978	0.808
Uncertainty (Calculated):	-0.72	92.09%	-3.34
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	N/A	Status vs Numerical Indicator:	N/A
Numerical Performance Indicator:	Pass	Status vs Recovery:	Pass
Percent Recovery:	135%	Upper % Recovery Limits:	135%
Status vs Numerical Indicator:	60%	Lower % Recovery Limits:	60%

Duplicate Sample Assessment	
Sample I.D.:	LCS59783
Duplicate Sample I.D.:	LCSID59783
Sample Result (pCi/L, g, F):	4.309
Sample Result 2 Sigma CSU (pCi/L, g, F):	0.978
Sample Duplicate Result (pCi/L, g, F):	3.272
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	0.808
Are sample and/or duplicate results below RL?	NO
Duplicate Numerical Performance Indicator:	1.602
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	27.88%
Duplicate Status vs Numerical Indicator:	Pass
Duplicate Status vs RPD:	Pass
% RPD Limit:	38%

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

Comments:

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Sample Matrix Spike Control Assessment		MS/MSD 1	MS/MSD 2
Sample Collection Date:	3/15/2021	30413775001	30413775001MS
Sample I.D.:	21-003	30413775001	30413775001MS
Sample MS I.D.:	38.456	0.20	0.20
Sample MSD I.D.:	0.808	9.516	0.808
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	0.466	0.466	0.466
Spike Volume Used in MS (mL):	0.445	0.345	0.345
MS Aliquot (L, g, F):	10.659	2.113	2.113
MSD Aliquot (L, g, F):	0.624	107.33%	107.33%
MS Target Conc. (pCi/L, g, F):	Pass	Pass	Pass
MSD Target Conc. (pCi/L, g, F):	Pass	Pass	Pass
MSD Target Uncertainty (calculated):	135%	60%	60%
MSD Spike Uncertainty (calculated):	60%		
MS Numerical Performance Indicator:			
MSD Numerical Performance Indicator:			

Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample I.D.:	Sample I.D.
Sample MS I.D.:	Sample MS 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 Numerical Indicator:	MS/MSD Duplicate Status vs RPD:
MS/MSD Upper % Recovery Limits:	% RPD Limit:
MS/MSD Lower % Recovery Limits:	

March 16, 2021

Kelley Sharpe  
ARCADIS - Atlanta  
2839 Paces Ferry Rd  
STE 900  
Atlanta, GA 30339

RE: Project: Plant Hammond-CCR Ash Pond  
Pace Project No.: 92526544

Dear Kelley Sharpe:

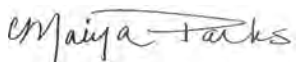
Enclosed are the analytical results for sample(s) received by the laboratory on March 09, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

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

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

Sincerely,



Maiya Parks  
maiya.parks@pacelabs.com  
(770)734-4200  
Project Manager

Enclosures

cc: Ben Hodges, Georgia Power  
Warren Johnson, ARCADIS - Atlanta



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: Plant Hammond-CCR Ash Pond

Pace Project No.: 92526544

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### **Pace Analytical Services Asheville**

2225 Riverside Drive, Asheville, NC 28804

Florida/NELAP Certification #: E87648

North Carolina Drinking Water Certification #: 37712

North Carolina Wastewater Certification #: 40

South Carolina Certification #: 99030001

Virginia/VELAP Certification #: 460222

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

110 Technology Pkwy, Peachtree Corners, GA 30092

Florida DOH Certification #: E87315

Georgia DW Inorganics Certification #: 812

North Carolina Certification #: 381

South Carolina Certification #: 98011001

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: Plant Hammond-CCR Ash Pond

Pace Project No.: 92526544

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Lab ID	Sample ID	Matrix	Date Collected	Date Received
92526544001	AP2-Up	Water	03/08/21 17:35	03/09/21 15:44
92526544002	AP2-Mid	Water	03/08/21 17:10	03/09/21 15:44
92526544003	AP2-Down	Water	03/08/21 14:10	03/09/21 15:44

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: Plant Hammond-CCR Ash Pond

Pace Project No.: 92526544

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92526544001	AP2-Up	EPA 6010D	KH	4	PASI-GA
		EPA 6020B	CW1	3	PASI-GA
		SM 2450C-2011	ALW	1	PASI-GA
		EPA 9040C	AW1	1	PASI-GA
		SM 2320B-2011	ECH	3	PASI-A
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
92526544002	AP2-Mid	EPA 6010D	KH	4	PASI-GA
		EPA 6020B	CW1	3	PASI-GA
		SM 2450C-2011	ALW	1	PASI-GA
		EPA 9040C	AW1	1	PASI-GA
		SM 2320B-2011	ECH	3	PASI-A
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
92526544003	AP2-Down	EPA 6010D	KH	4	PASI-GA
		EPA 6020B	CW1	3	PASI-GA
		SM 2450C-2011	ALW	1	PASI-GA
		EPA 9040C	AW1	1	PASI-GA
		SM 2320B-2011	ECH	3	PASI-A
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A

PASI-A = Pace Analytical Services - Asheville

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

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: Plant Hammond-CCR Ash Pond  
Pace Project No.: 92526544

Sample: AP2-Up	Lab ID: 92526544001	Collected: 03/08/21 17:35	Received: 03/09/21 15:44	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010D ATL ICP</b>								
Analytical Method: EPA 6010D Preparation Method: EPA 3010A								
Pace Analytical Services - Peachtree Corners, GA								
Potassium	0.65	mg/L	0.20	1	03/11/21 10:50	03/12/21 04:55	7440-09-7	
Sodium	1.8	mg/L	1.0	1	03/11/21 10:50	03/12/21 04:55	7440-23-5	
Calcium	25.1	mg/L	1.0	1	03/11/21 10:50	03/12/21 04:55	7440-70-2	
Magnesium	2.6	mg/L	0.050	1	03/11/21 10:50	03/12/21 04:55	7439-95-4	
<b>6020 MET ICPMS</b>								
Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Pace Analytical Services - Peachtree Corners, GA								
Boron	ND	mg/L	0.040	1	03/11/21 12:04	03/11/21 17:29	7440-42-8	
Cobalt	ND	mg/L	0.0050	1	03/11/21 12:04	03/11/21 17:29	7440-48-4	
Molybdenum	ND	mg/L	0.010	1	03/11/21 12:04	03/11/21 17:29	7439-98-7	
<b>2540C Total Dissolved Solids</b>								
Analytical Method: SM 2450C-2011								
Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	68.0	mg/L	10.0	1		03/10/21 17:23		
<b>9040 pH</b>								
Analytical Method: EPA 9040C								
Pace Analytical Services - Peachtree Corners, GA								
pH at 25 Degrees C	7.4	Std. Units	0.10	1		03/11/21 22:46		H3,H6
<b>2320B Alkalinity</b>								
Analytical Method: SM 2320B-2011								
Pace Analytical Services - Asheville								
Alkalinity,Bicarbonate (CaCO3)	68.3	mg/L	5.0	1		03/16/21 01:58		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	1		03/16/21 01:58		
Alkalinity, Total as CaCO3	68.3	mg/L	5.0	1		03/16/21 01:58		
<b>300.0 IC Anions 28 Days</b>								
Analytical Method: EPA 300.0 Rev 2.1 1993								
Pace Analytical Services - Asheville								
Chloride	1.1	mg/L	1.0	1		03/12/21 01:19	16887-00-6	
Fluoride	ND	mg/L	0.10	1		03/12/21 01:19	16984-48-8	
Sulfate	5.6	mg/L	1.0	1		03/12/21 01:19	14808-79-8	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: Plant Hammond-CCR Ash Pond

Pace Project No.: 92526544

Sample: AP2-Mid	Lab ID: 92526544002	Collected: 03/08/21 17:10	Received: 03/09/21 15:44	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010D ATL ICP</b>								
Analytical Method: EPA 6010D Preparation Method: EPA 3010A								
Pace Analytical Services - Peachtree Corners, GA								
Potassium	<b>0.73</b>	mg/L	0.20	1	03/11/21 10:50	03/12/21 05:00	7440-09-7	
Sodium	<b>1.9</b>	mg/L	1.0	1	03/11/21 10:50	03/12/21 05:00	7440-23-5	
Calcium	<b>26.3</b>	mg/L	1.0	1	03/11/21 10:50	03/12/21 05:00	7440-70-2	
Magnesium	<b>2.8</b>	mg/L	0.050	1	03/11/21 10:50	03/12/21 05:00	7439-95-4	
<b>6020 MET ICPMS</b>								
Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Pace Analytical Services - Peachtree Corners, GA								
Boron	<b>0.049</b>	mg/L	0.040	1	03/11/21 12:04	03/11/21 17:35	7440-42-8	
Cobalt	ND	mg/L	0.0050	1	03/11/21 12:04	03/11/21 17:35	7440-48-4	
Molybdenum	ND	mg/L	0.010	1	03/11/21 12:04	03/11/21 17:35	7439-98-7	
<b>2540C Total Dissolved Solids</b>								
Analytical Method: SM 2450C-2011								
Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	<b>94.0</b>	mg/L	10.0	1		03/10/21 17:24		
<b>9040 pH</b>								
Analytical Method: EPA 9040C								
Pace Analytical Services - Peachtree Corners, GA								
pH at 25 Degrees C	<b>7.5</b>	Std. Units	0.10	1		03/11/21 22:40		H3,H6
<b>2320B Alkalinity</b>								
Analytical Method: SM 2320B-2011								
Pace Analytical Services - Asheville								
Alkalinity,Bicarbonate (CaCO3)	<b>66.3</b>	mg/L	5.0	1		03/16/21 02:28		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	1		03/16/21 02:28		
Alkalinity, Total as CaCO3	<b>66.3</b>	mg/L	5.0	1		03/16/21 02:28		
<b>300.0 IC Anions 28 Days</b>								
Analytical Method: EPA 300.0 Rev 2.1 1993								
Pace Analytical Services - Asheville								
Chloride	<b>2.0</b>	mg/L	1.0	1		03/12/21 01:34	16887-00-6	
Fluoride	ND	mg/L	0.10	1		03/12/21 01:34	16984-48-8	
Sulfate	<b>10.8</b>	mg/L	1.0	1		03/12/21 01:34	14808-79-8	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: Plant Hammond-CCR Ash Pond  
Pace Project No.: 92526544

Sample: AP2-Down	Lab ID: 92526544003	Collected: 03/08/21 14:10	Received: 03/09/21 15:44	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010D ATL ICP</b>								
Analytical Method: EPA 6010D Preparation Method: EPA 3010A								
Pace Analytical Services - Peachtree Corners, GA								
Potassium	0.66	mg/L	0.20	1	03/11/21 10:50	03/12/21 05:05	7440-09-7	
Sodium	1.9	mg/L	1.0	1	03/11/21 10:50	03/12/21 05:05	7440-23-5	
Calcium	25.4	mg/L	1.0	1	03/11/21 10:50	03/12/21 05:05	7440-70-2	
Magnesium	2.8	mg/L	0.050	1	03/11/21 10:50	03/12/21 05:05	7439-95-4	
<b>6020 MET ICPMS</b>								
Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Pace Analytical Services - Peachtree Corners, GA								
Boron	0.044	mg/L	0.040	1	03/11/21 12:04	03/11/21 18:10	7440-42-8	
Cobalt	ND	mg/L	0.0050	1	03/11/21 12:04	03/11/21 18:10	7440-48-4	
Molybdenum	ND	mg/L	0.010	1	03/11/21 12:04	03/11/21 18:10	7439-98-7	
<b>2540C Total Dissolved Solids</b>								
Analytical Method: SM 2450C-2011								
Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	81.0	mg/L	10.0	1		03/10/21 17:24		
<b>9040 pH</b>								
Analytical Method: EPA 9040C								
Pace Analytical Services - Peachtree Corners, GA								
pH at 25 Degrees C	7.5	Std. Units	0.10	1		03/11/21 22:00		H3,H6
<b>2320B Alkalinity</b>								
Analytical Method: SM 2320B-2011								
Pace Analytical Services - Asheville								
Alkalinity,Bicarbonate (CaCO3)	65.0	mg/L	5.0	1		03/16/21 02:38		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	1		03/16/21 02:38		
Alkalinity, Total as CaCO3	65.0	mg/L	5.0	1		03/16/21 02:38		
<b>300.0 IC Anions 28 Days</b>								
Analytical Method: EPA 300.0 Rev 2.1 1993								
Pace Analytical Services - Asheville								
Chloride	1.9	mg/L	1.0	1		03/12/21 01:49	16887-00-6	
Fluoride	ND	mg/L	0.10	1		03/12/21 01:49	16984-48-8	
Sulfate	9.8	mg/L	1.0	1		03/12/21 01:49	14808-79-8	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: Plant Hammond-CCR Ash Pond  
Pace Project No.: 92526544

QC Batch: 605887 Analysis Method: EPA 6010D  
QC Batch Method: EPA 3010A Analysis Description: 6010D ATL  
Laboratory: Pace Analytical Services - Peachtree Corners, GA  
Associated Lab Samples: 92526544001, 92526544002, 92526544003

METHOD BLANK: 3191972 Matrix: Water  
Associated Lab Samples: 92526544001, 92526544002, 92526544003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	03/12/21 04:06	
Magnesium	mg/L	ND	0.050	03/12/21 04:06	
Potassium	mg/L	ND	0.20	03/12/21 04:06	
Sodium	mg/L	ND	1.0	03/12/21 04:06	

LABORATORY CONTROL SAMPLE: 3191973

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	mg/L	1	1.0	103	80-120	
Magnesium	mg/L	1	1.1	106	80-120	
Potassium	mg/L	1	1.1	115	80-120	
Sodium	mg/L	1	1.1	106	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3191974 3191975

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92526541002 Result	Spike Conc.	Spike Conc.	Result						
Calcium	mg/L	16.3	1	1	17.0	17.1	67	74	75-125	0	20 M1
Magnesium	mg/L	3.3	1	1	4.3	4.2	100	94	75-125	1	20
Potassium	mg/L	0.74	1	1	1.9	1.8	113	107	75-125	4	20
Sodium	mg/L	1.8	1	1	2.8	2.8	99	98	75-125	0	20

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: Plant Hammond-CCR Ash Pond  
Pace Project No.: 92526544

QC Batch: 605915 Analysis Method: EPA 6020B  
QC Batch Method: EPA 3005A Analysis Description: 6020 MET  
Laboratory: Pace Analytical Services - Peachtree Corners, GA  
Associated Lab Samples: 92526544001, 92526544002, 92526544003

METHOD BLANK: 3192197 Matrix: Water  
Associated Lab Samples: 92526544001, 92526544002, 92526544003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Boron	mg/L	ND	0.040	03/11/21 17:01	
Cobalt	mg/L	ND	0.0050	03/11/21 17:01	
Molybdenum	mg/L	ND	0.010	03/11/21 17:01	

LABORATORY CONTROL SAMPLE: 3192198

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron	mg/L	1	0.96	96	80-120	
Cobalt	mg/L	0.1	0.097	97	80-120	
Molybdenum	mg/L	0.1	0.099	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3192199 3192200

Parameter	Units	92526544002		3192199		3192200		% Rec	% Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Boron	mg/L	0.049	0.049	1	1	1.0	1.0	95	97	75-125	3	20	
Cobalt	mg/L	ND	ND	0.1	0.1	0.097	0.094	96	94	75-125	3	20	
Molybdenum	mg/L	ND	ND	0.1	0.1	0.098	0.099	98	99	75-125	1	20	

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: Plant Hammond-CCR Ash Pond  
Pace Project No.: 92526544

QC Batch: 605516 Analysis Method: SM 2450C-2011  
QC Batch Method: SM 2450C-2011 Analysis Description: 2540C Total Dissolved Solids  
Laboratory: Pace Analytical Services - Peachtree Corners, GA  
Associated Lab Samples: 92526544001, 92526544002, 92526544003

METHOD BLANK: 3189891 Matrix: Water  
Associated Lab Samples: 92526544001, 92526544002, 92526544003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	03/10/21 17:21	

LABORATORY CONTROL SAMPLE: 3189892

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	370	92	90-111	

SAMPLE DUPLICATE: 3189893

Parameter	Units	92524831026 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	798	800	0	10	

SAMPLE DUPLICATE: 3189894

Parameter	Units	92526337002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	415	425	2	10	

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### REPORT OF LABORATORY ANALYSIS

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**QUALITY CONTROL DATA**

Project: Plant Hammond-CCR Ash Pond

Pace Project No.: 92526544

QC Batch: 606012

Analysis Method: EPA 9040C

QC Batch Method: EPA 9040C

Analysis Description: 9040 pH

Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92526544001, 92526544002, 92526544003

SAMPLE DUPLICATE: 3192744

Parameter	Units	92525947001 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	6.9	6.9	0	9	H3,H6

SAMPLE DUPLICATE: 3193332

Parameter	Units	92526541002 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	7.2	7.2	1	9	H3,H6

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**REPORT OF LABORATORY ANALYSIS**

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### QUALITY CONTROL DATA

Project: Plant Hammond-CCR Ash Pond  
Pace Project No.: 92526544

QC Batch: 606758 Analysis Method: SM 2320B-2011  
QC Batch Method: SM 2320B-2011 Analysis Description: 2320B Alkalinity  
Laboratory: Pace Analytical Services - Asheville  
Associated Lab Samples: 92526544001, 92526544002, 92526544003

METHOD BLANK: 3196779 Matrix: Water  
Associated Lab Samples: 92526544001, 92526544002, 92526544003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Alkalinity, Total as CaCO <sub>3</sub>	mg/L	ND	5.0	03/16/21 01:47	
Alkalinity,Bicarbonate (CaCO <sub>3</sub> )	mg/L	ND	5.0	03/16/21 01:47	
Alkalinity,Carbonate (CaCO <sub>3</sub> )	mg/L	ND	5.0	03/16/21 01:47	

LABORATORY CONTROL SAMPLE: 3196780

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO <sub>3</sub>	mg/L	50	49.7	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3196781 3196782

Parameter	Units	92526544001		3196781		3196782		% Rec Limits	RPD	Max RPD	Qual	
		MS Result	MSD Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result					MS % Rec
Alkalinity, Total as CaCO <sub>3</sub>	mg/L	68.3	68.3	50	50	116	118	96	99	80-120	1	25

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3196783 3196784

Parameter	Units	92526568008		3196783		3196784		% Rec Limits	RPD	Max RPD	Qual	
		MS Result	MSD Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result					MS % Rec
Alkalinity, Total as CaCO <sub>3</sub>	mg/L	17.2	17.2	50	50	68.6	68.8	103	103	80-120	0	25

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: Plant Hammond-CCR Ash Pond  
Pace Project No.: 92526544

QC Batch: 605465 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: 92526544001, 92526544002, 92526544003

METHOD BLANK: 3189694 Matrix: Water  
Associated Lab Samples: 92526544001, 92526544002, 92526544003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	03/11/21 23:04	
Fluoride	mg/L	ND	0.10	03/11/21 23:04	
Sulfate	mg/L	ND	1.0	03/11/21 23:04	

LABORATORY CONTROL SAMPLE: 3189695

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	50.7	101	90-110	
Fluoride	mg/L	2.5	2.6	105	90-110	
Sulfate	mg/L	50	51.0	102	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3189696 3189697

Parameter	Units	92526541001		MS		MSD		% Rec	% Rec	% Rec	Limits	RPD	Max RPD	Qual
		Result	Conc.	Spike Conc.	Conc.	Result	Result							
Chloride	mg/L	1.3	50	50	48.9	56.2	95	110	90-110	14	10	R1		
Fluoride	mg/L	ND	2.5	2.5	2.5	2.9	97	113	90-110	15	10	M1,R1		
Sulfate	mg/L	9.8	50	50	58.6	65.8	98	112	90-110	12	10	M1,R1		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3189698 3189699

Parameter	Units	92526574005		MS		MSD		% Rec	% Rec	% Rec	Limits	RPD	Max RPD	Qual
		Result	Conc.	Spike Conc.	Conc.	Result	Result							
Chloride	mg/L	4.3	50	50	54.7	52.6	101	97	90-110	4	10			
Fluoride	mg/L	ND	2.5	2.5	2.6	2.5	101	98	90-110	3	10			
Sulfate	mg/L	4.3	50	50	55.1	53.2	102	98	90-110	3	10			

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### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: Plant Hammond-CCR Ash Pond

Pace Project No.: 92526544

---

### 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.

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

TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

H3 Sample was received or analysis requested beyond the recognized method holding time.

H6 Analysis initiated outside of the 15 minute EPA required holding time.

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-CCR Ash Pond

Pace Project No.: 92526544

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92526544001	AP2-Up	EPA 3010A	605887	EPA 6010D	605937
92526544002	AP2-Mid	EPA 3010A	605887	EPA 6010D	605937
92526544003	AP2-Down	EPA 3010A	605887	EPA 6010D	605937
92526544001	AP2-Up	EPA 3005A	605915	EPA 6020B	606002
92526544002	AP2-Mid	EPA 3005A	605915	EPA 6020B	606002
92526544003	AP2-Down	EPA 3005A	605915	EPA 6020B	606002
92526544001	AP2-Up	SM 2450C-2011	605516		
92526544002	AP2-Mid	SM 2450C-2011	605516		
92526544003	AP2-Down	SM 2450C-2011	605516		
92526544001	AP2-Up	EPA 9040C	606012		
92526544002	AP2-Mid	EPA 9040C	606012		
92526544003	AP2-Down	EPA 9040C	606012		
92526544001	AP2-Up	SM 2320B-2011	606758		
92526544002	AP2-Mid	SM 2320B-2011	606758		
92526544003	AP2-Down	SM 2320B-2011	606758		
92526544001	AP2-Up	EPA 300.0 Rev 2.1 1993	605465		
92526544002	AP2-Mid	EPA 300.0 Rev 2.1 1993	605465		
92526544003	AP2-Down	EPA 300.0 Rev 2.1 1993	605465		

### REPORT OF LABORATORY ANALYSIS

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# CHAIN-OF-CUSTODY / Analytical Request Document

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

Section A  
 Required Client Information:  
 Company: ARCADIS - Atlanta  
 Address: 2839 Paces Ferry Rd  
 Atlanta, GA 30339  
 Email: kelly.sharp@arcadis.com  
 Phone: (770)384-6984  
 Requested Due Date:

Section B  
 Required Project Information:  
 Report To: Kelly Sharp, Warren Johnson  
 Copy To: Ben Hodges, Jiju Abraham  
 Purchase Order #: GPC11084889  
 Project Name: Plant Hammer/COR-Ash Pond Closure  
 Project #:

Section C  
 Invoice Information:  
 Attention:  
 Company Name  
 Address:  
 Pace Quote:  
 Pace Project Manager: malva.parker@pacelabs.com,  
 Pace Profile #: 12590  
 Regulatory Agency  
 State / Location  
 GA

ITEM #	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Analyses Test	Residual Chlorine (Y/N)
			START DATE	END DATE				
1	AP2-UP	WT	3.8.21	1735		Unpreserved	Cobalt	
2	AP2-MID	WT	3.8.21	1710		H2SO4	Molybdenum	
3	AP2-DOWN	WT	3.8.21	1410		HNO3	Major Cations	
4						HCl	App. III Metals	
5						NaOH		
6						Na2S2O3		
7						Methanol		
8						Other		
9								
10								
11								
12								

Appendix III: Boron, Cadmium, Chloride, Fluoride, pH, Sulfate, Total Dissolved Solids (TDS)

Major Ions: Mg, Na, K, total alkalinity, bicarbonate alkalinity

RELINQUISHED BY / AFFILIATION: *Paul Pace* DATE: 3.9.21 TIME: 1200

ACCEPTED BY / AFFILIATION: *Charles York* DATE: 3.9.21 TIME: 1213

TEMP in C

Received on ice (Y/N)

Custody Sealed Cooler (Y/N)

Sample Intact (Y/N)

Sampler Name and Signature: *Paul Pace* DATE Signed: 3.9.21

PRINT Name of Sampler: *Paul Pace*

SIGNATURE of SAMPLER: *Paul Pace*

W0#: 92526544



**Laboratory receiving samples:**

Asheville  Eden  Greenwood  Huntersville  Raleigh  Mechanicsville  Atlanta  Kernersville

Sample Condition Upon Receipt

Client Name: Arcadis

Project #: **WO# : 92526544**  
 PM: MP Due Date: 03/16/21  
 CLIENT: GA-ArcadAt1

Courier:  Fed Ex  UPS  USPS  Client  
 Commercial  Pace  Other: \_\_\_\_\_

Custody Seal Present?  Yes  No Seals Intact?  Yes  No

Date/Initials Person Examining Contents: 3/9/21  
CDJ

Packing Material:  Bubble Wrap  Bubble Bags  None  Other  
 Thermometers:  IR Gun ID: 214  Wet  Blue  None

Biological Tissue Frozen?  
 Yes  No  N/A

Cooler Temp: 4.0 Correction Factor: Add/Subtract (°C) 0.1  
 Type of Ice: \_\_\_\_\_

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

Cooler Temp Corrected (°C): 4.1

USDA Regulated Soil (  N/A, water sample)

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

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

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

March 16, 2021

Kelley Sharpe  
ARCADIS - Atlanta  
2839 Paces Ferry Rd  
STE 900  
Atlanta, GA 30339

RE: Project: Plant Hammond-CCR Ash Pond  
Pace Project No.: 92526574

Dear Kelley Sharpe:

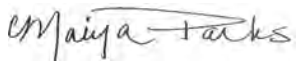
Enclosed are the analytical results for sample(s) received by the laboratory on March 09, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

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

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

Sincerely,



Maiya Parks  
maiya.parks@pacelabs.com  
(770)734-4200  
Project Manager

Enclosures

cc: Ben Hodges, Georgia Power  
Warren Johnson, ARCADIS - Atlanta



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: Plant Hammond-CCR Ash Pond

Pace Project No.: 92526574

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### **Pace Analytical Services Asheville**

2225 Riverside Drive, Asheville, NC 28804

Florida/NELAP Certification #: E87648

North Carolina Drinking Water Certification #: 37712

North Carolina Wastewater Certification #: 40

South Carolina Certification #: 99030001

Virginia/VELAP Certification #: 460222

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

110 Technology Pkwy, Peachtree Corners, GA 30092

Florida DOH Certification #: E87315

Georgia DW Inorganics Certification #: 812

North Carolina Certification #: 381

South Carolina Certification #: 98011001

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: Plant Hammond-CCR Ash Pond

Pace Project No.: 92526574

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92526574001	H+0.75	Water	03/08/21 14:00	03/09/21 15:44
92526574002	H+0.25	Water	03/08/21 14:25	03/09/21 15:44
92526574003	H+0.5	Water	03/08/21 15:25	03/09/21 15:44
92526574004	H+0.2	Water	03/08/21 16:00	03/09/21 15:44
92526574005	Up Stream	Water	03/08/21 15:00	03/09/21 15:44
92526574006	Down Stream	Water	03/08/21 14:35	03/09/21 15:44
92526574007	H+0.35	Water	03/08/21 14:20	03/09/21 15:44

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: Plant Hammond-CCR Ash Pond  
Pace Project No.: 92526574

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92526574001	H+0.75	EPA 6010D	KH	4	PASI-GA
		EPA 6020B	CW1	4	PASI-GA
		SM 2450C-2011	AW1	1	PASI-GA
		EPA 9040C	AW1	1	PASI-GA
		SM 2320B-2011	ECH	3	PASI-A
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
92526574002	H+0.25	EPA 6010D	KH	4	PASI-GA
		EPA 6020B	CW1	4	PASI-GA
		SM 2450C-2011	AW1	1	PASI-GA
		EPA 9040C	AW1	1	PASI-GA
		SM 2320B-2011	ECH	3	PASI-A
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
92526574003	H+0.5	EPA 6010D	KH	4	PASI-GA
		EPA 6020B	CW1	4	PASI-GA
		SM 2450C-2011	AW1	1	PASI-GA
		EPA 9040C	AW1	1	PASI-GA
		SM 2320B-2011	ECH	3	PASI-A
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
92526574004	H+0.2	EPA 6010D	KH	4	PASI-GA
		EPA 6020B	CW1	4	PASI-GA
		SM 2450C-2011	AW1	1	PASI-GA
		EPA 9040C	AW1	1	PASI-GA
		SM 2320B-2011	ECH	3	PASI-A
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
92526574005	Up Stream	EPA 6010D	KH	4	PASI-GA
		EPA 6020B	CW1	4	PASI-GA
		SM 2450C-2011	AW1	1	PASI-GA
		EPA 9040C	AW1	1	PASI-GA
		SM 2320B-2011	ECH	3	PASI-A
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
92526574006	Down Stream	EPA 6010D	KH	4	PASI-GA
		EPA 6020B	CW1	4	PASI-GA
		SM 2450C-2011	AW1	1	PASI-GA
		EPA 9040C	AW1	1	PASI-GA
		SM 2320B-2011	ECH	3	PASI-A
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
92526574007	H+0.35	EPA 6010D	KH	4	PASI-GA

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### SAMPLE ANALYTE COUNT

Project: Plant Hammond-CCR Ash Pond

Pace Project No.: 92526574

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 6020B	CW1	4	PASI-GA
		SM 2450C-2011	AW1	1	PASI-GA
		EPA 9040C	AW1	1	PASI-GA
		SM 2320B-2011	ECH	3	PASI-A
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A

PASI-A = Pace Analytical Services - Asheville

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

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### ANALYTICAL RESULTS

Project: Plant Hammond-CCR Ash Pond  
Pace Project No.: 92526574

Sample: H+0.75	Lab ID: 92526574001	Collected: 03/08/21 14:00	Received: 03/09/21 15:44	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010D ATL ICP</b>								
Analytical Method: EPA 6010D Preparation Method: EPA 3010A								
Pace Analytical Services - Peachtree Corners, GA								
Potassium	1.4	mg/L	0.20	1	03/11/21 10:50	03/12/21 05:10	7440-09-7	
Sodium	3.8	mg/L	1.0	1	03/11/21 10:50	03/12/21 05:10	7440-23-5	
Calcium	15.7	mg/L	1.0	1	03/11/21 10:50	03/12/21 05:10	7440-70-2	
Magnesium	4.3	mg/L	0.050	1	03/11/21 10:50	03/12/21 05:10	7439-95-4	
<b>6020 MET ICPMS</b>								
Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Pace Analytical Services - Peachtree Corners, GA								
Boron	ND	mg/L	0.040	1	03/11/21 12:04	03/11/21 18:15	7440-42-8	
Cobalt	ND	mg/L	0.0050	1	03/11/21 12:04	03/11/21 18:15	7440-48-4	
Lithium	ND	mg/L	0.030	1	03/11/21 12:04	03/11/21 18:15	7439-93-2	
Molybdenum	ND	mg/L	0.010	1	03/11/21 12:04	03/11/21 18:15	7439-98-7	
<b>2540C Total Dissolved Solids</b>								
Analytical Method: SM 2450C-2011								
Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	78.0	mg/L	10.0	1		03/13/21 15:42		D6
<b>9040 pH</b>								
Analytical Method: EPA 9040C								
Pace Analytical Services - Peachtree Corners, GA								
pH at 25 Degrees C	7.5	Std. Units	0.10	1		03/11/21 21:57		H3,H6
<b>2320B Alkalinity</b>								
Analytical Method: SM 2320B-2011								
Pace Analytical Services - Asheville								
Alkalinity,Bicarbonate (CaCO3)	51.1	mg/L	5.0	1		03/16/21 04:09		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	1		03/16/21 04:09		
Alkalinity, Total as CaCO3	51.1	mg/L	5.0	1		03/16/21 04:09		
<b>300.0 IC Anions 28 Days</b>								
Analytical Method: EPA 300.0 Rev 2.1 1993								
Pace Analytical Services - Asheville								
Chloride	4.0	mg/L	1.0	1		03/12/21 02:04	16887-00-6	
Fluoride	ND	mg/L	0.10	1		03/12/21 02:04	16984-48-8	
Sulfate	5.6	mg/L	1.0	1		03/12/21 02:04	14808-79-8	

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### ANALYTICAL RESULTS

Project: Plant Hammond-CCR Ash Pond  
Pace Project No.: 92526574

Sample: H+0.25	Lab ID: 92526574002	Collected: 03/08/21 14:25	Received: 03/09/21 15:44	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010D ATL ICP</b>								
Analytical Method: EPA 6010D Preparation Method: EPA 3010A								
Pace Analytical Services - Peachtree Corners, GA								
Potassium	1.6	mg/L	0.20	1	03/11/21 10:50	03/12/21 05:14	7440-09-7	
Sodium	8.8	mg/L	1.0	1	03/11/21 10:50	03/12/21 05:14	7440-23-5	
Calcium	16.3	mg/L	1.0	1	03/11/21 10:50	03/12/21 05:14	7440-70-2	
Magnesium	4.3	mg/L	0.050	1	03/11/21 10:50	03/12/21 05:14	7439-95-4	
<b>6020 MET ICPMS</b>								
Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Pace Analytical Services - Peachtree Corners, GA								
Boron	0.043	mg/L	0.040	1	03/11/21 12:04	03/11/21 18:21	7440-42-8	
Cobalt	ND	mg/L	0.0050	1	03/11/21 12:04	03/11/21 18:21	7440-48-4	
Lithium	ND	mg/L	0.030	1	03/11/21 12:04	03/11/21 18:21	7439-93-2	
Molybdenum	ND	mg/L	0.010	1	03/11/21 12:04	03/11/21 18:21	7439-98-7	
<b>2540C Total Dissolved Solids</b>								
Analytical Method: SM 2450C-2011								
Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	76.0	mg/L	10.0	1		03/13/21 15:43		
<b>9040 pH</b>								
Analytical Method: EPA 9040C								
Pace Analytical Services - Peachtree Corners, GA								
pH at 25 Degrees C	7.6	Std. Units	0.10	1		03/11/21 22:06		H3,H6
<b>2320B Alkalinity</b>								
Analytical Method: SM 2320B-2011								
Pace Analytical Services - Asheville								
Alkalinity,Bicarbonate (CaCO3)	54.2	mg/L	5.0	1		03/16/21 04:19		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	1		03/16/21 04:19		
Alkalinity, Total as CaCO3	54.2	mg/L	5.0	1		03/16/21 04:19		
<b>300.0 IC Anions 28 Days</b>								
Analytical Method: EPA 300.0 Rev 2.1 1993								
Pace Analytical Services - Asheville								
Chloride	4.2	mg/L	1.0	1		03/12/21 02:19	16887-00-6	
Fluoride	ND	mg/L	0.10	1		03/12/21 02:19	16984-48-8	
Sulfate	14.3	mg/L	1.0	1		03/12/21 02:19	14808-79-8	

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## ANALYTICAL RESULTS

Project: Plant Hammond-CCR Ash Pond  
Pace Project No.: 92526574

<b>Sample: H+0.5</b>		<b>Lab ID: 92526574003</b>		Collected: 03/08/21 15:25	Received: 03/09/21 15:44	Matrix: Water		
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010D ATL ICP</b>		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA						
Potassium	<b>1.3</b>	mg/L	0.20	1	03/11/21 10:50	03/12/21 05:19	7440-09-7	
Sodium	<b>3.1</b>	mg/L	1.0	1	03/11/21 10:50	03/12/21 05:19	7440-23-5	
Calcium	<b>15.3</b>	mg/L	1.0	1	03/11/21 10:50	03/12/21 05:19	7440-70-2	
Magnesium	<b>4.2</b>	mg/L	0.050	1	03/11/21 10:50	03/12/21 05:19	7439-95-4	
<b>6020 MET ICPMS</b>		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA						
Boron	<b>0.044</b>	mg/L	0.040	1	03/11/21 12:04	03/11/21 18:27	7440-42-8	
Cobalt	ND	mg/L	0.0050	1	03/11/21 12:04	03/11/21 18:27	7440-48-4	
Lithium	ND	mg/L	0.030	1	03/11/21 12:04	03/11/21 18:27	7439-93-2	
Molybdenum	ND	mg/L	0.010	1	03/11/21 12:04	03/11/21 18:27	7439-98-7	
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA						
Total Dissolved Solids	<b>77.0</b>	mg/L	10.0	1		03/13/21 15:43		
<b>9040 pH</b>		Analytical Method: EPA 9040C Pace Analytical Services - Peachtree Corners, GA						
pH at 25 Degrees C	<b>7.1</b>	Std. Units	0.10	1		03/11/21 22:16		H3,H6
<b>2320B Alkalinity</b>		Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville						
Alkalinity,Bicarbonate (CaCO3)	<b>51.1</b>	mg/L	5.0	1		03/16/21 04:27		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	1		03/16/21 04:27		
Alkalinity, Total as CaCO3	<b>51.1</b>	mg/L	5.0	1		03/16/21 04:27		
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville						
Chloride	<b>4.4</b>	mg/L	1.0	1		03/12/21 02:34	16887-00-6	
Fluoride	ND	mg/L	0.10	1		03/12/21 02:34	16984-48-8	
Sulfate	<b>4.3</b>	mg/L	1.0	1		03/12/21 02:34	14808-79-8	

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### ANALYTICAL RESULTS

Project: Plant Hammond-CCR Ash Pond

Pace Project No.: 92526574

Sample: H+0.2	Lab ID: 92526574004	Collected: 03/08/21 16:00	Received: 03/09/21 15:44	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010D ATL ICP</b>								
Analytical Method: EPA 6010D Preparation Method: EPA 3010A								
Pace Analytical Services - Peachtree Corners, GA								
Potassium	1.4	mg/L	0.20	1	03/11/21 10:50	03/12/21 05:24	7440-09-7	
Sodium	3.2	mg/L	1.0	1	03/11/21 10:50	03/12/21 05:24	7440-23-5	
Calcium	16.0	mg/L	1.0	1	03/11/21 10:50	03/12/21 05:24	7440-70-2	
Magnesium	4.4	mg/L	0.050	1	03/11/21 10:50	03/12/21 05:24	7439-95-4	
<b>6020 MET ICPMS</b>								
Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Pace Analytical Services - Peachtree Corners, GA								
Boron	0.050	mg/L	0.040	1	03/11/21 12:04	03/11/21 18:32	7440-42-8	
Cobalt	ND	mg/L	0.0050	1	03/11/21 12:04	03/11/21 18:32	7440-48-4	
Lithium	ND	mg/L	0.030	1	03/11/21 12:04	03/11/21 18:32	7439-93-2	
Molybdenum	ND	mg/L	0.010	1	03/11/21 12:04	03/11/21 18:32	7439-98-7	
<b>2540C Total Dissolved Solids</b>								
Analytical Method: SM 2450C-2011								
Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	66.0	mg/L	10.0	1		03/13/21 15:43		
<b>9040 pH</b>								
Analytical Method: EPA 9040C								
Pace Analytical Services - Peachtree Corners, GA								
pH at 25 Degrees C	7.2	Std. Units	0.10	1		03/15/21 06:55		H3,H6
<b>2320B Alkalinity</b>								
Analytical Method: SM 2320B-2011								
Pace Analytical Services - Asheville								
Alkalinity,Bicarbonate (CaCO3)	51.5	mg/L	5.0	1		03/16/21 04:47		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	1		03/16/21 04:47		
Alkalinity, Total as CaCO3	51.5	mg/L	5.0	1		03/16/21 04:47		
<b>300.0 IC Anions 28 Days</b>								
Analytical Method: EPA 300.0 Rev 2.1 1993								
Pace Analytical Services - Asheville								
Chloride	4.7	mg/L	1.0	1		03/12/21 02:49	16887-00-6	
Fluoride	ND	mg/L	0.10	1		03/12/21 02:49	16984-48-8	
Sulfate	4.3	mg/L	1.0	1		03/12/21 02:49	14808-79-8	

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## ANALYTICAL RESULTS

Project: Plant Hammond-CCR Ash Pond

Pace Project No.: 92526574

Sample: Up Stream	Lab ID: 92526574005		Collected: 03/08/21 15:00	Received: 03/09/21 15:44	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010D ATL ICP</b>								
Analytical Method: EPA 6010D Preparation Method: EPA 3010A								
Pace Analytical Services - Peachtree Corners, GA								
Potassium	1.4	mg/L	0.20	1	03/11/21 10:50	03/12/21 05:29	7440-09-7	
Sodium	3.1	mg/L	1.0	1	03/11/21 10:50	03/12/21 05:29	7440-23-5	
Calcium	15.6	mg/L	1.0	1	03/11/21 10:50	03/12/21 05:29	7440-70-2	
Magnesium	4.3	mg/L	0.050	1	03/11/21 10:50	03/12/21 05:29	7439-95-4	
<b>6020 MET ICPMS</b>								
Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Pace Analytical Services - Peachtree Corners, GA								
Boron	0.044	mg/L	0.040	1	03/11/21 12:04	03/11/21 18:38	7440-42-8	
Cobalt	ND	mg/L	0.0050	1	03/11/21 12:04	03/11/21 18:38	7440-48-4	
Lithium	ND	mg/L	0.030	1	03/11/21 12:04	03/11/21 18:38	7439-93-2	
Molybdenum	ND	mg/L	0.010	1	03/11/21 12:04	03/11/21 18:38	7439-98-7	
<b>2540C Total Dissolved Solids</b>								
Analytical Method: SM 2450C-2011								
Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	42.0	mg/L	10.0	1		03/13/21 15:43		
<b>9040 pH</b>								
Analytical Method: EPA 9040C								
Pace Analytical Services - Peachtree Corners, GA								
pH at 25 Degrees C	7.6	Std. Units	0.10	1		03/11/21 22:11		H3,H6
<b>2320B Alkalinity</b>								
Analytical Method: SM 2320B-2011								
Pace Analytical Services - Asheville								
Alkalinity,Bicarbonate (CaCO3)	50.8	mg/L	5.0	1		03/16/21 04:56		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	1		03/16/21 04:56		
Alkalinity, Total as CaCO3	50.8	mg/L	5.0	1		03/16/21 04:56		
<b>300.0 IC Anions 28 Days</b>								
Analytical Method: EPA 300.0 Rev 2.1 1993								
Pace Analytical Services - Asheville								
Chloride	4.3	mg/L	1.0	1		03/12/21 03:33	16887-00-6	
Fluoride	ND	mg/L	0.10	1		03/12/21 03:33	16984-48-8	
Sulfate	4.3	mg/L	1.0	1		03/12/21 03:33	14808-79-8	

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## ANALYTICAL RESULTS

Project: Plant Hammond-CCR Ash Pond  
Pace Project No.: 92526574

<b>Sample: Down Stream</b>		<b>Lab ID: 92526574006</b>		Collected: 03/08/21 14:35	Received: 03/09/21 15:44	Matrix: Water		
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010D ATL ICP</b>		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA						
Potassium	<b>1.4</b>	mg/L	0.20	1	03/11/21 10:50	03/12/21 05:43	7440-09-7	
Sodium	<b>3.3</b>	mg/L	1.0	1	03/11/21 10:50	03/12/21 05:43	7440-23-5	
Calcium	<b>15.3</b>	mg/L	1.0	1	03/11/21 10:50	03/12/21 05:43	7440-70-2	
Magnesium	<b>4.2</b>	mg/L	0.050	1	03/11/21 10:50	03/12/21 05:43	7439-95-4	
<b>6020 MET ICPMS</b>		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA						
Boron	ND	mg/L	0.040	1	03/11/21 12:04	03/11/21 18:44	7440-42-8	
Cobalt	ND	mg/L	0.0050	1	03/11/21 12:04	03/11/21 18:44	7440-48-4	
Lithium	ND	mg/L	0.030	1	03/11/21 12:04	03/11/21 18:44	7439-93-2	
Molybdenum	ND	mg/L	0.010	1	03/11/21 12:04	03/11/21 18:44	7439-98-7	
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA						
Total Dissolved Solids	<b>54.0</b>	mg/L	10.0	1		03/13/21 15:44		
<b>9040 pH</b>		Analytical Method: EPA 9040C Pace Analytical Services - Peachtree Corners, GA						
pH at 25 Degrees C	<b>7.6</b>	Std. Units	0.10	1		03/11/21 22:08		H3,H6
<b>2320B Alkalinity</b>		Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville						
Alkalinity,Bicarbonate (CaCO3)	<b>50.9</b>	mg/L	5.0	1		03/16/21 05:04		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	1		03/16/21 05:04		
Alkalinity, Total as CaCO3	<b>50.9</b>	mg/L	5.0	1		03/16/21 05:04		
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville						
Chloride	<b>4.2</b>	mg/L	1.0	1		03/12/21 04:18	16887-00-6	
Fluoride	ND	mg/L	0.10	1		03/12/21 04:18	16984-48-8	
Sulfate	<b>4.8</b>	mg/L	1.0	1		03/12/21 04:18	14808-79-8	

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### ANALYTICAL RESULTS

Project: Plant Hammond-CCR Ash Pond  
Pace Project No.: 92526574

Sample: H+0.35	Lab ID: 92526574007	Collected: 03/08/21 14:20	Received: 03/09/21 15:44	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010D ATL ICP</b>								
Analytical Method: EPA 6010D Preparation Method: EPA 3010A								
Pace Analytical Services - Peachtree Corners, GA								
Potassium	1.5	mg/L	0.20	1	03/11/21 10:50	03/12/21 05:48	7440-09-7	
Sodium	5.8	mg/L	1.0	1	03/11/21 10:50	03/12/21 05:48	7440-23-5	
Calcium	16.1	mg/L	1.0	1	03/11/21 10:50	03/12/21 05:48	7440-70-2	
Magnesium	4.3	mg/L	0.050	1	03/11/21 10:50	03/12/21 05:48	7439-95-4	
<b>6020 MET ICPMS</b>								
Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Pace Analytical Services - Peachtree Corners, GA								
Boron	0.041	mg/L	0.040	1	03/11/21 12:04	03/11/21 18:50	7440-42-8	
Cobalt	ND	mg/L	0.0050	1	03/11/21 12:04	03/11/21 18:50	7440-48-4	
Lithium	ND	mg/L	0.030	1	03/11/21 12:04	03/11/21 18:50	7439-93-2	
Molybdenum	ND	mg/L	0.010	1	03/11/21 12:04	03/11/21 18:50	7439-98-7	
<b>2540C Total Dissolved Solids</b>								
Analytical Method: SM 2450C-2011								
Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	67.0	mg/L	10.0	1		03/13/21 15:44		
<b>9040 pH</b>								
Analytical Method: EPA 9040C								
Pace Analytical Services - Peachtree Corners, GA								
pH at 25 Degrees C	7.6	Std. Units	0.10	1		03/11/21 22:03		H3,H6
<b>2320B Alkalinity</b>								
Analytical Method: SM 2320B-2011								
Pace Analytical Services - Asheville								
Alkalinity,Bicarbonate (CaCO3)	52.1	mg/L	5.0	1		03/16/21 05:13		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	1		03/16/21 05:13		
Alkalinity, Total as CaCO3	52.1	mg/L	5.0	1		03/16/21 05:13		
<b>300.0 IC Anions 28 Days</b>								
Analytical Method: EPA 300.0 Rev 2.1 1993								
Pace Analytical Services - Asheville								
Chloride	4.1	mg/L	1.0	1		03/12/21 04:33	16887-00-6	
Fluoride	ND	mg/L	0.10	1		03/12/21 04:33	16984-48-8	
Sulfate	9.1	mg/L	1.0	1		03/12/21 04:33	14808-79-8	

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### QUALITY CONTROL DATA

Project: Plant Hammond-CCR Ash Pond  
Pace Project No.: 92526574

QC Batch: 605887 Analysis Method: EPA 6010D  
QC Batch Method: EPA 3010A Analysis Description: 6010D ATL  
Laboratory: Pace Analytical Services - Peachtree Corners, GA  
Associated Lab Samples: 92526574001, 92526574002, 92526574003, 92526574004, 92526574005, 92526574006, 92526574007

METHOD BLANK: 3191972 Matrix: Water  
Associated Lab Samples: 92526574001, 92526574002, 92526574003, 92526574004, 92526574005, 92526574006, 92526574007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	03/12/21 04:06	
Magnesium	mg/L	ND	0.050	03/12/21 04:06	
Potassium	mg/L	ND	0.20	03/12/21 04:06	
Sodium	mg/L	ND	1.0	03/12/21 04:06	

LABORATORY CONTROL SAMPLE: 3191973

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	mg/L	1	1.0	103	80-120	
Magnesium	mg/L	1	1.1	106	80-120	
Potassium	mg/L	1	1.1	115	80-120	
Sodium	mg/L	1	1.1	106	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3191974 3191975

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92526541002 Result	Spike Conc.	Spike Conc.	Result						
Calcium	mg/L	16.3	1	1	17.0	17.1	67	74	75-125	0	20 M1
Magnesium	mg/L	3.3	1	1	4.3	4.2	100	94	75-125	1	20
Potassium	mg/L	0.74	1	1	1.9	1.8	113	107	75-125	4	20
Sodium	mg/L	1.8	1	1	2.8	2.8	99	98	75-125	0	20

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: Plant Hammond-CCR Ash Pond  
Pace Project No.: 92526574

QC Batch: 605915 Analysis Method: EPA 6020B  
QC Batch Method: EPA 3005A Analysis Description: 6020 MET  
Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92526574001, 92526574002, 92526574003, 92526574004, 92526574005, 92526574006, 92526574007

METHOD BLANK: 3192197 Matrix: Water  
Associated Lab Samples: 92526574001, 92526574002, 92526574003, 92526574004, 92526574005, 92526574006, 92526574007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Boron	mg/L	ND	0.040	03/11/21 17:01	
Cobalt	mg/L	ND	0.0050	03/11/21 17:01	
Lithium	mg/L	ND	0.030	03/11/21 17:01	
Molybdenum	mg/L	ND	0.010	03/11/21 17:01	

LABORATORY CONTROL SAMPLE: 3192198

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron	mg/L	1	0.96	96	80-120	
Cobalt	mg/L	0.1	0.097	97	80-120	
Lithium	mg/L	0.1	0.10	102	80-120	
Molybdenum	mg/L	0.1	0.099	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3192199 3192200

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92526544002 Result	Spike Conc.	Spike Conc.	Result						
Boron	mg/L	0.049	1	1	1.0	1.0	95	97	75-125	3	20
Cobalt	mg/L	ND	0.1	0.1	0.097	0.094	96	94	75-125	3	20
Lithium	mg/L	ND	0.1	0.1	0.099	0.10	98	99	75-125	1	20
Molybdenum	mg/L	ND	0.1	0.1	0.098	0.099	98	99	75-125	1	20

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: Plant Hammond-CCR Ash Pond

Pace Project No.: 92526574

QC Batch:	606468	Analysis Method:	SM 2450C-2011
QC Batch Method:	SM 2450C-2011	Analysis Description:	2540C Total Dissolved Solids
		Laboratory:	Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92526574001, 92526574002, 92526574003, 92526574004, 92526574005, 92526574006, 92526574007

METHOD BLANK: 3195225 Matrix: Water  
Associated Lab Samples: 92526574001, 92526574002, 92526574003, 92526574004, 92526574005, 92526574006, 92526574007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	03/13/21 15:41	

LABORATORY CONTROL SAMPLE: 3195226

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	368	92	90-111	

SAMPLE DUPLICATE: 3195227

Parameter	Units	92526574001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	78.0	60.0	26	10	D6

SAMPLE DUPLICATE: 3195228

Parameter	Units	92526337005 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	227	203	11	10	D6

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: Plant Hammond-CCR Ash Pond

Pace Project No.: 92526574

QC Batch: 606012

Analysis Method: EPA 9040C

QC Batch Method: EPA 9040C

Analysis Description: 9040 pH

Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92526574001, 92526574002, 92526574003, 92526574005, 92526574006, 92526574007

SAMPLE DUPLICATE: 3192744

Parameter	Units	92525947001 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	6.9	6.9	0	9	H3,H6

SAMPLE DUPLICATE: 3193332

Parameter	Units	92526541002 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	7.2	7.2	1	9	H3,H6

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: Plant Hammond-CCR Ash Pond

Pace Project No.: 92526574

QC Batch: 606506

Analysis Method: EPA 9040C

QC Batch Method: EPA 9040C

Analysis Description: 9040 pH

Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92526574004

SAMPLE DUPLICATE: 3195363

Parameter	Units	92526574004 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	7.2	7.2	1	10	H3,H6

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: Plant Hammond-CCR Ash Pond

Pace Project No.: 92526574

QC Batch: 606758 Analysis Method: SM 2320B-2011  
 QC Batch Method: SM 2320B-2011 Analysis Description: 2320B Alkalinity  
 Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92526574001, 92526574002, 92526574003, 92526574004, 92526574005, 92526574006, 92526574007

METHOD BLANK: 3196779 Matrix: Water  
 Associated Lab Samples: 92526574001, 92526574002, 92526574003, 92526574004, 92526574005, 92526574006, 92526574007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Alkalinity, Total as CaCO <sub>3</sub>	mg/L	ND	5.0	03/16/21 01:47	
Alkalinity,Bicarbonate (CaCO <sub>3</sub> )	mg/L	ND	5.0	03/16/21 01:47	
Alkalinity,Carbonate (CaCO <sub>3</sub> )	mg/L	ND	5.0	03/16/21 01:47	

LABORATORY CONTROL SAMPLE: 3196780

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO <sub>3</sub>	mg/L	50	49.7	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3196781 3196782

Parameter	Units	92526544001		3196781		3196782		% Rec Limits	RPD	Max RPD	Qual	
		MS Result	MSD Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result					MS % Rec
Alkalinity, Total as CaCO <sub>3</sub>	mg/L	68.3	68.3	50	50	116	118	96	99	80-120	1	25

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3196783 3196784

Parameter	Units	92526568008		3196783		3196784		% Rec Limits	RPD	Max RPD	Qual	
		MS Result	MSD Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result					MS % Rec
Alkalinity, Total as CaCO <sub>3</sub>	mg/L	17.2	17.2	50	50	68.6	68.8	103	103	80-120	0	25

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: Plant Hammond-CCR Ash Pond  
Pace Project No.: 92526574

QC Batch: 605465 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: 92526574001, 92526574002, 92526574003, 92526574004, 92526574005, 92526574006, 92526574007

METHOD BLANK: 3189694 Matrix: Water  
Associated Lab Samples: 92526574001, 92526574002, 92526574003, 92526574004, 92526574005, 92526574006, 92526574007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	03/11/21 23:04	
Fluoride	mg/L	ND	0.10	03/11/21 23:04	
Sulfate	mg/L	ND	1.0	03/11/21 23:04	

LABORATORY CONTROL SAMPLE: 3189695

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	50.7	101	90-110	
Fluoride	mg/L	2.5	2.6	105	90-110	
Sulfate	mg/L	50	51.0	102	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3189696 3189697

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92526541001 Result	Spike Conc.	Spike Conc.	Conc.								
Chloride	mg/L	1.3	50	50	50	48.9	56.2	95	110	90-110	14	10	R1
Fluoride	mg/L	ND	2.5	2.5	2.5	2.5	2.9	97	113	90-110	15	10	M1,R1
Sulfate	mg/L	9.8	50	50	50	58.6	65.8	98	112	90-110	12	10	M1,R1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3189698 3189699

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92526574005 Result	Spike Conc.	Spike Conc.	Conc.								
Chloride	mg/L	4.3	50	50	50	54.7	52.6	101	97	90-110	4	10	
Fluoride	mg/L	ND	2.5	2.5	2.5	2.6	2.5	101	98	90-110	3	10	
Sulfate	mg/L	4.3	50	50	50	55.1	53.2	102	98	90-110	3	10	

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### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: Plant Hammond-CCR Ash Pond

Pace Project No.: 92526574

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### DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

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

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

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.

H3 Sample was received or analysis requested beyond the recognized method holding time.

H6 Analysis initiated outside of the 15 minute EPA required holding time.

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-CCR Ash Pond  
Pace Project No.: 92526574

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92526574001	H+0.75	EPA 3010A	605887	EPA 6010D	605937
92526574002	H+0.25	EPA 3010A	605887	EPA 6010D	605937
92526574003	H+0.5	EPA 3010A	605887	EPA 6010D	605937
92526574004	H+0.2	EPA 3010A	605887	EPA 6010D	605937
92526574005	Up Stream	EPA 3010A	605887	EPA 6010D	605937
92526574006	Down Stream	EPA 3010A	605887	EPA 6010D	605937
92526574007	H+0.35	EPA 3010A	605887	EPA 6010D	605937
92526574001	H+0.75	EPA 3005A	605915	EPA 6020B	606002
92526574002	H+0.25	EPA 3005A	605915	EPA 6020B	606002
92526574003	H+0.5	EPA 3005A	605915	EPA 6020B	606002
92526574004	H+0.2	EPA 3005A	605915	EPA 6020B	606002
92526574005	Up Stream	EPA 3005A	605915	EPA 6020B	606002
92526574006	Down Stream	EPA 3005A	605915	EPA 6020B	606002
92526574007	H+0.35	EPA 3005A	605915	EPA 6020B	606002
92526574001	H+0.75	SM 2450C-2011	606468		
92526574002	H+0.25	SM 2450C-2011	606468		
92526574003	H+0.5	SM 2450C-2011	606468		
92526574004	H+0.2	SM 2450C-2011	606468		
92526574005	Up Stream	SM 2450C-2011	606468		
92526574006	Down Stream	SM 2450C-2011	606468		
92526574007	H+0.35	SM 2450C-2011	606468		
92526574001	H+0.75	EPA 9040C	606012		
92526574002	H+0.25	EPA 9040C	606012		
92526574003	H+0.5	EPA 9040C	606012		
92526574004	H+0.2	EPA 9040C	606506		
92526574005	Up Stream	EPA 9040C	606012		
92526574006	Down Stream	EPA 9040C	606012		
92526574007	H+0.35	EPA 9040C	606012		
92526574001	H+0.75	SM 2320B-2011	606758		
92526574002	H+0.25	SM 2320B-2011	606758		
92526574003	H+0.5	SM 2320B-2011	606758		
92526574004	H+0.2	SM 2320B-2011	606758		
92526574005	Up Stream	SM 2320B-2011	606758		
92526574006	Down Stream	SM 2320B-2011	606758		
92526574007	H+0.35	SM 2320B-2011	606758		
92526574001	H+0.75	EPA 300.0 Rev 2.1 1993	605465		
92526574002	H+0.25	EPA 300.0 Rev 2.1 1993	605465		
92526574003	H+0.5	EPA 300.0 Rev 2.1 1993	605465		
92526574004	H+0.2	EPA 300.0 Rev 2.1 1993	605465		
92526574005	Up Stream	EPA 300.0 Rev 2.1 1993	605465		
92526574006	Down Stream	EPA 300.0 Rev 2.1 1993	605465		
92526574007	H+0.35	EPA 300.0 Rev 2.1 1993	605465		

**REPORT OF LABORATORY ANALYSIS**

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# CHAIN-OF-CUSTODY / Analytical Request Document

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

**Section A** Requested Client Information: Company: **AT&T** - Atlanta Address: **2528 Peach Ferry Rd** Atlanta, GA 30329

**Section B** Requested Project Information: Project For: **Mobile Storage, Western Johnson** Project To: **Ben Higgins, J&J Auction** Purchase Order #: **GPC1104499** Project Name: **Ford Instruments/CON/AM Ford Chairs** Project #: **12345**

**Section C** Analytical Information: Analytical: **Yes** Company Name: **Procter & Gamble** Project Manager: **matt.ford@procter.com** Phone #: **12345**

ITEM #	SAMPLE ID	DATE	TIME	DATE	TIME	COLLECTED		MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	# OF CONTAINERS	Preservatives	Analysis Test	Residual Chlorine (Y/N)
						START	END						
1	H-Q-75	WT	14:00	14:00									
2	H-Q-25	WT	14:25	14:25									
3	H-Q-5	WT	15:05	15:05									
4	H-Q-2	WT	16:00	16:00									
5	Up Stream	WT	15:00	15:00									
6	Down Stream	WT	14:35	14:35									
7	H+O.35	WT	3:35 PM	14:30									
8													
9													
10													
11													
12													

ADDITIONAL COMMENTS	ANALYZED BY / APPLICATION	DATE	SIGN	ADDRESS BY / APPLICATION	DATE	TIME	TEMP °C	RECEIVED ON (Y/N)	CHECKED COOLER (Y/N)	SAMPLE LABEL (Y/N)
<i>Sample 1000</i>	<i>John Page</i>	<i>3-9-01</i>	<i>1200</i>	<i>John Page</i>	<i>3-9-01</i>	<i>1213</i>				
<i>Sample 1001</i>	<i>John Page</i>	<i>3-9-01</i>	<i>1201</i>	<i>John Page</i>	<i>3-9-01</i>	<i>1213</i>				

MO#: 92526574

92526574

DATE Request: 3-9-01

TEMP °C

Received on box (Y/N)

Checked Cooler (Y/N)

Sample Label (Y/N)

**Laboratory receiving samples:**

Asheville  Eden  Greenwood  Huntersville  Raleigh  Mechanicsville  Atlanta  Kernersville

Sample Condition Upon Receipt

Client Name: Arcadi's

Project #:

**WO# : 92526574**

PM: MP Due Date: 03/16/21  
CLIENT: GA-ArcadAtI

Courier:  Fed Ex  UPS  USPS  Client  
 Commercial  Pace  Other: \_\_\_\_\_

Custody Seal Present?  Yes  No Seals Intact?  Yes  No

Date/Initials Person Examining Contents: \_\_\_\_\_

Packing Material:  Bubble Wrap  Bubble Bags  None  Other

Biological Tissue Frozen?

Yes  No  N/A

Thermometer:

IR Gun ID: 214 Type of Ice:  Wet  Blue  None

Cooler Temp: 4.0

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

Temp should be above freezing to 6°C

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

Cooler Temp Corrected (°C): 4.1

USDA Regulated Soil (  N/A, water sample)

Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)?

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

			Comments/Discrepancy:
Chain of Custody Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.	
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.	
Short Hold Time Analysis (<72 hr.)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	3.	
Rush Turn Around Time Requested?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	4.	
Sufficient Volume?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.	
Correct Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6.	
-Pace Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
Containers Intact?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	7.	
Dissolved analysis: Samples Field Filtered?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	8.	
Sample Labels Match COC?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	9.	<u>H+0.2 NOT present</u> <u>Sample H+0.35 taken 3/8/21 14LO present</u> <u>H+0.2 present without time or date</u>
-Includes Date/Time/ID/Analysis Matrix: <u>W</u>			
Headspace in VOA Vials (>5-6mm)?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	10.	
Trip Blank Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.	
Trip Blank Custody Seals Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input 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: \_\_\_\_\_

August 2021

September 14, 2021

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

RE: Project: HAMMOND AP-2  
Pace Project No.: 92555504

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory between August 13, 2021 and August 20, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

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

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

Sincerely,



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

Enclosures

cc: Christine Hug, Geosyntec Consultants, Inc.  
Kristen Jurinko  
Thomas Kessler, Geosyntec  
Whitney Law, Geosyntec Consultants  
Noelia Muskus, Geosyntec Consultants  
Ms. Lauren Petty, Southern Company  
Nardos Tilahun, GeoSyntec  
Dawit Yifru, Geosyntec Consultants, Inc.



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: HAMMOND AP-2

Pace Project No.: 92555504

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### **Pace Analytical Services Charlotte**

9800 Kinsey Ave. Ste 100, Huntersville, NC 28078  
Louisiana/NELAP Certification # LA170028  
North Carolina Drinking Water Certification #: 37706  
North Carolina Field Services Certification #: 5342  
North Carolina Wastewater Certification #: 12

South Carolina Certification #: 99006001  
Florida/NELAP Certification #: E87627  
Kentucky UST Certification #: 84  
Virginia/VELAP Certification #: 460221

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### **Pace Analytical Services Asheville**

2225 Riverside Drive, Asheville, NC 28804  
Florida/NELAP Certification #: E87648  
North Carolina Drinking Water Certification #: 37712

North Carolina Wastewater Certification #: 40  
South Carolina Certification #: 99030001  
Virginia/VELAP Certification #: 460222

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

110 Technology Pkwy, Peachtree Corners, GA 30092  
Florida DOH Certification #: E87315  
Georgia DW Inorganics Certification #: 812

North Carolina Certification #: 381  
South Carolina Certification #: 98011001

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: HAMMOND AP-2

Pace Project No.: 92555504

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92555504001	HGWA-4	Water	08/12/21 16:55	08/13/21 14:55
92555504002	HGWA-5	Water	08/12/21 16:18	08/13/21 14:55
92555504003	HGWA-6	Water	08/12/21 14:48	08/13/21 14:55
92555504004	HGWA-42D	Water	08/12/21 09:35	08/13/21 14:55
92555504005	MW-34D	Water	08/16/21 15:03	08/17/21 11:25
92555504006	HGWC-17	Water	08/18/21 17:25	08/19/21 12:40
92555504007	HGWC-14	Water	08/18/21 15:31	08/19/21 12:40
92555504008	MW-33	Water	08/18/21 13:40	08/19/21 12:40
92555504009	MW-51	Water	08/18/21 11:54	08/19/21 12:40
92555504010	MW-35	Water	08/18/21 10:18	08/19/21 12:40
92555504011	MW-37D	Water	08/18/21 18:30	08/19/21 12:40
92555504012	MW-22	Water	08/19/21 14:58	08/20/21 12:15
92555504013	HGWC-18	Water	08/19/21 09:30	08/20/21 12:15
92555504014	MW-21D	Water	08/19/21 10:50	08/20/21 12:15
92555504015	HGWC-16	Water	08/19/21 13:15	08/20/21 12:15
92555504016	HGWC-15	Water	08/19/21 15:00	08/20/21 12:15
92555504017	MW-23D	Water	08/19/21 18:48	08/20/21 12:15
92555504018	DUP-2	Water	08/19/21 00:00	08/20/21 12:15
92555504019	EB-2	Water	08/19/21 13:30	08/20/21 12:15
92555504020	FB-2	Water	08/19/21 09:40	08/20/21 12:15

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: HAMMOND AP-2  
Pace Project No.: 92555504

Lab ID	Sample ID	Method	Analysts	Analytes Reported
92555504001	HGWA-4	EPA 6010D	KH	1
		EPA 6020B	CW1	13
		SM 2540C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92555504002	HGWA-5	EPA 6010D	KH	1
		EPA 6020B	CW1	13
		SM 2540C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92555504003	HGWA-6	EPA 6010D	KH	1
		EPA 6020B	CW1	13
		SM 2540C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92555504004	HGWA-42D	EPA 6010D	KH	1
		EPA 6020B	CW1	13
		SM 2540C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92555504005	MW-34D	EPA 6010D	KH	1
		EPA 6020B	CW1	13
		SM 2540C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92555504006	HGWC-17	EPA 6010D	KH	1
		EPA 6020B	CW1	13
		SM 2540C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92555504007	HGWC-14	EPA 6010D	DRB	1
		EPA 6020B	CW1	13
		SM 2540C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92555504008	MW-33	EPA 6010D	DRB	1
		EPA 6020B	CW1	13
		SM 2540C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92555504009	MW-51	EPA 6010D	DRB	1
		EPA 6020B	CW1	13
		SM 2540C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92555504010	MW-35	EPA 6010D	DRB	1

### REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: HAMMOND AP-2  
Pace Project No.: 92555504

Lab ID	Sample ID	Method	Analysts	Analytes Reported
92555504011	MW-37D	EPA 6020B	CW1	13
		SM 2540C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
		EPA 6010D	KH	1
		EPA 6020B	CW1	13
92555504012	MW-22	SM 2540C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
		EPA 6010D	DRB	1
		EPA 6020B	CW1	13
		SM 2540C-2011	ALW	1
92555504013	HGWC-18	EPA 300.0 Rev 2.1 1993	CDC	3
		EPA 6010D	DRB	1
		EPA 6020B	CW1	13
		SM 2540C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92555504014	MW-21D	EPA 6010D	DRB	1
		EPA 6020B	CW1	13
		SM 2540C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
		EPA 6010D	DRB	1
92555504015	HGWC-16	EPA 6020B	CW1	13
		SM 2540C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
		EPA 6010D	DRB	1
		EPA 6020B	CW1	13
92555504016	HGWC-15	SM 2540C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
		EPA 6010D	DRB	1
		EPA 6020B	CW1	13
		SM 2540C-2011	ALW	1
92555504017	MW-23D	EPA 300.0 Rev 2.1 1993	CDC	3
		EPA 6010D	DRB	1
		EPA 6020B	CW1	13
		SM 2540C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92555504018	DUP-2	EPA 6010D	DRB	1
		EPA 6020B	CW1	13
		SM 2540C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
		EPA 6010D	DRB	1
92555504019	EB-2	EPA 6020B	CW1	13

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### SAMPLE ANALYTE COUNT

Project: HAMMOND AP-2

Pace Project No.: 92555504

Lab ID	Sample ID	Method	Analysts	Analytes Reported
		SM 2540C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92555504020	FB-2	EPA 6010D	DRB	1
		EPA 6020B	CW1	13
		SM 2540C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3

PASI-A = Pace Analytical Services - Asheville

PASI-C = Pace Analytical Services - Charlotte

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

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: HAMMOND AP-2

Pace Project No.: 92555504

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
<b>92555504001</b>	<b>HGWA-4</b>					
	Performed by	CUSTOME			08/16/21 10:18	
		R				
	pH	5.26	Std. Units		08/16/21 10:18	
EPA 6010D	Calcium	5.4	mg/L	1.0	08/18/21 17:06	
EPA 6020B	Barium	0.034	mg/L	0.0050	08/19/21 18:02	
EPA 6020B	Beryllium	0.00021J	mg/L	0.00050	08/19/21 18:02	
EPA 6020B	Boron	0.014J	mg/L	0.040	08/19/21 18:02	
EPA 6020B	Cobalt	0.00070J	mg/L	0.0050	08/19/21 18:02	
EPA 6020B	Lithium	0.0013J	mg/L	0.030	08/19/21 18:02	
SM 2540C-2011	Total Dissolved Solids	55.0	mg/L	10.0	08/18/21 08:32	
EPA 300.0 Rev 2.1 1993	Chloride	2.4	mg/L	1.0	08/20/21 05:29	
EPA 300.0 Rev 2.1 1993	Sulfate	1.1	mg/L	1.0	08/20/21 05:29	
<b>92555504002</b>	<b>HGWA-5</b>					
	Performed by	CUSTOME			08/16/21 10:18	
		R				
	pH	6.46	Std. Units		08/16/21 10:18	
EPA 6010D	Calcium	32.0	mg/L	1.0	08/18/21 17:25	
EPA 6020B	Antimony	0.0014J	mg/L	0.0030	08/19/21 18:25	
EPA 6020B	Barium	0.044	mg/L	0.0050	08/19/21 18:25	
EPA 6020B	Boron	0.0092J	mg/L	0.040	08/19/21 18:25	
EPA 6020B	Lithium	0.0032J	mg/L	0.030	08/19/21 18:25	
SM 2540C-2011	Total Dissolved Solids	158	mg/L	10.0	08/18/21 08:32	
EPA 300.0 Rev 2.1 1993	Chloride	1.4	mg/L	1.0	08/20/21 05:43	
EPA 300.0 Rev 2.1 1993	Sulfate	17.4	mg/L	1.0	08/20/21 05:43	
<b>92555504003</b>	<b>HGWA-6</b>					
	Performed by	CUSTOME			08/16/21 10:18	
		R				
	pH	7.47	Std. Units		08/16/21 10:18	
EPA 6010D	Calcium	54.7	mg/L	1.0	08/18/21 17:30	
EPA 6020B	Barium	0.18	mg/L	0.0050	08/19/21 18:30	
EPA 6020B	Boron	0.014J	mg/L	0.040	08/19/21 18:30	
EPA 6020B	Lithium	0.0094J	mg/L	0.030	08/19/21 18:30	
SM 2540C-2011	Total Dissolved Solids	229	mg/L	10.0	08/18/21 08:32	
EPA 300.0 Rev 2.1 1993	Chloride	0.94J	mg/L	1.0	08/20/21 05:58	
EPA 300.0 Rev 2.1 1993	Sulfate	28.6	mg/L	1.0	08/20/21 05:58	
<b>92555504004</b>	<b>HGWA-42D</b>					
	Performed by	CUSTOME			08/16/21 10:18	
		R				
	pH	7.70	Std. Units		08/16/21 10:18	
EPA 6010D	Calcium	43.6	mg/L	1.0	08/18/21 17:45	
EPA 6020B	Barium	0.18	mg/L	0.0050	08/19/21 18:36	
EPA 6020B	Boron	0.044	mg/L	0.040	08/19/21 18:36	
EPA 6020B	Lithium	0.0096J	mg/L	0.030	08/19/21 18:36	
SM 2540C-2011	Total Dissolved Solids	179	mg/L	10.0	08/18/21 08:32	
EPA 300.0 Rev 2.1 1993	Chloride	2.6	mg/L	1.0	08/20/21 06:13	
EPA 300.0 Rev 2.1 1993	Fluoride	0.079J	mg/L	0.10	08/20/21 06:13	
EPA 300.0 Rev 2.1 1993	Sulfate	7.8	mg/L	1.0	08/20/21 06:13	

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: HAMMOND AP-2

Pace Project No.: 92555504

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
<b>92555504005</b>	<b>MW-34D</b>					
	Performed by	CUSTOMER			08/18/21 10:11	
	pH	7.05	Std. Units		08/18/21 10:11	
EPA 6010D	Calcium	554	mg/L	5.0	08/18/21 17:55	
EPA 6020B	Arsenic	0.0024J	mg/L	0.0050	08/19/21 18:42	
EPA 6020B	Barium	0.035	mg/L	0.0050	08/19/21 18:42	
EPA 6020B	Boron	8.2	mg/L	0.040	08/19/21 18:42	
EPA 6020B	Cadmium	0.00023J	mg/L	0.00050	08/19/21 18:42	
EPA 6020B	Cobalt	0.0093	mg/L	0.0050	08/19/21 18:42	
EPA 6020B	Lithium	0.0010J	mg/L	0.030	08/19/21 18:42	
SM 2540C-2011	Total Dissolved Solids	2340	mg/L	100	08/19/21 15:12	
EPA 300.0 Rev 2.1 1993	Chloride	264	mg/L	22.0	08/23/21 12:44	
EPA 300.0 Rev 2.1 1993	Fluoride	0.066J	mg/L	0.10	08/23/21 00:17	
EPA 300.0 Rev 2.1 1993	Sulfate	987	mg/L	22.0	08/23/21 12:44	
<b>92555504006</b>	<b>HGWC-17</b>					
	Performed by	CUSTOMER			08/19/21 16:57	
	pH	6.43	Std. Units		08/19/21 16:57	
EPA 6010D	Calcium	281	mg/L	1.0	08/20/21 17:52	M1
EPA 6020B	Barium	0.022	mg/L	0.0050	08/27/21 14:38	
EPA 6020B	Boron	5.3	mg/L	0.040	08/27/21 14:38	
EPA 6020B	Cobalt	0.0090	mg/L	0.0050	08/27/21 14:38	
EPA 6020B	Lithium	0.0012J	mg/L	0.030	08/27/21 14:38	
SM 2540C-2011	Total Dissolved Solids	1290	mg/L	50.0	08/24/21 18:59	
EPA 300.0 Rev 2.1 1993	Chloride	90.7	mg/L	9.0	08/28/21 13:29	
EPA 300.0 Rev 2.1 1993	Fluoride	0.062J	mg/L	0.10	08/26/21 02:13	
EPA 300.0 Rev 2.1 1993	Sulfate	280	mg/L	9.0	08/28/21 13:29	
<b>92555504007</b>	<b>HGWC-14</b>					
	Performed by	CUSTOMER			08/19/21 16:57	
	pH	4.90	Std. Units		08/19/21 16:57	
EPA 6010D	Calcium	583	mg/L	10.0	08/23/21 16:28	
EPA 6020B	Arsenic	0.0035J	mg/L	0.0050	08/27/21 14:49	
EPA 6020B	Barium	0.018	mg/L	0.0050	08/27/21 14:49	
EPA 6020B	Beryllium	0.00039J	mg/L	0.00050	08/27/21 14:49	
EPA 6020B	Boron	8.6	mg/L	0.040	08/27/21 14:49	M1
EPA 6020B	Cadmium	0.00013J	mg/L	0.00050	08/27/21 14:49	
EPA 6020B	Cobalt	0.033	mg/L	0.0050	08/27/21 14:49	
EPA 6020B	Lead	0.0015	mg/L	0.0010	08/27/21 14:49	
EPA 6020B	Selenium	0.0077	mg/L	0.0050	08/27/21 14:49	
EPA 6020B	Thallium	0.00027J	mg/L	0.0010	08/27/21 14:49	
SM 2540C-2011	Total Dissolved Solids	2350	mg/L	100	08/24/21 18:59	
EPA 300.0 Rev 2.1 1993	Chloride	141	mg/L	25.0	08/28/21 13:46	
EPA 300.0 Rev 2.1 1993	Sulfate	768	mg/L	25.0	08/28/21 13:46	
<b>92555504008</b>	<b>MW-33</b>					
	Performed by	CUSTOMER			08/19/21 16:57	

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: HAMMOND AP-2

Pace Project No.: 92555504

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
<b>92555504008</b>	<b>MW-33</b>					
	pH	4.42	Std. Units		08/19/21 16:57	
EPA 6010D	Calcium	549	mg/L	10.0	08/23/21 16:32	
EPA 6020B	Arsenic	0.0058	mg/L	0.0050	08/27/21 15:43	
EPA 6020B	Barium	0.025	mg/L	0.0050	08/27/21 15:43	
EPA 6020B	Beryllium	0.00097	mg/L	0.00050	08/30/21 17:01	
EPA 6020B	Boron	9.1	mg/L	0.040	08/30/21 17:01	
EPA 6020B	Cadmium	0.00017J	mg/L	0.00050	08/27/21 15:43	
EPA 6020B	Cobalt	0.054	mg/L	0.0050	08/27/21 15:43	
EPA 6020B	Lead	0.0016	mg/L	0.0010	08/27/21 15:43	
EPA 6020B	Lithium	0.00097J	mg/L	0.030	08/30/21 17:01	
EPA 6020B	Selenium	0.014	mg/L	0.0050	08/27/21 15:43	
EPA 6020B	Thallium	0.00040J	mg/L	0.0010	08/27/21 15:43	
SM 2540C-2011	Total Dissolved Solids	3690	mg/L	100	08/24/21 18:59	
EPA 300.0 Rev 2.1 1993	Chloride	118	mg/L	25.0	08/28/21 15:10	
EPA 300.0 Rev 2.1 1993	Fluoride	0.16	mg/L	0.10	08/26/21 02:45	
EPA 300.0 Rev 2.1 1993	Sulfate	740	mg/L	25.0	08/28/21 15:10	
<b>92555504009</b>	<b>MW-51</b>					
	Performed by	CUSTOMER			08/19/21 16:58	
	pH	6.19	Std. Units		08/19/21 16:58	
EPA 6010D	Calcium	532	mg/L	10.0	08/23/21 16:37	
EPA 6020B	Arsenic	0.0020J	mg/L	0.0050	08/27/21 15:54	
EPA 6020B	Barium	0.032	mg/L	0.0050	08/27/21 15:54	
EPA 6020B	Beryllium	0.00042J	mg/L	0.00050	08/30/21 17:07	
EPA 6020B	Boron	9.7	mg/L	0.40	08/30/21 17:48	
EPA 6020B	Cadmium	0.00094	mg/L	0.00050	08/27/21 15:54	
EPA 6020B	Cobalt	0.030	mg/L	0.0050	08/27/21 15:54	
EPA 6020B	Lithium	0.0022J	mg/L	0.030	08/30/21 17:07	
EPA 6020B	Selenium	0.0040J	mg/L	0.0050	08/27/21 15:54	
SM 2540C-2011	Total Dissolved Solids	2610	mg/L	100	08/24/21 18:59	
EPA 300.0 Rev 2.1 1993	Chloride	123	mg/L	23.0	08/28/21 15:28	
EPA 300.0 Rev 2.1 1993	Fluoride	0.072J	mg/L	0.10	08/26/21 03:33	
EPA 300.0 Rev 2.1 1993	Sulfate	757	mg/L	23.0	08/28/21 15:28	
<b>92555504010</b>	<b>MW-35</b>					
	Performed by	CUSTOMER			08/19/21 16:58	
	pH	4.89	Std. Units		08/19/21 16:58	
EPA 6010D	Calcium	546	mg/L	10.0	08/23/21 16:42	
EPA 6020B	Arsenic	0.0043J	mg/L	0.0050	08/27/21 16:06	
EPA 6020B	Barium	0.025	mg/L	0.0050	08/27/21 16:06	
EPA 6020B	Beryllium	0.00061	mg/L	0.00050	08/30/21 17:13	
EPA 6020B	Boron	11.2	mg/L	0.40	08/30/21 17:54	
EPA 6020B	Cadmium	0.0015	mg/L	0.00050	08/27/21 16:06	
EPA 6020B	Cobalt	0.085	mg/L	0.0050	08/27/21 16:06	
EPA 6020B	Lithium	0.0036J	mg/L	0.030	08/30/21 17:13	
EPA 6020B	Selenium	0.014	mg/L	0.0050	08/27/21 16:06	
SM 2540C-2011	Total Dissolved Solids	2390	mg/L	100	08/25/21 19:25	

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: HAMMOND AP-2  
Pace Project No.: 92555504

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
<b>92555504010</b>	<b>MW-35</b>					
EPA 300.0 Rev 2.1 1993	Chloride	149	mg/L	23.0	08/28/21 15:45	
EPA 300.0 Rev 2.1 1993	Fluoride	0.052J	mg/L	0.10	08/26/21 03:49	
EPA 300.0 Rev 2.1 1993	Sulfate	789	mg/L	23.0	08/28/21 15:45	
<b>92555504011</b>	<b>MW-37D</b>					
	Performed by	CUSTOMER			08/19/21 16:58	
	pH	7.52	Std. Units		08/19/21 16:58	
EPA 6010D	Calcium	180	mg/L	1.0	08/20/21 18:41	
EPA 6020B	Barium	0.12	mg/L	0.0050	08/27/21 16:17	
EPA 6020B	Boron	0.20	mg/L	0.040	08/30/21 17:19	
EPA 6020B	Lithium	0.030	mg/L	0.030	08/30/21 17:19	
EPA 6020B	Molybdenum	0.0083J	mg/L	0.010	08/27/21 16:17	
SM 2540C-2011	Total Dissolved Solids	950	mg/L	20.0	08/25/21 19:25	
EPA 300.0 Rev 2.1 1993	Chloride	122	mg/L	6.0	08/28/21 16:02	
EPA 300.0 Rev 2.1 1993	Fluoride	0.050J	mg/L	0.10	08/26/21 04:05	
EPA 300.0 Rev 2.1 1993	Sulfate	207	mg/L	6.0	08/28/21 16:02	
<b>92555504012</b>	<b>MW-22</b>					
	Performed by	CUSTOMER			08/20/21 15:26	
	pH	6.05	Std. Units		08/20/21 15:26	
EPA 6010D	Calcium	203	mg/L	1.0	08/24/21 19:31	M1
EPA 6020B	Antimony	0.0016J	mg/L	0.0030	08/27/21 13:32	
EPA 6020B	Barium	0.018	mg/L	0.0050	08/27/21 13:32	
EPA 6020B	Beryllium	0.000070J	mg/L	0.00050	08/27/21 13:32	
EPA 6020B	Boron	2.5	mg/L	0.040	08/27/21 13:32	
EPA 6020B	Cadmium	0.0021	mg/L	0.00050	08/27/21 13:32	
EPA 6020B	Cobalt	0.022	mg/L	0.0050	08/27/21 13:32	
EPA 6020B	Lithium	0.0012J	mg/L	0.030	08/27/21 13:32	
SM 2540C-2011	Total Dissolved Solids	1030	mg/L	20.0	08/25/21 19:44	
EPA 300.0 Rev 2.1 1993	Chloride	118	mg/L	9.0	08/27/21 18:19	M1
EPA 300.0 Rev 2.1 1993	Sulfate	412	mg/L	9.0	08/27/21 18:19	M1
<b>92555504013</b>	<b>HGWC-18</b>					
	Performed by	CUSTOMER			08/20/21 15:27	
	pH	4.43	Std. Units		08/20/21 15:27	
EPA 6010D	Calcium	416	mg/L	10.0	08/25/21 12:33	
EPA 6020B	Antimony	0.00080J	mg/L	0.0030	08/27/21 13:38	
EPA 6020B	Arsenic	0.0045J	mg/L	0.0050	08/27/21 13:38	
EPA 6020B	Barium	0.031	mg/L	0.0050	08/27/21 13:38	
EPA 6020B	Beryllium	0.0034	mg/L	0.00050	08/27/21 13:38	
EPA 6020B	Boron	8.6	mg/L	0.040	08/27/21 13:38	
EPA 6020B	Cadmium	0.0014	mg/L	0.00050	08/27/21 13:38	
EPA 6020B	Cobalt	0.15	mg/L	0.0050	08/27/21 13:38	
EPA 6020B	Lead	0.0013	mg/L	0.0010	08/27/21 13:38	
EPA 6020B	Lithium	0.013J	mg/L	0.030	08/27/21 13:38	
EPA 6020B	Selenium	0.010	mg/L	0.0050	08/27/21 13:38	

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: HAMMOND AP-2

Pace Project No.: 92555504

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
<b>92555504013</b>	<b>HGWC-18</b>					
EPA 6020B	Thallium	0.00020J	mg/L	0.0010	08/27/21 13:38	
SM 2540C-2011	Total Dissolved Solids	1750	mg/L	100	08/25/21 19:44	
EPA 300.0 Rev 2.1 1993	Chloride	95.8	mg/L	1.0	08/27/21 09:46	
EPA 300.0 Rev 2.1 1993	Fluoride	0.31	mg/L	0.10	08/27/21 09:46	
EPA 300.0 Rev 2.1 1993	Sulfate	934	mg/L	21.0	08/27/21 19:05	
<b>92555504014</b>	<b>MW-21D</b>					
	Performed by	CUSTOME			08/20/21 15:27	
		R				
	pH	6.85	Std. Units		08/20/21 15:27	
EPA 6010D	Calcium	365	mg/L	10.0	08/25/21 12:38	
EPA 6020B	Barium	0.042	mg/L	0.0050	08/27/21 13:44	
EPA 6020B	Boron	5.4	mg/L	0.040	08/27/21 13:44	
EPA 6020B	Lithium	0.022J	mg/L	0.030	08/27/21 13:44	
EPA 6020B	Molybdenum	0.018	mg/L	0.010	08/27/21 13:44	
SM 2540C-2011	Total Dissolved Solids	1920	mg/L	100	08/25/21 19:44	
EPA 300.0 Rev 2.1 1993	Chloride	173	mg/L	17.0	08/27/21 19:20	
EPA 300.0 Rev 2.1 1993	Sulfate	724	mg/L	17.0	08/27/21 19:20	
<b>92555504015</b>	<b>HGWC-16</b>					
	Performed by	CUSTOME			08/20/21 15:27	
		R				
	pH	7.04	Std. Units		08/20/21 15:27	
EPA 6010D	Calcium	207	mg/L	1.0	08/24/21 20:11	
EPA 6020B	Barium	0.10	mg/L	0.0050	08/27/21 13:50	
EPA 6020B	Boron	2.5	mg/L	0.040	08/27/21 13:50	
EPA 6020B	Lithium	0.0042J	mg/L	0.030	08/27/21 13:50	
SM 2540C-2011	Total Dissolved Solids	816	mg/L	20.0	08/26/21 18:46	
EPA 300.0 Rev 2.1 1993	Chloride	90.1	mg/L	1.0	08/27/21 11:09	
EPA 300.0 Rev 2.1 1993	Sulfate	228	mg/L	5.0	08/27/21 20:06	
<b>92555504016</b>	<b>HGWC-15</b>					
	Performed by	CUSTOME			08/20/21 15:27	
		R				
	pH	6.18	Std. Units		08/20/21 15:27	
EPA 6010D	Calcium	203	mg/L	1.0	08/24/21 20:15	
EPA 6020B	Barium	0.010	mg/L	0.0050	08/27/21 14:13	
EPA 6020B	Boron	2.1	mg/L	0.040	08/27/21 14:13	
EPA 6020B	Cadmium	0.0012	mg/L	0.00050	08/27/21 14:13	
EPA 6020B	Cobalt	0.011	mg/L	0.0050	08/27/21 14:13	
EPA 6020B	Lithium	0.0058J	mg/L	0.030	08/27/21 14:13	
SM 2540C-2011	Total Dissolved Solids	958	mg/L	20.0	08/26/21 18:46	
EPA 300.0 Rev 2.1 1993	Chloride	89.9	mg/L	1.0	08/27/21 11:24	
EPA 300.0 Rev 2.1 1993	Sulfate	223	mg/L	5.0	08/27/21 20:21	
<b>92555504017</b>	<b>MW-23D</b>					
	Performed by	CUSTOME			08/20/21 15:27	
		R				
	pH	6.72	Std. Units		08/20/21 15:27	
EPA 6010D	Calcium	307	mg/L	5.0	08/24/21 20:25	

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### SUMMARY OF DETECTION

Project: HAMMOND AP-2

Pace Project No.: 92555504

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>92555504017</b>	<b>MW-23D</b>					
EPA 6020B	Barium	0.050	mg/L	0.0050	08/27/21 14:19	
EPA 6020B	Boron	3.4	mg/L	0.040	08/27/21 14:19	
EPA 6020B	Cadmium	0.00012J	mg/L	0.00050	08/27/21 14:19	
EPA 6020B	Cobalt	0.00089J	mg/L	0.0050	08/27/21 14:19	
EPA 6020B	Lithium	0.0022J	mg/L	0.030	08/27/21 14:19	
EPA 6020B	Molybdenum	0.0034J	mg/L	0.010	08/27/21 14:19	
SM 2540C-2011	Total Dissolved Solids	1440	mg/L	50.0	08/26/21 18:46	
EPA 300.0 Rev 2.1 1993	Chloride	137	mg/L	10.0	08/27/21 20:36	
EPA 300.0 Rev 2.1 1993	Sulfate	432	mg/L	10.0	08/27/21 20:36	
<b>92555504018</b>	<b>DUP-2</b>					
EPA 6010D	Calcium	210	mg/L	1.0	08/24/21 20:30	
EPA 6020B	Barium	0.10	mg/L	0.0050	08/27/21 14:31	
EPA 6020B	Boron	2.6	mg/L	0.040	08/27/21 14:31	
EPA 6020B	Lithium	0.0042J	mg/L	0.030	08/27/21 14:31	
SM 2540C-2011	Total Dissolved Solids	862	mg/L	20.0	08/26/21 18:46	
EPA 300.0 Rev 2.1 1993	Chloride	98.8	mg/L	1.0	08/27/21 11:55	
EPA 300.0 Rev 2.1 1993	Fluoride	0.051J	mg/L	0.10	08/27/21 11:55	
EPA 300.0 Rev 2.1 1993	Sulfate	349	mg/L	8.0	08/27/21 20:51	
<b>92555504019</b>	<b>EB-2</b>					
EPA 6020B	Boron	0.011J	mg/L	0.040	08/27/21 14:37	

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### ANALYTICAL RESULTS

Project: HAMMOND AP-2

Pace Project No.: 92555504

Sample: HGWA-4		Lab ID: 92555504001		Collected: 08/12/21 16:55		Received: 08/13/21 14:55		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		08/16/21 10:18		
pH	<b>5.26</b>	Std. Units			1		08/16/21 10:18		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Calcium	<b>5.4</b>	mg/L	1.0	0.12	1	08/18/21 09:54	08/18/21 17:06	7440-70-2	
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	08/18/21 09:57	08/19/21 18:02	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0011	1	08/18/21 09:57	08/19/21 18:02	7440-38-2	
Barium	<b>0.034</b>	mg/L	0.0050	0.00067	1	08/18/21 09:57	08/19/21 18:02	7440-39-3	
Beryllium	<b>0.00021J</b>	mg/L	0.00050	0.000054	1	08/18/21 09:57	08/19/21 18:02	7440-41-7	
Boron	<b>0.014J</b>	mg/L	0.040	0.0086	1	08/18/21 09:57	08/19/21 18:02	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	08/18/21 09:57	08/19/21 18:02	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/18/21 09:57	08/19/21 18:02	7440-47-3	
Cobalt	<b>0.00070J</b>	mg/L	0.0050	0.00039	1	08/18/21 09:57	08/19/21 18:02	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	08/18/21 09:57	08/19/21 18:02	7439-92-1	
Lithium	<b>0.0013J</b>	mg/L	0.030	0.00073	1	08/18/21 09:57	08/19/21 18:02	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00074	1	08/18/21 09:57	08/19/21 18:02	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	08/18/21 09:57	08/19/21 18:02	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	08/18/21 09:57	08/19/21 18:02	7440-28-0	
<b>2540C Total Dissolved Solids</b>									
Analytical Method: SM 2540C-2011									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	<b>55.0</b>	mg/L	10.0	10.0	1		08/18/21 08:32		
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	<b>2.4</b>	mg/L	1.0	0.60	1		08/20/21 05:29	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		08/20/21 05:29	16984-48-8	
Sulfate	<b>1.1</b>	mg/L	1.0	0.50	1		08/20/21 05:29	14808-79-8	

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### ANALYTICAL RESULTS

Project: HAMMOND AP-2

Pace Project No.: 92555504

Sample: HGWA-5		Lab ID: 92555504002		Collected: 08/12/21 16:18		Received: 08/13/21 14:55		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		08/16/21 10:18		
pH	<b>6.46</b>	Std. Units			1		08/16/21 10:18		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	<b>32.0</b>	mg/L	1.0	0.12	1	08/18/21 09:54	08/18/21 17:25	7440-70-2	
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	<b>0.0014J</b>	mg/L	0.0030	0.00078	1	08/18/21 09:57	08/19/21 18:25	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0011	1	08/18/21 09:57	08/19/21 18:25	7440-38-2	
Barium	<b>0.044</b>	mg/L	0.0050	0.00067	1	08/18/21 09:57	08/19/21 18:25	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	08/18/21 09:57	08/19/21 18:25	7440-41-7	
Boron	<b>0.0092J</b>	mg/L	0.040	0.0086	1	08/18/21 09:57	08/19/21 18:25	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	08/18/21 09:57	08/19/21 18:25	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/18/21 09:57	08/19/21 18:25	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	08/18/21 09:57	08/19/21 18:25	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	08/18/21 09:57	08/19/21 18:25	7439-92-1	
Lithium	<b>0.0032J</b>	mg/L	0.030	0.00073	1	08/18/21 09:57	08/19/21 18:25	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00074	1	08/18/21 09:57	08/19/21 18:25	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	08/18/21 09:57	08/19/21 18:25	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	08/18/21 09:57	08/19/21 18:25	7440-28-0	
<b>2540C Total Dissolved Solids</b>									
Analytical Method: SM 2540C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	<b>158</b>	mg/L	10.0	10.0	1		08/18/21 08:32		
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	<b>1.4</b>	mg/L	1.0	0.60	1		08/20/21 05:43	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		08/20/21 05:43	16984-48-8	
Sulfate	<b>17.4</b>	mg/L	1.0	0.50	1		08/20/21 05:43	14808-79-8	

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### ANALYTICAL RESULTS

Project: HAMMOND AP-2  
Pace Project No.: 92555504

Sample: <b>HGWA-6</b> Lab ID: <b>92555504003</b> Collected: 08/12/21 14:48 Received: 08/13/21 14:55 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		08/16/21 10:18		
pH	<b>7.47</b>	Std. Units			1		08/16/21 10:18		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	<b>54.7</b>	mg/L	1.0	0.12	1	08/18/21 09:54	08/18/21 17:30	7440-70-2	
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	08/18/21 09:57	08/19/21 18:30	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0011	1	08/18/21 09:57	08/19/21 18:30	7440-38-2	
Barium	<b>0.18</b>	mg/L	0.0050	0.00067	1	08/18/21 09:57	08/19/21 18:30	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	08/18/21 09:57	08/19/21 18:30	7440-41-7	
Boron	<b>0.014J</b>	mg/L	0.040	0.0086	1	08/18/21 09:57	08/19/21 18:30	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	08/18/21 09:57	08/19/21 18:30	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/18/21 09:57	08/19/21 18:30	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	08/18/21 09:57	08/19/21 18:30	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	08/18/21 09:57	08/19/21 18:30	7439-92-1	
Lithium	<b>0.0094J</b>	mg/L	0.030	0.00073	1	08/18/21 09:57	08/19/21 18:30	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00074	1	08/18/21 09:57	08/19/21 18:30	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	08/18/21 09:57	08/19/21 18:30	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	08/18/21 09:57	08/19/21 18:30	7440-28-0	
<b>2540C Total Dissolved Solids</b>									
Analytical Method: SM 2540C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	<b>229</b>	mg/L	10.0	10.0	1		08/18/21 08:32		
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	<b>0.94J</b>	mg/L	1.0	0.60	1		08/20/21 05:58	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		08/20/21 05:58	16984-48-8	
Sulfate	<b>28.6</b>	mg/L	1.0	0.50	1		08/20/21 05:58	14808-79-8	

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### ANALYTICAL RESULTS

Project: HAMMOND AP-2  
Pace Project No.: 92555504

Sample: HGWA-42D		Lab ID: 92555504004		Collected: 08/12/21 09:35		Received: 08/13/21 14:55		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		08/16/21 10:18		
pH	<b>7.70</b>	Std. Units			1		08/16/21 10:18		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	<b>43.6</b>	mg/L	1.0	0.12	1	08/18/21 09:54	08/18/21 17:45	7440-70-2	
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	08/18/21 09:57	08/19/21 18:36	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0011	1	08/18/21 09:57	08/19/21 18:36	7440-38-2	
Barium	<b>0.18</b>	mg/L	0.0050	0.00067	1	08/18/21 09:57	08/19/21 18:36	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	08/18/21 09:57	08/19/21 18:36	7440-41-7	
Boron	<b>0.044</b>	mg/L	0.040	0.0086	1	08/18/21 09:57	08/19/21 18:36	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	08/18/21 09:57	08/19/21 18:36	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/18/21 09:57	08/19/21 18:36	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	08/18/21 09:57	08/19/21 18:36	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	08/18/21 09:57	08/19/21 18:36	7439-92-1	
Lithium	<b>0.0096J</b>	mg/L	0.030	0.00073	1	08/18/21 09:57	08/19/21 18:36	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00074	1	08/18/21 09:57	08/19/21 18:36	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	08/18/21 09:57	08/19/21 18:36	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	08/18/21 09:57	08/19/21 18:36	7440-28-0	
<b>2540C Total Dissolved Solids</b>									
Analytical Method: SM 2540C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	<b>179</b>	mg/L	10.0	10.0	1		08/18/21 08:32		
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	<b>2.6</b>	mg/L	1.0	0.60	1		08/20/21 06:13	16887-00-6	
Fluoride	<b>0.079J</b>	mg/L	0.10	0.050	1		08/20/21 06:13	16984-48-8	
Sulfate	<b>7.8</b>	mg/L	1.0	0.50	1		08/20/21 06:13	14808-79-8	

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### ANALYTICAL RESULTS

Project: HAMMOND AP-2  
Pace Project No.: 92555504

Sample: MW-34D		Lab ID: 92555504005		Collected: 08/16/21 15:03		Received: 08/17/21 11:25		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		08/18/21 10:11		
pH	<b>7.05</b>	Std. Units			1		08/18/21 10:11		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	<b>554</b>	mg/L	5.0	0.61	5	08/18/21 09:54	08/18/21 17:55	7440-70-2	
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	08/18/21 09:57	08/19/21 18:42	7440-36-0	
Arsenic	<b>0.0024J</b>	mg/L	0.0050	0.0011	1	08/18/21 09:57	08/19/21 18:42	7440-38-2	
Barium	<b>0.035</b>	mg/L	0.0050	0.00067	1	08/18/21 09:57	08/19/21 18:42	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	08/18/21 09:57	08/19/21 18:42	7440-41-7	
Boron	<b>8.2</b>	mg/L	0.040	0.0086	1	08/18/21 09:57	08/19/21 18:42	7440-42-8	
Cadmium	<b>0.00023J</b>	mg/L	0.00050	0.00011	1	08/18/21 09:57	08/19/21 18:42	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/18/21 09:57	08/19/21 18:42	7440-47-3	
Cobalt	<b>0.0093</b>	mg/L	0.0050	0.00039	1	08/18/21 09:57	08/19/21 18:42	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	08/18/21 09:57	08/19/21 18:42	7439-92-1	
Lithium	<b>0.0010J</b>	mg/L	0.030	0.00073	1	08/18/21 09:57	08/19/21 18:42	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00074	1	08/18/21 09:57	08/19/21 18:42	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	08/18/21 09:57	08/19/21 18:42	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	08/18/21 09:57	08/19/21 18:42	7440-28-0	
<b>2540C Total Dissolved Solids</b>									
Analytical Method: SM 2540C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	<b>2340</b>	mg/L	100	100	1		08/19/21 15:12		
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	<b>264</b>	mg/L	22.0	13.2	22		08/23/21 12:44	16887-00-6	
Fluoride	<b>0.066J</b>	mg/L	0.10	0.050	1		08/23/21 00:17	16984-48-8	
Sulfate	<b>987</b>	mg/L	22.0	11.0	22		08/23/21 12:44	14808-79-8	

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### ANALYTICAL RESULTS

Project: HAMMOND AP-2  
Pace Project No.: 92555504

Sample: <b>HGWC-17</b> Lab ID: <b>92555504006</b> Collected: 08/18/21 17:25 Received: 08/19/21 12:40 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		08/19/21 16:57		
pH	<b>6.43</b>	Std. Units			1		08/19/21 16:57		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	<b>281</b>	mg/L	1.0	0.12	1	08/20/21 11:15	08/20/21 17:52	7440-70-2	M1
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	08/20/21 11:15	08/27/21 14:38	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0011	1	08/20/21 11:15	08/27/21 14:38	7440-38-2	
Barium	<b>0.022</b>	mg/L	0.0050	0.00067	1	08/20/21 11:15	08/27/21 14:38	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	08/20/21 11:15	08/27/21 14:38	7440-41-7	
Boron	<b>5.3</b>	mg/L	0.040	0.0086	1	08/20/21 11:15	08/27/21 14:38	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	08/20/21 11:15	08/27/21 14:38	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/20/21 11:15	08/27/21 14:38	7440-47-3	
Cobalt	<b>0.0090</b>	mg/L	0.0050	0.00039	1	08/20/21 11:15	08/27/21 14:38	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	08/20/21 11:15	08/27/21 14:38	7439-92-1	
Lithium	<b>0.0012J</b>	mg/L	0.030	0.00073	1	08/20/21 11:15	08/27/21 14:38	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00074	1	08/20/21 11:15	08/27/21 14:38	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	08/20/21 11:15	08/27/21 14:38	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	08/20/21 11:15	08/27/21 14:38	7440-28-0	
<b>2540C Total Dissolved Solids</b>									
Analytical Method: SM 2540C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	<b>1290</b>	mg/L	50.0	50.0	1		08/24/21 18:59		
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	<b>90.7</b>	mg/L	9.0	5.4	9		08/28/21 13:29	16887-00-6	
Fluoride	<b>0.062J</b>	mg/L	0.10	0.050	1		08/26/21 02:13	16984-48-8	
Sulfate	<b>280</b>	mg/L	9.0	4.5	9		08/28/21 13:29	14808-79-8	

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### ANALYTICAL RESULTS

Project: HAMMOND AP-2  
Pace Project No.: 92555504

Sample: <b>HGWC-14</b> Lab ID: <b>92555504007</b> Collected: 08/18/21 15:31 Received: 08/19/21 12:40 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		08/19/21 16:57		
pH	<b>4.90</b>	Std. Units			1		08/19/21 16:57		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	<b>583</b>	mg/L	10.0	1.2	10	08/20/21 11:15	08/23/21 16:28	7440-70-2	
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	08/20/21 11:15	08/27/21 14:49	7440-36-0	
Arsenic	<b>0.0035J</b>	mg/L	0.0050	0.0011	1	08/20/21 11:15	08/27/21 14:49	7440-38-2	
Barium	<b>0.018</b>	mg/L	0.0050	0.00067	1	08/20/21 11:15	08/27/21 14:49	7440-39-3	
Beryllium	<b>0.00039J</b>	mg/L	0.00050	0.000054	1	08/20/21 11:15	08/27/21 14:49	7440-41-7	
Boron	<b>8.6</b>	mg/L	0.040	0.0086	1	08/20/21 11:15	08/27/21 14:49	7440-42-8	M1
Cadmium	<b>0.00013J</b>	mg/L	0.00050	0.00011	1	08/20/21 11:15	08/27/21 14:49	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/20/21 11:15	08/27/21 14:49	7440-47-3	
Cobalt	<b>0.033</b>	mg/L	0.0050	0.00039	1	08/20/21 11:15	08/27/21 14:49	7440-48-4	
Lead	<b>0.0015</b>	mg/L	0.0010	0.00089	1	08/20/21 11:15	08/27/21 14:49	7439-92-1	
Lithium	ND	mg/L	0.030	0.00073	1	08/20/21 11:15	08/27/21 14:49	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00074	1	08/20/21 11:15	08/27/21 14:49	7439-98-7	
Selenium	<b>0.0077</b>	mg/L	0.0050	0.0014	1	08/20/21 11:15	08/27/21 14:49	7782-49-2	
Thallium	<b>0.00027J</b>	mg/L	0.0010	0.00018	1	08/20/21 11:15	08/27/21 14:49	7440-28-0	
<b>2540C Total Dissolved Solids</b>									
Analytical Method: SM 2540C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	<b>2350</b>	mg/L	100	100	1		08/24/21 18:59		
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	<b>141</b>	mg/L	25.0	15.0	25		08/28/21 13:46	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		08/26/21 02:29	16984-48-8	
Sulfate	<b>768</b>	mg/L	25.0	12.5	25		08/28/21 13:46	14808-79-8	

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### ANALYTICAL RESULTS

Project: HAMMOND AP-2  
Pace Project No.: 92555504

Sample: MW-33		Lab ID: 92555504008		Collected: 08/18/21 13:40		Received: 08/19/21 12:40		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		08/19/21 16:57		
pH	<b>4.42</b>	Std. Units			1		08/19/21 16:57		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	<b>549</b>	mg/L	10.0	1.2	10	08/20/21 11:15	08/23/21 16:32	7440-70-2	
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	08/20/21 11:15	08/27/21 15:43	7440-36-0	
Arsenic	<b>0.0058</b>	mg/L	0.0050	0.0011	1	08/20/21 11:15	08/27/21 15:43	7440-38-2	
Barium	<b>0.025</b>	mg/L	0.0050	0.00067	1	08/20/21 11:15	08/27/21 15:43	7440-39-3	
Beryllium	<b>0.00097</b>	mg/L	0.00050	0.000054	1	08/20/21 11:15	08/30/21 17:01	7440-41-7	
Boron	<b>9.1</b>	mg/L	0.040	0.0086	1	08/20/21 11:15	08/30/21 17:01	7440-42-8	
Cadmium	<b>0.00017J</b>	mg/L	0.00050	0.00011	1	08/20/21 11:15	08/27/21 15:43	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/20/21 11:15	08/27/21 15:43	7440-47-3	
Cobalt	<b>0.054</b>	mg/L	0.0050	0.00039	1	08/20/21 11:15	08/27/21 15:43	7440-48-4	
Lead	<b>0.0016</b>	mg/L	0.0010	0.00089	1	08/20/21 11:15	08/27/21 15:43	7439-92-1	
Lithium	<b>0.00097J</b>	mg/L	0.030	0.00073	1	08/20/21 11:15	08/30/21 17:01	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00074	1	08/20/21 11:15	08/27/21 15:43	7439-98-7	
Selenium	<b>0.014</b>	mg/L	0.0050	0.0014	1	08/20/21 11:15	08/27/21 15:43	7782-49-2	
Thallium	<b>0.00040J</b>	mg/L	0.0010	0.00018	1	08/20/21 11:15	08/27/21 15:43	7440-28-0	
<b>2540C Total Dissolved Solids</b>									
Analytical Method: SM 2540C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	<b>3690</b>	mg/L	100	100	1		08/24/21 18:59		
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	<b>118</b>	mg/L	25.0	15.0	25		08/28/21 15:10	16887-00-6	
Fluoride	<b>0.16</b>	mg/L	0.10	0.050	1		08/26/21 02:45	16984-48-8	
Sulfate	<b>740</b>	mg/L	25.0	12.5	25		08/28/21 15:10	14808-79-8	

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### ANALYTICAL RESULTS

Project: HAMMOND AP-2  
Pace Project No.: 92555504

Sample: MW-51      Lab ID: 92555504009      Collected: 08/18/21 11:54      Received: 08/19/21 12:40      Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		08/19/21 16:58		
pH	<b>6.19</b>	Std. Units			1		08/19/21 16:58		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D      Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	<b>532</b>	mg/L	10.0	1.2	10	08/20/21 11:15	08/23/21 16:37	7440-70-2	
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B      Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	08/20/21 11:15	08/27/21 15:54	7440-36-0	
Arsenic	<b>0.0020J</b>	mg/L	0.0050	0.0011	1	08/20/21 11:15	08/27/21 15:54	7440-38-2	
Barium	<b>0.032</b>	mg/L	0.0050	0.00067	1	08/20/21 11:15	08/27/21 15:54	7440-39-3	
Beryllium	<b>0.00042J</b>	mg/L	0.00050	0.000054	1	08/20/21 11:15	08/30/21 17:07	7440-41-7	
Boron	<b>9.7</b>	mg/L	0.40	0.086	10	08/20/21 11:15	08/30/21 17:48	7440-42-8	
Cadmium	<b>0.00094</b>	mg/L	0.00050	0.00011	1	08/20/21 11:15	08/27/21 15:54	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/20/21 11:15	08/27/21 15:54	7440-47-3	
Cobalt	<b>0.030</b>	mg/L	0.0050	0.00039	1	08/20/21 11:15	08/27/21 15:54	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	08/20/21 11:15	08/27/21 15:54	7439-92-1	
Lithium	<b>0.0022J</b>	mg/L	0.030	0.00073	1	08/20/21 11:15	08/30/21 17:07	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00074	1	08/20/21 11:15	08/27/21 15:54	7439-98-7	
Selenium	<b>0.0040J</b>	mg/L	0.0050	0.0014	1	08/20/21 11:15	08/27/21 15:54	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	08/20/21 11:15	08/27/21 15:54	7440-28-0	
<b>2540C Total Dissolved Solids</b>									
Analytical Method: SM 2540C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	<b>2610</b>	mg/L	100	100	1		08/24/21 18:59		
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	<b>123</b>	mg/L	23.0	13.8	23		08/28/21 15:28	16887-00-6	
Fluoride	<b>0.072J</b>	mg/L	0.10	0.050	1		08/26/21 03:33	16984-48-8	
Sulfate	<b>757</b>	mg/L	23.0	11.5	23		08/28/21 15:28	14808-79-8	

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### ANALYTICAL RESULTS

Project: HAMMOND AP-2  
Pace Project No.: 92555504

Sample: MW-35      Lab ID: 92555504010      Collected: 08/18/21 10:18      Received: 08/19/21 12:40      Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		08/19/21 16:58		
pH	<b>4.89</b>	Std. Units			1		08/19/21 16:58		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D      Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	<b>546</b>	mg/L	10.0	1.2	10	08/20/21 11:15	08/23/21 16:42	7440-70-2	
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B      Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	08/20/21 11:15	08/27/21 16:06	7440-36-0	
Arsenic	<b>0.0043J</b>	mg/L	0.0050	0.0011	1	08/20/21 11:15	08/27/21 16:06	7440-38-2	
Barium	<b>0.025</b>	mg/L	0.0050	0.00067	1	08/20/21 11:15	08/27/21 16:06	7440-39-3	
Beryllium	<b>0.00061</b>	mg/L	0.00050	0.000054	1	08/20/21 11:15	08/30/21 17:13	7440-41-7	
Boron	<b>11.2</b>	mg/L	0.40	0.086	10	08/20/21 11:15	08/30/21 17:54	7440-42-8	
Cadmium	<b>0.0015</b>	mg/L	0.00050	0.00011	1	08/20/21 11:15	08/27/21 16:06	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/20/21 11:15	08/27/21 16:06	7440-47-3	
Cobalt	<b>0.085</b>	mg/L	0.0050	0.00039	1	08/20/21 11:15	08/27/21 16:06	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	08/20/21 11:15	08/27/21 16:06	7439-92-1	
Lithium	<b>0.0036J</b>	mg/L	0.030	0.00073	1	08/20/21 11:15	08/30/21 17:13	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00074	1	08/20/21 11:15	08/27/21 16:06	7439-98-7	
Selenium	<b>0.014</b>	mg/L	0.0050	0.0014	1	08/20/21 11:15	08/27/21 16:06	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	08/20/21 11:15	08/27/21 16:06	7440-28-0	
<b>2540C Total Dissolved Solids</b>									
Analytical Method: SM 2540C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	<b>2390</b>	mg/L	100	100	1		08/25/21 19:25		
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	<b>149</b>	mg/L	23.0	13.8	23		08/28/21 15:45	16887-00-6	
Fluoride	<b>0.052J</b>	mg/L	0.10	0.050	1		08/26/21 03:49	16984-48-8	
Sulfate	<b>789</b>	mg/L	23.0	11.5	23		08/28/21 15:45	14808-79-8	

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### ANALYTICAL RESULTS

Project: HAMMOND AP-2  
Pace Project No.: 92555504

Sample: MW-37D		Lab ID: 92555504011		Collected: 08/18/21 18:30		Received: 08/19/21 12:40		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		08/19/21 16:58		
pH	<b>7.52</b>	Std. Units			1		08/19/21 16:58		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	<b>180</b>	mg/L	1.0	0.12	1	08/20/21 11:15	08/20/21 18:41	7440-70-2	
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	08/20/21 11:15	08/27/21 16:17	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0011	1	08/20/21 11:15	08/27/21 16:17	7440-38-2	
Barium	<b>0.12</b>	mg/L	0.0050	0.00067	1	08/20/21 11:15	08/27/21 16:17	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	08/20/21 11:15	08/30/21 17:19	7440-41-7	
Boron	<b>0.20</b>	mg/L	0.040	0.0086	1	08/20/21 11:15	08/30/21 17:19	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	08/20/21 11:15	08/27/21 16:17	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/20/21 11:15	08/27/21 16:17	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	08/20/21 11:15	08/27/21 16:17	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	08/20/21 11:15	08/27/21 16:17	7439-92-1	
Lithium	<b>0.030</b>	mg/L	0.030	0.00073	1	08/20/21 11:15	08/30/21 17:19	7439-93-2	
Molybdenum	<b>0.0083J</b>	mg/L	0.010	0.00074	1	08/20/21 11:15	08/27/21 16:17	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	08/20/21 11:15	08/27/21 16:17	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	08/20/21 11:15	08/27/21 16:17	7440-28-0	
<b>2540C Total Dissolved Solids</b>									
Analytical Method: SM 2540C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	<b>950</b>	mg/L	20.0	20.0	1		08/25/21 19:25		
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	<b>122</b>	mg/L	6.0	3.6	6		08/28/21 16:02	16887-00-6	
Fluoride	<b>0.050J</b>	mg/L	0.10	0.050	1		08/26/21 04:05	16984-48-8	
Sulfate	<b>207</b>	mg/L	6.0	3.0	6		08/28/21 16:02	14808-79-8	

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### ANALYTICAL RESULTS

Project: HAMMOND AP-2  
Pace Project No.: 92555504

Sample: MW-22		Lab ID: 92555504012		Collected: 08/19/21 14:58		Received: 08/20/21 12:15		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		08/20/21 15:26		
pH	<b>6.05</b>	Std. Units			1		08/20/21 15:26		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	<b>203</b>	mg/L	1.0	0.12	1	08/24/21 12:42	08/24/21 19:31	7440-70-2	M1
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	<b>0.0016J</b>	mg/L	0.0030	0.00078	1	08/24/21 12:10	08/27/21 13:32	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0011	1	08/24/21 12:10	08/27/21 13:32	7440-38-2	
Barium	<b>0.018</b>	mg/L	0.0050	0.00067	1	08/24/21 12:10	08/27/21 13:32	7440-39-3	
Beryllium	<b>0.000070J</b>	mg/L	0.00050	0.000054	1	08/24/21 12:10	08/27/21 13:32	7440-41-7	
Boron	<b>2.5</b>	mg/L	0.040	0.0086	1	08/24/21 12:10	08/27/21 13:32	7440-42-8	
Cadmium	<b>0.0021</b>	mg/L	0.00050	0.00011	1	08/24/21 12:10	08/27/21 13:32	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/24/21 12:10	08/27/21 13:32	7440-47-3	
Cobalt	<b>0.022</b>	mg/L	0.0050	0.00039	1	08/24/21 12:10	08/27/21 13:32	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	08/24/21 12:10	08/27/21 13:32	7439-92-1	
Lithium	<b>0.0012J</b>	mg/L	0.030	0.00073	1	08/24/21 12:10	08/27/21 13:32	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00074	1	08/24/21 12:10	08/27/21 13:32	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	08/24/21 12:10	08/27/21 13:32	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	08/24/21 12:10	08/27/21 13:32	7440-28-0	
<b>2540C Total Dissolved Solids</b>									
Analytical Method: SM 2540C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	<b>1030</b>	mg/L	20.0	20.0	1		08/25/21 19:44		
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	<b>118</b>	mg/L	9.0	5.4	9		08/27/21 18:19	16887-00-6	M1
Fluoride	ND	mg/L	0.10	0.050	1		08/27/21 08:06	16984-48-8	
Sulfate	<b>412</b>	mg/L	9.0	4.5	9		08/27/21 18:19	14808-79-8	M1

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### ANALYTICAL RESULTS

Project: HAMMOND AP-2  
Pace Project No.: 92555504

Sample: <b>HGWC-18</b> Lab ID: <b>92555504013</b> Collected: 08/19/21 09:30      Received: 08/20/21 12:15      Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		08/20/21 15:27		
pH	<b>4.43</b>	Std. Units			1		08/20/21 15:27		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D      Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	<b>416</b>	mg/L	10.0	1.2	10	08/24/21 12:42	08/25/21 12:33	7440-70-2	
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B      Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	<b>0.00080J</b>	mg/L	0.0030	0.00078	1	08/24/21 12:10	08/27/21 13:38	7440-36-0	
Arsenic	<b>0.0045J</b>	mg/L	0.0050	0.0011	1	08/24/21 12:10	08/27/21 13:38	7440-38-2	
Barium	<b>0.031</b>	mg/L	0.0050	0.00067	1	08/24/21 12:10	08/27/21 13:38	7440-39-3	
Beryllium	<b>0.0034</b>	mg/L	0.00050	0.000054	1	08/24/21 12:10	08/27/21 13:38	7440-41-7	
Boron	<b>8.6</b>	mg/L	0.040	0.0086	1	08/24/21 12:10	08/27/21 13:38	7440-42-8	
Cadmium	<b>0.0014</b>	mg/L	0.00050	0.00011	1	08/24/21 12:10	08/27/21 13:38	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/24/21 12:10	08/27/21 13:38	7440-47-3	
Cobalt	<b>0.15</b>	mg/L	0.0050	0.00039	1	08/24/21 12:10	08/27/21 13:38	7440-48-4	
Lead	<b>0.0013</b>	mg/L	0.0010	0.00089	1	08/24/21 12:10	08/27/21 13:38	7439-92-1	
Lithium	<b>0.013J</b>	mg/L	0.030	0.00073	1	08/24/21 12:10	08/27/21 13:38	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00074	1	08/24/21 12:10	08/27/21 13:38	7439-98-7	
Selenium	<b>0.010</b>	mg/L	0.0050	0.0014	1	08/24/21 12:10	08/27/21 13:38	7782-49-2	
Thallium	<b>0.00020J</b>	mg/L	0.0010	0.00018	1	08/24/21 12:10	08/27/21 13:38	7440-28-0	
<b>2540C Total Dissolved Solids</b>									
Analytical Method: SM 2540C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	<b>1750</b>	mg/L	100	100	1		08/25/21 19:44		
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	<b>95.8</b>	mg/L	1.0	0.60	1		08/27/21 09:46	16887-00-6	
Fluoride	<b>0.31</b>	mg/L	0.10	0.050	1		08/27/21 09:46	16984-48-8	
Sulfate	<b>934</b>	mg/L	21.0	10.5	21		08/27/21 19:05	14808-79-8	

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### ANALYTICAL RESULTS

Project: HAMMOND AP-2  
Pace Project No.: 92555504

Sample: MW-21D		Lab ID: 92555504014		Collected: 08/19/21 10:50		Received: 08/20/21 12:15		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		08/20/21 15:27		
pH	<b>6.85</b>	Std. Units			1		08/20/21 15:27		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	<b>365</b>	mg/L	10.0	1.2	10	08/24/21 12:42	08/25/21 12:38	7440-70-2	
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	08/24/21 12:10	08/27/21 13:44	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0011	1	08/24/21 12:10	08/27/21 13:44	7440-38-2	
Barium	<b>0.042</b>	mg/L	0.0050	0.00067	1	08/24/21 12:10	08/27/21 13:44	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	08/24/21 12:10	08/27/21 13:44	7440-41-7	
Boron	<b>5.4</b>	mg/L	0.040	0.0086	1	08/24/21 12:10	08/27/21 13:44	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	08/24/21 12:10	08/27/21 13:44	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/24/21 12:10	08/27/21 13:44	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	08/24/21 12:10	08/27/21 13:44	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	08/24/21 12:10	08/27/21 13:44	7439-92-1	
Lithium	<b>0.022J</b>	mg/L	0.030	0.00073	1	08/24/21 12:10	08/27/21 13:44	7439-93-2	
Molybdenum	<b>0.018</b>	mg/L	0.010	0.00074	1	08/24/21 12:10	08/27/21 13:44	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	08/24/21 12:10	08/27/21 13:44	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	08/24/21 12:10	08/27/21 13:44	7440-28-0	
<b>2540C Total Dissolved Solids</b>									
Analytical Method: SM 2540C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	<b>1920</b>	mg/L	100	100	1		08/25/21 19:44		
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	<b>173</b>	mg/L	17.0	10.2	17		08/27/21 19:20	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		08/27/21 10:54	16984-48-8	
Sulfate	<b>724</b>	mg/L	17.0	8.5	17		08/27/21 19:20	14808-79-8	

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### ANALYTICAL RESULTS

Project: HAMMOND AP-2

Pace Project No.: 92555504

Sample: HGWC-16		Lab ID: 92555504015		Collected: 08/19/21 13:15		Received: 08/20/21 12:15		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		08/20/21 15:27		
pH	<b>7.04</b>	Std. Units			1		08/20/21 15:27		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	<b>207</b>	mg/L	1.0	0.12	1	08/24/21 12:42	08/24/21 20:11	7440-70-2	
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	08/24/21 12:10	08/27/21 13:50	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0011	1	08/24/21 12:10	08/27/21 13:50	7440-38-2	
Barium	<b>0.10</b>	mg/L	0.0050	0.00067	1	08/24/21 12:10	08/27/21 13:50	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	08/24/21 12:10	08/27/21 13:50	7440-41-7	
Boron	<b>2.5</b>	mg/L	0.040	0.0086	1	08/24/21 12:10	08/27/21 13:50	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	08/24/21 12:10	08/27/21 13:50	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/24/21 12:10	08/27/21 13:50	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	08/24/21 12:10	08/27/21 13:50	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	08/24/21 12:10	08/27/21 13:50	7439-92-1	
Lithium	<b>0.0042J</b>	mg/L	0.030	0.00073	1	08/24/21 12:10	08/27/21 13:50	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00074	1	08/24/21 12:10	08/27/21 13:50	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	08/24/21 12:10	08/27/21 13:50	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	08/24/21 12:10	08/27/21 13:50	7440-28-0	
<b>2540C Total Dissolved Solids</b>									
Analytical Method: SM 2540C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	<b>816</b>	mg/L	20.0	20.0	1		08/26/21 18:46		
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	<b>90.1</b>	mg/L	1.0	0.60	1		08/27/21 11:09	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		08/27/21 11:09	16984-48-8	
Sulfate	<b>228</b>	mg/L	5.0	2.5	5		08/27/21 20:06	14808-79-8	

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### ANALYTICAL RESULTS

Project: HAMMOND AP-2  
Pace Project No.: 92555504

Sample: <b>HGWC-15</b> Lab ID: <b>92555504016</b> Collected: 08/19/21 15:00      Received: 08/20/21 12:15      Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		08/20/21 15:27		
pH	<b>6.18</b>	Std. Units			1		08/20/21 15:27		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D    Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	<b>203</b>	mg/L	1.0	0.12	1	08/24/21 12:42	08/24/21 20:15	7440-70-2	
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B    Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	08/24/21 12:10	08/27/21 14:13	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0011	1	08/24/21 12:10	08/27/21 14:13	7440-38-2	
Barium	<b>0.010</b>	mg/L	0.0050	0.00067	1	08/24/21 12:10	08/27/21 14:13	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	08/24/21 12:10	08/27/21 14:13	7440-41-7	
Boron	<b>2.1</b>	mg/L	0.040	0.0086	1	08/24/21 12:10	08/27/21 14:13	7440-42-8	
Cadmium	<b>0.0012</b>	mg/L	0.00050	0.00011	1	08/24/21 12:10	08/27/21 14:13	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/24/21 12:10	08/27/21 14:13	7440-47-3	
Cobalt	<b>0.011</b>	mg/L	0.0050	0.00039	1	08/24/21 12:10	08/27/21 14:13	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	08/24/21 12:10	08/27/21 14:13	7439-92-1	
Lithium	<b>0.0058J</b>	mg/L	0.030	0.00073	1	08/24/21 12:10	08/27/21 14:13	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00074	1	08/24/21 12:10	08/27/21 14:13	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	08/24/21 12:10	08/27/21 14:13	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	08/24/21 12:10	08/27/21 14:13	7440-28-0	
<b>2540C Total Dissolved Solids</b>									
Analytical Method: SM 2540C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	<b>958</b>	mg/L	20.0	20.0	1		08/26/21 18:46		
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	<b>89.9</b>	mg/L	1.0	0.60	1		08/27/21 11:24	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		08/27/21 11:24	16984-48-8	
Sulfate	<b>223</b>	mg/L	5.0	2.5	5		08/27/21 20:21	14808-79-8	

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### ANALYTICAL RESULTS

Project: HAMMOND AP-2  
Pace Project No.: 92555504

Sample: MW-23D		Lab ID: 92555504017		Collected: 08/19/21 18:48		Received: 08/20/21 12:15		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		08/20/21 15:27		
pH	<b>6.72</b>	Std. Units			1		08/20/21 15:27		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	<b>307</b>	mg/L	5.0	0.61	5	08/24/21 12:42	08/24/21 20:25	7440-70-2	
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	08/24/21 12:10	08/27/21 14:19	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0011	1	08/24/21 12:10	08/27/21 14:19	7440-38-2	
Barium	<b>0.050</b>	mg/L	0.0050	0.00067	1	08/24/21 12:10	08/27/21 14:19	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	08/24/21 12:10	08/27/21 14:19	7440-41-7	
Boron	<b>3.4</b>	mg/L	0.040	0.0086	1	08/24/21 12:10	08/27/21 14:19	7440-42-8	
Cadmium	<b>0.00012J</b>	mg/L	0.00050	0.00011	1	08/24/21 12:10	08/27/21 14:19	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/24/21 12:10	08/27/21 14:19	7440-47-3	
Cobalt	<b>0.00089J</b>	mg/L	0.0050	0.00039	1	08/24/21 12:10	08/27/21 14:19	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	08/24/21 12:10	08/27/21 14:19	7439-92-1	
Lithium	<b>0.0022J</b>	mg/L	0.030	0.00073	1	08/24/21 12:10	08/27/21 14:19	7439-93-2	
Molybdenum	<b>0.0034J</b>	mg/L	0.010	0.00074	1	08/24/21 12:10	08/27/21 14:19	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	08/24/21 12:10	08/27/21 14:19	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	08/24/21 12:10	08/27/21 14:19	7440-28-0	
<b>2540C Total Dissolved Solids</b>									
Analytical Method: SM 2540C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	<b>1440</b>	mg/L	50.0	50.0	1		08/26/21 18:46		
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	<b>137</b>	mg/L	10.0	6.0	10		08/27/21 20:36	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		08/27/21 11:40	16984-48-8	
Sulfate	<b>432</b>	mg/L	10.0	5.0	10		08/27/21 20:36	14808-79-8	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: HAMMOND AP-2  
Pace Project No.: 92555504

Sample: DUP-2		Lab ID: 92555504018		Collected: 08/19/21 00:00	Received: 08/20/21 12:15	Matrix: Water				
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
<b>6010D ATL ICP</b>		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Calcium	<b>210</b>	mg/L	1.0	0.12	1	08/24/21 12:42	08/24/21 20:30	7440-70-2		
<b>6020 MET ICPMS</b>		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00078	1	08/24/21 12:10	08/27/21 14:31	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.0011	1	08/24/21 12:10	08/27/21 14:31	7440-38-2		
Barium	<b>0.10</b>	mg/L	0.0050	0.00067	1	08/24/21 12:10	08/27/21 14:31	7440-39-3		
Beryllium	ND	mg/L	0.00050	0.000054	1	08/24/21 12:10	08/27/21 14:31	7440-41-7		
Boron	<b>2.6</b>	mg/L	0.040	0.0086	1	08/24/21 12:10	08/27/21 14:31	7440-42-8		
Cadmium	ND	mg/L	0.00050	0.00011	1	08/24/21 12:10	08/27/21 14:31	7440-43-9		
Chromium	ND	mg/L	0.0050	0.0011	1	08/24/21 12:10	08/27/21 14:31	7440-47-3		
Cobalt	ND	mg/L	0.0050	0.00039	1	08/24/21 12:10	08/27/21 14:31	7440-48-4		
Lead	ND	mg/L	0.0010	0.00089	1	08/24/21 12:10	08/27/21 14:31	7439-92-1		
Lithium	<b>0.0042J</b>	mg/L	0.030	0.00073	1	08/24/21 12:10	08/27/21 14:31	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.00074	1	08/24/21 12:10	08/27/21 14:31	7439-98-7		
Selenium	ND	mg/L	0.0050	0.0014	1	08/24/21 12:10	08/27/21 14:31	7782-49-2		
Thallium	ND	mg/L	0.0010	0.00018	1	08/24/21 12:10	08/27/21 14:31	7440-28-0		
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C-2011 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	<b>862</b>	mg/L	20.0	20.0	1		08/26/21 18:46			
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	<b>98.8</b>	mg/L	1.0	0.60	1		08/27/21 11:55	16887-00-6		
Fluoride	<b>0.051J</b>	mg/L	0.10	0.050	1		08/27/21 11:55	16984-48-8		
Sulfate	<b>349</b>	mg/L	8.0	4.0	8		08/27/21 20:51	14808-79-8		

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### ANALYTICAL RESULTS

Project: HAMMOND AP-2  
Pace Project No.: 92555504

Sample: EB-2		Lab ID: 92555504019		Collected: 08/19/21 13:30		Received: 08/20/21 12:15		Matrix: Water		
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
<b>6010D ATL ICP</b>		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Calcium	ND	mg/L	1.0	0.12	1	08/24/21 12:42	08/24/21 20:35	7440-70-2		
<b>6020 MET ICPMS</b>		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00078	1	08/24/21 12:10	08/27/21 14:37	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.0011	1	08/24/21 12:10	08/27/21 14:37	7440-38-2		
Barium	ND	mg/L	0.0050	0.00067	1	08/24/21 12:10	08/27/21 14:37	7440-39-3		
Beryllium	ND	mg/L	0.00050	0.000054	1	08/24/21 12:10	08/27/21 14:37	7440-41-7		
Boron	<b>0.011J</b>	mg/L	0.040	0.0086	1	08/24/21 12:10	08/27/21 14:37	7440-42-8		
Cadmium	ND	mg/L	0.00050	0.00011	1	08/24/21 12:10	08/27/21 14:37	7440-43-9		
Chromium	ND	mg/L	0.0050	0.0011	1	08/24/21 12:10	08/27/21 14:37	7440-47-3		
Cobalt	ND	mg/L	0.0050	0.00039	1	08/24/21 12:10	08/27/21 14:37	7440-48-4		
Lead	ND	mg/L	0.0010	0.00089	1	08/24/21 12:10	08/27/21 14:37	7439-92-1		
Lithium	ND	mg/L	0.030	0.00073	1	08/24/21 12:10	08/27/21 14:37	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.00074	1	08/24/21 12:10	08/27/21 14:37	7439-98-7		
Selenium	ND	mg/L	0.0050	0.0014	1	08/24/21 12:10	08/27/21 14:37	7782-49-2		
Thallium	ND	mg/L	0.0010	0.00018	1	08/24/21 12:10	08/27/21 14:37	7440-28-0		
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C-2011 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	ND	mg/L	10.0	10.0	1		08/26/21 18:46			
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	ND	mg/L	1.0	0.60	1		08/27/21 12:11	16887-00-6		
Fluoride	ND	mg/L	0.10	0.050	1		08/27/21 12:11	16984-48-8		
Sulfate	ND	mg/L	1.0	0.50	1		08/27/21 12:11	14808-79-8		

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### ANALYTICAL RESULTS

Project: HAMMOND AP-2  
Pace Project No.: 92555504

Sample: <b>FB-2</b>		Lab ID: <b>92555504020</b>		Collected: 08/19/21 09:40	Received: 08/20/21 12:15	Matrix: Water				
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
<b>6010D ATL ICP</b>		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Calcium	ND	mg/L	1.0	0.12	1	08/24/21 12:42	08/24/21 20:40	7440-70-2		
<b>6020 MET ICPMS</b>		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00078	1	08/24/21 12:10	08/27/21 14:43	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.0011	1	08/24/21 12:10	08/27/21 14:43	7440-38-2		
Barium	ND	mg/L	0.0050	0.00067	1	08/24/21 12:10	08/27/21 14:43	7440-39-3		
Beryllium	ND	mg/L	0.00050	0.000054	1	08/24/21 12:10	08/27/21 14:43	7440-41-7		
Boron	ND	mg/L	0.040	0.0086	1	08/24/21 12:10	08/27/21 14:43	7440-42-8		
Cadmium	ND	mg/L	0.00050	0.00011	1	08/24/21 12:10	08/27/21 14:43	7440-43-9		
Chromium	ND	mg/L	0.0050	0.0011	1	08/24/21 12:10	08/27/21 14:43	7440-47-3		
Cobalt	ND	mg/L	0.0050	0.00039	1	08/24/21 12:10	08/27/21 14:43	7440-48-4		
Lead	ND	mg/L	0.0010	0.00089	1	08/24/21 12:10	08/27/21 14:43	7439-92-1		
Lithium	ND	mg/L	0.030	0.00073	1	08/24/21 12:10	08/27/21 14:43	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.00074	1	08/24/21 12:10	08/27/21 14:43	7439-98-7		
Selenium	ND	mg/L	0.0050	0.0014	1	08/24/21 12:10	08/27/21 14:43	7782-49-2		
Thallium	ND	mg/L	0.0010	0.00018	1	08/24/21 12:10	08/27/21 14:43	7440-28-0		
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C-2011 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	ND	mg/L	10.0	10.0	1		08/26/21 18:46			
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	ND	mg/L	1.0	0.60	1		08/27/21 12:26	16887-00-6		
Fluoride	ND	mg/L	0.10	0.050	1		08/27/21 12:26	16984-48-8		
Sulfate	ND	mg/L	1.0	0.50	1		08/27/21 12:26	14808-79-8		

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: HAMMOND AP-2  
Pace Project No.: 92555504

QC Batch: 641193 Analysis Method: EPA 6010D  
QC Batch Method: EPA 3010A Analysis Description: 6010D ATL  
Laboratory: Pace Analytical Services - Peachtree Corners, GA  
Associated Lab Samples: 92555504001, 92555504002, 92555504003, 92555504004, 92555504005

METHOD BLANK: 3365273 Matrix: Water  
Associated Lab Samples: 92555504001, 92555504002, 92555504003, 92555504004, 92555504005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	0.12	08/18/21 16:31	

LABORATORY CONTROL SAMPLE: 3365274

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	mg/L	1	1.1	105	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3365275 3365276

Parameter	Units	3365275		3365276		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92555504001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result						
Calcium	mg/L	5.4	1	1	6.6	6.4	113	103	75-125	2	20

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### QUALITY CONTROL DATA

Project: HAMMOND AP-2

Pace Project No.: 92555504

QC Batch:	641912	Analysis Method:	EPA 6010D
QC Batch Method:	EPA 3010A	Analysis Description:	6010D ATL
		Laboratory:	Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92555504006, 92555504007, 92555504008, 92555504009, 92555504010, 92555504011

METHOD BLANK: 3368995

Matrix: Water

Associated Lab Samples: 92555504006, 92555504007, 92555504008, 92555504009, 92555504010, 92555504011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	0.12	08/20/21 17:38	

LABORATORY CONTROL SAMPLE: 3368996

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: 3368997 3368998

Parameter	Units	3368997		3368998		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Calcium	mg/L	281	1	1	282	275	124	-592	75-125	3	20 M1

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### QUALITY CONTROL DATA

Project: HAMMOND AP-2  
Pace Project No.: 92555504

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

Associated Lab Samples: 92555504012, 92555504013, 92555504014, 92555504015, 92555504016, 92555504017, 92555504018, 92555504019, 92555504020

METHOD BLANK: 3371892 Matrix: Water  
Associated Lab Samples: 92555504012, 92555504013, 92555504014, 92555504015, 92555504016, 92555504017, 92555504018, 92555504019, 92555504020

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

LABORATORY CONTROL SAMPLE: 3371893

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	mg/L	1	0.99J	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3371894 3371895

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

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### QUALITY CONTROL DATA

Project: HAMMOND AP-2  
Pace Project No.: 92555504

QC Batch: 641199 Analysis Method: EPA 6020B  
QC Batch Method: EPA 3005A Analysis Description: 6020 MET  
Laboratory: Pace Analytical Services - Peachtree Corners, GA  
Associated Lab Samples: 92555504001, 92555504002, 92555504003, 92555504004, 92555504005

METHOD BLANK: 3365292 Matrix: Water  
Associated Lab Samples: 92555504001, 92555504002, 92555504003, 92555504004, 92555504005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00078	08/19/21 17:50	
Arsenic	mg/L	ND	0.0050	0.0011	08/19/21 17:50	
Barium	mg/L	ND	0.0050	0.00067	08/19/21 17:50	
Beryllium	mg/L	ND	0.00050	0.000054	08/19/21 17:50	
Boron	mg/L	ND	0.040	0.0086	08/19/21 17:50	
Cadmium	mg/L	ND	0.00050	0.00011	08/19/21 17:50	
Chromium	mg/L	ND	0.0050	0.0011	08/19/21 17:50	
Cobalt	mg/L	ND	0.0050	0.00039	08/19/21 17:50	
Lead	mg/L	ND	0.0010	0.00089	08/19/21 17:50	
Lithium	mg/L	ND	0.030	0.00073	08/19/21 17:50	
Molybdenum	mg/L	ND	0.010	0.00074	08/19/21 17:50	
Selenium	mg/L	ND	0.0050	0.0014	08/19/21 17:50	
Thallium	mg/L	ND	0.0010	0.00018	08/19/21 17:50	

LABORATORY CONTROL SAMPLE: 3365293

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.098	98	80-120	
Arsenic	mg/L	0.1	0.096	96	80-120	
Barium	mg/L	0.1	0.096	96	80-120	
Beryllium	mg/L	0.1	0.094	94	80-120	
Boron	mg/L	1	0.95	95	80-120	
Cadmium	mg/L	0.1	0.099	99	80-120	
Chromium	mg/L	0.1	0.10	101	80-120	
Cobalt	mg/L	0.1	0.10	100	80-120	
Lead	mg/L	0.1	0.098	98	80-120	
Lithium	mg/L	0.1	0.094	94	80-120	
Molybdenum	mg/L	0.1	0.099	99	80-120	
Selenium	mg/L	0.1	0.096	96	80-120	
Thallium	mg/L	0.1	0.10	101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3365294 3365295

Parameter	Units	92555504001 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	MS Result	Spike Conc.	MSD Result						
Antimony	mg/L	ND	0.1	0.1	0.099	0.097	98	97	75-125	2	20	
Arsenic	mg/L	ND	0.1	0.1	0.098	0.098	98	98	75-125	0	20	

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### QUALITY CONTROL DATA

Project: HAMMOND AP-2

Pace Project No.: 92555504

Parameter	Units	3365294		3365295		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92555504001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result								
Barium	mg/L	0.034	0.1	0.1	0.13	0.13	99	98	75-125	1	20		
Beryllium	mg/L	0.00021J	0.1	0.1	0.10	0.10	102	100	75-125	2	20		
Boron	mg/L	0.014J	1	1	1.0	1.0	102	101	75-125	1	20		
Cadmium	mg/L	ND	0.1	0.1	0.10	0.098	100	98	75-125	1	20		
Chromium	mg/L	ND	0.1	0.1	0.11	0.11	110	107	75-125	2	20		
Cobalt	mg/L	0.00070J	0.1	0.1	0.11	0.11	110	106	75-125	4	20		
Lead	mg/L	ND	0.1	0.1	0.096	0.095	96	94	75-125	2	20		
Lithium	mg/L	0.0013J	0.1	0.1	0.11	0.11	106	104	75-125	1	20		
Molybdenum	mg/L	ND	0.1	0.1	0.10	0.097	100	97	75-125	3	20		
Selenium	mg/L	ND	0.1	0.1	0.093	0.094	93	94	75-125	1	20		
Thallium	mg/L	ND	0.1	0.1	0.097	0.098	97	98	75-125	1	20		

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### QUALITY CONTROL DATA

Project: HAMMOND AP-2  
Pace Project No.: 92555504

QC Batch: 641913 Analysis Method: EPA 6020B  
QC Batch Method: EPA 3005A Analysis Description: 6020 MET  
Laboratory: Pace Analytical Services - Peachtree Corners, GA  
Associated Lab Samples: 92555504006, 92555504007, 92555504008, 92555504009, 92555504010, 92555504011

METHOD BLANK: 3368999 Matrix: Water  
Associated Lab Samples: 92555504006, 92555504007, 92555504008, 92555504009, 92555504010, 92555504011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00078	08/27/21 14:27	
Arsenic	mg/L	ND	0.0050	0.0011	08/27/21 14:27	
Barium	mg/L	ND	0.0050	0.00067	08/27/21 14:27	
Beryllium	mg/L	ND	0.00050	0.000054	08/27/21 14:27	
Boron	mg/L	ND	0.040	0.0086	08/27/21 14:27	
Cadmium	mg/L	ND	0.00050	0.00011	08/27/21 14:27	
Chromium	mg/L	ND	0.0050	0.0011	08/27/21 14:27	
Cobalt	mg/L	ND	0.0050	0.00039	08/27/21 14:27	
Lead	mg/L	ND	0.0010	0.00089	08/27/21 14:27	
Lithium	mg/L	ND	0.030	0.00073	08/27/21 14:27	
Molybdenum	mg/L	ND	0.010	0.00074	08/27/21 14:27	
Selenium	mg/L	ND	0.0050	0.0014	08/27/21 14:27	
Thallium	mg/L	ND	0.0010	0.00018	08/27/21 14:27	

LABORATORY CONTROL SAMPLE: 3369000

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.10	101	80-120	
Arsenic	mg/L	0.1	0.10	100	80-120	
Barium	mg/L	0.1	0.098	98	80-120	
Beryllium	mg/L	0.1	0.097	97	80-120	
Boron	mg/L	1	0.95	95	80-120	
Cadmium	mg/L	0.1	0.10	100	80-120	
Chromium	mg/L	0.1	0.098	98	80-120	
Cobalt	mg/L	0.1	0.097	97	80-120	
Lead	mg/L	0.1	0.10	101	80-120	
Lithium	mg/L	0.1	0.096	96	80-120	
Molybdenum	mg/L	0.1	0.099	99	80-120	
Selenium	mg/L	0.1	0.099	99	80-120	
Thallium	mg/L	0.1	0.098	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3369001 3369002

Parameter	Units	92555504007 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Antimony	mg/L	ND	0.1	0.1	0.10	0.10	103	101	75-125	2	20	
Arsenic	mg/L	0.0035J	0.1	0.1	0.11	0.11	108	106	75-125	2	20	

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**QUALITY CONTROL DATA**

Project: HAMMOND AP-2

Pace Project No.: 92555504

Parameter	Units	3369001		3369002		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92555504007 Result	MS Spike Conc.	MSD Spike Conc.	MS Result								
Barium	mg/L	0.018	0.1	0.1	0.11	0.11	96	94	75-125	1	20		
Beryllium	mg/L	0.00039J	0.1	0.1	0.085	0.084	85	84	75-125	1	20		
Boron	mg/L	8.6	1	1	9.1	9.3	51	71	75-125	2	20	M1	
Cadmium	mg/L	0.00013J	0.1	0.1	0.098	0.095	98	95	75-125	3	20		
Chromium	mg/L	ND	0.1	0.1	0.098	0.094	98	94	75-125	4	20		
Cobalt	mg/L	0.033	0.1	0.1	0.13	0.12	95	90	75-125	4	20		
Lead	mg/L	0.0015	0.1	0.1	0.097	0.095	96	93	75-125	3	20		
Lithium	mg/L	ND	0.1	0.1	0.087	0.085	87	85	75-125	2	20		
Molybdenum	mg/L	ND	0.1	0.1	0.10	0.098	103	98	75-125	5	20		
Selenium	mg/L	0.0077	0.1	0.1	0.12	0.12	112	110	75-125	1	20		
Thallium	mg/L	0.00027J	0.1	0.1	0.095	0.092	95	92	75-125	4	20		

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### QUALITY CONTROL DATA

Project: HAMMOND AP-2  
Pace Project No.: 92555504

QC Batch: 642521 Analysis Method: EPA 6020B  
QC Batch Method: EPA 3005A Analysis Description: 6020 MET  
Laboratory: Pace Analytical Services - Peachtree Corners, GA  
Associated Lab Samples: 92555504012, 92555504013, 92555504014, 92555504015, 92555504016, 92555504017, 92555504018, 92555504019, 92555504020

METHOD BLANK: 3371879 Matrix: Water  
Associated Lab Samples: 92555504012, 92555504013, 92555504014, 92555504015, 92555504016, 92555504017, 92555504018, 92555504019, 92555504020

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

LABORATORY CONTROL SAMPLE: 3371880

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.10	103	80-120	
Arsenic	mg/L	0.1	0.098	98	80-120	
Barium	mg/L	0.1	0.10	101	80-120	
Beryllium	mg/L	0.1	0.099	99	80-120	
Boron	mg/L	1	1.0	100	80-120	
Cadmium	mg/L	0.1	0.099	99	80-120	
Chromium	mg/L	0.1	0.10	101	80-120	
Cobalt	mg/L	0.1	0.097	97	80-120	
Lead	mg/L	0.1	0.10	101	80-120	
Lithium	mg/L	0.1	0.099	99	80-120	
Molybdenum	mg/L	0.1	0.10	103	80-120	
Selenium	mg/L	0.1	0.10	100	80-120	
Thallium	mg/L	0.1	0.10	100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3371881 3371882

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92555501017	Spike Conc.	Spike Conc.	MS Result								
Antimony	mg/L	ND	0.1	0.1	0.099	0.10	99	102	75-125	3	20		

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### QUALITY CONTROL DATA

Project: HAMMOND AP-2

Pace Project No.: 92555504

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3371881 3371882												
Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
		92555501017 Result	Spike Conc.	Spike Conc.	MS Result							
Arsenic	mg/L	ND	0.1	0.1	0.095	0.096	95	96	75-125	1	20	
Barium	mg/L	0.041	0.1	0.1	0.16	0.16	114	117	75-125	1	20	
Beryllium	mg/L	0.000056J	0.1	0.1	0.092	0.094	92	94	75-125	3	20	
Boron	mg/L	0.78	1	1	1.8	1.9	103	108	75-125	3	20	
Cadmium	mg/L	0.0012	0.1	0.1	0.097	0.098	96	97	75-125	2	20	
Chromium	mg/L	ND	0.1	0.1	0.097	0.098	97	98	75-125	1	20	
Cobalt	mg/L	0.017	0.1	0.1	0.11	0.11	91	96	75-125	4	20	
Lead	mg/L	ND	0.1	0.1	0.094	0.097	93	97	75-125	4	20	
Lithium	mg/L	0.0017J	0.1	0.1	0.095	0.098	93	96	75-125	3	20	
Molybdenum	mg/L	ND	0.1	0.1	0.10	0.10	100	101	75-125	1	20	
Selenium	mg/L	ND	0.1	0.1	0.095	0.097	95	97	75-125	3	20	
Thallium	mg/L	ND	0.1	0.1	0.094	0.099	94	99	75-125	5	20	

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### QUALITY CONTROL DATA

Project: HAMMOND AP-2  
Pace Project No.: 92555504

QC Batch: 640931      Analysis Method: SM 2540C-2011  
QC Batch Method: SM 2540C-2011      Analysis Description: 2540C Total Dissolved Solids  
Laboratory: Pace Analytical Services - Peachtree Corners, GA  
Associated Lab Samples: 92555504001, 92555504002, 92555504003, 92555504004

METHOD BLANK: 3363778      Matrix: Water  
Associated Lab Samples: 92555504001, 92555504002, 92555504003, 92555504004

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

LABORATORY CONTROL SAMPLE: 3363779

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

SAMPLE DUPLICATE: 3363780

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

SAMPLE DUPLICATE: 3363781

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

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### QUALITY CONTROL DATA

Project: HAMMOND AP-2

Pace Project No.: 92555504

QC Batch: 641466

Analysis Method: SM 2540C-2011

QC Batch Method: SM 2540C-2011

Analysis Description: 2540C Total Dissolved Solids

Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92555504005

METHOD BLANK: 3366949

Matrix: Water

Associated Lab Samples: 92555504005

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

LABORATORY CONTROL SAMPLE: 3366950

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

SAMPLE DUPLICATE: 3366951

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

SAMPLE DUPLICATE: 3366952

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

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### QUALITY CONTROL DATA

Project: HAMMOND AP-2

Pace Project No.: 92555504

QC Batch: 642067

Analysis Method: SM 2540C-2011

QC Batch Method: SM 2540C-2011

Analysis Description: 2540C Total Dissolved Solids

Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92555504006, 92555504007, 92555504008, 92555504009

METHOD BLANK: 3369965

Matrix: Water

Associated Lab Samples: 92555504006, 92555504007, 92555504008, 92555504009

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	08/20/21 16:46	

LABORATORY CONTROL SAMPLE: 3369966

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	383	96	90-111	

SAMPLE DUPLICATE: 3369967

Parameter	Units	92555895001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	533	566	6	10	

SAMPLE DUPLICATE: 3369968

Parameter	Units	92556790001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	38.0	52.0	31	10	D6

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### QUALITY CONTROL DATA

Project: HAMMOND AP-2  
Pace Project No.: 92555504

QC Batch: 642673      Analysis Method: SM 2540C-2011  
QC Batch Method: SM 2540C-2011      Analysis Description: 2540C Total Dissolved Solids  
Laboratory: Pace Analytical Services - Peachtree Corners, GA  
Associated Lab Samples: 92555504010, 92555504011

METHOD BLANK: 3372850      Matrix: Water  
Associated Lab Samples: 92555504010, 92555504011

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

LABORATORY CONTROL SAMPLE: 3372851

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	392	98	90-111	

SAMPLE DUPLICATE: 3372852

Parameter	Units	92555504010 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	2390	2610	9	10	

SAMPLE DUPLICATE: 3372853

Parameter	Units	92555948008 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	666	696	4	10	

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### QUALITY CONTROL DATA

Project: HAMMOND AP-2  
Pace Project No.: 92555504

QC Batch: 642674      Analysis Method: SM 2540C-2011  
QC Batch Method: SM 2540C-2011      Analysis Description: 2540C Total Dissolved Solids  
Laboratory: Pace Analytical Services - Peachtree Corners, GA  
Associated Lab Samples: 92555504012, 92555504013, 92555504014

METHOD BLANK: 3372854      Matrix: Water  
Associated Lab Samples: 92555504012, 92555504013, 92555504014

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

LABORATORY CONTROL SAMPLE: 3372855

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

SAMPLE DUPLICATE: 3372856

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

SAMPLE DUPLICATE: 3372857

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

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### QUALITY CONTROL DATA

Project: HAMMOND AP-2

Pace Project No.: 92555504

QC Batch: 643140

Analysis Method: SM 2540C-2011

QC Batch Method: SM 2540C-2011

Analysis Description: 2540C Total Dissolved Solids

Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92555504015, 92555504016, 92555504017, 92555504018, 92555504019, 92555504020

METHOD BLANK: 3374769

Matrix: Water

Associated Lab Samples: 92555504015, 92555504016, 92555504017, 92555504018, 92555504019, 92555504020

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	08/26/21 18:46	

LABORATORY CONTROL SAMPLE: 3374770

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

SAMPLE DUPLICATE: 3374771

Parameter	Units	92555504015 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	816	876	7	10	

SAMPLE DUPLICATE: 3374772

Parameter	Units	92555938012 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	ND	ND		10	

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### QUALITY CONTROL DATA

Project: HAMMOND AP-2  
Pace Project No.: 92555504

QC Batch: 641753 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: 92555504001, 92555504002, 92555504003, 92555504004

METHOD BLANK: 3368331 Matrix: Water  
Associated Lab Samples: 92555504001, 92555504002, 92555504003, 92555504004

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

LABORATORY CONTROL SAMPLE: 3368332

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3368333 3368334

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3368335 3368336

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

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### QUALITY CONTROL DATA

Project: HAMMOND AP-2  
Pace Project No.: 92555504

QC Batch: 642138 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: 92555504005

METHOD BLANK: 3370171 Matrix: Water  
Associated Lab Samples: 92555504005

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

LABORATORY CONTROL SAMPLE: 3370172

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3370173 3370174

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3370177 3370178

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

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: HAMMOND AP-2  
Pace Project No.: 92555504

QC Batch: 642990 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: 92555504006, 92555504007, 92555504008, 92555504009, 92555504010, 92555504011

METHOD BLANK: 3374032 Matrix: Water  
Associated Lab Samples: 92555504006, 92555504007, 92555504008, 92555504009, 92555504010, 92555504011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	08/26/21 00:53	
Fluoride	mg/L	ND	0.10	0.050	08/26/21 00:53	
Sulfate	mg/L	ND	1.0	0.50	08/26/21 00:53	

LABORATORY CONTROL SAMPLE: 3374033

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	48.8	98	90-110	
Fluoride	mg/L	2.5	2.5	100	90-110	
Sulfate	mg/L	50	48.4	97	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3374034 3374035

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92557349005	Result	Spike Conc.	Spike Conc.								
Chloride	mg/L	248	50	50	144	155	-207	-187	90-110	7	10	M1	
Fluoride	mg/L	8.9	2.5	2.5	5.4	5.7	-139	-128	90-110	5	10	M1	
Sulfate	mg/L	1040	50	50	1040	1090	-16	89	90-110	5	10	M1	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3374036 3374037

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92555945011	Result	Spike Conc.	Spike Conc.								
Chloride	mg/L	14.3	50	50	65.1	67.7	101	107	90-110	4	10		
Fluoride	mg/L	0.12	2.5	2.5	2.4	2.5	91	97	90-110	6	10		
Sulfate	mg/L	219	50	50	321	254	204	68	90-110	24	10	M1, R1	

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: HAMMOND AP-2  
Pace Project No.: 92555504

QC Batch:	643306	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: 92555504012, 92555504013, 92555504014, 92555504015, 92555504016, 92555504017, 92555504018, 92555504019, 92555504020

METHOD BLANK: 3375691 Matrix: Water  
Associated Lab Samples: 92555504012, 92555504013, 92555504014, 92555504015, 92555504016, 92555504017, 92555504018, 92555504019, 92555504020

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	08/27/21 07:35	
Fluoride	mg/L	ND	0.10	0.050	08/27/21 07:35	
Sulfate	mg/L	ND	1.0	0.50	08/27/21 07:35	

LABORATORY CONTROL SAMPLE: 3375692

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	47.1	94	90-110	
Fluoride	mg/L	2.5	2.4	95	90-110	
Sulfate	mg/L	50	47.6	95	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3375693 3375694

Parameter	Units	92555504012		3375694		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Chloride	mg/L	118	50	50	160	160	84	85	90-110	0	10 M1
Fluoride	mg/L	ND	2.5	2.5	2.3	2.4	92	94	90-110	2	10
Sulfate	mg/L	412	50	50	453	454	84	85	90-110	0	10 M1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3375695 3375696

Parameter	Units	92555938009		3375696		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Chloride	mg/L	4.5	50	50	52.3	52.6	96	96	90-110	1	10
Fluoride	mg/L	0.17	2.5	2.5	2.5	2.6	95	96	90-110	1	10
Sulfate	mg/L	264	50	50	305	306	82	83	90-110	0	10 M1

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### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: HAMMOND AP-2

Pace Project No.: 92555504

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### DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

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

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

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

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

TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

D6 The precision between the sample and sample duplicate exceeded laboratory control limits.

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

R1 RPD value was outside control limits.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: HAMMOND AP-2

Pace Project No.: 92555504

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92555504001	HGWA-4				
92555504002	HGWA-5				
92555504003	HGWA-6				
92555504004	HGWA-42D				
92555504005	MW-34D				
92555504006	HGWC-17				
92555504007	HGWC-14				
92555504008	MW-33				
92555504009	MW-51				
92555504010	MW-35				
92555504011	MW-37D				
92555504012	MW-22				
92555504013	HGWC-18				
92555504014	MW-21D				
92555504015	HGWC-16				
92555504016	HGWC-15				
92555504017	MW-23D				
92555504001	HGWA-4	EPA 3010A	641193	EPA 6010D	641263
92555504002	HGWA-5	EPA 3010A	641193	EPA 6010D	641263
92555504003	HGWA-6	EPA 3010A	641193	EPA 6010D	641263
92555504004	HGWA-42D	EPA 3010A	641193	EPA 6010D	641263
92555504005	MW-34D	EPA 3010A	641193	EPA 6010D	641263
92555504006	HGWC-17	EPA 3010A	641912	EPA 6010D	641995
92555504007	HGWC-14	EPA 3010A	641912	EPA 6010D	641995
92555504008	MW-33	EPA 3010A	641912	EPA 6010D	641995
92555504009	MW-51	EPA 3010A	641912	EPA 6010D	641995
92555504010	MW-35	EPA 3010A	641912	EPA 6010D	641995
92555504011	MW-37D	EPA 3010A	641912	EPA 6010D	641995
92555504012	MW-22	EPA 3010A	642523	EPA 6010D	642626
92555504013	HGWC-18	EPA 3010A	642523	EPA 6010D	642626
92555504014	MW-21D	EPA 3010A	642523	EPA 6010D	642626
92555504015	HGWC-16	EPA 3010A	642523	EPA 6010D	642626
92555504016	HGWC-15	EPA 3010A	642523	EPA 6010D	642626
92555504017	MW-23D	EPA 3010A	642523	EPA 6010D	642626
92555504018	DUP-2	EPA 3010A	642523	EPA 6010D	642626
92555504019	EB-2	EPA 3010A	642523	EPA 6010D	642626
92555504020	FB-2	EPA 3010A	642523	EPA 6010D	642626
92555504001	HGWA-4	EPA 3005A	641199	EPA 6020B	641271
92555504002	HGWA-5	EPA 3005A	641199	EPA 6020B	641271
92555504003	HGWA-6	EPA 3005A	641199	EPA 6020B	641271
92555504004	HGWA-42D	EPA 3005A	641199	EPA 6020B	641271
92555504005	MW-34D	EPA 3005A	641199	EPA 6020B	641271
92555504006	HGWC-17	EPA 3005A	641913	EPA 6020B	642062
92555504007	HGWC-14	EPA 3005A	641913	EPA 6020B	642062
92555504008	MW-33	EPA 3005A	641913	EPA 6020B	642062
92555504009	MW-51	EPA 3005A	641913	EPA 6020B	642062

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: HAMMOND AP-2  
Pace Project No.: 92555504

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92555504010	MW-35	EPA 3005A	641913	EPA 6020B	642062
92555504011	MW-37D	EPA 3005A	641913	EPA 6020B	642062
92555504012	MW-22	EPA 3005A	642521	EPA 6020B	642652
92555504013	HGWC-18	EPA 3005A	642521	EPA 6020B	642652
92555504014	MW-21D	EPA 3005A	642521	EPA 6020B	642652
92555504015	HGWC-16	EPA 3005A	642521	EPA 6020B	642652
92555504016	HGWC-15	EPA 3005A	642521	EPA 6020B	642652
92555504017	MW-23D	EPA 3005A	642521	EPA 6020B	642652
92555504018	DUP-2	EPA 3005A	642521	EPA 6020B	642652
92555504019	EB-2	EPA 3005A	642521	EPA 6020B	642652
92555504020	FB-2	EPA 3005A	642521	EPA 6020B	642652
92555504001	HGWA-4	SM 2540C-2011	640931		
92555504002	HGWA-5	SM 2540C-2011	640931		
92555504003	HGWA-6	SM 2540C-2011	640931		
92555504004	HGWA-42D	SM 2540C-2011	640931		
92555504005	MW-34D	SM 2540C-2011	641466		
92555504006	HGWC-17	SM 2540C-2011	642067		
92555504007	HGWC-14	SM 2540C-2011	642067		
92555504008	MW-33	SM 2540C-2011	642067		
92555504009	MW-51	SM 2540C-2011	642067		
92555504010	MW-35	SM 2540C-2011	642673		
92555504011	MW-37D	SM 2540C-2011	642673		
92555504012	MW-22	SM 2540C-2011	642674		
92555504013	HGWC-18	SM 2540C-2011	642674		
92555504014	MW-21D	SM 2540C-2011	642674		
92555504015	HGWC-16	SM 2540C-2011	643140		
92555504016	HGWC-15	SM 2540C-2011	643140		
92555504017	MW-23D	SM 2540C-2011	643140		
92555504018	DUP-2	SM 2540C-2011	643140		
92555504019	EB-2	SM 2540C-2011	643140		
92555504020	FB-2	SM 2540C-2011	643140		
92555504001	HGWA-4	EPA 300.0 Rev 2.1 1993	641753		
92555504002	HGWA-5	EPA 300.0 Rev 2.1 1993	641753		
92555504003	HGWA-6	EPA 300.0 Rev 2.1 1993	641753		
92555504004	HGWA-42D	EPA 300.0 Rev 2.1 1993	641753		
92555504005	MW-34D	EPA 300.0 Rev 2.1 1993	642138		
92555504006	HGWC-17	EPA 300.0 Rev 2.1 1993	642990		
92555504007	HGWC-14	EPA 300.0 Rev 2.1 1993	642990		
92555504008	MW-33	EPA 300.0 Rev 2.1 1993	642990		
92555504009	MW-51	EPA 300.0 Rev 2.1 1993	642990		
92555504010	MW-35	EPA 300.0 Rev 2.1 1993	642990		
92555504011	MW-37D	EPA 300.0 Rev 2.1 1993	642990		
92555504012	MW-22	EPA 300.0 Rev 2.1 1993	643306		

### REPORT OF LABORATORY ANALYSIS

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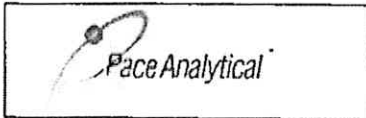
### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: HAMMOND AP-2  
Pace Project No.: 92555504

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92555504013	HGWC-18	EPA 300.0 Rev 2.1 1993	643306		
92555504014	MW-21D	EPA 300.0 Rev 2.1 1993	643306		
92555504015	HGWC-16	EPA 300.0 Rev 2.1 1993	643306		
92555504016	HGWC-15	EPA 300.0 Rev 2.1 1993	643306		
92555504017	MW-23D	EPA 300.0 Rev 2.1 1993	643306		
92555504018	DUP-2	EPA 300.0 Rev 2.1 1993	643306		
92555504019	EB-2	EPA 300.0 Rev 2.1 1993	643306		
92555504020	FB-2	EPA 300.0 Rev 2.1 1993	643306		

### REPORT OF LABORATORY ANALYSIS

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Document Name:  
Sample Condition Upon Receipt(SCUR)  
Document No.:  
F-CAR-CS-033-Rev.07

Document Revised: October 28, 2020  
Page 1 of 2  
Issuing Authority:  
Pace Carolinas Quality Office

Laboratory receiving samples:

Asheville  Eden  Greenwood  Huntersville  Raleigh  Mechanicsville  Atlanta  Kernersville

Sample Condition Upon Receipt

Client Name:

GFA POWER

Project #

WO#: 92555504

Courier:  Commercial  Pace  Fed Ex  UPS  USFS  Other  Client



92555504

Custody Seal Present?  Yes  No Seals Intact?  Yes  No

Date/Initials Person Examining Contents: 3/13/21 KRW

Packing Material:  Bubble Wrap  Bubble Bags  None  Other

Biological Tissue Frozen?

Yes  No  N/A

Thermometer:

IR Gun ID:

TH2083

Type of ice:

Wet  Blue  None

Cooler Temp: 1.8 Correction Factor: Add/Subtract (°C) ± 0

Temp should be above freezing to 6°C

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

Cooler Temp Corrected (°C): 1.8

USDA Regulated Soil ( N/A, water sample)

Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)?

Yes  No

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

Comments/Discrepancy:

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

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:



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

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

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

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

Project **WO# : 92555504**

PM: NMG Due Date: 08/27/21

CLIENT: GA-GA Power

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)	BP4C-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	AG3A(DG3A)-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unp (N/A)	DG9P-40 mL VOA H3PO4 (N/A)	VOAK (6 vials per kit)-5035 kit (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)	BP3A-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved vials (N/A)	VSGU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)	
1																												
2																												
3																												
4																												
5																												
6																												
7																												
8																												
9																												
10																												
11																												
12																												

**pH Adjustment Log for Preserved Samples**

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

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





# CHAIN-OF-CUSTODY / Analytical Request Document

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

<b>Section A</b>	<b>Required Client Information</b>	<b>Section B</b>	<b>Required Project Information</b>	<b>Section C</b>	<b>Requested Analysis Information</b>
Company: GA Power Address: Atlanta GA Email To: SCS Contacts Phone: SCS Contacts Requested Due Date/TAT: To Day		Report To: SCS Contacts Copy To: Geosyntec Contacts Purchase Order No.: Project Name: Hammond AP-2 Project Number:		Invoice Information: Attention: Southern Co. Company Name: Address: Page Choice: Reference: Pace Project Manager: Pace Profile #: 10839	
REGULATORY AGENCY NPDES <input type="checkbox"/> GROUND WATER <input checked="" type="checkbox"/> DRINKING WATER USE <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER (C.C.) <input type="checkbox"/> Site Location: GA STATE: GA			Requested Analysis Filtered (Y/N)		

ITEM #	Section D Required Client Information Valid Matrix Codes (A-Z, 0-9 / .)	Matrix Code	Sample Type (G=GRAB C=COMP)	Collected		Sample Temp at Collection	# of Containers	Preservatives	Analysis Test	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	
				DATE	TIME							
1	HGWA-4	WT	G	8/12/21	16:55	22	5	3	2	X	X	
2	HGWA-5	WT	G	8/12/21	16:18	21	5	3	2	X	X	
3	HGWA-6	WT	G	8/12/21	14:48	20	5	3	2	X	X	
4	HGWA-22D	WT	G	8/12/21	09:35	23	5	3	2	X	X	
5												
6												
7												
8												
9												
10												
11												
12												

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
Thomas Weedy Green	8/13/21	1445	Connor Cain / Pace	8/13/21	1445	PH = 5.28
Connor Cain / Pace	8/13/21	1455	Ryan Williams / Pace	8/13/21	1455	PH = 6.46
Ryan Williams / Pace	8/13/21	16:50	Ryan Williams / Pace	8/13/21	16:50	PH = 7.47
						PH = 7.70

ADDITIONAL COMMENTS  
Please note dry wells, strike through any wells not sampled, and note when the last sample for this event has been taken.

RELINQUISHED BY / AFFILIATION

DATE

TIME

ACCEPTED BY / AFFILIATION

DATE

TIME

SAMPLE CONDITIONS

PRINT Name of SAMPLER: Connor Cain / Ashley Rounsley

SIGNATURE of SAMPLER: [Signature]

DATE Signed (MM/DD/YY): 8/12/2021

Temp in °C

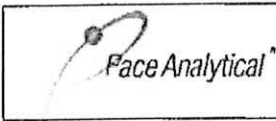
Received on Ice (Y/N)

Custody Sealed Cooler (Y/N)

Samples Intact (Y/N)

Important Note: By signing this form you are accepting Pace's MET 30 day payment terms and agreeing to the charges of 1.5% per month for any invoices not paid within 30 days. P.A.L.-Q-2020rev.07 15-Feb-2007





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

Laboratory receiving samples:

Asheville  Eden  Greenwood  Huntersville  Raleigh  Mechanicsville  Atlanta  Kernersville

Sample Condition Upon Receipt

Client Name:

Project #:

**WO#: 92555504**

Courier:  Fed Ex  UPS  USPS  Client  
 Commercial  Pace  Other: \_\_\_\_\_

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

Custody Seal Present?  Yes  No Seals Intact?  Yes  No

Date/Initials Person Examining Contents: 8/17/21 KKW

Packing Material:  Bubble Wrap  Bubble Bags  None  Other

Biological Tissue Frozen?  Yes  No  N/A

Thermometer:  IR Gun ID: THK230 Type of Ice:  Wet  Blue  None

Cooler Temp: 4.6 Correction Factor: Add/Subtract (°C) +0.1

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

Cooler Temp Corrected (°C): 4.7

USDA Regulated Soil (  N/A, water sample)

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

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

	Comments/Discrepancy:
Chain of Custody Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Samples Arrived within Hold Time? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Short Hold Time Analysis (<72 hr.)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	3.
Rush Turn Around Time Requested? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	4. 10 DAY
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: \_\_\_\_\_



Document Name:  
**Sample Condition Upon Receipt(SCUR)**  
 Document No.:  
**F-CAR-CS-033-Rev.07**

Document Revised: October 28, 2020  
 Page 2 of 2  
 Issuing Authority:  
 Pace Carolinas Quality Office

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

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

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

Project #

**WO# : 9255504**

PM: NMG

Due Date: 08/27/21

CLIENT: GA-GA Power

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic 2N Acetate & NaOH (>9)	BP4C-125 mL Plastic NaOH (pH > 12) (Cl-)	WGfU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	AG3A(DG3A)-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unp (N/A)	DG9P-40 mL VOA H3PO4 (N/A)	VOAK (6 vials per kit)-5035 kit (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)	BP3A-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved vials (N/A)	V5GU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)		
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**pH Adjustment Log for Preserved Samples**

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

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

### CHAIN-OF-CUSTODY / Analytical Request Document

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

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

Section B Required Project Information: Report To: SCS Contacts, Corp To: Geosyntec Contacts

Section C Invoice Information: Attention: Southern Co., Company Name:

Requested Client Information: Requested Date/Time: 10 Day

Section D: Requested Analysis Filtered (Y/N)

Requested Analysis Filtered (Y/N)

REGULATORY AGENCY: NPDES, GROUND WATER, DRINKING WATER, UST, RCRA, OTHER

Site Location: STA TE: GA

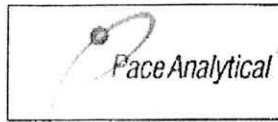
ITEM #	Matrix Code	Sample Type	COLLECTED		DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives			Analysis Test	Requested Analysis Filtered (Y/N)			Residual Chlorine (Y/N)	Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
			COMPOSITE	COMPOSITE					H2SO4	HNO3	HCl		NaOH	Na2S2O3	Methanol					
1	MW-34D	WT G	8/16/21	1503	22	5	2	3				X	X	X	X					
<b>Section D Valid Matrix Codes</b> MATRIX CODE (see valid codes to left) SAMPLE TYPE (G=GRAB C=COMP) Section D Required Client Information: VALU MATRIX CODE DENATURED WATER WIT, WASTE WATER WIT, PRODUCT SLS, SCLUCIDUS SLS, WIP, WIP, WIP, OTHER <b>SAMPLE ID</b> (A-Z, 0-9 / ) Sample IDs MUST BE UNIQUE																				
ADDITIONAL COMMENTS: MARY KESLER Pace, Ryan Williams Pace, 8/17/21 1500, Ryan Williams Pace, 8/17/21 1500 RELINQUISHED BY / AFFILIATION: MARY KESLER Pace, Ryan Williams Pace DATE: 8/17/21, 8/17/21 TIME: 1125, 1500 ACCEPTED BY / AFFILIATION: Ryan Williams Pace DATE: 8/17/21 TIME: 1125 SAMPLE CONDITIONS: TJ, 8/16/2021																				

SAMPLER NAME AND SIGNATURE: MARY KESLER Pace

PRINT Name of SAMPLER: MARY KESLER Pace

SIGNATURE OF SAMPLER: [Signature]

DATE SIGNED (MM/DD/YYYY): 8/16/2021



Document Name:  
Sample Condition Upon Receipt(SCUR)

Document No.:  
F-CAR-CS-033-Rev.07

Document Revised: October 28, 2020  
Page 1 of 2

Issuing Authority:  
Pace Carolinas Quality Office

Laboratory receiving samples:

Asheville  Eden  Greenwood  Huntersville  Raleigh  Mechanicsville  Atlanta  Kernersville

Sample Condition  
Upon Receipt

Client Name:

GA Power

Project #:

Courier:  Fed Ex  UPS  USPS  Client  
 Commercial  Pace  Other: \_\_\_\_\_

Custody Seal Present?  Yes  No Seals Intact?  Yes  No

Packing Material:  Bubble Wrap  Bubble Bags  None  Other

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

Cooler Temp: 1.8 Correction Factor: Add/Subtract (°C) 0.0

Cooler Temp Corrected (°C): 1.8

USDA Regulated Soil (  N/A, water sample)

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

Temp should be above freezing to 6°C

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

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

Date/Initials Person Examining Contents: 8/19/25  
CS

Biological Tissue Frozen?

Yes  No  N/A

			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:	<u>[Signature]</u>		
Headspace in VOA Vials (>5-6mm)?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A		10.
Trip Blank Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A		11.
Trip Blank Custody Seals Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A		

COMMENTS/SAMPLE DISCREPANCY

Field Data Required?  Yes  No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

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

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

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

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





Document Name:  
Sample Condition Upon Receipt(SCUR)

Document Revised October 28, 2020  
Page 2 of 2

Document No.:  
F-CAR-CS-033-Rev.07

Issuing Authority:  
Pace Carolinas Quality Office

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

Project #

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

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


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

**pH Adjustment Log for Preserved Samples**

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

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



	Document Name	Document Revised: October 23, 2020
	Sample Condition Upon Receipt (SCUR)	Page 1 of 2
	Document No: F-CAR-CS-033-Rev.07	Issuing Authority Pace Carolina's Quality Office

Laboratory receiving samples:

Asheville  Eden  Greenwood  Huntersville  Raleigh  Mechanicsville  Atlanta  Kernersville

**Sample Condition Upon Receipt**

Client Name:

*GA Power*

Project #:

Courier:  Fed Ex  UPS  USPS  Client  
 Commercial  Pace  Other \_\_\_\_\_

Custody Seal Present?  Yes  No    Seals Intact?  Yes  No

Date/Initials Person Examining Contents *MT 8/20/22*

Packing Material:  Bubble Wrap  Bubble Bags  None  Other

Biological Tissue Frozen?

Yes  No  N/A

Thermometer:

IR Gun ID: *083*

Type of Ice:

Wet  Blue  None

Cooler Temp: *4.4*

Correction Factor: Add/Subtract (°C)

*±0*

Temp should be above freezing to 6°C

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

Cooler Temp Corrected (°C): *4.4*

USDA Regulated Soil (  N/A, water sample)

Did samples originate in a quarantine zone within the United States, CA, NY, or SC (check map)?

Yes  No

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

				Comments/Discrepancy:
Chain of Custody Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	1
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	2
Short Hold Time Analysis (<72 hr.)?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> N/A	3
Rush Turn Around Time Requested?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	4
Sufficient Volume?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> N/A	5
Correct Containers Used?	<input 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 checked="" 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:	<i>WT</i>			
Headspace in VOA Vials (>5-6mm)?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A	10
Trip Blank Present?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A	11
Trip Blank Custody Seals Present?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A	

COMMENTS/SAMPLE DISCREPANCY

Field Data Required?  Yes  No

\_\_\_\_\_

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

\_\_\_\_\_

Person contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

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

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

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

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



Document Name:  
Sample Condition Upon Receipt(SCUR)

Document Revised: October 28, 2020  
Page 2 of 2

Document No.:  
F-CAR-CS-033-Rev.07

Issuing Authority:  
Pace Carolinas Quality Office

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

Project #

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

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

--

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)	BP4C-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	AG3A(DG3A)-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unp (N/A)	DG9P-40 mL VOA H3PO4 (N/A)	VOAK (6 vials per kit)-5035 kit (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)	BP1U	BP3A-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved vials (N/A)	V5GU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)	
1	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	2	/	/	/	/
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12	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	2	/	/	/	/

**pH Adjustment Log for Preserved Samples**

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

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





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

<b>Section A</b> Required Client Information:	<b>Section B</b> Required Project Information:	<b>Section C</b> Invoice Information:
Company: GA Power	Report To: SCS Contacts	Attention: Southern Co.
Address: Atlanta, GA	Copy To: Geosyntec Contacts	Company Name:
Email To: SCS Contacts	Purchase Order No.:	Address:
Phone: Fax:	Project Name: Hammond AP-2	Pace Quota Reference:
Requested Due Date/TAT: 10 Day	Project Number:	Pace Project: Kevin Herring Manager Pace Profile #: 10839
		<b>REGULATORY AGENCY</b>
		NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/>
		UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER <input type="checkbox"/>
		Site Location: _____ STATE: GA

ITEM #	Section D Required Description	Valid Matrix Codes MATRIX CODE	COLLECTED	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives	Analysis Test	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.								
											MATRIX	COLLE	DATE	TIME	DATE	TIME	UNPRESERVED	H2SO4
1	MW-22	WT G	8/19/21	14:58	20	5	2	3	X	PH = 6.05								
2	HGWC-18	WT G	8/19/21	8:20	22	5	2	3	X	PH = 4.43								
3	MW-21D	WT G	8/19/21	10:50	20	5	2	3	X	PH = 6.85								
4	HGWC-16	WT G	8/19/21	13:15	23	5	2	3	X	PH = 7.04								
5	HGWC-15	WT G	8/19/21	15:00	20	5	2	3	X	PH = 6.18								
6	MW-23D	WT G	8/19/21	18:48	21	5	2	3	X	PH = 6.72								
7	DUP-2	WT G	8/19/21	0:00	23	5	2	3	X	N/A								
8	EB-2	WT G	8/19/21	13:30	20	5	2	3	X	N/A								
9	FB-2	WT G	8/19/21	8:40	20	5	2	3	X	N/A								
10										Last sample								
11	TJ																	
12	8/19/2021																	

<b>ADDITIONAL COMMENTS</b>	<b>RELINQUISHED BY / AFFILIATION</b>	<b>DATE</b>	<b>TIME</b>	<b>ACCEPTED BY / AFFILIATION</b>	<b>DATE</b>	<b>TIME</b>	<b>SAMPLE CONDITIONS</b>
	Kevin's Headley	8/19/21	12:15	Ryan Williams / Pace	8/20/21	12:15	
	Ryan Williams / Pace	8/20/21	13:30	Ryan Williams / Pace	8/20/21	13:30	

**SAMPLER NAME AND SIGNATURE**

PRINT Name of SAMPLER: \_\_\_\_\_ DATE Signed: \_\_\_\_\_

SIGNATURE of SAMPLER: \_\_\_\_\_ (M/M/DD/YYYY): \_\_\_\_\_

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

F-ALL-C-2020:rev.07, 15-Feb-2007

October 11, 2021

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

RE: Project: HAMMOND AP-2 RADS  
Pace Project No.: 92555496

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory between August 13, 2021 and August 20, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

- Pace Analytical Services - Greensburg

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

Sincerely,



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

Enclosures

cc: Christine Hug, Geosyntec Consultants, Inc.  
Kristen Jurinko  
Thomas Kessler, Geosyntec  
Whitney Law, Geosyntec Consultants  
Noelia Muskus, Geosyntec Consultants  
Ms. Lauren Petty, Southern Company  
Nardos Tilahun, GeoSyntec  
Dawit Yifru, Geosyntec Consultants, Inc.



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: HAMMOND AP-2 RADS  
Pace Project No.: 92555496

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### **Pace Analytical Services Pennsylvania**

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

Missouri Certification #: 235  
Montana Certification #: Cert0082  
Nebraska Certification #: NE-OS-29-14  
Nevada Certification #: PA014572018-1  
New Hampshire/TNI Certification #: 297617  
New Jersey/TNI Certification #: PA051  
New Mexico Certification #: PA01457  
New York/TNI Certification #: 10888  
North Carolina Certification #: 42706  
North Dakota Certification #: R-190  
Ohio EPA Rad Approval: #41249  
Oregon/TNI Certification #: PA200002-010  
Pennsylvania/TNI Certification #: 65-00282  
Puerto Rico Certification #: PA01457  
Rhode Island Certification #: 65-00282  
South Dakota Certification  
Tennessee Certification #: 02867  
Texas/TNI Certification #: T104704188-17-3  
Utah/TNI Certification #: PA014572017-9  
USDA Soil Permit #: P330-17-00091  
Vermont Dept. of Health: ID# VT-0282  
Virgin Island/PADEP Certification  
Virginia/VELAP Certification #: 9526  
Washington Certification #: C868  
West Virginia DEP Certification #: 143  
West Virginia DHHR Certification #: 9964C  
Wisconsin Approve List for Rad  
Wyoming Certification #: 8TMS-L

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: HAMMOND AP-2 RADS  
Pace Project No.: 92555496

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92555496001	HGWA-4	Water	08/12/21 16:55	08/13/21 14:55
92555496002	HGWA-5	Water	08/12/21 16:18	08/13/21 14:55
92555496003	HGWA-6	Water	08/12/21 14:48	08/13/21 14:55
92555496004	HGWA-42D	Water	08/12/21 09:35	08/13/21 14:55
92555496005	MW-34D	Water	08/16/21 15:03	08/17/21 11:25
92555496006	HGWC-17	Water	08/18/21 17:25	08/19/21 12:40
92555496007	HGWC-14	Water	08/18/21 15:31	08/19/21 12:40
92555496008	MW-33	Water	08/18/21 13:40	08/19/21 12:40
92555496009	MW-51	Water	08/18/21 11:54	08/19/21 12:40
92555496010	MW-35	Water	08/18/21 10:18	08/19/21 12:40
92555496011	MW-37D	Water	08/18/21 18:30	08/19/21 12:40
92555496012	MW-22	Water	08/19/21 14:58	08/20/21 12:15
92555496013	HGWC-18	Water	08/19/21 09:30	08/20/21 12:15
92555496014	MW-21D	Water	08/19/21 10:50	08/20/21 12:15
92555496015	HGWC-16	Water	08/19/21 13:15	08/20/21 12:15
92555496016	HGWC-15	Water	08/19/21 15:00	08/20/21 12:15
92555496017	MW-23D	Water	08/19/21 18:48	08/20/21 12:15
92555496018	DUP-2	Water	08/19/21 00:00	08/20/21 12:15
92555496019	EB-2	Water	08/19/21 13:30	08/20/21 12:15
92555496020	FB-2	Water	08/19/21 09:40	08/20/21 12:15

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: HAMMOND AP-2 RADS  
Pace Project No.: 92555496

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92555496001	HGWA-4	EPA 9315	CLA	1	PASI-PA
		EPA 9320	JC2	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92555496002	HGWA-5	EPA 9315	CLA	1	PASI-PA
		EPA 9320	JC2	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92555496003	HGWA-6	EPA 9315	CLA	1	PASI-PA
		EPA 9320	JC2	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92555496004	HGWA-42D	EPA 9315	CLA	1	PASI-PA
		EPA 9320	JC2	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92555496005	MW-34D	EPA 9315	CLA	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92555496006	HGWC-17	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	RMK	1	PASI-PA
92555496007	HGWC-14	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	RMK	1	PASI-PA
92555496008	MW-33	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	RMK	1	PASI-PA
92555496009	MW-51	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	RMK	1	PASI-PA
92555496010	MW-35	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	RMK	1	PASI-PA
92555496011	MW-37D	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	RMK	1	PASI-PA
92555496012	MW-22	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	RMK	1	PASI-PA
92555496013	HGWC-18	EPA 9315	LAL	1	PASI-PA

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### SAMPLE ANALYTE COUNT

Project: HAMMOND AP-2 RADS  
Pace Project No.: 92555496

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92555496014	MW-21D	EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	RMK	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
92555496015	HGWC-16	EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	RMK	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
92555496016	HGWC-15	EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	RMK	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
92555496017	MW-23D	EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	RMK	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
92555496018	DUP-2	EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	RMK	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
92555496019	EB-2	EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	RMK	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
92555496020	FB-2	EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	RMK	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: HAMMOND AP-2 RADS  
Pace Project No.: 92555496

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>92555496001</b>	<b>HGWA-4</b>					
EPA 9315	Radium-226	-0.0153 ± 0.122 (0.345) C:77% T:NA	pCi/L		09/16/21 08:29	
EPA 9320	Radium-228	0.359 ± 0.423 (0.894) C:74% T:84%	pCi/L		09/03/21 14:23	
Total Radium Calculation	Total Radium	0.359 ± 0.545 (1.24)	pCi/L		09/17/21 16:27	
<b>92555496002</b>	<b>HGWA-5</b>					
EPA 9315	Radium-226	0.254 ± 0.199 (0.342) C:66% T:NA	pCi/L		09/16/21 08:31	
EPA 9320	Radium-228	0.668 ± 0.481 (0.934) C:72% T:81%	pCi/L		09/03/21 14:23	
Total Radium Calculation	Total Radium	0.922 ± 0.680 (1.28)	pCi/L		09/17/21 16:27	
<b>92555496003</b>	<b>HGWA-6</b>					
EPA 9315	Radium-226	0.0782 ± 0.149 (0.342) C:73% T:NA	pCi/L		09/16/21 08:32	
EPA 9320	Radium-228	0.00215 ± 0.392 (0.914) C:69% T:81%	pCi/L		09/03/21 14:23	
Total Radium Calculation	Total Radium	0.0804 ± 0.541 (1.26)	pCi/L		09/17/21 16:27	
<b>92555496004</b>	<b>HGWA-42D</b>					
EPA 9315	Radium-226	0.0745 ± 0.132 (0.297) C:69% T:NA	pCi/L		09/16/21 08:31	
EPA 9320	Radium-228	0.0358 ± 0.315 (0.725) C:74% T:96%	pCi/L		09/03/21 14:23	
Total Radium Calculation	Total Radium	0.110 ± 0.447 (1.02)	pCi/L		09/17/21 16:27	

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### SUMMARY OF DETECTION

Project: HAMMOND AP-2 RADS  
Pace Project No.: 92555496

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>92555496005</b>	<b>MW-34D</b>					
EPA 9315	Radium-226	0.201 ± 0.161 (0.293) C:98% T:NA	pCi/L		09/16/21 08:30	
EPA 9320	Radium-228	0.492 ± 0.433 (0.881) C:62% T:91%	pCi/L		09/03/21 11:26	
Total Radium Calculation	Total Radium	0.693 ± 0.594 (1.17)	pCi/L		09/17/21 16:27	
<b>92555496006</b>	<b>HGWC-17</b>					
EPA 9315	Radium-226	0.167 ± 0.144 (0.266) C:91% T:NA	pCi/L		09/20/21 07:02	
EPA 9320	Radium-228	0.381 ± 0.348 (0.709) C:70% T:95%	pCi/L		09/16/21 11:09	
Total Radium Calculation	Total Radium	0.548 ± 0.492 (0.975)	pCi/L		09/21/21 16:44	
<b>92555496007</b>	<b>HGWC-14</b>					
EPA 9315	Radium-226	0.247 ± 0.161 (0.267) C:100% T:NA	pCi/L		09/20/21 07:02	
EPA 9320	Radium-228	0.611 ± 0.408 (0.783) C:70% T:87%	pCi/L		09/16/21 11:09	
Total Radium Calculation	Total Radium	0.858 ± 0.569 (1.05)	pCi/L		09/21/21 16:44	
<b>92555496008</b>	<b>MW-33</b>					
EPA 9315	Radium-226	0.272 ± 0.181 (0.310) C:97% T:NA	pCi/L		09/20/21 07:02	
EPA 9320	Radium-228	1.50 ± 0.657 (1.13) C:66% T:77%	pCi/L		09/16/21 11:09	
Total Radium Calculation	Total Radium	1.77 ± 0.838 (1.44)	pCi/L		09/21/21 16:44	

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### SUMMARY OF DETECTION

Project: HAMMOND AP-2 RADS  
Pace Project No.: 92555496

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>92555496009</b>	<b>MW-51</b>					
EPA 9315	Radium-226	0.106 ± 0.120 (0.241)	pCi/L		09/20/21 07:02	
EPA 9320	Radium-228	C:98% T:NA 0.867 ± 0.484 (0.889)	pCi/L		09/16/21 11:09	
Total Radium Calculation	Total Radium	C:67% T:83% 0.973 ± 0.604 (1.13)	pCi/L		09/21/21 16:44	
<b>92555496010</b>	<b>MW-35</b>					
EPA 9315	Radium-226	0.389 ± 0.187 (0.261)	pCi/L		09/20/21 07:04	
EPA 9320	Radium-228	C:99% T:NA 1.28 ± 0.502 (0.787)	pCi/L		09/16/21 11:09	
Total Radium Calculation	Total Radium	C:67% T:90% 1.67 ± 0.689 (1.05)	pCi/L		09/21/21 16:44	
<b>92555496011</b>	<b>MW-37D</b>					
EPA 9315	Radium-226	0.0718 ± 0.121 (0.271)	pCi/L		09/20/21 07:04	
EPA 9320	Radium-228	C:88% T:NA 1.24 ± 0.503 (0.798)	pCi/L		09/16/21 11:09	
Total Radium Calculation	Total Radium	C:67% T:86% 1.31 ± 0.624 (1.07)	pCi/L		09/21/21 16:44	
<b>92555496012</b>	<b>MW-22</b>					
EPA 9315	Radium-226	-0.0119 ± 0.120 (0.321)	pCi/L		09/20/21 07:04	
EPA 9320	Radium-228	C:98% T:NA 0.689 ± 0.435 (0.828)	pCi/L		09/16/21 11:09	
Total Radium Calculation	Total Radium	C:70% T:88% 0.689 ± 0.555 (1.15)	pCi/L		09/21/21 16:44	

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: HAMMOND AP-2 RADS  
Pace Project No.: 92555496

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>92555496013</b>	<b>HGWC-18</b>					
EPA 9315	Radium-226	0.534 ± 0.240 (0.357) C:96% T:NA	pCi/L		09/20/21 07:04	
EPA 9320	Radium-228	0.917 ± 0.497 (0.906) C:65% T:86%	pCi/L		09/16/21 11:09	
Total Radium Calculation	Total Radium	1.45 ± 0.737 (1.26)	pCi/L		09/21/21 16:44	
<b>92555496014</b>	<b>MW-21D</b>					
EPA 9315	Radium-226	0.158 ± 0.144 (0.278) C:96% T:NA	pCi/L		09/20/21 07:04	
EPA 9320	Radium-228	1.01 ± 0.442 (0.726) C:64% T:95%	pCi/L		09/16/21 11:09	
Total Radium Calculation	Total Radium	1.17 ± 0.586 (1.00)	pCi/L		09/21/21 16:44	
<b>92555496015</b>	<b>HGWC-16</b>					
EPA 9315	Radium-226	0.167 ± 0.153 (0.299) C:95% T:NA	pCi/L		09/20/21 07:05	
EPA 9320	Radium-228	0.501 ± 0.349 (0.668) C:70% T:91%	pCi/L		09/16/21 11:10	
Total Radium Calculation	Total Radium	0.668 ± 0.502 (0.967)	pCi/L		09/21/21 16:44	
<b>92555496016</b>	<b>HGWC-15</b>					
EPA 9315	Radium-226	0.0381 ± 0.104 (0.253) C:96% T:NA	pCi/L		09/20/21 07:05	
EPA 9320	Radium-228	0.489 ± 0.446 (0.915) C:69% T:83%	pCi/L		09/16/21 11:10	
Total Radium Calculation	Total Radium	0.527 ± 0.550 (1.17)	pCi/L		09/21/21 16:44	

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: HAMMOND AP-2 RADS  
Pace Project No.: 92555496

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>92555496017</b>	<b>MW-23D</b>					
EPA 9315	Radium-226	0.179 ± 0.140 (0.251) C:97% T:NA	pCi/L		09/20/21 07:05	
EPA 9320	Radium-228	0.511 ± 0.421 (0.846) C:67% T:85%	pCi/L		09/16/21 11:10	
Total Radium Calculation	Total Radium	0.690 ± 0.561 (1.10)	pCi/L		09/21/21 16:44	
<b>92555496018</b>	<b>DUP-2</b>					
EPA 9315	Radium-226	0.153 ± 0.138 (0.262) C:94% T:NA	pCi/L		09/20/21 14:29	
EPA 9320	Radium-228	0.744 ± 0.382 (0.672) C:71% T:94%	pCi/L		09/16/21 11:10	
Total Radium Calculation	Total Radium	0.897 ± 0.520 (0.934)	pCi/L		09/21/21 16:44	
<b>92555496019</b>	<b>EB-2</b>					
EPA 9315	Radium-226	-0.0769 ± 0.114 (0.348) C:92% T:NA	pCi/L		09/20/21 07:05	
EPA 9320	Radium-228	0.879 ± 0.445 (0.776) C:69% T:83%	pCi/L		09/16/21 11:10	
Total Radium Calculation	Total Radium	0.879 ± 0.559 (1.12)	pCi/L		09/21/21 16:44	
<b>92555496020</b>	<b>FB-2</b>					
EPA 9315	Radium-226	0.0316 ± 0.117 (0.292) C:84% T:NA	pCi/L		09/20/21 07:05	
EPA 9320	Radium-228	0.152 ± 0.280 (0.614) C:73% T:82%	pCi/L		09/16/21 11:07	
Total Radium Calculation	Total Radium	0.184 ± 0.397 (0.906)	pCi/L		09/21/21 16:44	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 RADS

Pace Project No.: 92555496

**Sample: HGWA-4**      **Lab ID: 92555496001**      Collected: 08/12/21 16:55      Received: 08/13/21 14:55      Matrix: Water  
PWS:      Site ID:      Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	<b>-0.0153 ± 0.122 (0.345)</b> <b>C:77% T:NA</b>	pCi/L	09/16/21 08:29	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>0.359 ± 0.423 (0.894)</b> <b>C:74% T:84%</b>	pCi/L	09/03/21 14:23	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>0.359 ± 0.545 (1.24)</b>	pCi/L	09/17/21 16:27	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 RADS

Pace Project No.: 92555496

**Sample: HGWA-5**      **Lab ID: 92555496002**      Collected: 08/12/21 16:18      Received: 08/13/21 14:55      Matrix: Water  
PWS:      Site ID:      Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	<b>0.254 ± 0.199 (0.342)</b> <b>C:66% T:NA</b>	pCi/L	09/16/21 08:31	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>0.668 ± 0.481 (0.934)</b> <b>C:72% T:81%</b>	pCi/L	09/03/21 14:23	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>0.922 ± 0.680 (1.28)</b>	pCi/L	09/17/21 16:27	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 RADS

Pace Project No.: 92555496

**Sample: HGWA-6**      **Lab ID: 92555496003**      Collected: 08/12/21 14:48      Received: 08/13/21 14:55      Matrix: Water  
PWS:      Site ID:      Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	<b>0.0782 ± 0.149 (0.342)</b> <b>C:73% T:NA</b>	pCi/L	09/16/21 08:32	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>0.00215 ± 0.392 (0.914)</b> <b>C:69% T:81%</b>	pCi/L	09/03/21 14:23	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>0.0804 ± 0.541 (1.26)</b>	pCi/L	09/17/21 16:27	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 RADS

Pace Project No.: 92555496

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: HGWA-42D</b> <b>Lab ID: 92555496004</b> Collected: 08/12/21 09:35      Received: 08/13/21 14:55      Matrix: Water PWS:      Site ID:      Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	<b>0.0745 ± 0.132 (0.297)</b> C:69% T:NA	pCi/L	09/16/21 08:31	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>0.0358 ± 0.315 (0.725)</b> C:74% T:96%	pCi/L	09/03/21 14:23	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>0.110 ± 0.447 (1.02)</b>	pCi/L	09/17/21 16:27	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 RADS

Pace Project No.: 92555496

**Sample: MW-34D**      **Lab ID: 92555496005**      Collected: 08/16/21 15:03      Received: 08/17/21 11:25      Matrix: Water  
PWS:      Site ID:      Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	<b>0.201 ± 0.161 (0.293)</b> <b>C:98% T:NA</b>	pCi/L	09/16/21 08:30	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>0.492 ± 0.433 (0.881)</b> <b>C:62% T:91%</b>	pCi/L	09/03/21 11:26	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>0.693 ± 0.594 (1.17)</b>	pCi/L	09/17/21 16:27	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 RADS

Pace Project No.: 92555496

**Sample: HGWC-17**      **Lab ID: 92555496006**      Collected: 08/18/21 17:25      Received: 08/19/21 12:40      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	<b>0.167 ± 0.144 (0.266)</b> <b>C:91% T:NA</b>	pCi/L	09/20/21 07:02	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>0.381 ± 0.348 (0.709)</b> <b>C:70% T:95%</b>	pCi/L	09/16/21 11:09	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>0.548 ± 0.492 (0.975)</b>	pCi/L	09/21/21 16:44	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 RADS

Pace Project No.: 92555496

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: HGWC-14</b> <b>Lab ID: 92555496007</b> Collected: 08/18/21 15:31      Received: 08/19/21 12:40      Matrix: Water PWS:      Site ID:      Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	<b>0.247 ± 0.161 (0.267)</b> <b>C:100% T:NA</b>	pCi/L	09/20/21 07:02	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>0.611 ± 0.408 (0.783)</b> <b>C:70% T:87%</b>	pCi/L	09/16/21 11:09	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>0.858 ± 0.569 (1.05)</b>	pCi/L	09/21/21 16:44	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 RADS

Pace Project No.: 92555496

**Sample: MW-33**      **Lab ID: 92555496008**      Collected: 08/18/21 13:40      Received: 08/19/21 12:40      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	<b>0.272 ± 0.181 (0.310)</b> <b>C:97% T:NA</b>	pCi/L	09/20/21 07:02	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>1.50 ± 0.657 (1.13)</b> <b>C:66% T:77%</b>	pCi/L	09/16/21 11:09	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>1.77 ± 0.838 (1.44)</b>	pCi/L	09/21/21 16:44	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 RADS

Pace Project No.: 92555496

**Sample: MW-51**      **Lab ID: 92555496009**      Collected: 08/18/21 11:54      Received: 08/19/21 12:40      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	<b>0.106 ± 0.120 (0.241)</b> <b>C:98% T:NA</b>	pCi/L	09/20/21 07:02	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>0.867 ± 0.484 (0.889)</b> <b>C:67% T:83%</b>	pCi/L	09/16/21 11:09	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>0.973 ± 0.604 (1.13)</b>	pCi/L	09/21/21 16:44	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 RADS

Pace Project No.: 92555496

**Sample: MW-35**      **Lab ID: 92555496010**      Collected: 08/18/21 10:18      Received: 08/19/21 12:40      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	<b>0.389 ± 0.187 (0.261)</b> <b>C:99% T:NA</b>	pCi/L	09/20/21 07:04	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>1.28 ± 0.502 (0.787)</b> <b>C:67% T:90%</b>	pCi/L	09/16/21 11:09	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>1.67 ± 0.689 (1.05)</b>	pCi/L	09/21/21 16:44	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 RADS

Pace Project No.: 92555496

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: MW-37D</b> <b>Lab ID: 92555496011</b> Collected: 08/18/21 18:30      Received: 08/19/21 12:40      Matrix: Water PWS:      Site ID:      Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	<b>0.0718 ± 0.121 (0.271)</b> <b>C:88% T:NA</b>	pCi/L	09/20/21 07:04	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>1.24 ± 0.503 (0.798)</b> <b>C:67% T:86%</b>	pCi/L	09/16/21 11:09	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>1.31 ± 0.624 (1.07)</b>	pCi/L	09/21/21 16:44	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 RADS

Pace Project No.: 92555496

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: MW-22</b> <b>Lab ID: 92555496012</b> Collected: 08/19/21 14:58      Received: 08/20/21 12:15      Matrix: Water PWS:      Site ID:      Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	<b>-0.0119 ± 0.120 (0.321)</b> <b>C:98% T:NA</b>	pCi/L	09/20/21 07:04	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>0.689 ± 0.435 (0.828)</b> <b>C:70% T:88%</b>	pCi/L	09/16/21 11:09	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>0.689 ± 0.555 (1.15)</b>	pCi/L	09/21/21 16:44	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 RADS

Pace Project No.: 92555496

**Sample: HGWC-18**      **Lab ID: 92555496013**      Collected: 08/19/21 09:30      Received: 08/20/21 12:15      Matrix: Water  
PWS:      Site ID:      Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	<b>0.534 ± 0.240 (0.357)</b> <b>C:96% T:NA</b>	pCi/L	09/20/21 07:04	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>0.917 ± 0.497 (0.906)</b> <b>C:65% T:86%</b>	pCi/L	09/16/21 11:09	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>1.45 ± 0.737 (1.26)</b>	pCi/L	09/21/21 16:44	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 RADS

Pace Project No.: 92555496

**Sample: MW-21D**      **Lab ID: 92555496014**      Collected: 08/19/21 10:50      Received: 08/20/21 12:15      Matrix: Water  
PWS:      Site ID:      Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	<b>0.158 ± 0.144 (0.278)</b> <b>C:96% T:NA</b>	pCi/L	09/20/21 07:04	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>1.01 ± 0.442 (0.726)</b> <b>C:64% T:95%</b>	pCi/L	09/16/21 11:09	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>1.17 ± 0.586 (1.00)</b>	pCi/L	09/21/21 16:44	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 RADS

Pace Project No.: 92555496

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: HGWC-16</b> <b>Lab ID: 92555496015</b> Collected: 08/19/21 13:15      Received: 08/20/21 12:15      Matrix: Water PWS:      Site ID:      Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	<b>0.167 ± 0.153 (0.299)</b> <b>C:95% T:NA</b>	pCi/L	09/20/21 07:05	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>0.501 ± 0.349 (0.668)</b> <b>C:70% T:91%</b>	pCi/L	09/16/21 11:10	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>0.668 ± 0.502 (0.967)</b>	pCi/L	09/21/21 16:44	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 RADS

Pace Project No.: 92555496

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: HGWC-15</b> <b>Lab ID: 92555496016</b> Collected: 08/19/21 15:00      Received: 08/20/21 12:15      Matrix: Water PWS:      Site ID:      Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	<b>0.0381 ± 0.104 (0.253)</b> <b>C:96% T:NA</b>	pCi/L	09/20/21 07:05	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>0.489 ± 0.446 (0.915)</b> <b>C:69% T:83%</b>	pCi/L	09/16/21 11:10	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>0.527 ± 0.550 (1.17)</b>	pCi/L	09/21/21 16:44	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 RADS

Pace Project No.: 92555496

**Sample: MW-23D**      **Lab ID: 92555496017**      Collected: 08/19/21 18:48      Received: 08/20/21 12:15      Matrix: Water  
PWS:      Site ID:      Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	<b>0.179 ± 0.140 (0.251)</b> <b>C:97% T:NA</b>	pCi/L	09/20/21 07:05	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>0.511 ± 0.421 (0.846)</b> <b>C:67% T:85%</b>	pCi/L	09/16/21 11:10	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>0.690 ± 0.561 (1.10)</b>	pCi/L	09/21/21 16:44	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 RADS

Pace Project No.: 92555496

**Sample: DUP-2**      **Lab ID: 92555496018**      Collected: 08/19/21 00:00      Received: 08/20/21 12:15      Matrix: Water  
PWS:      Site ID:      Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	<b>0.153 ± 0.138 (0.262)</b> <b>C:94% T:NA</b>	pCi/L	09/20/21 14:29	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>0.744 ± 0.382 (0.672)</b> <b>C:71% T:94%</b>	pCi/L	09/16/21 11:10	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>0.897 ± 0.520 (0.934)</b>	pCi/L	09/21/21 16:44	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 RADS

Pace Project No.: 92555496

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: EB-2</b> <b>Lab ID: 92555496019</b> Collected: 08/19/21 13:30      Received: 08/20/21 12:15      Matrix: Water PWS:      Site ID:      Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	<b>-0.0769 ± 0.114 (0.348)</b> <b>C:92% T:NA</b>	pCi/L	09/20/21 07:05	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>0.879 ± 0.445 (0.776)</b> <b>C:69% T:83%</b>	pCi/L	09/16/21 11:10	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>0.879 ± 0.559 (1.12)</b>	pCi/L	09/21/21 16:44	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 RADS

Pace Project No.: 92555496

**Sample: FB-2**      **Lab ID: 92555496020**      Collected: 08/19/21 09:40      Received: 08/20/21 12:15      Matrix: Water  
PWS:      Site ID:      Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	<b>0.0316 ± 0.117 (0.292)</b> <b>C:84% T:NA</b>	pCi/L	09/20/21 07:05	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>0.152 ± 0.280 (0.614)</b> <b>C:73% T:82%</b>	pCi/L	09/16/21 11:07	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>0.184 ± 0.397 (0.906)</b>	pCi/L	09/21/21 16:44	7440-14-4	

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-2 RADS

Pace Project No.: 92555496

QC Batch: 463298

Analysis Method: EPA 9320

QC Batch Method: EPA 9320

Analysis Description: 9320 Radium 228

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92555496005

METHOD BLANK: 2236861

Matrix: Water

Associated Lab Samples: 92555496005

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.204 ± 0.329 (0.713) C:63% T:88%	pCi/L	09/03/21 11:28	

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-2 RADS

Pace Project No.: 92555496

QC Batch: 463426

Analysis Method: EPA 9315

QC Batch Method: EPA 9315

Analysis Description: 9315 Total Radium

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92555496001, 92555496002, 92555496003, 92555496004, 92555496005

METHOD BLANK: 2237360

Matrix: Water

Associated Lab Samples: 92555496001, 92555496002, 92555496003, 92555496004, 92555496005

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

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

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-2 RADS

Pace Project No.: 92555496

QC Batch: 461961

Analysis Method: EPA 9320

QC Batch Method: EPA 9320

Analysis Description: 9320 Radium 228

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92555496001, 92555496002, 92555496003, 92555496004

METHOD BLANK: 2230398

Matrix: Water

Associated Lab Samples: 92555496001, 92555496002, 92555496003, 92555496004

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

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

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-2 RADS

Pace Project No.: 92555496

QC Batch: 463377

Analysis Method: EPA 9320

QC Batch Method: EPA 9320

Analysis Description: 9320 Radium 228

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92555496006, 92555496007, 92555496008, 92555496009, 92555496010, 92555496011, 92555496012, 92555496013, 92555496014, 92555496015, 92555496016, 92555496017, 92555496018, 92555496019, 92555496020

METHOD BLANK: 2237266

Matrix: Water

Associated Lab Samples: 92555496006, 92555496007, 92555496008, 92555496009, 92555496010, 92555496011, 92555496012, 92555496013, 92555496014, 92555496015, 92555496016, 92555496017, 92555496018, 92555496019, 92555496020

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

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

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-2 RADS

Pace Project No.: 92555496

QC Batch: 463378

Analysis Method: EPA 9315

QC Batch Method: EPA 9315

Analysis Description: 9315 Total Radium

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92555496006, 92555496007, 92555496008, 92555496009, 92555496010, 92555496011, 92555496012, 92555496013, 92555496014, 92555496015, 92555496016, 92555496017, 92555496018, 92555496019, 92555496020

METHOD BLANK: 2237267

Matrix: Water

Associated Lab Samples: 92555496006, 92555496007, 92555496008, 92555496009, 92555496010, 92555496011, 92555496012, 92555496013, 92555496014, 92555496015, 92555496016, 92555496017, 92555496018, 92555496019, 92555496020

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

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

### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: HAMMOND AP-2 RADS

Pace Project No.: 92555496

---

### 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-2 RADS  
Pace Project No.: 92555496

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92555496001	HGWA-4	EPA 9315	463426		
92555496002	HGWA-5	EPA 9315	463426		
92555496003	HGWA-6	EPA 9315	463426		
92555496004	HGWA-42D	EPA 9315	463426		
92555496005	MW-34D	EPA 9315	463426		
92555496006	HGWC-17	EPA 9315	463378		
92555496007	HGWC-14	EPA 9315	463378		
92555496008	MW-33	EPA 9315	463378		
92555496009	MW-51	EPA 9315	463378		
92555496010	MW-35	EPA 9315	463378		
92555496011	MW-37D	EPA 9315	463378		
92555496012	MW-22	EPA 9315	463378		
92555496013	HGWC-18	EPA 9315	463378		
92555496014	MW-21D	EPA 9315	463378		
92555496015	HGWC-16	EPA 9315	463378		
92555496016	HGWC-15	EPA 9315	463378		
92555496017	MW-23D	EPA 9315	463378		
92555496018	DUP-2	EPA 9315	463378		
92555496019	EB-2	EPA 9315	463378		
92555496020	FB-2	EPA 9315	463378		
92555496001	HGWA-4	EPA 9320	461961		
92555496002	HGWA-5	EPA 9320	461961		
92555496003	HGWA-6	EPA 9320	461961		
92555496004	HGWA-42D	EPA 9320	461961		
92555496005	MW-34D	EPA 9320	463298		
92555496006	HGWC-17	EPA 9320	463377		
92555496007	HGWC-14	EPA 9320	463377		
92555496008	MW-33	EPA 9320	463377		
92555496009	MW-51	EPA 9320	463377		
92555496010	MW-35	EPA 9320	463377		
92555496011	MW-37D	EPA 9320	463377		
92555496012	MW-22	EPA 9320	463377		
92555496013	HGWC-18	EPA 9320	463377		
92555496014	MW-21D	EPA 9320	463377		
92555496015	HGWC-16	EPA 9320	463377		
92555496016	HGWC-15	EPA 9320	463377		
92555496017	MW-23D	EPA 9320	463377		
92555496018	DUP-2	EPA 9320	463377		
92555496019	EB-2	EPA 9320	463377		
92555496020	FB-2	EPA 9320	463377		
92555496001	HGWA-4	Total Radium Calculation	464617		
92555496002	HGWA-5	Total Radium Calculation	464617		
92555496003	HGWA-6	Total Radium Calculation	464617		
92555496004	HGWA-42D	Total Radium Calculation	464617		
92555496005	MW-34D	Total Radium Calculation	464617		
92555496006	HGWC-17	Total Radium Calculation	464982		

### REPORT OF LABORATORY ANALYSIS

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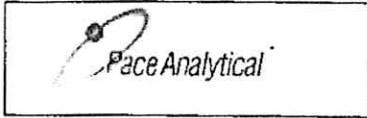
**QUALITY CONTROL DATA CROSS REFERENCE TABLE**

Project: HAMMOND AP-2 RADS  
Pace Project No.: 92555496

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92555496007	HGWC-14	Total Radium Calculation	464982		
92555496008	MW-33	Total Radium Calculation	464982		
92555496009	MW-51	Total Radium Calculation	464982		
92555496010	MW-35	Total Radium Calculation	464982		
92555496011	MW-37D	Total Radium Calculation	464982		
92555496012	MW-22	Total Radium Calculation	464982		
92555496013	HGWC-18	Total Radium Calculation	464982		
92555496014	MW-21D	Total Radium Calculation	464982		
92555496015	HGWC-16	Total Radium Calculation	464982		
92555496016	HGWC-15	Total Radium Calculation	464982		
92555496017	MW-23D	Total Radium Calculation	464982		
92555496018	DUP-2	Total Radium Calculation	464982		
92555496019	EB-2	Total Radium Calculation	464982		
92555496020	FB-2	Total Radium Calculation	464982		

**REPORT OF LABORATORY ANALYSIS**

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Document Name:  
**Sample Condition Upon Receipt (SCUR)**  
 Document No.:  
**F-CAR-CS-033-Rev.07**

Document Revised: October 28, 2020  
 Page 1 of 2  
 Issuing Authority:  
 Pace Carolinas Quality Office

**Laboratory receiving samples:**

Asheville  Eden  Greenwood  Huntersville  Raleigh  Mechanicsville  Atlanta  Kernersville

**Sample Condition Upon Receipt**

Client Name:  
GJA POWER

Project #:

**WO# : 92555496**



Date/Initials Person Examining Contents: 3/13/21 KAW

Courier:  Fed Ex  UPS  USPS  Client  
 Commercial  Pace  Other

Custody Seal Present?  Yes  No Seals Intact?  Yes  No

Packing Material:  Bubble Wrap  Bubble Bags  None  Other

Thermometer:  TR Gun ID: TH2083 Type of ice:  Wet  Blue  None

Biological Tissue Frozen?  Yes  No  N/A

Cooler Temp: 1.8 Correction Factor: Add/Subtract (°C) ± 0

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

Cooler Temp Corrected (°C): 1.8

USDA Regulated Soil ( N/A, water sample)

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

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

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

COMMENTS/SAMPLE DISCREPANCY \_\_\_\_\_ Field Data Required?  Yes  No

CLIENT NOTIFICATION/RESOLUTION \_\_\_\_\_ Lot ID of split containers: \_\_\_\_\_

Person contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

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

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





Document Name:  
**Sample Condition Upon Receipt(SCUR)**  
 Document No.:  
**F-CAR-CS-033-Rev.07**

Document Revised: October 28, 2020  
 Page 2 of 2  
 Issuing Authority:  
 Pace Carolinas Quality Office

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

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

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

Project #

**WO# : 92555496**  
 PM: NMG Due Date: 09/03/21  
 CLIENT: GA-GA Power

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

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

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

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

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

**Section B** Required Project Information  
Project To: SCS Contacts  
Copy To: Gensync Contact

**Section C** Invoice Information:  
Attention: Southern Co.  
Company Name:  
Address:  
Phone Number: 10839

Page 1 of 1

**Section D** Valid Matrix Codes  
MATRIX CODE (see valid codes to left)  
SAMPLE TYPE (G=GRAB C=COMP)

**Section E** Collected / Preservatives / Analysis Test

**Section F** Requested Analysis Filtered (Y/N)

**Section G** Regulatory Agency  
NPDDES GROUND WATER DRINKING WATER  
UST RCRA OTHER  
Site Location: GA

ITEM #	MATRIX CODE	SAMPLE TYPE	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.
									Unpreserved	Other				
1	HGWA-4	WT G	8/12/21	16:55	22	5	3	2	X	X	X	X		
2	HGWA-5	WT G	8/12/21	16:18	21	5	3	2	X	X	X	X		
3	HGWA-6	WT G	8/12/21	14:48	20	5	3	2	X	X	X	X		
4	HGWA-4ZD	WT G	8/12/21	08:35	23	5	3	2	X	X	X	X		
5														
6														
7														
8														
9														
10														
11														
12														

**Section H** Relinquished By / Affiliation

**Section I** Accepted By / Affiliation

**Section J** Sampler Name and Signature

**Section K** Date and Time

**Section L** Sample Conditions

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

\*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to take charge of 1.5% per month for any invoices not paid within 30 days.  
FALL-0-020rev. 07 15-Feb-2007



Document Name:  
Sample Condition Upon Receipt(SCUR)  
Document No.:  
F-CAR-CS-033-Rev.07

Document Revised: October 28, 2020  
Page 1 of 2  
Issuing Authority:  
Pace Carolinas Quality Office

Laboratory receiving samples:

Asheville  Eden  Greenwood  Huntersville  Raleigh  Mechanicsville  Atlanta  Kernersville

Sample Condition Upon Receipt

Client Name:

Project #:

**WO# : 92555496**

PM: NMG

Due Date: 09/03/21

CLIENT: GA-GA Power

Courier:  Fed Ex  UPS  USPS  Client  
 Commercial  Pace  Other: \_\_\_\_\_

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

Date/Initials Person Examining Contents: 8/17/21 *KAW*

Packing Material:  Bubble Wrap  Bubble Bags  None  Other

Biological Tissue Frozen?

Yes  No  N/A

Thermometer:

IR-Gun ID: JH1230

Type of Ice:

Wet  Blue  None

Cooler Temp: 4.6 Correction Factor: Add/Subtract (°C) +0.1

Temp should be above freezing to 6°C

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

Cooler Temp Corrected (°C): 4.7

USDA Regulated Soil (  N/A, water sample)

Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)?

Yes  No

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

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

COMMENTS/SAMPLE DISCREPANCY

Field Data Required?  Yes  No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

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

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

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

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



Document Name:  
 Sample Condition Upon Receipt(SCUR)  
 Document No.:  
 F-CAR-CS-033-Rev.07

Document Revised: October 28, 2020  
 Page 2 of 2  
 Issuing Authority:  
 Pace Carolinas Quality Office

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

Project #

**WO# : 92555496**

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

Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC, LLHg  
 \*\*Bottom half of box is to list number of bottles

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)	BP4C-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	AG3A(DG3A)-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unp (N/A)	DG9P-40 mL VOA H3PO4 (N/A)	VOAK (6 vials per kit)-5035 kit (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)	BP3A-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved vials (N/A)	V5GU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)		
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**pH Adjustment Log for Preserved Samples**

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

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



# 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  
 Section B Required Project Information  
 Section C Invoice Information

Company: GA Power	Report To: SCS Contacts	Attention: Southern Co.	Page: 1 of 1
Address: Atlanta, GA	Copy To: Geosyntec Contacts	Company Name:	
Email To: SCS Contacts	Purchase Order No.:	Address:	REGULATORY AGENCY
Phone: _____	Project Name: Hammond AP-2	Page Quote Reference Manager	NPDES GROUND WATER DRINKING WATER UST RCRA OTHER COR
Requested Due Date/TAT: 18 Day	Project Number:	Project Profile #: 10839	Site Location: GA

ITEM #	Section D Required Client Information	Valid Matrix Codes MATRIX CODE	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives			Analysis Test	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	pH = 7.05
				COMPOSITE	COMPOSITE					H <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>	HCl				
1	MM-34D	DRINKING WATER WATER WASTE WATER PRODUCT OR WASTE AIR OTHER	WT	G	8/16/21	15:03	22	5	2	3	X	X	X	X	X	
2																
3																
4																
5																
6																
7																
8																
9																
10																
11																
12																

ADDITIONAL COMMENTS: Please note dry wells, strike through any wells not sampled, and note when the last sample for the event has been taken.

RELINQUISHED BY / AFFILIATION: *Thomas Kessler / Pace* DATE: *8/17/21* TIME: *11:25*

ACCEPTED BY / AFFILIATION: *Ryan Williams / Pace* DATE: *8/17/21* TIME: *15:00*

SAMPLER NAME AND SIGNATURE: *Thomas Kessler*

PRINT Name of SAMPLER: \_\_\_\_\_ DATE Signed (MM/DD/YYYY): *8/16/2021*

SIGNATURE of SAMPLER: \_\_\_\_\_

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

**Laboratory receiving samples:**

Asheville  Eden  Greenwood  Huntersville  Raleigh  Mechanicsville  Atlanta  Kernersville

Sample Condition Upon Receipt	Client Name: <u>GA Power</u>	Project #: <div style="border: 1px solid black; height: 40px; width: 100%;"></div>
-------------------------------	------------------------------	--

Courier:  Fed Ex  UPS  USPS  Client  
 Commercial  Pace  Other: \_\_\_\_\_

Custody Seal Present?  Yes  No    Seals Intact?  Yes  No

Date/Initials Person Examining Contents: 8/19/25  
Low

Packing Material:  Bubble Wrap  Bubble Bags  None  Other

Biological Tissue Frozen?  Yes  No  N/A

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

Cooler Temp: 1.8    Correction Factor: Add/Subtract (°C) 0.0

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

Cooler Temp Corrected (°C): 1.8

USDA Regulated Soil (  N/A, water sample)

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

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

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

COMMENTS/SAMPLE DISCREPANCY Field Data Required?  Yes  No

Lot ID of split containers: \_\_\_\_\_

CLIENT NOTIFICATION/RESOLUTION  
 \_\_\_\_\_  
 \_\_\_\_\_

Person contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

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

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



Document Name:  
 Sample Condition Upon Receipt(SCUR)  
 Document No.:  
 F-CAR-CS-033-Rev.07

Document Revised October 28, 2020  
 Page 2 of 2  
 Issuing Authority:  
 Pace Carolinas Quality Office

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

Project #

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

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

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)	BP4C-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	AG3A(DG3A)-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2SO3 (N/A)	VG9U-40 mL VOA Unp (N/A)	DG9P-40 mL VOA H3PO4 (N/A)	VOAK (6 vials per kit)-5035 kit (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)	BP3A-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved vials (N/A)	V5GU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)	
1	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
2	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
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12	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/

**pH Adjustment Log for Preserved Samples**

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

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

<b>Section A</b> Required Client Information Company: GA Power Address: Atlanta GA	<b>Section B</b> Required Project Information Report To: SCS Contacts Copy To: Geosyntec Contacts	<b>Section C</b> Invoice Information Attention: Southern Co.
<b>Section D</b> Required Client Information Valid Matrix Codes MATRIX CODE (see valid codes to left) SAMPLE TYPE (G=GRAB C=COMP)	<b>Section E</b> Purchase Order No.: Project Name: Hammond AP-2 Project Number:	<b>Section F</b> REGULATORY AGENCY NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER <input type="checkbox"/> Site Location: _____ STATE: GA

Requested Client Information Company: GA Power Address: Atlanta GA	Required Project Information Report To: SCS Contacts Copy To: Geosyntec Contacts	Invoice Information Attention: Southern Co.
Valid Matrix Codes MATRIX CODE (see valid codes to left) SAMPLE TYPE (G=GRAB C=COMP)	Purchase Order No.: Project Name: Hammond AP-2 Project Number:	REGULATORY AGENCY NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER <input type="checkbox"/> Site Location: _____ STATE: GA

ITEM #	Section D Required Client Information Valid Matrix Codes MATRIX CODE (see valid codes to left) SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives		Analysis Test	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	Page Project No./ Lab I.D.	
		DATE	TIME			DATE	TIME					H <sub>2</sub> SO <sub>4</sub>
1	HQWC-17	WT G	8/18/21	17:25	22	5	2	3	X	X	X	TJ 8/18/2021
2	HQWC-14	WT G	8/18/21	19:31	22	5	2	3	X	X	X	
3	MW-33	WT G	8/18/21	19:40	22	5	2	3	X	X	X	
4	MW-51	WT G	8/18/21	11:54	20	5	2	3	X	X	X	
5	MW-35	WT G	8/18/21	10:18	21	5	2	3	X	X	X	
6	MW-37D	WT G	8/18/21	16:30	22	5	2	3	X	X	X	
7												
8												
9												
10												
11												
12												

Section D Required Client Information Valid Matrix Codes MATRIX CODE (see valid codes to left) SAMPLE TYPE (G=GRAB C=COMP)	Section E Purchase Order No.: Project Name: Hammond AP-2 Project Number:	Section F REGULATORY AGENCY NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER <input type="checkbox"/> Site Location: _____ STATE: GA
--	---	--

Section G Additional Comments Please note dry wells, spike through any well not sampled, and note when the last sample for the event has been taken.	Section H Relinquished By / Affiliation Name: <i>Thomas Kessler</i> Signature: <i>Thomas Kessler</i> Date: <i>8/19/21</i> Time: <i>1240</i>	Section I Accepted By / Affiliation Name: <i>Dyan Williams</i> Signature: <i>Dyan Williams</i> Date: <i>8/19/21</i> Time: <i>1340</i>
--	--	--

SAMPLER NAME AND SIGNATURE		PRINT Name of SAMPLER: <i>Thomas Kessler</i>	SIGNATURE of SAMPLER: <i>Thomas Kessler</i>	DATE Signed (MM/DD/YY): <i>8/18/21</i>
SAMPLER NAME AND SIGNATURE		PRINT Name of SAMPLER: <i>Dyan Williams</i>	SIGNATURE of SAMPLER: <i>Dyan Williams</i>	DATE Signed (MM/DD/YY): <i>8/18/21</i>





Document Name  
 Sample Condition Upon Receipt (SCUR)  
 Document No:  
 F-CAR-CS-033-Rev.07

Document Revised: October 23, 2020  
 Page 1 of 2  
 Issuing Authority  
 Pace Carolinas Quality Office

Laboratory receiving samples:

Asheville  Eden  Greenwood  Huntersville  Raleigh  Mechanicsville  Atlanta  Kernersville

Sample Condition Upon Receipt

Client Name:

*GA Power*

Project #:

Courier:  Fed Ex  UPS  USPS  Client  
 Commercial  Pace  Other \_\_\_\_\_

Custody Seal Present?  Yes  No Seals Intact?  Yes  No

Date/Initials Person Examining Contents *MT 8/22/21*

Packing Material:  Bubble Wrap  Bubble Bags  None  Other

Biological Tissue Frozen?

Yes  No  N/A

Thermometer:

IR Gun ID:

*083*

Type of Ice:

Wet  Blue  None

Cooler Temp:

*4.4*

Correction Factor:

Add/Subtract (°C)

*+0*

Temp should be above freezing to 6°C

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

Cooler Temp Corrected (°C):

*4.4*

USDA Regulated Soil (  N/A, water sample)

Did samples originate in a quarantine zone within the United States, CA, NY, or SC (check map)?

Yes  No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)?

Yes  No

	Comments/Discrepancy:
Chain of Custody Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A 1
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A 2
Short Hold Time Analysis (<72 hr.)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A 3
Rush Turn Around Time Requested?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A 4
Sufficient Volume?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A 5
Correct Containers Used?	<input 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 checked="" 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:	<i>WT</i> 10
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: \_\_\_\_\_



Document Name:  
Sample Condition Upon Receipt(SCUR)

Document Revised: October 28, 2020  
Page 2 of 2

Document No.:  
F-CAR-CS-033-Rev.07

Issuing Authority:  
Pace Carolina Quality Office

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

Project #

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

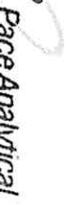
\*\*Bottom half of box is to list number of bottles

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)	BP4C-125 mL Plastic NaOH (pH > 12) (Cl-)	WGfU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	AG3A(DG3A)-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unp (N/A)	DG9P-40 mL VOA H3PO4 (N/A)	VOAK (6 vials per kit)-5035 kit (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)	BP3A-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved vials (N/A)	V5GU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)
1	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	2	/	/	/
2	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	2	/	/	/
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11	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
12	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/

**pH Adjustment Log for Preserved Samples**

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

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



Section A  
Required Client Information:

Company: GA P Over  
Address: Atlanta, GA

Section B  
Required Project Information:

Report To: SCS Contacts  
Copy To: Geosyntec Contacts

Section C  
Invoice Information:

Attention: Southern Co.  
Company Name  
Address:  
Pace Data  
Reference  
Pace Project: Kevin Herring  
Manager:  
Pace Profile #: 10839

Project Name: Hammond AP-2  
Purchase Order No.:  
Email To: SCS Contacts  
Phone: \_\_\_\_\_ Fax: \_\_\_\_\_  
Requested Due Date/TAT: 10 Day  
Project Number:  
REGULATORY AGENCY:  
NPD/S GROUND WATER/ DRINKING WATER  
UST RORA OTHER COP  
Site Location: \_\_\_\_\_  
STATE: GA

ITEM #	Section D Required Client Information	Valid Matrix Codes MATRIX CODE	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=CCMP)	COLLECTED		DATE	TIME	DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	Preservatives							Analysis Test	Requested Analysis Filtered (Y/N)
					COMPOSITE	COMPOSITE								H <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>	HCl	NaOH	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>	Methanol	Other		

1		MMW-22	WT G	G	8/19/21	14:58				20	5	2	3	X	X	X	X	X	X	X
2		HGWC-18	WT G	G	8/19/21	8:30				22	5	2	3	X	X	X	X	X	X	X
3		MMW-21D	WT G	G	8/19/21	10:50				20	5	2	3	X	X	X	X	X	X	X
4		HGWC-16	WT G	G	8/19/21	13:15				23	5	2	3	X	X	X	X	X	X	X
5		HGWC-15	WT G	G	8/19/21	15:00				20	5	2	3	X	X	X	X	X	X	X
6		MMW-23D	WT G	G	8/19/21	18:48				21	5	2	3	X	X	X	X	X	X	X
7		DUP-2	WT G	G	8/19/21	0:00				23	5	2	3	X	X	X	X	X	X	X
8		EB-2	WT G	G	8/19/21	13:30				20	5	2	3	X	X	X	X	X	X	X
9		FB-2	WT G	G	8/19/21	8:40				20	5	2	3	X	X	X	X	X	X	X
10																				
11																				
12																				

ADDITIONAL COMMENTS: 8/19/2021 TJ

REINQUISHED BY / AFFILIATION: *Matthew Hester* / *Ryan Williams*

DATE: 8/19/21 13:30

ACCEPTED BY / AFFILIATION: *Ryan Williams* / *Yvonne*

DATE: 8/19/21 13:15

TEMPERATURE: 4.1

Received on Ice (Y/N): Y

Custody Sealed Cooler (Y/N): N

Samples Intact (Y/N): Y

Temp in °C: 4.1  
Received on Ice (Y/N): Y  
Custody Sealed Cooler (Y/N): N  
Samples Intact (Y/N): Y

Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to the stipulations of 1.5% per month penalty interest not paid within 30 days.

FALL-Q-020/rev.07, 15-Feb-2007

# Quality Control Sample Performance Assessment



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

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

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

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

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

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

Comments:

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

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

# Quality Control Sample Performance Assessment



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

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

Laboratory Control Sample Assessment	LCSD (Y or N)?	
	LCSD62576	LCSD62576
Count Date:	9/16/2021	9/16/2021
Spike I.D.:	21-029	21-029
Decay Corrected Spike Concentration (pCi/mL):	38.200	38.200
Volume Used (mL):	0.10	0.10
Aliquot Volume (L, g, F):	0.809	0.809
Target Conc. (pCi/L, g, F):	4.708	4.721
Uncertainty (Calculated):	0.231	0.231
Result (pCi/L, g, F):	5.680	5.498
LCSD/LCSD 2 Sigma CSU (pCi/L, g, F):	1.224	1.181
Numerical Performance Indicator:	1.53	1.26
Percent Recovery:	120.65%	116.43%
Status vs Numerical Indicator:	N/A	N/A
Status vs Recovery:	Pass	Pass
Upper % Recovery Limits:	135%	135%
Lower % Recovery Limits:	60%	60%

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

Enter Duplicate sample IDs if other than LCS/LCSD in the space below.

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

Comments:

Analyst Must Manually Enter All Fields Highlighted in Yellow.

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

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# Quality Control Sample Performance Assessment

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



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

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

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

Duplicate Sample Assessment	
Sample I.D.:	92555497007
Duplicate Sample I.D.:	92555497007DUP
Sample Result (pCi/L, g, F):	0.141
Sample Result Counting Uncertainty (pCi/L, g, F):	0.150
Sample Duplicate Result (pCi/L, g, F):	0.202
Sample Duplicate Counting Uncertainty (pCi/L, g, F):	0.163
Are sample and/or duplicate results below RL?	See Below #
Duplicate Numerical Performance Indicator:	-0.540
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	35.65%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Fail**
% RPD Limit:	25%

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

Comments:

\*\*\*Determinations are prepared due to unacceptable precision\*\*\* N/A

LAM 9/21/21

LAM 9/21/21

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.:		
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 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 Matrix Spike Result: Matrix Spike Result Counting Uncertainty (pCi/L, g, F): Sample Matrix Spike Duplicate Result: Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F): MS Numerical Performance Indicator: MSD Numerical Performance Indicator: MS Percent Recovery: MSD Percent Recovery: MS Status vs Numerical Indicator: MSD Status vs Numerical Indicator: MS Status vs Recovery: MSD Status vs Recovery: MS/MSD Upper % Recovery Limits: MS/MSD Lower % Recovery Limits:		

Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample I.D.:	92555497007
Sample MS I.D.:	92555497007DUP
Sample MSD I.D.:	0.141
Sample Matrix Spike Result:	0.150
Sample Matrix Spike Duplicate Result:	0.202
Sample Matrix Spike Duplicate Counting Uncertainty (pCi/L, g, F):	0.163
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	See Below #
Duplicate Numerical Performance Indicator:	-0.540
(Based on the Percent Recoveries) MS/MSD Duplicate RPD:	35.65%
MS/MSD Duplicate Status vs Numerical Indicator:	N/A
MS/MSD Duplicate Status vs RPD:	Fail**
% RPD Limit:	25%

# Quality Control Sample Performance Assessment

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



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

Method Blank Assessment	MB Sample ID	Count Date	LCS D (Y or N)?	Y
MB concentration:	2237360	9/15/2021	LCS D62605	LCS D62605
M/B Counting Uncertainty:	0.250	19-033	24.034	24.034
MB MDC:	0.180	24.034	0.10	0.10
MB Numerical Performance Indicator:	0.307	0.503	4.775	0.057
MB Status vs. Numerical Indicator:	2.72	4.197	0.681	3.605
MB Status vs. MDC:	N/A	-1.66	87.88%	0.612
	Pass		Pass	-3.68
			75.74%	75.74%
			N/A	N/A
			Pass	Pass
			125%	125%
			75%	75%

Laboratory Control Sample Assessment	Count Date	LCS D (Y or N)?	Y
Decay Corrected Spike Concentration (pCi/mL):	9/15/2021	LCS D62605	LCS D62605
Volume Used (mL):	19-033	24.034	24.034
Aliquot Volume (L, g, F):	0.10	0.10	0.10
Target Conc. (pCi/L, g, F):	0.503	4.775	0.057
Uncertainty (Calculated):	4.197	0.681	3.605
Result (pCi/L, g, F):	0.681	87.88%	0.612
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	-1.66	Pass	-3.68
Numerical Performance Indicator:		75%	75.74%
Percent Recovery:		N/A	N/A
Status vs Numerical Indicator:		Pass	Pass
Upper % Recovery Limits:		125%	125%
Lower % Recovery Limits:		75%	75%

Duplicate Sample Assessment	Sample I.D.	Count Date	LCS D (Y or N)?	Y
Duplicate Sample I.D.:	92555928001	9/15/2021	LCS D62605	LCS D62605
Duplicate Result (pCi/L, g, F):	0.048	0.100	0.106	0.106
Sample Result Counting Uncertainty (pCi/L, g, F):	0.160	1.289	108.01%	108.01%
Sample Duplicate Result (pCi/L, g, F):	0.106	N/A	Fail***	25%
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	See Below #			
Are sample and/or duplicate results below RL?				
Duplicate Numerical Performance Indicator:				
Duplicate (Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:				
Duplicate Status vs Numerical Indicator:				
Duplicate Status vs RPD:				
% RPD Limit:				

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

Comments:

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

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

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



September 24, 2021

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

RE: Project: HAMMOND ASH POND #1 & #2  
Pace Project No.: 92555520

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory between August 13, 2021 and August 16, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

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

This report was revised 9/24/21 to report the correct TDS result for sample HGWA-2 (92555520-003)

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

Sincerely,



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

Enclosures

cc: Christine Hug, Geosyntec Consultants, Inc.  
Kristen Jurinko  
Thomas Kessler, Geosyntec  
Whitney Law, Geosyntec Consultants  
Noelia Muskus, Geosyntec Consultants  
Ms. Lauren Petty, Southern Company  
Nardos Tilahun, GeoSyntec

Dawit Yifru, Geosyntec Consultants, Inc.



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: HAMMOND ASH POND #1 & #2

Pace Project No.: 92555520

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### **Pace Analytical Services Charlotte**

9800 Kinsey Ave. Ste 100, Huntersville, NC 28078  
Louisiana/NELAP Certification # LA170028  
North Carolina Drinking Water Certification #: 37706  
North Carolina Field Services Certification #: 5342  
North Carolina Wastewater Certification #: 12

South Carolina Certification #: 99006001  
Florida/NELAP Certification #: E87627  
Kentucky UST Certification #: 84  
Virginia/VELAP Certification #: 460221

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### **Pace Analytical Services Asheville**

2225 Riverside Drive, Asheville, NC 28804  
Florida/NELAP Certification #: E87648  
North Carolina Drinking Water Certification #: 37712

North Carolina Wastewater Certification #: 40  
South Carolina Certification #: 99030001  
Virginia/VELAP Certification #: 460222

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

110 Technology Pkwy, Peachtree Corners, GA 30092  
Florida DOH Certification #: E87315  
Georgia DW Inorganics Certification #: 812

North Carolina Certification #: 381  
South Carolina Certification #: 98011001

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: HAMMOND ASH POND #1 & #2

Pace Project No.: 92555520

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92555520001	HGWA-1	Water	08/11/21 17:00	08/13/21 14:55
92555520002	HGWA-43D	Water	08/11/21 17:03	08/13/21 14:55
92555520003	HGWA-2	Water	08/12/21 15:35	08/13/21 14:55
92555520004	HGWA-3	Water	08/12/21 10:17	08/13/21 14:55
92555520005	HGWA-44D	Water	08/13/21 11:25	08/16/21 13:25

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: HAMMOND ASH POND #1 & #2

Pace Project No.: 92555520

Lab ID	Sample ID	Method	Analysts	Analytes Reported
92555520001	HGWA-1	EPA 6010D	KH	1
		EPA 6020B	CW1	13
		SM 2540C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92555520002	HGWA-43D	EPA 6010D	KH	1
		EPA 6020B	CW1	13
		SM 2540C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92555520003	HGWA-2	EPA 6010D	KH	1
		EPA 6020B	CW1	13
		SM 2540C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92555520004	HGWA-3	EPA 6010D	KH	1
		EPA 6020B	CW1	13
		SM 2540C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92555520005	HGWA-44D	EPA 6010D	KH	1
		EPA 6020B	CW1	13
		SM 2540C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3

PASI-A = Pace Analytical Services - Asheville

PASI-C = Pace Analytical Services - Charlotte

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

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: HAMMOND ASH POND #1 & #2

Pace Project No.: 92555520

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
<b>92555520001</b>	<b>HGWA-1</b>					
	Performed by	CUSTOME			08/16/21 11:23	
		R				
	pH	6.98	Std. Units		08/16/21 11:23	
EPA 6010D	Calcium	113	mg/L	1.0	08/18/21 18:00	
EPA 6020B	Barium	0.030	mg/L	0.0050	08/19/21 19:05	
EPA 6020B	Boron	0.020J	mg/L	0.040	08/19/21 19:05	
EPA 6020B	Lithium	0.00078J	mg/L	0.030	08/19/21 19:05	
SM 2540C-2011	Total Dissolved Solids	366	mg/L	10.0	08/18/21 08:30	
EPA 300.0 Rev 2.1 1993	Chloride	9.6	mg/L	1.0	08/20/21 06:28	
EPA 300.0 Rev 2.1 1993	Fluoride	0.058J	mg/L	0.10	08/20/21 06:28	
EPA 300.0 Rev 2.1 1993	Sulfate	48.9	mg/L	1.0	08/20/21 06:28	
<b>92555520002</b>	<b>HGWA-43D</b>					
	Performed by	CUSTOME			08/16/21 11:23	
		R				
	pH	7.40	Std. Units		08/16/21 11:23	
EPA 6010D	Calcium	61.0	mg/L	1.0	08/18/21 18:04	
EPA 6020B	Arsenic	0.0015J	mg/L	0.0050	08/19/21 19:10	
EPA 6020B	Barium	0.28	mg/L	0.0050	08/19/21 19:10	
EPA 6020B	Boron	0.042	mg/L	0.040	08/19/21 19:10	
EPA 6020B	Lithium	0.0024J	mg/L	0.030	08/19/21 19:10	
EPA 6020B	Molybdenum	0.0034J	mg/L	0.010	08/19/21 19:10	
SM 2540C-2011	Total Dissolved Solids	277	mg/L	10.0	08/18/21 08:30	
EPA 300.0 Rev 2.1 1993	Chloride	3.5	mg/L	1.0	08/20/21 07:13	
EPA 300.0 Rev 2.1 1993	Fluoride	0.15	mg/L	0.10	08/20/21 07:13	
EPA 300.0 Rev 2.1 1993	Sulfate	30.5	mg/L	1.0	08/20/21 07:13	
<b>92555520003</b>	<b>HGWA-2</b>					
	Performed by	CUSTOME			08/16/21 11:24	
		R				
	pH	5.05	Std. Units		08/16/21 11:24	
EPA 6010D	Calcium	21.9	mg/L	1.0	08/18/21 18:09	
EPA 6020B	Barium	0.12	mg/L	0.0050	08/19/21 19:16	
EPA 6020B	Beryllium	0.00014J	mg/L	0.00050	08/19/21 19:16	
EPA 6020B	Boron	0.044	mg/L	0.040	08/19/21 19:16	
EPA 6020B	Cadmium	0.00014J	mg/L	0.00050	08/19/21 19:16	
EPA 6020B	Cobalt	0.022	mg/L	0.0050	08/19/21 19:16	
EPA 6020B	Lithium	0.0012J	mg/L	0.030	08/19/21 19:16	
SM 2540C-2011	Total Dissolved Solids	118	mg/L	10.0	08/19/21 15:09	
EPA 300.0 Rev 2.1 1993	Chloride	5.2	mg/L	1.0	08/20/21 08:28	
EPA 300.0 Rev 2.1 1993	Sulfate	47.4	mg/L	1.0	08/20/21 08:28	
<b>92555520004</b>	<b>HGWA-3</b>					
	Performed by	CUSTOME			08/16/21 11:24	
		R				
	pH	7.31	Std. Units		08/16/21 11:24	
EPA 6010D	Calcium	84.0	mg/L	1.0	08/18/21 18:14	
EPA 6020B	Barium	0.11	mg/L	0.0050	08/19/21 19:22	
EPA 6020B	Lithium	0.0028J	mg/L	0.030	08/19/21 19:22	
SM 2540C-2011	Total Dissolved Solids	265	mg/L	10.0	08/19/21 15:09	

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: HAMMOND ASH POND #1 & #2

Pace Project No.: 92555520

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
<b>92555520004</b>	<b>HGWA-3</b>					
EPA 300.0 Rev 2.1 1993	Chloride	4.8	mg/L	1.0	08/20/21 08:43	
EPA 300.0 Rev 2.1 1993	Sulfate	38.6	mg/L	1.0	08/20/21 08:43	
<b>92555520005</b>	<b>HGWA-44D</b>					
	Performed by	CUSTOMER			08/16/21 17:40	
	pH	7.77	Std. Units		08/16/21 17:40	
EPA 6010D	Calcium	28.9	mg/L	1.0	08/18/21 18:29	
EPA 6020B	Barium	0.22	mg/L	0.0050	08/19/21 19:39	
EPA 6020B	Boron	0.31	mg/L	0.040	08/19/21 19:39	
EPA 6020B	Chromium	0.0016J	mg/L	0.0050	08/19/21 19:39	
EPA 6020B	Lithium	0.032	mg/L	0.030	08/19/21 19:39	
EPA 6020B	Molybdenum	0.0051J	mg/L	0.010	08/19/21 19:39	
SM 2540C-2011	Total Dissolved Solids	436	mg/L	20.0	08/19/21 15:11	
EPA 300.0 Rev 2.1 1993	Chloride	39.9	mg/L	1.0	08/20/21 22:01	
EPA 300.0 Rev 2.1 1993	Fluoride	0.87	mg/L	0.10	08/20/21 22:01	
EPA 300.0 Rev 2.1 1993	Sulfate	56.1	mg/L	1.0	08/20/21 22:01	

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### ANALYTICAL RESULTS

Project: HAMMOND ASH POND #1 & #2  
Pace Project No.: 92555520

Sample: HGWA-1		Lab ID: 92555520001		Collected: 08/11/21 17:00		Received: 08/13/21 14:55		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		08/16/21 11:23		
pH	<b>6.98</b>	Std. Units			1		08/16/21 11:23		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	<b>113</b>	mg/L	1.0	0.12	1	08/18/21 09:54	08/18/21 18:00	7440-70-2	
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	08/18/21 09:57	08/19/21 19:05	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0011	1	08/18/21 09:57	08/19/21 19:05	7440-38-2	
Barium	<b>0.030</b>	mg/L	0.0050	0.00067	1	08/18/21 09:57	08/19/21 19:05	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	08/18/21 09:57	08/19/21 19:05	7440-41-7	
Boron	<b>0.020J</b>	mg/L	0.040	0.0086	1	08/18/21 09:57	08/19/21 19:05	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	08/18/21 09:57	08/19/21 19:05	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/18/21 09:57	08/19/21 19:05	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	08/18/21 09:57	08/19/21 19:05	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	08/18/21 09:57	08/19/21 19:05	7439-92-1	
Lithium	<b>0.00078J</b>	mg/L	0.030	0.00073	1	08/18/21 09:57	08/19/21 19:05	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00074	1	08/18/21 09:57	08/19/21 19:05	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	08/18/21 09:57	08/19/21 19:05	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	08/18/21 09:57	08/19/21 19:05	7440-28-0	
<b>2540C Total Dissolved Solids</b>									
Analytical Method: SM 2540C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	<b>366</b>	mg/L	10.0	10.0	1		08/18/21 08:30		
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	<b>9.6</b>	mg/L	1.0	0.60	1		08/20/21 06:28	16887-00-6	
Fluoride	<b>0.058J</b>	mg/L	0.10	0.050	1		08/20/21 06:28	16984-48-8	
Sulfate	<b>48.9</b>	mg/L	1.0	0.50	1		08/20/21 06:28	14808-79-8	

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### ANALYTICAL RESULTS

Project: HAMMOND ASH POND #1 & #2  
Pace Project No.: 92555520

Sample: HGWA-43D		Lab ID: 92555520002		Collected: 08/11/21 17:03		Received: 08/13/21 14:55		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		08/16/21 11:23		
pH	<b>7.40</b>	Std. Units			1		08/16/21 11:23		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	<b>61.0</b>	mg/L	1.0	0.12	1	08/18/21 09:54	08/18/21 18:04	7440-70-2	
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	08/18/21 09:57	08/19/21 19:10	7440-36-0	
Arsenic	<b>0.0015J</b>	mg/L	0.0050	0.0011	1	08/18/21 09:57	08/19/21 19:10	7440-38-2	
Barium	<b>0.28</b>	mg/L	0.0050	0.00067	1	08/18/21 09:57	08/19/21 19:10	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	08/18/21 09:57	08/19/21 19:10	7440-41-7	
Boron	<b>0.042</b>	mg/L	0.040	0.0086	1	08/18/21 09:57	08/19/21 19:10	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	08/18/21 09:57	08/19/21 19:10	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/18/21 09:57	08/19/21 19:10	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	08/18/21 09:57	08/19/21 19:10	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	08/18/21 09:57	08/19/21 19:10	7439-92-1	
Lithium	<b>0.0024J</b>	mg/L	0.030	0.00073	1	08/18/21 09:57	08/19/21 19:10	7439-93-2	
Molybdenum	<b>0.0034J</b>	mg/L	0.010	0.00074	1	08/18/21 09:57	08/19/21 19:10	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	08/18/21 09:57	08/19/21 19:10	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	08/18/21 09:57	08/19/21 19:10	7440-28-0	
<b>2540C Total Dissolved Solids</b>									
Analytical Method: SM 2540C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	<b>277</b>	mg/L	10.0	10.0	1		08/18/21 08:30		
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	<b>3.5</b>	mg/L	1.0	0.60	1		08/20/21 07:13	16887-00-6	
Fluoride	<b>0.15</b>	mg/L	0.10	0.050	1		08/20/21 07:13	16984-48-8	
Sulfate	<b>30.5</b>	mg/L	1.0	0.50	1		08/20/21 07:13	14808-79-8	

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### ANALYTICAL RESULTS

Project: HAMMOND ASH POND #1 & #2

Pace Project No.: 92555520

Sample: HGWA-2		Lab ID: 92555520003		Collected: 08/12/21 15:35		Received: 08/13/21 14:55		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		08/16/21 11:24		
pH	<b>5.05</b>	Std. Units			1		08/16/21 11:24		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Calcium	<b>21.9</b>	mg/L	1.0	0.12	1	08/18/21 09:54	08/18/21 18:09	7440-70-2	
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	08/18/21 09:57	08/19/21 19:16	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0011	1	08/18/21 09:57	08/19/21 19:16	7440-38-2	
Barium	<b>0.12</b>	mg/L	0.0050	0.00067	1	08/18/21 09:57	08/19/21 19:16	7440-39-3	
Beryllium	<b>0.00014J</b>	mg/L	0.00050	0.000054	1	08/18/21 09:57	08/19/21 19:16	7440-41-7	
Boron	<b>0.044</b>	mg/L	0.040	0.0086	1	08/18/21 09:57	08/19/21 19:16	7440-42-8	
Cadmium	<b>0.00014J</b>	mg/L	0.00050	0.00011	1	08/18/21 09:57	08/19/21 19:16	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/18/21 09:57	08/19/21 19:16	7440-47-3	
Cobalt	<b>0.022</b>	mg/L	0.0050	0.00039	1	08/18/21 09:57	08/19/21 19:16	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	08/18/21 09:57	08/19/21 19:16	7439-92-1	
Lithium	<b>0.0012J</b>	mg/L	0.030	0.00073	1	08/18/21 09:57	08/19/21 19:16	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00074	1	08/18/21 09:57	08/19/21 19:16	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	08/18/21 09:57	08/19/21 19:16	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	08/18/21 09:57	08/19/21 19:16	7440-28-0	
<b>2540C Total Dissolved Solids</b>									
Analytical Method: SM 2540C-2011									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	<b>118</b>	mg/L	10.0	10.0	1		08/19/21 15:09		
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	<b>5.2</b>	mg/L	1.0	0.60	1		08/20/21 08:28	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		08/20/21 08:28	16984-48-8	
Sulfate	<b>47.4</b>	mg/L	1.0	0.50	1		08/20/21 08:28	14808-79-8	

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### ANALYTICAL RESULTS

Project: HAMMOND ASH POND #1 & #2  
Pace Project No.: 92555520

Sample: HGWA-3		Lab ID: 92555520004		Collected: 08/12/21 10:17		Received: 08/13/21 14:55		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		08/16/21 11:24		
pH	<b>7.31</b>	Std. Units			1		08/16/21 11:24		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	<b>84.0</b>	mg/L	1.0	0.12	1	08/18/21 09:54	08/18/21 18:14	7440-70-2	
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	08/18/21 09:57	08/19/21 19:22	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0011	1	08/18/21 09:57	08/19/21 19:22	7440-38-2	
Barium	<b>0.11</b>	mg/L	0.0050	0.00067	1	08/18/21 09:57	08/19/21 19:22	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	08/18/21 09:57	08/19/21 19:22	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	08/18/21 09:57	08/19/21 19:22	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	08/18/21 09:57	08/19/21 19:22	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/18/21 09:57	08/19/21 19:22	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	08/18/21 09:57	08/19/21 19:22	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	08/18/21 09:57	08/19/21 19:22	7439-92-1	
Lithium	<b>0.0028J</b>	mg/L	0.030	0.00073	1	08/18/21 09:57	08/19/21 19:22	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00074	1	08/18/21 09:57	08/19/21 19:22	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	08/18/21 09:57	08/19/21 19:22	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	08/18/21 09:57	08/19/21 19:22	7440-28-0	
<b>2540C Total Dissolved Solids</b>									
Analytical Method: SM 2540C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	<b>265</b>	mg/L	10.0	10.0	1		08/19/21 15:09		
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	<b>4.8</b>	mg/L	1.0	0.60	1		08/20/21 08:43	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		08/20/21 08:43	16984-48-8	
Sulfate	<b>38.6</b>	mg/L	1.0	0.50	1		08/20/21 08:43	14808-79-8	

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### ANALYTICAL RESULTS

Project: HAMMOND ASH POND #1 & #2  
Pace Project No.: 92555520

Sample: HGWA-44D		Lab ID: 92555520005		Collected: 08/13/21 11:25		Received: 08/16/21 13:25		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		08/16/21 17:40		
pH	<b>7.77</b>	Std. Units			1		08/16/21 17:40		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	<b>28.9</b>	mg/L	1.0	0.12	1	08/18/21 09:54	08/18/21 18:29	7440-70-2	
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	08/18/21 09:57	08/19/21 19:39	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0011	1	08/18/21 09:57	08/19/21 19:39	7440-38-2	
Barium	<b>0.22</b>	mg/L	0.0050	0.00067	1	08/18/21 09:57	08/19/21 19:39	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	08/18/21 09:57	08/19/21 19:39	7440-41-7	
Boron	<b>0.31</b>	mg/L	0.040	0.0086	1	08/18/21 09:57	08/19/21 19:39	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	08/18/21 09:57	08/19/21 19:39	7440-43-9	
Chromium	<b>0.0016J</b>	mg/L	0.0050	0.0011	1	08/18/21 09:57	08/19/21 19:39	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	08/18/21 09:57	08/19/21 19:39	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	08/18/21 09:57	08/19/21 19:39	7439-92-1	
Lithium	<b>0.032</b>	mg/L	0.030	0.00073	1	08/18/21 09:57	08/19/21 19:39	7439-93-2	
Molybdenum	<b>0.0051J</b>	mg/L	0.010	0.00074	1	08/18/21 09:57	08/19/21 19:39	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	08/18/21 09:57	08/19/21 19:39	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	08/18/21 09:57	08/19/21 19:39	7440-28-0	
<b>2540C Total Dissolved Solids</b>									
Analytical Method: SM 2540C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	<b>436</b>	mg/L	20.0	20.0	1		08/19/21 15:11		
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	<b>39.9</b>	mg/L	1.0	0.60	1		08/20/21 22:01	16887-00-6	
Fluoride	<b>0.87</b>	mg/L	0.10	0.050	1		08/20/21 22:01	16984-48-8	
Sulfate	<b>56.1</b>	mg/L	1.0	0.50	1		08/20/21 22:01	14808-79-8	

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### QUALITY CONTROL DATA

Project: HAMMOND ASH POND #1 & #2

Pace Project No.: 92555520

QC Batch: 641193

Analysis Method: EPA 6010D

QC Batch Method: EPA 3010A

Analysis Description: 6010D ATL

Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92555520001, 92555520002, 92555520003, 92555520004, 92555520005

METHOD BLANK: 3365273

Matrix: Water

Associated Lab Samples: 92555520001, 92555520002, 92555520003, 92555520004, 92555520005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	0.12	08/18/21 16:31	

LABORATORY CONTROL SAMPLE: 3365274

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	mg/L	1	1.1	105	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3365275 3365276

Parameter	Units	3365275		3365276		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Calcium	mg/L	5.4	1	6.6	6.4	113	103	75-125	2	20	

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

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### QUALITY CONTROL DATA

Project: HAMMOND ASH POND #1 & #2  
Pace Project No.: 92555520

QC Batch: 641199 Analysis Method: EPA 6020B  
QC Batch Method: EPA 3005A Analysis Description: 6020 MET  
Laboratory: Pace Analytical Services - Peachtree Corners, GA  
Associated Lab Samples: 92555520001, 92555520002, 92555520003, 92555520004, 92555520005

METHOD BLANK: 3365292 Matrix: Water  
Associated Lab Samples: 92555520001, 92555520002, 92555520003, 92555520004, 92555520005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00078	08/19/21 17:50	
Arsenic	mg/L	ND	0.0050	0.0011	08/19/21 17:50	
Barium	mg/L	ND	0.0050	0.00067	08/19/21 17:50	
Beryllium	mg/L	ND	0.00050	0.000054	08/19/21 17:50	
Boron	mg/L	ND	0.040	0.0086	08/19/21 17:50	
Cadmium	mg/L	ND	0.00050	0.00011	08/19/21 17:50	
Chromium	mg/L	ND	0.0050	0.0011	08/19/21 17:50	
Cobalt	mg/L	ND	0.0050	0.00039	08/19/21 17:50	
Lead	mg/L	ND	0.0010	0.00089	08/19/21 17:50	
Lithium	mg/L	ND	0.030	0.00073	08/19/21 17:50	
Molybdenum	mg/L	ND	0.010	0.00074	08/19/21 17:50	
Selenium	mg/L	ND	0.0050	0.0014	08/19/21 17:50	
Thallium	mg/L	ND	0.0010	0.00018	08/19/21 17:50	

LABORATORY CONTROL SAMPLE: 3365293

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.098	98	80-120	
Arsenic	mg/L	0.1	0.096	96	80-120	
Barium	mg/L	0.1	0.096	96	80-120	
Beryllium	mg/L	0.1	0.094	94	80-120	
Boron	mg/L	1	0.95	95	80-120	
Cadmium	mg/L	0.1	0.099	99	80-120	
Chromium	mg/L	0.1	0.10	101	80-120	
Cobalt	mg/L	0.1	0.10	100	80-120	
Lead	mg/L	0.1	0.098	98	80-120	
Lithium	mg/L	0.1	0.094	94	80-120	
Molybdenum	mg/L	0.1	0.099	99	80-120	
Selenium	mg/L	0.1	0.096	96	80-120	
Thallium	mg/L	0.1	0.10	101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3365294 3365295

Parameter	Units	92555504001 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Antimony	mg/L	ND	0.1	0.1	0.099	0.097	98	97	75-125	2	20	
Arsenic	mg/L	ND	0.1	0.1	0.098	0.098	98	98	75-125	0	20	

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: HAMMOND ASH POND #1 & #2

Pace Project No.: 92555520

Parameter	Units	3365294		3365295		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92555504001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result								
Barium	mg/L	0.034	0.1	0.1	0.13	0.13	99	98	75-125	1	20		
Beryllium	mg/L	0.00021J	0.1	0.1	0.10	0.10	102	100	75-125	2	20		
Boron	mg/L	0.014J	1	1	1.0	1.0	102	101	75-125	1	20		
Cadmium	mg/L	ND	0.1	0.1	0.10	0.098	100	98	75-125	1	20		
Chromium	mg/L	ND	0.1	0.1	0.11	0.11	110	107	75-125	2	20		
Cobalt	mg/L	0.00070J	0.1	0.1	0.11	0.11	110	106	75-125	4	20		
Lead	mg/L	ND	0.1	0.1	0.096	0.095	96	94	75-125	2	20		
Lithium	mg/L	0.0013J	0.1	0.1	0.11	0.11	106	104	75-125	1	20		
Molybdenum	mg/L	ND	0.1	0.1	0.10	0.097	100	97	75-125	3	20		
Selenium	mg/L	ND	0.1	0.1	0.093	0.094	93	94	75-125	1	20		
Thallium	mg/L	ND	0.1	0.1	0.097	0.098	97	98	75-125	1	20		

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: HAMMOND ASH POND #1 & #2  
Pace Project No.: 92555520

QC Batch: 640931 Analysis Method: SM 2540C-2011  
QC Batch Method: SM 2540C-2011 Analysis Description: 2540C Total Dissolved Solids  
Laboratory: Pace Analytical Services - Peachtree Corners, GA  
Associated Lab Samples: 92555520001, 92555520002

METHOD BLANK: 3363778 Matrix: Water  
Associated Lab Samples: 92555520001, 92555520002

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

LABORATORY CONTROL SAMPLE: 3363779

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

SAMPLE DUPLICATE: 3363780

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

SAMPLE DUPLICATE: 3363781

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

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: HAMMOND ASH POND #1 & #2  
Pace Project No.: 92555520

QC Batch: 641466 Analysis Method: SM 2540C-2011  
QC Batch Method: SM 2540C-2011 Analysis Description: 2540C Total Dissolved Solids  
Laboratory: Pace Analytical Services - Peachtree Corners, GA  
Associated Lab Samples: 92555520003, 92555520004, 92555520005

METHOD BLANK: 3366949 Matrix: Water  
Associated Lab Samples: 92555520003, 92555520004, 92555520005

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

LABORATORY CONTROL SAMPLE: 3366950

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

SAMPLE DUPLICATE: 3366951

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

SAMPLE DUPLICATE: 3366952

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

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: HAMMOND ASH POND #1 & #2  
Pace Project No.: 92555520

QC Batch: 641753 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: 92555520001

METHOD BLANK: 3368331 Matrix: Water  
Associated Lab Samples: 92555520001

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

LABORATORY CONTROL SAMPLE: 3368332

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3368333 3368334

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3368335 3368336

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

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### QUALITY CONTROL DATA

Project: HAMMOND ASH POND #1 & #2  
Pace Project No.: 92555520

QC Batch: 641754 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: 92555520002, 92555520003, 92555520004

METHOD BLANK: 3368337 Matrix: Water  
Associated Lab Samples: 92555520002, 92555520003, 92555520004

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

LABORATORY CONTROL SAMPLE: 3368338

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3368339 3368340

Parameter	Units	92555514002		3368339		3368340		% Rec	% Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec						
Chloride	mg/L	3.5	50	50	53.7	54.7	100	102	90-110	2	10		
Fluoride	mg/L	0.15	2.5	2.5	2.6	2.6	98	99	90-110	1	10		
Sulfate	mg/L	30.5	50	50	81.4	81.9	102	103	90-110	1	10		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3368341 3368342

Parameter	Units	92555652002		3368341		3368342		% Rec	% Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec						
Chloride	mg/L	2.3	50	50	52.0	56.1	99	108	90-110	8	10		
Fluoride	mg/L	ND	2.5	2.5	2.4	2.7	96	105	90-110	9	10		
Sulfate	mg/L	8.3	50	50	58.0	62.4	99	108	90-110	7	10		

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: HAMMOND ASH POND #1 & #2  
Pace Project No.: 92555520

QC Batch: 641887 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: 92555520005

METHOD BLANK: 3368749 Matrix: Water  
Associated Lab Samples: 92555520005

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

LABORATORY CONTROL SAMPLE: 3368750

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3368751 3368752

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3368753 3368754

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

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### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: HAMMOND ASH POND #1 & #2

Pace Project No.: 92555520

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### DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

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

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

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

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

TNI - The NELAC Institute.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: HAMMOND ASH POND #1 & #2  
Pace Project No.: 92555520

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92555520001	HGWA-1				
92555520002	HGWA-43D				
92555520003	HGWA-2				
92555520004	HGWA-3				
92555520005	HGWA-44D				
92555520001	HGWA-1	EPA 3010A	641193	EPA 6010D	641263
92555520002	HGWA-43D	EPA 3010A	641193	EPA 6010D	641263
92555520003	HGWA-2	EPA 3010A	641193	EPA 6010D	641263
92555520004	HGWA-3	EPA 3010A	641193	EPA 6010D	641263
92555520005	HGWA-44D	EPA 3010A	641193	EPA 6010D	641263
92555520001	HGWA-1	EPA 3005A	641199	EPA 6020B	641271
92555520002	HGWA-43D	EPA 3005A	641199	EPA 6020B	641271
92555520003	HGWA-2	EPA 3005A	641199	EPA 6020B	641271
92555520004	HGWA-3	EPA 3005A	641199	EPA 6020B	641271
92555520005	HGWA-44D	EPA 3005A	641199	EPA 6020B	641271
92555520001	HGWA-1	SM 2540C-2011	640931		
92555520002	HGWA-43D	SM 2540C-2011	640931		
92555520003	HGWA-2	SM 2540C-2011	641466		
92555520004	HGWA-3	SM 2540C-2011	641466		
92555520005	HGWA-44D	SM 2540C-2011	641466		
92555520001	HGWA-1	EPA 300.0 Rev 2.1 1993	641753		
92555520002	HGWA-43D	EPA 300.0 Rev 2.1 1993	641754		
92555520003	HGWA-2	EPA 300.0 Rev 2.1 1993	641754		
92555520004	HGWA-3	EPA 300.0 Rev 2.1 1993	641754		
92555520005	HGWA-44D	EPA 300.0 Rev 2.1 1993	641887		

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Document Name:  
**Sample Condition Upon Receipt (SCUR)**  
 Document No.:  
**F-CAR-CS-033-Rev.07**

Document Revised: October 28, 2020  
 Page 1 of 2  
 Issuing Authority:  
 Pace Carolinas Quality Office

Laboratory receiving samples:

Asheville  Eden  Greenwood  Huntersville  Raleigh  Mechanicsville  Atlanta  Kernersville

Sample Condition  
 Upon Receipt

Client Name:

GPA POWER

Project #:

**WO# : 92555520**



Courier:  Fed Ex  UPS  USPS  Client  
 Commercial  Pace  Other: \_\_\_\_\_

Custody Seal Present?  Yes  No Seals Intact?  Yes  No

Packing Material:  Bubble Wrap  Bubble Bags  None  Other

Thermometer:  IR Gun ID: TH2083 Type of Ice:  Wet  Blue  None

Cooler Temp: 3.7 Correction Factor: Add/Subtract (°C) ± 0

Cooler Temp Corrected (°C): 3.7

USDA Regulated Soil ( N/A, water sample)

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

Date/Initials Person Examining Contents: 3/13/21 KRW

Biological Tissue Frozen?

Yes  No  N/A

Temp should be above freezing to 6°C

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

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

Comments/Discrepancy:

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

COMMENTS/SAMPLE DISCREPANCY

Field Data Required?  Yes  No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

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

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



Document Name:  
**Sample Condition Upon Receipt(SCUR)**  
 Document No.:  
**F-CAR-CS-033-Rev.07**

Document Revised: October 28, 2020  
 Page 2 of 2  
 Issuing Authority:  
 Pace Carolinas Quality Office

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

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

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

Project #

**WO# : 9255520**

PM: NMG

Due Date: 08/27/21

CLIENT: GA-GA Power

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)	BP4C-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	AG3A(DG3A)-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unp (N/A)	DG9P-40 mL VOA H3PO4 (N/A)	VOAK (6 vials per kit)-5035 kit (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)	BP3A-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved vials (N/A)	VSGU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)	
1	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
2	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
3	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
4	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
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10	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
11	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
12	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/

**pH Adjustment Log for Preserved Samples**

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

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



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

Section A Required Client Information: Company: GA Power Address: Atlanta, GA		Section B Required Project Information: Report To: SCS Contacts Copy To: Geosyntec Contacts		Section C Invoice Information: Attention: Southern Co.	
Email To: SCS Contacts Phone: _____ Requested One Date/TAT: 10 Day		Purchase Order No.: _____ Project Name: Plant Hammond Ash Pond #1 & #2 Project Number: _____		Address: _____ Company Name: _____ Reference: Kevin Herring Plant Order # 10839	
REGULATORY AGENCY NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER <input type="checkbox"/>		Site Location STATE: GA		Requested Analysis Filtered (Y/N)	

ITEM #	Section D Required Client Information	Valid Matrix Codes MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives	Analysis Test	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	Sample Conditions
				DATE	TIME							
1	HGWA-1	WT G	G	8/11/21	17:00	19	5	2	3	X	X	Face Project No./ Lab I.D. pH = 6.98 pH = 7.40
2	HGWA-43D	WT G	G	8/11/21	17:03	19	5	2	3	X	X	
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
Thomas Kessler / Geo	8/13/21	14:45	Connor Cain / Geo	8/13/21	14:45
Connor Cain / Geo	8/13/21	14:55	Ryan Williams / Pace	8/13/21	14:55
Ryan Williams / Pace	8/13/21	16:50	Ryan Williams / Pace	8/13/21	16:50

**ADDITIONAL COMMENTS**  
Please note dry wells, strikes through any wells not sampled, and note when the last sample for the event has been taken.

**SAMPLER NAME AND SIGNATURE**  
PRINT Name of SAMPLER: Thomas Kessler  
SIGNATURE of SAMPLER: [Signature]  
DATE Signed (MM/DD/YYYY): 8/11/2021

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

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

Section A Required Client Information: Company: GA Power Address: Atlanta, GA  
Section B Required Project Information: Report to: SCS Contacts Cap To: Geosyntec Contacts  
Section C Site Information: Address: Plant Hammond Ash Pond #1 & #2  
Page: 1 of 1

Section D Valid Matrix Codes: METRIX CODE  
 DRAINAGE WATER DW  
 WATER WW  
 WASTE WATER WWT  
 PRODUCT P  
 SOLID/LIQUID SL  
 OIL OIL  
 WASTE WWP  
 AIR AR  
 OTHER OT  
 TISSUE TS

Section E Required Client Information: Company: GA Power Address: Atlanta, GA  
 Section B Required Project Information: Report to: SCS Contacts Cap To: Geosyntec Contacts  
 Section C Site Information: Address: Plant Hammond Ash Pond #1 & #2  
 Project Name: Plant Hammond Ash Pond #1 & #2  
 Project Number: 10839  
 Company Name: Southern Co.  
 Site Address: Hammond, GA  
 Site Location: Hammond, GA  
 State: GA  
 Requested Analysis Filtered (Y/N):  
 NPDES  GROUND WATER  DRINKING WATER   
 UST  RCRA  OTHER

ITEM #	Valid Matrix Codes	MATRIX CODE (use valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives	Analysis Test	Y/N	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)	
				COMPOSITE	COMPOSITE														
1	HGMVA-2	WT G	B/12/21	1535		21	5	2	3	Unpreserved H <sub>2</sub> SO <sub>4</sub> HNO <sub>3</sub> HCl NaOH Na <sub>2</sub> S <sub>2</sub> O <sub>5</sub> Methanol Other									
2	HGMVA-3	WT G	B/12/21	10-17		21	5	2	3		Chloride/Fluoride/Sulfate APP. III & IV Metals 6010/6020/7470 TDS RAD 226/228 Sh, As, Ba, Be, B, Cd Co, Cr, Cu, Pb, Li Mo, Se, Tl								
3																			
4																			
5																			
6																			
7																			
8																			
9																			
10																			
11																			
12																			

ADDITIONAL COMMENTS: REMUNISHED BY/AFFILIATION: THOMAS KESSLER / GCS  
 DATE: 8/13/21 TIME: 1445  
 ACCEPTED BY/AFFILIATION: Connor Cain / GCS  
 DATE: 8/13/21 TIME: 1455  
 SIGNATURE: [Signature]  
 DATE SIGNED: 8/13/21  
 SAMPLE NAME AND SIGNATURE: Connor Cain / GCS  
 PRINT Name of SAMPLER: Connor Cain / GCS  
 SIGNATURE OF SAMPLER: [Signature]  
 DATE SIGNED: 8/13/21  
 SAMPLES: 10839





Document Name:  
Sample Condition Upon Receipt(SCUR)

Document Revised: October 28, 2020  
Page 1 of 2

Document No.:  
F-CAR-CS-033-Rev.07

Issuing Authority:  
Pace Carolinas Quality Office

Laboratory receiving samples:

Asheville  Eden  Greenwood  Huntersville  Raleigh  Mechanicsville  Atlanta  Kernersville

Sample Condition  
Upon Receipt

Client Name:

Project #

**WO# : 92555520**

Courier:  Fed Ex  Pace  UPS  USPS  Client  Other: \_\_\_\_\_

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

Custody Seal Present?  Yes  No Seals Intact?  Yes  No

Date/Initials Person Examining Contents: 08/21/21 Kew

Packing Material:  Bubble Wrap  Bubble Bags  None  Other

Biological Tissue Frozen?

Thermometer:  IR Gun ID: TH2230 Type of Ice:  Wet  Blue  None

Yes  No  N/A

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

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

Cooler Temp Corrected (°C): 4.4/5.5

USDA Regulated Soil  N/A, water sample

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

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

	Comments/Discrepancy:
Chain of Custody Present? <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	
<del>Containers Intact? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A</del>	<del>7.</del>
Dissolved analysis: Samples Field Filtered? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	8.
Sample Labels Match CDC? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Includes Date/Time/ID/Analysis Matrix: <u>w</u>	
Headspace in VOA Vials (>5-6mm)? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	10.
Trip Blank Present? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Trip Blank Custody Seals Present? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	

COMMENTS/SAMPLE DISCREPANCY

Field Data Required?  Yes  No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

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

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

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

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



Document Name:  
Sample Condition Upon Receipt(SCUR)

Document Revised: October 28, 2020  
Page 2 of 2

Document No.:  
F-CAR-CS-033-Rev.07

Issuing Authority:  
Pace Carolinas Quality Office

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

Project #

**WO# : 92555520**

PM: NMG

Due Date: 08/27/21

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

CLIENT: GA-GA Power

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

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)	BP4C-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	AG3A(DG3A)-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unp (N/A)	DG9P-40 mL VOA H3PO4 (N/A)	VOAK (6 vials per kit)-5035 kit (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)	BP3A-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved vials (N/A)	V5GU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)		
1	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
2	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	
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11	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	
12	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	

**pH Adjustment Log for Preserved Samples**

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

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

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

**Section A**  
 Required Client Information

Company: GA Power

Address: Atlanta GA

Phone: SCS Contacts

Requested Due Date/TAT: 10 Day

**Section B**  
 Required Project Information

Report To: SCS Contacts

Copy To: Geosynthetic Contacts

Project Name: Plant Hammond Ash Pond #1 & #2

Project Number: 10833

**Section C**  
 Service Information:

Attention: Southem Co.

Company Name:

Address:

Project Name: Kevin Heming

Requester: Kevin Heming

**Section D**  
 Regulatory Agency

NPDES  GROUND WATER  DRINKING WATER

UST  RCRA  OTHER

Site Location: GA

STATE: GA

Page: 1 of 1

ITEM #	Section D Required Client Information	Valid Matrix Codes ECCS CODE	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives	Analysis Test	Requested Analysis Filtered (Y/N)
			COMPOSITE	COMPOSITE					
1	HGWA-44D								
2	<del>_____</del>	<del>_____</del>	<del>_____</del>	<del>_____</del>	<del>_____</del>	<del>_____</del>	<del>_____</del>	<del>_____</del>	<del>_____</del>
3	<del>_____</del>	<del>_____</del>	<del>_____</del>	<del>_____</del>	<del>_____</del>	<del>_____</del>	<del>_____</del>	<del>_____</del>	<del>_____</del>
4	<del>_____</del>	<del>_____</del>	<del>_____</del>	<del>_____</del>	<del>_____</del>	<del>_____</del>	<del>_____</del>	<del>_____</del>	<del>_____</del>
5	<del>_____</del>	<del>_____</del>	<del>_____</del>	<del>_____</del>	<del>_____</del>	<del>_____</del>	<del>_____</del>	<del>_____</del>	<del>_____</del>
6	<del>_____</del>	<del>_____</del>	<del>_____</del>	<del>_____</del>	<del>_____</del>	<del>_____</del>	<del>_____</del>	<del>_____</del>	<del>_____</del>
7	<del>_____</del>	<del>_____</del>	<del>_____</del>	<del>_____</del>	<del>_____</del>	<del>_____</del>	<del>_____</del>	<del>_____</del>	<del>_____</del>
8	<del>_____</del>	<del>_____</del>	<del>_____</del>	<del>_____</del>	<del>_____</del>	<del>_____</del>	<del>_____</del>	<del>_____</del>	<del>_____</del>
9	<del>_____</del>	<del>_____</del>	<del>_____</del>	<del>_____</del>	<del>_____</del>	<del>_____</del>	<del>_____</del>	<del>_____</del>	<del>_____</del>
10	<del>_____</del>	<del>_____</del>	<del>_____</del>	<del>_____</del>	<del>_____</del>	<del>_____</del>	<del>_____</del>	<del>_____</del>	<del>_____</del>
11	<del>_____</del>	<del>_____</del>	<del>_____</del>	<del>_____</del>	<del>_____</del>	<del>_____</del>	<del>_____</del>	<del>_____</del>	<del>_____</del>
12	<del>_____</del>	<del>_____</del>	<del>_____</del>	<del>_____</del>	<del>_____</del>	<del>_____</del>	<del>_____</del>	<del>_____</del>	<del>_____</del>

REINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
Wendell Lewis	8/16/21	0830	Kevin Heming	8/16/21	0830	
Kevin Heming	8/16/21	1325	Wendell Lewis	8/16/21	1325	
Lyn Williams	8/16/21	1535	Kevin Heming	8/16/21	1535	
_____	_____	_____	_____	_____	_____	
_____	_____	_____	_____	_____	_____	
_____	_____	_____	_____	_____	_____	
_____	_____	_____	_____	_____	_____	
_____	_____	_____	_____	_____	_____	
_____	_____	_____	_____	_____	_____	
_____	_____	_____	_____	_____	_____	
_____	_____	_____	_____	_____	_____	

**SAMPLER NAME AND SIGNATURE**

PRINT Name of SAMPLER: \_\_\_\_\_

SIGNATURE of SAMPLER: \_\_\_\_\_

DATE signed (MM/DD/YYYY): 8/13

Temp in °C \_\_\_\_\_

Received on (ice (Y/N)) \_\_\_\_\_

Custody Sealed Cooler (Y/N) \_\_\_\_\_

Sample Intact (Y/N) \_\_\_\_\_

October 15, 2021

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

RE: Project: HAMMOND ASH POND #1 & #2 RADS  
Pace Project No.: 92555511

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory between August 13, 2021 and August 16, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

- Pace Analytical Services - Greensburg

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

Sincerely,



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

Enclosures

cc: Christine Hug, Geosyntec Consultants, Inc.  
Kristen Jurinko  
Thomas Kessler, Geosyntec  
Whitney Law, Geosyntec Consultants  
Noelia Muskus, Geosyntec Consultants  
Ms. Lauren Petty, Southern Company  
Nardos Tilahun, GeoSyntec  
Dawit Yifru, Geosyntec Consultants, Inc.



## REPORT OF LABORATORY ANALYSIS

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

## CERTIFICATIONS

Project: HAMMOND ASH POND #1 & #2 RAD5  
Pace Project No.: 92555511

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### **Pace Analytical Services Pennsylvania**

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

Missouri Certification #: 235  
Montana Certification #: Cert0082  
Nebraska Certification #: NE-OS-29-14  
Nevada Certification #: PA014572018-1  
New Hampshire/TNI Certification #: 297617  
New Jersey/TNI Certification #: PA051  
New Mexico Certification #: PA01457  
New York/TNI Certification #: 10888  
North Carolina Certification #: 42706  
North Dakota Certification #: R-190  
Ohio EPA Rad Approval: #41249  
Oregon/TNI Certification #: PA200002-010  
Pennsylvania/TNI Certification #: 65-00282  
Puerto Rico Certification #: PA01457  
Rhode Island Certification #: 65-00282  
South Dakota Certification  
Tennessee Certification #: 02867  
Texas/TNI Certification #: T104704188-17-3  
Utah/TNI Certification #: PA014572017-9  
USDA Soil Permit #: P330-17-00091  
Vermont Dept. of Health: ID# VT-0282  
Virgin Island/PADEP Certification  
Virginia/VELAP Certification #: 9526  
Washington Certification #: C868  
West Virginia DEP Certification #: 143  
West Virginia DHHR Certification #: 9964C  
Wisconsin Approve List for Rad  
Wyoming Certification #: 8TMS-L

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: HAMMOND ASH POND #1 & #2 RADS

Pace Project No.: 92555511

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92555511001	HGWA-1	Water	08/11/21 17:00	08/13/21 14:55
92555511002	HGWA-43D	Water	08/11/21 17:03	08/13/21 14:55
92555511003	HGWA-2	Water	08/12/21 15:35	08/13/21 14:55
92555511004	HGWA-3	Water	08/12/21 10:17	08/13/21 14:55
92555511005	HGWA-44D	Water	08/13/21 11:25	08/16/21 13:25

## REPORT OF LABORATORY ANALYSIS

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without the written consent of Pace Analytical Services, LLC.

### SAMPLE ANALYTE COUNT

Project: HAMMOND ASH POND #1 & #2 RADS

Pace Project No.: 92555511

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92555511001	HGWA-1	EPA 9315	CLA	1	PASI-PA
		EPA 9320	JC2	1	PASI-PA
		Total Radium Calculation	RMK	1	PASI-PA
92555511002	HGWA-43D	EPA 9315	CLA	1	PASI-PA
		EPA 9320	JC2	1	PASI-PA
		Total Radium Calculation	RMK	1	PASI-PA
92555511003	HGWA-2	EPA 9315	CLA	1	PASI-PA
		EPA 9320	JC2	1	PASI-PA
		Total Radium Calculation	RMK	1	PASI-PA
92555511004	HGWA-3	EPA 9315	CLA	1	PASI-PA
		EPA 9320	JC2	1	PASI-PA
		Total Radium Calculation	RMK	1	PASI-PA
92555511005	HGWA-44D	EPA 9315	CLA	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	RMK	1	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: HAMMOND ASH POND #1 & #2 RADS

Pace Project No.: 92555511

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>92555511001</b>	<b>HGWA-1</b>					
EPA 9315	Radium-226	0.115 ± 0.118 (0.222)	pCi/L		09/17/21 07:27	
EPA 9320	Radium-228	C:88% T:NA -0.0659 ± 0.329 (0.785)	pCi/L		09/03/21 14:23	
Total Radium Calculation	Total Radium	C:71% T:87% 0.115 ± 0.447 (1.01)	pCi/L		10/14/21 15:22	
<b>92555511002</b>	<b>HGWA-43D</b>					
EPA 9315	Radium-226	0.101 ± 0.153 (0.337)	pCi/L		09/16/21 08:31	
EPA 9320	Radium-228	C:82% T:NA 0.293 ± 0.366 (0.775)	pCi/L		09/03/21 14:23	
Total Radium Calculation	Total Radium	C:71% T:87% 0.394 ± 0.519 (1.11)	pCi/L		10/14/21 15:22	
<b>92555511003</b>	<b>HGWA-2</b>					
EPA 9315	Radium-226	0.283 ± 0.170 (0.239)	pCi/L		09/17/21 07:27	
EPA 9320	Radium-228	C:80% T:NA 0.463 ± 0.383 (0.759)	pCi/L		09/03/21 14:23	
Total Radium Calculation	Total Radium	C:80% T:81% 0.746 ± 0.553 (0.998)	pCi/L		10/14/21 15:22	
<b>92555511004</b>	<b>HGWA-3</b>					
EPA 9315	Radium-226	0.0698 ± 0.160 (0.378)	pCi/L		09/16/21 14:16	
EPA 9320	Radium-228	C:67% T:NA 0.319 ± 0.393 (0.831)	pCi/L		09/03/21 14:23	
Total Radium Calculation	Total Radium	C:75% T:82% 0.389 ± 0.553 (1.21)	pCi/L		10/14/21 15:22	

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### SUMMARY OF DETECTION

Project: HAMMOND ASH POND #1 & #2 RADS

Pace Project No.: 92555511

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>92555511005</b>	<b>HGWA-44D</b>					
EPA 9315	Radium-226	0.319 ± 0.198 (0.285) C:73% T:NA	pCi/L		09/16/21 08:30	
EPA 9320	Radium-228	0.878 ± 0.486 (0.892) C:67% T:85%	pCi/L		09/03/21 11:26	
Total Radium Calculation	Total Radium	1.20 ± 0.684 (1.18)	pCi/L		10/14/21 15:22	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND ASH POND #1 & #2 RADS

Pace Project No.: 92555511

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: HGWA-1</b> <b>Lab ID: 92555511001</b> Collected: 08/11/21 17:00      Received: 08/13/21 14:55      Matrix: Water PWS:      Site ID:      Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	<b>0.115 ± 0.118 (0.222)</b> <b>C:88% T:NA</b>	pCi/L	09/17/21 07:27	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>-0.0659 ± 0.329 (0.785)</b> <b>C:71% T:87%</b>	pCi/L	09/03/21 14:23	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>0.115 ± 0.447 (1.01)</b>	pCi/L	10/14/21 15:22	7440-14-4	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND ASH POND #1 & #2 RADS

Pace Project No.: 92555511

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: HGWA-43D</b> <b>Lab ID: 92555511002</b> Collected: 08/11/21 17:03      Received: 08/13/21 14:55      Matrix: Water PWS:      Site ID:      Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	<b>0.101 ± 0.153 (0.337)</b> <b>C:82% T:NA</b>	pCi/L	09/16/21 08:31	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>0.293 ± 0.366 (0.775)</b> <b>C:71% T:87%</b>	pCi/L	09/03/21 14:23	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>0.394 ± 0.519 (1.11)</b>	pCi/L	10/14/21 15:22	7440-14-4	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND ASH POND #1 & #2 RADS

Pace Project No.: 92555511

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: HGWA-2</b> <b>Lab ID: 92555511003</b> Collected: 08/12/21 15:35      Received: 08/13/21 14:55      Matrix: Water PWS:      Site ID:      Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	<b>0.283 ± 0.170 (0.239)</b> <b>C:80% T:NA</b>	pCi/L	09/17/21 07:27	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>0.463 ± 0.383 (0.759)</b> <b>C:80% T:81%</b>	pCi/L	09/03/21 14:23	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>0.746 ± 0.553 (0.998)</b>	pCi/L	10/14/21 15:22	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND ASH POND #1 & #2 RADS

Pace Project No.: 92555511

**Sample: HGWA-3**      **Lab ID: 92555511004**      Collected: 08/12/21 10:17      Received: 08/13/21 14:55      Matrix: Water  
PWS:      Site ID:      Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	<b>0.0698 ± 0.160 (0.378)</b> <b>C:67% T:NA</b>	pCi/L	09/16/21 14:16	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>0.319 ± 0.393 (0.831)</b> <b>C:75% T:82%</b>	pCi/L	09/03/21 14:23	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>0.389 ± 0.553 (1.21)</b>	pCi/L	10/14/21 15:22	7440-14-4	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND ASH POND #1 & #2 RADS

Pace Project No.: 92555511

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: HGWA-44D</b> <b>Lab ID: 92555511005</b> Collected: 08/13/21 11:25      Received: 08/16/21 13:25      Matrix: Water PWS:      Site ID:      Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	<b>0.319 ± 0.198 (0.285)</b> <b>C:73% T:NA</b>	pCi/L	09/16/21 08:30	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>0.878 ± 0.486 (0.892)</b> <b>C:67% T:85%</b>	pCi/L	09/03/21 11:26	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>1.20 ± 0.684 (1.18)</b>	pCi/L	10/14/21 15:22	7440-14-4	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND ASH POND #1 & #2 RADS

Pace Project No.: 92555511

QC Batch: 463298

Analysis Method: EPA 9320

QC Batch Method: EPA 9320

Analysis Description: 9320 Radium 228

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92555511005

METHOD BLANK: 2236861

Matrix: Water

Associated Lab Samples: 92555511005

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.204 ± 0.329 (0.713) C:63% T:88%	pCi/L	09/03/21 11:28	

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

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND ASH POND #1 & #2 RADS

Pace Project No.: 92555511

QC Batch: 463426

Analysis Method: EPA 9315

QC Batch Method: EPA 9315

Analysis Description: 9315 Total Radium

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92555511001, 92555511002, 92555511003, 92555511004, 92555511005

METHOD BLANK: 2237360

Matrix: Water

Associated Lab Samples: 92555511001, 92555511002, 92555511003, 92555511004, 92555511005

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

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

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND ASH POND #1 & #2 RADS

Pace Project No.: 92555511

QC Batch: 461961

Analysis Method: EPA 9320

QC Batch Method: EPA 9320

Analysis Description: 9320 Radium 228

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92555511001, 92555511002, 92555511003, 92555511004

METHOD BLANK: 2230398

Matrix: Water

Associated Lab Samples: 92555511001, 92555511002, 92555511003, 92555511004

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

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

### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: HAMMOND ASH POND #1 & #2 RADS  
Pace Project No.: 92555511

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### DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

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

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

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

Act - Activity

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

Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: HAMMOND ASH POND #1 & #2 RADS  
Pace Project No.: 92555511

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92555511001	HGWA-1	EPA 9315	463426		
92555511002	HGWA-43D	EPA 9315	463426		
92555511003	HGWA-2	EPA 9315	463426		
92555511004	HGWA-3	EPA 9315	463426		
92555511005	HGWA-44D	EPA 9315	463426		
92555511001	HGWA-1	EPA 9320	461961		
92555511002	HGWA-43D	EPA 9320	461961		
92555511003	HGWA-2	EPA 9320	461961		
92555511004	HGWA-3	EPA 9320	461961		
92555511005	HGWA-44D	EPA 9320	463298		
92555511001	HGWA-1	Total Radium Calculation	468223		
92555511002	HGWA-43D	Total Radium Calculation	468223		
92555511003	HGWA-2	Total Radium Calculation	468223		
92555511004	HGWA-3	Total Radium Calculation	468223		
92555511005	HGWA-44D	Total Radium Calculation	468223		

### REPORT OF LABORATORY ANALYSIS

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Document Name:  
Sample Condition Upon Receipt (SCUR)

Document Revised: October 28, 2020  
Page 1 of 2

Document No.:  
F-CAR-CS-033-Rev.07

Issuing Authority:  
Pace Carolinas Quality Office

Laboratory receiving samples:

Asheville  Eden  Greenwood  Huntersville  Raleigh  Mechanicsville  Atlanta  Kernersville

Sample Condition  
Upon Receipt

Client Name:

GPA POWER

Project #:

WO#: 92555511



Courier:  Fed Ex  UPS  USPS  Client  
 Commercial  Pace  Other: \_\_\_\_\_

Custody Seal Present?  Yes  No Seals Intact?  Yes  No

Packing Material:  Bubble Wrap  Bubble Bags  None  Other

Thermometer:  IR Gun ID: TH2083 Type of Ice:  Wet  Blue  None

Cooler Temp: 3.7 Correction Factor: Add/Subtract (°C) ± 0

Cooler Temp Corrected (°C): 3.7

USDA Regulated Soil ( N/A, water sample)

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

Date/Initials Person Examining Contents: 3/13/21 KRW

Biological Tissue Frozen?

Yes  No  N/A

Temp should be above freezing to 6°C

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

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

Comments/Discrepancy:

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

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: \_\_\_\_\_



Document Name:  
**Sample Condition Upon Receipt(SCUR)**  
 Document No.:  
**F-CAR-CS-033-Rev.07**

Document Revised: October 28, 2020  
 Page 2 of 2

Issuing Authority:  
 Pace Carolinas Quality Office

**WO# : 92555511**

PM: NMG

Due Date: 09/03/21

CLIENT: GA-GA Power

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

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

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

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)	BP4C-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	AG3A(DG3A)-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unp (N/A)	DG9P-40 mL VOA H3PO4 (N/A)	VOAK (6 vials per kit)-S035 kit (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)	BP3A-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved vials (N/A)	VSGU-20 mL Scintillation Vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)		
1																													
2																													
3																													
4																													
5																													
6																													
7																													
8																													
9																													
10																													
11																													
12																													

**pH Adjustment Log for Preserved Samples**

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

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

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

**Section A** Required Client Information: Company: GA Power Address: Atlanta, GA  
**Section B** Required Project Information: Report to: SCS Contacts Copy To: Geosyntec Contacts  
**Section C** Invoice Information: Invoice Number: Southern Co. Company Name: Address: Plant Hammond Ash Pond #1 & #2  
 Project Name: Plant Hammond Ash Pond #1 & #2  
 Project Number: 10839  
 Reference: Kevin Herring  
 State: GA  
 Regulatory Agency: NPDES GROUND WATER DRINKING WATER  
 USE: RCPA OTHER:  OTHER:

ITEM #	Section D Required Client Information	Valid Matrix Codes WATER WASTE WATER PRODUCT ION EXCH. OIL WIRE AIR OTHER TISSUE	CODE WT WT WY P SL QL WSP AR QT TS	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		DATE	TIME	DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>	HCl	NaOH	Na <sub>2</sub> S <sub>2</sub> O <sub>5</sub>	Methanol	Other	Preservatives	Analysis Test	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	PH	Temp in °C	Received on ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)		
						COMPOSITE	COMPOSITE																									
1	HGWA-1			WT G	G			8/11/21	17:00			19	5	2																		
2	HGWA-43D			WT G	G			8/11/21	17:03			19	5	2																		
3																																
4																																
5																																
6																																
7																																
8																																
9																																
10																																
11																																
12																																

**ADDITIONAL COMMENTS:** Please note dry walls, strike through any wells not sampled, and note when the last sample for the event has been taken.

**REQUISITIONED BY / AFFILIATION:** Thomas Kessler / Genex  
**DATE:** 8/13/21  
**TIME:** 1445  
**ACCEPTED BY / AFFILIATION:** Connor Cain / Genex  
**DATE:** 8/13/21  
**TIME:** 1455

**SAMPLER NAME AND SIGNATURE:** Thomas Kessler  
**PRINT Name of SAMPLER:** Thomas Kessler  
**SIGNATURE of SAMPLER:** [Signature]  
**DATE Signed (MM/DD/YYYY):** 8/11/2021

**REQUISITIONED BY / AFFILIATION:** Ryan Williams / Pace  
**DATE:** 8/13/21  
**TIME:** 1650  
**ACCEPTED BY / AFFILIATION:** Ryan Williams / Pace  
**DATE:** 8/13/21  
**TIME:** 1650

**REGULATORY AGENCY:** NPDES GROUND WATER DRINKING WATER  
**USE:** RCPA OTHER:  OTHER:

**Site Location:** \_\_\_\_\_  
**STATE:** GA

**Temp in °C:** \_\_\_\_\_  
**Received on ice (Y/N):** \_\_\_\_\_  
**Custody Sealed Cooler (Y/N):** \_\_\_\_\_  
**Samples Intact (Y/N):** \_\_\_\_\_



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

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

**Section B** Required Project Information:  
Report to: SCS Contacts  
Copy to: Geosyntec Contacts

**Section C** Inv. Co. Information:  
Attention: Southern Co.  
Company Name:  
Address:  
City/State:  
Reference: Plant Hemmond Ash Pond #1 & #2  
Project Manager: Kevin Herring  
Phone/Fax: 10839

Pages: 1 of 1

**Section D** Required Client Information:  
Valid Matrix Codes:  
MATERIAL: PHOSPHORUS, WATER, WET WATER, PRODUCT, EQUIPMENT, OIL, ZINC, ALUMINUM, CHLORINE, MANGANESE, SILICA  
CODE: DW, WT, VW, PV, PL, OL, WP, AP, ST, TS

Requested Due Date/TIME: 10 Day

Requested Analysis Filtered (Y/N):  
Chloride/Fluoride/Sulfate:  Y  
APP. III & IV Metals 6010/6020/747:  Y  
TDS:  Y  
RAD 226/228:  Y  
sh, As, Ba, Be, Bi, Cd:  Y  
Ca, Cr, Co, Pb, Li:  Y  
Mo, Se, Tl:  Y

Regulatory Agency:  NPDES  GROUND WATER  DRINKING WATER  UST  RCRA  OTHER:  CW

Site Location: GA

ITEM #	MATRIX CODE	SAMPLE TYPE (G=GRAB C=CCMP)	COLLECTED			SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives	Analysis Test	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	Temp in °C	Received on Ice (Y/N)	Custody Sampled Cooler (Y/N)	Samples Intact (Y/N)
			DATE	TIME	DATE										
1	HGWA-2	WT G	8/12/21	15:35	21	5	2	3	X	X	X	X	X	X	X
2	HGWA-3	WT G	8/12/21	16:17	21	5	2	3	X	X	X	X	X	X	X
3															
4															
5															
6															
7															
8															
9															
10															
11															
12															

**ADDITIONAL COMMENTS:**  
Please note dry wells, strike through any wells not sampled, and note when the last sample for the event has been taken.

**REQUISITIONED BY / AFFILIATION:** Thomas Kessler / Georgia Power  
**DATE:** 8/13/21  
**TIME:** 1445

**ACCEPTED BY / AFFILIATION:** Connor Cain / Georgia Power  
**DATE:** 8/13/21  
**TIME:** 1455

**REQUISITIONED BY / AFFILIATION:** Ryan Williams / Pace  
**DATE:** 8/13/21  
**TIME:** 1650

**ACCEPTED BY / AFFILIATION:** Ryan Williams / Pace  
**DATE:** 8/13/21  
**TIME:** 1655

**SAMPLER NAME AND SIGNATURE:**  
PRINT Name of SAMPLER: Connor Cain / Ryan Williams  
SIGNATURE OF SAMPLER: [Signatures]

**DATE SIGNED:** 8/12/2021

**Temp in °C:** [Blank]  
**Received on Ice (Y/N):** [Blank]  
**Custody Sampled Cooler (Y/N):** [Blank]  
**Samples Intact (Y/N):** [Blank]



Document Name:  
Sample Condition Upon Receipt(SCUR)  
Document No.:  
F-CAR-CS-033-Rev.07

Document Revised: October 28, 2020  
Page 1 of 2  
Issuing Authority:  
Pace Carolinas Quality Office

Laboratory receiving samples:

Asheville  Eden  Greenwood  Huntersville  Raleigh  Mechanicsville  Atlanta  Kernersville

Sample Condition Upon Receipt

Client Name: GA Power

Project #: **WO# : 92555511**  
PM: NMG Due Date: 09/03/21  
CLIENT: GA-GA Power

Courier:  Fed Ex  UPS  USPS  Client  
 Commercial  Pace  Other: \_\_\_\_\_

Custody Seal Present?  Yes  No Seals Intact?  Yes  No

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

Packing Material:  Bubble Wrap  Bubble Bags  None  Other

Biological Tissue Frozen?  
 Yes  No  N/A

Thermometer:  IR Gun ID: TH2230 Type of Ice:  Wet  Blue  None

Cooler Temp: 4.3/54 Correction Factor: Add/Subtract (°C) +0.1

Temp should be above freezing to 6°C  
 Samples out of temp criteria. Samples on ice, cooling process has begun

Cooler Temp Corrected (°C): 4.4/55

USDA Regulated Soil  N/A, water sample  
Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)?  Yes  No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)?  Yes  No

	Comments/Discrepancy:
Chain of Custody Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Samples Arrived within Hold Time? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Short Hold Time Analysis (<72 hr.)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	3.
Rush Turn Around Time Requested? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	4.
Sufficient Volume? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Correct Containers Used? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6.
-Pace Containers Used? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	7.
Dissolved analysis: Samples Field Filtered? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	8.
Sample Labels Match COC? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Includes Date/Time/ID/Analysis Matrix: <u>w</u>	
Headspace in VOA Vials (>5-6mm)? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	10.
Trip Blank Present? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Trip Blank Custody Seals Present? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	

COMMENTS/SAMPLE DISCREPANCY

Field Data Required?  Yes  No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Project Manager SCURF Review: \_\_\_\_\_

Date: \_\_\_\_\_

Project Manager SRF Review: \_\_\_\_\_

Date: \_\_\_\_\_





Document Name:  
Sample Condition Upon Receipt(SCUR)

Document Revised: October 28, 2020  
Page 2 of 2

Document No.:  
F-CAR-CS-033-Rev.07

Issuing Authority:  
Pace Carolinas Quality Office

\*Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.

Project #

**WO# : 92555511**

PM: NMG

Due Date: 09/03/21

Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC, LLHg

CLIENT: GA-GA Power

\*\*Bottom half of box is to list number of bottles

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (C-)	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) (C-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)	BP4C-125 mL Plastic NaOH (pH > 12) (C-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (C-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (C-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	AG3A(DG3A)-250 mL Amber NH4Cl (N/A)(C-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unp (N/A)	DG9P-40 mL VOA H3PO4 (N/A)	VOAK (6 vials per kit)-5035 kit (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)	BP3A-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved vials (N/A)	VSGU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)			
1		1	1																											
2																														
3																														
4																														
5																														
6																														
7																														
8																														
9																														
10																														
11																														
12																														

**pH Adjustment Log for Preserved Samples**

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. Out of hold, incorrect preservative, out of temp, incorrect containers.

# CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

<b>Section A</b> Required Client Information	<b>Section B</b> Required Project Information
Company: GA Power	Report To: SCS Contacts
Address: Atlanta GA	Copy To: Gossynier, Contacts
Email To: SCS Contacts	Purchase Order No.:
Phone: Fax:	Project Name: Plant Hammond Ash Pond #1 & #2
Requested Date/Date/T: 10 Day	Project Number:

<b>Section C</b> Invoice Information:	<b>REGULATORY AGENCY</b>
Attention: South-gh Co.	<input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER
Company Name:	<input type="checkbox"/> UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER <input type="checkbox"/>
Address:	Site Location: GA
Person Charge Reference:	STATE: GA
Facility Project Manager: Kevin Heming	Requested Analysis Filtered (Y/N)
Plant Profile #: 10839	

ITEM #	Section D Required Client Information	Valid Matrix Codes MATRIX CODE MATERIALS: GAV, MMS, WWT, WASTEWATER, PRODUCT, SOLID, DIL, WIFE, AIR, OTHER, TS	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives	Analysis Test	Requested Analysis Filtered (Y/N)
			COMPOSITE	COMPOSITE					
1	HGWA-44D		DATE	TIME	DATE	TIME	20	Unpreserved	
2			8/13/21	11:25			5	H <sub>2</sub> SO <sub>4</sub>	
3							2	HNO <sub>3</sub>	
4							3	HCl	
5								NaOH	
6								Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>	
7								Methanol	
8								Other	
9									
10									
11									
12									

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
<i>Yuan Williams</i>	8/13/21	08:30	<i>Kevin Heming</i>	8/13/21	08:30	
<i>Kevin Heming</i>	8/13/21	13:25	<i>Yuan Williams</i>	8/13/21	13:25	TJ
<i>Yuan Williams</i>	8/13/21	15:35	<i>Kevin Heming</i>	8/13/21	15:38	8/13/2021

ADDITIONAL COMMENTS		SAMPLER NAME AND SIGNATURE	
Please note dry wells, strike through any wells not sampled, and include the label number for the event has been taken.		PRINT Name of SAMPLER: <i>Yuan Williams</i>	
		SIGNATURE of SAMPLER: <i>[Signature]</i>	
		DATE signed (MANDATORY): 8/13	
Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

# Quality Control Sample Performance Assessment



**Analyst Must Manually Enter All Fields Highlighted in Yellow.**

Test: Ra-228  
Analyst: JC2  
Date: 9/1/2021  
Worklist: 62391  
Matrix: WT

Method Blank Assessment	
MB Sample ID	2230398
MB concentration:	0.353
MB 2 Sigma CSU:	0.350
MB MDC:	0.718
MB Numerical Performance Indicator:	1.97
MB Status vs Numerical Indicator:	Pass
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	
	LCSD62391	LCSD62391
Count Date:	9/3/2021	9/3/2021
Spike I.D.:	21-029	21-029
Decay Corrected Spike Concentration (pCi/mL):	38.363	38.363
Volume Used (mL):	0.10	0.10
Aliquot Volume (L, g, F):	0.809	0.805
Target Conc. (pCi/L, g, F):	4.742	4.764
Uncertainty (Calculated):	0.232	0.233
Result (pCi/L, g, F):	3.364	3.328
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	0.857	0.867
Numerical Performance Indicator:	-3.04	-3.14
Percent Recovery:	70.96%	69.85%
Status vs Numerical Indicator:	N/A	N/A
Status vs Recovery:	Pass	Pass
Upper % Recovery Limits:	135%	135%
Lower % Recovery Limits:	60%	60%

Duplicate Sample Assessment	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.	
	Sample I.D.:	LCSD62391
Duplicate Sample I.D.:	3.364	3.364
Sample Result 2 Sigma CSU (pCi/L, g, F):	0.857	0.857
Sample Duplicate Result (pCi/L, g, F):	3.328	3.328
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	0.867	0.867
Are sample and/or duplicate results below RL?	NO	NO
Duplicate Numerical Performance Indicator:	0.059	0.059
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	1.58%	1.58%
Duplicate Status vs Numerical Indicator:	Pass	Pass
Duplicate Status vs RPD:	Pass	Pass
% RPD Limit:	36%	36%

## Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

Sample Matrix Spike Control Assessment	MS/MSD 1	MS/MSD 2
Sample Collection Date: Sample I.D. Sample MS I.D. Sample MSD I.D. Spike I.D.:		
MS/MSD Decay Corrected Spike Concentration (pCi/mL): Spike Volume Used in MS (mL): Spike Volume Used in MSD (mL): MS Aliquot (L, g, F): MS Target Conc. (pCi/L, g, F): MSD Aliquot (L, g, F): MSD Target Conc. (pCi/L, g, F): MS Spike Uncertainty (calculated): MSD Spike Uncertainty (calculated):		
Sample Result: Sample Result 2 Sigma CSU (pCi/L, g, F): Sample Matrix Spike Result: Sample Matrix Spike Duplicate Result: Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F): MS Numerical Performance Indicator: MS Percent Recovery: MSD Percent Recovery: MS Status vs Numerical Indicator: MSD Status vs Numerical Indicator: MS Status vs Recovery: MSD Status vs Recovery: MS/MSD Upper % Recovery Limits: MS/MSD Lower % Recovery Limits:		

Matrix Spike/Matrix Spike Duplicate Sample Assessment
Sample I.D. Sample MS I.D. Sample MSD I.D. Sample Matrix Spike Result: Matrix Spike Result 2 Sigma CSU (pCi/L, g, F): Sample Matrix Spike Duplicate Result: Sample Matrix Spike Duplicate Duplicate Result 2 Sigma CSU (pCi/L, g, F): Duplicate Numerical Performance Indicator: Duplicate Numerical Performance Indicator: (Based on the Percent Recoveries) MS/MSD Duplicate RPD: MS/MSD Duplicate Status vs Numerical Indicator: MS/MSD Duplicate Status vs RPD: % RPD Limit:

# Quality Control Sample Performance Assessment

**Analyst Must Manually Enter All Fields Highlighted in Yellow.**

Test: Ra-228  
Analyst: VAL  
Date: 9/1/2021  
Worklist: 62397  
Matrix: WT



Method Blank Assessment	
MB Sample ID	2230406
MB concentration:	0.204
M/B 2 Sigma CSU:	0.329
MB MDC:	0.713
MB Numerical Performance Indicator:	1.22
MB Status vs Numerical Indicator:	Pass
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment		LCSID (Y or N)?	Y
Count Date:		LCS62397	LCS62397
Spike I.D.:	9/3/2021		
Decay Corrected Spike Concentration (pCi/mL):	21-029		21-029
Volume Used (mL):	38.364		38.364
Aliquot Volume (L, g, F):	0.10		0.10
Target Conc. (pCi/L, g, F):	0.807		0.808
Uncertainty (Calculated):	4.756		4.749
Result (pCi/L, g, F):	0.233		0.233
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	5.599		7.050
Numerical Performance Indicator:	1.216		1.488
Percent Recovery:	1.34		2.99
Status vs Numerical Indicator:	N/A		Warning
Status vs Recovery:	Pass		Fall High**
Upper % Recovery Limits:	135%		135%
Lower % Recovery Limits:	60%		60%

Duplicate Sample Assessment		Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample I.D.:	LCS62397	Sample I.D.:	MS/MSD 1
Duplicate Sample I.D.:	LCS62397	Sample MS I.D.:	MS/MSD 2
Sample Result (pCi/L, g, F):	5.599	Sample Matrix Spike Result:	
Sample Duplicate Result (pCi/L, g, F):	1.216	Sample Matrix Spike Duplicate Result:	
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	7.050	Duplicate Numerical Performance Indicator:	
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	1.488	(Based on the Percent Recoveries) MS/MSD Duplicate RPD:	
Are sample and/or duplicate results below RL?	NO	MS/MSD Duplicate Status vs Numerical Indicator:	
Duplicate Numerical Performance Indicator:	-1.480	MS/MSD Duplicate Status vs RPD:	
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	23.10%	% RPD Limit:	
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:

**\*\*If all sample results are below MDC, the batch is acceptable, otherwise this batch must be reprocessed due to LCSID failure.**

LCSID NI < 3.0

307  
9-7-21

12/16/19  
MO

# Quality Control Sample Performance Assessment

Analyst *Must Manually Enter All Fields Highlighted in Yellow.*



Test: Ra-226  
Analyst: CLA  
Date: 1/0/1900  
Worklist: 62605  
Matrix: DW

Method Blank Assessment	MB Sample ID	Count Date	LCS/D62605	Y
MB concentration:	2237360	9/15/2021	LCS/D62605	
M/B Counting Uncertainty:	0.250	19-033		
MB MDC:	0.180	24.034		
MB Numerical Performance Indicator:	0.307	0.10		
MB Status vs. Numerical Indicator:	2.72	0.505		
MB Status vs. MDC:	N/A	4.775		
	Pass	0.057		
		4.197		
		0.681		
		-1.66		
		87.89%		
		Pass		
		125%		
		75%		

Laboratory Control Sample Assessment	LCS/D62605	Y
Count Date:	9/15/2021	LCS/D62605
Spike I.D.:	19-033	
Decay Corrected Spike Concentration (pCi/mL):	24.034	
Volume Used (mL):	0.10	
Aliquot Volume (L, g, F):	0.505	
Target Conc. (pCi/L, g, F):	4.759	
Uncertainty (Calculated):	0.057	
Result (pCi/L, g, F):	3.605	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.612	
Numerical Performance Indicator:	-3.68	
Percent Recovery:	75.74%	
Status vs Numerical Indicator:	N/A	
Status vs Recovery:	Pass	
Upper % Recovery Limits:	125%	
Lower % Recovery Limits:	75%	

Duplicate Sample Assessment	LCS/D62605	Y
Sample I.D.:	92555928001	
Duplicate Sample I.D.:	92555928001DUP	
Sample Result (pCi/L, g, F):	0.048	
Sample Duplicate Result (pCi/L, g, F):	0.100	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.160	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.106	
Are sample and/or duplicate results below RL?	See Below #	
Duplicate Numerical Performance Indicator:	-1.509	
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	108.01%	
Duplicate Status vs Numerical Indicator:	N/A	
Duplicate Status vs RPD:	Fail***	
% RPD Limit:	25%	

\*\*\*Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

\*\*\*Batch must be re-prepped due to unacceptable precision.

Sample Matrix Spike Control Assessment	MS/MSD 1	MS/MSD 2
Sample Collection Date:		
Sample I.D.:		
Sample MS I.D.:		
Sample MSD I.D.:		
Spike I.D.:		
MS/MSD Decay Corrected Spike Concentration (pCi/mL):		
Spike Volume Used in MS (mL):		
Spike Volume Used in MSD (mL):		
MS Aliquot (L, g, F):		
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 Counting Uncertainty (pCi/L, g, F):		
Sample Matrix Spike Result:		
Sample Matrix Spike Result Counting Uncertainty (pCi/L, g, F):		
Sample Matrix Spike Duplicate Result:		
Sample Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):		
MS Numerical Performance Indicator:		
MSD Numerical Performance Indicator:		
MS Percent Recovery:		
MSD Percent Recovery:		
MS Status vs Numerical Indicator:		
MSD Status vs Numerical Indicator:		
MS Status vs Recovery:		
MSD Status vs Recovery:		
MS/MSD Upper % Recovery Limits:		
MS/MSD Lower % Recovery Limits:		

Matrix Spike/Matrix Spike Duplicate Sample Assessment
Sample I.D.:
Sample MS I.D.:
Sample MSD I.D.:
Sample Matrix Spike Result:
Sample Matrix Spike Duplicate Result:
Sample Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):
Sample Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):
Duplicate Numerical Performance Indicator:
(Based on the Percent Recoveries) MS/MSD Duplicate RPD:
MS/MSD Duplicate Status vs Numerical Indicator:
MS/MSD Duplicate Status vs RPD:
% RPD Limit:

# VALIDATION REPORTS

December 2020

## Memorandum

Date: February 8, 2021  
To: Whitney Law  
From: Kristoffer Henderson  
CC: J. Caprio  
Subject: **Stage 2A Data Validation - Level II Data Deliverables – Pace Analytical Services, LLC Project Numbers 92512541 and 92512574**

### **SITE: Plant Hammond AP-2**

### **INTRODUCTION**

This report summarizes the findings of the Stage 2A data validation of three aqueous samples and one equipment blank, collected 15 December 2020, as part of the Plant Hammond AP on-site sampling event.

The samples were analyzed at Pace Analytical Services Atlanta, Peachtree Corners, Georgia, for the following analytical tests:

- Calcium by United States (US) Environmental Protection Agency (EPA) Methods 3010A/6010D
- Metals by USEPA Methods 3005A/6020B
- Mercury by USEPA Method 7470A
- Total Dissolved Solids (TDS) by Standard Method 2540C

The samples were analyzed at Pace Analytical Services Asheville, North Carolina, for the following analytical test:

- Anions (Chloride, Fluoride and Sulfate) by USEPA Method 300.0

The samples were analyzed at Pace Analytical Services, LLC, Greensburg, Pennsylvania, for the following analytical tests:

- Radium-226 by USEPA Method 9315
- Radium-228 by USEPA Method 9320
- Total Radium by Calculation



## EXECUTIVE SUMMARY

Based on the Stage 2A data validation covering the quality control (QC) parameters listed below and the information provided, the data are usable for meeting project objectives.

The data were reviewed based on the pertinent methods referenced in the laboratory reports, professional and technical judgment, and the following documents:

- US EPA Region IV Data Validation Standard Operating Procedures (US EPA Region IV, September 2011);
- USEPA National Functional Guidelines for Inorganic Superfund Methods Data Review, January 2017 (EPA 540-R-2017-001); 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
92512541001	HGWA-43D
92512541002	HGWA-44D
92512541003	EB-01
92512541004	HGWA-42D

Laboratory ID	Client ID
92512574001	HGWA-43D
92512574002	HGWA-44D
92512574003	EB-01
92512574004	HGWA-42D

The samples were received within 0-6 degrees Celsius (°C). No sample preservation issues were noted by the laboratory.

The following issues were noted with the chain of custody (COC) forms:

- The year was not documented for the *relinquished by* date for the first sample transfer on page one of the COC and for the second transfer on page two of the COC.
- The year was not documented for the *received by* date for the first sample transfer on page two of the COC.

The field pH data included in the laboratory report were not validated.

## 1.0 METALS

The samples were analyzed for metals by USEPA methods 3010A/6010D and USEPA methods 3005A/6020B. (Mercury was evaluated separately in Section 2.0, below).

The areas of data review are listed below. A leading check mark (✓) indicates an area of review in which the data were acceptable. A preceding crossed circle (⊗) signifies areas where issues were

raised during the course of the validation review and should be considered to determine any impact on data quality and usability.

- ✓ Overall Assessment
- ✓ Holding Time
- ✓ Method Blank
- ✓ Matrix Spike/Matrix Spike Duplicate
- ✓ Laboratory Control Sample
- ✓ Equipment Blank
- ✓ Field Blank
- ✓ Field Duplicate
- ✓ Sensitivity
- ✓ Electronic Data Deliverables Review

### **1.1 Overall Assessment**

The metals data reported in this data set are considered usable for meeting project objectives. The results are considered valid; the analytical completeness defined as the ratio of the number of valid analytical results (valid analytical results include values qualified as estimated) to the total number of analytical results requested on samples submitted for this analysis, for this data set is 100%.

### **1.2 Holding Time**

The holding time for the metals analysis of a water sample is 180 days from sample collection to analysis. The holding times were met for the sample analyses.

### **1.3 Method Blank**

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Two method blanks were reported (batches 589396 and 589337). Metals were not detected in the method blanks above the method detection limits (MDLs).

### **1.4 Matrix Spike/Matrix Spike Duplicate (MS/MSD)**

MS/MSDs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Two batch MS/MSD pairs were reported. Since these were batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data.

### **1.5 Equipment Blank**

One equipment blank was collected with the sample set, EB-01. Metals were not detected in the equipment blank above the MDLs, with the following exception.

Calcium was detected in EB-01 at an estimated concentration greater than the MDL and less than the reporting limit (RL). Since calcium was detected in the associated samples at concentrations greater than the RL, no qualifications were applied to the data.

### **1.6 Field Blank**

A field blank was not collected with the sample set.

### **1.7 Field Duplicate**

A field duplicate was not collected with the sample set.

### **1.8 Sensitivity**

The samples were reported to the MDLs. Elevated nondetect results were not reported.

### **1.9 Electronic Data Deliverable (EDD) Review**

The results and sample IDs in the EDD were reviewed against the information provided by the associated level II report at a minimum of 20% as part of the data validation process. No discrepancies were identified between the level II report and the EDD.

## **2.0 MERCURY**

The samples were analyzed for mercury by USEPA method 7470A.

The areas of data review are listed below. A leading check mark (✓) indicates an area of review in which the data were acceptable. A preceding crossed circle (⊗) signifies areas where issues were raised during the course of the validation review and should be considered to determine any impact on data quality and usability.

- ✓ Overall Assessment
- ✓ Holding Time
- ✓ Method Blank
- ✓ Matrix Spike/Matrix Spike Duplicate
- ✓ Laboratory Control Sample
- ✓ Equipment Blank
- ✓ Field Blank
- ✓ Field Duplicate
- ✓ Sensitivity
- ✓ Electronic Data Deliverables Review

## **2.1 Overall Assessment**

The mercury data reported in this data set are considered usable for meeting project objectives. The results are considered valid; the analytical completeness defined as the ratio of the number of valid analytical results (valid analytical results include values qualified as estimated) to the total number of analytical results requested on samples submitted for this analysis, for this data set is 100%.

## **2.2 Holding Time**

The holding time for mercury analysis of a water sample is 28 days from sample collection to analysis. The holding times were met for the sample analyses.

## **2.3 Method Blank**

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). One method blank was reported (batch 588542). Mercury was not detected in the method blank above the MDL.

## **2.4 Matrix Spike/Matrix Spike Duplicate**

MS/MSDs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). One sample set specific MS/MSD pair was reported using sample HGWA-42D. The recovery and relative percent difference (RPD) results were within the laboratory specified acceptance criteria.

## **2.5 Laboratory Control Sample**

LCSs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). One LCS was reported. The recovery result was within the laboratory specified acceptance criteria.

## **2.6 Equipment Blank**

One equipment blank was collected with the sample set, EB-01. Mercury was not detected in the equipment blank above the MDL.

## **2.7 Field Blank**

A field blank was not collected with the sample set.

## **2.8 Field Duplicate**

A field duplicate was not collected with the sample set.

## **2.9 Sensitivity**

The samples were reported to the MDL. No elevated nondetect results were reported.

## **2.10 Electronic Data Deliverable Review**

The results and sample IDs in the EDD were reviewed against the information provided by the associated level II report at a minimum of 20% as part of the data validation process. No discrepancies were identified between the level II report and the EDD.

## **3.0 WET CHEMISTRY**

The samples were analyzed for TDS by Standard method 2540C and anions by USEPA method 300.0.

The areas of data review are listed below. A leading check mark (✓) indicates an area of review in which the data were acceptable. A preceding crossed circle (⊗) signifies areas where issues were raised during the course of the validation review and should be considered to determine any impact on data quality and usability.

- ✓ Overall Assessment
- ✓ Holding Times
- ✓ Method Blank
- ✓ Matrix Spike/Matrix Spike Duplicate
- ✓ Laboratory Control Sample
- ✓ Laboratory Duplicate
- ✓ Equipment Blank
- ✓ Field Blank
- ✓ Field Duplicate
- ✓ Sensitivity
- ✓ Electronic Data Deliverables Review

## **3.1 Overall Assessment**

The wet chemistry data reported in this data set are considered usable for meeting project objectives. The results are considered valid; the analytical completeness defined as the ratio of the number of valid analytical results (valid analytical results include values qualified as estimated) to the total number of analytical results requested on samples submitted for these analyses, for this data set is 100%.

### **3.2 Holding Times**

The holding time for the TDS analysis of a water sample is 7 days from sample collection to analysis. The holding time for the anions (chloride, fluoride and sulfate) analysis of a water sample is 28 days from sample collection to analysis. The holding times were met for the sample analyses.

### **3.3 Method Blank**

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). One method blank was reported for TDS (batch 588373) and one method blank was reported for the anions (batch 589104). The wet chemistry parameters were not detected in the method blanks above the MDLs.

### **3.4 Matrix Spike/Matrix Spike Duplicate**

MS/MSDs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Two batch MS/MSD pairs were reported for the anions. Since these were batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data.

### **3.5 Laboratory Control Sample**

LCSs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). One LCS was reported for TDS and one LCS was reported for the anions. The recovery results were within the laboratory specified acceptance criteria.

### **3.6 Laboratory Duplicate**

One sample set specific laboratory duplicate was reported for TDS using HGWA-42D. The RPD result was within the laboratory specified acceptance criteria.

One batch laboratory duplicate was also reported for TDS. Since these were batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data.

### **3.7 Equipment Blank**

One equipment blank was collected with the sample set, EB-01. The wet chemistry parameters were not detected in the equipment blank above the MDLs.

### **3.8 Field Blank**

A field blank was not collected with the sample set.

### **3.9 Field Duplicate**

A field duplicate was not collected with the sample set.

### **3.10 Sensitivity**

The samples were reported to the MDLs. No elevated nondetect results were reported.

### **3.11 Electronic Data Deliverable Review**

The results and sample IDs in the EDD were reviewed against the information provided by the associated level II report at a minimum of 20% as part of the data validation process. No discrepancies were identified between the level II report and the EDD.

## **4.0 RADIOCHEMISTRY**

The samples were analyzed for radium-226 by USEPA method 9315, radium-228 by USEPA method 9320 and total radium by calculation.

The areas of data review are listed below. A leading check mark (✓) indicates an area of review in which the data were acceptable. A preceding crossed circle (⊗) signifies areas where issues were raised during the course of the validation review and should be considered to determine any impact on data quality and usability.

- ✓ Overall Assessment
- ✓ Holding Times
- ✓ Method Blank
- ✓ Matrix Spike/Matrix Spike Duplicate
- ✓ Laboratory Control Sample
- ✓ Laboratory Duplicate
- ✓ Tracers and Carriers
- ✓ Equipment Blank
- ✓ Field Blank
- ✓ Field Duplicate
- ✓ Sensitivity
- ✓ Electronic Data Deliverables Review

### **4.1 Overall Assessment**

The radium-226 and radium-228 data reported in this data set are considered usable for meeting project objectives. The results are considered valid; the analytical completeness defined as the ratio of the number of valid analytical results (valid analytical results include values qualified as

estimated) to the total number of analytical results requested on samples submitted for this analysis, for this data set is 100%.

#### **4.2 Holding Times**

The holding times for the radium-226 and radium-228 analyses of a water sample are 180 days from sample collection to analysis. The holding times were met for the sample analyses.

#### **4.3 Method Blank**

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). One method blank was reported for the radium-228 data (batch 428750). One method blank was reported for the radium-226 data (batch 429175). Radium-226 was not detected in the method blank above the minimum detectable concentration (MDC).

Radium-228 (0.694 pCi/L) was detected in the method blank in batch 428750 at a concentration greater than the MDC. Since radium-228 was not detected at concentrations greater than the MDCs in the associated samples, no qualifications were applied to the data.

#### **4.4 Matrix Spike/Matrix Spike Duplicate**

MS/MSD pairs were not reported with the data.

#### **4.5 Laboratory Control Sample**

LCSs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). One LCS/LCS duplicate (LCSD) pair was reported for radium-226. One LCS/LCSD pair was reported for radium-228. The recovery and replicate error ratio (RER) [1 sigma ( $1\sigma$ )] results were within the laboratory specified acceptance criteria.

#### **4.6 Laboratory Duplicate**

One batch laboratory duplicate was reported radium-26. Since these were batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data.

#### **4.7 Tracers and Carriers**

Carriers were reported for the radium-226 and radium-228 analyses and a tracer was reported for the radium-228 analyses. The recovery results were within the laboratory specified acceptance criteria.



#### **4.8 Equipment Blank**

One equipment blank was collected with the sample set, EB-01. Radium-226 and Radium-228 were not detected in the equipment blank above the MDCs.

#### **4.9 Field Blank**

A field blank was not collected with the sample set.

#### **4.10 Field Duplicate**

A field duplicate was not collected with the sample set.

#### **4.11 Sensitivity**

The samples were reported to the MDCs. No elevated nondetect results were reported.

#### **4.12 Electronic Data Deliverable Review**

The results and sample IDs in the EDD were reviewed against the information provided by the associated level II report at a minimum of 20% as part of the data validation process. No discrepancies were identified between the level II report and the EDD.

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\* \* \* \* \*

**ATTACHMENT 1**  
**DATA VALIDATION QUALIFIER DEFINITIONS**  
**AND INTERPRETATION KEY**  
**Assigned by Geosyntec's Data Validation Team**

**DATA QUALIFIER DEFINITIONS**

- U The analyte was analyzed for, but was not detected above the reported sample quantitation limit. Upon application of the U qualifier to a reported result, the definition changes to “not detected at or above the reported result”.
- J The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
- J+ The analyte was positively identified; however, the associated numerical value is likely to be higher than the concentration of the analyte in the sample due to positive bias of associated QC or calibration data or attributable to matrix interference.
- J- The analyte was positively identified; however, the associated numerical value is likely to be lower than the concentration of the analyte in the sample due to negative bias of associated QC or calibration data or attributable to matrix interference.
- UJ The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
- R The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

**ATTACHMENT 2**  
**DATA VALIDATION REASON CODES**  
**Assigned by Geosyntec's Data Validation Team**

<b>Valid Value</b>	<b>Description</b>
1	Preservation requirement not met
2	Analysis holding time exceeded
3	Blank contamination (i.e., method, trip, equipment, etc.)
4	Matrix spike/matrix spike duplicate recovery or RPD outside limits
5	LCS or RPD recovery outside limits (LCS/LCSD)
6	Surrogate recovery outside limits
7	Field Duplicate RPD exceeded
8	Serial dilution percent difference exceeded
9	Calibration criteria not met
10	Linear range exceeded
11	Internal standard criteria not met
12	Lab duplicates RPD exceeded
13	Other
14	Lab flag removed or modified: no validation qualification required

LCS - Laboratory Control Sample

LCSD - Laboratory Control Sample duplicate

RPD - Relative percent difference

January 2021

## Memorandum

Date: April 8, 2021  
To: Whitney Law  
From: Kristoffer Henderson  
CC: J. Caprio  
Subject: **Stage 2A Data Validation - Level II Data Deliverables – Pace Analytical Services, LLC Project Numbers 92517863 and 92517891**

**SITE: Plant Hammond AP-2**

### INTRODUCTION

This report summarizes the findings of the Stage 2A data validation of three aqueous samples and one equipment blank, collected 19-20 January 2021, as part of the Plant Hammond AP on-site sampling event.

The samples were analyzed at Pace Analytical Services Atlanta, Peachtree Corners, Georgia, for the following analytical tests:

- Calcium by United States Environmental Protection Agency (US EPA) Methods 3010A/6010D
- Metals by USEPA Methods 3005A/6020B
- Mercury by USEPA Method 7470A
- Total Dissolved Solids (TDS) by Standard Method 2540C

The samples were analyzed at Pace Analytical Services Asheville, North Carolina, for the following analytical test:

- Anions (Chloride, Fluoride and Sulfate) by USEPA Method 300.0

The samples were analyzed at Pace Analytical Services, LLC, Greensburg, Pennsylvania, for the following analytical tests:

- Radium-226 by USEPA Method 9315
- Radium-228 by USEPA Method 9320
- Total Radium by Calculation

## EXECUTIVE SUMMARY

Based on the Stage 2A data validation covering the quality control (QC) parameters listed below and the information provided, the data as qualified are usable for meeting project objectives. Qualified data should be used within the limitation of the qualification.

The data were reviewed based on the pertinent methods referenced in the laboratory reports, professional and technical judgment, and the following documents:

- US EPA Region IV Data Validation Standard Operating Procedures (US EPA Region IV, September 2011);
- USEPA National Functional Guidelines for Inorganic Superfund Methods Data Review, November 2020 (EPA 542-R-20-006); and
- American National Standard, Verification and Validation of Radiological Data for use in Waste Management and Environmental Remediation, February 15, 2012 (ANSI/ANS-41.5-2012).

The following samples were analyzed and reported in the laboratory reports:

Laboratory ID	Client ID
92517863001	HGWA-42D
92517863002	HGWA-43D
92517863003	HGWA-44D
92517863004	EB-01

Laboratory ID	Client ID
92517891001	HGWA-42D
92517891002	HGWA-43D
92517891003	HGWA-44D
92517891004	EB-01

The samples were received within 0-6 degrees Celsius (°C). No sample preservation issues were noted by the laboratory.

The year was not noted on the chain of custody (COC) for the collection dates associated with samples HGWA-44D and EB-01. The samples were logged in with the collection year of 2021.

The field pH data included in the laboratory report were not validated.

### 1.0 METALS

The samples were analyzed for metals by USEPA methods 3010A/6010D and USEPA methods 3005A/6020B. (Mercury was evaluated separately in Section 2.0, below).

The areas of data review are listed below. A leading check mark (✓) indicates an area of review in which the data were acceptable. A preceding crossed circle (⊗) signifies areas where issues were raised during the course of the validation review and should be considered to determine any impact on data quality and usability.

- ✓ Overall Assessment
- ✓ Holding Time
- ⊗ Method Blank
- ✓ Matrix Spike/Matrix Spike Duplicate
- ✓ Laboratory Control Sample
- ✓ Equipment Blank
- ✓ Field Blank
- ✓ Field Duplicate
- ✓ Sensitivity
- ✓ Electronic Data Deliverables Review

### 1.1 Overall Assessment

The metals data reported in this data set are considered usable for meeting project objectives. The results are considered valid; the analytical completeness defined as the ratio of the number of valid analytical results (valid analytical results include values qualified as estimated) to the total number of analytical results requested on samples submitted for this analysis, for this data set is 100%.

### 1.2 Holding Time

The holding time for the metals analysis of a water sample is 180 days from sample collection to analysis. The holding times were met for the sample analyses.

### 1.3 Method Blank

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Two method blanks were reported (batches 596653 and 596887). Metals were not detected in the method blanks above the method detection limits (MDLs), with the following exception.

Antimony was detected in the method blank in batch 596887 at an estimated concentration greater than the MDL and less than the reporting limit (RL). Therefore, the estimated antimony concentrations in the associated samples were U qualified as not detected at the RL.

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	Validation Result (mg/L)	Validation Qualifier*	Reason Code**
HGWA-43D	Antimony	0.00029	J B	0.0030	U	3
HGWA-44D	Antimony	0.00067	J B	0.0030	U	3

mg/L-milligrams per liter

J-estimated concentration greater than the MDL and less than the RL

B-laboratory indicating the analyte was detected in both the method blank and sample

\* 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

#### **1.4 Matrix Spike/Matrix Spike Duplicate (MS/MSD)**

MS/MSDs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Three batch MS/MSD pairs were reported. Since these were batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data.

#### **1.5 Laboratory Control Sample (LCS)**

LCSs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Two LCSs were reported. The recovery results were within the laboratory specified acceptance criteria.

#### **1.6 Equipment Blank**

One equipment blank was collected with the sample set, EB-01. Metals were not detected in the equipment blank above the MDLs.

#### **1.7 Field Blank**

A field blank was not collected with the sample set.

#### **1.8 Field Duplicate**

A field duplicate was not collected with the sample set.

#### **1.9 Sensitivity**

The samples were reported to the MDLs. No elevated non-detect results were reported.

#### **1.10 Electronic Data Deliverable (EDD) Review**

The results and sample IDs in the EDD were reviewed against the information provided by the associated level II report at a minimum of 20% as part of the data validation process. No discrepancies were identified between the level II report and the EDD.

### **2.0 MERCURY**

The samples were analyzed for mercury by USEPA method 7470A.

The areas of data review are listed below. A leading check mark (✓) indicates an area of review in which the data were acceptable. A preceding crossed circle (⊗) signifies areas where issues



were raised during the course of the validation review and should be considered to determine any impact on data quality and usability.

- ✓ Overall Assessment
- ✓ Holding Time
- ✓ Method Blank
- ✓ Matrix Spike/Matrix Spike Duplicate
- ✓ Laboratory Control Sample
- ✓ Equipment Blank
- ✓ Field Blank
- ✓ Field Duplicate
- ✓ Sensitivity
- ✓ Electronic Data Deliverables Review

## **2.1 Overall Assessment**

The mercury data reported in this data set are considered usable for meeting project objectives. The results are considered valid; the analytical completeness defined as the ratio of the number of valid analytical results (valid analytical results include values qualified as estimated) to the total number of analytical results requested on samples submitted for this analysis, for this data set is 100%.

## **2.2 Holding Time**

The holding time for mercury analysis of a water sample is 28 days from sample collection to analysis. The holding times were met for the sample analyses.

## **2.3 Method Blank**

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). One method blank was reported (batch 594784). Mercury was not detected in the method blank above the MDL.

## **2.4 Matrix Spike/Matrix Spike Duplicate**

MS/MSDs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). One sample set specific MS/MSD pair was reported using sample HGWA-42D. The recovery and relative percent difference (RPD) results were within the laboratory specified acceptance criteria.

## **2.5 Laboratory Control Sample**

LCSs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). One LCS was reported. The recovery result was within the laboratory specified acceptance criteria.

## **2.6 Equipment Blank**

One equipment blank was collected with the sample set, EB-01. Mercury was not detected in the equipment blank above the MDL.

## **2.7 Field Blank**

A field blank was not collected with the sample set.

## **2.8 Field Duplicate**

A field duplicate was not collected with the sample set.

## **2.9 Sensitivity**

The samples were reported to the MDL. No elevated non-detect results were reported.

## **2.10 Electronic Data Deliverable Review**

The results and sample IDs in the EDD were reviewed against the information provided by the associated level II report at a minimum of 20% as part of the data validation process. No discrepancies were identified between the level II report and the EDD.

## **3.0 WET CHEMISTRY**

The samples were analyzed for TDS by Standard method 2540C and anions by USEPA method 300.0.

The areas of data review are listed below. A leading check mark (✓) indicates an area of review in which the data were acceptable. A preceding crossed circle (⊗) signifies areas where issues were raised during the course of the validation review and should be considered to determine any impact on data quality and usability.

- ✓ Overall Assessment
- ✓ Holding Times
- ✓ Method Blank
- ✓ Matrix Spike/Matrix Spike Duplicate

- ✓ Laboratory Control Sample
- ✓ Laboratory Duplicate
- ✓ Equipment Blank
- ✓ Field Blank
- ✓ Field Duplicate
- ✓ Sensitivity
- ✓ Electronic Data Deliverables Review

### **3.1 Overall Assessment**

The wet chemistry data reported in this data set are considered usable for meeting project objectives. The results are considered valid; the analytical completeness defined as the ratio of the number of valid analytical results (valid analytical results include values qualified as estimated) to the total number of analytical results requested on samples submitted for these analyses, for this data set is 100%.

### **3.2 Holding Times**

The holding time for the TDS analysis of a water sample is 7 days from sample collection to analysis. The holding time for the anions (chloride, fluoride, and sulfate) analysis of a water sample is 28 days from sample collection to analysis. The holding times were met for the sample analyses.

### **3.3 Method Blank**

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Two method blanks were reported for TDS (batches 594633 and 594779) and two method blanks were reported for the anions (batches 594878 and 595172). The wet chemistry parameters were not detected in the method blanks above the MDLs.

### **3.4 Matrix Spike/Matrix Spike Duplicate**

MS/MSDs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Four batch MS/MSD pairs were reported for the anions. Since these were batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data.

### **3.5 Laboratory Control Sample**

LCSs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Two LCSs were reported for TDS and two LCSs were reported for the anions. The recovery results were within the laboratory specified acceptance criteria.

### **3.6 Laboratory Duplicate**

Four batch laboratory duplicates were reported for TDS. Since these were batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data.

### **3.7 Equipment Blank**

One equipment blank was collected with the sample set, EB-01. The wet chemistry parameters were not detected in the equipment blank above the MDL.

### **3.8 Field Blank**

A field blank was not collected with the sample set.

### **3.9 Field Duplicate**

A field duplicate was not collected with the sample set.

### **3.10 Sensitivity**

The samples were reported to the MDLs. No elevated non-detect results were reported.

### **3.11 Electronic Data Deliverable Review**

The results and sample IDs in the EDD were reviewed against the information provided by the associated level II report at a minimum of 20% as part of the data validation process. No discrepancies were identified between the level II report and the EDD.

## **4.0 RADIOCHEMISTRY**

The samples were analyzed for radium-226 by USEPA method 9315, radium-228 by USEPA method 9320 and total radium by calculation.

The areas of data review are listed below. A leading check mark (✓) indicates an area of review in which the data were acceptable. A preceding crossed circle (⊗) signifies areas where issues were raised during the course of the validation review and should be considered to determine any impact on data quality and usability.

- ✓ Overall Assessment
- ✓ Holding Times
- ✓ Method Blank
- ✓ Matrix Spike/Matrix Spike Duplicate
- ⊗ Laboratory Control Sample

- ✓ Laboratory Duplicate
- ✓ Tracers and Carriers
- ✓ Equipment Blank
- ✓ Field Blank
- ✓ Field Duplicate
- ✓ Sensitivity
- ✓ Electronic Data Deliverables Review

#### **4.1 Overall Assessment**

The radium-226 and radium-228 data reported in this data set are considered usable for meeting project objectives. The results are considered valid; the analytical completeness defined as the ratio of the number of valid analytical results (valid analytical results include values qualified as estimated) to the total number of analytical results requested on samples submitted for this analysis, for this data set is 100%.

#### **4.2 Holding Times**

The holding times for the radium-226 and radium-228 analyses of a water sample are 180 days from sample collection to analysis. The holding times were met for the sample analyses.

#### **4.3 Method Blank**

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Two method blanks were reported for the radium-228 data (batches 433216 and 432561). One method blank was reported for the radium-226 data (batch 433326). Radium-226 and radium-228 were not detected in the method blanks above the minimum detectable concentrations (MDCs).

#### **4.4 Matrix Spike/Matrix Spike Duplicate**

MS/MSD pairs were not reported with the data.

#### **4.5 Laboratory Control Sample**

LCSs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). One LCS/LCS duplicate (LCSD) pair was reported for radium-226. Two LCS/LCSD pairs were reported for radium-228. The recovery and replicate error ratio (RER) [1 sigma ( $1\sigma$ )] results were within the laboratory specified acceptance criteria, with the following exception.

The recovery of radium-228 in the LCS in batch 432561 was low and outside of the laboratory specified acceptance criteria. Therefore, the radium-228 and total radium concentrations less than the MDCs in the associated samples were UJ qualified as estimated less than the MDCs.

Sample	Analyte	Laboratory Result (pCi/L)	Laboratory Flag	Validation Result (pCi/L)	Validation Qualifier	Reason Code
HGWA-42D	Radium-228	0.702	U	0.702	UJ	5
HGWA-42D	Combined Radium 226 + 228	0.845	U	0.845	UJ	5
HGWA-43D	Radium-228	0.482	U	0.482	UJ	5
HGWA-43D	Combined Radium 226 + 228	0.685	U	0.685	UJ	5
HGWA-44D	Radium-228	0.531	U	0.531	UJ	5
HGWA-44D	Combined Radium 226 + 228	0.790	U	0.790	UJ	5
EB-01	Radium-228	0.365	U	0.365	UJ	5
EB-01	Combined Radium 226 + 228	0.404	U	0.404	UJ	5

pCi/L-picocuries per liter

U-not detected at or above the MDC

#### 4.6 Laboratory Duplicate

One batch laboratory duplicate was reported for radium-226. Since these were batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data.

#### 4.7 Tracers and Carriers

Carriers were reported for the radium-226 and radium-228 analyses and a tracer was reported for the radium-228 analyses. The recovery results were within the laboratory specified acceptance criteria.

#### 4.8 Equipment Blank

One equipment blank was collected with the sample set, EB-01. Radium-226 and Radium-228 were not detected in the equipment blank above the MDCs.

#### 4.9 Field Blank

A field blank was not collected with the sample set.

#### 4.10 Field Duplicate

A field duplicate was not collected with the sample set.

#### **4.11 Sensitivity**

The samples were reported to the MDCs. No elevated non-detect results were reported.

#### **4.12 Electronic Data Deliverable Review**

The results and sample IDs in the EDD were reviewed against the information provided by the associated level II report at a minimum of 20% as part of the data validation process. No discrepancies were identified between the level II report and the EDD.

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\* \* \* \* \*

**ATTACHMENT 1**  
**DATA VALIDATION QUALIFIER DEFINITIONS**  
**AND INTERPRETATION KEY**  
**Assigned by Geosyntec's Data Validation Team**

**DATA QUALIFIER DEFINITIONS**

- U The analyte was analyzed for but was not detected above the reported sample quantitation limit. Upon application of the U qualifier to a reported result, the definition changes to “not detected at or above the reported result”.
  
- J The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
  
- J+ The analyte was positively identified; however, the associated numerical value is likely to be higher than the concentration of the analyte in the sample due to positive bias of associated QC or calibration data or attributable to matrix interference.
  
- J- The analyte was positively identified; however, the associated numerical value is likely to be lower than the concentration of the analyte in the sample due to negative bias of associated QC or calibration data or attributable to matrix interference.
  
- UJ The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
  
- R The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.



**ATTACHMENT 2**  
**DATA VALIDATION REASON CODES**  
**Assigned by Geosyntec's Data Validation Team**

<b>Valid Value</b>	<b>Description</b>
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

February 2021

## Memorandum

Date: April 27, 2021  
To: Whitney Law  
From: Kristoffer Henderson  
CC: J. Caprio  
Subject: **Stage 2A Data Validation - Level II Data Deliverables – Pace Analytical Services, LLC Project Numbers 92521125 and 92521143**

**SITE: Plant Hammond AP-2**

### INTRODUCTION

This report summarizes the findings of the Stage 2A data validation of twenty aqueous samples, one field duplicate, one field blank and one equipment blank, collected 8-15 February 2021, as part of the Plant Hammond AP on-site sampling event.

The samples were analyzed at Pace Analytical Services Atlanta, Peachtree Corners, Georgia, for the following analytical tests:

- Metals by USEPA Methods 3005A/6020B
- Mercury by USEPA Method 7470A

The samples were analyzed at Pace Analytical Services Asheville, North Carolina, for the following analytical test:

- Fluoride by USEPA Method 300.0

The samples were analyzed at Pace Analytical Services, LLC, Greensburg, Pennsylvania, for the following analytical tests:

- Radium-226 by USEPA Method 9315
- Radium-228 by USEPA Method 9320
- Total Radium by Calculation

**EXECUTIVE SUMMARY**

Based on the Stage 2A data validation covering the quality control (QC) parameters listed below and the information provided, the data as qualified are usable for meeting project objectives. Qualified data should be used within the limitation of the qualification.

The data were reviewed based on the pertinent methods referenced in the laboratory reports, professional and technical judgment, and the following documents:

- US EPA Region IV Data Validation Standard Operating Procedures (US EPA Region IV, September 2011);
- USEPA National Functional Guidelines for Inorganic Superfund Methods Data Review, November 2020 (EPA 542-R-20-006); and
- American National Standard, Verification and Validation of Radiological Data for use in Waste Management and Environmental Remediation, February 15, 2012 (ANSI/ANS-41.5-2012).

The following samples were analyzed and reported in the laboratory reports:

Client ID	Laboratory ID
92521125001	HGWA-1
92521125002	HGWA-4
92521125003	HGWA-42D
92521125004	HGWA-2
92521125005	HGWA-3
92521125006	HGWA-5
92521125007	HGWA-6
92521125008	HGWA-43D
92521125009	HGWA-44D
92521125010	HGWC-16
92521125011	HGWC-18
92521125012	MW-21D
92521125013	DUP-2
92521125014	HGWC-14
92521125015	HGWC-17
92521125016	MW-37D
92521125017	FB-2
92521125018	HGWC-15
92521125019	MW-23D
92521125020	MW-33
92521125021	EB-1
92521125022	MW-22
92521125023	MW-35

Client ID	Laboratory ID
92521143001	HGWA-1
92521143002	HGWA-4
92521143003	HGWA-42D
92521143004	HGWA-2
92521143005	HGWA-3
92521143006	HGWA-5
92521143007	HGWA-6
92521143008	HGWA-43D
92521143009	HGWA-44D
92521143010	HGWC-16
92521143011	HGWC-18
92521143012	MW-21D
92521143013	DUP-2
92521143014	HGWC-14
92521143015	HGWC-17
92521143016	MW-37D
92521143017	FB-2
92521143018	HGWC-15
92521143019	MW-23D
92521143020	MW-33
92521143021	EB-1
92521143022	MW-22
92521143023	MW-35

The samples were received within 0-6 degrees Celsius (°C). No sample preservation issues were noted by the laboratory.

The following issues were noted on the chain of custody (COC). No qualifications were applied based on these issues.

- A collection time was not listed on the COC for the field duplicate, DUP-2. The field duplicate was logged in with the collection time of 00:00.
- There were time discrepancies for sample transfers on pages 1-3 of the COC. The relinquished by time was documented as 2/9/21 1231 and the received by time was documented as 2/9/21 1233.
- There were time discrepancies for sample transfers on pages 4-6 of the COC. The relinquished by time was documented as 2/9/21 0933 and the received by time was documented as 2/9/21 0936.
- The relinquished by signature, date and time were missing for the final sample transfer on page 7 of the COC.
- The relinquished by date and time and the received by signature, date and time were missing for the final sample transfer on page 11 of the COC.

The field pH data included in the laboratory report were not validated.

## 1.0 METALS

The samples were analyzed for metals by USEPA methods 3005A/6020B. (Mercury was evaluated separately in Section 2.0, below).

The areas of data review are listed below. A leading check mark (✓) indicates an area of review in which the data were acceptable. A preceding crossed circle (⊗) signifies areas where issues were raised during the course of the validation review and should be considered to determine any impact on data quality and usability.

- ✓ Overall Assessment
- ✓ Holding Time
- ⊗ Method Blank
- ✓ Matrix Spike/Matrix Spike Duplicate
- ✓ Laboratory Control Sample
- ✓ Equipment Blank
- ⊗ Field Blank
- ⊗ Field Duplicate
- ✓ Sensitivity
- ✓ Electronic Data Deliverables Review

### 1.1 Overall Assessment

The metals data reported in this data set are considered usable for meeting project objectives. The results are considered valid; the analytical completeness defined as the ratio of the number of valid analytical results (valid analytical results include values qualified as estimated) to the total number of analytical results requested on samples submitted for this analysis, for this data set is 100%.

### 1.2 Holding Time

The holding time for the metals analysis of a water sample is 180 days from sample collection to analysis. The holding times were met for the sample analyses.

### 1.3 Method Blank

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Two method blanks were reported (batches 601892 and 601924). Metals were not detected in the method blanks above the method detection limits (MDLs), with the following exceptions.

Antimony and arsenic were detected in the method blank in batch 601892 at estimated concentrations greater than the MDLs and less than the reporting limits (RLs). Therefore, the estimated antimony and arsenic concentrations in the associated samples were U qualified as not detected at the RLs and based on professional and technical judgment the arsenic concentrations in samples HGWC-18 and HGWC-14 were J+ qualified as estimated with high biases.

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	Validation Result (mg/L)	Validation Qualifier*	Reason Code**
HGWA-42D	Antimony	0.0019	J B	0.0030	U	3
HGWA-2	Antimony	0.00062	J B	0.0030	U	3
HGWA-3	Antimony	0.00031	J B	0.0030	U	3
HGWA-43D	Antimony	0.00037	J B	0.0030	U	3
HGWA-43D	Arsenic	0.0017	J B	0.0050	U	3
HGWA-44D	Antimony	0.00042	J B	0.0030	U	3
HGWA-44D	Arsenic	0.00083	J B	0.0050	U	3
HGWC-16	Arsenic	0.0012	J B	0.0050	U	3
HGWC-18	Arsenic	0.0069	B	0.0069	J+	3
MW-21D	Arsenic	0.001	J B	0.0050	U	3
DUP-2	Arsenic	0.00095	J B	0.0050	U	3
HGWC-14	Antimony	0.00043	J B	0.0030	U	3
HGWC-14	Arsenic	0.0062	B	0.0062	J+	3
HGWC-17	Arsenic	0.0012	J B	0.0050	U	3

mg/L-milligrams per liter

J-estimated concentration greater than the MDL and less than the RL

B-laboratory indicating the analyte was detected in both the method blank and sample

\* 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

#### **1.4 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). One sample set specific MS/MSD pair was reported using sample HGWA-4. The recovery and relative percent difference (RPD) results were within the laboratory specified acceptance criteria.

One batch MS/MSD pair was also reported. Since these were batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data.

#### **1.5 Laboratory Control Sample (LCS)**

LCSs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Two LCSs were reported. The recovery results were within the laboratory specified acceptance criteria.

#### **1.6 Equipment Blank**

One equipment blank was collected with the sample set, EB-1. Metals were not detected in the equipment blank above the MDLs.

#### **1.7 Field Blank**

One field blank was collected with the sample set, FB-2. Metals were not detected in the field blank above the MDLs, with the following exception.

Arsenic was detected in FB-2 at an estimated concentration greater than the MDL and less than the RL. Therefore, the estimated arsenic concentrations in the associated samples were U qualified as not detected at the RL and based on professional and technical judgment the arsenic concentrations in samples HGWC-18, HGWC-14, MW-33 and MW-35 were J+ qualified as estimated with high biases.

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	Validation Result (mg/L)	Validation Qualifier	Reason Code
HGWA-43D	Arsenic	0.0017	JB	0.0050	U	3
HGWA-44D	Arsenic	0.00083	JB	0.0050	U	3
HGWC-16	Arsenic	0.0012	JB	0.0050	U	3

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	Validation Result (mg/L)	Validation Qualifier	Reason Code
HGWC-18	Arsenic	0.0069	B	0.0069	J+	3
MW-21D	Arsenic	0.0010	J B	0.0050	U	3
DUP-2	Arsenic	0.00095	J B	0.0050	U	3
HGWC-14	Arsenic	0.0062	B	0.0062	J+	3
HGWC-17	Arsenic	0.0012	J B	0.0050	U	3
MW-37D	Arsenic	0.0023	J	0.0050	U	3
MW-23D	Arsenic	0.0010	J	0.0050	U	3
MW-33	Arsenic	0.0059	NA	0.0059	J+	3
MW-35	Arsenic	0.0050	NA	0.0050	J+	3

mg/L-milligrams per liter

J-estimated concentration greater than the MDL and less than the RL

B-laboratory indicating the analyte was detected in both the method blank and sample

NA-not applicable

### 1.8 Field Duplicate

One field duplicate sample was collected with the sample set, DUP-02. Acceptable precision (RPD  $\leq$  20% or the difference between the concentrations  $<$  RL) was demonstrated between the field duplicate and the original sample, MW-21D, with the following exception.

Lead was detected in MW-21D at an estimated concentration greater than the MDL and less than the RL and was not detected in DUP-2, resulting in a noncalculable RPD. Therefore, based on professional and technical judgment the lead concentration in MW-21D was J qualified as estimated and the non-detect lead result in DUP-2 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
MW-21D	Lead	0.00066	J	NC	0.00066	J	7
DUP-2	Lead	0.000036	U		0.000036	UJ	7

mg/L-milligrams per liter

J-estimated concentration greater than the MDL and less than the RL

U-not detected at or above the MDL

NC-not calculable

### 1.9 Sensitivity

The samples were reported to the MDLs. No elevated non-detect results were reported.



### **1.10 Electronic Data Deliverable (EDD) Review**

The results and sample IDs in the EDD were reviewed against the information provided by the associated level II report at a minimum of 20% as part of the data validation process. No discrepancies were identified between the level II report and the EDD.

## **2.0 MERCURY**

The samples were analyzed for mercury by USEPA method 7470A.

The areas of data review are listed below. A leading check mark (✓) indicates an area of review in which the data were acceptable. A preceding crossed circle (⊗) signifies areas where issues were raised during the course of the validation review and should be considered to determine any impact on data quality and usability.

- ✓ Overall Assessment
- ✓ Holding Time
- ✓ Method Blank
- ✓ Matrix Spike/Matrix Spike Duplicate
- ✓ Laboratory Control Sample
- ✓ Equipment Blank
- ✓ Field Blank
- ✓ Field Duplicate
- ✓ Sensitivity
- ✓ Electronic Data Deliverables Review

### **2.1 Overall Assessment**

The mercury data reported in this data set are considered usable for meeting project objectives. The results are considered valid; the analytical completeness defined as the ratio of the number of valid analytical results (valid analytical results include values qualified as estimated) to the total number of analytical results requested on samples submitted for this analysis, for this data set is 100%.

### **2.2 Holding Time**

The holding time for mercury analysis of a water sample is 28 days from sample collection to analysis. The holding times were met for the sample analyses.

### **2.3 Method Blank**

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Three method blanks were reported (batches 600377, 601295 and 601590). Mercury was not detected in the method blanks 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). Two sample set specific MS/MSD pairs were reported using samples HGWA-1 and EB-1. The recovery and RPD results were within the laboratory specified acceptance criteria.

One batch MS/MSD pair was also reported. Since these were batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data.

### **2.5 Laboratory Control Sample**

LCSs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Three LCSs were reported. The recovery results were within the laboratory specified acceptance criteria.

### **2.6 Equipment Blank**

One equipment blank was collected with the sample set, EB-1. Mercury was not detected in the equipment blank above the MDL.

### **2.7 Field Blank**

One field blank was collected with the sample set, FB-2. Mercury was not detected in the field blank above the MDL.

### **2.8 Field Duplicate**

One field duplicate sample was collected with the sample set, DUP-02. Acceptable precision (RPD  $\leq$  20% or the difference between the concentrations  $<$  RL) was demonstrated between the field duplicate and the original sample, MW-21D.

### **2.9 Sensitivity**

The samples were reported to the MDL. No elevated non-detect results were reported.

## **2.10 Electronic Data Deliverable Review**

The results and sample IDs in the EDD were reviewed against the information provided by the associated level II report at a minimum of 20% as part of the data validation process. No discrepancies were identified between the level II report and the EDD.

## **3.0 FLUORIDE**

The samples were analyzed for fluoride by USEPA method 300.0.

The areas of data review are listed below. A leading check mark (✓) indicates an area of review in which the data were acceptable. A preceding crossed circle (⊗) signifies areas where issues were raised during the course of the validation review and should be considered to determine any impact on data quality and usability.

- ✓ Overall Assessment
- ✓ Holding Times
- ✓ Method Blank
- ⊗ Matrix Spike/Matrix Spike Duplicate
- ✓ Laboratory Control Sample
- ✓ Equipment Blank
- ✓ Field Blank
- ✓ Field Duplicate
- ✓ Sensitivity
- ✓ Electronic Data Deliverables Review

### **3.1 Overall Assessment**

The fluoride data reported in this data set are considered usable for meeting project objectives. The results are considered valid; the analytical completeness defined as the ratio of the number of valid analytical results (valid analytical results include values qualified as estimated) to the total number of analytical results requested on samples submitted for these analyses, for this data set is 100%.

### **3.2 Holding Times**

The holding time for the fluoride analysis of a water sample is 28 days from sample collection to analysis. The holding time was met for the sample analyses.

### 3.3 Method Blank

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Seven method blanks were reported (batches 598903, 599257, 599664, 599863, 599864, 600235 and 601397). Fluoride was not detected in the method blanks above the MDL.

### 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). Three sample set specific MS/MSD pairs were reported using samples HGWA-2, HGWC-16 and MW-22. The recovery and RPD results were within the laboratory specified acceptance criteria, with the following exception.

The recovery of fluoride in the MS using sample HGWC-16 was low and outside the laboratory specified acceptance criteria. Therefore, the fluoride concentration in sample HGWC-16 was J-qualified as estimated with low bias.

Twelve 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	Analyte	Laboratory Result (mg/L)	Laboratory Flag	Validation Result (mg/L)	Validation Qualifier	Reason Code
HGWC-16	Fluoride	0.21	M1	0.21	J-	4

mg/L-milligrams per liter

M1-laboratory flag indicating the MS recovery exceeded the 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). Seven LCSs were reported. The recovery results were within the laboratory specified acceptance criteria.

### 3.6 Equipment Blank

One equipment blank was collected with the sample set, EB-1. Fluoride was not detected in the equipment blank above the MDL.

### 3.7 Field Blank

One field blank was collected with the sample set, FB-2. Fluoride was not detected in the field blank above the MDL.

### **3.8 Field Duplicate**

One field duplicate sample was collected with the sample set, DUP-02. Acceptable precision (RPD  $\leq 20\%$  or the difference between the concentrations  $< RL$ ) was demonstrated between the field duplicate and the original sample, MW-21D.

### **3.9 Sensitivity**

The samples were reported to the MDLs. No elevated non-detect results were reported.

### **3.10 Electronic Data Deliverable Review**

The results and sample IDs in the EDD were reviewed against the information provided by the associated level II report at a minimum of 20% as part of the data validation process. No discrepancies were identified between the level II report and the EDD.

## **4.0 RADIOCHEMISTRY**

The samples were analyzed for radium-226 by USEPA method 9315, radium-228 by USEPA method 9320 and total radium by calculation.

The areas of data review are listed below. A leading check mark (✓) indicates an area of review in which the data were acceptable. A preceding crossed circle (⊗) signifies areas where issues were raised during the course of the validation review and should be considered to determine any impact on data quality and usability.

- ✓ Overall Assessment
- ✓ Holding Times
- ✓ Method Blank
- ✓ Matrix Spike/Matrix Spike Duplicate
- ✓ Laboratory Control Sample
- ✓ Laboratory Duplicate
- ✓ Tracers and Carriers
- ⊗ Equipment Blank
- ✓ Field Blank
- ✓ Field Duplicate
- ✓ Sensitivity
- ✓ Electronic Data Deliverables Review

### **4.1 Overall Assessment**

The radium-226 and radium-228 data reported in this data set are considered usable for meeting project objectives. The results are considered valid; the analytical completeness defined as the ratio

of the number of valid analytical results (valid analytical results include values qualified as estimated) to the total number of analytical results requested on samples submitted for this analysis, for this data set is 100%.

#### **4.2 Holding Times**

The holding times for the radium-226 and radium-228 analyses of a water sample are 180 days from sample collection to analysis. The holding times were met for the sample analyses.

#### **4.3 Method Blank**

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Four method blanks were reported for the radium-228 data (batches 435116, 435836, 435838 and 435787). Four method blanks were reported for the radium-226 data (batches 435459, 435786, 435837 and 435835). Radium-226 and radium-228 were not detected in the method blanks above the minimum detectable concentrations (MDCs), with the following exception.

Radium-226 (0.276 pCi/L) was detected in the method blank in batch 435459 at a concentration greater than the MDC. Since radium-226 was not detected in the associated samples at concentrations greater than the MDCs, no qualifications were applied to the data.

#### **4.4 Matrix Spike/Matrix Spike Duplicate**

MS/MSD pairs were not reported with the data.

#### **4.5 Laboratory Control Sample**

LCSs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Four 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 ( $1\sigma$ )] results were within the laboratory specified acceptance criteria.

#### **4.6 Laboratory Duplicate**

Three batch laboratory duplicates were reported for radium-226. Since these were batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data.

#### 4.7 Tracers and Carriers

Carriers were reported for the radium-226 and radium-228 analyses and a tracer was reported for the radium-228 analyses. The recovery results were within the laboratory specified acceptance criteria.

#### 4.8 Equipment Blank

One equipment blank was collected with the sample set, EB-1.

Radium-226 was not detected in the equipment blank above the MDC. However, Radium-228 (2.12 pCi/L) was detected in EB-1 at a concentration greater than the MDC. Therefore, based on professional and technical judgment the radium-228 concentrations in the associated samples greater than the MDCs and less than the equipment blank concentration were U qualified as not detected at the reported concentrations. In addition, based on professional and technical judgment, the total radium concentration in sample HGWC-15 was U qualified as not detected at the reported concentration and the total radium concentrations in samples MW-33 and MW-35 were J+ qualified as estimated with high biases.

Sample	Analyte	Laboratory Result (pCi/L)	Laboratory Flag	Validation Result (pCi/L)	Validation Qualifier	Reason Code
HGWC-15	Radium-228	1.59	NA	1.59	U	3
HGWC-15	Combined Radium 226 + 228	1.65	NA	1.65	U	3
MW-33	Radium-228	1.88	NA	1.88	U	3
MW-33	Combined Radium 226 + 228	2.26	NA	2.26	J+	3
MW-35	Radium-228	1.06	NA	1.06	U	3
MW-35	Combined Radium 226 + 228	1.52	NA	1.52	J+	3

pCi/-picocuries per liter

NA-not applicable

#### 4.9 Field Blank

One field blank was collected with the sample set, FB-2. Radium-226 and Radium-228 were not detected in the field blank above the MDCs.

#### 4.10 Field Duplicate

One field duplicate sample was collected with the sample set, DUP-02. Acceptable precision (RER ( $1\sigma$ ) < 3) was demonstrated between the field duplicate and the original sample, MW-25D.

#### **4.11 Sensitivity**

The samples were reported to the MDCs. No elevated non-detect results were reported.

#### **4.12 Electronic Data Deliverable Review**

The results and sample IDs in the EDD were reviewed against the information provided by the associated level II report at a minimum of 20% as part of the data validation process. No discrepancies were identified between the level II report and the EDD.

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\* \* \* \* \*



**ATTACHMENT 1**  
**DATA VALIDATION QUALIFIER DEFINITIONS**  
**AND INTERPRETATION KEY**  
**Assigned by Geosyntec's Data Validation Team**

**DATA QUALIFIER DEFINITIONS**

- U The analyte was analyzed for but was not detected above the reported sample quantitation limit. Upon application of the U qualifier to a reported result, the definition changes to “not detected at or above the reported result”.
  
- J The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
  
- J+ The analyte was positively identified; however, the associated numerical value is likely to be higher than the concentration of the analyte in the sample due to positive bias of associated QC or calibration data or attributable to matrix interference.
  
- J- The analyte was positively identified; however, the associated numerical value is likely to be lower than the concentration of the analyte in the sample due to negative bias of associated QC or calibration data or attributable to matrix interference.
  
- UJ The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
  
- R The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

**ATTACHMENT 2**  
**DATA VALIDATION REASON CODES**  
**Assigned by Geosyntec's Data Validation Team**

<b>Valid Value</b>	<b>Description</b>
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

March 2021

## Memorandum

Date: April 27, 2021  
To: Whitney Law  
From: Kristoffer Henderson  
CC: J. Caprio  
Subject: **Stage 2A Data Validation - Level II Data Deliverables – Pace Analytical Services, LLC Project Numbers 92527256 and 92527258**

**SITE: Plant Hammond AP-2**

### INTRODUCTION

This report summarizes the findings of the Stage 2A data validation of twenty aqueous samples, one field duplicate, one field blank and one equipment blank, collected 10-19 March 2021, as part of the Plant Hammond AP on-site sampling event.

The samples were analyzed at Pace Analytical Services Atlanta, Peachtree Corners, Georgia, for the following analytical tests:

- Calcium by USEPA Methods 3010A/6010D
- Metals by USEPA Methods 3005A/6020B
- Total Dissolved Solids (TDS) by Standard Method 2450C

The samples were analyzed at Pace Analytical Services Asheville, North Carolina, for the following analytical test:

- Anions (Chloride, Fluoride and Sulfate) by USEPA Method 300.0

The samples were analyzed at Pace Analytical Services, LLC, Greensburg, Pennsylvania, for the following analytical tests:

- Radium-226 by USEPA Method 9315
- Radium-228 by USEPA Method 9320
- Total Radium by Calculation

**EXECUTIVE SUMMARY**

Based on the Stage 2A data validation covering the quality control (QC) parameters listed below and the information provided, the data as qualified are usable for meeting project objectives. Qualified data should be used within the limitation of the qualification.

The data were reviewed based on the pertinent methods referenced in the laboratory reports, professional and technical judgment, and the following documents:

- US EPA Region IV Data Validation Standard Operating Procedures (US EPA Region IV, September 2011);
- USEPA National Functional Guidelines for Inorganic Superfund Methods Data Review, November 2020 (EPA 542-R-20-006); and
- American National Standard, Verification and Validation of Radiological Data for use in Waste Management and Environmental Remediation, February 15, 2012 (ANSI/ANS-41.5-2012).

The following samples were analyzed and reported in the laboratory reports:

Laboratory ID	Client ID
92527256001	HGWA-1
92527256002	HGWA-4
92527256003	HGWA-42D
92527256004	HGWA-44D
92527256006	HGWA-2
92527256007	HGWA-3
92527256008	HGWA-5
92527256009	HGWA-6
92527256010	HGWA-43D
92527256011	MW-37D
92527256012	HGWC-15
92527256013	HGWC-14
92527256014	HGWC-16
92527256015	MW-22
92527256016	MW-23D
92527256017	HGWC-17
92527256018	HGWC-18
92527256019	MW-21D
92527256020	MW-33
92527256021	DUP-2
92527256022	EB-2
92527256023	FB-2
92527256024	MW-35

Laboratory ID	Client ID
92527258001	HGWA-1
92527258002	HGWA-4
92527258003	HGWA-42D
92527258004	HGWA-44D
92527258005	HGWA-2
92527258006	HGWA-3
92527258007	HGWA-5
92527258008	HGWA-6
92527258009	HGWA-43D
92527258010	MW-37D
92527258011	HGWC-15
92527258012	HGWC-14
92527258013	HGWC-16
92527258014	MW-22
92527258015	MW-23D
92527258016	HGWC-17
92527258017	HGWC-18
92527258018	MW-21D
92527258019	MW-33
92527258020	DUP-2
92527258021	EB-2
92527258022	FB-2
92527258023	MW-35

The samples were received within 0-6 degrees Celsius (°C). No sample preservation issues were noted by the laboratory.

The following issues were noted on the chain of custody (COC). No qualifications were applied based on these issues.

- A collection time was not listed on the COC for the field duplicate, DUP-2. The field duplicate was logged in with the collection time of 00:00.
- There was a time discrepancy for the sample transfer on pages 3 of the COC. The relinquished by time was documented as 3/15/21 1145 and the received by time was documented as 3/15/21 1200.

Incorrect error corrections were observed on the COCs, instead of the proper procedure of a single strike through, correction, and initials and date of person making the corrections.

The field pH data included in the laboratory report were not validated.

## 1.0 METALS

The samples were analyzed for metals by USEPA methods 3005A/6020B.

The areas of data review are listed below. A leading check mark (✓) indicates an area of review in which the data were acceptable. A preceding crossed circle (⊗) signifies areas where issues were raised during the course of the validation review and should be considered to determine any impact on data quality and usability.

- ✓ Overall Assessment
- ✓ Holding Time
- ⊗ Method Blank
- ✓ Matrix Spike/Matrix Spike Duplicate
- ✓ Laboratory Control Sample
- ✓ Equipment Blank
- ⊗ Field Blank
- ✓ Field Duplicate
- ✓ Sensitivity
- ✓ Electronic Data Deliverables Review

### 1.1 Overall Assessment

The metals data reported in this data set are considered usable for meeting project objectives. The results are considered valid; the analytical completeness defined as the ratio of the number of valid analytical results (valid analytical results include values qualified as estimated) to the total number of analytical results requested on samples submitted for this analysis, for this data set is 100%.

## 1.2 Holding Time

The holding time for the metals analysis of a water sample is 180 days from sample collection to analysis. The holding times were met for the sample analyses.

## 1.3 Method Blank

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Six method blanks were reported (batches 606634, 608195, 610580, 606644, 607964 and 610582). Metals were not detected in the method blanks above the method detection limits (MDLs), with the following exception.

Antimony was detected in the method blank in batch 606644 at an estimated concentration greater than the MDL and less than the reporting limit (RL). Therefore, the estimated antimony concentration in the associated sample was U qualified as not detected at the RL.

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	Validation Result (mg/L)	Validation Qualifier*	Reason Code**
HGWA-44D	Antimony	0.00037	J B	0.0030	U	3

mg/L-milligrams per liter

J-estimated concentration greater than the MDL and less than the RL

B-laboratory indicating the analyte was detected in both the method blank and sample

\* 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

## 1.4 Matrix Spike/Matrix Spike Duplicate (MS/MSD)

MS/MSDs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Three sample set specific MS/MSD pairs were reported using samples HGWA-2, HGWA-5 and HGWA-6. The recovery and relative percent difference (RPD) results were within the laboratory specified acceptance criteria, with the following exceptions.

The MSD recovery and RPD of chromium in the MS/MSD pair using sample HGWA-6 were high and outside of the laboratory specified acceptance criteria. Since chromium was not detected in sample HGWA-6, no qualifications were applied to the data.

The MSD recovery of calcium in the MS/MSD pair using sample HGWA-2 was low and outside of the laboratory specified acceptance criteria. Since the concentration of calcium in sample HGWA-2 was greater than four times the spike concentration, no qualifications were applied to the data.

The MS recovery of calcium in the MS/MSD pair using sample HGWA-5 was low and outside of the laboratory specified acceptance criteria. Since the concentration of calcium in sample HGWA-5 was greater than four times the spike concentration, no qualifications were applied to the data.

Three 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.

### 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). Six LCSs were reported. The recovery results were within the laboratory specified acceptance criteria.

### 1.6 Equipment Blank

One equipment blank was collected with the sample set, EB-2. Metals were not detected in the equipment blank above the MDLs, with the following exception.

Boron was detected in EB-2 at an estimated concentration greater than the MDL and less than the RL. Since the boron concentration in EB-2 was U qualified due to field blank contamination and based on professional and technical judgment, no additional qualifications were applied to the data.

### 1.7 Field Blank

One field blank was collected with the sample set, FB-2. Metals were not detected in the field blank above the MDLs, with the following exception.

Boron was detected in FB-2 at an estimated concentration greater than the MDL and less than the RL. Therefore, the estimated boron concentrations in the associated samples were U qualified as not detected at the RL.

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	Validation Result (mg/L)	Validation Qualifier	Reason Code
HGWA-1	Boron	0.015	J	0.040	U	3
HGWA-4	Boron	0.012	J	0.040	U	3
HGWA-3	Boron	0.015	J	0.040	U	3
HGWA-5	Boron	0.0075	J	0.040	U	3
HGWA-6	Boron	0.018	J	0.040	U	3
EB-2	Boron	0.026	J	0.040	U	3

mg/L-milligrams per liter

J-estimated concentration greater than the MDL and less than the RL



### **1.8 Field Duplicate**

One field duplicate sample was collected with the sample set, DUP-02. Acceptable precision (RPD  $\leq 20\%$  or the difference between the concentrations  $< RL$ ) was demonstrated between the field duplicate and the original sample, MW-33.

### **1.9 Sensitivity**

The samples were reported to the MDLs. Elevated non-detect results were reported based upon the dilutions analyzed.

### **1.10 Electronic Data Deliverable (EDD) Review**

The results and sample IDs in the EDD were reviewed against the information provided by the associated level II report at a minimum of 20% as part of the data validation process. No discrepancies were identified between the level II report and the EDD.

## **2.0 WET CHEMISTRY**

The samples were analyzed for TDS by Standard Method 2450C and anions (chloride, fluoride and sulfate) by USEPA method 300.0.

The areas of data review are listed below. A leading check mark (✓) indicates an area of review in which the data were acceptable. A preceding crossed circle (⊗) signifies areas where issues were raised during the course of the validation review and should be considered to determine any impact on data quality and usability.

- ✓ Overall Assessment
- ✓ Holding Times
- ✓ Method Blank
- ⊗ Matrix Spike/Matrix Spike Duplicate
- ✓ Laboratory Control Sample
- ✓ Laboratory Duplicate
- ✓ Equipment Blank
- ✓ Field Blank
- ✓ Field Duplicate
- ✓ Sensitivity
- ✓ Electronic Data Deliverables Review

### **2.1 Overall Assessment**

The wet chemistry data reported in this data set are considered usable for meeting project objectives. The results are considered valid; the analytical completeness defined as the ratio of the

number of valid analytical results (valid analytical results include values qualified as estimated) to the total number of analytical results requested on samples submitted for these analyses, for this data set is 100%.

## **2.2 Holding Times**

The holding time for TDS analysis of a water sample is 7 days from sample collection to analysis. The holding time for the anions analysis of a water sample is 28 days from sample collection to analysis. The holding time was 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). Seven method blanks were reported for TDS (batches 606587, 606868, 607316, 608136, 608146, 608913 and 609221). Seven method blanks were reported for the anions (batches 607170, 607751, 607758, 607984, 608285, 608857 and 608960). The wet chemistry parameters were not detected in the method blanks 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). Four sample set specific MS/MSD pairs were reported for the anions using samples HGWA-1, HGWA-4, HGWA-3 and HGWC-17. The recovery and RPD results were within the laboratory specified acceptance criteria, with the following exceptions.

The recovery of sulfate in the MS using sample HGWA-1 was low and outside of the laboratory specified acceptance criteria. Therefore, the sulfate concentration in sample HGWA-1 was J-qualified as estimated with low bias.

The recovery of fluoride in the MS/MSD using sample HGWA-4 were high and outside of the laboratory specified acceptance criteria. Since fluoride was not detected in sample HGWA-4, no qualifications were applied to the data.

The recoveries of chloride and sulfate in the MS using sample HGWC-17 were low and outside of the laboratory specified acceptance criteria. Since the sulfate concentration in sample HGWC-17 was greater than four times the spiked concentration, no qualifications were applied to the sulfate data. However, the chloride concentration in sample HGWC-17 was J-qualified as estimated with low bias. It was noted the laboratory flagged the chloride concentration M6 indicating the MS/MSD was not evaluated due to dilution. Based on the sample and spiked concentrations and professional and technical judgment, the MS/MSD results were considered for validation.

Batch MS/MSD pairs were also reported for the anions. Since these were batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data.

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	Validation Result (mg/L)	Validation Qualifier	Reason Code
HGWA-1	Sulfate	49.6	M1	49.6	J-	4
HGWC-17	Chloride	138	M6	138	J-	4

mg/L-milligrams per liter

M1-laboratory flag indicating the MS recovery exceeded the QC limits

M6-laboratory flag indicating MS/MSD recovery was not evaluated due to sample dilution

## 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). LCSs were reported for each analysis and batch. The recovery results were within the laboratory specified acceptance criteria.

## 2.6 Laboratory Duplicate

One sample set specific laboratory duplicate was reported using sample HGWA-2. The RPD result was within the laboratory specified acceptance criteria.

Batch laboratory duplicates 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.

## 2.7 Equipment Blank

One equipment blank was collected with the sample set, EB-2. The wet chemistry parameters were not detected in the equipment blank above the MDLs.

## 2.8 Field Blank

One field blank was collected with the sample set, FB-2. The wet chemistry parameters were not detected in the field blank above the MDLs.

## 2.9 Field Duplicate

One field duplicate sample was collected with the sample set, DUP-02. Acceptable precision (RPD  $\leq$  20% or the difference between the concentrations  $<$  RL) was demonstrated between the field duplicate and the original sample, MW-33.

## 2.10 Sensitivity

The samples were reported to the MDLs. No elevated non-detect results were reported.

## 2.11 Electronic Data Deliverable Review

The results and sample IDs in the EDD were reviewed against the information provided by the associated level II report at a minimum of 20% as part of the data validation process. No discrepancies were identified between the level II report and the EDD.

## 3.0 RADIOCHEMISTRY

The samples were analyzed for radium-226 by USEPA method 9315, radium-228 by USEPA 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

## 3.1 Overall Assessment

The radium-226 and radium-228 data reported in this data set are considered usable for meeting project objectives. The results are considered valid; the analytical completeness defined as the ratio of the number of valid analytical results (valid analytical results include values qualified as estimated) to the total number of analytical results requested on samples submitted for this analysis, for this data set is 100%.

### 3.2 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.

### 3.3 Method Blank

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Four method blanks were reported for the radium-228 data (batches 440493, 442226, 440490 and 440491). Four method blanks were reported for the radium-226 data (batches 441707, 440499, 440500 and 439773). Radium-226 and radium-228 were not detected in the method blanks above the minimum detectable concentrations (MDCs), with the following exceptions.

Radium-228 was detected in the method blank in batches 440490 (0.738 pCi/L) and 440491 (0.826 pCi/L) at concentrations greater than the MDCs. Therefore, the radium-228 concentration in the associated sample greater than the MDC and method blank concentration was J+ qualified as estimated with high bias.

Sample	Analyte	Laboratory Result (pCi/L)	Laboratory Flag	Validation Result (pCi/L)	Validation Qualifier	Reason Code
HGWA-5	Radium-228	0.920	NA	0.920	J+	3

pCi/L-picocuries per liter

NA-not applicable

### 3.4 Matrix Spike/Matrix Spike Duplicate

MS/MSD pairs were not reported with the data.

### 3.5 Laboratory Control Sample

LCSs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Four 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 ( $1\sigma$ )] results were within the laboratory specified acceptance criteria.

### 3.6 Laboratory Duplicate

Two sample set specific laboratory duplicates were reported using samples HGWA-1 and MW-37D. The RER ( $1\sigma$ ) results were within the laboratory specified acceptance criteria.

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.

### **3.7 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.

### **3.8 Equipment Blank**

One equipment blank was collected with the sample set, EB-2. Radium-226 and Radium-228 were not detected in the equipment blank above the MDCs.

### **3.9 Field Blank**

One field blank was collected with the sample set, FB-2. Radium-226 and Radium-228 were not detected in the field blank above the MDCs.

### **3.10 Field Duplicate**

One field duplicate sample was collected with the sample set, DUP-02. Acceptable precision (RER ( $1\sigma$ ) < 3) was demonstrated between the field duplicate and the original sample, MW-25D.

### **3.11 Sensitivity**

The samples were reported to the MDCs. No elevated non-detect results were reported.

### **3.12 Electronic Data Deliverable Review**

The results and sample IDs in the EDD were reviewed against the information provided by the associated level II report at a minimum of 20% as part of the data validation process. No discrepancies were identified between the level II report and the EDD.

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**ATTACHMENT 1**  
**DATA VALIDATION QUALIFIER DEFINITIONS**  
**AND INTERPRETATION KEY**  
**Assigned by Geosyntec's Data Validation Team**

**DATA QUALIFIER DEFINITIONS**

- U The analyte was analyzed for but was not detected above the reported sample quantitation limit. Upon application of the U qualifier to a reported result, the definition changes to “not detected at or above the reported result”.
  
- J The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
  
- J+ The analyte was positively identified; however, the associated numerical value is likely to be higher than the concentration of the analyte in the sample due to positive bias of associated QC or calibration data or attributable to matrix interference.
  
- J- The analyte was positively identified; however, the associated numerical value is likely to be lower than the concentration of the analyte in the sample due to negative bias of associated QC or calibration data or attributable to matrix interference.
  
- UJ The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
  
- R The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

**ATTACHMENT 2**  
**DATA VALIDATION REASON CODES**  
**Assigned by Geosyntec's Data Validation Team**

<b>Valid Value</b>	<b>Description</b>
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



August 2021

## Memorandum

Date: November 11, 2021  
To: Whitney Law  
From: Kristoffer Henderson  
CC: J. Caprio  
Subject: **Stage 2A Data Validation - Level II Data Deliverables – Pace Analytical Services, LLC Project Numbers 92555496 and 92555504**

**SITE: Plant Hammond AP-2**

### INTRODUCTION

This report summarizes the findings of the Stage 2A data validation of seventeen aqueous samples, one field duplicate, one field blank and one equipment blank, collected 12-19 August 2021, as part of the Plant Hammond AP on-site sampling event.

The samples were analyzed at Pace Analytical Services Atlanta, Peachtree Corners, Georgia, for the following analytical tests:

- Calcium by United States (US) Environmental Protection Agency (EPA) Methods 3010A/6010D
- Metals by US EPA Methods 3005A/6020B
- Total Dissolved Solids (TDS) by Standard Method 2450C

The samples were analyzed at Pace Analytical Services Asheville, North Carolina, for the following analytical test:

- Anions (Chloride, Fluoride and Sulfate) by US EPA Method 300.0

The samples were analyzed at Pace Analytical Services, LLC, Greensburg, Pennsylvania, for the following analytical tests:

- Radium-226 by US EPA Method 9315
- Radium-228 by US EPA Method 9320
- Total Radium by Calculation

**EXECUTIVE SUMMARY**

Based on the Stage 2A data validation covering the quality control (QC) parameters listed below and the information provided, the data as qualified are usable for meeting project objectives. Qualified data should be used within the limitation of the qualification.

The data were reviewed based on the pertinent methods referenced in the laboratory reports, professional and technical judgment, and the following documents:

- US EPA Region IV Data Validation Standard Operating Procedures (US EPA Region IV, September 2011);
- USEPA National Functional Guidelines for Inorganic Superfund Methods Data Review, November 2020 (EPA 542-R-20-006); and
- American National Standard, Verification and Validation of Radiological Data for use in Waste Management and Environmental Remediation, February 15, 2012 (ANSI/ANS-41.5-2012).

The following samples were analyzed and reported in the laboratory reports:

Laboratory ID	Client ID
92555496001	HGWA-4
92555496002	HGWA-5
92555496003	HGWA-6
92555496004	HGWA-42D
92555496005	MW-34D
92555496006	HGWC-17
92555496007	HGWC-14
92555496008	MW-33
92555496009	MW-51
92555496010	MW-35
92555496011	MW-37D
92555496012	MW-22
92555496013	HGWC-18
92555496014	MW-21D
92555496015	HGWC-16
92555496016	HGWC-15
92555496017	MW-23D
92555496018	DUP-2
92555496019	EB-2
92555496020	FB-2

Laboratory ID	Client ID
92555504001	HGWA-4
92555504002	HGWA-5
92555504003	HGWA-6
92555504004	HGWA-42D
92555504005	MW-34D
92555504006	HGWC-17
92555504007	HGWC-14
92555504008	MW-33
92555504009	MW-51
92555504010	MW-35
92555504011	MW-37D
92555504012	MW-22
92555504013	HGWC-18
92555504014	MW-21D
92555504015	HGWC-16
92555504016	HGWC-15
92555504017	MW-23D
92555504018	DUP-2
92555504019	EB-2
92555504020	FB-2

The samples were received within 0-6 degrees Celsius (°C). No sample preservation issues were noted by the laboratory.

A collection time was not listed on the chain of custody (COC) for the field duplicate, DUP-2. The field duplicate was logged in with the collection time of 00:00.

The field pH data included in the laboratory report were not validated.

## 1.0 METALS

The samples were analyzed for metals by US EPA methods 3005A/6020B and 3010A/6010D.

The areas of data review are listed below. A leading check mark (✓) indicates an area of review in which the data were acceptable. A preceding crossed circle (⊗) signifies areas where issues were raised during the course of the validation review and should be considered to determine any impact on data quality and usability.

- ✓ Overall Assessment
- ✓ Holding Time
- ✓ Method Blank
- ✓ Matrix Spike/Matrix Spike Duplicate
- ✓ Laboratory Control Sample
- ⊗ Equipment Blank
- ✓ Field Blank
- ✓ Field Duplicate
- ✓ Sensitivity
- ✓ Electronic Data Deliverables Review

### 1.1 Overall Assessment

The metals data reported in this data set are considered usable for meeting project objectives. The results are considered valid; the analytical completeness defined as the ratio of the number of valid analytical results (valid analytical results include values qualified as estimated) to the total number of analytical results requested on samples submitted for this analysis, for this data set is 100%.

### 1.2 Holding Time

The holding time for the metals analysis of a water sample is 180 days from sample collection to analysis. The holding times were met for the sample analyses.

### 1.3 Method Blank

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Six method blanks were reported (batches 641193, 641912, 642523, 641199, 641913 and 642521). Metals were not detected in the method blanks above the method detection limits (MDLs).

#### 1.4 Matrix Spike/Matrix Spike Duplicate (MS/MSD)

MS/MSDs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Five sample set specific MS/MSD pairs were reported, two using sample HGWA-4 and one each using samples HGWC-17, MW-22 and HGWC-14. The recovery and relative percent difference (RPD) results were within the laboratory specified acceptance criteria.

One batch MS/MSD pair was also reported. Since these were batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data.

For sample concentrations greater than four times the spiked concentration the MS/MSD recovery results were not considered for validation and no qualifications were applied based on the MS/MSD recovery results.

#### 1.5 Laboratory Control Sample (LCS)

LCSs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Six LCSs were reported. The recovery results were within the laboratory specified acceptance criteria.

#### 1.6 Equipment Blank

One equipment blank was collected with the sample set, EB-2. Metals were not detected in the equipment blank above the MDLs, with the following exception.

Boron was detected in EB-2 at an estimated concentration greater than the MDL and less than the reporting limit (RL). Therefore, the estimated concentrations of boron in the associated samples were U qualified as not detected at the RL.

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	Laboratory Result (mg/L)	Validation Qualifier*	Reason Code**
HGWA-4	Boron	0.014	J	0.040	U	3
HGWA-5	Boron	0.0092	J	0.040	U	3
HGWA-6	Boron	0.014	J	0.040	U	3

mg/L-milligrams per liter

J-estimated concentration greater than the MDL and less than the RL

\* 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

### 1.7 **Field Blank**

One field blank was collected with the sample set, FB-2. Metals were not detected in the field blank above the MDLs.

### 1.8 **Field Duplicate**

One field duplicate sample was collected with the sample set, DUP-02. Acceptable precision (RPD  $\leq 20\%$  or the difference between the concentrations  $< RL$ ) was demonstrated between the field duplicate and the original sample, HGWC-16.

### 1.9 **Sensitivity**

The samples were reported to the MDLs. No elevated non-detect results were reported.

### 1.10 **Electronic Data Deliverable (EDD) Review**

The results and sample IDs in the EDD were reviewed against the information provided by the associated level II report at a minimum of 20% as part of the data validation process. No discrepancies were identified between the level II report and the EDD.

## 2.0 **WET CHEMISTRY**

The samples were analyzed for TDS by Standard Method 2450C and anions (chloride, fluoride and sulfate) by US EPA method 300.0.

The areas of data review are listed below. A leading check mark (✓) indicates an area of review in which the data were acceptable. A preceding crossed circle (⊗) signifies areas where issues were raised during the course of the validation review and should be considered to determine any impact on data quality and usability.

- ✓ Overall Assessment
- ✓ Holding Times
- ✓ Method Blank
- ⊗ Matrix Spike/Matrix Spike Duplicate
- ✓ Laboratory Control Sample
- ✓ Laboratory Duplicate
- ✓ Equipment Blank
- ✓ Field Blank
- ⊗ Field Duplicate
- ✓ Sensitivity
- ✓ Electronic Data Deliverables Review

## 2.1 Overall Assessment

The wet chemistry data reported in this data set are considered usable for meeting project objectives. The results are considered valid; the analytical completeness defined as the ratio of the number of valid analytical results (valid analytical results include values qualified as estimated) to the total number of analytical results requested on samples submitted for these analyses, for this data set is 100%.

## 2.2 Holding Times

The holding time for TDS analysis of a water sample is 7 days from sample collection to analysis. The holding time for the anions 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). Six method blanks were reported for TDS (batches 640931, 641466, 642067, 642673, 642674 and 643140). Four method blanks were reported for the anions (batches 641753, 642138, 642990 and 643306). The wet chemistry parameters were not detected in the method blanks above the MDL.

## 2.4 Matrix Spike/Matrix Spike Duplicate

MS/MSDs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). One sample set specific MS/MSD pair was reported for the anions using sample MW-22. The recovery and RPD results were within the laboratory specified acceptance criteria, with the following exceptions.

The recoveries of chloride and sulfate in the MS/MSD pair were low and outside of the laboratory specified acceptance criteria. Since the sulfate concentration for sample MW-22 was greater than four times the spiked concentration, no qualifications were applied to the sulfate data. However, the chloride concentration in sample MW-22 was J- qualified as estimated with a low bias.

Batch MS/MSD pairs were also reported for the anions. Since these were batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data.

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	Validation Result (mg/L)	Validation Qualifier	Reason Code
MW-22	Chloride	118	M1	118	J-	4

mg/L-milligrams per liter

M1-laboratory flag indicating the MS recovery exceeded the QC limits

## 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). LCSs were reported for each analysis and batch. The recovery results were within the laboratory specified acceptance criteria.

## 2.6 Laboratory Duplicate

Two sample set specific laboratory duplicates were reported using samples MW-35 and HGWC-16. The RPD results were within the laboratory specified acceptance criteria.

Batch laboratory duplicates 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.

## 2.7 Equipment Blank

One equipment blank was collected with the sample set, EB-2. The wet chemistry parameters were not detected in the equipment blank above the MDLs.

## 2.8 Field Blank

One field blank was collected with the sample set, FB-2. The wet chemistry parameters were not detected in the field blank above the MDLs.

## 2.9 Field Duplicate

One field duplicate sample was collected with the sample set, DUP-02. Acceptable precision (RPD  $\leq$  20% or the difference between the concentrations  $<$  RL) was demonstrated between the field duplicate and the original sample, HGWC-16, with the following exception.

The RPD for sulfate in the field duplicate pair was greater than 20%; therefore, the sulfate concentrations in the field duplicate pair were J qualified as estimated.

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	RPD	Laboratory Result (mg/L)	Laboratory Flag	Reason Code
HGWC-16	Sulfate	228	NA	42	228	J	7
DUP-2	Sulfate	349	NA		349	J	7

mg/L-milligrams per liter

NA-not applicable



## 2.10 Sensitivity

The samples were reported to the MDLs. No elevated non-detect results were reported.

## 2.11 Electronic Data Deliverable Review

The results and sample IDs in the EDD were reviewed against the information provided by the associated level II report at a minimum of 20% as part of the data validation process. No discrepancies were identified between the level II report and the EDD.

## 3.0 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

## 3.1 Overall Assessment

The radium-226 and radium-228 data reported in this data set are considered usable for meeting project objectives. The results are considered valid; the analytical completeness defined as the ratio of the number of valid analytical results (valid analytical results include values qualified as estimated) to the total number of analytical results requested on samples submitted for this analysis, for this data set is 100%.

### **3.2 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.

### **3.3 Method Blank**

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Three method blanks were reported for the radium-228 data (batches 463298, 461961 and 463377). Two method blanks were reported for the radium-226 data (batches 463426 and 463378). Radium-226 and radium-228 were not detected in the method blanks above the minimum detectable concentrations (MDCs).

### **3.4 Matrix Spike/Matrix Spike Duplicate**

MS/MSD pairs were not reported with the data.

### **3.5 Laboratory Control Sample**

LCSs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Two LCS/LCS duplicate (LCSD) pairs were reported for radium-226. Three LCS/LCSD pairs were reported for radium-228. The recovery and replicate error ratio (RER) [1 sigma ( $1\sigma$ )] results were within the laboratory specified acceptance criteria, with the following exception.

The LCSD recovery of radium-228 in the LCS/LCSD pair in batch 463298 was high and outside of the laboratory specified acceptance criteria. Since radium-228 was not detected in the associated sample, no qualifications were applied to the data.

### **3.6 Laboratory Duplicate**

Two batch laboratory duplicates were reported for radium-226. Since these were batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data.

### **3.7 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.

### 3.8 Equipment Blank

One equipment blank was collected with the sample set, EB-2. Radium-226 was not detected in the equipment blank above the MDCs.

Radium-228 (0.879 pCi/L) was detected in EB-2 at a concentration greater than the MDC. Therefore, the radium-228 concentration in sample DUP-2 was U qualified as not detected at the reported concentration and the radium-228 and total radium concentrations in samples MW-33, MW-35, MW-37D, HGWC-18 and MW-21D were J+ qualified as estimated with high biases.

Sample	Analyte	Laboratory Result (pCi/L)	Laboratory Flag	Validation Result (pCi/L)	Validation Qualifier	Reason Code
MW-33	Radium-228	1.50	NA	1.50	J+	3
MW-33	Combined Radium 226 + 228	1.77	NA	1.77	J+	3
MW-35	Radium-228	1.28	NA	1.28	J+	3
MW-35	Combined Radium 226 + 228	1.67	NA	1.67	J+	3
MW-37D	Radium-228	1.24	NA	1.24	J+	3
MW-37D	Combined Radium 226 + 228	1.31	NA	1.31	J+	3
HGWC-18	Radium-228	0.917	NA	0.917	J+	3
HGWC-18	Combined Radium 226 + 228	1.45	NA	1.45	J+	3
MW-21D	Radium-228	1.01	NA	1.01	J+	3
MW-21D	Combined Radium 226 + 228	1.17	NA	1.17	J+	3
DUP-2	Radium-228	0.744	NA	0.744	U	3

pCi/L-picocuries per liter

NA-not applicable

### 3.9 Field Blank

One field blank was collected with the sample set, FB-2. Radium-226 and Radium-228 were not detected in the field blank above the MDCs.

### 3.10 Field Duplicate

One field duplicate sample was collected with the sample set, DUP-02. Acceptable precision ( $RER$  ( $1\sigma$ ) < 3) was demonstrated between the field duplicate and the original sample, HGWC-16.

### **3.11 Sensitivity**

The samples were reported to the MDCs. No elevated non-detect results were reported.

### **3.12 Electronic Data Deliverable Review**

The results and sample IDs in the EDD were reviewed against the information provided by the associated level II report at a minimum of 20% as part of the data validation process. No discrepancies were identified between the level II report and the EDD.

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**ATTACHMENT 1**  
**DATA VALIDATION QUALIFIER DEFINITIONS**  
**AND INTERPRETATION KEY**  
**Assigned by Geosyntec's Data Validation Team**

**DATA QUALIFIER DEFINITIONS**

- U The analyte was analyzed for but was not detected above the reported sample quantitation limit. Upon application of the U qualifier to a reported result, the definition changes to “not detected at or above the reported result”.
- J The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
- J+ The analyte was positively identified; however, the associated numerical value is likely to be higher than the concentration of the analyte in the sample due to positive bias of associated QC or calibration data or attributable to matrix interference.
- J- The analyte was positively identified; however, the associated numerical value is likely to be lower than the concentration of the analyte in the sample due to negative bias of associated QC or calibration data or attributable to matrix interference.
- UJ The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
- R The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

**ATTACHMENT 2**  
**DATA VALIDATION REASON CODES**  
**Assigned by Geosyntec’s Data Validation Team**

<b>Valid Value</b>	<b>Description</b>
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

December 2020



# Low-Flow Test Report:

**Test Date / Time:** 12/15/2020 3:46:13 PM

**Project:** GP-Plant Hammond

**Operator Name:** Shawn Lin

<b>Location Name: HGWA-42D</b> <b>Well Diameter: 2 ft</b> <b>Casing Type: PVC</b> <b>Screen Length: 10 ft</b> <b>Top of Screen: 58.03 ft</b> <b>Initial Depth to Water: 9.96 ft</b>	<b>Pump Type: Bladder</b> <b>Tubing Type: Polyethylene</b> <b>Pump Intake From TOC: 63.03 ft</b> <b>Estimated Total Volume Pumped: 7.5 liters</b> <b>Flow Cell Volume: 90 ml</b> <b>Final Flow Rate: 125 ml/min Final Draw Down: 0.32 ft</b>	<b>Instrument Used: Aqua TROLL 400</b> <b>Serial Number: 728648</b>
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## Test Notes:

Five bottles: Two 1-L plastic bottles with HNO<sub>3</sub> for radium (EPA 9315/9320); one 500-mL plastic bottle for TDS (EPA 2540C); one 250-mL plastic bottle for Cl, F, SO<sub>4</sub> (EPA 300.0); and one 250-mL plastic bottle with HNO<sub>3</sub> for App. III and IV metals (EPA 6010D/6020B/7470A). Total depth = 68.03 ft.

## Weather Conditions:

Sunny, cold

## 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	
12/15/2020 3:46 PM	00:00	7.71 pH	16.61 °C	284.97 µS/cm	0.50 mg/L		-35.9 mV		125.00 ml/min
12/15/2020 3:51 PM	05:00	7.68 pH	16.40 °C	285.53 µS/cm	0.39 mg/L	6.65 NTU	-49.9 mV	11.02 ft	125.00 ml/min
12/15/2020 3:56 PM	10:00	7.67 pH	16.38 °C	286.06 µS/cm	0.33 mg/L	6.85 NTU	-82.2 mV	11.11 ft	125.00 ml/min
12/15/2020 4:01 PM	15:00	7.67 pH	16.45 °C	283.93 µS/cm	0.28 mg/L	6.22 NTU	-56.2 mV	11.17 ft	125.00 ml/min
12/15/2020 4:06 PM	20:00	7.66 pH	16.54 °C	284.91 µS/cm	0.26 mg/L	6.62 NTU	-57.3 mV	11.24 ft	125.00 ml/min
12/15/2020 4:11 PM	25:00	7.66 pH	16.27 °C	287.75 µS/cm	0.23 mg/L	6.44 NTU	-94.5 mV	11.28 ft	125.00 ml/min
12/15/2020 4:16 PM	30:00	7.66 pH	16.23 °C	287.77 µS/cm	0.22 mg/L	6.88 NTU	-58.5 mV	11.34 ft	125.00 ml/min
12/15/2020 4:21 PM	35:00	7.65 pH	16.18 °C	290.90 µS/cm	0.20 mg/L	7.37 NTU	-59.1 mV	11.34 ft	125.00 ml/min
12/15/2020 4:26 PM	40:00	7.65 pH	16.22 °C	293.63 µS/cm	0.19 mg/L	5.72 NTU	-60.6 mV	11.34 ft	125.00 ml/min
12/15/2020 4:31 PM	45:00	7.64 pH	16.11 °C	296.11 µS/cm	0.17 mg/L	4.79 NTU	-110.7 mV	11.34 ft	125.00 ml/min

**Samples**

Sample ID:	Description:
HGWA-42D	Grab Sample

Created using VuSitu from In-Situ, Inc.

# Low-Flow Test Report:

**Test Date / Time:** 12/15/2020 9:50:43 AM

**Project:** GP-Plant Hammond

**Operator Name:** Thomas Kessler

<b>Location Name: HGWA-43D</b> <b>Well Diameter: 2 in</b> <b>Casing Type: PVC</b> <b>Screen Length: 10 ft</b> <b>Top of Screen: 52.55 ft</b> <b>Initial Depth to Water: 14.51 ft</b>	<b>Pump Type: Bladder</b> <b>Tubing Type: Polyethylene</b> <b>Pump Intake From TOC: 57.55 ft</b> <b>Estimated Total Volume Pumped: 9 liters</b> <b>Flow Cell Volume: 90 ml</b> <b>Final Flow Rate: 100 ml/min Final Draw Down: 1.6 ft</b>	<b>Instrument Used: Aqua TROLL 400</b> <b>Serial Number: 728634</b>
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## Test Notes:

Five bottles: Two 1-L plastic bottles with HNO<sub>3</sub> for radium (EPA 9315/9320); one 500-mL plastic bottle for TDS (EPA 2540C); one 250-mL plastic bottle for Cl, F, SO<sub>4</sub> (EPA 300.0); and one 250-mL plastic bottle with HNO<sub>3</sub> for App. III and IV metals (EPA 6010D/6020B/7470A). Total depth = 61.80 ft.

## Weather Conditions:

Sunny, cold

## 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	
12/15/2020 9:50 AM	00:00	7.34 pH	14.21 °C	526.82 µS/cm	1.46 mg/L	29.90 NTU	-59.7 mV	14.51 ft	100.00 ml/min
12/15/2020 9:55 AM	05:00	7.30 pH	15.61 °C	517.14 µS/cm	0.70 mg/L	37.61 NTU	-60.6 mV	15.00 ft	100.00 ml/min
12/15/2020 10:00 AM	10:00	7.31 pH	16.28 °C	515.08 µS/cm	0.96 mg/L	33.61 NTU	-108.1 mV	15.34 ft	100.00 ml/min
12/15/2020 10:05 AM	15:00	7.32 pH	16.55 °C	508.92 µS/cm	0.89 mg/L	24.82 NTU	-115.1 mV	15.61 ft	100.00 ml/min
12/15/2020 10:10 AM	20:00	7.34 pH	16.75 °C	498.96 µS/cm	0.60 mg/L	21.50 NTU	-69.4 mV	15.75 ft	100.00 ml/min
12/15/2020 10:15 AM	25:00	7.35 pH	16.80 °C	484.29 µS/cm	0.48 mg/L	19.06 NTU	-67.3 mV	15.85 ft	100.00 ml/min
12/15/2020 10:20 AM	30:00	7.35 pH	16.93 °C	475.04 µS/cm	0.57 mg/L	15.28 NTU	-65.8 mV	15.92 ft	100.00 ml/min
12/15/2020 10:25 AM	35:00	7.36 pH	17.09 °C	465.50 µS/cm	0.45 mg/L	14.47 NTU	-110.0 mV	15.97 ft	100.00 ml/min
12/15/2020 10:30 AM	40:00	7.36 pH	17.08 °C	459.56 µS/cm	0.35 mg/L	14.03 NTU	-108.6 mV	16.02 ft	100.00 ml/min
12/15/2020 10:35 AM	45:00	7.37 pH	17.28 °C	453.06 µS/cm	0.42 mg/L	12.14 NTU	-110.5 mV	16.05 ft	100.00 ml/min
12/15/2020 10:40 AM	50:00	7.37 pH	17.31 °C	447.42 µS/cm	0.32 mg/L	11.04 NTU	-61.9 mV	16.08 ft	100.00 ml/min

12/15/2020 10:45 AM	55:00	7.37 pH	17.26 °C	447.49 µS/cm	0.82 mg/L	10.63 NTU	-60.8 mV	16.10 ft	100.00 ml/min
12/15/2020 10:50 AM	01:00:00	7.38 pH	17.18 °C	447.76 µS/cm	0.74 mg/L	9.65 NTU	-58.5 mV	16.11 ft	100.00 ml/min
12/15/2020 10:55 AM	01:05:00	7.38 pH	16.87 °C	454.65 µS/cm	0.71 mg/L	8.89 NTU	-104.5 mV	16.11 ft	100.00 ml/min
12/15/2020 11:00 AM	01:10:00	7.39 pH	16.77 °C	455.20 µS/cm	0.44 mg/L	7.34 NTU	-101.8 mV	16.11 ft	100.00 ml/min
12/15/2020 11:05 AM	01:15:00	7.39 pH	17.04 °C	451.13 µS/cm	0.31 mg/L	6.63 NTU	-58.6 mV	16.11 ft	100.00 ml/min
12/15/2020 11:10 AM	01:20:00	7.40 pH	17.26 °C	448.17 µS/cm	0.31 mg/L	6.43 NTU	-56.8 mV	16.11 ft	100.00 ml/min
12/15/2020 11:15 AM	01:25:00	7.40 pH	17.20 °C	452.85 µS/cm	0.27 mg/L	5.33 NTU	-56.6 mV	16.11 ft	100.00 ml/min
12/15/2020 11:20 AM	01:30:00	7.39 pH	17.11 °C	453.03 µS/cm	0.22 mg/L	4.88 NTU	-55.8 mV	16.11 ft	100.00 ml/min

## Samples

Sample ID:	Description:
HGWA-43D	Grab Sample

# Low-Flow Test Report:

Test Date / Time: 12/15/2020 1:09:32 PM

Project: GP-Plant Hammond

Operator Name: Thomas Kessler

<b>Location Name: HGWA-44D</b> <b>Well Diameter: 2 in</b> <b>Casing Type: PVC</b> <b>Screen Length: 10 ft</b> <b>Top of Screen: 103.25 ft</b> <b>Initial Depth to Water: 14.4 ft</b>	<b>Pump Type: Bladder</b> <b>Tubing Type: Polyethylene</b> <b>Pump Intake From TOC: 108 ft</b> <b>Estimated Total Volume Pumped: 18.5 liters</b> <b>Flow Cell Volume: 90 ml</b> <b>Final Flow Rate: 100 ml/min</b> <b>Final Draw Down: 2.33 ft</b>	<b>Instrument Used: Aqua TROLL 400</b> <b>Serial Number: 728634</b>
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## Test Notes:

Five bottles: Two 1-L plastic bottles with HNO<sub>3</sub> for radium (EPA 9315/9320); one 500-mL plastic bottle for TDS (EPA 2540C); one 250-mL plastic bottle for Cl, F, SO<sub>4</sub> (EPA 300.0); and one 250-mL plastic bottle with HNO<sub>3</sub> for App. III and IV metals (EPA 6010D/6020B/7470A). Total depth = 111.3 ft.

## Weather Conditions:

Sunny, cold

## 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	
12/15/2020 1:09 PM	00:00	7.90 pH	15.77 °C	484.96 µS/cm	1.80 mg/L	63.27 NTU	-106.7 mV	14.40 ft	100.00 ml/min
12/15/2020 1:14 PM	05:00	7.90 pH	16.46 °C	498.20 µS/cm	1.07 mg/L	98.00 NTU	-105.8 mV	14.55 ft	100.00 ml/min
12/15/2020 1:19 PM	10:00	7.90 pH	16.38 °C	499.17 µS/cm	0.74 mg/L	114.00 NTU	-182.1 mV	14.70 ft	100.00 ml/min
12/15/2020 1:24 PM	15:00	7.90 pH	16.30 °C	497.96 µS/cm	0.64 mg/L	112.00 NTU	-186.3 mV	14.93 ft	100.00 ml/min
12/15/2020 1:29 PM	20:00	7.90 pH	16.37 °C	496.40 µS/cm	0.57 mg/L	139.00 NTU	-114.7 mV	15.13 ft	100.00 ml/min
12/15/2020 1:34 PM	25:00	7.90 pH	16.26 °C	494.15 µS/cm	0.52 mg/L	128.00 NTU	-191.2 mV	15.28 ft	100.00 ml/min
12/15/2020 1:39 PM	30:00	7.90 pH	16.24 °C	491.16 µS/cm	0.48 mg/L	92.00 NTU	-194.6 mV	15.45 ft	100.00 ml/min
12/15/2020 1:44 PM	35:00	7.90 pH	16.52 °C	488.12 µS/cm	0.43 mg/L	50.00 NTU	-119.5 mV	15.60 ft	100.00 ml/min
12/15/2020 1:49 PM	40:00	7.90 pH	16.59 °C	483.68 µS/cm	0.40 mg/L	61.95 NTU	-200.0 mV	15.65 ft	100.00 ml/min
12/15/2020 1:54 PM	45:00	7.90 pH	16.81 °C	479.85 µS/cm	0.37 mg/L	49.82 NTU	-123.8 mV	15.77 ft	100.00 ml/min
12/15/2020 1:59 PM	50:00	7.90 pH	16.55 °C	493.05 µS/cm	0.35 mg/L	58.41 NTU	-124.2 mV	15.82 ft	100.00 ml/min
12/15/2020 2:04 PM	55:00	7.90 pH	16.64 °C	494.17 µS/cm	0.35 mg/L	38.92 NTU	-126.4 mV	15.90 ft	100.00 ml/min

12/15/2020 2:09 PM	01:00:00	7.90 pH	16.69 °C	492.65 µS/cm	0.32 mg/L	28.72 NTU	-207.7 mV	15.90 ft	100.00 ml/min
12/15/2020 2:14 PM	01:05:00	7.89 pH	16.55 °C	490.67 µS/cm	0.30 mg/L	23.69 NTU	-126.3 mV	15.91 ft	100.00 ml/min
12/15/2020 2:19 PM	01:10:00	7.88 pH	16.37 °C	492.49 µS/cm	0.29 mg/L	21.04 NTU	-124.5 mV	15.95 ft	100.00 ml/min
12/15/2020 2:24 PM	01:15:00	7.89 pH	16.26 °C	489.74 µS/cm	0.28 mg/L	18.27 NTU	-124.8 mV	15.95 ft	100.00 ml/min
12/15/2020 2:29 PM	01:20:00	7.88 pH	16.10 °C	488.48 µS/cm	0.28 mg/L	17.32 NTU	-207.2 mV	16.00 ft	100.00 ml/min
12/15/2020 2:34 PM	01:25:00	7.88 pH	15.93 °C	489.52 µS/cm	0.27 mg/L	15.96 NTU	-126.3 mV	16.05 ft	100.00 ml/min
12/15/2020 2:39 PM	01:30:00	7.88 pH	15.96 °C	489.65 µS/cm	0.26 mg/L	18.00 NTU	-126.0 mV	16.00 ft	100.00 ml/min
12/15/2020 2:44 PM	01:35:00	7.88 pH	15.96 °C	486.86 µS/cm	0.26 mg/L	16.95 NTU	-206.9 mV	16.00 ft	100.00 ml/min
12/15/2020 2:49 PM	01:40:00	7.88 pH	16.15 °C	485.86 µS/cm	0.25 mg/L	16.43 NTU	-207.8 mV	16.05 ft	100.00 ml/min
12/15/2020 2:54 PM	01:45:00	7.88 pH	16.01 °C	489.56 µS/cm	0.24 mg/L	16.22 NTU	-125.5 mV	16.05 ft	100.00 ml/min
12/15/2020 2:59 PM	01:50:00	7.88 pH	15.89 °C	489.90 µS/cm	0.24 mg/L	16.47 NTU	-124.1 mV	16.05 ft	100.00 ml/min
12/15/2020 3:04 PM	01:55:00	7.88 pH	15.74 °C	490.53 µS/cm	0.25 mg/L	13.59 NTU	-204.7 mV	16.05 ft	100.00 ml/min
12/15/2020 3:09 PM	02:00:00	7.87 pH	15.83 °C	489.04 µS/cm	0.25 mg/L	14.49 NTU	-206.8 mV	16.05 ft	100.00 ml/min
12/15/2020 3:14 PM	02:05:00	7.87 pH	16.38 °C	488.60 µS/cm	0.22 mg/L	14.19 NTU	-126.3 mV	16.20 ft	100.00 ml/min
12/15/2020 3:19 PM	02:10:00	7.87 pH	16.44 °C	486.41 µS/cm	0.19 mg/L	13.34 NTU	-209.6 mV	16.30 ft	100.00 ml/min
12/15/2020 3:24 PM	02:15:00	7.86 pH	16.46 °C	487.69 µS/cm	0.17 mg/L	13.09 NTU	-127.4 mV	16.35 ft	100.00 ml/min
12/15/2020 3:29 PM	02:20:00	7.88 pH	16.38 °C	491.48 µS/cm	0.16 mg/L	13.05 NTU	-126.5 mV	16.43 ft	100.00 ml/min
12/15/2020 3:34 PM	02:25:00	7.88 pH	16.35 °C	491.38 µS/cm	0.15 mg/L	12.11 NTU	-125.1 mV	16.50 ft	100.00 ml/min
12/15/2020 3:39 PM	02:30:00	7.88 pH	16.30 °C	489.46 µS/cm	0.15 mg/L	12.06 NTU	-207.6 mV	16.50 ft	100.00 ml/min
12/15/2020 3:44 PM	02:35:00	7.88 pH	16.30 °C	488.61 µS/cm	0.14 mg/L	11.87 NTU	-208.3 mV	16.60 ft	100.00 ml/min
12/15/2020 3:49 PM	02:40:00	7.87 pH	16.28 °C	488.02 µS/cm	0.13 mg/L	11.04 NTU	-124.4 mV	16.62 ft	100.00 ml/min
12/15/2020 3:54 PM	02:45:00	7.88 pH	16.30 °C	487.19 µS/cm	0.13 mg/L	11.03 NTU	-206.7 mV	16.65 ft	100.00 ml/min
12/15/2020 3:59 PM	02:50:00	7.88 pH	16.30 °C	487.66 µS/cm	0.13 mg/L	10.78 NTU	-122.7 mV	16.67 ft	100.00 ml/min
12/15/2020 4:04 PM	02:55:00	7.88 pH	16.28 °C	486.45 µS/cm	0.12 mg/L	8.75 NTU	-204.0 mV	16.70 ft	100.00 ml/min
12/15/2020 4:09 PM	03:00:00	7.86 pH	16.28 °C	486.14 µS/cm	0.12 mg/L	9.69 NTU	-203.7 mV	16.69 ft	100.00 ml/min
12/15/2020 4:14 PM	03:05:00	7.87 pH	16.32 °C	488.28 µS/cm	0.12 mg/L	9.00 NTU	-203.5 mV	16.73 ft	100.00 ml/min

## Samples

<b>Sample ID:</b>	<b>Description:</b>
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HGWA-44D	Grab Sample
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Created using VuSitu from In-Situ, Inc.

January 2021



# Low-Flow Test Report:

Test Date / Time: 1/20/2021 9:45:34 AM

Project: GP-Plant Hammond (5)

Operator Name: Connor Cain

<b>Location Name: HGWA-42D</b> <b>Well Diameter: 2 in</b> <b>Casing Type: PVC</b> <b>Initial Depth to Water: 11.91 ft</b>	<b>Pump Type: QED</b> <b>Tubing Type: polyethylene</b> <b>Tubing Inner Diameter: 0.17 in</b> <b>Estimated Total Volume Pumped: 6076.667 ml</b> <b>Flow Cell Volume: 90 ml</b> <b>Final Flow Rate: 200 ml/min</b> <b>Final Draw Down: -11.478 ft</b>	<b>Instrument Used: Aqua TROLL 400</b> <b>Serial Number: 728638</b>
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## Test Notes:

## Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 5	
1/20/2021 9:45 AM	00:00	7.60 pH	16.23 °C	281.02 µS/cm	0.84 mg/L	0.81 NTU	-77.5 mV	11.93 ft	200.00 ml/min
1/20/2021 9:50 AM	05:00	7.62 pH	17.31 °C	277.18 µS/cm	0.39 mg/L	1.08 NTU	-73.2 mV	12.54 ft	200.00 ml/min
1/20/2021 9:55 AM	10:00	7.64 pH	17.40 °C	276.68 µS/cm	0.26 mg/L	1.71 NTU	-73.3 mV	12.91 ft	200.00 ml/min
1/20/2021 10:00 AM	15:00	7.65 pH	17.36 °C	276.87 µS/cm	0.21 mg/L	0.42 NTU	-142.5 mV	13.07 ft	200.00 ml/min
1/20/2021 10:05 AM	20:00	7.66 pH	17.63 °C	277.01 µS/cm	0.48 mg/L	1.28 NTU	-69.7 mV	13.18 ft	200.00 ml/min
1/20/2021 10:07 AM	21:55	7.65 pH	17.62 °C	275.34 µS/cm	0.36 mg/L	0.53 NTU	-66.9 mV	13.18 ft	200.00 ml/min
1/20/2021 10:10 AM	25:23	7.67 pH	17.49 °C	276.41 µS/cm	0.27 mg/L	0.59 NTU	-69.6 mV	13.18 ft	200.00 ml/min
1/20/2021 10:15 AM	30:23	7.68 pH	17.65 °C	276.16 µS/cm	0.20 mg/L	0.35 NTU	-131.4 mV	13.18 ft	200.00 ml/min

## Samples

Sample ID:	Description:
HGWA-42D	Grab sample

# Low-Flow Test Report:

Test Date / Time: 1/19/2021 2:58:28 PM

Project: GP-Plant Hammond (4)

Operator Name: Connor Cain

<b>Location Name: HGWA-43D</b> <b>Well Diameter: 2 in</b> <b>Casing Type: PVC</b> <b>Initial Depth to Water: 16.76 ft</b>	<b>Pump Type: QED</b> <b>Tubing Type: polyethylene</b> <b>Tubing Inner Diameter: 0.17 in</b> <b>Estimated Total Volume Pumped: 13500 ml</b> <b>Flow Cell Volume: 90 ml</b> <b>Final Flow Rate: 100 ml/min</b> <b>Final Draw Down: 20.73 ft</b>	<b>Instrument Used: Aqua TROLL 400</b> <b>Serial Number: 728638</b>
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## Test Notes:

## Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 5	
1/19/2021 2:58 PM	00:00	7.49 pH	15.85 °C	0.53 µS/cm	7.61 mg/L	38.60 NTU	-69.0 mV	18.84 ft	200.00 ml/min
1/19/2021 3:03 PM	05:00	7.44 pH	15.96 °C	0.53 µS/cm	5.84 mg/L	30.20 NTU	-66.7 mV	19.43 ft	200.00 ml/min
1/19/2021 3:08 PM	10:00	7.42 pH	15.97 °C	0.53 µS/cm	4.66 mg/L	25.00 NTU	-122.3 mV	19.86 ft	200.00 ml/min
1/19/2021 3:13 PM	15:00	7.40 pH	15.98 °C	0.53 µS/cm	3.85 mg/L	14.00 NTU	-62.8 mV	20.32 ft	200.00 ml/min
1/19/2021 3:18 PM	20:00	7.40 pH	15.87 °C	0.52 µS/cm	2.77 mg/L	11.60 NTU	-116.6 mV	20.44 ft	200.00 ml/min
1/19/2021 3:23 PM	25:00	7.39 pH	15.84 °C	0.52 µS/cm	2.30 mg/L	10.68 NTU	-56.1 mV	20.49 ft	200.00 ml/min
1/19/2021 3:28 PM	30:00	7.39 pH	15.74 °C	0.51 µS/cm	2.20 mg/L	8.80 NTU	-106.6 mV	20.66 ft	200.00 ml/min
1/19/2021 3:33 PM	35:00	7.39 pH	15.75 °C	0.51 µS/cm	2.01 mg/L	8.22 NTU	-49.7 mV	20.74 ft	200.00 ml/min
1/19/2021 3:38 PM	40:00	7.39 pH	15.60 °C	0.51 µS/cm	1.54 mg/L	6.60 NTU	-99.3 mV	20.76 ft	200.00 ml/min
1/19/2021 3:43 PM	45:00	7.39 pH	15.83 °C	0.50 µS/cm	1.76 mg/L	6.79 NTU	-96.2 mV	20.78 ft	100.00 ml/min
1/19/2021 3:48 PM	50:00	7.40 pH	15.43 °C	0.50 µS/cm	1.81 mg/L	7.01 NTU	-90.9 mV	20.79 ft	100.00 ml/min
1/19/2021 3:53 PM	55:00	7.38 pH	15.16 °C	0.50 µS/cm	0.90 mg/L	4.52 NTU	-91.3 mV	20.72 ft	100.00 ml/min
1/19/2021 3:58 PM	01:00:00	7.39 pH	15.14 °C	0.49 µS/cm	1.30 mg/L	4.32 NTU	-87.6 mV	20.69 ft	100.00 ml/min
1/19/2021 4:03 PM	01:05:00	7.37 pH	15.65 °C	0.50 µS/cm	1.15 mg/L	4.04 NTU	-87.6 mV	20.68 ft	100.00 ml/min
1/19/2021 4:08 PM	01:10:00	7.39 pH	15.74 °C	0.49 µS/cm	1.59 mg/L	6.02 NTU	-82.9 mV	20.68 ft	100.00 ml/min

1/19/2021 4:13 PM	01:15:00	7.39 pH	15.88 °C	0.49 µS/cm	1.41 mg/L	4.49 NTU	-37.4 mV	20.71 ft	100.00 ml/min
1/19/2021 4:18 PM	01:20:00	7.39 pH	15.46 °C	0.49 µS/cm	1.11 mg/L	4.23 NTU	-80.1 mV	20.70 ft	100.00 ml/min
1/19/2021 4:23 PM	01:25:00	7.38 pH	15.21 °C	0.49 µS/cm	1.02 mg/L	3.20 NTU	-36.1 mV	20.74 ft	100.00 ml/min
1/19/2021 4:28 PM	01:30:00	7.39 pH	14.79 °C	0.49 µS/cm	0.98 mg/L	3.88 NTU	-78.1 mV	20.70 ft	100.00 ml/min

## Samples

Sample ID:	Description:
HGWA-43D	Grab sample

# Low-Flow Test Report:

Test Date / Time: 1/19/2021 2:36:54 PM

Project: GP-Plant Hammond (3)

Operator Name: Chad Russo

<b>Location Name: HGWA-44D</b> <b>Well Diameter: 2 in</b> <b>Casing Type: PVC</b> <b>Screen Length: 10 ft</b> <b>Top of Screen: 103 ft</b> <b>Initial Depth to Water: 16.28 ft</b>	<b>Pump Type: Bladder</b> <b>Tubing Type: polyethylene</b> <b>Tubing Inner Diameter: 0.17 in</b> <b>Estimated Total Volume Pumped: 20500 ml</b> <b>Flow Cell Volume: 90 ml</b> <b>Final Flow Rate: 100 ml/min</b> <b>Final Draw Down: 2.32 ft</b>	<b>Instrument Used: Aqua TROLL 400</b> <b>Serial Number: 728634</b>
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## Test Notes:

## Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
1/19/2021 2:36 PM	00:00	7.83 pH	15.29 °C	506.34 µS/cm	1.46 mg/L	--	-91.3 mV	16.28 ft	200.00 ml/min
1/19/2021 2:41 PM	05:00	7.84 pH	16.03 °C	500.24 µS/cm	0.44 mg/L	82.00 NTU	-97.3 mV	17.19 ft	200.00 ml/min
1/19/2021 2:46 PM	10:00	7.85 pH	16.14 °C	495.76 µS/cm	0.31 mg/L	98.00 NTU	-98.2 mV	17.51 ft	200.00 ml/min
1/19/2021 2:51 PM	15:00	7.86 pH	16.16 °C	491.34 µS/cm	0.26 mg/L	77.00 NTU	-99.1 mV	18.04 ft	200.00 ml/min
1/19/2021 2:56 PM	20:00	7.85 pH	16.14 °C	489.93 µS/cm	0.22 mg/L	22.00 NTU	-100.6 mV	18.40 ft	200.00 ml/min
1/19/2021 3:01 PM	25:00	7.84 pH	15.74 °C	485.07 µS/cm	0.22 mg/L	44.40 NTU	-98.0 mV	18.35 ft	100.00 ml/min
1/19/2021 3:06 PM	30:00	7.84 pH	15.57 °C	484.09 µS/cm	0.24 mg/L	34.10 NTU	-98.8 mV	18.35 ft	100.00 ml/min
1/19/2021 3:11 PM	35:00	7.84 pH	15.58 °C	481.64 µS/cm	0.25 mg/L	33.00 NTU	-99.5 mV	18.45 ft	100.00 ml/min
1/19/2021 3:16 PM	40:00	7.84 pH	15.59 °C	479.88 µS/cm	0.24 mg/L	25.90 NTU	-99.5 mV	18.50 ft	100.00 ml/min
1/19/2021 3:21 PM	45:00	7.83 pH	15.59 °C	483.16 µS/cm	0.22 mg/L	18.50 NTU	-96.8 mV	18.55 ft	100.00 ml/min
1/19/2021 3:26 PM	50:00	7.83 pH	15.56 °C	482.00 µS/cm	0.20 mg/L	19.20 NTU	-96.5 mV	18.60 ft	100.00 ml/min
1/19/2021 3:31 PM	55:00	7.82 pH	15.40 °C	479.95 µS/cm	0.20 mg/L	16.50 NTU	-95.5 mV	18.60 ft	100.00 ml/min
1/19/2021 3:36 PM	01:00:00	7.83 pH	15.25 °C	482.48 µS/cm	0.20 mg/L	14.60 NTU	-95.8 mV	18.55 ft	100.00 ml/min
1/19/2021 3:41 PM	01:05:00	7.83 pH	15.24 °C	482.12 µS/cm	0.20 mg/L	14.60 NTU	-94.8 mV	18.55 ft	100.00 ml/min
1/19/2021 3:46 PM	01:10:00	7.83 pH	15.29 °C	481.12 µS/cm	0.19 mg/L	14.50 NTU	-95.1 mV	18.50 ft	100.00 ml/min

1/19/2021 3:51 PM	01:15:00	7.83 pH	15.29 °C	480.83 µS/cm	0.19 mg/L	12.90 NTU	-94.8 mV	18.55 ft	100.00 ml/min
1/19/2021 3:56 PM	01:20:00	7.83 pH	15.29 °C	479.33 µS/cm	0.18 mg/L	12.80 NTU	-94.6 mV	18.55 ft	100.00 ml/min
1/19/2021 4:01 PM	01:25:00	7.84 pH	15.29 °C	481.00 µS/cm	0.18 mg/L	11.40 NTU	-94.2 mV	18.55 ft	100.00 ml/min
1/19/2021 4:06 PM	01:30:00	7.84 pH	15.16 °C	479.47 µS/cm	0.18 mg/L	10.15 NTU	-93.1 mV	18.40 ft	100.00 ml/min
1/19/2021 4:11 PM	01:35:00	7.84 pH	15.03 °C	481.23 µS/cm	0.18 mg/L	13.40 NTU	-92.7 mV	18.50 ft	100.00 ml/min
1/19/2021 4:16 PM	01:40:00	7.84 pH	15.25 °C	478.27 µS/cm	0.18 mg/L	22.80 NTU	-93.1 mV	18.50 ft	100.00 ml/min
1/19/2021 4:21 PM	01:45:00	7.84 pH	15.14 °C	477.80 µS/cm	0.18 mg/L	20.30 NTU	-91.5 mV	18.50 ft	100.00 ml/min
1/19/2021 4:26 PM	01:50:00	7.84 pH	15.02 °C	475.66 µS/cm	0.18 mg/L	16.10 NTU	-90.8 mV	18.50 ft	100.00 ml/min
1/19/2021 4:31 PM	01:55:00	7.85 pH	14.91 °C	478.31 µS/cm	0.16 mg/L	12.39 NTU	-90.1 mV	18.60 ft	100.00 ml/min
1/19/2021 4:36 PM	02:00:00	7.84 pH	14.59 °C	482.53 µS/cm	0.15 mg/L	11.95 NTU	-88.5 mV	18.60 ft	100.00 ml/min
1/19/2021 4:41 PM	02:05:00	7.85 pH	14.52 °C	486.75 µS/cm	0.15 mg/L	12.84 NTU	-88.6 mV	18.60 ft	100.00 ml/min
1/19/2021 4:46 PM	02:10:00	7.86 pH	14.42 °C	483.95 µS/cm	0.15 mg/L	11.56 NTU	-87.4 mV	18.60 ft	100.00 ml/min
1/19/2021 4:51 PM	02:15:00	7.85 pH	14.41 °C	484.00 µS/cm	0.14 mg/L	11.67 NTU	-87.0 mV	18.60 ft	100.00 ml/min
1/19/2021 4:56 PM	02:20:00	7.86 pH	14.30 °C	483.23 µS/cm	0.15 mg/L	12.43 NTU	-158.9 mV	18.60 ft	100.00 ml/min
1/19/2021 5:01 PM	02:25:00	7.85 pH	14.34 °C	485.05 µS/cm	0.15 mg/L	12.12 NTU	-87.2 mV	18.60 ft	100.00 ml/min
1/19/2021 5:06 PM	02:30:00	7.87 pH	14.39 °C	484.74 µS/cm	0.14 mg/L	10.12 NTU	-159.9 mV	18.60 ft	100.00 ml/min
1/19/2021 5:11 PM	02:35:00	7.87 pH	14.34 °C	484.08 µS/cm	0.15 mg/L	10.94 NTU	-86.3 mV	18.60 ft	100.00 ml/min
1/19/2021 5:16 PM	02:40:00	7.87 pH	14.24 °C	489.94 µS/cm	0.15 mg/L	11.81 NTU	-158.9 mV	18.60 ft	100.00 ml/min
1/19/2021 5:21 PM	02:45:00	7.86 pH	14.25 °C	491.19 µS/cm	0.15 mg/L	11.14 NTU	-87.4 mV	18.60 ft	100.00 ml/min
1/19/2021 5:26 PM	02:50:00	7.85 pH	14.21 °C	497.24 µS/cm	0.16 mg/L	10.54 NTU	-84.7 mV	18.60 ft	100.00 ml/min
1/19/2021 5:31 PM	02:55:00	7.85 pH	14.41 °C	494.66 µS/cm	0.16 mg/L	10.42 NTU	-157.5 mV	18.60 ft	100.00 ml/min
1/19/2021 5:36 PM	03:00:00	7.86 pH	14.48 °C	493.23 µS/cm	0.16 mg/L	9.73 NTU	-158.4 mV	18.60 ft	100.00 ml/min

## Samples

Sample ID:	Description:
HGWA-44D	Grab

February 2021

# Low-Flow Test Report:

Test Date / Time: 2/8/2021 3:34:14 PM

Project: Plant Hammond

Operator Name: Chad Russo

<b>Location Name: HGWA-1</b> <b>Well Diameter: 2 in</b> <b>Casing Type: PVC</b> <b>Screen Length: 10 ft</b> <b>Top of Screen: 22.5 ft</b> <b>Total Depth: 32.5 ft</b> <b>Initial Depth to Water: 13.59 ft</b>	<b>Pump Type: Bladder</b> <b>Tubing Type: Polyethylene</b> <b>Pump Intake From TOC: 28 ft</b> <b>Estimated Total Volume Pumped: 6.68 liter</b> <b>Flow Cell Volume: 90 ml</b> <b>Final Flow Rate: 200 ml/min</b> <b>Final Draw Down: 0.66 ft</b>	<b>Instrument Used: Aqua TROLL 400</b> <b>Serial Number: 728634</b>
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## Test Notes:

Four bottles: Two 1-L plastic bottles with HNO<sub>3</sub> for radium (EPA 9315/9320); one 120-mL plastic bottle for F (EPA 300.0); and one 250-mL plastic bottle with HNO<sub>3</sub> for App. IV metals (EPA 6010D/6020B/7470A).

## 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	+/- 10	+/- 10	+/- 0.3	
2/8/2021 3:34 PM	00:00	7.14 pH	17.08 °C	579.20 µS/cm	2.07 mg/L	--	70.9 mV	13.59 ft	200.00 ml/min
2/8/2021 3:39 PM	05:00	7.15 pH	17.13 °C	583.74 µS/cm	1.41 mg/L	--	47.2 mV	14.15 ft	200.00 ml/min
2/8/2021 3:40 PM	06:44	7.14 pH	17.19 °C	567.43 µS/cm	1.19 mg/L	8.62 NTU	46.0 mV	14.15 ft	200.00 ml/min
2/8/2021 3:45 PM	11:44	7.13 pH	17.27 °C	584.98 µS/cm	0.83 mg/L	4.92 NTU	53.6 mV	14.20 ft	200.00 ml/min
2/8/2021 3:50 PM	16:44	7.13 pH	17.34 °C	584.50 µS/cm	0.68 mg/L	3.22 NTU	35.0 mV	14.20 ft	200.00 ml/min
2/8/2021 3:55 PM	21:44	7.12 pH	17.40 °C	580.08 µS/cm	0.60 mg/L	2.44 NTU	31.9 mV	14.25 ft	200.00 ml/min
2/8/2021 3:57 PM	23:24	7.12 pH	17.43 °C	558.18 µS/cm	0.56 mg/L	2.44 NTU	31.9 mV	14.25 ft	200.00 ml/min
2/8/2021 4:02 PM	28:24	7.12 pH	17.43 °C	582.77 µS/cm	0.46 mg/L	2.08 NTU	34.2 mV	14.25 ft	200.00 ml/min
2/8/2021 4:07 PM	33:24	7.11 pH	17.39 °C	587.09 µS/cm	0.40 mg/L	1.74 NTU	29.3 mV	14.25 ft	200.00 ml/min

## Samples

Sample ID:	Description:
HGWA-1	Grab

# Low-Flow Test Report:

Test Date / Time: 2/9/2021 9:46:32 AM

Project: GP-Plant Hammond

Operator Name: Thomas Kessler

<b>Location Name: HGWA-2</b> <b>Well Diameter: 2 in</b> <b>Casing Type: PVC</b> <b>Screen Length: 10 ft</b> <b>Top of Screen: 17.95 ft</b> <b>Total Depth: 28.45 ft</b> <b>Initial Depth to Water: 8.1 ft</b>	<b>Pump Type: Bladder</b> <b>Tubing Type: Polyethylene</b> <b>Pump Intake From TOC: 22.95 ft</b> <b>Estimated Total Volume Pumped: 9.8 liter</b> <b>Flow Cell Volume: 90 ml</b> <b>Final Flow Rate: 200 ml/min</b> <b>Final Draw Down: 0.05 ft</b>	<b>Instrument Used: Aqua TROLL 400</b> <b>Serial Number: 728541</b>
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## Test Notes:

Four bottles: Two 1-L plastic bottles with HNO<sub>3</sub> for radium (EPA 9315/9320); one 120-mL plastic bottle for F (EPA 300.0); and one 250-mL plastic bottle with HNO<sub>3</sub> for App. IV metals (EPA 6010D/6020B/7470A).

## Weather Conditions:

Cloudy, 45 degrees

## Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.03	
2/9/2021 9:46 AM	00:00	5.84 pH	14.99 °C	229.06 µS/cm	6.18 mg/L	26.90 NTU	101.0 mV	8.10 ft	200.00 ml/min
2/9/2021 9:49 AM	03:18	5.68 pH	16.11 °C	249.70 µS/cm	3.22 mg/L	24.00 NTU	103.9 mV	8.14 ft	200.00 ml/min
2/9/2021 9:50 AM	04:09	5.66 pH	16.20 °C	246.42 µS/cm	2.98 mg/L	24.00 NTU	94.6 mV	8.14 ft	200.00 ml/min
2/9/2021 9:56 AM	09:45	5.50 pH	16.47 °C	218.63 µS/cm	1.47 mg/L	17.60 NTU	108.7 mV	8.14 ft	200.00 ml/min
2/9/2021 10:01 AM	14:45	5.49 pH	16.52 °C	220.74 µS/cm	1.55 mg/L	12.50 NTU	97.9 mV	8.14 ft	200.00 ml/min
2/9/2021 10:06 AM	19:45	5.47 pH	16.56 °C	220.10 µS/cm	1.91 mg/L	12.30 NTU	99.6 mV	8.14 ft	200.00 ml/min
2/9/2021 10:11 AM	24:45	5.44 pH	16.62 °C	217.52 µS/cm	1.55 mg/L	8.22 NTU	97.3 mV	8.14 ft	200.00 ml/min
2/9/2021 10:16 AM	29:45	5.43 pH	16.64 °C	216.58 µS/cm	1.07 mg/L	7.46 NTU	103.0 mV	8.15 ft	200.00 ml/min
2/9/2021 10:21 AM	34:45	5.44 pH	16.69 °C	216.07 µS/cm	0.54 mg/L	6.90 NTU	104.8 mV	8.15 ft	200.00 ml/min
2/9/2021 10:26 AM	39:45	5.42 pH	16.56 °C	213.99 µS/cm	0.27 mg/L	4.67 NTU	103.4 mV	8.15 ft	200.00 ml/min
2/9/2021 10:31 AM	44:45	5.42 pH	16.53 °C	212.92 µS/cm	0.27 mg/L	4.71 NTU	105.1 mV	8.15 ft	200.00 ml/min
2/9/2021 10:36 AM	49:45	5.42 pH	16.48 °C	214.52 µS/cm	0.24 mg/L	4.32 NTU	105.5 mV	8.15 ft	200.00 ml/min



**Samples**

Sample ID:	Description:
HGWA-2	Grab Sample.

# Low-Flow Test Report:

Test Date / Time: 2/9/2021 11:22:55 AM

Project: GP-Plant Hammond

Operator Name: Thomas Kessler

<b>Location Name: HGWA-3</b> <b>Well Diameter: 2 in</b> <b>Casing Type: PVC</b> <b>Screen Length: 10 ft</b> <b>Top of Screen: 34.87 ft</b> <b>Total Depth: 34.87 ft</b> <b>Initial Depth to Water: 7.7 ft</b>	<b>Pump Type: Bladder</b> <b>Tubing Type: Polyethylene</b> <b>Pump Intake From TOC: 39.87 ft</b> <b>Estimated Total Volume Pumped: 6 liter</b> <b>Flow Cell Volume: 90 ml</b> <b>Final Flow Rate: 200 ml/min</b> <b>Final Draw Down: 0 ft</b>	<b>Instrument Used: Aqua TROLL 400</b> <b>Serial Number: 728541</b>
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## Test Notes:

Four bottles: Two 1-L plastic bottles with HNO<sub>3</sub> for radium (EPA 9315/9320); one 120-mL plastic bottle for F (EPA 300.0); and one 250-mL plastic bottle with HNO<sub>3</sub> for App. IV metals (EPA 6010D/6020B/7470A).

## Weather Conditions:

Sunny, 46 degrees

## Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.03	
2/9/2021 11:22 AM	00:00	7.01 pH	17.95 °C	451.18 µS/cm	1.75 mg/L	4.20 NTU	-33.3 mV	7.70 ft	200.00 ml/min
2/9/2021 11:27 AM	05:00	7.11 pH	17.08 °C	461.05 µS/cm	0.44 mg/L	2.49 NTU	-48.0 mV	7.70 ft	200.00 ml/min
2/9/2021 11:32 AM	10:00	7.15 pH	17.23 °C	457.34 µS/cm	0.33 mg/L	1.24 NTU	-53.3 mV	7.70 ft	200.00 ml/min
2/9/2021 11:37 AM	15:00	7.17 pH	17.28 °C	455.26 µS/cm	0.27 mg/L	1.54 NTU	-92.6 mV	7.70 ft	200.00 ml/min
2/9/2021 11:42 AM	20:00	7.20 pH	17.28 °C	455.00 µS/cm	0.27 mg/L	1.52 NTU	-95.6 mV	7.70 ft	200.00 ml/min
2/9/2021 11:47 AM	25:00	7.22 pH	17.40 °C	453.59 µS/cm	0.23 mg/L	1.39 NTU	-97.9 mV	7.70 ft	200.00 ml/min
2/9/2021 11:52 AM	30:00	7.23 pH	17.54 °C	451.62 µS/cm	0.22 mg/L	0.86 NTU	-99.4 mV	7.70 ft	200.00 ml/min

## Samples

Sample ID:	Description:
HGWA-3	Grab Sample.

# Low-Flow Test Report:

Test Date / Time: 2/8/2021 3:34:36

PM Project: GP-Plant Hammond

Operator Name: Aaron Reeder

<b>Location Name: HGWA-4</b> <b>Well Diameter: 2 in</b> <b>Casing Type: PVC</b> <b>Screen Length: 10 ft</b> <b>Top of Screen: 14.88 ft Initial</b> <b>Total Depth: 24.88 ft</b> <b>Depth to Water: 7.50 ft</b>	<b>Pump Type: QED MP50</b> <b>Tubing Type: polyethylene</b> <b>Tubing Inner Diameter: 0.17 in</b> <b>Estimated Total Volume Pumped: 4 liter</b> <b>Flow Cell Volume: 90 ml</b> <b>Final Flow Rate: 200 ml/min Final</b> <b>Draw Down: 1.50 ft</b>	<b>Instrument Used: Aqua TROLL 400</b> <b>Serial Number: 728623</b>
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## Test Notes:

Four bottles: Two 1-L plastic bottles with HNO<sub>3</sub> for radium (EPA 9315/9320); one 120-mL plastic bottle for F (EPA 300.0); and one 250-mL plastic bottle with HNO<sub>3</sub> for App. IV metals (EPA 6010D/6020B/7470A).

## 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	
2/8/2021 3:34 PM	00:00	5.01 pH	16.67 °C	67.94 µS/cm	2.47 mg/L	--	142.8 mV	7.50 ft	200.00 ml/min
2/8/2021 3:39 PM	05:00	4.99 pH	16.70 °C	67.76 µS/cm	2.37 mg/L	4.83 NTU	141.2 mV	6.00 ft	200.00 ml/min
2/8/2021 3:44 PM	10:00	4.97 pH	16.72 °C	67.06 µS/cm	2.30 mg/L	4.53 NTU	140.1 mV	6.00 ft	200.00 ml/min
2/8/2021 3:49 PM	15:00	4.95 pH	16.67 °C	67.26 µS/cm	2.28 mg/L	3.47 NTU	140.0 mV	6.00 ft	200.00 ml/min
2/8/2021 3:54 PM	20:00	4.94 pH	16.79 °C	67.39 µS/cm	2.25 mg/L	4.16 NTU	139.7 mV	6.00 ft	200.00 ml/min

## Samples

Sample ID:	Description:
HGWA-4	Grab Sample.

# Low-Flow Test Report:

Test Date / Time: 2/9/2021 10:01:52 AM

Project: GP-Plant Hammond

Operator Name: Aaron Reeder

<b>Location Name: HGWA-5</b> <b>Well Diameter: 2 in</b> <b>Casing Type: PVC</b> <b>Screen Length: 10 ft</b> <b>Top of Screen: 17.95 ft</b> <b>Total Depth: 27.95 ft</b> <b>Initial Depth to Water: 5.5 ft</b>	<b>Pump Type: QED MP50</b> <b>Tubing Type: polyethylene</b> <b>Tubing Inner Diameter: 0.17 in</b> <b>Pump Intake From TOC: 22.95 ft</b> <b>Estimated Total Volume Pumped: 9 liter</b> <b>Flow Cell Volume: 90 ml</b> <b>Final Flow Rate: 200 ml/min</b> <b>Final Draw Down: 0.9 ft</b>	<b>Instrument Used: Aqua TROLL 400</b> <b>Serial Number: 728623</b>
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## Test Notes:

Four bottles: Two 1-L plastic bottles with HNO<sub>3</sub> for radium (EPA 9315/9320); one 120-mL plastic bottle for F (EPA 300.0); and one 250-mL plastic bottle with HNO<sub>3</sub> for App. IV metals (EPA 6010D/6020B/7470A).

## Weather Conditions:

Sunny

## 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	
2/9/2021 10:01 AM	00:00	6.27 pH	16.34 °C	208.31 µS/cm	2.26 mg/L	--	69.5 mV	5.50 ft	200.00 ml/min
2/9/2021 10:06 AM	05:00	6.28 pH	16.69 °C	211.41 µS/cm	1.10 mg/L	7.74 NTU	59.0 mV	6.40 ft	200.00 ml/min
2/9/2021 10:11 AM	10:00	6.31 pH	16.74 °C	214.46 µS/cm	0.84 mg/L	6.71 NTU	55.2 mV	6.45 ft	200.00 ml/min
2/9/2021 10:16 AM	15:00	6.31 pH	16.65 °C	216.53 µS/cm	0.71 mg/L	6.59 NTU	49.4 mV	6.40 ft	200.00 ml/min
2/9/2021 10:21 AM	20:00	6.34 pH	16.53 °C	216.90 µS/cm	0.72 mg/L	6.67 NTU	47.5 mV	6.40 ft	200.00 ml/min
2/9/2021 10:26 AM	25:00	6.33 pH	16.63 °C	215.21 µS/cm	0.57 mg/L	6.55 NTU	46.3 mV	6.40 ft	200.00 ml/min
2/9/2021 10:31 AM	30:00	6.35 pH	16.66 °C	219.36 µS/cm	0.53 mg/L	7.02 NTU	43.0 mV	6.40 ft	200.00 ml/min
2/9/2021 10:36 AM	35:00	6.36 pH	16.58 °C	220.82 µS/cm	0.51 mg/L	6.21 NTU	40.3 mV	6.40 ft	200.00 ml/min
2/9/2021 10:41 AM	40:00	6.35 pH	16.61 °C	218.16 µS/cm	0.49 mg/L	6.09 NTU	37.2 mV	6.40 ft	200.00 ml/min
2/9/2021 10:46 AM	45:00	6.35 pH	16.66 °C	216.84 µS/cm	0.48 mg/L	4.82 NTU	37.2 mV	6.40 ft	200.00 ml/min

## Samples

Sample ID:	Description:
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HGWA-5

Grab Sample.

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# Low-Flow Test Report:

Test Date / Time: 2/9/2021 11:20:40 AM

Project: GP-Plant Hammond

Operator Name: Aaron Reeder

<b>Location Name: HGWA-6</b> <b>Well Diameter: 2 in</b> <b>Casing Type: PVC</b> <b>Screen Length: 10 ft</b> <b>Top of Screen: 40.52 ft</b> <b>Total Depth: 50.52 ft</b> <b>Initial Depth to Water: 5.41 ft</b>	<b>Pump Type: QED MP50</b> <b>Tubing Type: polyethylene</b> <b>Tubing Inner Diameter: 0.17 in</b> <b>Pump Intake From TOC: 45.52 ft</b> <b>Estimated Total Volume Pumped: 8 liter</b> <b>Flow Cell Volume: 90 ml</b> <b>Final Flow Rate: 200 ml/min</b> <b>Final Draw Down: 0.84 ft</b>	<b>Instrument Used: Aqua TROLL 400</b> <b>Serial Number: 728623</b>
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## Test Notes:

Four bottles: Two 1-L plastic bottles with HNO<sub>3</sub> for radium (EPA 9315/9320); one 120-mL plastic bottle for F (EPA 300.0); and one 250-mL plastic bottle with HNO<sub>3</sub> for App. IV metals (EPA 6010D/6020B/7470A).

## Weather Conditions:

Sunny

## 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	
2/9/2021 11:20 AM	00:00	7.07 pH	18.48 °C	365.44 µS/cm	2.66 mg/L	--	23.1 mV	5.41 ft	200.00 ml/min
2/9/2021 11:25 AM	05:00	7.29 pH	17.55 °C	373.51 µS/cm	1.09 mg/L	8.98 NTU	3.6 mV	6.55 ft	200.00 ml/min
2/9/2021 11:30 AM	10:00	7.38 pH	17.54 °C	183.83 µS/cm	1.28 mg/L	2.19 NTU	-7.3 mV	6.70 ft	200.00 ml/min
2/9/2021 11:35 AM	15:00	7.41 pH	17.55 °C	371.06 µS/cm	1.08 mg/L	1.85 NTU	-17.9 mV	6.50 ft	200.00 ml/min
2/9/2021 11:40 AM	20:00	7.42 pH	17.72 °C	372.85 µS/cm	0.92 mg/L	1.41 NTU	-27.7 mV	6.40 ft	200.00 ml/min
2/9/2021 11:45 AM	25:00	7.42 pH	17.76 °C	373.09 µS/cm	0.72 mg/L	1.15 NTU	-36.6 mV	6.40 ft	200.00 ml/min
2/9/2021 11:50 AM	30:00	7.43 pH	17.81 °C	372.43 µS/cm	0.57 mg/L	0.96 NTU	-42.2 mV	6.40 ft	200.00 ml/min
2/9/2021 11:55 AM	35:00	7.42 pH	17.87 °C	372.96 µS/cm	0.51 mg/L	1.05 NTU	-47.7 mV	6.25 ft	200.00 ml/min
2/9/2021 12:00 PM	40:00	7.40 pH	17.86 °C	372.49 µS/cm	0.46 mg/L	1.14 NTU	-48.5 mV	6.25 ft	200.00 ml/min

## Samples

Sample ID:	Description:
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HGWA-6

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# Low-Flow Test Report:

Test Date / Time: 2/8/2021 3:40:33 PM

Project: GP-Plant Hammond

Operator Name: Thomas Kessler

<b>Location Name: HGWA-42D</b> <b>Well Diameter: 2 in</b> <b>Casing Type: PVC</b> <b>Screen Length: 10 ft</b> <b>Top of Screen: 58.03 ft</b> <b>Total Depth: 67.62 ft</b> <b>Initial Depth to Water: 10.42 ft</b>	<b>Pump Type: Bladder</b> <b>Tubing Type: Polyethylene</b> <b>Pump Intake From TOC: 63.3 m</b> <b>Estimated Total Volume Pumped: 19.6 liter</b> <b>Flow Cell Volume: 90 ml</b> <b>Final Flow Rate: 200 ml/min</b> <b>Final Draw Down: 1.98 ft</b>	<b>Instrument Used: Aqua TROLL 400</b> <b>Serial Number: 728541</b>
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## Test Notes:

Four bottles: Two 1-L plastic bottles with HNO<sub>3</sub> for radium (EPA 9315/9320); one 120-mL plastic bottle for F (EPA 300.0); and one 250-mL plastic bottle with HNO<sub>3</sub> for App. IV metals (EPA 6010D/6020B/7470A).

## Weather Conditions:

Sunny, 61 degrees

## Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.03	
2/8/2021 3:40 PM	00:00	7.51 pH	20.00 °C	278.54 µS/cm	3.29 mg/L	29.40 NTU	-1.2 mV	10.42 ft	200.00 ml/min
2/8/2021 3:42 PM	02:13	7.52 pH	18.27 °C	296.45 µS/cm	3.73 mg/L	18.20 NTU	-27.1 mV	11.30 ft	200.00 ml/min
2/8/2021 3:47 PM	06:36	7.54 pH	18.17 °C	286.51 µS/cm	1.84 mg/L	12.30 NTU	-37.3 mV	11.50 ft	200.00 ml/min
2/8/2021 3:52 PM	11:36	7.56 pH	18.20 °C	292.59 µS/cm	0.94 mg/L	11.30 NTU	-40.8 mV	11.90 ft	200.00 ml/min
2/8/2021 3:57 PM	16:36	7.58 pH	18.24 °C	290.47 µS/cm	2.01 mg/L	7.95 NTU	-42.9 mV	12.10 ft	200.00 ml/min
2/8/2021 4:02 PM	21:36	7.59 pH	18.25 °C	290.76 µS/cm	1.39 mg/L	5.51 NTU	-44.9 mV	12.20 ft	200.00 ml/min
2/8/2021 4:03 PM	22:45	7.59 pH	18.24 °C	290.31 µS/cm	1.09 mg/L	4.93 NTU	-45.0 mV	12.20 ft	200.00 ml/min
2/8/2021 4:06 PM	25:27	7.59 pH	18.21 °C	289.85 µS/cm	1.84 mg/L	5.54 NTU	-47.6 mV	12.27 ft	200.00 ml/min
2/8/2021 4:06 PM	26:03	7.59 pH	18.22 °C	289.52 µS/cm	2.04 mg/L	5.54 NTU	-44.4 mV	12.27 ft	200.00 ml/min
2/8/2021 4:07 PM	27:08	7.59 pH	18.25 °C	289.65 µS/cm	2.17 mg/L	5.54 NTU	-45.6 mV	12.27 ft	200.00 ml/min
2/8/2021 4:10 PM	30:10	7.60 pH	18.21 °C	289.56 µS/cm	2.35 mg/L	5.43 NTU	-50.5 mV	12.30 ft	200.00 ml/min
2/8/2021 4:13 PM	33:23	7.59 pH	18.17 °C	290.45 µS/cm	3.16 mg/L	4.97 NTU	-52.5 mV	12.30 ft	200.00 ml/min
2/8/2021 4:18 PM	38:23	7.60 pH	18.03 °C	289.53 µS/cm	2.88 mg/L	4.72 NTU	-51.3 mV	12.35 ft	200.00 ml/min



2/8/2021 4:23 PM	43:23	7.60 pH	17.95 °C	290.88 µS/cm	3.23 mg/L	4.51 NTU	-104.2 mV	12.35 ft	200.00 ml/min
2/8/2021 4:28 PM	48:23	7.60 pH	17.92 °C	291.88 µS/cm	2.37 mg/L	4.10 NTU	-53.0 mV	12.35 ft	200.00 ml/min
2/8/2021 4:33 PM	53:23	7.61 pH	17.90 °C	293.18 µS/cm	1.59 mg/L	4.07 NTU	-109.6 mV	12.40 ft	200.00 ml/min
2/8/2021 4:38 PM	58:23	7.62 pH	17.90 °C	292.68 µS/cm	1.59 mg/L	4.51 NTU	-55.6 mV	12.40 ft	200.00 ml/min
2/8/2021 4:43 PM	01:03:23	7.61 pH	17.87 °C	293.34 µS/cm	2.92 mg/L	4.44 NTU	-55.5 mV	12.40 ft	200.00 ml/min
2/8/2021 4:48 PM	01:08:23	7.62 pH	17.81 °C	293.23 µS/cm	1.64 mg/L	4.37 NTU	-55.0 mV	12.40 ft	200.00 ml/min
2/8/2021 4:53 PM	01:13:23	7.63 pH	17.79 °C	293.15 µS/cm	2.41 mg/L	3.82 NTU	-57.2 mV	12.40 ft	200.00 ml/min
2/8/2021 4:58 PM	01:18:23	7.63 pH	17.77 °C	293.43 µS/cm	0.82 mg/L	3.96 NTU	-58.8 mV	12.40 ft	200.00 ml/min
2/8/2021 5:03 PM	01:23:23	7.63 pH	17.77 °C	293.42 µS/cm	1.04 mg/L	4.00 NTU	-59.2 mV	12.40 ft	200.00 ml/min
2/8/2021 5:08 PM	01:28:23	7.63 pH	17.77 °C	294.54 µS/cm	1.88 mg/L	4.13 NTU	-114.8 mV	12.40 ft	200.00 ml/min
2/8/2021 5:13 PM	01:33:23	7.63 pH	17.74 °C	293.09 µS/cm	0.93 mg/L	3.88 NTU	-60.8 mV	12.40 ft	200.00 ml/min
2/8/2021 5:18 PM	01:38:23	7.64 pH	17.73 °C	294.07 µS/cm	0.86 mg/L	3.74 NTU	-60.9 mV	12.45 ft	200.00 ml/min
2/8/2021 5:23 PM	01:43:23	7.64 pH	17.73 °C	292.51 µS/cm	0.36 mg/L	3.82 NTU	-61.7 mV	12.45 ft	200.00 ml/min

## Samples

Sample ID:	Description:
HGWA-42D	Grab Sample.

# Low-Flow Test Report:

Test Date / Time: 2/9/2021 2:33:12 PM

Project: GP-Plant Hammond

Operator Name: Chad Russo

<b>Location Name: HGWA-43D</b> <b>Well Diameter: 2 in</b> <b>Casing Type: PVC</b> <b>Screen Length: 10 ft</b> <b>Top of Screen: 51.25 ft</b> <b>Total Depth: 61.25 ft</b> <b>Initial Depth to Water: 13.39 ft</b>	<b>Pump Type: Bladder</b> <b>Tubing Type: Polyethylene</b> <b>Pump Intake From TOC: 56 ft</b> <b>Estimated Total Volume Pumped: 20000 ml</b> <b>Flow Cell Volume: 90 ml</b> <b>Final Flow Rate: 100 ml/min</b> <b>Final Draw Down: 1.18 ft</b>	<b>Instrument Used: Aqua TROLL 400</b> <b>Serial Number: 728634</b>
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## Test Notes:

Four bottles: Two 1-L plastic bottles with HNO<sub>3</sub> for radium (EPA 9315/9320); one 120-mL plastic bottle for F (EPA 300.0); and one 250-mL plastic bottle with HNO<sub>3</sub> for App. IV metals (EPA 6010D/6020B/7470A).

## Weather Conditions:

Sunny, 46 degrees.

## Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 10	+/- 10	+/- 0.3	
2/9/2021 2:33 PM	00:00	7.48 pH	20.47 °C	499.44 µS/cm	2.96 mg/L	--	-41.6 mV	13.39 ft	100.00 ml/min
2/9/2021 2:38 PM	05:00	7.44 pH	18.98 °C	502.27 µS/cm	1.31 mg/L	84.70 NTU	-44.5 mV	14.49 ft	100.00 ml/min
2/9/2021 2:43 PM	10:00	7.43 pH	19.03 °C	500.77 µS/cm	0.88 mg/L	97.20 NTU	-98.8 mV	14.56 ft	100.00 ml/min
2/9/2021 2:48 PM	15:00	7.44 pH	19.04 °C	497.98 µS/cm	0.75 mg/L	101.90 NTU	-50.5 mV	14.56 ft	100.00 ml/min
2/9/2021 2:53 PM	20:00	7.44 pH	18.91 °C	492.45 µS/cm	0.66 mg/L	92.80 NTU	-48.1 mV	14.60 ft	100.00 ml/min
2/9/2021 2:58 PM	25:00	7.45 pH	19.05 °C	485.46 µS/cm	0.60 mg/L	91.20 NTU	-47.6 mV	14.51 ft	100.00 ml/min
2/9/2021 3:03 PM	30:00	7.45 pH	18.73 °C	482.58 µS/cm	0.55 mg/L	96.10 NTU	-97.3 mV	14.56 ft	100.00 ml/min
2/9/2021 3:08 PM	35:00	7.44 pH	18.06 °C	483.81 µS/cm	0.46 mg/L	89.20 NTU	-43.3 mV	14.56 ft	100.00 ml/min
2/9/2021 3:13 PM	40:00	7.45 pH	17.89 °C	491.52 µS/cm	0.57 mg/L	89.20 NTU	-91.6 mV	14.56 ft	100.00 ml/min
2/9/2021 3:18 PM	45:00	7.44 pH	17.67 °C	491.90 µS/cm	0.37 mg/L	97.50 NTU	-91.6 mV	14.66 ft	100.00 ml/min
2/9/2021 3:23 PM	50:00	7.45 pH	17.57 °C	488.23 µS/cm	0.26 mg/L	73.40 NTU	-91.0 mV	14.85 ft	100.00 ml/min
2/9/2021 3:28 PM	55:00	7.44 pH	17.44 °C	484.07 µS/cm	0.22 mg/L	63.20 NTU	-39.5 mV	15.00 ft	100.00 ml/min

2/9/2021 3:48 PM	01:15:00	7.44 pH	17.10 °C	472.09 µS/cm	0.23 mg/L	38.70 NTU	-33.1 mV	14.80 ft	100.00 ml/min
2/9/2021 3:53 PM	01:20:00	7.45 pH	17.09 °C	470.08 µS/cm	0.20 mg/L	30.30 NTU	-76.8 mV	14.77 ft	100.00 ml/min
2/9/2021 3:58 PM	01:25:00	7.44 pH	17.08 °C	469.73 µS/cm	0.20 mg/L	28.50 NTU	-30.1 mV	14.69 ft	100.00 ml/min
2/9/2021 4:03 PM	01:30:00	7.44 pH	17.04 °C	468.72 µS/cm	0.19 mg/L	28.80 NTU	-30.4 mV	14.62 ft	100.00 ml/min
2/9/2021 4:08 PM	01:35:00	7.45 pH	17.06 °C	469.22 µS/cm	0.19 mg/L	29.10 NTU	-30.0 mV	14.62 ft	100.00 ml/min
2/9/2021 4:13 PM	01:40:00	7.45 pH	17.09 °C	469.93 µS/cm	0.18 mg/L	28.70 NTU	-73.5 mV	14.62 ft	100.00 ml/min
2/9/2021 4:18 PM	01:45:00	7.44 pH	17.22 °C	470.76 µS/cm	0.18 mg/L	26.40 NTU	-29.8 mV	14.62 ft	100.00 ml/min
2/9/2021 4:23 PM	01:50:00	7.44 pH	17.22 °C	469.98 µS/cm	0.17 mg/L	24.80 NTU	-28.7 mV	14.62 ft	100.00 ml/min
2/9/2021 4:28 PM	01:55:00	7.45 pH	17.16 °C	469.46 µS/cm	0.17 mg/L	22.50 NTU	-29.0 mV	14.62 ft	100.00 ml/min
2/9/2021 4:33 PM	02:00:00	7.44 pH	16.95 °C	470.80 µS/cm	0.16 mg/L	23.80 NTU	-27.6 mV	14.57 ft	100.00 ml/min
2/9/2021 4:38 PM	02:05:00	7.44 pH	16.86 °C	472.08 µS/cm	0.16 mg/L	22.80 NTU	-27.7 mV	14.57 ft	100.00 ml/min
2/9/2021 4:43 PM	02:10:00	7.45 pH	16.86 °C	471.18 µS/cm	0.15 mg/L	21.60 NTU	-27.6 mV	14.57 ft	100.00 ml/min
2/9/2021 4:48 PM	02:15:00	7.44 pH	16.81 °C	472.85 µS/cm	0.14 mg/L	20.80 NTU	-27.1 mV	14.57 ft	100.00 ml/min
2/9/2021 4:53 PM	02:20:00	7.45 pH	16.73 °C	481.44 µS/cm	0.31 mg/L	28.40 NTU	-66.8 mV	14.57 ft	100.00 ml/min
2/9/2021 4:58 PM	02:25:00	7.45 pH	16.64 °C	479.86 µS/cm	0.28 mg/L	20.10 NTU	-25.7 mV	14.57 ft	100.00 ml/min
2/9/2021 5:03 PM	02:30:00	7.44 pH	16.64 °C	477.43 µS/cm	0.25 mg/L	16.70 NTU	-24.9 mV	14.57 ft	100.00 ml/min
2/9/2021 5:08 PM	02:35:00	7.44 pH	16.60 °C	476.94 µS/cm	0.23 mg/L	15.80 NTU	-25.0 mV	14.57 ft	100.00 ml/min
2/9/2021 5:13 PM	02:40:00	7.45 pH	16.59 °C	478.67 µS/cm	0.20 mg/L	14.20 NTU	-24.5 mV	14.57 ft	100.00 ml/min
2/9/2021 5:18 PM	02:45:00	7.44 pH	16.55 °C	475.63 µS/cm	0.17 mg/L	13.90 NTU	-24.0 mV	14.57 ft	100.00 ml/min
2/9/2021 5:23 PM	02:50:00	7.44 pH	16.57 °C	475.73 µS/cm	0.16 mg/L	13.60 NTU	-24.4 mV	14.57 ft	100.00 ml/min
2/9/2021 5:28 PM	02:55:00	7.44 pH	16.55 °C	472.82 µS/cm	0.15 mg/L	12.60 NTU	-24.2 mV	14.57 ft	100.00 ml/min
2/9/2021 5:33 PM	03:00:00	7.44 pH	16.55 °C	473.54 µS/cm	0.14 mg/L	11.30 NTU	-23.9 mV	14.57 ft	100.00 ml/min
2/9/2021 5:38 PM	03:05:00	7.44 pH	16.50 °C	471.84 µS/cm	0.13 mg/L	11.00 NTU	-23.7 mV	14.57 ft	100.00 ml/min
2/9/2021 5:43 PM	03:10:00	7.45 pH	16.46 °C	470.56 µS/cm	0.12 mg/L	11.97 NTU	-23.7 mV	14.57 ft	100.00 ml/min
2/9/2021 5:48 PM	03:15:00	7.45 pH	16.41 °C	470.42 µS/cm	0.12 mg/L	11.00 NTU	-23.4 mV	14.57 ft	100.00 ml/min
2/9/2021 5:53 PM	03:20:00	7.44 pH	16.37 °C	471.57 µS/cm	0.11 mg/L	9.22 NTU	-23.2 mV	14.57 ft	100.00 ml/min

## Samples

<b>Sample ID:</b>	<b>Description:</b>
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HGWA-43D	Grab Sample.
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Created using VuSitu from In-Situ, Inc.

# Low-Flow Test Report:

Test Date / Time: 2/9/2021 10:04:37 AM

Project: Plant Hammond

Operator Name: Chad Russo

<b>Location Name: HGWA-44D</b> <b>Well Diameter: 2 in</b> <b>Casing Type: PVC</b> <b>Screen Length: 10 ft</b> <b>Top of Screen: 103.28 ft</b> <b>Total Depth: 113.28 ft</b> <b>Initial Depth to Water: 12.11 ft</b>	<b>Pump Type: Bladder</b> <b>Tubing Type: Polyethylene</b> <b>Pump Intake From TOC: 108 ft</b> <b>Estimated Total Volume Pumped: 18 liter</b> <b>Flow Cell Volume: 90 ml</b> <b>Final Flow Rate: 100 ml/min</b> <b>Final Draw Down: 3.35 ft</b>	<b>Instrument Used: Aqua TROLL 400</b> <b>Serial Number: 728634</b>
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## Test Notes:

Four bottles: Two 1-L plastic bottles with HNO<sub>3</sub> for radium (EPA 9315/9320); one 120-mL plastic bottle for F (EPA 300.0); and one 250-mL plastic bottle with HNO<sub>3</sub> for App. IV metals (EPA 6010D/6020B/7470A).

## 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	+/- 10	+/- 10	+/- 0.3	
2/9/2021 10:04 AM	00:00	7.71 pH	15.52 °C	501.55 µS/cm	1.51 mg/L	--	-68.7 mV	12.11 ft	100.00 ml/min
2/9/2021 10:09 AM	05:00	7.79 pH	15.93 °C	498.49 µS/cm	0.84 mg/L	25.00 NTU	-76.9 mV	13.61 ft	100.00 ml/min
2/9/2021 10:14 AM	10:00	7.82 pH	15.58 °C	495.77 µS/cm	0.64 mg/L	19.90 NTU	-147.0 mV	13.85 ft	100.00 ml/min
2/9/2021 10:19 AM	15:00	7.83 pH	15.48 °C	494.19 µS/cm	0.56 mg/L	16.90 NTU	-80.8 mV	14.08 ft	100.00 ml/min
2/9/2021 10:24 AM	20:00	7.83 pH	15.42 °C	492.43 µS/cm	0.52 mg/L	13.30 NTU	-83.2 mV	14.26 ft	100.00 ml/min
2/9/2021 10:29 AM	25:00	7.84 pH	15.41 °C	490.58 µS/cm	0.50 mg/L	11.80 NTU	-84.5 mV	14.41 ft	100.00 ml/min
2/9/2021 10:34 AM	30:00	7.84 pH	15.41 °C	489.95 µS/cm	0.47 mg/L	12.48 NTU	-84.8 mV	14.56 ft	100.00 ml/min
2/9/2021 10:39 AM	35:00	7.83 pH	15.47 °C	486.80 µS/cm	0.45 mg/L	11.22 NTU	-153.6 mV	14.64 ft	100.00 ml/min
2/9/2021 10:44 AM	40:00	7.83 pH	15.49 °C	486.36 µS/cm	0.44 mg/L	9.71 NTU	-82.8 mV	14.76 ft	100.00 ml/min
2/9/2021 10:49 AM	45:00	7.82 pH	15.70 °C	484.60 µS/cm	0.40 mg/L	9.43 NTU	-82.1 mV	14.83 ft	100.00 ml/min
2/9/2021 10:54 AM	50:00	7.82 pH	15.94 °C	483.12 µS/cm	0.35 mg/L	9.21 NTU	-80.8 mV	14.91 ft	100.00 ml/min
2/9/2021 10:59 AM	55:00	7.81 pH	16.28 °C	485.63 µS/cm	0.32 mg/L	9.30 NTU	-79.5 mV	14.98 ft	100.00 ml/min
2/9/2021 11:04 AM	01:00:00	7.82 pH	16.19 °C	484.56 µS/cm	0.30 mg/L	7.57 NTU	-78.1 mV	15.05 ft	100.00 ml/min
2/9/2021 11:09 AM	01:05:00	7.82 pH	16.59 °C	486.83 µS/cm	0.29 mg/L	7.49 NTU	-77.0 mV	15.11 ft	100.00 ml/min
2/9/2021 11:14 AM	01:10:00	7.81 pH	16.83 °C	483.83 µS/cm	0.26 mg/L	6.32 NTU	-142.7 mV	15.17 ft	100.00 ml/min

2/9/2021 11:19 AM	01:15:00	7.81 pH	16.73 °C	483.69 µS/cm	0.25 mg/L	6.87 NTU	-75.3 mV	15.22 ft	100.00 ml/min
2/9/2021 11:24 AM	01:20:00	7.82 pH	16.59 °C	485.43 µS/cm	0.24 mg/L	7.87 NTU	-73.7 mV	15.28 ft	100.00 ml/min
2/9/2021 11:29 AM	01:25:00	7.81 pH	16.48 °C	488.10 µS/cm	0.24 mg/L	7.50 NTU	-72.8 mV	15.30 ft	100.00 ml/min
2/9/2021 11:34 AM	01:30:00	7.82 pH	16.47 °C	487.19 µS/cm	0.23 mg/L	7.69 NTU	-73.4 mV	15.35 ft	100.00 ml/min
2/9/2021 11:39 AM	01:35:00	7.81 pH	16.55 °C	488.27 µS/cm	0.21 mg/L	8.18 NTU	-72.7 mV	15.40 ft	100.00 ml/min
2/9/2021 11:44 AM	01:40:00	7.81 pH	16.46 °C	488.63 µS/cm	0.21 mg/L	8.76 NTU	-71.5 mV	15.42 ft	100.00 ml/min
2/9/2021 11:49 AM	01:45:00	7.81 pH	16.36 °C	489.31 µS/cm	0.21 mg/L	8.26 NTU	-136.4 mV	15.45 ft	100.00 ml/min
2/9/2021 11:54 AM	01:50:00	7.83 pH	16.33 °C	493.57 µS/cm	0.19 mg/L	7.30 NTU	-70.1 mV	15.50 ft	100.00 ml/min
2/9/2021 11:59 AM	01:55:00	7.81 pH	16.41 °C	502.52 µS/cm	0.20 mg/L	8.80 NTU	-69.3 mV	15.51 ft	100.00 ml/min
2/9/2021 12:04 PM	02:00:00	7.82 pH	16.41 °C	502.73 µS/cm	0.20 mg/L	9.03 NTU	-67.4 mV	15.53 ft	100.00 ml/min
2/9/2021 12:09 PM	02:05:00	7.82 pH	16.33 °C	503.19 µS/cm	0.20 mg/L	9.59 NTU	-68.4 mV	15.56 ft	100.00 ml/min
2/9/2021 12:14 PM	02:10:00	7.83 pH	16.37 °C	502.88 µS/cm	0.18 mg/L	9.27 NTU	-68.8 mV	15.56 ft	100.00 ml/min
2/9/2021 12:19 PM	02:15:00	7.82 pH	16.41 °C	504.39 µS/cm	0.17 mg/L	9.58 NTU	-67.8 mV	15.60 ft	100.00 ml/min
2/9/2021 12:24 PM	02:20:00	7.83 pH	16.45 °C	504.74 µS/cm	0.17 mg/L	8.78 NTU	-67.3 mV	15.60 ft	100.00 ml/min
2/9/2021 12:29 PM	02:25:00	7.83 pH	16.52 °C	505.67 µS/cm	0.19 mg/L	8.60 NTU	-66.6 mV	15.60 ft	100.00 ml/min
2/9/2021 12:34 PM	02:30:00	7.83 pH	16.91 °C	505.02 µS/cm	0.18 mg/L	9.45 NTU	-69.1 mV	15.52 ft	100.00 ml/min
2/9/2021 12:39 PM	02:35:00	7.83 pH	17.15 °C	506.24 µS/cm	0.18 mg/L	8.90 NTU	-69.1 mV	15.50 ft	100.00 ml/min
2/9/2021 12:44 PM	02:40:00	7.83 pH	17.31 °C	505.12 µS/cm	0.18 mg/L	8.78 NTU	-68.6 mV	15.48 ft	100.00 ml/min
2/9/2021 12:49 PM	02:45:00	7.83 pH	17.22 °C	507.67 µS/cm	0.19 mg/L	8.84 NTU	-68.7 mV	15.46 ft	100.00 ml/min
2/9/2021 12:54 PM	02:50:00	7.84 pH	17.05 °C	509.41 µS/cm	0.18 mg/L	8.37 NTU	-68.6 mV	15.46 ft	100.00 ml/min
2/9/2021 12:59 PM	02:55:00	7.84 pH	16.89 °C	508.68 µS/cm	0.17 mg/L	8.21 NTU	-69.0 mV	15.46 ft	100.00 ml/min
2/9/2021 1:04 PM	03:00:00	7.84 pH	16.84 °C	507.84 µS/cm	0.17 mg/L	7.69 NTU	-133.0 mV	15.46 ft	100.00 ml/min

## Samples

Sample ID:	Description:
HGWA-44D	Grab Sample.

# Low-Flow Test Report:

Test Date / Time: 2/11/2021 2:47:03 PM

Project: GP-Plant Hammond

Operator Name: Aaron Reeder

<b>Location Name: HGWC-14</b> <b>Well Diameter: 2 in</b> <b>Casing Type: PVC</b> <b>Screen Length: 10 ft</b> <b>Top of Screen: 33 ft</b> <b>Total Depth: 43 ft</b> <b>Initial Depth to Water: 28.5 ft</b>	<b>Pump Type: QED MP50</b> <b>Tubing Type: polyethylene</b> <b>Tubing Inner Diameter: 0.17 in</b> <b>Pump Intake From TOC: 38 ft</b> <b>Estimated Total Volume Pumped: 3.75 liter</b> <b>Flow Cell Volume: 90 ml</b> <b>Final Flow Rate: 150 ml/min</b> <b>Final Draw Down: 0.1 ft</b>	<b>Instrument Used: Aqua TROLL 400</b> <b>Serial Number: 728623</b>
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## Test Notes:

Four bottles: Two 1-L plastic bottles with HNO<sub>3</sub> for radium (EPA 9315/9320); one 120-mL plastic bottle for F (EPA 300.0); and one 250-mL plastic bottle with HNO<sub>3</sub> for App. IV metals (EPA 6010D/6020B/7470A).

## Weather Conditions:

Cloudy and rain

## 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	
2/11/2021 2:47 PM	00:00	5.65 pH	16.43 °C	2,935.2 µS/cm	8.53 mg/L	--	107.8 mV	28.50 ft	150.00 ml/min
2/11/2021 2:52 PM	05:00	4.79 pH	18.71 °C	2,878.7 µS/cm	1.59 mg/L	12.10 NTU	113.6 mV	28.60 ft	150.00 ml/min
2/11/2021 2:57 PM	10:00	4.77 pH	19.15 °C	2,910.7 µS/cm	1.14 mg/L	5.56 NTU	122.0 mV	28.60 ft	150.00 ml/min
2/11/2021 3:02 PM	15:00	4.80 pH	19.24 °C	2,855.9 µS/cm	0.90 mg/L	3.34 NTU	124.8 mV	28.60 ft	150.00 ml/min
2/11/2021 3:07 PM	20:00	4.82 pH	19.26 °C	2,912.3 µS/cm	0.88 mg/L	3.11 NTU	122.9 mV	28.60 ft	150.00 ml/min
2/11/2021 3:12 PM	25:00	4.84 pH	19.28 °C	2,901.2 µS/cm	0.83 mg/L	1.44 NTU	128.7 mV	28.60 ft	150.00 ml/min

## Samples

Sample ID:	Description:
HGWC-14	Grab Sample.

# Low-Flow Test Report:

Test Date / Time: 2/12/2021 2:20:50 PM

Project: Plant Hammond

Operator Name: Chad Russo

<b>Location Name: HGWC-15</b> <b>Well Diameter: 2 in</b> <b>Casing Type: PVC</b> <b>Screen Length: 10 ft</b> <b>Top of Screen: 28 ft</b> <b>Total Depth: 38 ft</b> <b>Initial Depth to Water: 17.34 ft</b>	<b>Pump Type: Bladder</b> <b>Tubing Type: Polyethylene</b> <b>Pump Intake From TOC: 33 ft</b> <b>Estimated Total Volume Pumped: 7 liter</b> <b>Flow Cell Volume: 90 ml</b> <b>Final Flow Rate: 200 ml/min</b> <b>Final Draw Down: 0.56 ft</b>	<b>Instrument Used: Aqua TROLL 400</b> <b>Serial Number: 728634</b>
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## Test Notes:

Four bottles: Two 1-L plastic bottles with HNO<sub>3</sub> for radium (EPA 9315/9320); one 120-mL plastic bottle for F (EPA 300.0); and one 250-mL plastic bottle with HNO<sub>3</sub> for App. IV metals (EPA 6010D/6020B/7470A).

## 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	+/- 10	+/- 10	+/- 0.3	
2/12/2021 2:20 PM	00:00	6.51 pH	16.94 °C	1,329.3 µS/cm	2.51 mg/L	--	118.5 mV	17.34 ft	200.00 ml/min
2/12/2021 2:25 PM	05:00	6.20 pH	17.45 °C	1,278.3 µS/cm	2.21 mg/L	8.97 NTU	160.5 mV	17.90 ft	200.00 ml/min
2/12/2021 2:30 PM	10:00	6.05 pH	17.53 °C	1,261.2 µS/cm	0.91 mg/L	4.40 NTU	130.7 mV	17.90 ft	200.00 ml/min
2/12/2021 2:35 PM	15:00	6.01 pH	17.61 °C	1,239.1 µS/cm	0.73 mg/L	3.26 NTU	208.7 mV	17.90 ft	200.00 ml/min
2/12/2021 2:40 PM	20:00	6.00 pH	17.62 °C	1,245.6 µS/cm	0.78 mg/L	2.30 NTU	121.8 mV	17.90 ft	200.00 ml/min
2/12/2021 2:45 PM	25:00	6.00 pH	17.66 °C	1,242.9 µS/cm	0.94 mg/L	1.46 NTU	127.6 mV	17.90 ft	200.00 ml/min
2/12/2021 2:50 PM	30:00	6.00 pH	17.67 °C	1,246.2 µS/cm	1.03 mg/L	1.49 NTU	129.2 mV	17.90 ft	200.00 ml/min
2/12/2021 2:55 PM	35:00	5.99 pH	17.66 °C	1,243.2 µS/cm	0.99 mg/L	1.12 NTU	128.1 mV	17.90 ft	200.00 ml/min

## Samples

Sample ID:	Description:
HGWC-15	Grab Sample.



# Low-Flow Test Report:

Test Date / Time: 2/10/2021 1:06:55 PM

Project: GP-Plant Hammond

Operator Name: Aaron Reeder

<b>Location Name: HGWC-16</b> <b>Well Diameter: 2 in</b> <b>Casing Type: PVC</b> <b>Screen Length: 10 ft</b> <b>Top of Screen: 23.1 ft</b> <b>Total Depth: 33.1 ft</b> <b>Initial Depth to Water: 12.71 ft</b>	<b>Pump Type: QED MP50</b> <b>Tubing Type: polyethylene</b> <b>Tubing Inner Diameter: 0.17 in</b> <b>Pump Intake From TOC: 28.1 ft</b> <b>Estimated Total Volume Pumped: 23 liter</b> <b>Flow Cell Volume: 90 ml</b> <b>Final Flow Rate: 200 ml/min</b> <b>Final Draw Down: 0.59 ft</b>	<b>Instrument Used: Aqua TROLL 400</b> <b>Serial Number: 728623</b>
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## Test Notes:

Four bottles: Two 1-L plastic bottles with HNO<sub>3</sub> for radium (EPA 9315/9320); one 120-mL plastic bottle for F (EPA 300.0); and one 250-mL plastic bottle with HNO<sub>3</sub> for App. IV metals (EPA 6010D/6020B/7470A).

## Weather Conditions:

Sunny warm

## 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	
2/10/2021 1:06 PM	00:00	7.06 pH	19.47 °C	1,121.5 µS/cm	1.32 mg/L	--	9.8 mV	12.71 ft	200.00 ml/min
2/10/2021 1:11 PM	05:00	7.00 pH	19.38 °C	1,090.7 µS/cm	0.84 mg/L	40.60 NTU	-5.2 mV	13.30 ft	200.00 ml/min
2/10/2021 1:16 PM	10:00	6.98 pH	19.45 °C	1,076.2 µS/cm	0.66 mg/L	50.50 NTU	-18.1 mV	13.30 ft	200.00 ml/min
2/10/2021 1:21 PM	15:00	6.99 pH	19.59 °C	1,075.8 µS/cm	0.56 mg/L	33.20 NTU	-27.1 mV	13.30 ft	200.00 ml/min
2/10/2021 1:26 PM	20:00	7.01 pH	20.17 °C	1,074.3 µS/cm	0.79 mg/L	25.20 NTU	-32.6 mV	13.25 ft	200.00 ml/min
2/10/2021 1:31 PM	25:00	7.01 pH	19.50 °C	1,085.0 µS/cm	0.49 mg/L	20.80 NTU	-36.1 mV	13.30 ft	200.00 ml/min
2/10/2021 1:36 PM	30:00	7.02 pH	19.58 °C	1,077.1 µS/cm	0.49 mg/L	15.70 NTU	-39.2 mV	13.40 ft	200.00 ml/min
2/10/2021 1:41 PM	35:00	7.03 pH	19.64 °C	1,076.1 µS/cm	0.44 mg/L	13.30 NTU	-41.9 mV	13.30 ft	200.00 ml/min
2/10/2021 1:46 PM	40:00	7.04 pH	19.64 °C	1,081.4 µS/cm	0.44 mg/L	12.12 NTU	-42.8 mV	13.30 ft	200.00 ml/min
2/10/2021 1:51 PM	45:00	7.04 pH	19.64 °C	1,085.4 µS/cm	0.42 mg/L	10.44 NTU	-42.1 mV	13.30 ft	200.00 ml/min
2/10/2021 1:56 PM	50:00	7.05 pH	19.46 °C	1,081.1 µS/cm	0.40 mg/L	9.50 NTU	-43.6 mV	13.30 ft	200.00 ml/min
2/10/2021 2:01 PM	55:00	7.05 pH	19.61 °C	1,084.7 µS/cm	0.36 mg/L	8.82 NTU	-44.4 mV	13.30 ft	200.00 ml/min
2/10/2021 2:06 PM	01:00:00	7.05 pH	19.75 °C	1,079.4 µS/cm	0.36 mg/L	8.40 NTU	-45.3 mV	13.30 ft	200.00 ml/min

2/10/2021 2:11 PM	01:05:00	7.06 pH	19.75 °C	1,082.8 µS/cm	0.35 mg/L	7.96 NTU	-46.6 mV	13.30 ft	200.00 ml/min
2/10/2021 2:16 PM	01:10:00	7.07 pH	19.78 °C	1,083.8 µS/cm	0.35 mg/L	7.59 NTU	-48.1 mV	13.30 ft	200.00 ml/min
2/10/2021 2:21 PM	01:15:00	7.07 pH	19.74 °C	1,085.9 µS/cm	0.34 mg/L	6.60 NTU	-49.4 mV	13.30 ft	200.00 ml/min
2/10/2021 2:26 PM	01:20:00	7.07 pH	19.69 °C	1,086.9 µS/cm	0.35 mg/L	6.60 NTU	-50.8 mV	13.30 ft	200.00 ml/min
2/10/2021 2:31 PM	01:25:00	7.07 pH	19.64 °C	1,084.4 µS/cm	0.36 mg/L	5.94 NTU	-51.9 mV	13.30 ft	200.00 ml/min
2/10/2021 2:36 PM	01:30:00	7.07 pH	19.71 °C	1,085.3 µS/cm	0.36 mg/L	5.92 NTU	-53.3 mV	13.30 ft	200.00 ml/min
2/10/2021 2:41 PM	01:35:00	7.08 pH	19.62 °C	1,085.4 µS/cm	0.36 mg/L	5.84 NTU	-55.0 mV	13.30 ft	200.00 ml/min
2/10/2021 2:46 PM	01:40:00	7.08 pH	19.68 °C	1,107.3 µS/cm	0.40 mg/L	5.78 NTU	-56.6 mV	13.30 ft	200.00 ml/min
2/10/2021 2:51 PM	01:45:00	7.09 pH	19.53 °C	1,087.2 µS/cm	0.39 mg/L	5.21 NTU	-58.0 mV	13.30 ft	200.00 ml/min
2/10/2021 2:56 PM	01:50:00	7.09 pH	19.32 °C	1,090.9 µS/cm	0.35 mg/L	5.12 NTU	-59.2 mV	13.30 ft	200.00 ml/min
2/10/2021 3:01 PM	01:55:00	7.08 pH	19.50 °C	1,086.5 µS/cm	0.36 mg/L	4.83 NTU	-60.8 mV	13.30 ft	200.00 ml/min

## Samples

Sample ID:	Description:
HGWC-16	Grab Sample.

# Low-Flow Test Report:

Test Date / Time: 2/11/2021 10:05:05 AM

Project: GP-Plant Hammond

Operator Name: Aaron Reeder

<b>Location Name: HGWC-17</b> <b>Well Diameter: 2 in</b> <b>Casing Type: PVC</b> <b>Screen Length: 10 ft</b> <b>Top of Screen: 17.8 ft</b> <b>Total Depth: 27.8 ft</b> <b>Initial Depth to Water: 17.83 ft</b>	<b>Pump Type: QED MP50</b> <b>Tubing Type: polyethylene</b> <b>Tubing Inner Diameter: 0.17 in</b> <b>Pump Intake From TOC: 22.8 ft</b> <b>Estimated Total Volume Pumped: 17 liter</b> <b>Flow Cell Volume: 90 ml</b> <b>Final Flow Rate: 200 ml/min</b> <b>Final Draw Down: 0.17 ft</b>	<b>Instrument Used: Aqua TROLL 400</b> <b>Serial Number: 728623</b>
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## Test Notes:

Four bottles: Two 1-L plastic bottles with HNO<sub>3</sub> for radium (EPA 9315/9320); one 120-mL plastic bottle for F (EPA 300.0); and one 250-mL plastic bottle with HNO<sub>3</sub> for App. IV metals (EPA 6010D/6020B/7470A).

## Weather Conditions:

Cloudy with rain and lightning

## 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	
2/11/2021 10:05 AM	00:00	6.89 pH	14.49 °C	1,721.2 µS/cm	8.23 mg/L	--	94.4 mV	17.83 ft	200.00 ml/min
2/11/2021 10:10 AM	05:00	6.33 pH	17.50 °C	1,636.2 µS/cm	2.44 mg/L	17.00 NTU	100.3 mV	18.05 ft	200.00 ml/min
2/11/2021 10:15 AM	10:00	6.30 pH	17.72 °C	1,636.5 µS/cm	1.82 mg/L	24.20 NTU	109.4 mV	18.00 ft	200.00 ml/min
2/11/2021 10:20 AM	15:00	6.29 pH	17.81 °C	1,652.0 µS/cm	1.34 mg/L	28.10 NTU	109.0 mV	18.00 ft	200.00 ml/min
2/11/2021 10:25 AM	20:00	6.28 pH	17.75 °C	1,644.3 µS/cm	1.12 mg/L	22.90 NTU	108.5 mV	18.00 ft	200.00 ml/min
2/11/2021 10:30 AM	25:00	6.28 pH	17.72 °C	1,655.0 µS/cm	1.01 mg/L	20.30 NTU	108.4 mV	18.00 ft	200.00 ml/min
2/11/2021 10:35 AM	30:00	6.29 pH	17.69 °C	1,644.9 µS/cm	1.25 mg/L	17.00 NTU	104.5 mV	18.00 ft	200.00 ml/min
2/11/2021 10:40 AM	35:00	6.29 pH	17.73 °C	1,650.3 µS/cm	0.97 mg/L	14.30 NTU	107.1 mV	18.00 ft	200.00 ml/min
2/11/2021 10:45 AM	40:00	6.29 pH	17.77 °C	1,647.6 µS/cm	1.02 mg/L	12.00 NTU	107.0 mV	18.00 ft	200.00 ml/min
2/11/2021 10:50 AM	45:00	6.30 pH	17.64 °C	1,640.6 µS/cm	1.65 mg/L	12.17 NTU	103.3 mV	18.00 ft	200.00 ml/min
2/11/2021 10:55 AM	50:00	6.30 pH	17.59 °C	1,641.3 µS/cm	0.78 mg/L	9.14 NTU	106.2 mV	18.00 ft	200.00 ml/min
2/11/2021 11:00 AM	55:00	6.29 pH	17.76 °C	1,672.2 µS/cm	0.84 mg/L	7.02 NTU	106.0 mV	18.00 ft	200.00 ml/min
2/11/2021 11:05 AM	01:00:00	6.30 pH	17.79 °C	1,659.1 µS/cm	0.71 mg/L	7.44 NTU	105.2 mV	18.00 ft	200.00 ml/min

2/11/2021 11:10 AM	01:05:00	6.30 pH	17.77 °C	1,650.8 µS/cm	0.70 mg/L	6.65 NTU	105.1 mV	18.00 ft	200.00 ml/min
2/11/2021 11:15 AM	01:10:00	6.30 pH	17.77 °C	1,641.9 µS/cm	0.73 mg/L	6.07 NTU	104.7 mV	18.00 ft	200.00 ml/min
2/11/2021 11:20 AM	01:15:00	6.31 pH	17.66 °C	1,658.6 µS/cm	0.66 mg/L	5.67 NTU	104.5 mV	18.00 ft	200.00 ml/min
2/11/2021 11:25 AM	01:20:00	6.30 pH	17.63 °C	1,657.5 µS/cm	0.70 mg/L	4.80 NTU	104.2 mV	18.00 ft	200.00 ml/min
2/11/2021 11:30 AM	01:25:00	6.31 pH	17.69 °C	1,654.5 µS/cm	0.51 mg/L	4.52 NTU	104.0 mV	18.00 ft	200.00 ml/min

## Samples

Sample ID:	Description:
HGWC-17	Grab Sample.

# Low-Flow Test Report:

**Test Date / Time:** 2/11/2021 12:21:07 PM

**Project:** Plant Hammond

**Operator Name:** Chad Russo

<b>Location Name:</b> HGWC-18 <b>Well Diameter:</b> 2 in <b>Casing Type:</b> PVC <b>Screen Length:</b> 10 ft <b>Top of Screen:</b> 17.8 ft <b>Total Depth:</b> 27.8 ft <b>Initial Depth to Water:</b> 17.7 ft	<b>Pump Type:</b> Bladder <b>Tubing Type:</b> Polyethylene <b>Pump Intake From TOC:</b> 22.8 ft <b>Estimated Total Volume Pumped:</b> 6.273 liter <b>Flow Cell Volume:</b> 90 ml <b>Final Flow Rate:</b> 200 ml/min <b>Final Draw Down:</b> 0.15 ft	<b>Instrument Used:</b> Aqua TROLL 400 <b>Serial Number:</b> 728634
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## Test Notes:

Four bottles: Two 1-L plastic bottles with HNO<sub>3</sub> for radium (EPA 9315/9320); one 120-mL plastic bottle for F (EPA 300.0); and one 250-mL plastic bottle with HNO<sub>3</sub> for App. IV metals (EPA 6010D/6020B/7470A).

## 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	+/- 10	+/- 10	+/- 0.3	
2/11/2021 12:21 PM	00:00	4.48 pH	15.29 °C	2,183.8 µS/cm	2.08 mg/L	--	104.0 mV	17.70 ft	200.00 ml/min
2/11/2021 12:24 PM	03:11	4.49 pH	15.25 °C	2,223.6 µS/cm	2.27 mg/L	--	107.1 mV	17.70 ft	200.00 ml/min
2/11/2021 12:26 PM	05:07	4.51 pH	15.07 °C	2,178.0 µS/cm	3.16 mg/L	4.41 NTU	124.9 mV	17.85 ft	200.00 ml/min
2/11/2021 12:31 PM	10:07	4.47 pH	15.92 °C	2,055.2 µS/cm	0.59 mg/L	1.25 NTU	155.2 mV	17.85 ft	200.00 ml/min
2/11/2021 12:32 PM	11:05	4.48 pH	15.96 °C	2,110.1 µS/cm	0.54 mg/L	--	150.4 mV	17.85 ft	200.00 ml/min
2/11/2021 12:37 PM	16:05	4.51 pH	16.01 °C	2,000.2 µS/cm	0.44 mg/L	1.43 NTU	156.6 mV	17.85 ft	200.00 ml/min
2/11/2021 12:39 PM	18:18	4.51 pH	16.04 °C	2,118.6 µS/cm	0.42 mg/L	--	171.9 mV	17.85 ft	200.00 ml/min
2/11/2021 12:42 PM	21:22	4.52 pH	16.06 °C	2,008.8 µS/cm	0.37 mg/L	1.24 NTU	177.5 mV	17.85 ft	200.00 ml/min
2/11/2021 12:47 PM	26:22	4.53 pH	16.10 °C	2,042.2 µS/cm	0.39 mg/L	0.92 NTU	160.8 mV	17.85 ft	200.00 ml/min
2/11/2021 12:52 PM	31:22	4.53 pH	16.12 °C	2,029.6 µS/cm	0.28 mg/L	0.91 NTU	252.5 mV	17.85 ft	200.00 ml/min

## Samples

Sample ID:	Description:
HGWC-18	Grab Sample.

# Low-Flow Test Report:

Test Date / Time: 2/11/2021 1:40:28 PM

Project: Plant Hammond

Operator Name: Chad Russo

<b>Location Name: MW-21D</b> <b>Well Diameter: 2 in</b> <b>Casing Type: PVC</b> <b>Screen Length: 10 ft</b> <b>Top of Screen: 41.8 ft</b> <b>Total Depth: 51.8 ft</b> <b>Initial Depth to Water: 16.54 ft</b>	<b>Pump Type: Bladder</b> <b>Tubing Type: Polyethylene</b> <b>Pump Intake From TOC: 47 ft</b> <b>Estimated Total Volume Pumped: 13.6 liter</b> <b>Flow Cell Volume: 90 ml</b> <b>Final Flow Rate: 200 ml/min</b> <b>Final Draw Down: 0.25 ft</b>	<b>Instrument Used: Aqua TROLL 400</b> <b>Serial Number: 728634</b>
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## Test Notes:

Four bottles: Two 1-L plastic bottles with HNO<sub>3</sub> for radium (EPA 9315/9320); one 120-mL plastic bottle for F (EPA 300.0); and one 250-mL plastic bottle with HNO<sub>3</sub> for App. IV metals (EPA 6010D/6020B/7470A).

## 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	+/- 10	+/- 10	+/- 0.3	
2/11/2021 1:40 PM	00:00	6.30 pH	16.41 °C	2,104.9 µS/cm	4.87 mg/L	--	-18.1 mV	16.54 ft	200.00 ml/min
2/11/2021 1:42 PM	01:56	6.40 pH	16.58 °C	2,113.4 µS/cm	3.61 mg/L	--	-22.3 mV	16.54 ft	200.00 ml/min
2/11/2021 1:43 PM	03:03	6.46 pH	16.64 °C	2,109.1 µS/cm	3.22 mg/L	--	-24.4 mV	16.54 ft	200.00 ml/min
2/11/2021 1:48 PM	08:03	6.61 pH	16.66 °C	2,108.1 µS/cm	2.63 mg/L	1.83 NTU	-29.9 mV	16.79 ft	200.00 ml/min
2/11/2021 1:53 PM	13:03	6.69 pH	16.64 °C	2,108.2 µS/cm	2.06 mg/L	1.17 NTU	-33.9 mV	16.79 ft	200.00 ml/min
2/11/2021 1:58 PM	18:03	6.72 pH	16.73 °C	2,104.3 µS/cm	2.10 mg/L	1.18 NTU	-64.9 mV	16.79 ft	200.00 ml/min
2/11/2021 2:03 PM	23:03	6.77 pH	16.63 °C	2,102.2 µS/cm	1.99 mg/L	1.01 NTU	-36.7 mV	16.79 ft	200.00 ml/min
2/11/2021 2:08 PM	28:03	6.78 pH	16.63 °C	2,101.9 µS/cm	1.77 mg/L	0.62 NTU	-68.0 mV	16.79 ft	200.00 ml/min
2/11/2021 2:13 PM	33:03	6.80 pH	16.73 °C	2,094.7 µS/cm	1.58 mg/L	0.87 NTU	-39.9 mV	16.79 ft	200.00 ml/min
2/11/2021 2:18 PM	38:03	6.82 pH	16.68 °C	2,099.3 µS/cm	1.42 mg/L	0.92 NTU	-41.1 mV	16.79 ft	200.00 ml/min
2/11/2021 2:23 PM	43:03	6.83 pH	16.75 °C	2,102.1 µS/cm	1.18 mg/L	0.47 NTU	-72.7 mV	16.79 ft	200.00 ml/min
2/11/2021 2:28 PM	48:03	6.84 pH	16.86 °C	2,100.7 µS/cm	1.01 mg/L	0.63 NTU	-43.9 mV	16.79 ft	200.00 ml/min
2/11/2021 2:33 PM	53:03	6.85 pH	16.82 °C	2,102.5 µS/cm	0.91 mg/L	0.56 NTU	-44.8 mV	16.79 ft	200.00 ml/min
2/11/2021 2:38 PM	58:03	6.86 pH	16.73 °C	2,104.9 µS/cm	0.79 mg/L	0.47 NTU	-45.5 mV	16.79 ft	200.00 ml/min
2/11/2021 2:43 PM	01:03:03	6.87 pH	16.73 °C	2,106.4 µS/cm	0.68 mg/L	0.50 NTU	-46.3 mV	16.79 ft	200.00 ml/min

2/11/2021 2:48 PM	01:08:03	6.87 pH	16.70 °C	2,103.9 µS/cm	0.59 mg/L	0.54 NTU	-46.3 mV	16.79 ft	200.00 ml/min
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## Samples

Sample ID:	Description:
MW-21D	Grab Sample.
Dup-2	Grab Sample.

# Low-Flow Test Report:

Test Date / Time: 2/15/2021 2:54:34 PM

Project: Plant Hammond

Operator Name: Chad Russo

<b>Location Name: MW-22</b> <b>Well Diameter: 2 in</b> <b>Casing Type: PVC</b> <b>Screen Length: 10 ft</b> <b>Top of Screen: 27.58 ft</b> <b>Total Depth: 37.58 ft</b> <b>Initial Depth to Water: 14.05 ft</b>	<b>Pump Type: Bladder</b> <b>Tubing Type: Polyethylene</b> <b>Pump Intake From TOC: 32 ft</b> <b>Estimated Total Volume Pumped: 4.38 liter</b> <b>Flow Cell Volume: 90 ml</b> <b>Final Flow Rate: 100 ml/min</b> <b>Final Draw Down: 4.63 ft</b>	<b>Instrument Used: Aqua TROLL 400</b> <b>Serial Number: 728634</b>
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## Test Notes:

Four bottles: Two 1-L plastic bottles with HNO<sub>3</sub> for radium (EPA 9315/9320); one 120-mL plastic bottle for F (EPA 300.0); and one 250-mL plastic bottle with HNO<sub>3</sub> for App. IV metals (EPA 6010D/6020B/7470A).

## 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	+/- 10	+/- 10	+/- 0.3	
2/15/2021 2:54 PM	00:00	5.56 pH	15.07 °C	1,393.8 µS/cm	1.44 mg/L	--	141.9 mV	14.05 ft	100.00 ml/min
2/15/2021 2:58 PM	03:49	5.52 pH	14.69 °C	1,393.9 µS/cm	1.39 mg/L	8.82 NTU	192.3 mV	15.75 ft	100.00 ml/min
2/15/2021 3:03 PM	08:49	5.50 pH	14.63 °C	1,373.9 µS/cm	1.26 mg/L	7.56 NTU	319.6 mV	16.22 ft	100.00 ml/min
2/15/2021 3:08 PM	13:49	5.47 pH	14.84 °C	1,370.8 µS/cm	2.04 mg/L	4.46 NTU	343.7 mV	16.75 ft	100.00 ml/min
2/15/2021 3:13 PM	18:49	5.47 pH	14.71 °C	1,366.4 µS/cm	2.52 mg/L	3.75 NTU	205.1 mV	17.13 ft	100.00 ml/min
2/15/2021 3:18 PM	23:49	5.47 pH	14.86 °C	1,373.4 µS/cm	2.74 mg/L	2.86 NTU	221.1 mV	17.50 ft	100.00 ml/min
2/15/2021 3:23 PM	28:49	5.47 pH	15.07 °C	1,373.3 µS/cm	2.80 mg/L	2.46 NTU	218.8 mV	17.86 ft	100.00 ml/min
2/15/2021 3:28 PM	33:49	5.48 pH	15.14 °C	1,372.2 µS/cm	2.75 mg/L	1.98 NTU	213.2 mV	18.18 ft	100.00 ml/min
2/15/2021 3:33 PM	38:49	5.48 pH	15.02 °C	1,370.7 µS/cm	2.64 mg/L	1.99 NTU	203.8 mV	18.45 ft	100.00 ml/min
2/15/2021 3:38 PM	43:49	5.48 pH	15.03 °C	1,377.8 µS/cm	2.51 mg/L	1.57 NTU	200.4 mV	18.68 ft	100.00 ml/min

## Samples

Sample ID:	Description:
MW-22	Grab Sample.



# Low-Flow Test Report:

Test Date / Time: 2/12/2021 1:19:43 PM

Project: Plant Hammond

Operator Name: Chad Russo

<b>Location Name: MW-23D</b> <b>Well Diameter: 2 in</b> <b>Casing Type: PVC</b> <b>Screen Length: 10 ft</b> <b>Top of Screen: 52.79 ft</b> <b>Total Depth: 62.79 ft</b> <b>Initial Depth to Water: 18.55 ft</b>	<b>Pump Type: Alexis</b> <b>Tubing Type: Polyethylene</b> <b>Pump Intake From TOC: 58 ft</b> <b>Estimated Total Volume Pumped: 6 liter</b> <b>Flow Cell Volume: 90 ml</b> <b>Final Flow Rate: 200 ml/min</b> <b>Final Draw Down: 0.07 ft</b>	<b>Instrument Used: Aqua TROLL 400</b> <b>Serial Number: 728634</b>
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## Test Notes:

Four bottles: Two 1-L plastic bottles with HNO<sub>3</sub> for radium (EPA 9315/9320); one 120-mL plastic bottle for F (EPA 300.0); and one 250-mL plastic bottle with HNO<sub>3</sub> for App. IV metals (EPA 6010D/6020B/7470A).

## 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	+/- 10	+/- 10	+/- 0.3	
2/12/2021 1:19 PM	00:00	6.93 pH	15.24 °C	1,591.9 µS/cm	1.38 mg/L	--	-6.6 mV	18.55 ft	200.00 ml/min
2/12/2021 1:24 PM	05:00	6.86 pH	16.41 °C	1,666.0 µS/cm	0.82 mg/L	4.58 NTU	8.5 mV	18.62 ft	200.00 ml/min
2/12/2021 1:29 PM	10:00	6.84 pH	16.49 °C	1,697.5 µS/cm	0.56 mg/L	4.09 NTU	7.8 mV	18.62 ft	200.00 ml/min
2/12/2021 1:34 PM	15:00	6.83 pH	16.37 °C	1,711.2 µS/cm	0.46 mg/L	3.38 NTU	17.2 mV	18.62 ft	200.00 ml/min
2/12/2021 1:39 PM	20:00	6.80 pH	16.43 °C	1,723.7 µS/cm	0.40 mg/L	4.06 NTU	26.3 mV	18.62 ft	200.00 ml/min
2/12/2021 1:44 PM	25:00	6.81 pH	16.33 °C	1,725.1 µS/cm	0.36 mg/L	2.84 NTU	28.4 mV	18.62 ft	200.00 ml/min
2/12/2021 1:49 PM	30:00	6.80 pH	16.09 °C	1,730.2 µS/cm	0.33 mg/L	2.92 NTU	30.1 mV	18.62 ft	200.00 ml/min

## Samples

Sample ID:	Description:
MW-23D	Grab Sample.

# Low-Flow Test Report:

Test Date / Time: 2/12/2021 9:52:33 AM

Project: GP-Plant Hammond

Operator Name: Aaron Reeder

<b>Location Name: MW-33</b> <b>Well Diameter: 2 in</b> <b>Casing Type: PVC</b> <b>Screen Length: 10 ft</b> <b>Top of Screen: 27.93 ft</b> <b>Total Depth: 37.93 ft</b> <b>Initial Depth to Water: 24.6 ft</b>	<b>Pump Type: Alexis</b> <b>Tubing Type: polyethylene</b> <b>Tubing Inner Diameter: 0.17 in</b> <b>Pump Intake From TOC: 33 ft</b> <b>Estimated Total Volume Pumped: 6 liter</b> <b>Flow Cell Volume: 90 ml</b> <b>Final Flow Rate: 150 ml/min</b> <b>Final Draw Down: 0.05 ft</b>	<b>Instrument Used: Aqua TROLL 400</b> <b>Serial Number: 728623</b>
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## Test Notes:

Four bottles: Two 1-L plastic bottles with HNO<sub>3</sub> for radium (EPA 9315/9320); one 120-mL plastic bottle for F (EPA 300.0); and one 250-mL plastic bottle with HNO<sub>3</sub> for App. IV metals (EPA 6010D/6020B/7470A).

## Weather Conditions:

Rain

## 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	
2/12/2021 9:52 AM	00:00	5.01 pH	10.36 °C	2,888.5 µS/cm	5.12 mg/L	--	182.4 mV	24.60 ft	150.00 ml/min
2/12/2021 9:57 AM	05:00	4.28 pH	17.23 °C	2,834.9 µS/cm	1.57 mg/L	2.55 NTU	259.6 mV	24.65 ft	150.00 ml/min
2/12/2021 10:02 AM	10:00	4.34 pH	17.77 °C	2,826.2 µS/cm	1.00 mg/L	1.37 NTU	256.1 mV	24.65 ft	150.00 ml/min
2/12/2021 10:07 AM	15:00	4.37 pH	17.81 °C	2,813.5 µS/cm	1.85 mg/L	1.30 NTU	249.9 mV	24.65 ft	150.00 ml/min
2/12/2021 10:12 AM	20:00	4.38 pH	17.90 °C	2,800.3 µS/cm	1.03 mg/L	1.25 NTU	249.1 mV	24.65 ft	150.00 ml/min
2/12/2021 10:17 AM	25:00	4.39 pH	17.90 °C	2,777.7 µS/cm	0.66 mg/L	1.42 NTU	287.8 mV	24.65 ft	150.00 ml/min
2/12/2021 10:22 AM	30:00	4.39 pH	17.92 °C	2,760.3 µS/cm	0.64 mg/L	1.24 NTU	243.9 mV	24.65 ft	150.00 ml/min
2/12/2021 10:27 AM	35:00	4.40 pH	18.00 °C	2,808.6 µS/cm	0.67 mg/L	0.85 NTU	239.4 mV	24.65 ft	150.00 ml/min
2/12/2021 10:32 AM	40:00	4.40 pH	18.01 °C	2,740.4 µS/cm	0.47 mg/L	0.72 NTU	235.9 mV	24.65 ft	150.00 ml/min

## Samples

Sample ID:	Description:
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MW-33

Grab Sample.

# Low-Flow Test Report:

Test Date / Time: 2/15/2021 11:00:06 AM

Project: Plant Hammond

Operator Name: Chad Russo

<b>Location Name: MW-35</b> <b>Well Diameter: 2 in</b> <b>Casing Type: PVC</b> <b>Screen Length: 10 ft</b> <b>Top of Screen: 13.52 ft</b> <b>Total Depth: 23.52 ft</b> <b>Initial Depth to Water: 8.49 ft</b>	<b>Pump Type: Alexis</b> <b>Tubing Type: Polyethylene</b> <b>Pump Intake From TOC: 20 ft</b> <b>Estimated Total Volume Pumped: 4 liter</b> <b>Flow Cell Volume: 90 ml</b> <b>Final Flow Rate: 100 ml/min</b> <b>Final Draw Down: 2.12 ft</b>	<b>Instrument Used: Aqua TROLL 400</b> <b>Serial Number: 728634</b>
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## Test Notes:

Four bottles: Two 1-L plastic bottles with HNO<sub>3</sub> for radium (EPA 9315/9320); one 120-mL plastic bottle for F (EPA 300.0); and one 250-mL plastic bottle with HNO<sub>3</sub> for App. IV metals (EPA 6010D/6020B/7470A).

## 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	+/- 10	+/- 10	+/- 0.3	
2/15/2021 11:00 AM	00:00	4.80 pH	15.39 °C	2,791.7 µS/cm	0.65 mg/L	--	187.7 mV	8.49 ft	200.00 ml/min
2/15/2021 11:05 AM	05:00	4.78 pH	15.65 °C	2,745.6 µS/cm	0.51 mg/L	1.28 NTU	282.1 mV	10.88 ft	200.00 ml/min
2/15/2021 11:10 AM	10:00	4.79 pH	14.83 °C	2,762.2 µS/cm	0.55 mg/L	2.60 NTU	167.6 mV	10.76 ft	100.00 ml/min
2/15/2021 11:15 AM	15:00	4.80 pH	14.84 °C	2,783.3 µS/cm	0.52 mg/L	1.73 NTU	160.4 mV	10.67 ft	100.00 ml/min
2/15/2021 11:20 AM	20:00	4.81 pH	14.93 °C	2,775.5 µS/cm	0.44 mg/L	2.74 NTU	154.9 mV	10.67 ft	100.00 ml/min
2/15/2021 11:25 AM	25:00	4.82 pH	15.02 °C	2,779.0 µS/cm	0.49 mg/L	2.40 NTU	154.6 mV	10.61 ft	100.00 ml/min
2/15/2021 11:30 AM	30:00	4.82 pH	14.85 °C	2,800.6 µS/cm	0.42 mg/L	1.48 NTU	149.5 mV	10.61 ft	100.00 ml/min

## Samples

Sample ID:	Description:
MW-35	Grab Sample.

# Low-Flow Test Report:

Test Date / Time: 2/10/2021 1:49:57 PM

Project: Plant Hammond

Operator Name: Chad Russo

<b>Location Name: MW-37D</b> <b>Well Diameter: 2 in</b> <b>Casing Type: PVC</b> <b>Screen Length: 10 ft</b> <b>Top of Screen: 66.63 ft</b> <b>Total Depth: 76.63 ft</b> <b>Initial Depth to Water: 16.27 ft</b>	<b>Pump Type: Bladder</b> <b>Tubing Type: Polyethylene</b> <b>Pump Intake From TOC: 71 ft</b> <b>Estimated Total Volume Pumped: 2 liter</b> <b>Flow Cell Volume: 90 ml</b> <b>Final Flow Rate: 100 ml/min</b> <b>Final Draw Down: 1.52 ft</b>	<b>Instrument Used: Aqua TROLL 400</b> <b>Serial Number: 728634</b>
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## Test Notes:

Purge Dry

## 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	+/- 10	+/- 10	+/- 0.3	
2/10/2021 1:49 PM	00:00	7.71 pH	22.97 °C	1,263.9 µS/cm	1.71 mg/L	--	-67.0 mV	16.27 ft	100.00 ml/min
2/10/2021 1:54 PM	05:00	7.51 pH	20.24 °C	1,487.8 µS/cm	0.91 mg/L	32.60 NTU	-70.7 mV	15.69 ft	100.00 ml/min
2/10/2021 1:59 PM	10:00	7.47 pH	19.54 °C	1,509.5 µS/cm	0.67 mg/L	35.30 NTU	-75.2 mV	16.41 ft	100.00 ml/min
2/10/2021 2:04 PM	15:00	7.48 pH	19.54 °C	1,507.4 µS/cm	0.53 mg/L	27.50 NTU	-145.1 mV	17.10 ft	100.00 ml/min
2/10/2021 2:09 PM	20:00	7.50 pH	19.49 °C	1,507.8 µS/cm	0.45 mg/L	27.50 NTU	-80.9 mV	17.79 ft	100.00 ml/min

## Samples

Sample ID:	Description:
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# Low-Flow Test Report:

Test Date / Time: 2/11/2021 12:34:42 PM

Project: GP-Plant Hammond

Operator Name: Aaron Reeder

<b>Location Name: MW-37D</b> <b>Well Diameter: 2 in</b> <b>Casing Type: PVC</b> <b>Screen Length: 10 ft</b> <b>Top of Screen: 66.63 ft</b> <b>Total Depth: 76.63 ft</b> <b>Initial Depth to Water: 15.01 ft</b>	<b>Pump Type: QED MP50</b> <b>Tubing Type: polyethylene</b> <b>Tubing Inner Diameter: 0.17 in</b> <b>Pump Intake From TOC: 71 ft</b> <b>Estimated Total Volume Pumped: 4 liter</b> <b>Flow Cell Volume: 90 ml</b> <b>Final Flow Rate: 100 ml/min</b> <b>Final Draw Down: 1.86 ft</b>	<b>Instrument Used: Aqua TROLL 400</b> <b>Serial Number: 728623</b>
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## Test Notes:

## Weather Conditions:

Cloudy with rain

## 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	
2/11/2021 12:34 PM	00:00	7.31 pH	16.56 °C	1,413.4 µS/cm	4.15 mg/L	--	100.7 mV	15.01 ft	150.00 ml/min
2/11/2021 12:39 PM	05:00	7.37 pH	16.92 °C	902.43 µS/cm	2.67 mg/L	27.30 NTU	93.9 mV	18.85 ft	150.00 ml/min
2/11/2021 12:44 PM	10:00	7.39 pH	16.96 °C	1,352.2 µS/cm	2.69 mg/L	26.30 NTU	90.4 mV	18.85 ft	150.00 ml/min
2/11/2021 12:49 PM	15:00	7.40 pH	16.87 °C	1,351.1 µS/cm	2.63 mg/L	25.90 NTU	86.3 mV	18.80 ft	100.00 ml/min
2/11/2021 12:54 PM	20:00	7.41 pH	16.87 °C	1,350.5 µS/cm	2.65 mg/L	30.90 NTU	82.7 mV	18.80 ft	100.00 ml/min
2/11/2021 12:59 PM	25:00	7.41 pH	16.89 °C	1,122.2 µS/cm	2.69 mg/L	14.20 NTU	79.6 mV	18.82 ft	100.00 ml/min
2/11/2021 1:04 PM	30:00	7.41 pH	16.92 °C	1,350.6 µS/cm	2.67 mg/L	11.70 NTU	76.7 mV	18.80 ft	100.00 ml/min
2/11/2021 1:09 PM	35:00	7.42 pH	16.96 °C	1,426.9 µS/cm	2.73 mg/L	9.35 NTU	74.0 mV	18.80 ft	100.00 ml/min

## Samples

Sample ID:	Description:
MW-37D	Grab Sample.

# Low-Flow Test Report:

Test Date / Time: 2/10/2021 11:48:21 AM

Project: Plant Hammond (4)

Operator Name: Chad Russo

<b>Location Name: HGWC-18</b> <b>Well Diameter: 2 in</b> <b>Casing Type: PVC</b> <b>Screen Length: 10 ft</b> <b>Top of Screen: 17.8 ft</b> <b>Total Depth: 27.8 ft</b> <b>Initial Depth to Water: 17.66 ft</b>	<b>Pump Type: Bladder</b> <b>Tubing Type: Polyethylene</b> <b>Pump Intake From TOC: 22.8 ft</b> <b>Estimated Total Volume Pumped: 4970 ml</b> <b>Flow Cell Volume: 90 ml</b> <b>Final Flow Rate: 200 ml/min</b> <b>Final Draw Down: 0.18 ft</b>	<b>Instrument Used: Aqua TROLL 400</b> <b>Serial Number: 728634</b>
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## Test Notes:

Seven bottles: Alkalinity, dissolved CO2, ions, metals, sulfide.

## 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	+/- 10	+/- 10	+/- 0.3	
2/10/2021 11:48 AM	00:00	4.43 pH	16.89 °C	2,123.4 µS/cm	1.74 mg/L		122.4 mV	17.66 ft	100.00 ml/min
2/10/2021 11:53 AM	05:00	4.45 pH	17.09 °C	2,021.9 µS/cm	1.12 mg/L	5.47 NTU	132.0 mV	17.76 ft	100.00 ml/min
2/10/2021 11:58 AM	10:00	4.50 pH	17.10 °C	1,994.8 µS/cm	0.92 mg/L	2.28 NTU	221.9 mV	17.76 ft	100.00 ml/min
2/10/2021 12:03 PM	15:00	4.52 pH	17.11 °C	2,028.2 µS/cm	0.93 mg/L	1.71 NTU	242.9 mV	17.84 ft	200.00 ml/min
2/10/2021 12:08 PM	20:00	4.52 pH	17.16 °C	2,025.5 µS/cm	0.64 mg/L	1.71 NTU	152.3 mV	17.84 ft	200.00 ml/min
2/10/2021 12:13 PM	25:00	4.54 pH	17.22 °C	2,040.4 µS/cm	0.50 mg/L	1.19 NTU	151.6 mV	17.84 ft	200.00 ml/min
2/10/2021 12:18 PM	30:00	4.55 pH	17.27 °C	2,025.6 µS/cm	0.40 mg/L	1.05 NTU	248.2 mV	17.84 ft	200.00 ml/min
2/10/2021 12:20 PM	32:21	4.55 pH	17.29 °C	2,148.7 µS/cm	0.37 mg/L		175.4 mV	17.84 ft	200.00 ml/min

## Samples

Sample ID:	Description:
HGWC-18	Grab

March 2021



# Low-Flow Test Report:

Test Date / Time: 3/10/2021 3:42:04 PM

Project: GP-Plant Hammond

Operator Name: Vashish Taukoor

<b>Location Name: HGWA-1</b> <b>Well Diameter: 2 in</b> <b>Casing Type: PVC</b> <b>Screen Length: 10 ft</b> <b>Top of Screen: 22.5 ft</b> <b>Total Depth: 32.5 ft</b> <b>Initial Depth to Water: 10.84 ft</b>	<b>Pump Type: Bladder</b> <b>Tubing Type: Polyethylene</b> <b>Pump Intake From TOC: 28 ft</b> <b>Estimated Total Volume Pumped: 8 Liter</b> <b>Flow Cell Volume: 90 ml</b> <b>Final Flow Rate: 200 ml/min</b> <b>Final Draw Down: 1.02 ft</b>	<b>Instrument Used: Aqua TROLL 400</b> <b>Serial Number: 728563</b>
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## Test Notes:

Five bottles: Metals, TDS, Inorganics, Radium.

## Weather Conditions:

Sunny

Low wind

50 degrees F

## Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
3/10/2021 3:42 PM	00:00	6.98 pH	17.27 °C	604.28 µS/cm	0.27 mg/L	2.98 NTU	14.4 mV	11.82 ft	200.00 ml/min
3/10/2021 3:47 PM	05:00	6.97 pH	17.21 °C	600.58 µS/cm	0.24 mg/L	2.44 NTU	0.8 mV	11.84 ft	200.00 ml/min
3/10/2021 3:52 PM	10:00	6.96 pH	17.19 °C	600.84 µS/cm	0.24 mg/L	1.52 NTU	-3.3 mV	11.86 ft	200.00 ml/min
3/10/2021 3:57 PM	15:00	6.96 pH	17.23 °C	599.63 µS/cm	0.22 mg/L	1.49 NTU	-7.0 mV	11.86 ft	200.00 ml/min
3/10/2021 4:02 PM	20:00	6.95 pH	17.31 °C	598.41 µS/cm	0.21 mg/L	1.40 NTU	3.4 mV	11.86 ft	200.00 ml/min
3/10/2021 4:07 PM	25:00	6.95 pH	17.29 °C	598.87 µS/cm	0.20 mg/L	1.35 NTU	-9.3 mV	11.86 ft	200.00 ml/min

## Samples

Sample ID:	Description:
HGWA-1	Grab Sample.

# Low-Flow Test Report:

Test Date / Time: 3/11/2021 9:07:23 AM

Project: GP-Plant Hammond

Operator Name: Vashish Taukoor

<b>Location Name: HGWA-2</b> <b>Well Diameter: 2 in</b> <b>Casing Type: PVC</b> <b>Screen Length: 10 ft</b> <b>Top of Screen: 17.95 ft</b> <b>Total Depth: 27.95 ft</b> <b>Initial Depth to Water: 7.11 ft</b>	<b>Pump Type: Bladder</b> <b>Tubing Type: Polyethylene</b> <b>Pump Intake From TOC: 23 ft</b> <b>Estimated Total Volume Pumped: 14.5 Liter</b> <b>Flow Cell Volume: 90 ml</b> <b>Final Flow Rate: 200 ml/min Final Draw Down: 0.1 ft</b>	<b>Instrument Used: Aqua TROLL 400</b> <b>Serial Number: 728563</b>
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## Test Notes:

Five bottles: Metals, TDS, Inorganics, Radium.

## Weather Conditions:

Sunny

55 deg F

No wind

## 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	
3/11/2021 9:07 AM	00:00	5.93 pH	16.04 °C	330.25 µS/cm	1.23 mg/L	11.40 NTU	83.5 mV	7.21 ft	200.00 ml/min
3/11/2021 9:12 AM	05:00	5.89 pH	16.20 °C	317.44 µS/cm	1.09 mg/L	11.00 NTU	108.3 mV	7.25 ft	200.00 ml/min
3/11/2021 9:17 AM	10:00	5.87 pH	16.23 °C	310.57 µS/cm	1.08 mg/L	7.97 NTU	87.1 mV	7.25 ft	200.00 ml/min
3/11/2021 9:22 AM	15:00	5.85 pH	16.32 °C	306.71 µS/cm	1.09 mg/L	6.85 NTU	89.0 mV	7.23 ft	200.00 ml/min
3/11/2021 9:27 AM	20:00	5.85 pH	16.32 °C	305.68 µS/cm	1.08 mg/L	6.18 NTU	115.2 mV	7.25 ft	200.00 ml/min
3/11/2021 9:32 AM	25:00	5.84 pH	16.33 °C	301.10 µS/cm	1.05 mg/L	5.43 NTU	89.7 mV	7.21 ft	200.00 ml/min
3/11/2021 9:37 AM	30:00	5.80 pH	16.35 °C	288.98 µS/cm	1.03 mg/L	5.09 NTU	91.2 mV	7.25 ft	200.00 ml/min
3/11/2021 9:42 AM	35:00	5.81 pH	16.43 °C	291.38 µS/cm	0.97 mg/L	4.69 NTU	90.1 mV	7.25 ft	200.00 ml/min
3/11/2021 9:47 AM	40:00	5.81 pH	16.47 °C	294.20 µS/cm	0.93 mg/L	4.21 NTU	117.5 mV	7.21 ft	200.00 ml/min
3/11/2021 9:52 AM	45:00	5.79 pH	16.48 °C	288.27 µS/cm	0.98 mg/L	4.15 NTU	120.2 mV	7.21 ft	200.00 ml/min
3/11/2021 9:57 AM	50:00	5.80 pH	16.47 °C	288.45 µS/cm	0.98 mg/L	4.00 NTU	88.6 mV	7.21 ft	200.00 ml/min

**Samples**

Sample ID:	Description:
HGWA-2	Five bottles: Metals, TDS, Inorganics, Radium

# Low-Flow Test Report:

Test Date / Time: 3/11/2021 10:57:05 AM

Project: GP-Plant Hammond

Operator Name: Vashish Taukoor

<b>Location Name: HGWA-3</b> <b>Well Diameter: 2 in</b> <b>Screen Length: 10 ft</b> <b>Top of Screen: 34.87 ft</b> <b>Total Depth: 44.87 ft</b> <b>Initial Depth to Water: 6.71 ft</b>	<b>Pump Type: Bladder</b> <b>Tubing Type: Polyethylene</b> <b>Pump Intake From TOC: 40 ft</b> <b>Estimated Total Volume Pumped: 8 Liter</b> <b>Flow Cell Volume: 90 ml</b> <b>Final Flow Rate: 200 ml/min Final Draw Down: 0.01 ft</b>	<b>Instrument Used: Aqua TROLL 400</b> <b>Serial Number: 728563</b>
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## Test Notes:

Five bottles: Metals, TDS, Inorganics, Radium.  
Prepurged 15 min at 200 ml/min

## Weather Conditions:

Sunny

Low wind

50 deg 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	
3/11/2021 10:57 AM	00:00	7.26 pH	17.10 °C	470.32 µS/cm	0.67 mg/L	4.21 NTU	-50.0 mV	6.72 ft	200.00 ml/min
3/11/2021 11:02 AM	05:00	7.28 pH	17.37 °C	467.49 µS/cm	0.62 mg/L	1.29 NTU	-54.2 mV	6.72 ft	200.00 ml/min
3/11/2021 11:07 AM	10:06	7.30 pH	17.25 °C	467.75 µS/cm	0.59 mg/L	0.67 NTU	-57.4 mV	6.72 ft	200.00 ml/min
3/11/2021 11:12 AM	15:06	7.31 pH	17.23 °C	466.88 µS/cm	0.57 mg/L	0.55 NTU	-59.9 mV	6.72 ft	200.00 ml/min
3/11/2021 11:17 AM	20:06	7.32 pH	17.23 °C	466.87 µS/cm	0.58 mg/L	0.50 NTU	-75.3 mV	6.72 ft	200.00 ml/min
3/11/2021 11:22 AM	24:57	7.33 pH	17.42 °C	467.54 µS/cm	0.56 mg/L	0.45 NTU	-64.5 mV	6.72 ft	200.00 ml/min

## Samples

Sample ID:	Description:
HGWA-3	Grab Sample.

# Low-Flow Test Report:

Test Date / Time: 3/10/2021 3:46:02 PM

Project: GP-Plant Hammond

Operator Name: Thomas Kessler

<b>Location Name: HGWA-4</b> <b>Well Diameter: 2 in</b> <b>Casing Type: PVC</b> <b>Screen Length: 10 ft</b> <b>Top of Screen: 15.8 ft</b> <b>Total Depth: 24.88 ft</b> <b>Initial Depth to Water: 5.75 ft</b>	<b>Pump Type: Bladder</b> <b>Tubing Type: polyethylene</b> <b>Pump Intake From TOC: 20.8 ft</b> <b>Estimated Total Volume Pumped: 6 liter</b> <b>Flow Cell Volume: 90 ml</b> <b>Final Flow Rate: 200 ml/min</b> <b>Final Draw Down: 0.2 ft</b>	<b>Instrument Used: Aqua TROLL 400</b> <b>Serial Number: 728566</b>
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## Test Notes:

Five bottles; Metals, TDS, Inorganics, Radium.

## Weather Conditions:

Cloudy, 70 degrees.

## Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
3/10/2021 3:46 PM	00:00	5.80 pH	20.04 °C	67.67 µS/cm	6.15 mg/L	3.75 NTU	106.9 mV	5.75 ft	200.00 ml/min
3/10/2021 3:51 PM	05:00	5.37 pH	16.64 °C	68.82 µS/cm	2.55 mg/L	3.10 NTU	116.8 mV	5.90 ft	200.00 ml/min
3/10/2021 3:56 PM	10:00	5.33 pH	16.32 °C	69.95 µS/cm	2.46 mg/L	3.01 NTU	119.4 mV	5.95 ft	200.00 ml/min
3/10/2021 4:01 PM	15:00	5.31 pH	16.29 °C	70.17 µS/cm	2.37 mg/L	2.50 NTU	118.4 mV	5.95 ft	200.00 ml/min
3/10/2021 4:06 PM	20:00	5.25 pH	16.38 °C	70.83 µS/cm	2.25 mg/L	2.77 NTU	119.7 mV	5.95 ft	200.00 ml/min
3/10/2021 4:11 PM	25:00	5.26 pH	16.38 °C	71.62 µS/cm	2.20 mg/L	2.40 NTU	114.6 mV	5.95 ft	200.00 ml/min
3/10/2021 4:16 PM	30:00	5.28 pH	16.33 °C	72.76 µS/cm	2.16 mg/L	2.16 NTU	109.8 mV	5.95 ft	200.00 ml/min

## Samples

Sample ID:	Description:
HGWA-4	Grab Sample.

# Low-Flow Test Report:

Test Date / Time: 3/11/2021 10:25:17 AM

Project: GP-Plant Hammond

Operator Name: Chad Russo

<b>Location Name: HGWA-5</b> <b>Well Diameter: 2 in</b> <b>Casing Type: PVC</b> <b>Screen Length: 10 ft</b> <b>Top of Screen: 17.95 ft</b> <b>Total Depth: 27.95 ft</b> <b>Initial Depth to Water: 4.83 ft</b>	<b>Pump Type: Bladder</b> <b>Tubing Type: Polyethylene</b> <b>Pump Intake From TOC: 23 ft</b> <b>Estimated Total Volume Pumped: 12 Liter</b> <b>Flow Cell Volume: 90 ml</b> <b>Final Flow Rate: 200 ml/min Final Draw Down: 1.03 ft</b>	<b>Instrument Used: Aqua TROLL 400</b> <b>Serial Number: 728550</b>
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## Test Notes:

Five Bottles: Metals, TDS, Inorganics, Radium

## 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	
3/11/2021 10:25 AM	00:00	6.41 pH	17.17 °C	253.71 µS/cm	1.24 mg/L	--	11.3 mV	4.83 ft	200.00 ml/min
3/11/2021 10:30 AM	05:00	6.47 pH	17.19 °C	246.39 µS/cm	1.13 mg/L	32.60 NTU	7.6 mV	5.45 ft	200.00 ml/min
3/11/2021 10:35 AM	10:00	6.49 pH	17.23 °C	246.96 µS/cm	0.50 mg/L	27.90 NTU	-4.3 mV	5.54 ft	200.00 ml/min
3/11/2021 10:40 AM	15:00	6.51 pH	17.26 °C	243.45 µS/cm	0.38 mg/L	16.30 NTU	2.5 mV	5.65 ft	200.00 ml/min
3/11/2021 10:45 AM	20:00	6.50 pH	17.37 °C	238.90 µS/cm	0.27 mg/L	14.10 NTU	-4.2 mV	5.67 ft	200.00 ml/min
3/11/2021 10:50 AM	25:00	6.51 pH	17.54 °C	234.14 µS/cm	0.22 mg/L	11.50 NTU	4.3 mV	5.74 ft	200.00 ml/min
3/11/2021 10:55 AM	30:00	6.48 pH	17.46 °C	231.69 µS/cm	0.21 mg/L	11.17 NTU	-0.5 mV	5.74 ft	200.00 ml/min
3/11/2021 11:00 AM	35:00	6.49 pH	17.77 °C	229.74 µS/cm	0.20 mg/L	9.01 NTU	7.2 mV	5.81 ft	200.00 ml/min
3/11/2021 11:05 AM	40:00	6.49 pH	17.56 °C	226.98 µS/cm	0.18 mg/L	8.96 NTU	2.1 mV	5.81 ft	200.00 ml/min
3/11/2021 11:10 AM	45:00	6.49 pH	17.54 °C	224.11 µS/cm	0.19 mg/L	7.46 NTU	4.1 mV	5.81 ft	200.00 ml/min
3/11/2021 11:15 AM	50:00	6.46 pH	17.51 °C	223.24 µS/cm	0.18 mg/L	6.85 NTU	12.6 mV	5.86 ft	200.00 ml/min
3/11/2021 11:20 AM	55:00	6.47 pH	17.55 °C	221.87 µS/cm	0.16 mg/L	5.87 NTU	7.9 mV	5.86 ft	200.00 ml/min
3/11/2021 11:25 AM	01:00:00	6.48 pH	18.06 °C	220.96 µS/cm	0.16 mg/L	4.99 NTU	13.7 mV	5.86 ft	200.00 ml/min

## Samples

Sample ID:	Description:
HGWA-5	Grab Sample.

Created using VuSitu from In-Situ, Inc.

# Low-Flow Test Report:

Test Date / Time: 3/11/2021 11:54:50 AM

Project: GP-Plant Hammond

Operator Name: Chad Russo

<b>Location Name: HGWA-6</b> <b>Well Diameter: 2 in</b> <b>Casing Type: PVC</b> <b>Screen Length: 10 ft</b> <b>Top of Screen: 40.52 ft</b> <b>Total Depth: 50.52 ft</b> <b>Initial Depth to Water: 4.55 ft</b>	<b>Pump Type: Bladder</b> <b>Tubing Type: Polyethylene</b> <b>Pump Intake From TOC: 45 ft</b> <b>Estimated Total Volume Pumped: 8 Liter</b> <b>Flow Cell Volume: 90 ml</b> <b>Final Flow Rate: 200 ml/min</b> <b>Final Draw Down: 1.49 ft</b>	<b>Instrument Used: Aqua TROLL 400</b> <b>Serial Number: 728550</b>
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## Test Notes:

Five Bottles: Metals, TDS, Inorganics, Radium.

## 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	
3/11/2021 11:54 AM	00:00	7.34 pH	18.52 °C	366.61 µS/cm	2.00 mg/L	--	-25.7 mV	4.55 ft	200.00 ml/min
3/11/2021 11:59 AM	05:00	7.52 pH	17.84 °C	367.82 µS/cm	2.42 mg/L	1.85 NTU	-37.2 mV	5.80 ft	200.00 ml/min
3/11/2021 12:04 PM	10:00	7.59 pH	17.94 °C	368.30 µS/cm	2.56 mg/L	1.59 NTU	-50.9 mV	5.95 ft	200.00 ml/min
3/11/2021 12:09 PM	15:00	7.59 pH	18.29 °C	367.82 µS/cm	1.81 mg/L	1.02 NTU	-51.8 mV	5.95 ft	200.00 ml/min
3/11/2021 12:14 PM	20:00	7.60 pH	18.25 °C	367.95 µS/cm	1.26 mg/L	0.86 NTU	-53.4 mV	5.95 ft	200.00 ml/min
3/11/2021 12:19 PM	25:00	7.59 pH	18.28 °C	367.63 µS/cm	0.90 mg/L	0.81 NTU	-55.6 mV	5.97 ft	200.00 ml/min
3/11/2021 12:24 PM	30:00	7.59 pH	18.35 °C	368.45 µS/cm	0.68 mg/L	0.83 NTU	-57.5 mV	5.97 ft	200.00 ml/min
3/11/2021 12:29 PM	35:00	7.57 pH	18.44 °C	368.09 µS/cm	0.52 mg/L	1.02 NTU	-42.4 mV	6.00 ft	200.00 ml/min
3/11/2021 12:34 PM	40:00	7.56 pH	18.35 °C	368.13 µS/cm	0.42 mg/L	1.00 NTU	-62.4 mV	6.04 ft	200.00 ml/min

## Samples

Sample ID:	Description:
HGWA-6	Grab Sample.



# Low-Flow Test Report:

Test Date / Time: 3/10/2021 1:48:06 PM

Project: GP-Plant Hammond

Operator Name: Thomas Kessler

<b>Location Name: HGWA-42D</b> <b>Well Diameter: 2 in</b> <b>Casing Type: PVC</b> <b>Screen Length: 10 ft</b> <b>Top of Screen: 58.03 ft</b> <b>Total Depth: 68.03</b> <b>Initial Depth to Water: 10.68 ft</b>	<b>Pump Type: Bladder</b> <b>Tubing Type: polyethylene</b> <b>Pump Intake From TOC: 63.03 ft</b> <b>Estimated Total Volume Pumped: 5 liter</b> <b>Flow Cell Volume: 90 ml</b> <b>Final Flow Rate: 200 ml/min</b> <b>Final Draw Down: 1.57 ft</b>	<b>Instrument Used: Aqua TROLL 400</b> <b>Serial Number: 728566</b>
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## Test Notes:

Five bottles; Metals, TDS, Inorganics, Radium.

## Weather Conditions:

Sunny, 70 degrees.

## Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
3/10/2021 1:48 PM	00:00	7.54 pH	23.31 °C	290.35 µS/cm	1.70 mg/L	5.68 NTU	-32.1 mV	10.68 ft	200.00 ml/min
3/10/2021 1:53 PM	05:00	7.63 pH	18.93 °C	289.31 µS/cm	1.29 mg/L	4.91 NTU	-86.0 mV	12.10 ft	200.00 ml/min
3/10/2021 1:58 PM	10:00	7.65 pH	18.75 °C	292.15 µS/cm	0.79 mg/L	4.41 NTU	-97.0 mV	12.34 ft	200.00 ml/min
3/10/2021 2:03 PM	15:00	7.67 pH	18.82 °C	289.96 µS/cm	0.60 mg/L	3.89 NTU	-120.3 mV	12.65 ft	200.00 ml/min
3/10/2021 2:08 PM	20:00	7.69 pH	18.80 °C	291.40 µS/cm	0.62 mg/L	3.21 NTU	-123.6 mV	12.95 ft	200.00 ml/min
3/10/2021 2:13 PM	25:00	7.70 pH	19.38 °C	290.86 µS/cm	0.63 mg/L	2.61 NTU	-121.6 mV	12.25 ft	200.00 ml/min
3/10/2021 2:18 PM	30:00	7.70 pH	19.04 °C	298.35 µS/cm	0.41 mg/L	2.40 NTU	-129.5 mV	12.25 ft	200.00 ml/min

## Samples

Sample ID:	Description:
HGWA-42D	Grab Sample.

# Low-Flow Test Report:

Test Date / Time: 3/11/2021 9:02:31 AM

Project: GP-Plant Hammond

Operator Name: Thomas Kessler

<b>Location Name: HGWA-43D</b> <b>Well Diameter: 2 in</b> <b>Casing Type: PVC</b> <b>Screen Length: 10 ft</b> <b>Top of Screen: 51.25 ft</b> <b>Total Depth: 61.85</b> <b>Initial Depth to Water: 11.19 ft</b>	<b>Pump Type: Bladder</b> <b>Tubing Type: polyethylene</b> <b>Pump Intake From TOC: 56.25 ft</b> <b>Estimated Total Volume Pumped: 8 Liter</b> <b>Flow Cell Volume: 90 ml</b> <b>Final Flow Rate: 100 ml/min</b> <b>Final Draw Down: 1.73 ft</b>	<b>Instrument Used: Aqua TROLL 400</b> <b>Serial Number: 728566</b>
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## Test Notes:

Five Bottles: Metals, TDS, Inorganics, Radium.

## Weather Conditions:

Cloudy, 55 degrees

## Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
3/11/2021 9:02 AM	00:00	7.44 pH	15.53 °C	518.31 µS/cm	1.99 mg/L	15.70 NTU	-59.3 mV	11.19 ft	200.00 ml/min
3/11/2021 9:07 AM	05:00	7.43 pH	15.84 °C	519.02 µS/cm	0.82 mg/L	16.40 NTU	-73.8 mV	12.15 ft	200.00 ml/min
3/11/2021 9:12 AM	10:00	7.44 pH	16.13 °C	514.46 µS/cm	0.56 mg/L	18.90 NTU	-78.6 mV	12.75 ft	200.00 ml/min
3/11/2021 9:17 AM	15:00	7.46 pH	16.20 °C	515.21 µS/cm	0.41 mg/L	12.80 NTU	-83.0 mV	13.20 ft	200.00 ml/min
3/11/2021 9:22 AM	20:00	7.47 pH	16.29 °C	511.87 µS/cm	0.40 mg/L	13.40 NTU	-103.2 mV	13.45 ft	200.00 ml/min
3/11/2021 9:27 AM	25:00	7.46 pH	16.42 °C	502.64 µS/cm	0.34 mg/L	8.45 NTU	-104.5 mV	13.65 ft	200.00 ml/min
3/11/2021 9:32 AM	30:00	7.45 pH	16.47 °C	496.83 µS/cm	0.13 mg/L	6.57 NTU	-87.9 mV	13.80 ft	200.00 ml/min
3/11/2021 9:37 AM	35:00	7.45 pH	16.45 °C	494.24 µS/cm	0.11 mg/L	7.73 NTU	-88.1 mV	13.80 ft	200.00 ml/min
3/11/2021 9:42 AM	40:00	7.46 pH	16.22 °C	485.88 µS/cm	0.10 mg/L	4.38 NTU	-85.0 mV	13.13 ft	200.00 ml/min
3/11/2021 9:47 AM	45:00	7.46 pH	16.21 °C	479.85 µS/cm	0.10 mg/L	2.45 NTU	-81.0 mV	13.07 ft	200.00 ml/min
3/11/2021 9:52 AM	50:00	7.46 pH	16.22 °C	475.91 µS/cm	0.10 mg/L	4.58 NTU	-77.8 mV	12.92 ft	200.00 ml/min

## Samples

Sample ID:	Description:
HGWA-43D	Grab Sample.

Created using VuSitu from In-Situ, Inc.

# Low-Flow Test Report:

Test Date / Time: 3/10/2021 1:57:00 PM

Project: GP-Plant Hammond

Operator Name: Vashish Taukoor

<b>Location Name: HGWA-44D</b> <b>Well Diameter: 2 cm</b> <b>Casing Type: PVC</b> <b>Screen Length: 10 ft</b> <b>Top of Screen: 103.28 ft</b> <b>Total Depth: 113.28 ft</b> <b>Initial Depth to Water: 11.1 ft</b>	<b>Pump Type: Bladder</b> <b>Tubing Type: Polyethylene</b> <b>Pump Intake From TOC: 108 ft</b> <b>Estimated Total Volume Pumped: 9.5 Liter</b> <b>Flow Cell Volume: 90 ml</b> <b>Final Flow Rate: 100 ml/min Final Draw Down: 3.25 ft</b>	<b>Instrument Used: Aqua TROLL 400</b> <b>Serial Number: 728563</b>
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## Test Notes:

Five bottles: Metals, TDS, Inorganics, Radium

Pre-purged 6.5 L @ 200 ml/min, then dropped to 100 ml/min

## Weather Conditions:

Sunny

Low wind

55 degree F

## Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 5	
3/10/2021 1:57 PM	00:00	7.85 pH	18.25 °C	495.62 µS/cm	0.23 mg/L	2.89 NTU	-107.3 mV	14.48 ft	100.00 ml/min
3/10/2021 2:02 PM	05:00	7.89 pH	18.22 °C	498.99 µS/cm	0.23 mg/L	2.45 NTU	-112.3 mV	14.45 ft	100.00 ml/min
3/10/2021 2:07 PM	10:00	7.91 pH	18.44 °C	496.45 µS/cm	0.23 mg/L	2.67 NTU	-116.4 mV	14.45 ft	100.00 ml/min
3/10/2021 2:12 PM	15:00	7.92 pH	18.58 °C	501.57 µS/cm	0.23 mg/L	2.84 NTU	-120.9 mV	14.45 ft	100.00 ml/min
3/10/2021 2:17 PM	20:00	7.92 pH	18.61 °C	504.22 µS/cm	0.23 mg/L	2.56 NTU	-124.6 mV	14.45 ft	100.00 ml/min
3/10/2021 2:22 PM	25:00	7.92 pH	18.79 °C	502.44 µS/cm	0.22 mg/L	3.54 NTU	-147.9 mV	14.35 ft	100.00 ml/min
3/10/2021 2:27 PM	30:00	7.92 pH	18.88 °C	499.04 µS/cm	0.21 mg/L	2.98 NTU	-129.8 mV	14.35 ft	100.00 ml/min

## Samples

Sample ID:	Description:
HGWA-44D	Grab Sample.

# Low-Flow Test Report:

Test Date / Time: 3/17/2021 1:52:51 PM

Project: GP-Plant

Operator Name: Thomas Kessler

<b>Location Name: HGWC-14</b> <b>Well Diameter: 2 in</b> <b>Casing Type: PVC</b> <b>Screen Length: 10 ft</b> <b>Top of Screen: 33 ft</b> <b>Total Depth: 43 ft</b> <b>Initial Depth to Water: 26.33 ft</b>	<b>Pump Type: Bladder</b> <b>Tubing Type: polyethylene</b> <b>Pump Intake From TOC: 38 ft</b> <b>Estimated Total Volume Pumped: 6 liter</b> <b>Flow Cell Volume: 90 ml</b> <b>Final Flow Rate: 200 ml/min</b> <b>Final Draw Down: 0.05 ft</b>	<b>Instrument Used: Aqua TROLL 400</b> <b>Serial Number: 728566</b>
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## Test Notes:

Five bottles: Metals, TDS, Inorganics, Radium.

## Weather Conditions:

Cloudy, 50 degrees.

## Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
3/17/2021 1:52 PM	00:00	4.83 pH	17.34 °C	2,767.6 µS/cm	7.04 mg/L	1.40 NTU	219.8 mV	26.33 ft	200.00 ml/min
3/17/2021 1:57 PM	05:00	4.74 pH	18.14 °C	2,762.5 µS/cm	1.33 mg/L	3.37 NTU	254.3 mV	26.38 ft	200.00 ml/min
3/17/2021 2:02 PM	10:00	4.70 pH	18.66 °C	2,743.5 µS/cm	1.04 mg/L	2.25 NTU	202.7 mV	26.38 ft	200.00 ml/min
3/17/2021 2:07 PM	15:00	4.70 pH	18.60 °C	2,747.6 µS/cm	0.86 mg/L	1.92 NTU	201.3 mV	26.38 ft	200.00 ml/min
3/17/2021 2:12 PM	20:00	4.70 pH	18.56 °C	2,749.3 µS/cm	0.71 mg/L	1.42 NTU	197.1 mV	26.38 ft	200.00 ml/min
3/17/2021 2:17 PM	25:00	4.70 pH	18.33 °C	2,744.7 µS/cm	0.61 mg/L	1.36 NTU	195.8 mV	26.38 ft	200.00 ml/min
3/17/2021 2:22 PM	30:00	4.72 pH	18.38 °C	2,749.4 µS/cm	0.52 mg/L	1.45 NTU	197.3 mV	26.38 ft	200.00 ml/min

## Samples

Sample ID:	Description:
HGWC-14	Grab Sample.

# Low-Flow Test Report:

Test Date / Time: 3/16/2021 2:49:16 PM

Project: GP-Plant Hammond

Operator Name: Thomas Kessler

<b>Location Name: HGWC-15</b> <b>Well Diameter: 2 in</b> <b>Casing Type: PVC</b> <b>Screen Length: 10 ft</b> <b>Top of Screen: 28 ft</b> <b>Total Depth: 38.1 ft</b> <b>Initial Depth to Water: 16.02 ft</b>	<b>Pump Type: Bladder</b> <b>Tubing Type: polyethylene</b> <b>Pump Intake From TOC: 33 ft</b> <b>Estimated Total Volume Pumped: 6 liter</b> <b>Flow Cell Volume: 90 ml</b> <b>Final Flow Rate: 200 ml/min</b> <b>Final Draw Down: 0.48 ft</b>	<b>Instrument Used: Aqua TROLL 400</b> <b>Serial Number: 728566</b>
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## Test Notes:

Five bottles: Metals, TDS, Inorganics, Radium.

## Weather Conditions:

Cloudy, 50 degrees.

## Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
3/16/2021 2:49 PM	00:00	6.96 pH	12.81 °C	1,163.3 µS/cm	8.62 mg/L	1.44 NTU	87.9 mV	16.02 ft	200.00 ml/min
3/16/2021 2:54 PM	05:00	6.32 pH	16.60 °C	1,235.1 µS/cm	2.48 mg/L	2.54 NTU	182.4 mV	16.50 ft	200.00 ml/min
3/16/2021 2:59 PM	10:00	6.15 pH	16.92 °C	1,207.2 µS/cm	2.11 mg/L	1.67 NTU	266.7 mV	16.50 ft	200.00 ml/min
3/16/2021 3:04 PM	15:00	6.11 pH	16.95 °C	1,211.3 µS/cm	1.29 mg/L	1.63 NTU	256.2 mV	16.50 ft	200.00 ml/min
3/16/2021 3:09 PM	20:00	6.10 pH	16.94 °C	1,213.9 µS/cm	1.20 mg/L	1.46 NTU	188.6 mV	16.50 ft	200.00 ml/min
3/16/2021 3:14 PM	25:00	6.08 pH	16.89 °C	1,211.7 µS/cm	1.17 mg/L	1.37 NTU	187.2 mV	16.50 ft	200.00 ml/min
3/16/2021 3:19 PM	30:00	6.08 pH	17.10 °C	1,211.6 µS/cm	1.21 mg/L	1.93 NTU	197.1 mV	16.50 ft	200.00 ml/min

## Samples

Sample ID:	Description:
HGWC-15	Grab Sample.

# Low-Flow Test Report:

Test Date / Time: 3/17/2021 8:19:03 AM

Project: GP-Plant Hammond

Operator Name: Chad Russo

<b>Location Name: HGWC-16</b> <b>Well Diameter: 2 in</b> <b>Casing Type: PVC</b> <b>Screen Length: 10 ft</b> <b>Top of Screen: 23.1 ft</b> <b>Total Depth: 33.1 ft</b> <b>Initial Depth to Water: 11.69 ft</b>	<b>Pump Type: Bladder</b> <b>Tubing Type: Polyethylene</b> <b>Pump Intake From TOC: 28 ft</b> <b>Estimated Total Volume Pumped: 13 Liter</b> <b>Flow Cell Volume: 90 ml</b> <b>Final Flow Rate: 200 ml/min</b> <b>Final Draw Down: 0.41 ft</b>	<b>Instrument Used: Aqua TROLL 400</b> <b>Serial Number: 728550</b>
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## Test Notes:

Five Bottles: Metals, TDS, Inorganics, Radium.

## 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	
3/17/2021 8:19 AM	00:00	7.02 pH	16.68 °C	1,120.8 µS/cm	1.28 mg/L	--	6.1 mV	11.69 ft	200.00 ml/min
3/17/2021 8:24 AM	05:00	7.07 pH	16.87 °C	1,104.4 µS/cm	0.54 mg/L	45.60 NTU	-27.9 mV	12.07 ft	200.00 ml/min
3/17/2021 8:29 AM	10:00	7.13 pH	16.87 °C	1,096.9 µS/cm	0.83 mg/L	668.00 NTU	-24.5 mV	12.07 ft	200.00 ml/min
3/17/2021 8:34 AM	15:00	7.13 pH	16.74 °C	1,095.6 µS/cm	0.47 mg/L	154.00 NTU	-30.1 mV	12.07 ft	200.00 ml/min
3/17/2021 8:39 AM	20:00	7.13 pH	16.76 °C	1,099.0 µS/cm	0.32 mg/L	88.90 NTU	-18.7 mV	12.07 ft	200.00 ml/min
3/17/2021 8:44 AM	25:00	7.14 pH	16.73 °C	1,097.3 µS/cm	0.30 mg/L	101.40 NTU	-18.9 mV	12.10 ft	200.00 ml/min
3/17/2021 8:49 AM	30:00	7.15 pH	16.72 °C	1,096.2 µS/cm	0.24 mg/L	36.50 NTU	-40.1 mV	12.10 ft	200.00 ml/min
3/17/2021 8:54 AM	35:00	7.16 pH	16.70 °C	1,096.3 µS/cm	0.25 mg/L	23.40 NTU	-24.0 mV	12.10 ft	200.00 ml/min
3/17/2021 8:59 AM	40:00	7.16 pH	16.74 °C	1,095.5 µS/cm	0.26 mg/L	11.70 NTU	-42.8 mV	12.10 ft	200.00 ml/min
3/17/2021 9:04 AM	45:00	7.17 pH	16.88 °C	1,098.7 µS/cm	0.30 mg/L	8.78 NTU	-25.3 mV	12.10 ft	200.00 ml/min
3/17/2021 9:09 AM	50:00	7.18 pH	16.96 °C	1,099.0 µS/cm	0.30 mg/L	9.65 NTU	-43.5 mV	12.10 ft	200.00 ml/min
3/17/2021 9:14 AM	55:00	7.18 pH	17.01 °C	1,099.6 µS/cm	0.26 mg/L	6.89 NTU	-26.3 mV	12.10 ft	200.00 ml/min
3/17/2021 9:19 AM	01:00:00	7.18 pH	16.88 °C	1,100.7 µS/cm	0.27 mg/L	6.03 NTU	-43.5 mV	12.10 ft	200.00 ml/min
3/17/2021 9:24 AM	01:05:00	7.19 pH	16.79 °C	1,100.8 µS/cm	0.22 mg/L	4.43 NTU	-26.2 mV	12.10 ft	200.00 ml/min

**Samples**

Sample ID:	Description:
HGWC-16	Grab Sample.



# Low-Flow Test Report:

Test Date / Time: 3/18/2021 1:48:33 PM

Project: GP-Plant Hammond

Operator Name: Chad Russo

<b>Location Name: HGWC-17</b> <b>Well Diameter: 2 in</b> <b>Casing Type: PVC</b> <b>Screen Length: 10 ft</b> <b>Top of Screen: 17.8 ft</b> <b>Total Depth: 27.8 ft</b> <b>Initial Depth to Water: 16.18 ft</b>	<b>Pump Type: Bladder</b> <b>Tubing Type: Polyethylene</b> <b>Pump Intake From TOC: 16.18 ft</b> <b>Estimated Total Volume Pumped: 11 Liter</b> <b>Flow Cell Volume: 90 ml</b> <b>Final Flow Rate: 200 ml/min</b> <b>Final Draw Down: 0.17 ft</b>	<b>Instrument Used: Aqua TROLL 400</b> <b>Serial Number: 728550</b>
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## Test Notes:

Five Bottles: Metals, TDS, Inorganics, Radium.

## 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	
3/18/2021 1:48 PM	00:00	6.81 pH	19.54 °C	1,441.5 µS/cm	3.31 mg/L	--	89.5 mV	16.18 ft	200.00 ml/min
3/18/2021 1:53 PM	05:00	6.60 pH	18.91 °C	1,461.3 µS/cm	1.11 mg/L	16.20 NTU	93.9 mV	16.45 ft	200.00 ml/min
3/18/2021 1:58 PM	10:00	6.49 pH	18.68 °C	1,473.5 µS/cm	0.69 mg/L	17.80 NTU	82.7 mV	16.45 ft	200.00 ml/min
3/18/2021 2:03 PM	15:00	6.46 pH	18.45 °C	1,486.1 µS/cm	0.40 mg/L	17.20 NTU	62.4 mV	16.45 ft	200.00 ml/min
3/18/2021 2:08 PM	20:00	6.46 pH	18.53 °C	1,490.2 µS/cm	0.28 mg/L	14.20 NTU	78.1 mV	16.45 ft	200.00 ml/min
3/18/2021 2:13 PM	25:00	6.45 pH	18.72 °C	1,506.9 µS/cm	0.23 mg/L	12.90 NTU	61.8 mV	16.45 ft	200.00 ml/min
3/18/2021 2:18 PM	30:00	6.44 pH	18.89 °C	1,505.1 µS/cm	0.21 mg/L	12.19 NTU	77.2 mV	16.45 ft	200.00 ml/min
3/18/2021 2:23 PM	35:00	6.44 pH	18.88 °C	1,502.5 µS/cm	0.19 mg/L	8.57 NTU	61.7 mV	16.45 ft	200.00 ml/min
3/18/2021 2:28 PM	40:00	6.44 pH	18.76 °C	1,508.8 µS/cm	0.18 mg/L	7.99 NTU	76.9 mV	16.45 ft	200.00 ml/min
3/18/2021 2:33 PM	45:00	6.44 pH	18.79 °C	1,512.7 µS/cm	0.18 mg/L	6.67 NTU	61.4 mV	16.35 ft	200.00 ml/min
3/18/2021 2:38 PM	50:00	6.44 pH	18.53 °C	1,517.7 µS/cm	0.18 mg/L	6.19 NTU	76.7 mV	16.35 ft	200.00 ml/min
3/18/2021 2:43 PM	55:00	6.43 pH	18.39 °C	1,518.6 µS/cm	0.18 mg/L	4.97 NTU	61.6 mV	16.35 ft	200.00 ml/min

## Samples

Sample ID:	Description:
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HGWC-17

Grab Sample.

Created using VuSitu from In-Situ, Inc.

# Low-Flow Test Report:

Test Date / Time: 3/18/2021 9:25:52 AM

Project: GP-Plant Hammond

Operator Name: Chad Russo

<b>Location Name: HGWC-18</b> <b>Well Diameter: 2 in</b> <b>Casing Type: PVC</b> <b>Screen Length: 10 ft</b> <b>Top of Screen: 17.8 ft</b> <b>Total Depth: 27.8 ft</b> <b>Initial Depth to Water: 16.58 ft</b>	<b>Pump Type: Bladder</b> <b>Tubing Type: Polyethylene</b> <b>Pump Intake From TOC: 23 ft</b> <b>Estimated Total Volume Pumped: 6 Liter</b> <b>Flow Cell Volume: 90 ml</b> <b>Final Flow Rate: 200 ml/min</b> <b>Final Draw Down: 0.17 ft</b>	<b>Instrument Used: Aqua TROLL 400</b> <b>Serial Number: 728550</b>
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## Test Notes:

Five Bottles: Metals, TDS, Inorganics, Radium.

## 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	
3/18/2021 9:25 AM	00:00	4.41 pH	15.99 °C	1,976.4 µS/cm	1.71 mg/L	--	162.0 mV	16.58 ft	200.00 ml/min
3/18/2021 9:30 AM	05:00	4.43 pH	15.74 °C	1,886.4 µS/cm	1.20 mg/L	1.07 NTU	178.8 mV	16.75 ft	200.00 ml/min
3/18/2021 9:35 AM	10:00	4.46 pH	15.69 °C	1,904.4 µS/cm	0.84 mg/L	1.09 NTU	237.0 mV	16.75 ft	200.00 ml/min
3/18/2021 9:40 AM	15:00	4.49 pH	15.67 °C	1,916.1 µS/cm	0.71 mg/L	0.83 NTU	310.8 mV	16.75 ft	200.00 ml/min
3/18/2021 9:45 AM	20:00	4.52 pH	15.63 °C	1,955.8 µS/cm	0.54 mg/L	0.79 NTU	192.7 mV	16.75 ft	200.00 ml/min
3/18/2021 9:50 AM	25:00	4.52 pH	15.69 °C	1,949.7 µS/cm	0.50 mg/L	0.86 NTU	343.6 mV	16.75 ft	200.00 ml/min
3/18/2021 9:55 AM	30:00	4.54 pH	15.76 °C	1,948.3 µS/cm	0.48 mg/L	0.63 NTU	204.7 mV	16.75 ft	200.00 ml/min

## Samples

Sample ID:	Description:
HGWC-18	Grab Sample.

# Low-Flow Test Report:

**Test Date / Time:** 3/18/2021 10:38:51 AM

**Project:** GP-Plant Hammond

**Operator Name:** Chad Russo

<b>Location Name: MW-21D</b> <b>Well Diameter: 2 in</b> <b>Casing Type: PVC</b> <b>Screen Length: 10 ft</b> <b>Top of Screen: 41.8 ft</b> <b>Total Depth: 51.8 ft</b> <b>Initial Depth to Water: 15.5 ft</b>	<b>Pump Type: Bladder</b> <b>Tubing Type: Polyethylene</b> <b>Pump Intake From TOC: 47 ft</b> <b>Estimated Total Volume Pumped: 17 Liter</b> <b>Flow Cell Volume: 90 ml</b> <b>Final Flow Rate: 200 ml/min</b> <b>Final Draw Down: 0.3 ft</b>	<b>Instrument Used: Aqua TROLL 400</b> <b>Serial Number: 728550</b>
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## Test Notes:

Five Bottles: Metals, TDS, Inorganics, Radium.

## 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	
3/18/2021 10:38 AM	00:00	6.39 pH	17.48 °C	2,068.3 µS/cm	3.96 mg/L	--	17.5 mV	15.50 ft	200.00 ml/min
3/18/2021 10:43 AM	05:00	6.62 pH	17.63 °C	2,114.6 µS/cm	1.74 mg/L	22.50 NTU	-23.0 mV	15.70 ft	200.00 ml/min
3/18/2021 10:48 AM	10:00	6.71 pH	17.59 °C	2,111.2 µS/cm	0.92 mg/L	19.10 NTU	-58.4 mV	15.70 ft	200.00 ml/min
3/18/2021 10:53 AM	15:00	6.77 pH	17.50 °C	2,110.7 µS/cm	0.60 mg/L	19.90 NTU	-67.2 mV	15.70 ft	200.00 ml/min
3/18/2021 10:58 AM	20:00	6.81 pH	17.22 °C	2,116.3 µS/cm	0.46 mg/L	23.10 NTU	-51.4 mV	15.70 ft	200.00 ml/min
3/18/2021 11:03 AM	25:00	6.83 pH	17.50 °C	2,116.2 µS/cm	0.40 mg/L	26.00 NTU	-74.1 mV	15.70 ft	200.00 ml/min
3/18/2021 11:08 AM	30:00	6.85 pH	17.59 °C	2,116.5 µS/cm	0.38 mg/L	25.90 NTU	-56.8 mV	15.70 ft	200.00 ml/min
3/18/2021 11:13 AM	35:00	6.87 pH	17.99 °C	2,114.0 µS/cm	0.38 mg/L	25.40 NTU	-77.1 mV	15.70 ft	200.00 ml/min
3/18/2021 11:18 AM	40:00	6.88 pH	18.04 °C	2,105.0 µS/cm	0.39 mg/L	24.30 NTU	-77.9 mV	15.70 ft	200.00 ml/min
3/18/2021 11:23 AM	45:00	6.88 pH	18.15 °C	2,112.1 µS/cm	0.41 mg/L	21.50 NTU	-60.3 mV	15.70 ft	200.00 ml/min
3/18/2021 11:28 AM	50:00	6.89 pH	18.44 °C	2,103.8 µS/cm	0.42 mg/L	18.80 NTU	-79.0 mV	15.60 ft	200.00 ml/min
3/18/2021 11:33 AM	55:00	6.90 pH	18.70 °C	2,103.7 µS/cm	0.44 mg/L	16.80 NTU	-61.9 mV	15.60 ft	200.00 ml/min
3/18/2021 11:38 AM	01:00:00	6.92 pH	17.86 °C	2,105.6 µS/cm	0.36 mg/L	14.70 NTU	-81.0 mV	15.70 ft	200.00 ml/min
3/18/2021 11:43 AM	01:05:00	6.93 pH	17.75 °C	2,101.2 µS/cm	0.24 mg/L	11.96 NTU	-83.7 mV	15.70 ft	200.00 ml/min
3/18/2021 11:48 AM	01:10:00	6.93 pH	17.94 °C	2,098.2 µS/cm	0.20 mg/L	10.61 NTU	-85.4 mV	15.80 ft	200.00 ml/min

3/18/2021 11:53 AM	01:15:00	6.94 pH	18.04 °C	2,092.1 µS/cm	0.19 mg/L	8.33 NTU	-68.1 mV	15.80 ft	200.00 ml/min
3/18/2021 11:58 AM	01:20:00	6.94 pH	18.13 °C	2,087.9 µS/cm	0.19 mg/L	6.26 NTU	-86.5 mV	15.80 ft	200.00 ml/min
3/18/2021 12:03 PM	01:25:00	6.95 pH	18.10 °C	2,083.9 µS/cm	0.18 mg/L	4.59 NTU	-69.3 mV	15.80 ft	200.00 ml/min

## Samples

Sample ID:	Description:
MW-21D	Grab Sample.

# Low-Flow Test Report:

Test Date / Time: 3/17/2021 8:44:28 AM

Project: GP-Plant Hammond

Operator Name: Thomas Kessler

<b>Location Name: MW-22</b> <b>Well Diameter: 2 in</b> <b>Casing Type: PVC</b> <b>Screen Length: 10 ft</b> <b>Top of Screen: 27.58 ft</b> <b>Total Depth: 39.00 ft</b> <b>Initial Depth to Water: 13.36 ft</b>	<b>Pump Type: Bladder</b> <b>Tubing Type: polyethylene</b> <b>Pump Intake From TOC: 33.58 ft</b> <b>Estimated Total Volume Pumped: 14 Liter</b> <b>Flow Cell Volume: 90 ml</b> <b>Final Flow Rate: 200 ml/min</b> <b>Final Draw Down: 4.52 ft</b>	<b>Instrument Used: Aqua TROLL 400</b> <b>Serial Number: 728566</b>
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## Test Notes:

Five Bottles: Metals, TDS, Inorganics, Radium.

## Weather Conditions:

Foggy, 50 degrees.

## Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
3/17/2021 8:44 AM	00:00	5.64 pH	14.80 °C	1,344.0 µS/cm	5.94 mg/L	1.35 NTU	122.2 mV	13.36 ft	200.00 ml/min
3/17/2021 8:49 AM	05:00	5.52 pH	16.56 °C	1,346.4 µS/cm	2.40 mg/L	2.06 NTU	258.0 mV	15.45 ft	200.00 ml/min
3/17/2021 8:54 AM	10:00	5.54 pH	15.89 °C	1,331.9 µS/cm	3.25 mg/L	1.71 NTU	262.0 mV	15.85 ft	200.00 ml/min
3/17/2021 8:59 AM	15:00	5.55 pH	15.31 °C	1,340.5 µS/cm	3.21 mg/L	1.37 NTU	173.6 mV	16.10 ft	200.00 ml/min
3/17/2021 9:04 AM	20:00	5.55 pH	15.30 °C	1,339.9 µS/cm	2.92 mg/L	0.94 NTU	176.1 mV	16.35 ft	200.00 ml/min
3/17/2021 9:09 AM	25:00	5.55 pH	15.44 °C	1,340.9 µS/cm	2.65 mg/L	0.86 NTU	269.7 mV	16.60 ft	200.00 ml/min
3/17/2021 9:14 AM	30:00	5.55 pH	15.47 °C	1,344.0 µS/cm	2.42 mg/L	--	182.1 mV	16.60 ft	200.00 ml/min
3/17/2021 9:19 AM	35:00	5.56 pH	15.57 °C	1,342.6 µS/cm	2.26 mg/L	0.84 NTU	178.4 mV	16.85 ft	200.00 ml/min
3/17/2021 9:24 AM	40:00	5.55 pH	15.42 °C	1,342.5 µS/cm	2.07 mg/L	0.91 NTU	263.8 mV	17.10 ft	200.00 ml/min
3/17/2021 9:29 AM	45:00	5.56 pH	15.44 °C	1,343.6 µS/cm	1.92 mg/L	1.05 NTU	261.2 mV	17.27 ft	200.00 ml/min
3/17/2021 9:34 AM	50:00	5.56 pH	15.44 °C	1,345.2 µS/cm	1.79 mg/L	1.04 NTU	169.5 mV	17.42 ft	200.00 ml/min
3/17/2021 9:39 AM	55:00	5.56 pH	15.57 °C	1,346.3 µS/cm	1.68 mg/L	1.52 NTU	259.0 mV	17.52 ft	200.00 ml/min
3/17/2021 9:44 AM	01:00:00	5.57 pH	15.62 °C	1,350.8 µS/cm	1.56 mg/L	1.46 NTU	174.1 mV	17.67 ft	200.00 ml/min

3/17/2021 9:49 AM	01:05:00	5.57 pH	15.61 °C	1,346.5 µS/cm	1.47 mg/L	1.16 NTU	172.0 mV	17.77 ft	200.00 ml/min
3/17/2021 9:54 AM	01:10:00	5.57 pH	15.44 °C	1,348.6 µS/cm	1.38 mg/L	1.15 NTU	168.9 mV	17.88 ft	200.00 ml/min

## Samples

Sample ID:	Description:
MW-22	Grab Sample.

# Low-Flow Test Report:

Test Date / Time: 3/17/2021 11:15:53 AM

Project: GP-Plant Hammond

Operator Name: Thomas Kessler

<b>Location Name: MW-23D</b> <b>Well Diameter: 2 in</b> <b>Casing Type: PVC</b> <b>Screen Length: 10 ft</b> <b>Top of Screen: 52.79 ft</b> <b>Total Depth: 62.74 ft</b> <b>Initial Depth to Water: 16.34 ft</b>	<b>Pump Type: Peri</b> <b>Tubing Type: polyethylene</b> <b>Pump Intake From TOC: 57.79 ft</b> <b>Estimated Total Volume Pumped: 3 liter</b> <b>Flow Cell Volume: 90 ml</b> <b>Final Flow Rate: 100 ml/min</b> <b>Final Draw Down: 0.1 ft</b>	<b>Instrument Used: Aqua TROLL 400</b> <b>Serial Number: 728566</b>
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## Test Notes:

Five Bottles, Metals, TDS, Inorganics, Radium.

## Weather Conditions:

Foggy, 50 degrees.

## Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 5	
3/17/2021 11:15 AM	00:00	6.83 pH	13.50 °C	1,365.4 µS/cm	3.01 mg/L	5.46 NTU	-44.5 mV	16.34 ft	100.00 ml/min
3/17/2021 11:20 AM	05:00	6.87 pH	16.52 °C	1,696.0 µS/cm	0.26 mg/L	2.48 NTU	4.2 mV	16.44 ft	100.00 ml/min
3/17/2021 11:25 AM	10:00	6.86 pH	17.01 °C	1,710.1 µS/cm	0.20 mg/L	1.37 NTU	15.0 mV	16.44 ft	100.00 ml/min
3/17/2021 11:30 AM	15:00	6.86 pH	17.18 °C	1,729.1 µS/cm	0.19 mg/L	1.76 NTU	18.8 mV	16.44 ft	100.00 ml/min
3/17/2021 11:35 AM	20:00	6.86 pH	17.37 °C	1,733.7 µS/cm	0.18 mg/L	2.22 NTU	20.6 mV	16.44 ft	100.00 ml/min
3/17/2021 11:40 AM	25:00	6.86 pH	17.45 °C	1,726.4 µS/cm	0.20 mg/L	4.93 NTU	21.8 mV	16.44 ft	100.00 ml/min
3/17/2021 11:45 AM	30:00	6.86 pH	17.50 °C	1,731.0 µS/cm	0.24 mg/L	1.48 NTU	21.8 mV	16.44 ft	100.00 ml/min

## Samples

Sample ID:	Description:
MW-23D	Grab Sample.



# Low-Flow Test Report:

Test Date / Time: 3/18/2021 10:05:18 AM

Project: GP-Plant Hammond

Operator Name: Thomas Kessler

<b>Location Name: MW-33</b> <b>Well Diameter: 2 in</b> <b>Casing Type: PVC</b> <b>Screen Length: 10 ft</b> <b>Top of Screen: 27.93 m</b> <b>Total Depth: 37.93 ft</b> <b>Initial Depth to Water: 21.75 ft</b>	<b>Pump Type: Bladder</b> <b>Tubing Type: polyethylene</b> <b>Pump Intake From TOC: 32.93 ft</b> <b>Estimated Total Volume Pumped: 6 liter</b> <b>Flow Cell Volume: 90 ml</b> <b>Final Flow Rate: 200 ml/min</b> <b>Final Draw Down: 0.1 ft</b>	<b>Instrument Used: Aqua TROLL 400</b> <b>Serial Number: 728566</b>
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## Test Notes:

Five bottles: Metals, TDS, Inorganics, Radium.

## Weather Conditions:

Sunny, 65 degrees.

## Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
3/18/2021 10:05 AM	00:00	4.62 pH	19.19 °C	2,706.7 µS/cm	5.62 mg/L	11.44 NTU	236.7 mV	21.75 ft	200.00 ml/min
3/18/2021 10:10 AM	05:00	4.21 pH	18.84 °C	2,679.3 µS/cm	1.55 mg/L	10.99 NTU	346.5 mV	21.85 ft	200.00 ml/min
3/18/2021 10:15 AM	10:00	4.21 pH	19.05 °C	2,688.1 µS/cm	0.78 mg/L	7.77 NTU	345.5 mV	21.85 ft	200.00 ml/min
3/18/2021 10:20 AM	15:00	4.23 pH	19.01 °C	2,694.5 µS/cm	0.49 mg/L	4.90 NTU	380.9 mV	21.85 ft	200.00 ml/min
3/18/2021 10:25 AM	20:00	4.25 pH	19.06 °C	2,694.5 µS/cm	0.37 mg/L	4.09 NTU	369.2 mV	21.85 ft	200.00 ml/min
3/18/2021 10:30 AM	25:00	4.26 pH	19.06 °C	2,693.2 µS/cm	0.32 mg/L	3.59 NTU	370.6 mV	21.85 ft	200.00 ml/min
3/18/2021 10:35 AM	30:00	4.27 pH	19.15 °C	2,691.3 µS/cm	0.31 mg/L	3.34 NTU	363.6 mV	21.85 ft	200.00 ml/min

## Samples

Sample ID:	Description:
MW-33	Grab Sample.

# Low-Flow Test Report:

Test Date / Time: 3/19/2021 9:43:04 AM

Project: GP-Plant Hammond

Operator Name: Chad Russo

<b>Location Name: MW-35</b> <b>Well Diameter: 2 in</b> <b>Casing Type: PVC</b> <b>Screen Length: 10 ft</b> <b>Top of Screen: 13.52 ft</b> <b>Total Depth: 23.52 ft</b> <b>Initial Depth to Water: 4.12 ft</b>	<b>Pump Type: Bladder</b> <b>Tubing Type: Polyethylene</b> <b>Pump Intake From TOC: 18.52 ft</b> <b>Estimated Total Volume Pumped: 18 Liter</b> <b>Flow Cell Volume: 90 ml</b> <b>Final Flow Rate: 100 ml/min</b> <b>Final Draw Down: 1.13 ft</b>	<b>Instrument Used: Aqua TROLL 400</b> <b>Serial Number: 728550</b>
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## Test Notes:

Five Bottles: Metals, TDS, Inorganics, Radium.

## 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	
3/19/2021 9:43 AM	00:00	4.95 pH	14.00 °C	2,654.2 µS/cm	3.08 mg/L	--	115.7 mV	4.12 ft	100.00 ml/min
3/19/2021 9:48 AM	05:00	4.87 pH	13.22 °C	2,695.4 µS/cm	1.40 mg/L	26.40 NTU	127.4 mV	4.47 ft	100.00 ml/min
3/19/2021 9:53 AM	10:00	4.86 pH	13.41 °C	2,707.4 µS/cm	1.50 mg/L	16.20 NTU	204.9 mV	4.50 ft	100.00 ml/min
3/19/2021 9:58 AM	15:00	4.86 pH	13.53 °C	2,705.3 µS/cm	1.31 mg/L	15.30 NTU	136.8 mV	4.50 ft	100.00 ml/min
3/19/2021 10:03 AM	20:00	4.85 pH	14.24 °C	2,722.0 µS/cm	1.02 mg/L	12.70 NTU	216.7 mV	4.70 ft	100.00 ml/min
3/19/2021 10:08 AM	25:00	4.85 pH	14.67 °C	2,705.6 µS/cm	0.69 mg/L	11.60 NTU	138.6 mV	4.82 ft	100.00 ml/min
3/19/2021 10:13 AM	30:00	4.85 pH	14.86 °C	2,704.4 µS/cm	0.61 mg/L	13.20 NTU	214.2 mV	4.87 ft	100.00 ml/min
3/19/2021 10:18 AM	35:00	4.85 pH	14.87 °C	2,704.2 µS/cm	0.49 mg/L	12.90 NTU	137.5 mV	4.90 ft	100.00 ml/min
3/19/2021 10:23 AM	40:00	4.86 pH	14.93 °C	2,699.5 µS/cm	0.44 mg/L	13.40 NTU	210.4 mV	4.90 ft	100.00 ml/min
3/19/2021 10:28 AM	45:00	4.86 pH	15.03 °C	2,701.5 µS/cm	0.38 mg/L	11.27 NTU	134.8 mV	4.90 ft	100.00 ml/min
3/19/2021 10:33 AM	50:00	4.86 pH	15.12 °C	2,702.8 µS/cm	0.36 mg/L	11.51 NTU	208.6 mV	4.90 ft	100.00 ml/min
3/19/2021 10:38 AM	55:00	4.86 pH	15.10 °C	2,703.7 µS/cm	0.34 mg/L	10.26 NTU	134.1 mV	4.90 ft	100.00 ml/min
3/19/2021 10:43 AM	01:00:00	4.86 pH	14.83 °C	2,714.5 µS/cm	0.33 mg/L	9.19 NTU	206.8 mV	4.90 ft	100.00 ml/min
3/19/2021 10:48 AM	01:05:00	4.86 pH	14.89 °C	2,713.1 µS/cm	0.32 mg/L	9.01 NTU	133.6 mV	4.90 ft	100.00 ml/min
3/19/2021 10:53 AM	01:10:00	4.85 pH	14.99 °C	2,716.7 µS/cm	0.29 mg/L	7.62 NTU	207.6 mV	4.90 ft	100.00 ml/min

3/19/2021 10:58 AM	01:15:00	4.85 pH	15.13 °C	2,717.6 µS/cm	0.27 mg/L	7.41 NTU	133.9 mV	4.90 ft	100.00 ml/min
3/19/2021 11:03 AM	01:20:00	4.86 pH	15.26 °C	2,719.0 µS/cm	0.27 mg/L	6.53 NTU	209.0 mV	4.95 ft	100.00 ml/min
3/19/2021 11:08 AM	01:25:00	4.85 pH	15.40 °C	2,721.9 µS/cm	0.22 mg/L	7.13 NTU	134.9 mV	5.10 ft	100.00 ml/min
3/19/2021 11:13 AM	01:30:00	4.85 pH	15.76 °C	2,727.5 µS/cm	0.16 mg/L	7.60 NTU	211.8 mV	5.26 ft	100.00 ml/min
3/19/2021 11:18 AM	01:35:00	4.85 pH	15.71 °C	2,720.9 µS/cm	0.16 mg/L	9.85 NTU	135.2 mV	5.30 ft	100.00 ml/min
3/19/2021 11:23 AM	01:40:00	4.85 pH	15.71 °C	2,726.6 µS/cm	0.21 mg/L	10.27 NTU	210.1 mV	5.35 ft	100.00 ml/min
3/19/2021 11:28 AM	01:45:00	4.86 pH	15.62 °C	2,726.4 µS/cm	0.19 mg/L	11.28 NTU	134.3 mV	5.35 ft	100.00 ml/min
3/19/2021 11:33 AM	01:50:00	4.86 pH	15.67 °C	2,730.9 µS/cm	0.18 mg/L	10.75 NTU	208.3 mV	5.35 ft	100.00 ml/min
3/19/2021 11:38 AM	01:55:00	4.86 pH	15.76 °C	2,729.2 µS/cm	0.18 mg/L	11.51 NTU	133.8 mV	5.35 ft	100.00 ml/min
3/19/2021 11:43 AM	02:00:00	4.86 pH	15.89 °C	2,735.2 µS/cm	0.18 mg/L	11.00 NTU	207.6 mV	5.35 ft	100.00 ml/min
3/19/2021 11:48 AM	02:05:00	4.86 pH	15.94 °C	2,728.9 µS/cm	0.20 mg/L	10.72 NTU	133.2 mV	5.35 ft	100.00 ml/min
3/19/2021 11:53 AM	02:10:00	4.86 pH	15.91 °C	2,732.2 µS/cm	0.18 mg/L	11.18 NTU	206.9 mV	5.35 ft	100.00 ml/min
3/19/2021 11:58 AM	02:15:00	4.87 pH	15.85 °C	2,731.9 µS/cm	0.19 mg/L	10.03 NTU	133.1 mV	5.30 ft	100.00 ml/min
3/19/2021 12:03 PM	02:20:00	4.87 pH	15.84 °C	2,732.4 µS/cm	0.18 mg/L	8.93 NTU	131.0 mV	5.30 ft	100.00 ml/min
3/19/2021 12:08 PM	02:25:00	4.87 pH	15.84 °C	2,736.0 µS/cm	0.18 mg/L	9.81 NTU	205.1 mV	5.25 ft	100.00 ml/min
3/19/2021 12:13 PM	02:30:00	4.87 pH	15.85 °C	2,733.7 µS/cm	0.20 mg/L	9.10 NTU	133.1 mV	5.25 ft	100.00 ml/min
3/19/2021 12:18 PM	02:35:00	4.88 pH	15.84 °C	2,735.1 µS/cm	0.19 mg/L	8.93 NTU	206.6 mV	5.25 ft	100.00 ml/min
3/19/2021 12:23 PM	02:40:00	4.88 pH	15.80 °C	2,734.5 µS/cm	0.20 mg/L	8.75 NTU	132.6 mV	5.25 ft	100.00 ml/min
3/19/2021 12:28 PM	02:45:00	4.88 pH	15.80 °C	2,735.9 µS/cm	0.19 mg/L	9.12 NTU	131.3 mV	5.25 ft	100.00 ml/min
3/19/2021 12:33 PM	02:50:00	4.88 pH	15.79 °C	2,737.7 µS/cm	0.19 mg/L	8.77 NTU	206.1 mV	5.25 ft	100.00 ml/min
3/19/2021 12:38 PM	02:55:00	4.88 pH	15.71 °C	2,735.7 µS/cm	0.21 mg/L	8.24 NTU	133.1 mV	5.25 ft	100.00 ml/min
3/19/2021 12:43 PM	03:00:00	4.89 pH	15.77 °C	2,737.3 µS/cm	0.20 mg/L	8.19 NTU	207.4 mV	5.25 ft	100.00 ml/min

## Samples

Sample ID:	Description:
MW-35	Grab Sample.

# Low-Flow Test Report:

**Test Date / Time:** 3/11/2021 1:04:15 PM

**Project:** GP-Plant Hammond

**Operator Name:** Vashish Taukoor

<b>Location Name:</b> MW-37D <b>Well Diameter:</b> 2 in <b>Casing Type:</b> PVC <b>Screen Length:</b> 10 ft <b>Top of Screen:</b> 66.63 ft Total <b>Depth:</b> 76.63 ft <b>Initial Depth to Water:</b> 16.3 ft	<b>Pump Type:</b> Bladder <b>Tubing Type:</b> Polyethylene <b>Pump Intake From TOC:</b> 71 ft <b>Estimated Total Volume Pumped:</b> 32 Liter <b>Flow Cell Volume:</b> 90 ml <b>Final Flow Rate:</b> 300 ml/min Final <b>Draw Down:</b> -14.161 ft	<b>Instrument Used:</b> Aqua TROLL 400 <b>Serial Number:</b> 728563
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## Test Notes:

Prepurged for 20 min @ 100ml/min

Fast dropping water level

Well purged dry @ 300 ml/min Final Water level recorded = 65.20 ft

Sample to be collected on 3/12/2021

## Weather Conditions:

Sunny

73 deg F

Low wind

## 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	
3/11/2021 1:04 PM	00:00	7.40 pH	18.86 °C	1,291.3 µS/cm	2.26 mg/L	7.28 NTU	-78.3 mV	20.85 cm	100.00 ml/min
3/11/2021 1:09 PM	05:00	7.39 pH	18.74 °C	1,298.5 µS/cm	2.24 mg/L	5.39 NTU	-76.8 mV	21.50 cm	100.00 ml/min
3/11/2021 1:14 PM	10:00	7.39 pH	18.84 °C	1,290.3 µS/cm	2.18 mg/L	7.67 NTU	-90.9 mV	22.80 cm	100.00 ml/min
3/11/2021 1:19 PM	15:00	7.39 pH	18.74 °C	1,280.0 µS/cm	2.39 mg/L	5.78 NTU	-74.3 mV	23.93 cm	100.00 ml/min
3/11/2021 1:21 PM	17:16	7.38 pH	18.84 °C	1,288.6 µS/cm	2.46 mg/L	--	-72.2 mV	--	100.00 ml/min
3/11/2021 1:26 PM	22:16	7.38 pH	19.00 °C	1,299.3 µS/cm	2.64 mg/L	--	-70.0 mV	--	100.00 ml/min
3/11/2021 1:27 PM	23:40	7.37 pH	19.01 °C	1,296.7 µS/cm	2.72 mg/L	4.23 NTU	-69.1 mV	25.50 cm	100.00 ml/min
3/11/2021 1:32 PM	28:40	7.39 pH	19.06 °C	1,292.6 µS/cm	2.97 mg/L	4.99 NTU	-83.4 mV	26.62 cm	100.00 ml/min

3/11/2021 1:33 PM	29:40	7.39 pH	19.07 °C	1,287.3 µS/cm	2.89 mg/L	--	-83.1 mV	--	300.00 ml/min
3/11/2021 1:48 PM	44:40	7.57 pH	18.45 °C	1,324.5 µS/cm	9.28 mg/L	4.57 NTU	-53.2 mV	32.50 cm	300.00 ml/min
3/11/2021 2:03 PM	59:40	7.81 pH	18.44 °C	1,332.7 µS/cm	10.56 mg/L	5.50 NTU	-63.9 mV	39.00 cm	300.00 ml/min
3/11/2021 2:09 PM	01:04:53	7.84 pH	18.61 °C	1,333.0 µS/cm	9.58 mg/L	6.04 NTU	-70.8 mV	43.50 cm	300.00 ml/min
3/11/2021 2:24 PM	01:19:53	7.96 pH	18.44 °C	1,340.1 µS/cm	8.96 mg/L	8.07 NTU	-82.2 mV	49.30 cm	300.00 ml/min
3/11/2021 2:39 PM	01:34:53	8.02 pH	18.57 °C	1,374.4 µS/cm	8.25 mg/L	10.65 NTU	-88.4 mV	56.40 cm	300.00 ml/min
3/11/2021 2:43 PM	01:39:18	8.02 pH	18.48 °C	1,395.8 µS/cm	7.87 mg/L	--	-88.4 mV	--	300.00 ml/min
3/11/2021 2:58 PM	01:54:18	8.03 pH	18.26 °C	1,438.0 µS/cm	7.40 mg/L	12.10 NTU	-89.4 mV	62.00 cm	300.00 ml/min
3/11/2021 3:13 PM	02:09:18	7.56 pH	18.90 °C	1,500.6 µS/cm	4.25 mg/L	8.16 NTU	-88.1 mV	65.20 cm	300.00 ml/min

## Samples

Sample ID:	Description:
MW-37D	No sample taken.

# Low-Flow Test Report:

Test Date / Time: 3/12/2021 9:48:03 AM

Project: GP-Plant Hammond

Operator Name: Vashish Taukoor

<b>Location Name: MW-37D</b> <b>Well Diameter: 2 in</b> <b>Screen Length: 10 ft</b> <b>Top of Screen: 66.63 ft</b> <b>Total Depth: 76.63 ft</b> <b>Initial Depth to Water: 16.76 ft</b>	<b>Pump Type: Bladder</b> <b>Tubing Type: Polyethylene</b> <b>Pump Intake From TOC: 68 ft</b> <b>Estimated Total Volume Pumped: 4.5 Liters</b> <b>Flow Cell Volume: 90 ml</b> <b>Final Flow Rate: 100 ml/min Final Draw Down: 13.21 ft</b>	<b>Instrument Used: Aqua TROLL 400</b> <b>Serial Number: 728563</b>
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## Test Notes:

Five Bottles: Metals, TDS, Inorganics, Radium.

Purged well dry on 3-11-2021

Water table back to original (well fully recharged)

Pre purged 15 min @ 100 ml/min

## Weather Conditions:

Sunny

55 deg F

No wind

## 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	
3/12/2021 9:48 AM	00:00	7.46 pH	17.77 °C	1,306.7 µS/cm	0.90 mg/L	2.85 NTU	-91.3 mV	21.60 cm	100.00 ml/min
3/12/2021 9:53 AM	05:00	7.47 pH	17.85 °C	1,310.5 µS/cm	0.76 mg/L	1.03 NTU	-91.0 mV	22.40 cm	100.00 ml/min
3/12/2021 9:58 AM	10:00	7.48 pH	17.81 °C	1,044.1 µS/cm	0.73 mg/L	2.31 NTU	-115.9 mV	23.92 cm	100.00 ml/min
3/12/2021 10:03 AM	15:00	7.49 pH	17.81 °C	1,000.9 µS/cm	0.70 mg/L	1.26 NTU	-116.1 mV	25.72 cm	100.00 ml/min
3/12/2021 10:08 AM	20:00	7.50 pH	17.86 °C	1,324.4 µS/cm	0.82 mg/L	1.56 NTU	-115.5 mV	26.96 cm	100.00 ml/min
3/12/2021 10:13 AM	25:00	7.50 pH	17.84 °C	1,327.1 µS/cm	0.73 mg/L	1.07 NTU	-115.2 mV	28.37 cm	100.00 ml/min
3/12/2021 10:18 AM	30:00	7.50 pH	17.85 °C	1,327.6 µS/cm	0.82 mg/L	0.98 NTU	-91.6 mV	29.97 cm	100.00 ml/min

## Samples

Sample ID:	Description:
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MW-37D

Grab Sample.

Created using VuSitu from In-Situ, Inc.

August 2021



# Low-Flow Test Report:

Test Date / Time: 8/11/2021 1:57:08 PM

Project: GP-Plant Hammond

Operator Name: Connor Cain

<b>Location Name: HGWA-1</b> <b>Well Diameter: 2 in</b> <b>Casing Type: PVC</b> <b>Screen Length: 10 ft</b> <b>Top of Screen: 22.50 ft</b> <b>Total Depth: 32.50 ft</b> <b>Initial Depth to Water: 18.88 ft</b>	<b>Pump Type: Bladder</b> <b>Tubing Type: Polyethylene</b> <b>Pump Intake From TOC: 27.50 ft</b> <b>Estimated Total Volume Pumped: 36.75 Liter</b> <b>Flow Cell Volume: 90 ml</b> <b>Final Flow Rate: 200 ml/min</b> <b>Final Draw Down: 0.52 ft</b>	<b>Instrument Used: Aqua TROLL 400</b> <b>Serial Number: 728541</b>
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## Test Notes:

Five bottles: Full app. III & IV.

## Weather Conditions:

Sunny 96 Degrees.

## Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
8/11/2021 1:57 PM	00:00	7.00 pH	21.04 °C	667.52 µS/cm	0.64 mg/L	3.23 NTU	33.4 mV	19.28 ft	200.00 ml/min
8/11/2021 2:02 PM	05:00	6.99 pH	19.20 °C	683.41 µS/cm	0.40 mg/L	1.41 NTU	33.7 mV	19.33 ft	200.00 ml/min
8/11/2021 2:07 PM	10:00	6.99 pH	19.15 °C	659.32 µS/cm	0.45 mg/L	2.60 NTU	33.5 mV	19.38 ft	200.00 ml/min
8/11/2021 2:12 PM	15:00	6.99 pH	19.02 °C	656.40 µS/cm	0.40 mg/L	0.75 NTU	32.2 mV	19.39 ft	200.00 ml/min
8/11/2021 2:15 PM	18:12	6.99 pH	19.03 °C	661.45 µS/cm	0.35 mg/L	0.36 NTU	34.6 mV	19.40 ft	200.00 ml/min
8/11/2021 2:20 PM	23:12	6.98 pH	18.94 °C	660.06 µS/cm	0.28 mg/L	0.55 NTU	35.7 mV	19.40 ft	200.00 ml/min
8/11/2021 2:25 PM	28:12	6.98 pH	19.06 °C	660.13 µS/cm	0.28 mg/L	0.19 NTU	35.4 mV	19.40 ft	200.00 ml/min
8/11/2021 2:30 PM	33:12	6.99 pH	18.90 °C	665.62 µS/cm	0.38 mg/L	1.14 NTU	35.4 mV	19.40 ft	200.00 ml/min
8/11/2021 2:35 PM	38:12	6.99 pH	18.79 °C	661.37 µS/cm	0.33 mg/L	0.28 NTU	35.6 mV	19.40 ft	200.00 ml/min
8/11/2021 2:40 PM	43:12	6.98 pH	18.75 °C	662.88 µS/cm	0.26 mg/L	--	37.0 mV	19.40 ft	200.00 ml/min
8/11/2021 2:45 PM	48:12	6.98 pH	18.75 °C	663.83 µS/cm	0.25 mg/L	--	36.8 mV	19.40 ft	200.00 ml/min
8/11/2021 2:50 PM	53:12	6.98 pH	18.74 °C	655.03 µS/cm	0.36 mg/L	--	34.6 mV	19.40 ft	200.00 ml/min
8/11/2021 2:55 PM	58:12	6.98 pH	18.80 °C	664.96 µS/cm	0.32 mg/L	--	34.7 mV	19.40 ft	200.00 ml/min

8/11/2021 3:00 PM	01:03:12	6.98 pH	18.73 °C	667.63 µS/cm	0.27 mg/L	--	34.7 mV	19.40 ft	200.00 ml/min
8/11/2021 3:05 PM	01:08:12	6.98 pH	18.79 °C	667.13 µS/cm	0.26 mg/L	--	34.5 mV	19.40 ft	200.00 ml/min
8/11/2021 3:10 PM	01:13:12	6.98 pH	18.92 °C	666.06 µS/cm	0.30 mg/L	--	32.6 mV	19.40 ft	200.00 ml/min
8/11/2021 3:15 PM	01:18:12	6.98 pH	18.99 °C	665.79 µS/cm	0.24 mg/L	--	30.5 mV	19.40 ft	200.00 ml/min
8/11/2021 3:20 PM	01:23:12	6.97 pH	18.97 °C	665.66 µS/cm	0.34 mg/L	--	30.7 mV	19.40 ft	200.00 ml/min
8/11/2021 3:25 PM	01:28:12	6.98 pH	18.84 °C	666.38 µS/cm	0.25 mg/L	--	30.9 mV	19.40 ft	200.00 ml/min
8/11/2021 3:30 PM	01:33:12	6.98 pH	18.79 °C	665.01 µS/cm	0.19 mg/L	--	29.8 mV	19.40 ft	200.00 ml/min
8/11/2021 3:35 PM	01:38:12	6.98 pH	18.74 °C	664.47 µS/cm	0.22 mg/L	--	30.0 mV	19.40 ft	200.00 ml/min
8/11/2021 3:40 PM	01:43:12	6.98 pH	18.69 °C	664.99 µS/cm	0.24 mg/L	--	28.6 mV	19.40 ft	200.00 ml/min
8/11/2021 3:45 PM	01:48:12	6.97 pH	18.75 °C	662.12 µS/cm	0.21 mg/L	--	29.5 mV	19.40 ft	200.00 ml/min
8/11/2021 3:50 PM	01:53:12	6.98 pH	18.78 °C	663.73 µS/cm	0.28 mg/L	--	28.4 mV	19.40 ft	200.00 ml/min
8/11/2021 3:55 PM	01:58:12	6.98 pH	18.70 °C	665.36 µS/cm	0.21 mg/L	--	27.3 mV	19.40 ft	200.00 ml/min
8/11/2021 4:00 PM	02:03:12	6.98 pH	18.70 °C	664.22 µS/cm	0.20 mg/L	--	28.1 mV	19.40 ft	200.00 ml/min
8/11/2021 4:05 PM	02:08:12	6.98 pH	18.70 °C	663.86 µS/cm	0.33 mg/L	--	29.3 mV	19.40 ft	200.00 ml/min
8/11/2021 4:10 PM	02:13:12	6.97 pH	18.75 °C	662.73 µS/cm	0.24 mg/L	--	29.7 mV	19.40 ft	200.00 ml/min
8/11/2021 4:15 PM	02:18:12	6.98 pH	18.93 °C	663.37 µS/cm	0.20 mg/L	--	30.1 mV	19.40 ft	200.00 ml/min
8/11/2021 4:20 PM	02:23:12	6.98 pH	18.97 °C	663.89 µS/cm	0.20 mg/L	--	28.0 mV	19.40 ft	200.00 ml/min
8/11/2021 4:25 PM	02:28:12	6.98 pH	18.85 °C	661.80 µS/cm	0.31 mg/L	--	30.1 mV	19.40 ft	200.00 ml/min
8/11/2021 4:30 PM	02:33:12	6.97 pH	18.84 °C	663.72 µS/cm	0.28 mg/L	--	30.4 mV	19.40 ft	200.00 ml/min
8/11/2021 4:35 PM	02:38:12	6.97 pH	18.71 °C	662.50 µS/cm	0.22 mg/L	--	29.4 mV	19.40 ft	200.00 ml/min
8/11/2021 4:40 PM	02:43:12	6.98 pH	18.74 °C	660.97 µS/cm	0.32 mg/L	--	29.4 mV	19.40 ft	200.00 ml/min
8/11/2021 4:45 PM	02:48:12	6.98 pH	18.73 °C	636.44 µS/cm	0.23 mg/L	0.36 NTU	29.7 mV	19.40 ft	200.00 ml/min
8/11/2021 4:50 PM	02:53:12	6.98 pH	18.73 °C	663.99 µS/cm	0.37 mg/L	0.38 NTU	30.5 mV	19.40 ft	200.00 ml/min
8/11/2021 4:55 PM	02:58:12	6.98 pH	18.65 °C	661.28 µS/cm	0.36 mg/L	0.37 NTU	28.5 mV	19.40 ft	200.00 ml/min

## Samples

Sample ID:	Description:
HGWA-1	Grab sample.

# Low-Flow Test Report:

Test Date / Time: 8/12/2021 2:21:33 PM

Project: GP-Plant Hammond

Operator Name: Ashley Ramsey

<b>Location Name: HGWA-2</b> <b>Well Diameter: 2 in</b> <b>Casing Type: PVC</b> <b>Screen Length: 10 ft</b> <b>Top of Screen: 17.95 ft</b> <b>Total Depth: 27.95 ft</b> <b>Initial Depth to Water: 10.67 ft</b>	<b>Pump Type: Bladder</b> <b>Tubing Type: Polyethylene</b> <b>Pump Intake From TOC: 22.95 ft</b> <b>Estimated Total Volume Pumped: 14 Liter</b> <b>Flow Cell Volume: 90 ml</b> <b>Final Flow Rate: 200 ml/min</b> <b>Final Draw Down: 0.05 ft</b>	<b>Instrument Used: Aqua TROLL 400</b> <b>Serial Number: 728623</b>
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## Test Notes:

Five bottle: Full app. III & IV.

## Weather Conditions:

Sunny, 91 Degrees.

## Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
8/12/2021 2:21 PM	00:00	5.15 pH	23.08 °C	203.81 µS/cm	0.77 mg/L	34.00 NTU	130.2 mV	10.67 ft	200.00 ml/min
8/12/2021 2:26 PM	05:00	5.08 pH	21.50 °C	202.92 µS/cm	0.26 mg/L	49.60 NTU	130.2 mV	10.72 ft	200.00 ml/min
8/12/2021 2:31 PM	10:00	5.08 pH	21.42 °C	203.27 µS/cm	0.19 mg/L	29.60 NTU	155.5 mV	10.72 ft	200.00 ml/min
8/12/2021 2:36 PM	15:00	5.10 pH	21.73 °C	204.60 µS/cm	0.26 mg/L	22.80 NTU	127.2 mV	10.72 ft	200.00 ml/min
8/12/2021 2:41 PM	20:00	5.09 pH	21.78 °C	204.30 µS/cm	0.25 mg/L	16.80 NTU	156.0 mV	10.72 ft	200.00 ml/min
8/12/2021 2:46 PM	25:00	5.08 pH	21.69 °C	203.45 µS/cm	0.23 mg/L	16.10 NTU	127.1 mV	10.72 ft	200.00 ml/min
8/12/2021 2:51 PM	30:00	5.06 pH	21.60 °C	202.80 µS/cm	0.18 mg/L	15.50 NTU	156.8 mV	10.72 ft	200.00 ml/min
8/12/2021 2:56 PM	35:00	5.05 pH	21.81 °C	202.03 µS/cm	0.15 mg/L	11.70 NTU	127.1 mV	10.72 ft	200.00 ml/min
8/12/2021 3:01 PM	40:00	5.05 pH	21.65 °C	202.15 µS/cm	0.14 mg/L	9.76 NTU	126.0 mV	10.72 ft	200.00 ml/min
8/12/2021 3:06 PM	45:00	5.05 pH	21.82 °C	201.32 µS/cm	0.13 mg/L	9.92 NTU	125.4 mV	10.72 ft	200.00 ml/min
8/12/2021 3:11 PM	50:00	5.05 pH	21.82 °C	202.01 µS/cm	0.14 mg/L	7.58 NTU	125.2 mV	10.72 ft	200.00 ml/min
8/12/2021 3:16 PM	55:00	5.04 pH	21.33 °C	202.45 µS/cm	0.12 mg/L	6.44 NTU	124.8 mV	10.72 ft	200.00 ml/min
8/12/2021 3:21 PM	01:00:00	5.04 pH	21.24 °C	203.65 µS/cm	0.12 mg/L	6.07 NTU	124.7 mV	10.72 ft	200.00 ml/min

8/12/2021 3:26 PM	01:05:00	5.05 pH	21.37 °C	202.40 µS/cm	0.11 mg/L	5.42 NTU	158.0 mV	10.72 ft	200.00 ml/min
8/12/2021 3:31 PM	01:10:00	5.05 pH	21.04 °C	203.48 µS/cm	0.11 mg/L	4.12 NTU	124.4 mV	10.72 ft	200.00 ml/min

## Samples

Sample ID:	Description:
HGWA-2	Grab sample.

# Low-Flow Test Report:

Test Date / Time: 8/12/2021 8:42:53 AM

Project: GP-Plant Hammond

Operator Name: Connor Cain

<b>Location Name: HGWA-3</b> <b>Well Diameter: 2 in</b> <b>Casing Type: PVC</b> <b>Screen Length: 10 ft</b> <b>Top of Screen: 34.87 ft</b> <b>Initial Total Depth: 44.87 ft</b> <b>Depth to Water: 10.51 ft</b>	<b>Pump Type: Bladder</b> <b>Tubing Type: Polyethylene</b> <b>Pump Intake From TOC: 39.87 ft</b> <b>Estimated Total Volume Pumped: 19 Liter</b> <b>Flow Cell Volume: 90 ml</b> <b>Final Flow Rate: 200 ml/min</b> <b>Final Draw Down: 0.02 ft</b>	<b>Instrument Used: Aqua TROLL 400</b> <b>Serial Number: 728541</b>
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## Test Notes:

Five bottles: Full app. III & IV.

## Weather Conditions:

Sunny 75 Degrees.

## Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
8/12/2021 8:42 AM	00:00	7.28 pH	20.30 °C	460.79 µS/cm	2.04 mg/L	74.50 NTU	-65.2 mV	10.51 ft	200.00 ml/min
8/12/2021 8:47 AM	05:00	7.28 pH	19.16 °C	461.91 µS/cm	2.42 mg/L	10.15 NTU	-80.8 mV	10.51 ft	200.00 ml/min
8/12/2021 8:52 AM	10:00	7.27 pH	19.20 °C	464.76 µS/cm	2.64 mg/L	6.23 NTU	-85.6 mV	10.52 ft	200.00 ml/min
8/12/2021 8:57 AM	15:00	7.29 pH	19.26 °C	465.02 µS/cm	1.36 mg/L	5.51 NTU	-81.9 mV	10.52 ft	200.00 ml/min
8/12/2021 9:02 AM	20:00	7.29 pH	19.15 °C	462.89 µS/cm	2.28 mg/L	3.51 NTU	-98.1 mV	10.52 ft	200.00 ml/min
8/12/2021 9:07 AM	25:00	7.30 pH	19.15 °C	464.17 µS/cm	1.25 mg/L	2.55 NTU	-87.8 mV	10.52 ft	200.00 ml/min
8/12/2021 9:12 AM	30:00	7.30 pH	19.23 °C	462.67 µS/cm	1.71 mg/L	2.10 NTU	-83.8 mV	10.52 ft	200.00 ml/min
8/12/2021 9:17 AM	35:00	7.29 pH	19.30 °C	463.45 µS/cm	1.56 mg/L	1.32 NTU	-86.3 mV	10.52 ft	200.00 ml/min
8/12/2021 9:22 AM	40:00	7.30 pH	19.42 °C	451.88 µS/cm	1.79 mg/L	1.21 NTU	-87.3 mV	10.53 ft	200.00 ml/min
8/12/2021 9:27 AM	45:00	7.30 pH	19.43 °C	462.08 µS/cm	3.14 mg/L	1.28 NTU	-97.4 mV	10.53 ft	200.00 ml/min
8/12/2021 9:32 AM	50:00	7.31 pH	19.39 °C	463.60 µS/cm	1.34 mg/L	1.02 NTU	-85.6 mV	10.53 ft	200.00 ml/min
8/12/2021 9:37 AM	55:00	7.31 pH	19.42 °C	463.46 µS/cm	1.30 mg/L	2.16 NTU	-86.2 mV	10.53 ft	200.00 ml/min
8/12/2021 9:42 AM	01:00:00	7.29 pH	19.34 °C	464.62 µS/cm	1.08 mg/L	1.99 NTU	-79.5 mV	10.53 ft	200.00 ml/min

8/12/2021 9:47 AM	01:05:00	7.31 pH	19.37 °C	455.63 µS/cm	1.00 mg/L	1.53 NTU	-81.6 mV	10.53 ft	200.00 ml/min
8/12/2021 9:52 AM	01:10:00	7.31 pH	19.42 °C	462.54 µS/cm	1.40 mg/L	1.14 NTU	-97.2 mV	10.53 ft	200.00 ml/min
8/12/2021 9:57 AM	01:15:00	7.31 pH	19.28 °C	463.04 µS/cm	1.73 mg/L	0.99 NTU	-85.2 mV	10.53 ft	200.00 ml/min
8/12/2021 10:02 AM	01:20:00	7.31 pH	19.55 °C	463.83 µS/cm	1.41 mg/L	0.71 NTU	-95.5 mV	10.53 ft	200.00 ml/min
8/12/2021 10:07 AM	01:25:00	7.30 pH	19.58 °C	464.34 µS/cm	1.44 mg/L	0.58 NTU	-83.4 mV	10.53 ft	200.00 ml/min
8/12/2021 10:12 AM	01:30:00	7.31 pH	19.69 °C	457.58 µS/cm	1.28 mg/L	0.61 NTU	-85.1 mV	10.53 ft	200.00 ml/min

## Samples

Sample ID:	Description:
HGWA-3	Grab sample.

# Low-Flow Test Report:

Test Date / Time: 8/11/2021 2:08:01 PM

Project: GP-Plant Hammond

Operator Name: Thomas Kessler

<b>Location Name: HGWA-43D</b> <b>Well Diameter: 2 in</b> <b>Casing Type: PVC</b> <b>Screen Length: 10 ft</b> <b>Top of Screen: 51.26 ft</b> <b>Total Depth: 61.25 ft</b> <b>Initial Depth to Water: 18.65 ft</b>	<b>Pump Type: Bladder</b> <b>Tubing Type: Polyethylene</b> <b>Pump Intake From TOC: 56.25 ft</b> <b>Estimated Total Volume Pumped: 34 liter</b> <b>Flow Cell Volume: 90 ml</b> <b>Final Flow Rate: 200 ml/min</b> <b>Final Draw Down: 3.03 ft</b>	<b>Instrument Used: Aqua TROLL 400</b> <b>Serial Number: 728634</b>
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## Test Notes:

Five bottles: Full app. III & IV.

## Weather Conditions:

Sunny, 90 Degrees.

## Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
8/11/2021 2:08 PM	00:00	8.30 pH	37.12 °C	0.11 µS/cm	6.81 mg/L	3.16 NTU	82.9 mV	20.00 ft	200.00 ml/min
8/11/2021 2:13 PM	05:00	7.50 pH	20.20 °C	528.39 µS/cm	0.58 mg/L	4.21 NTU	-95.1 mV	20.20 ft	200.00 ml/min
8/11/2021 2:18 PM	10:00	7.49 pH	19.63 °C	521.25 µS/cm	0.36 mg/L	3.80 NTU	-91.7 mV	20.65 ft	200.00 ml/min
8/11/2021 2:23 PM	15:00	7.49 pH	19.49 °C	516.37 µS/cm	0.27 mg/L	--	-94.4 mV	--	200.00 ml/min
8/11/2021 2:28 PM	20:00	7.49 pH	19.40 °C	509.58 µS/cm	0.18 mg/L	--	-94.2 mV	--	200.00 ml/min
8/11/2021 2:33 PM	25:00	7.48 pH	19.45 °C	503.82 µS/cm	0.15 mg/L	--	-111.7 mV	--	200.00 ml/min
8/11/2021 2:38 PM	30:00	7.48 pH	19.36 °C	502.21 µS/cm	0.14 mg/L	--	-112.0 mV	--	200.00 ml/min
8/11/2021 2:43 PM	35:00	7.47 pH	19.47 °C	502.19 µS/cm	0.13 mg/L	--	-111.8 mV	--	200.00 ml/min
8/11/2021 2:48 PM	40:00	7.46 pH	19.40 °C	496.56 µS/cm	0.12 mg/L	--	-110.4 mV	--	200.00 ml/min
8/11/2021 2:53 PM	45:00	7.46 pH	19.44 °C	499.36 µS/cm	0.12 mg/L	--	-109.0 mV	--	200.00 ml/min
8/11/2021 2:58 PM	50:00	7.45 pH	19.34 °C	490.56 µS/cm	0.12 mg/L	--	-89.6 mV	--	200.00 ml/min
8/11/2021 3:03 PM	55:00	7.45 pH	19.41 °C	491.20 µS/cm	0.12 mg/L	--	-88.4 mV	--	200.00 ml/min
8/11/2021 3:08 PM	01:00:00	7.44 pH	19.54 °C	488.13 µS/cm	0.12 mg/L	--	-102.9 mV	--	200.00 ml/min

8/11/2021 3:13 PM	01:05:00	7.43 pH	19.70 °C	485.51 µS/cm	0.12 mg/L	--	-85.5 mV	--	200.00 ml/min
8/11/2021 3:18 PM	01:10:00	7.43 pH	19.69 °C	481.07 µS/cm	0.12 mg/L	--	-83.4 mV	--	200.00 ml/min
8/11/2021 3:23 PM	01:15:00	7.42 pH	19.57 °C	479.55 µS/cm	0.12 mg/L	--	-81.7 mV	--	200.00 ml/min
8/11/2021 3:28 PM	01:20:00	7.42 pH	19.56 °C	486.53 µS/cm	0.12 mg/L	--	-95.2 mV	--	200.00 ml/min
8/11/2021 3:33 PM	01:25:00	7.42 pH	19.49 °C	480.24 µS/cm	0.13 mg/L	--	-78.9 mV	--	200.00 ml/min
8/11/2021 3:38 PM	01:30:00	7.42 pH	19.51 °C	475.62 µS/cm	0.12 mg/L	--	-94.9 mV	--	200.00 ml/min
8/11/2021 3:43 PM	01:35:00	7.42 pH	19.50 °C	480.10 µS/cm	0.12 mg/L	--	-93.0 mV	--	200.00 ml/min
8/11/2021 3:48 PM	01:40:00	7.42 pH	19.58 °C	483.92 µS/cm	0.12 mg/L	--	-92.3 mV	--	200.00 ml/min
8/11/2021 3:53 PM	01:45:00	7.42 pH	19.61 °C	477.83 µS/cm	0.12 mg/L	--	-92.7 mV	--	200.00 ml/min
8/11/2021 3:58 PM	01:50:00	7.41 pH	19.54 °C	476.06 µS/cm	0.12 mg/L	--	-74.3 mV	--	200.00 ml/min
8/11/2021 4:03 PM	01:55:00	7.41 pH	19.65 °C	479.74 µS/cm	0.12 mg/L	--	-90.4 mV	--	200.00 ml/min
8/11/2021 4:08 PM	02:00:00	7.41 pH	19.70 °C	475.89 µS/cm	0.12 mg/L	--	-74.2 mV	--	200.00 ml/min
8/11/2021 4:13 PM	02:05:00	7.41 pH	19.76 °C	476.21 µS/cm	0.12 mg/L	--	-89.0 mV	--	200.00 ml/min
8/11/2021 4:18 PM	02:10:00	7.41 pH	19.75 °C	479.29 µS/cm	0.12 mg/L	--	-88.6 mV	--	200.00 ml/min
8/11/2021 4:23 PM	02:15:00	7.41 pH	19.70 °C	480.88 µS/cm	0.12 mg/L	--	-71.7 mV	--	200.00 ml/min
8/11/2021 4:28 PM	02:20:00	7.41 pH	19.54 °C	476.43 µS/cm	0.12 mg/L	--	-86.2 mV	--	200.00 ml/min
8/11/2021 4:33 PM	02:25:00	7.41 pH	19.49 °C	472.66 µS/cm	0.12 mg/L	--	-85.6 mV	--	200.00 ml/min
8/11/2021 4:38 PM	02:30:00	7.41 pH	19.45 °C	478.48 µS/cm	0.13 mg/L	--	-86.5 mV	--	200.00 ml/min
8/11/2021 4:43 PM	02:35:00	7.41 pH	19.35 °C	475.82 µS/cm	0.12 mg/L	--	-69.5 mV	--	200.00 ml/min
8/11/2021 4:48 PM	02:40:00	7.41 pH	19.39 °C	473.79 µS/cm	0.12 mg/L	2.27 NTU	-68.5 mV	21.68 ft	200.00 ml/min
8/11/2021 4:53 PM	02:45:00	7.41 pH	19.36 °C	476.17 µS/cm	0.12 mg/L	1.68 NTU	-67.8 mV	21.68 ft	200.00 ml/min
8/11/2021 4:58 PM	02:50:00	7.40 pH	19.40 °C	469.00 µS/cm	0.12 mg/L	0.68 NTU	-82.5 mV	21.68 ft	200.00 ml/min

## Samples

Sample ID:	Description:
HGWA-43D	Grab Sample.



# Low-Flow Test Report:

**Test Date / Time:** 8/13/2021 9:25:02 AM

**Project:** GP-Plant Hammond

**Operator Name:** Thomas Kessler

<b>Location Name: HGWA-44D</b> <b>Well Diameter: 2 in</b> <b>Casing Type: PVC</b> <b>Screen Length: 10 ft</b> <b>Top of Screen: 103 ft</b> <b>Total Depth: 113.28 ft</b> <b>Initial Depth to Water: 18.25 ft</b>	<b>Pump Type: Bladder</b> <b>Tubing Type: Polyethylene</b> <b>Pump Intake From TOC: 108.28 ft</b> <b>Estimated Total Volume Pumped: 23 liter</b> <b>Flow Cell Volume: 90 ml</b> <b>Final Flow Rate: 200 ml/min</b> <b>Final Draw Down: 3.1 ft</b>	<b>Instrument Used: Aqua TROLL 400</b> <b>Serial Number: 728634</b>
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## Test Notes:

Five bottles: Full app. III and IV

## Weather Conditions:

Sunny, 85 Degrees.

## Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
8/13/2021 9:25 AM	00:00	7.61 pH	24.10 °C	1,163.3 µS/cm	2.99 mg/L	50.70 NTU	98.2 mV	18.55 ft	200.00 ml/min
8/13/2021 9:30 AM	05:00	7.63 pH	19.76 °C	1,113.6 µS/cm	1.57 mg/L	69.60 NTU	39.4 mV	18.55 ft	200.00 ml/min
8/13/2021 9:35 AM	10:00	7.69 pH	19.26 °C	1,112.3 µS/cm	0.65 mg/L	65.80 NTU	-32.9 mV	18.55 ft	200.00 ml/min
8/13/2021 9:40 AM	15:00	7.69 pH	19.24 °C	1,109.5 µS/cm	0.43 mg/L	58.60 NTU	-62.0 mV	19.75 ft	200.00 ml/min
8/13/2021 9:45 AM	20:00	7.68 pH	19.74 °C	1,071.7 µS/cm	0.36 mg/L	46.30 NTU	-20.2 mV	19.85 ft	200.00 ml/min
8/13/2021 9:50 AM	25:00	7.67 pH	19.85 °C	1,053.8 µS/cm	0.31 mg/L	25.00 NTU	-14.5 mV	20.15 ft	200.00 ml/min
8/13/2021 9:55 AM	30:00	7.67 pH	19.76 °C	1,050.8 µS/cm	0.28 mg/L	18.40 NTU	3.1 mV	20.26 ft	200.00 ml/min
8/13/2021 10:00 AM	35:00	7.67 pH	19.64 °C	1,046.8 µS/cm	0.26 mg/L	12.40 NTU	14.2 mV	20.38 ft	200.00 ml/min
8/13/2021 10:05 AM	40:00	7.67 pH	19.70 °C	1,033.5 µS/cm	0.25 mg/L	11.20 NTU	24.6 mV	20.43 ft	200.00 ml/min
8/13/2021 10:10 AM	45:00	7.67 pH	19.69 °C	1,039.2 µS/cm	0.24 mg/L	8.47 NTU	27.3 mV	20.55 ft	200.00 ml/min
8/13/2021 10:15 AM	50:00	7.68 pH	19.67 °C	1,027.9 µS/cm	0.23 mg/L	8.93 NTU	28.6 mV	20.67 ft	200.00 ml/min
8/13/2021 10:20 AM	55:00	7.68 pH	19.69 °C	1,020.1 µS/cm	0.22 mg/L	14.06 NTU	28.7 mV	20.67 ft	200.00 ml/min
8/13/2021 10:25 AM	01:00:00	7.69 pH	19.63 °C	1,033.7 µS/cm	0.21 mg/L	11.74 NTU	29.4 mV	20.70 ft	200.00 ml/min

8/13/2021 10:30 AM	01:05:00	7.70 pH	19.62 °C	992.87 µS/cm	0.20 mg/L	8.71 NTU	30.0 mV	20.70 ft	200.00 ml/min
8/13/2021 10:35 AM	01:10:00	7.72 pH	19.60 °C	939.74 µS/cm	0.19 mg/L	6.36 NTU	30.4 mV	20.88 ft	200.00 ml/min
8/13/2021 10:37 AM	01:12:03	7.72 pH	19.49 °C	895.36 µS/cm	0.18 mg/L	6.36 NTU	32.2 mV	20.88 ft	200.00 ml/min
8/13/2021 10:42 AM	01:17:03	7.73 pH	19.45 °C	890.88 µS/cm	0.17 mg/L	4.39 NTU	30.6 mV	20.90 ft	200.00 ml/min
8/13/2021 10:47 AM	01:22:03	7.74 pH	19.50 °C	844.55 µS/cm	0.16 mg/L	4.13 NTU	30.9 mV	21.00 ft	200.00 ml/min
8/13/2021 10:52 AM	01:27:03	7.75 pH	19.40 °C	838.90 µS/cm	0.15 mg/L	3.85 NTU	30.6 mV	21.05 ft	200.00 ml/min
8/13/2021 10:57 AM	01:32:03	7.76 pH	19.49 °C	804.21 µS/cm	0.14 mg/L	3.05 NTU	30.5 mV	21.15 ft	200.00 ml/min
8/13/2021 11:02 AM	01:37:03	7.77 pH	19.86 °C	781.29 µS/cm	0.13 mg/L	2.95 NTU	30.6 mV	21.25 ft	200.00 ml/min
8/13/2021 11:07 AM	01:42:03	7.77 pH	20.03 °C	769.60 µS/cm	0.12 mg/L	5.36 NTU	30.7 mV	21.30 ft	200.00 ml/min
8/13/2021 11:12 AM	01:47:03	7.77 pH	20.14 °C	775.38 µS/cm	0.11 mg/L	5.44 NTU	30.8 mV	21.30 ft	200.00 ml/min
8/13/2021 11:17 AM	01:52:03	7.77 pH	20.35 °C	761.59 µS/cm	0.11 mg/L	4.83 NTU	30.8 mV	21.35 ft	200.00 ml/min

## Samples

Sample ID:	Description:
HGWA-44D	Grab sample.

# Low-Flow Test Report:

Test Date / Time: 8/12/2021 4:16:42 PM

Project: GP-Plant Hammond

Operator Name: Ashley Ramsey

<b>Location Name: HGWA-4</b> <b>Well Diameter: 2 in</b> <b>Casing Type: PVC</b> <b>Screen Length: 10 ft</b> <b>Top of Screen: 15.8 ft</b> <b>Total Depth: 25.8 ft</b> <b>Initial Depth to Water: 9.13 ft</b>	<b>Pump Type: Bladder</b> <b>Tubing Type: Polyethylene</b> <b>Pump Intake From TOC: 22.8 ft</b> <b>Estimated Total Volume Pumped: 7 Liter</b> <b>Flow Cell Volume: 90 ml</b> <b>Final Flow Rate: 200 ml/min</b> <b>Final Draw Down: 0.21 ft</b>	<b>Instrument Used: Aqua TROLL 400</b> <b>Serial Number: 728623</b>
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## Test Notes:

Five bottles: Metals, TDS, Inorganics, Radium.

## Weather Conditions:

Sunny, 91 Degrees.

## Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
8/12/2021 4:16 PM	00:00	5.31 pH	27.27 °C	67.34 µS/cm	4.22 mg/L	12.60 NTU	142.8 mV	9.13 ft	200.00 ml/min
8/12/2021 4:21 PM	05:00	5.09 pH	22.56 °C	63.95 µS/cm	2.97 mg/L	17.30 NTU	137.2 mV	9.32 ft	200.00 ml/min
8/12/2021 4:26 PM	10:00	5.13 pH	22.26 °C	65.61 µS/cm	2.59 mg/L	11.70 NTU	133.8 mV	9.37 ft	200.00 ml/min
8/12/2021 4:31 PM	15:00	5.17 pH	22.18 °C	67.98 µS/cm	2.40 mg/L	10.79 NTU	131.3 mV	9.37 ft	200.00 ml/min
8/12/2021 4:36 PM	20:00	5.18 pH	22.02 °C	69.49 µS/cm	2.30 mg/L	9.40 NTU	128.1 mV	9.37 ft	200.00 ml/min
8/12/2021 4:41 PM	25:00	5.21 pH	22.07 °C	70.97 µS/cm	2.23 mg/L	7.98 NTU	125.6 mV	9.34 ft	200.00 ml/min
8/12/2021 4:46 PM	30:00	5.24 pH	21.95 °C	71.71 µS/cm	2.23 mg/L	6.08 NTU	123.1 mV	9.34 ft	200.00 ml/min
8/12/2021 4:51 PM	35:00	5.25 pH	21.95 °C	72.54 µS/cm	2.23 mg/L	4.89 NTU	115.0 mV	9.34 ft	200.00 ml/min
8/12/2021 4:52 PM	35:48	5.26 pH	22.00 °C	72.29 µS/cm	2.24 mg/L	4.79 NTU	117.9 mV	9.34 ft	200.00 ml/min

## Samples

Sample ID:	Description:
HGWA-4	Grab Sample.

# Low-Flow Test Report:

Test Date / Time: 8/12/2021 3:42:45 PM

Project: GP-Plant Hammond

Operator Name: Connor Cain

<b>Location Name: HGWA-5</b> <b>Well Diameter: 2 in</b> <b>Casing Type: PVC</b> <b>Screen Length: 10 ft</b> <b>Top of Screen: 17.95 ft</b> <b>Total Depth: 27.95 ft</b> <b>Initial Depth to Water: 6.32 ft</b>	<b>Pump Type: Bladder</b> <b>Tubing Type: Polyethylene</b> <b>Pump Intake From TOC: 22.95 ft</b> <b>Estimated Total Volume Pumped: 6 Liter</b> <b>Flow Cell Volume: 90 ml</b> <b>Final Flow Rate: 200 ml/min</b> <b>Final Draw Down: 0.38 ft</b>	<b>Instrument Used: Aqua TROLL 400</b> <b>Serial Number: 728541</b>
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## Test Notes:

Five bottles: Metals, TDS, Inorganics, Radium.

## Weather Conditions:

Sunny, 94 Degrees

## Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
8/12/2021 3:42 PM	00:00	5.98 pH	22.36 °C	133.59 µS/cm	1.97 mg/L	9.59 NTU	106.5 mV	6.64 ft	200.00 ml/min
8/12/2021 3:47 PM	05:00	6.28 pH	21.20 °C	204.49 µS/cm	0.31 mg/L	6.35 NTU	21.7 mV	6.78 ft	200.00 ml/min
8/12/2021 3:52 PM	10:00	6.37 pH	21.17 °C	221.08 µS/cm	0.19 mg/L	4.22 NTU	7.8 mV	6.87 ft	200.00 ml/min
8/12/2021 3:57 PM	15:00	6.40 pH	20.91 °C	231.68 µS/cm	0.25 mg/L	4.05 NTU	0.5 mV	6.90 ft	200.00 ml/min
8/12/2021 4:02 PM	20:00	6.42 pH	20.98 °C	237.92 µS/cm	0.26 mg/L	3.64 NTU	-2.2 mV	6.91 ft	200.00 ml/min
8/12/2021 4:07 PM	25:00	6.47 pH	20.84 °C	243.75 µS/cm	0.15 mg/L	3.45 NTU	-10.5 mV	6.95 ft	200.00 ml/min
8/12/2021 4:12 PM	30:00	6.46 pH	20.80 °C	242.44 µS/cm	0.17 mg/L	2.75 NTU	-8.5 mV	6.70 ft	200.00 ml/min

## Samples

Sample ID:	Description:
HGWA-5	Grab Sample

# Low-Flow Test Report:

Test Date / Time: 8/12/2021 2:12:53 PM

Project: GP-Plant Hammond

Operator Name: Connor Cain

<b>Location Name: HGWA-6</b> <b>Well Diameter: 2 in</b> <b>Casing Type: PVC</b> <b>Screen Length: 10 ft</b> <b>Top of Screen: 40.52 ft</b> <b>Total Depth: 50.52ft</b> <b>Initial Depth to Water: 5.82 ft</b>	<b>Pump Type: Bladder</b> <b>Tubing Type: Polyethylene</b> <b>Pump Intake From TOC: 45.32 ft</b> <b>Estimated Total Volume Pumped: 7 Liter</b> <b>Flow Cell Volume: 90 ml</b> <b>Final Flow Rate: 200 ml/min Final Draw Down: 1.87 ft</b>	<b>Instrument Used: Aqua TROLL 400</b> <b>Serial Number: 728541</b>
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## Test Notes:

Five bottles: Metals, Inorganics, Radium.

## Weather Conditions:

Sunny, 94 Degrees.

## Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
8/12/2021 2:12 PM	00:00	7.36 pH	25.24 °C	351.47 µS/cm	1.61 mg/L	0.98 NTU	-88.4 mV	6.10 ft	200.00 ml/min
8/12/2021 2:17 PM	05:00	7.45 pH	20.30 °C	366.31 µS/cm	1.02 mg/L	2.74 NTU	-88.6 mV	7.05 ft	200.00 ml/min
8/12/2021 2:22 PM	10:00	7.45 pH	20.13 °C	367.04 µS/cm	0.86 mg/L	1.09 NTU	-90.2 mV	7.42 ft	200.00 ml/min
8/12/2021 2:27 PM	15:00	7.46 pH	20.08 °C	369.61 µS/cm	0.53 mg/L	0.87 NTU	-91.8 mV	7.59 ft	200.00 ml/min
8/12/2021 2:32 PM	20:00	7.47 pH	20.08 °C	365.98 µS/cm	0.33 mg/L	0.76 NTU	-94.3 mV	7.65 ft	200.00 ml/min
8/12/2021 2:37 PM	25:00	7.47 pH	20.00 °C	366.14 µS/cm	0.23 mg/L	0.68 NTU	-97.0 mV	7.67 ft	200.00 ml/min
8/12/2021 2:42 PM	30:00	7.47 pH	19.96 °C	366.51 µS/cm	0.19 mg/L	0.56 NTU	-84.5 mV	7.69 ft	200.00 ml/min

## Samples

Sample ID:	Description:
HGWA-6	Grab Sample.

# Low-Flow Test Report:

Test Date / Time: 8/12/2021 8:57:57 AM

Project: GP-Plant Hammond

Operator Name: Ashley Ramsey

<b>Location Name: HGWA-42D</b> <b>Well Diameter: 2 in</b> <b>Casing Type: PVC</b> <b>Screen Length: 10 ft</b> <b>Top of Screen: 58.03 ft</b> <b>Total Depth: 68.03 ft</b> <b>Initial Depth to Water: 12.16 ft</b>	<b>Pump Type: Bladder</b> <b>Tubing Type: Polyethylene</b> <b>Pump Intake From TOC: 63.03 ft</b> <b>Estimated Total Volume Pumped: 5.5 Liter</b> <b>Flow Cell Volume: 90 ml</b> <b>Final Flow Rate: 100 ml/min</b> <b>Final Draw Down: 0.96 ft</b>	<b>Instrument Used: Aqua TROLL 400</b> <b>Serial Number: 728623</b>
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## Test Notes:

Five bottles: Metals, TDS, Inorganics, Radium.

## Weather Conditions:

Sunny, 91

## Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
8/12/2021 8:57 AM	00:00	7.72 pH	20.54 °C	300.69 µS/cm	1.55 mg/L	2.63 NTU	-111.7 mV	12.16 ft	200.00 ml/min
8/12/2021 9:02 AM	05:00	7.70 pH	20.26 °C	299.69 µS/cm	0.65 mg/L	3.02 NTU	-126.4 mV	13.79 ft	200.00 ml/min
8/12/2021 9:07 AM	10:00	7.70 pH	20.81 °C	312.13 µS/cm	0.95 mg/L	1.92 NTU	-123.8 mV	12.98 ft	200.00 ml/min
8/12/2021 9:12 AM	15:00	7.70 pH	21.54 °C	299.91 µS/cm	1.06 mg/L	1.66 NTU	-127.1 mV	14.00 ft	200.00 ml/min
8/12/2021 9:17 AM	20:00	7.71 pH	21.71 °C	303.09 µS/cm	0.77 mg/L	1.93 NTU	-133.1 mV	13.88 ft	200.00 ml/min
8/12/2021 9:22 AM	25:00	7.68 pH	22.94 °C	304.60 µS/cm	1.08 mg/L	1.83 NTU	-131.1 mV	13.35 ft	100.00 ml/min
8/12/2021 9:27 AM	30:00	7.69 pH	23.07 °C	298.50 µS/cm	1.15 mg/L	1.61 NTU	-130.1 mV	13.20 ft	100.00 ml/min
8/12/2021 9:32 AM	35:00	7.70 pH	23.29 °C	302.66 µS/cm	1.26 mg/L	1.13 NTU	-130.9 mV	13.12 ft	100.00 ml/min

## Samples

Sample ID:	Description:
HGWA-42D	Grab sample.

# Low-Flow Test Report:

Test Date / Time: 8/18/2021 2:55:55 PM

Project: GP-Plant Hammond

Operator Name: Thomas Kessler

<b>Location Name: HGWC-14</b> <b>Well Diameter: 2 in</b> <b>Casing Type: PVC</b> <b>Screen Length: 10 ft</b> <b>Top of Screen: 33 ft</b> <b>Total Depth: 43.00</b> <b>Initial Depth to Water: 27.72 ft</b>	<b>Pump Type: Bladder</b> <b>Tubing Type: Polyethylene</b> <b>Pump Intake From TOC: 38.00 ft</b> <b>Estimated Total Volume Pumped: 6 Liter</b> <b>Flow Cell Volume: 90 ml</b> <b>Final Flow Rate: 200 ml/min</b> <b>Final Draw Down: 0.08 ft</b>	<b>Instrument Used: Aqua TROLL 400</b> <b>Serial Number: 728634</b>
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## Test Notes:

Five Bottles: Metals, TDS, Inorganics, Radium.

## Weather Conditions:

Sunny, 90 degrees.

## Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
8/18/2021 2:55 PM	00:00	4.60 pH	32.76 °C	2,750.6 µS/cm	6.45 mg/L	4.27 NTU	248.7 mV	27.72 ft	200.00 ml/min
8/18/2021 3:00 PM	05:00	4.91 pH	23.12 °C	2,711.4 µS/cm	1.61 mg/L	3.72 NTU	207.5 mV	27.80 ft	200.00 ml/min
8/18/2021 3:05 PM	10:00	4.90 pH	22.61 °C	2,728.3 µS/cm	0.87 mg/L	2.91 NTU	213.9 mV	27.80 ft	200.00 ml/min
8/18/2021 3:10 PM	15:00	4.90 pH	22.54 °C	2,716.5 µS/cm	0.50 mg/L	1.92 NTU	272.4 mV	27.80 ft	200.00 ml/min
8/18/2021 3:15 PM	20:00	4.90 pH	22.44 °C	2,724.0 µS/cm	0.36 mg/L	1.55 NTU	198.3 mV	27.80 ft	200.00 ml/min
8/18/2021 3:20 PM	25:00	4.90 pH	22.40 °C	2,722.5 µS/cm	0.29 mg/L	2.01 NTU	184.4 mV	27.80 ft	200.00 ml/min
8/18/2021 3:25 PM	30:00	4.90 pH	22.38 °C	2,716.2 µS/cm	0.25 mg/L	1.67 NTU	175.6 mV	27.80 ft	200.00 ml/min

## Samples

Sample ID:	Description:
HGWC-14	Grab sample.

# Low-Flow Test Report:

Test Date / Time: 8/19/2021 2:24:54 PM

Project: GP-Plant Hammond

Operator Name: Ashley Ramsey

<b>Location Name: HGWC-15</b> <b>Well Diameter: 2 in</b> <b>Casing Type: PVC</b> <b>Screen Length: 10 ft</b> <b>Top of Screen: 28 ft</b> <b>Total Depth: 38 ft</b> <b>Initial Depth to Water: 14.52 ft</b>	<b>Pump Type: Bladder</b> <b>Tubing Type: Polyethylene</b> <b>Pump Intake From TOC: 33 ft</b> <b>Estimated Total Volume Pumped: 6 Liter</b> <b>Flow Cell Volume: 90 ml</b> <b>Final Flow Rate: 100 ml/min Final Draw Down: 0.54 ft</b>	<b>Instrument Used: Aqua TROLL 400</b> <b>Serial Number: 728623</b>
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## Test Notes:

Five bottles: Metals, TDS, Inorganics, radium.

## Weather Conditions:

Rain, 91 Degrees

## Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
8/19/2021 2:24 PM	00:00	6.38 pH	23.68 °C	1,220.1 µS/cm	3.90 mg/L	3.18 NTU	111.1 mV	14.52 ft	100.00 ml/min
8/19/2021 2:29 PM	05:00	6.39 pH	20.42 °C	1,345.3 µS/cm	1.03 mg/L	3.57 NTU	142.6 mV	15.06 ft	100.00 ml/min
8/19/2021 2:34 PM	10:00	6.35 pH	20.08 °C	1,361.1 µS/cm	0.44 mg/L	2.57 NTU	216.7 mV	15.06 ft	100.00 ml/min
8/19/2021 2:39 PM	15:00	6.33 pH	19.91 °C	1,361.0 µS/cm	0.22 mg/L	2.30 NTU	247.2 mV	15.06 ft	100.00 ml/min
8/19/2021 2:44 PM	20:00	6.28 pH	19.86 °C	1,349.6 µS/cm	0.27 mg/L	2.29 NTU	227.1 mV	15.06 ft	100.00 ml/min
8/19/2021 2:49 PM	25:00	6.23 pH	19.86 °C	1,341.6 µS/cm	0.21 mg/L	1.73 NTU	311.5 mV	15.06 ft	100.00 ml/min
8/19/2021 2:54 PM	30:00	6.18 pH	19.59 °C	1,331.3 µS/cm	0.18 mg/L	1.49 NTU	240.0 mV	15.06 ft	100.00 ml/min

## Samples

Sample ID:	Description:
HGWC-15	Grab sample.



# Low-Flow Test Report:

Test Date / Time: 8/19/2021 11:44:04 AM

Project: GP-Plant Hammond

Operator Name: Ashley Ramsey

<b>Location Name: HGWC-16</b> <b>Well Diameter: 2 in</b> <b>Casing Type: PVC</b> <b>Screen Length: 10 ft</b> <b>Top of Screen: 23.1 ft</b> <b>Total Depth: 33.1 ft</b> <b>Initial Depth to Water: 10.62 ft</b>	<b>Pump Type: Bladder</b> <b>Tubing Type: Polyethylene</b> <b>Pump Intake From TOC: 28.1 ft</b> <b>Estimated Total Volume Pumped: 18 Liter</b> <b>Flow Cell Volume: 90 ml</b> <b>Final Flow Rate: 200 ml/min</b> <b>Final Draw Down: 0.67 ft</b>	<b>Instrument Used: Aqua TROLL 400</b> <b>Serial Number: 728623</b>
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## Test Notes:

Five bottles: Metals, TDS, Inorganics, radium.

## Weather Conditions:

Sunny, 91 Degrees.

## Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
8/19/2021 11:44 AM	00:00	7.05 pH	23.09 °C	1,169.9 µS/cm	1.41 mg/L	956.00 NTU	-38.4 mV	10.62 ft	200.00 ml/min
8/19/2021 11:49 AM	05:00	7.04 pH	22.79 °C	1,183.5 µS/cm	0.59 mg/L	145.00 NTU	-40.1 mV	11.12 ft	200.00 ml/min
8/19/2021 11:54 AM	10:00	7.05 pH	22.52 °C	1,158.9 µS/cm	0.40 mg/L	80.30 NTU	-53.5 mV	11.13 ft	200.00 ml/min
8/19/2021 11:59 AM	15:00	7.05 pH	22.36 °C	1,149.7 µS/cm	0.31 mg/L	55.10 NTU	-52.7 mV	11.14 ft	200.00 ml/min
8/19/2021 12:04 PM	20:00	7.06 pH	22.22 °C	1,136.4 µS/cm	0.25 mg/L	38.80 NTU	-56.7 mV	11.15 ft	200.00 ml/min
8/19/2021 12:09 PM	25:00	7.05 pH	22.18 °C	1,138.1 µS/cm	0.20 mg/L	31.80 NTU	-67.2 mV	11.16 ft	200.00 ml/min
8/19/2021 12:14 PM	30:00	7.06 pH	22.04 °C	1,135.5 µS/cm	0.17 mg/L	26.90 NTU	-58.8 mV	11.17 ft	200.00 ml/min
8/19/2021 12:19 PM	35:00	7.06 pH	22.00 °C	1,139.5 µS/cm	0.16 mg/L	21.90 NTU	-57.6 mV	11.18 ft	200.00 ml/min
8/19/2021 12:24 PM	40:00	7.06 pH	22.19 °C	1,143.5 µS/cm	0.15 mg/L	17.70 NTU	-57.0 mV	11.19 ft	200.00 ml/min
8/19/2021 12:29 PM	45:00	7.05 pH	22.40 °C	1,148.4 µS/cm	0.14 mg/L	14.20 NTU	-56.6 mV	11.20 ft	200.00 ml/min
8/19/2021 12:34 PM	50:00	7.05 pH	22.36 °C	1,148.2 µS/cm	0.13 mg/L	11.69 NTU	-56.3 mV	11.21 ft	200.00 ml/min
8/19/2021 12:39 PM	55:00	7.05 pH	22.58 °C	1,146.7 µS/cm	0.13 mg/L	11.10 NTU	-55.9 mV	11.22 ft	200.00 ml/min
8/19/2021 12:44 PM	01:00:00	7.05 pH	22.58 °C	1,144.5 µS/cm	0.12 mg/L	8.71 NTU	-55.2 mV	11.23 ft	200.00 ml/min

8/19/2021 12:49 PM	01:05:00	7.05 pH	22.50 °C	1,150.9 µS/cm	0.13 mg/L	7.87 NTU	-55.1 mV	11.24 ft	200.00 ml/min
8/19/2021 12:54 PM	01:10:00	7.04 pH	22.66 °C	1,145.3 µS/cm	0.13 mg/L	11.10 NTU	-55.1 mV	11.25 ft	200.00 ml/min
8/19/2021 12:59 PM	01:15:00	7.05 pH	22.94 °C	1,147.9 µS/cm	0.12 mg/L	8.98 NTU	-55.4 mV	11.26 ft	200.00 ml/min
8/19/2021 1:04 PM	01:20:00	7.04 pH	22.97 °C	1,149.7 µS/cm	0.13 mg/L	6.86 NTU	-54.7 mV	11.27 ft	200.00 ml/min
8/19/2021 1:09 PM	01:25:00	7.04 pH	22.76 °C	1,145.3 µS/cm	0.13 mg/L	6.62 NTU	-54.3 mV	11.28 ft	200.00 ml/min
8/19/2021 1:14 PM	01:30:00	7.04 pH	22.72 °C	1,147.8 µS/cm	0.12 mg/L	4.77 NTU	-54.0 mV	11.29 ft	200.00 ml/min

## Samples

Sample ID:	Description:
HGWC-16	Grab sample.
DUP-2	Grab sample.

# Low-Flow Test Report:

Test Date / Time: 8/18/2021 4:25:30 PM

Project: GP-Plant Hammond

Operator Name: Thomas Kessler

<b>Location Name: HGWC-17</b> <b>Well Diameter: 2 in</b> <b>Casing Type: PVC</b> <b>Screen Length: 10 ft</b> <b>Top of Screen: 17.8 ft</b> <b>Total Depth: 27.80 ft</b> <b>Initial Depth to Water: 16.85 ft</b>	<b>Pump Type: Bladder</b> <b>Tubing Type: Polyethylene</b> <b>Pump Intake From TOC: 22.8 ft</b> <b>Estimated Total Volume Pumped: 13 Liter</b> <b>Flow Cell Volume: 90 ml</b> <b>Final Flow Rate: 200 ml/min</b> <b>Final Draw Down: 0.26 ft</b>	<b>Instrument Used: Aqua TROLL 400</b> <b>Serial Number: 728634</b>
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## Test Notes:

Five bottles: Metals, TDS, Inorganics, Radium.

## Weather Conditions:

Sunny, 95 Degrees.

## Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
8/18/2021 4:25 PM	00:00	6.59 pH	30.32 °C	1,545.4 µS/cm	4.24 mg/L	2.56 NTU	200.7 mV	16.90 ft	200.00 ml/min
8/18/2021 4:28 PM	03:00	6.58 pH	25.85 °C	1,315.8 µS/cm	2.55 mg/L	2.56 NTU	255.8 mV	16.85 ft	200.00 ml/min
8/18/2021 4:28 PM	03:28	6.57 pH	25.18 °C	1,328.3 µS/cm	2.32 mg/L	14.60 NTU	227.0 mV	17.09 ft	200.00 ml/min
8/18/2021 4:33 PM	08:28	6.50 pH	22.94 °C	1,408.7 µS/cm	1.09 mg/L	22.90 NTU	207.4 mV	17.11 ft	200.00 ml/min
8/18/2021 4:38 PM	13:28	6.48 pH	22.79 °C	1,405.8 µS/cm	0.62 mg/L	16.30 NTU	192.0 mV	17.11 ft	200.00 ml/min
8/18/2021 4:43 PM	18:28	6.47 pH	22.88 °C	1,414.6 µS/cm	0.32 mg/L	12.00 NTU	135.4 mV	17.11 ft	200.00 ml/min
8/18/2021 4:48 PM	23:28	6.47 pH	22.78 °C	1,416.9 µS/cm	0.21 mg/L	14.58 NTU	113.9 mV	17.11 ft	200.00 ml/min
8/18/2021 4:53 PM	28:28	6.46 pH	22.78 °C	1,429.4 µS/cm	0.18 mg/L	11.74 NTU	76.1 mV	17.11 ft	200.00 ml/min
8/18/2021 4:58 PM	33:28	6.45 pH	22.57 °C	1,437.8 µS/cm	0.16 mg/L	9.10 NTU	95.1 mV	17.11 ft	200.00 ml/min
8/18/2021 5:03 PM	38:28	6.45 pH	22.15 °C	1,441.1 µS/cm	0.15 mg/L	7.60 NTU	67.1 mV	17.11 ft	200.00 ml/min
8/18/2021 5:08 PM	43:28	6.44 pH	22.26 °C	1,448.6 µS/cm	0.14 mg/L	6.93 NTU	85.4 mV	17.11 ft	200.00 ml/min
8/18/2021 5:13 PM	48:28	6.44 pH	22.30 °C	1,453.6 µS/cm	0.13 mg/L	6.40 NTU	63.5 mV	17.11 ft	200.00 ml/min
8/18/2021 5:18 PM	53:28	6.43 pH	22.26 °C	1,465.5 µS/cm	0.13 mg/L	5.53 NTU	81.0 mV	17.11 ft	200.00 ml/min

8/18/2021 5:23 PM	58:28	6.43 pH	22.16 °C	1,468.0 µS/cm	0.12 mg/L	17.11 NTU	60.7 mV	17.11 ft	200.00 ml/min
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## Samples

Sample ID:	Description:
HGWC-17	Grab sample.

# Low-Flow Test Report:

Test Date / Time: 8/19/2021 8:55:23 AM

Project: GP-Plant Hammond

Operator Name: Ashley Ramsey

<b>Location Name: HGWC-18</b> <b>Well Diameter: 2 in</b> <b>Casing Type: PVC</b> <b>Screen Length: 10 ft</b> <b>Top of Screen: 17.8 ft</b> <b>Total Depth: 27.8 ft</b> <b>Initial Depth to Water: 16.81 ft</b>	<b>Pump Type: Bladder</b> <b>Tubing Type: Polyethylene</b> <b>Pump Intake From TOC: 22.8 ft</b> <b>Estimated Total Volume Pumped: 6 Liter</b> <b>Flow Cell Volume: 90 ml</b> <b>Final Flow Rate: 200 ml/min</b> <b>Final Draw Down: 0.11 ft</b>	<b>Instrument Used: Aqua TROLL 400</b> <b>Serial Number: 728623</b>
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## Test Notes:

Five bottles: Metals, TDS, Inorganics, radium.

## Weather Conditions:

Sunny, 91 Degrees.

## Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
8/19/2021 8:55 AM	00:00	4.43 pH	21.97 °C	1,973.0 µS/cm	1.92 mg/L	4.22 NTU	233.3 mV	16.81 ft	200.00 ml/min
8/19/2021 9:00 AM	05:00	4.43 pH	21.91 °C	2,046.1 µS/cm	1.71 mg/L	2.70 NTU	327.6 mV	16.91 ft	200.00 ml/min
8/19/2021 9:05 AM	10:00	4.43 pH	22.17 °C	2,060.1 µS/cm	1.01 mg/L	1.96 NTU	338.0 mV	16.92 ft	200.00 ml/min
8/19/2021 9:10 AM	15:00	4.43 pH	22.16 °C	2,071.2 µS/cm	0.86 mg/L	1.68 NTU	441.5 mV	16.92 ft	200.00 ml/min
8/19/2021 9:15 AM	20:00	4.43 pH	22.15 °C	2,073.6 µS/cm	0.82 mg/L	1.74 NTU	347.5 mV	16.92 ft	200.00 ml/min
8/19/2021 9:20 AM	25:00	4.43 pH	21.91 °C	2,077.3 µS/cm	0.79 mg/L	1.61 NTU	455.0 mV	16.92 ft	200.00 ml/min
8/19/2021 9:25 AM	30:00	4.43 pH	22.13 °C	2,076.0 µS/cm	0.76 mg/L	3.23 NTU	452.8 mV	16.92 ft	200.00 ml/min

## Samples

Sample ID:	Description:
HGWC-18	Grab sample.

# Low-Flow Test Report:

Test Date / Time: 8/19/2021 9:57:17 AM

Project: GP-Plant Hammond

Operator Name: Ashley Ramsey

<b>Location Name: MW-21D</b> <b>Well Diameter: 2 in</b> <b>Casing Type: PVC</b> <b>Screen Length: 10 ft</b> <b>Top of Screen: 41.8 ft</b> <b>Total Depth: 51.8 ft</b> <b>Initial Depth to Water: 16.24 ft</b>	<b>Pump Type: Bladder</b> <b>Tubing Type: Polyethylene</b> <b>Pump Intake From TOC: 46.8 ft</b> <b>Estimated Total Volume Pumped: 10 Liter</b> <b>Flow Cell Volume: 90 ml</b> <b>Final Flow Rate: 200 ml/min</b> <b>Final Draw Down: 0.27 ft</b>	<b>Instrument Used: Aqua TROLL 400</b> <b>Serial Number: 728623</b>
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## Test Notes:

Five bottles: Metals, TDS, app Inorganics, radium.

## Weather Conditions:

Sunny, 91 Degrees.

## Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
8/19/2021 9:57 AM	00:00	6.50 pH	20.62 °C	2,177.6 µS/cm	0.69 mg/L	51.00 NTU	-86.3 mV	16.24 ft	200.00 ml/min
8/19/2021 9:58 AM	01:42	6.60 pH	20.46 °C	2,167.2 µS/cm	0.25 mg/L		-95.3 mV	16.24 ft	200.00 ml/min
8/19/2021 10:02 AM	05:08	6.70 pH	20.27 °C	2,164.9 µS/cm	0.31 mg/L	23.90 NTU	-102.4 mV	16.51 ft	200.00 ml/min
8/19/2021 10:07 AM	10:08	6.76 pH	20.35 °C	2,159.9 µS/cm	0.19 mg/L	12.50 NTU	-97.4 mV	16.51 ft	200.00 ml/min
8/19/2021 10:12 AM	15:08	6.80 pH	20.35 °C	2,164.2 µS/cm	0.16 mg/L	10.81 NTU	-106.5 mV	16.51 ft	200.00 ml/min
8/19/2021 10:17 AM	20:08	6.81 pH	20.41 °C	2,162.1 µS/cm	0.15 mg/L	9.01 NTU	-97.0 mV	16.51 ft	200.00 ml/min
8/19/2021 10:22 AM	25:08	6.83 pH	20.28 °C	2,159.3 µS/cm	0.15 mg/L	9.96 NTU	-104.5 mV	16.51 ft	200.00 ml/min
8/19/2021 10:27 AM	30:08	6.84 pH	20.12 °C	2,155.7 µS/cm	0.15 mg/L	8.51 NTU	-95.3 mV	16.51 ft	200.00 ml/min
8/19/2021 10:32 AM	35:08	6.84 pH	20.14 °C	2,152.8 µS/cm	0.15 mg/L	7.87 NTU	-94.3 mV	16.51 ft	200.00 ml/min
8/19/2021 10:37 AM	40:08	6.85 pH	20.15 °C	2,149.3 µS/cm	0.15 mg/L	6.16 NTU	-102.0 mV	16.51 ft	200.00 ml/min
8/19/2021 10:42 AM	45:08	6.85 pH	20.31 °C	2,143.4 µS/cm	0.14 mg/L	5.18 NTU	-93.2 mV	16.51 ft	200.00 ml/min
8/19/2021 10:47 AM	50:08	6.85 pH	20.44 °C	2,144.2 µS/cm	0.14 mg/L	4.65 NTU	-100.9 mV	16.51 ft	200.00 ml/min

**Samples**

Sample ID:	Description:
MW-21D	Grab sample.

# Low-Flow Test Report:

Test Date / Time: 8/19/2021 1:42:16 PM

Project: GP-Plant Hammond

Operator Name: Thomas Kessler

<b>Location Name: MW-22</b> <b>Well Diameter: 2 in</b> <b>Casing Type: PVC</b> <b>Screen Length: 10 ft</b> <b>Top of Screen: 27.58 ft</b> <b>Total Depth: 37.58 ft</b> <b>Initial Depth to Water: 11.54 ft</b>	<b>Pump Type: Bladder</b> <b>Tubing Type: Polyethylene</b> <b>Pump Intake From TOC: 32.58 ft</b> <b>Estimated Total Volume Pumped: 14 Liter</b> <b>Flow Cell Volume: 90 ml</b> <b>Final Flow Rate: 100 ml/min</b> <b>Final Draw Down: 6.26 ft</b>	<b>Instrument Used: Aqua TROLL 400</b> <b>Serial Number: 728634</b>
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## Test Notes:

Five bottles: Metals, TDS, Inorganics, Radium.

## Weather Conditions:

Cloudy, 90 Degrees.

## Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
8/19/2021 1:42 PM	00:00	5.89 pH	24.81 °C	1,320.0 µS/cm	2.33 mg/L	4.11 NTU	112.4 mV	11.54 ft	200.00 ml/min
8/19/2021 1:47 PM	05:00	6.13 pH	20.16 °C	1,339.9 µS/cm	0.85 mg/L	13.35 NTU	233.8 mV	13.35 ft	200.00 ml/min
8/19/2021 1:52 PM	10:00	6.07 pH	19.93 °C	1,375.2 µS/cm	0.46 mg/L	4.19 NTU	206.3 mV	14.20 ft	200.00 ml/min
8/19/2021 1:56 PM	14:01	6.04 pH	21.07 °C	1,368.8 µS/cm	0.38 mg/L	4.10 NTU	136.3 mV	14.60 ft	200.00 ml/min
8/19/2021 2:01 PM	19:01	6.05 pH	21.27 °C	1,362.6 µS/cm	0.46 mg/L	3.80 NTU	165.8 mV	14.90 ft	200.00 ml/min
8/19/2021 2:06 PM	24:01	6.06 pH	21.01 °C	1,346.3 µS/cm	0.36 mg/L	3.31 NTU	157.4 mV	15.10 ft	200.00 ml/min
8/19/2021 2:07 PM	24:53	6.06 pH	20.94 °C	1,362.3 µS/cm	0.34 mg/L	--	134.4 mV	--	200.00 ml/min
8/19/2021 2:12 PM	29:53	6.07 pH	20.74 °C	1,344.4 µS/cm	0.29 mg/L	3.24 NTU	141.8 mV	15.35 ft	200.00 ml/min
8/19/2021 2:17 PM	34:53	6.06 pH	20.83 °C	1,342.5 µS/cm	0.27 mg/L	3.20 NTU	194.6 mV	15.50 ft	200.00 ml/min
8/19/2021 2:22 PM	39:53	6.03 pH	20.87 °C	1,344.8 µS/cm	0.26 mg/L	3.14 NTU	140.1 mV	15.50 ft	200.00 ml/min
8/19/2021 2:27 PM	44:53	6.03 pH	20.67 °C	1,347.1 µS/cm	0.25 mg/L	3.19 NTU	188.3 mV	15.97 ft	200.00 ml/min
8/19/2021 2:32 PM	49:53	6.04 pH	20.47 °C	1,359.2 µS/cm	0.24 mg/L	3.11 NTU	139.0 mV	15.97 ft	200.00 ml/min
8/19/2021 2:37 PM	54:53	6.04 pH	20.33 °C	1,356.0 µS/cm	0.24 mg/L	3.95 NTU	125.4 mV	15.97 ft	200.00 ml/min



8/19/2021 2:41 PM	59:03	6.06 pH	20.20 °C	1,360.3 µS/cm	0.24 mg/L	--	145.6 mV	--	200.00 ml/min
8/19/2021 2:46 PM	01:04:03	6.05 pH	20.07 °C	1,344.1 µS/cm	0.23 mg/L	--	176.7 mV	--	200.00 ml/min
8/19/2021 2:51 PM	01:09:03	6.04 pH	20.20 °C	1,354.3 µS/cm	0.23 mg/L	--	129.9 mV	--	200.00 ml/min
8/19/2021 2:56 PM	01:14:03	6.05 pH	20.14 °C	1,338.6 µS/cm	0.23 mg/L	--	124.7 mV	--	200.00 ml/min
8/19/2021 3:01 PM	01:19:03	6.05 pH	19.94 °C	1,341.9 µS/cm	0.23 mg/L	--	170.7 mV	--	200.00 ml/min
8/19/2021 3:06 PM	01:24:03	6.05 pH	19.94 °C	1,344.6 µS/cm	0.24 mg/L	--	178.7 mV	--	200.00 ml/min
8/19/2021 3:11 PM	01:29:03	6.05 pH	19.94 °C	1,345.2 µS/cm	0.23 mg/L	--	181.2 mV	--	200.00 ml/min
8/19/2021 3:16 PM	01:34:03	6.04 pH	20.01 °C	1,344.3 µS/cm	0.23 mg/L	--	182.0 mV	--	200.00 ml/min
8/19/2021 3:21 PM	01:39:03	6.04 pH	20.03 °C	1,345.2 µS/cm	0.23 mg/L	--	185.1 mV	--	200.00 ml/min
8/19/2021 3:26 PM	01:44:03	6.04 pH	19.95 °C	1,346.2 µS/cm	0.23 mg/L	--	182.4 mV	--	200.00 ml/min
8/19/2021 3:31 PM	01:49:03	6.06 pH	20.03 °C	1,342.2 µS/cm	0.23 mg/L	--	180.8 mV	--	200.00 ml/min
8/19/2021 3:36 PM	01:54:03	6.06 pH	19.94 °C	1,345.3 µS/cm	0.23 mg/L	--	179.2 mV	--	200.00 ml/min
8/19/2021 3:41 PM	01:59:03	6.05 pH	19.96 °C	1,345.8 µS/cm	0.23 mg/L	4.63 NTU	177.0 mV	17.75 ft	200.00 ml/min
8/19/2021 3:46 PM	02:04:03	6.06 pH	19.89 °C	1,344.9 µS/cm	0.23 mg/L	4.25 NTU	177.9 mV	17.80 ft	200.00 ml/min
8/19/2021 3:51 PM	02:09:03	6.05 pH	20.06 °C	1,340.4 µS/cm	0.23 mg/L	4.38 NTU	125.2 mV	17.80 ft	200.00 ml/min

## Samples

Sample ID:	Description:
MW-22	Grab sample.

# Low-Flow Test Report:

Test Date / Time: 8/19/2021 6:17:57 PM

Project: GP-Plant Hammond

Operator Name: Connor Cain

<b>Location Name: MW-23D</b> <b>Well Diameter: 2 in</b> <b>Casing Type: PVC</b> <b>Screen Length: 10 ft</b> <b>Top of Screen: 52.79 ft</b> <b>Total Depth: 62.79 ft</b> <b>Initial Depth to Water: 14.60 ft</b>	<b>Pump Type: Peristaltic</b> <b>Tubing Type: Polyethylene</b> <b>Pump Intake From TOC: 57.79 ft</b> <b>Estimated Total Volume Pumped: 7 Liter</b> <b>Flow Cell Volume: 90 ml</b> <b>Final Flow Rate: 200 ml/min Final Draw Down: 0.11 ft</b>	<b>Instrument Used: Aqua TROLL 400</b> <b>Serial Number: 728541</b>
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## Test Notes:

Five bottles: Metals, TDS, Inorganics, Radium.

## Weather Conditions:

Cloudy, 84 Degrees.

## Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
8/19/2021 6:17 PM	00:00	6.90 pH	23.16 °C	1,663.3 µS/cm	1.97 mg/L	0.58 NTU	-35.3 mV	14.69 ft	200.00 ml/min
8/19/2021 6:22 PM	05:00	6.78 pH	21.47 °C	1,800.0 µS/cm	1.20 mg/L	0.52 NTU	-13.3 mV	14.70 ft	200.00 ml/min
8/19/2021 6:27 PM	10:00	6.77 pH	21.24 °C	1,794.9 µS/cm	0.77 mg/L	0.30 NTU	-6.4 mV	14.70 ft	200.00 ml/min
8/19/2021 6:32 PM	15:00	6.75 pH	21.15 °C	1,801.9 µS/cm	0.82 mg/L	0.22 NTU	1.7 mV	14.70 ft	200.00 ml/min
8/19/2021 6:37 PM	20:00	6.74 pH	20.94 °C	1,814.5 µS/cm	0.67 mg/L	0.24 NTU	-5.5 mV	14.70 ft	200.00 ml/min
8/19/2021 6:42 PM	25:00	6.73 pH	20.87 °C	1,818.8 µS/cm	0.71 mg/L	0.91 NTU	11.8 mV	14.71 ft	200.00 ml/min
8/19/2021 6:47 PM	30:00	6.72 pH	20.84 °C	1,822.4 µS/cm	0.74 mg/L	0.91 NTU	14.6 mV	14.71 ft	200.00 ml/min

## Samples

Sample ID:	Description:
MW-23D	Grab sample.

# Low-Flow Test Report:

Test Date / Time: 8/18/2021 1:04:58 PM

Project: GP-Plant Hammond

Operator Name: Thomas Kessler

<b>Location Name: MW-33</b> <b>Well Diameter: 2 in</b> <b>Casing Type: PVC</b> <b>Screen Length: 10 ft</b> <b>Top of Screen: 27.93 ft</b> <b>Total Depth: 37.93 ft</b> <b>Initial Depth to Water: 24.9 ft</b>	<b>Pump Type: Bladder</b> <b>Tubing Type: Polyethylene</b> <b>Pump Intake From TOC: 22.93 ft</b> <b>Estimated Total Volume Pumped: 6 Liter</b> <b>Flow Cell Volume: 90 ml</b> <b>Final Flow Rate: 200 ml/min</b> <b>Final Draw Down: 0.05 ft</b>	<b>Instrument Used: Aqua TROLL 400</b> <b>Serial Number: 728634</b>
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## Test Notes:

Five bottles: Metals, TDS, Inorganics, Radium.

## Weather Conditions:

Sunny, 90 Degrees.

## Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
8/18/2021 1:04 PM	00:00	4.25 pH	24.23 °C	2,757.6 µS/cm	3.93 mg/L	13.90 NTU	341.7 mV	24.90 ft	200.00 ml/min
8/18/2021 1:09 PM	05:00	4.32 pH	21.85 °C	2,700.7 µS/cm	0.90 mg/L	12.13 NTU	372.2 mV	24.95 ft	200.00 ml/min
8/18/2021 1:14 PM	10:00	4.39 pH	21.64 °C	2,705.9 µS/cm	0.68 mg/L	5.85 NTU	343.3 mV	24.95 ft	200.00 ml/min
8/18/2021 1:19 PM	15:00	4.41 pH	21.56 °C	2,700.5 µS/cm	0.41 mg/L	4.94 NTU	355.6 mV	24.95 ft	200.00 ml/min
8/18/2021 1:24 PM	20:00	4.43 pH	21.58 °C	2,708.6 µS/cm	0.28 mg/L	4.15 NTU	285.9 mV	24.95 ft	200.00 ml/min
8/18/2021 1:29 PM	25:00	4.41 pH	21.59 °C	2,701.6 µS/cm	0.21 mg/L	2.97 NTU	330.6 mV	24.95 ft	200.00 ml/min
8/18/2021 1:34 PM	30:00	4.42 pH	21.63 °C	2,702.0 µS/cm	0.18 mg/L	3.10 NTU	256.3 mV	24.95 ft	200.00 ml/min

## Samples

Sample ID:	Description:
MW-33	Grab sample.

# Low-Flow Test Report:

Test Date / Time: 8/13/2021 1:36:39 PM

Project: GP-Plant Hammond

Operator Name: Thomas Kessler

<b>Location Name: MW-34D</b> <b>Well Diameter: 2 in</b> <b>Casing Type: PVC</b> <b>Screen Length: 10 ft</b> <b>Top of Screen: 63.68 ft</b> <b>Total Depth: 73.68 Initial</b> <b>Depth to Water: 30.4 ft</b>	<b>Pump Type: Bladder</b> <b>Tubing Type: Polyethylene</b> <b>Pump Intake From TOC: 68.68 ft</b> <b>Estimated Total Volume Pumped: 45 Liter</b> <b>Flow Cell Volume: 90 ml</b> <b>Final Flow Rate: 200 ml/min</b> <b>Final Draw Down: 0.2 ft</b>	<b>Instrument Used: Aqua TROLL 400</b> <b>Serial Number: 728634</b>
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## Test Notes:

Low flow suspended to attempt redevelopment

## Weather Conditions:

Sunny, 92 degrees

## Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
8/13/2021 1:36 PM	00:00	7.03 pH	27.58 °C	2,984.6 µS/cm	2.56 mg/L	101.00 NTU	48.7 mV	30.49 ft	200.00 ml/min
8/13/2021 1:41 PM	05:00	7.08 pH	23.06 °C	2,849.4 µS/cm	0.90 mg/L	102.10 NTU	17.3 mV	30.50 ft	200.00 ml/min
8/13/2021 1:46 PM	10:00	7.08 pH	22.69 °C	2,852.9 µS/cm	0.55 mg/L	85.70 NTU	14.9 mV	30.50 ft	200.00 ml/min
8/13/2021 1:51 PM	15:00	7.07 pH	22.58 °C	2,835.1 µS/cm	0.42 mg/L	85.00 NTU	13.8 mV	30.50 ft	200.00 ml/min
8/13/2021 1:56 PM	20:00	7.06 pH	22.79 °C	2,823.2 µS/cm	0.37 mg/L	78.20 NTU	10.7 mV	30.50 ft	200.00 ml/min
8/13/2021 2:01 PM	25:00	7.05 pH	22.66 °C	2,835.3 µS/cm	0.32 mg/L	72.20 NTU	0.8 mV	30.55 ft	200.00 ml/min
8/13/2021 2:06 PM	30:00	7.04 pH	22.69 °C	2,821.7 µS/cm	0.28 mg/L	56.20 NTU	3.6 mV	30.55 ft	200.00 ml/min
8/13/2021 2:11 PM	35:00	7.04 pH	22.81 °C	2,810.9 µS/cm	0.24 mg/L	74.80 NTU	5.4 mV	30.55 ft	200.00 ml/min
8/13/2021 2:16 PM	40:00	7.03 pH	22.74 °C	2,796.1 µS/cm	0.21 mg/L	89.90 NTU	10.1 mV	30.60 ft	200.00 ml/min
8/13/2021 2:21 PM	45:00	7.03 pH	22.79 °C	2,770.8 µS/cm	0.19 mg/L	71.00 NTU	15.1 mV	30.60 ft	200.00 ml/min
8/13/2021 2:26 PM	50:00	7.03 pH	22.90 °C	2,743.1 µS/cm	0.17 mg/L	76.00 NTU	19.7 mV	30.60 ft	200.00 ml/min
8/13/2021 2:31 PM	55:00	7.03 pH	22.69 °C	2,731.1 µS/cm	0.16 mg/L	91.20 NTU	20.5 mV	30.65 ft	200.00 ml/min
8/13/2021 2:36 PM	01:00:00	7.02 pH	22.66 °C	2,750.4 µS/cm	0.15 mg/L	89.10 NTU	23.3 mV	30.65 ft	200.00 ml/min

8/13/2021 2:41 PM	01:05:00	7.02 pH	23.11 °C	2,696.2 µS/cm	0.13 mg/L	86.90 NTU	19.7 mV	30.65 ft	200.00 ml/min
8/13/2021 2:46 PM	01:10:00	7.02 pH	23.00 °C	2,688.4 µS/cm	0.13 mg/L	77.80 NTU	19.3 mV	30.65 ft	200.00 ml/min
8/13/2021 2:51 PM	01:15:00	7.02 pH	22.93 °C	2,715.5 µS/cm	0.12 mg/L	77.90 NTU	22.8 mV	30.60 ft	200.00 ml/min
8/13/2021 2:56 PM	01:20:00	7.02 pH	23.03 °C	2,666.1 µS/cm	0.11 mg/L	75.30 NTU	18.3 mV	30.60 ft	200.00 ml/min
8/13/2021 3:01 PM	01:25:00	7.02 pH	22.79 °C	2,666.5 µS/cm	0.11 mg/L	72.90 NTU	21.8 mV	30.60 ft	200.00 ml/min
8/13/2021 3:06 PM	01:30:00	7.02 pH	22.35 °C	2,667.8 µS/cm	0.10 mg/L	75.20 NTU	18.1 mV	30.60 ft	200.00 ml/min
8/13/2021 3:11 PM	01:35:00	7.03 pH	22.16 °C	2,655.7 µS/cm	0.10 mg/L	68.80 NTU	17.4 mV	30.60 ft	200.00 ml/min
8/13/2021 3:16 PM	01:40:00	7.03 pH	22.01 °C	2,652.2 µS/cm	0.09 mg/L	73.00 NTU	21.1 mV	30.60 ft	200.00 ml/min
8/13/2021 3:21 PM	01:45:00	7.03 pH	21.93 °C	2,639.1 µS/cm	0.09 mg/L	65.10 NTU	20.7 mV	30.60 ft	200.00 ml/min
8/13/2021 3:26 PM	01:50:00	7.03 pH	21.74 °C	2,628.5 µS/cm	0.08 mg/L	65.70 NTU	16.8 mV	30.60 ft	200.00 ml/min
8/13/2021 3:31 PM	01:55:00	7.03 pH	21.72 °C	2,625.3 µS/cm	0.08 mg/L	74.50 NTU	20.1 mV	30.60 ft	200.00 ml/min
8/13/2021 3:36 PM	02:00:00	7.03 pH	21.63 °C	2,614.7 µS/cm	0.07 mg/L	61.20 NTU	20.5 mV	30.60 ft	200.00 ml/min
8/13/2021 3:41 PM	02:05:00	7.04 pH	21.56 °C	2,612.6 µS/cm	0.07 mg/L	60.20 NTU	16.2 mV	30.60 ft	200.00 ml/min
8/13/2021 3:46 PM	02:10:00	7.04 pH	21.54 °C	2,627.3 µS/cm	0.07 mg/L	57.60 NTU	20.2 mV	30.60 ft	200.00 ml/min
8/13/2021 3:51 PM	02:15:00	7.04 pH	21.45 °C	2,596.3 µS/cm	0.07 mg/L	60.60 NTU	15.4 mV	30.60 ft	200.00 ml/min
8/13/2021 3:56 PM	02:20:00	7.04 pH	21.43 °C	2,591.9 µS/cm	0.06 mg/L	56.80 NTU	14.4 mV	30.60 ft	200.00 ml/min
8/13/2021 4:01 PM	02:25:00	7.04 pH	21.41 °C	2,587.2 µS/cm	0.06 mg/L	55.60 NTU	14.4 mV	30.60 ft	200.00 ml/min
8/13/2021 4:06 PM	02:30:00	7.04 pH	21.41 °C	2,587.9 µS/cm	0.06 mg/L	52.40 NTU	14.3 mV	30.60 ft	200.00 ml/min
8/13/2021 4:11 PM	02:35:00	7.04 pH	21.41 °C	2,590.4 µS/cm	0.06 mg/L	49.62 NTU	19.2 mV	30.60 ft	200.00 ml/min
8/13/2021 4:16 PM	02:40:00	7.04 pH	21.45 °C	2,575.6 µS/cm	0.06 mg/L	47.90 NTU	14.1 mV	30.60 ft	200.00 ml/min
8/13/2021 4:21 PM	02:45:00	7.04 pH	21.44 °C	2,574.8 µS/cm	0.06 mg/L	49.30 NTU	13.8 mV	30.60 ft	200.00 ml/min
8/13/2021 4:26 PM	02:50:00	7.04 pH	21.41 °C	2,573.9 µS/cm	0.06 mg/L	44.60 NTU	13.7 mV	30.60 ft	200.00 ml/min
8/13/2021 4:31 PM	02:55:00	7.04 pH	21.34 °C	2,574.9 µS/cm	0.06 mg/L	44.40 NTU	14.1 mV	30.60 ft	200.00 ml/min
8/13/2021 4:36 PM	03:00:00	7.04 pH	21.36 °C	2,566.1 µS/cm	0.06 mg/L	42.20 NTU	18.8 mV	30.60 ft	200.00 ml/min
8/13/2021 4:41 PM	03:05:00	7.04 pH	21.37 °C	2,565.8 µS/cm	0.05 mg/L	40.90 NTU	14.1 mV	30.60 ft	200.00 ml/min
8/13/2021 4:46 PM	03:10:00	7.04 pH	21.32 °C	2,567.7 µS/cm	0.05 mg/L	39.80 NTU	13.8 mV	30.60 ft	200.00 ml/min
8/13/2021 4:51 PM	03:15:00	7.04 pH	21.34 °C	2,574.9 µS/cm	0.05 mg/L	38.40 NTU	14.0 mV	30.60 ft	200.00 ml/min
8/13/2021 4:56 PM	03:20:00	7.04 pH	21.41 °C	2,556.7 µS/cm	0.05 mg/L	38.90 NTU	18.5 mV	30.60 ft	200.00 ml/min
8/13/2021 5:01 PM	03:25:00	7.04 pH	21.45 °C	2,556.7 µS/cm	0.05 mg/L	38.90 NTU	13.8 mV	30.60 ft	200.00 ml/min

8/13/2021 5:06 PM	03:30:00	7.04 pH	21.39 °C	2,549.0 µS/cm	0.05 mg/L	38.50 NTU	13.2 mV	30.60 ft	200.00 ml/min
8/13/2021 5:11 PM	03:35:00	7.04 pH	21.41 °C	2,558.0 µS/cm	0.05 mg/L	34.70 NTU	18.7 mV	30.60 ft	200.00 ml/min
8/13/2021 5:16 PM	03:40:00	7.04 pH	21.25 °C	2,579.1 µS/cm	0.05 mg/L	189.00 NTU	4.2 mV	30.60 ft	200.00 ml/min
8/13/2021 5:21 PM	03:45:00	7.05 pH	21.21 °C	2,517.4 µS/cm	0.06 mg/L		-5.1 mV	30.60 ft	200.00 ml/min

## Samples

Sample ID:	Description:
MW-34D	No sample, return 8/16.

# Low-Flow Test Report:

Test Date / Time: 8/16/2021 9:02:31 AM

Project: GP-Plant Hammond

Operator Name: Thomas Kessler

<b>Location Name: MW-34D</b> <b>Well Diameter: 2 in</b> <b>Casing Type: PVC</b> <b>Screen Length: 10 ft</b> <b>Top of Screen: 63.68 ft</b> <b>Total Depth 73.68 ft</b> <b>Initial Depth to Water: 30.5 ft</b>	<b>Pump Type: Bladder</b> <b>Tubing Type: Polyethylene</b> <b>Pump Intake From TOC: 68.68 ft</b> <b>Estimated Total Volume Pumped: 72 Liter</b> <b>Flow Cell Volume: 90 ml</b> <b>Final Flow Rate: 200 ml/min</b> <b>Final Draw Down: 0.11 ft</b>	<b>Instrument Used: Aqua TROLL 400</b> <b>Serial Number: 728634</b>
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## Test Notes:

Five bottles: Metals, TDS, Inorganics, Radium

## Weather Conditions:

Cloudy, 76 Degrees.

## Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
8/16/2021 9:02 AM	00:00	7.05 pH	21.36 °C	2,811.6 µS/cm	1.52 mg/L	23.20 NTU	50.1 mV	30.50 ft	200.00 ml/min
8/16/2021 9:07 AM	05:00	7.05 pH	21.00 °C	2,810.7 µS/cm	0.55 mg/L	51.00 NTU	22.0 mV	30.61 ft	200.00 ml/min
8/16/2021 9:12 AM	10:00	7.05 pH	20.89 °C	2,809.7 µS/cm	0.33 mg/L	62.50 NTU	11.1 mV	30.61 ft	200.00 ml/min
8/16/2021 9:17 AM	15:00	7.05 pH	20.88 °C	2,816.9 µS/cm	0.19 mg/L	74.40 NTU	7.2 mV	30.61 ft	200.00 ml/min
8/16/2021 9:22 AM	20:00	7.05 pH	20.87 °C	2,817.7 µS/cm	0.14 mg/L	80.40 NTU	5.1 mV	30.61 ft	200.00 ml/min
8/16/2021 9:27 AM	25:00	7.05 pH	20.88 °C	2,933.6 µS/cm	0.16 mg/L	76.10 NTU	4.4 mV	30.61 ft	200.00 ml/min
8/16/2021 9:32 AM	30:00	7.05 pH	20.92 °C	2,819.7 µS/cm	0.16 mg/L	74.00 NTU	4.1 mV	30.61 ft	200.00 ml/min
8/16/2021 9:37 AM	35:00	7.05 pH	20.94 °C	2,816.8 µS/cm	0.14 mg/L	65.70 NTU	3.9 mV	30.61 ft	200.00 ml/min
8/16/2021 9:42 AM	40:00	7.05 pH	20.94 °C	2,817.5 µS/cm	0.12 mg/L	59.20 NTU	2.7 mV	30.61 ft	200.00 ml/min
8/16/2021 9:47 AM	45:00	7.05 pH	20.97 °C	2,668.8 µS/cm	0.11 mg/L	54.30 NTU	1.7 mV	30.61 ft	200.00 ml/min
8/16/2021 9:52 AM	50:00	7.05 pH	20.98 °C	2,812.7 µS/cm	0.11 mg/L	51.80 NTU	2.1 mV	30.61 ft	200.00 ml/min
8/16/2021 9:57 AM	55:00	7.06 pH	21.00 °C	2,807.8 µS/cm	0.11 mg/L	47.60 NTU	10.8 mV	30.61 ft	200.00 ml/min
8/16/2021 10:02 AM	01:00:00	7.06 pH	21.03 °C	2,802.0 µS/cm	0.11 mg/L	46.50 NTU	2.7 mV	30.61 ft	200.00 ml/min

8/16/2021 10:07 AM	01:05:00	7.05 pH	21.06 °C	2,810.3 µS/cm	0.10 mg/L	42.40 NTU	10.8 mV	30.61 ft	200.00 ml/min
8/16/2021 10:12 AM	01:10:00	7.05 pH	21.23 °C	2,790.2 µS/cm	0.10 mg/L	38.50 NTU	2.7 mV	30.61 ft	200.00 ml/min
8/16/2021 10:17 AM	01:15:00	7.05 pH	21.28 °C	2,862.6 µS/cm	0.10 mg/L	34.00 NTU	2.8 mV	30.61 ft	200.00 ml/min
8/16/2021 10:22 AM	01:20:00	7.05 pH	21.26 °C	2,784.7 µS/cm	0.09 mg/L	33.40 NTU	2.8 mV	30.61 ft	200.00 ml/min
8/16/2021 10:27 AM	01:25:00	7.05 pH	21.19 °C	2,787.7 µS/cm	0.09 mg/L	31.30 NTU	11.7 mV	30.61 ft	200.00 ml/min
8/16/2021 10:32 AM	01:30:00	7.05 pH	21.25 °C	2,776.1 µS/cm	0.11 mg/L	30.61 NTU	3.8 mV	30.61 ft	200.00 ml/min
8/16/2021 10:37 AM	01:35:00	7.05 pH	21.27 °C	2,770.8 µS/cm	0.09 mg/L	28.80 NTU	3.6 mV	30.61 ft	200.00 ml/min
8/16/2021 10:42 AM	01:40:00	7.05 pH	21.26 °C	2,822.0 µS/cm	0.09 mg/L	27.20 NTU	3.6 mV	30.61 ft	200.00 ml/min
8/16/2021 10:47 AM	01:45:00	7.05 pH	21.31 °C	2,770.6 µS/cm	0.08 mg/L	27.40 NTU	12.2 mV	30.61 ft	200.00 ml/min
8/16/2021 10:52 AM	01:50:00	7.05 pH	21.27 °C	2,766.5 µS/cm	0.09 mg/L	26.70 NTU	3.9 mV	30.61 ft	200.00 ml/min
8/16/2021 10:57 AM	01:55:00	7.05 pH	21.38 °C	2,754.6 µS/cm	0.09 mg/L	25.10 NTU	4.0 mV	30.61 ft	200.00 ml/min
8/16/2021 11:02 AM	02:00:00	7.05 pH	21.28 °C	2,756.4 µS/cm	0.09 mg/L	23.50 NTU	12.1 mV	30.61 ft	200.00 ml/min
8/16/2021 11:07 AM	02:05:00	7.05 pH	21.39 °C	2,745.6 µS/cm	0.09 mg/L	23.30 NTU	4.4 mV	30.61 ft	200.00 ml/min
8/16/2021 11:12 AM	02:10:00	7.04 pH	21.81 °C	2,737.1 µS/cm	0.08 mg/L	22.80 NTU	11.9 mV	30.61 ft	200.00 ml/min
8/16/2021 11:17 AM	02:15:00	7.05 pH	21.47 °C	2,739.4 µS/cm	0.10 mg/L	21.80 NTU	5.0 mV	30.61 ft	200.00 ml/min
8/16/2021 11:22 AM	02:20:00	7.05 pH	21.40 °C	2,738.1 µS/cm	0.08 mg/L	22.70 NTU	4.5 mV	30.61 ft	200.00 ml/min
8/16/2021 11:27 AM	02:25:00	7.05 pH	21.37 °C	2,736.2 µS/cm	0.09 mg/L	21.60 NTU	4.5 mV	30.61 ft	200.00 ml/min
8/16/2021 11:32 AM	02:30:00	7.05 pH	21.72 °C	2,722.8 µS/cm	0.08 mg/L	21.00 NTU	12.5 mV	30.61 ft	200.00 ml/min
8/16/2021 11:37 AM	02:35:00	7.05 pH	21.41 °C	2,732.5 µS/cm	0.07 mg/L	19.40 NTU	5.9 mV	30.61 ft	200.00 ml/min
8/16/2021 11:42 AM	02:40:00	7.05 pH	21.58 °C	2,725.8 µS/cm	0.09 mg/L	19.20 NTU	5.0 mV	30.61 ft	200.00 ml/min
8/16/2021 11:47 AM	02:45:00	7.05 pH	21.68 °C	2,708.0 µS/cm	0.09 mg/L	21.20 NTU	4.6 mV	30.61 ft	200.00 ml/min
8/16/2021 11:52 AM	02:50:00	7.05 pH	21.75 °C	2,711.5 µS/cm	0.09 mg/L	19.00 NTU	5.3 mV	30.61 ft	200.00 ml/min
8/16/2021 11:57 AM	02:55:00	7.04 pH	21.85 °C	2,675.3 µS/cm	0.09 mg/L	18.90 NTU	5.6 mV	30.61 ft	200.00 ml/min
8/16/2021 12:02 PM	03:00:00	7.04 pH	22.08 °C	2,699.2 µS/cm	0.08 mg/L	17.90 NTU	5.9 mV	30.61 ft	200.00 ml/min
8/16/2021 12:07 PM	03:05:00	7.04 pH	21.98 °C	2,674.1 µS/cm	0.08 mg/L	17.00 NTU	13.4 mV	30.61 ft	200.00 ml/min
8/16/2021 12:12 PM	03:10:00	7.04 pH	22.12 °C	2,692.4 µS/cm	0.12 mg/L	18.00 NTU	6.8 mV	30.61 ft	200.00 ml/min
8/16/2021 12:17 PM	03:15:00	7.04 pH	22.06 °C	2,690.1 µS/cm	0.08 mg/L	16.70 NTU	7.2 mV	30.61 ft	200.00 ml/min
8/16/2021 12:22 PM	03:20:00	7.05 pH	21.94 °C	2,735.3 µS/cm	0.07 mg/L	15.70 NTU	14.9 mV	30.61 ft	200.00 ml/min
8/16/2021 12:27 PM	03:25:00	7.05 pH	21.85 °C	2,697.9 µS/cm	0.08 mg/L	16.00 NTU	7.9 mV	30.61 ft	200.00 ml/min



8/16/2021 12:32 PM	03:30:00	7.04 pH	22.05 °C	2,700.7 µS/cm	0.08 mg/L	15.80 NTU	7.5 mV	30.61 ft	200.00 ml/min
8/16/2021 12:37 PM	03:35:00	7.04 pH	22.05 °C	2,697.2 µS/cm	0.09 mg/L	14.10 NTU	7.3 mV	30.61 ft	200.00 ml/min
8/16/2021 12:42 PM	03:40:00	7.04 pH	21.83 °C	2,714.0 µS/cm	0.08 mg/L	13.70 NTU	7.5 mV	30.61 ft	200.00 ml/min
8/16/2021 12:47 PM	03:45:00	7.04 pH	21.75 °C	2,703.9 µS/cm	0.10 mg/L	14.20 NTU	7.8 mV	30.61 ft	200.00 ml/min
8/16/2021 12:52 PM	03:50:00	7.05 pH	21.75 °C	2,697.3 µS/cm	0.09 mg/L	13.50 NTU	8.1 mV	30.61 ft	200.00 ml/min
8/16/2021 12:57 PM	03:55:00	7.05 pH	21.67 °C	2,718.4 µS/cm	0.11 mg/L	13.10 NTU	8.1 mV	30.61 ft	200.00 ml/min
8/16/2021 1:02 PM	04:00:00	7.05 pH	21.50 °C	2,706.6 µS/cm	0.09 mg/L	13.40 NTU	8.3 mV	30.61 ft	200.00 ml/min
8/16/2021 1:07 PM	04:05:00	7.05 pH	21.50 °C	2,702.1 µS/cm	0.09 mg/L	13.00 NTU	8.4 mV	30.61 ft	200.00 ml/min
8/16/2021 1:12 PM	04:10:00	7.05 pH	21.57 °C	2,695.9 µS/cm	0.09 mg/L	12.40 NTU	8.2 mV	30.61 ft	200.00 ml/min
8/16/2021 1:17 PM	04:15:00	7.05 pH	21.56 °C	2,699.2 µS/cm	0.07 mg/L	11.80 NTU	8.3 mV	30.61 ft	200.00 ml/min
8/16/2021 1:22 PM	04:20:00	7.05 pH	21.63 °C	2,701.0 µS/cm	0.08 mg/L	11.50 NTU	8.4 mV	30.61 ft	200.00 ml/min
8/16/2021 1:27 PM	04:25:00	7.05 pH	21.66 °C	2,704.2 µS/cm	0.08 mg/L	11.80 NTU	8.4 mV	30.61 ft	200.00 ml/min
8/16/2021 1:32 PM	04:30:00	7.05 pH	21.69 °C	2,707.4 µS/cm	0.08 mg/L	11.30 NTU	8.5 mV	30.61 ft	200.00 ml/min
8/16/2021 1:37 PM	04:35:00	7.06 pH	21.63 °C	2,703.5 µS/cm	0.08 mg/L	11.30 NTU	15.1 mV	30.61 ft	200.00 ml/min
8/16/2021 1:42 PM	04:40:00	7.05 pH	21.65 °C	2,696.2 µS/cm	0.08 mg/L	11.00 NTU	9.4 mV	30.61 ft	200.00 ml/min
8/16/2021 1:47 PM	04:45:00	7.06 pH	21.66 °C	2,717.0 µS/cm	0.08 mg/L	13.49 NTU	16.0 mV	30.61 ft	200.00 ml/min
8/16/2021 1:52 PM	04:50:00	7.05 pH	21.83 °C	2,705.1 µS/cm	0.08 mg/L	12.34 NTU	9.1 mV	30.61 ft	200.00 ml/min
8/16/2021 1:57 PM	04:55:00	7.05 pH	22.03 °C	2,703.1 µS/cm	0.07 mg/L	12.06 NTU	15.7 mV	30.61 ft	200.00 ml/min
8/16/2021 2:02 PM	05:00:00	7.05 pH	22.16 °C	2,711.5 µS/cm	0.07 mg/L	11.80 NTU	16.3 mV	30.61 ft	200.00 ml/min
8/16/2021 2:07 PM	05:05:00	7.05 pH	22.07 °C	2,700.3 µS/cm	0.07 mg/L	11.07 NTU	16.0 mV	30.61 ft	200.00 ml/min
8/16/2021 2:12 PM	05:10:00	7.05 pH	22.26 °C	2,693.4 µS/cm	0.07 mg/L	10.69 NTU	9.9 mV	30.61 ft	200.00 ml/min
8/16/2021 2:17 PM	05:15:00	7.05 pH	22.35 °C	2,684.0 µS/cm	0.08 mg/L	11.51 NTU	9.4 mV	30.61 ft	200.00 ml/min
8/16/2021 2:22 PM	05:20:00	7.05 pH	22.14 °C	2,681.2 µS/cm	0.08 mg/L	11.48 NTU	9.3 mV	30.61 ft	200.00 ml/min
8/16/2021 2:27 PM	05:25:00	7.05 pH	22.16 °C	2,695.9 µS/cm	0.09 mg/L	12.10 NTU	16.0 mV	30.61 ft	200.00 ml/min
8/16/2021 2:32 PM	05:30:00	7.05 pH	21.92 °C	2,694.5 µS/cm	0.07 mg/L	11.92 NTU	16.6 mV	30.61 ft	200.00 ml/min
8/16/2021 2:37 PM	05:35:00	7.05 pH	21.78 °C	2,700.5 µS/cm	0.08 mg/L	10.25 NTU	11.1 mV	30.61 ft	200.00 ml/min
8/16/2021 2:42 PM	05:40:00	7.05 pH	21.72 °C	2,702.7 µS/cm	0.08 mg/L	10.29 NTU	10.3 mV	30.61 ft	200.00 ml/min
8/16/2021 2:47 PM	05:45:00	7.06 pH	21.74 °C	2,612.9 µS/cm	0.08 mg/L	10.25 NTU	10.4 mV	30.61 ft	200.00 ml/min
8/16/2021 2:52 PM	05:50:00	7.06 pH	21.76 °C	2,744.3 µS/cm	0.08 mg/L	10.51 NTU	17.5 mV	30.61 ft	200.00 ml/min

8/16/2021 2:57 PM	05:55:00	7.05 pH	21.76 °C	2,707.7 µS/cm	0.09 mg/L	9.80 NTU	16.7 mV	30.61 ft	200.00 ml/min
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## Samples

Sample ID:	Description:
MW-34D	Grab sample.

# Low-Flow Test Report:

Test Date / Time: 8/18/2021 8:43:45 AM

Project: GP-Plant Hammond

Operator Name: Thomas Kessler

<b>Location Name: MW-35</b> <b>Well Diameter: 2 in</b> <b>Casing Type: PVC</b> <b>Screen Length: 10 ft</b> <b>Top of Screen: 13.52 ft</b> <b>Total Depth: 23.52 ft</b> <b>Initial Depth to Water: 7.62 ft</b>	<b>Pump Type: Bladder</b> <b>Tubing Type: Polyethylene</b> <b>Pump Intake From TOC: 18.52 ft</b> <b>Estimated Total Volume Pumped: 9.5 Liter</b> <b>Flow Cell Volume: 90 ml</b> <b>Final Flow Rate: 100 ml/min</b> <b>Final Draw Down: 0.81 ft</b>	<b>Instrument Used: Aqua TROLL 400</b> <b>Serial Number: 728634</b>
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## Test Notes:

Five bottles: Metals, TDS, Inorganics, Radium.

## Weather Conditions:

Sunny, 80 Degrees.

## Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
8/18/2021 8:43 AM	00:00	5.04 pH	20.85 °C	2,692.3 µS/cm	5.10 mg/L	7.47 NTU	185.3 mV	7.98 ft	200.00 ml/min
8/18/2021 8:48 AM	05:00	4.87 pH	20.58 °C	2,652.3 µS/cm	1.21 mg/L	11.50 NTU	233.1 mV	8.06 ft	200.00 ml/min
8/18/2021 8:53 AM	10:00	4.87 pH	20.29 °C	2,658.0 µS/cm	1.33 mg/L	13.20 NTU	224.5 mV	8.28 ft	200.00 ml/min
8/18/2021 8:58 AM	15:00	4.88 pH	20.25 °C	2,676.3 µS/cm	1.35 mg/L	12.20 NTU	167.5 mV	8.31 ft	200.00 ml/min
8/18/2021 9:03 AM	20:00	4.87 pH	20.20 °C	2,651.7 µS/cm	0.86 mg/L	11.60 NTU	210.7 mV	8.35 ft	200.00 ml/min
8/18/2021 9:08 AM	25:00	4.87 pH	20.25 °C	2,654.6 µS/cm	0.62 mg/L	11.10 NTU	152.6 mV	8.39 ft	200.00 ml/min
8/18/2021 9:13 AM	30:00	4.87 pH	20.29 °C	2,652.3 µS/cm	0.54 mg/L	15.02 NTU	191.9 mV	8.43 ft	200.00 ml/min
8/18/2021 9:18 AM	35:00	4.87 pH	20.31 °C	2,671.6 µS/cm	0.45 mg/L	11.46 NTU	139.6 mV	8.43 ft	200.00 ml/min
8/18/2021 9:23 AM	40:00	4.88 pH	20.24 °C	2,655.3 µS/cm	0.38 mg/L	10.79 NTU	129.3 mV	8.43 ft	200.00 ml/min
8/18/2021 9:28 AM	45:00	4.88 pH	20.25 °C	2,661.0 µS/cm	0.34 mg/L	9.69 NTU	124.0 mV	8.43 ft	200.00 ml/min
8/18/2021 9:33 AM	50:00	4.88 pH	20.23 °C	2,651.9 µS/cm	0.32 mg/L	7.97 NTU	161.2 mV	8.43 ft	200.00 ml/min
8/18/2021 9:38 AM	55:00	4.88 pH	20.25 °C	2,668.9 µS/cm	0.29 mg/L	7.06 NTU	122.0 mV	8.43 ft	200.00 ml/min
8/18/2021 9:43 AM	01:00:00	4.89 pH	20.25 °C	2,671.9 µS/cm	0.28 mg/L	6.81 NTU	117.5 mV	8.43 ft	200.00 ml/min

8/18/2021 9:48 AM	01:05:00	4.89 pH	20.43 °C	2,660.4 µS/cm	0.26 mg/L	7.44 NTU	115.6 mV	8.43 ft	200.00 ml/min
8/18/2021 9:53 AM	01:10:00	4.88 pH	20.84 °C	2,647.6 µS/cm	0.26 mg/L	6.20 NTU	114.2 mV	8.43 ft	200.00 ml/min
8/18/2021 9:58 AM	01:15:00	4.89 pH	20.65 °C	2,651.7 µS/cm	0.25 mg/L	5.73 NTU	113.2 mV	8.43 ft	200.00 ml/min
8/18/2021 10:03 AM	01:20:00	4.89 pH	20.60 °C	2,659.8 µS/cm	0.25 mg/L	5.24 NTU	111.6 mV	8.43 ft	200.00 ml/min
8/18/2021 10:08 AM	01:25:00	4.89 pH	20.56 °C	2,662.2 µS/cm	0.24 mg/L	5.42 NTU	110.3 mV	8.43 ft	200.00 ml/min
8/18/2021 10:13 AM	01:30:00	4.89 pH	20.52 °C	2,657.2 µS/cm	0.24 mg/L	4.93 NTU	144.0 mV	8.43 ft	200.00 ml/min

## Samples

Sample ID:	Description:
MW-35	Grab sample.

# Low-Flow Test Report:

Test Date / Time: 8/18/2021 4:20:30 PM

Project: GP-Plant Hammond

Operator Name: Ashley Ramsey

<b>Location Name: MW-37D</b> <b>Well Diameter: 2 in</b> <b>Casing Type: PVC</b> <b>Screen Length: 10 ft</b> <b>Top of Screen: 66.63 ft</b> <b>Total Depth: 76.63 ft</b> <b>Initial Depth to Water: 16.05 ft</b>	<b>Pump Type: Bladder</b> <b>Tubing Type: Polyethylene</b> <b>Pump Intake From TOC: 71.63 ft</b> <b>Estimated Total Volume Pumped: 32 Liter</b> <b>Flow Cell Volume: 90 ml</b> <b>Final Flow Rate: 100 ml/min</b> <b>Final Draw Down: 34.56 ft</b>	<b>Instrument Used: Aqua TROLL 400</b> <b>Serial Number: 728623</b>
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## Test Notes:

Five bottles: Metals, TDS, Inorganics, radium.

## Weather Conditions:

Sunny, 91 Degrees.

## Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
8/18/2021 4:20 PM	00:00	7.34 pH	29.41 °C	1,149.7 µS/cm	1.96 mg/L	1.27 NTU	36.0 mV	16.05 ft	300.00 ml/min
8/18/2021 4:25 PM	05:00	7.44 pH	20.75 °C	1,249.2 µS/cm	1.85 mg/L	4.44 NTU	-87.7 mV	18.72 ft	300.00 ml/min
8/18/2021 4:30 PM	10:00	7.45 pH	20.48 °C	1,258.1 µS/cm	1.42 mg/L	1.52 NTU	-90.0 mV	21.15 ft	300.00 ml/min
8/18/2021 4:35 PM	15:00	7.45 pH	20.59 °C	1,254.1 µS/cm	1.25 mg/L	0.74 NTU	-73.3 mV	23.41 ft	300.00 ml/min
8/18/2021 4:40 PM	20:00	7.45 pH	20.49 °C	1,252.8 µS/cm	1.14 mg/L	0.34 NTU	-90.3 mV	25.60 ft	300.00 ml/min
8/18/2021 4:45 PM	25:00	7.45 pH	20.57 °C	1,256.3 µS/cm	1.40 mg/L	0.58 NTU	-71.5 mV	27.60 ft	300.00 ml/min
8/18/2021 4:50 PM	30:00	7.45 pH	20.44 °C	1,259.7 µS/cm	1.36 mg/L	0.34 NTU	-69.9 mV	30.00 ft	300.00 ml/min
8/18/2021 4:55 PM	35:00	7.45 pH	20.30 °C	1,255.2 µS/cm	1.56 mg/L	1.78 NTU	-70.9 mV	32.00 ft	300.00 ml/min
8/18/2021 5:00 PM	40:00	7.45 pH	20.18 °C	1,224.0 µS/cm	1.34 mg/L	0.24 NTU	-70.4 mV	33.73 ft	300.00 ml/min
8/18/2021 5:05 PM	45:00	7.45 pH	20.22 °C	1,256.2 µS/cm	1.37 mg/L	1.07 NTU	-71.3 mV	35.55 ft	300.00 ml/min
8/18/2021 5:10 PM	50:00	7.45 pH	19.99 °C	1,257.5 µS/cm	1.18 mg/L	1.00 NTU	-71.5 mV	37.84 ft	300.00 ml/min
8/18/2021 5:15 PM	55:00	7.44 pH	19.86 °C	1,264.4 µS/cm	1.04 mg/L	0.96 NTU	-71.2 mV	39.71 ft	300.00 ml/min
8/18/2021 5:20 PM	01:00:00	7.45 pH	19.77 °C	1,274.8 µS/cm	0.87 mg/L	0.96 NTU	-72.1 mV	41.13 ft	300.00 ml/min

8/18/2021 5:25 PM	01:05:00	7.45 pH	19.68 °C	1,271.0 µS/cm	1.23 mg/L	0.99 NTU	-72.0 mV	43.19 ft	300.00 ml/min
8/18/2021 5:30 PM	01:10:00	7.45 pH	19.59 °C	1,281.7 µS/cm	1.08 mg/L	1.12 NTU	-71.7 mV	44.88 ft	300.00 ml/min
8/18/2021 5:35 PM	01:15:00	7.46 pH	19.76 °C	1,288.2 µS/cm	1.14 mg/L	1.29 NTU	-74.6 mV	46.41 ft	300.00 ml/min
8/18/2021 5:40 PM	01:20:00	7.45 pH	19.82 °C	1,296.2 µS/cm	1.17 mg/L	1.23 NTU	-76.1 mV	47.99 ft	300.00 ml/min
8/18/2021 5:45 PM	01:25:00	7.46 pH	19.71 °C	1,301.3 µS/cm	1.21 mg/L	1.31 NTU	-75.5 mV	49.60 ft	300.00 ml/min
8/18/2021 5:50 PM	01:30:00	7.46 pH	19.52 °C	1,305.8 µS/cm	1.11 mg/L	0.25 NTU	-74.8 mV	51.20 ft	300.00 ml/min
8/18/2021 5:55 PM	01:35:00	7.44 pH	22.86 °C	1,338.3 µS/cm	1.65 mg/L	0.44 NTU	-81.6 mV	50.70 ft	100.00 ml/min
8/18/2021 6:00 PM	01:40:00	7.44 pH	24.16 °C	1,309.3 µS/cm	1.57 mg/L	0.30 NTU	-99.1 mV	50.20 ft	100.00 ml/min
8/18/2021 6:05 PM	01:45:00	7.48 pH	21.27 °C	1,177.9 µS/cm	1.65 mg/L	0.30 NTU	-91.3 mV	50.54 ft	150.00 ml/min
8/18/2021 6:10 PM	01:50:00	7.50 pH	21.11 °C	1,330.2 µS/cm	1.82 mg/L	0.35 NTU	-94.5 mV	50.73 ft	150.00 ml/min
8/18/2021 6:15 PM	01:55:00	7.51 pH	22.01 °C	1,374.3 µS/cm	1.30 mg/L	0.46 NTU	-102.7 mV	50.79 ft	100.00 ml/min
8/18/2021 6:20 PM	02:00:00	7.51 pH	22.18 °C	1,359.2 µS/cm	1.42 mg/L	0.52 NTU	-102.8 mV	50.70 ft	100.00 ml/min
8/18/2021 6:25 PM	02:05:00	7.52 pH	21.91 °C	1,346.3 µS/cm	1.33 mg/L	0.56 NTU	-104.1 mV	50.61 ft	100.00 ml/min

## Samples

Sample ID:	Description:
MW-37D	Grab sample.

# Low-Flow Test Report:

Test Date / Time: 8/18/2021 11:18:57 AM

Project: GP-Plant Hammond

Operator Name: Thomas Kessler

<b>Location Name: MW-51</b> <b>Well Diameter: 2 in</b> <b>Casing Type: PVC</b> <b>Screen Length: 10 ft</b> <b>Top of Screen: 18.31 ft</b> <b>Total Depth: 28.90</b> <b>Initial Depth to Water: 7.73 ft</b>	<b>Pump Type: Peristaltic</b> <b>Tubing Type: Polyethylene</b> <b>Pump Intake From TOC: 23.51 ft</b> <b>Estimated Total Volume Pumped: 7 liter</b> <b>Flow Cell Volume: 90 ml</b> <b>Final Flow Rate: 200 ml/min</b> <b>Final Draw Down: 0.57 ft</b>	<b>Instrument Used: Aqua TROLL 400</b> <b>Serial Number: 728634</b>
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## Test Notes:

Five bottles: Metals, TDS, Inorganics, Radium.

## Weather Conditions:

Sunny, 80 Degrees.

## Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
8/18/2021 11:18 AM	00:00	6.22 pH	20.80 °C	2,624.8 µS/cm	0.42 mg/L	3.15 NTU	252.5 mV	8.27 ft	200.00 ml/min
8/18/2021 11:23 AM	05:00	6.24 pH	20.38 °C	2,626.2 µS/cm	0.31 mg/L	1.82 NTU	258.8 mV	8.30 ft	200.00 ml/min
8/18/2021 11:28 AM	10:00	6.20 pH	20.34 °C	2,618.3 µS/cm	0.26 mg/L	1.90 NTU	226.2 mV	8.30 ft	200.00 ml/min
8/18/2021 11:33 AM	15:00	6.21 pH	20.32 °C	2,612.8 µS/cm	0.24 mg/L	2.90 NTU	228.3 mV	8.30 ft	200.00 ml/min
8/18/2021 11:38 AM	20:00	6.21 pH	20.16 °C	2,615.9 µS/cm	0.22 mg/L	2.82 NTU	237.4 mV	8.30 ft	200.00 ml/min
8/18/2021 11:43 AM	25:00	6.20 pH	20.21 °C	2,607.8 µS/cm	0.21 mg/L	2.08 NTU	200.7 mV	8.30 ft	200.00 ml/min
8/18/2021 11:48 AM	30:00	6.19 pH	20.21 °C	2,620.3 µS/cm	0.21 mg/L	2.75 NTU	187.9 mV	8.30 ft	200.00 ml/min

## Samples

Sample ID:	Description:
MW-51	Grab sample.

# CALIBRATION REPORTS



December 2020

EQUIPMENT CALIBRATION LOG

Field Technician: Shawn Lin Date: 12/15/2020 Time (start): 8:30 Time (finish): 8:55  
 smarTroll SN: 728648 Turbidity Meter Type: LaMotte 2020/ve SN: 1R59-0412  
 Weather Conditions: Sunny, 32°F Facility and Unit: Hammond Project No.: GW6581

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	#20010025 08/2021	8.35	4490	4774.8	4469.6	+/- 5 %	<input checked="" type="checkbox"/> Yes No	
pH (4)			4.000	4.00	4.00	+/- 0.1 SU	<input checked="" type="checkbox"/> Yes No	
pH (7)	#1934037 08/2021	8.48	7.00	<del>7.00</del> 7.11	7.00	+/- 0.1 SU	<input checked="" type="checkbox"/> Yes No	
pH (10)	#19320102 08/2021	8.35	10.00	10.26	10.10	+/- 0.1 SU	<input checked="" type="checkbox"/> Yes No	
ORP (mV)	#19460167 08/2021	8.21	228	247.3	227.9	+/- 20mV	<input checked="" type="checkbox"/> Yes No	
DO (%) (1pt. 100% water saturated air cal)			100	99.87	100.54	+/- 6 % saturation	<input checked="" type="checkbox"/> Yes No	
Turbidity 0 NTU			0	0	0	+/- 0.5 NTU	<input checked="" type="checkbox"/> Yes No	
Turbidity 1 NTU			1	0.87	1.00	+/- 0.5 NTU	<input checked="" type="checkbox"/> Yes No	
Turbidity 10 NTU			10	10.27	9.98	+/- 0.5 NTU	<input checked="" type="checkbox"/> Yes No	

EQUIPMENT CALIBRATION LOG

Field Technician: Thomas Messler Date: 12/15/20 Time (start): 826 Time (finish): 0850  
 smarTroll SN: 728634 Turbidity Meter Type: Lumette 2020w SN: 14179-4011  
 Weather Conditions: Sunny, cold Facility and Unit: Plant Hammond Project No.: 6W6581

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20010028	11.26	4490	4784	4490	+/- 5%	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
pH (4)	08121		4.0	4.00	4.00	+/- 0.1 SU	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
pH (7)	19340657	10.67	7.00	7.13	7.00	+/- 0.1 SU	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
pH (10)	19320102	9.62	10.00	10.22	10.00	+/- 0.1 SU	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
ORP (mV)	19460167	8.94	228	246	228	+/- 20mV	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
DO (%) (1pt, 100% water saturated air cal)			100%	101.75%	100%	+/- 6% saturation	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Turbidity 0 NTU			0	0.03	0.03	+/- 0.5 NTU	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Turbidity 1 NTU			1	1.08	1.03	+/- 0.5 NTU	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Turbidity 10 NTU			10	10.16	9.71	+/- 0.5 NTU	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	

January 2021

EQUIPMENT CALIBRATION LOG

Field Technician: Chad Russo Date: 1/20/21 Time (start): 0845 Time (finish): 0910  
 smarTroll SN: 728674 Turbidity Meter Type: LaMotte 2020w SN: 2289-2612  
 Weather Conditions: 40°F Sunny Facility and Unit: Hammond Project No: GW6581

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	28518025 8/21	12.87	4496	4514.5	4496	+/- 5 %	<input checked="" type="radio"/> Yes <input type="radio"/> No	
pH (4)			4	4.05	4	+/- 0.1 SU	<input type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (4) check		19.28	4	4.09	4.09	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
pH (7)	19348057 8/21	12.52	7	7.02	7	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (7) check		15.69	7	7.06	7.06	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
pH (10)	1732102 8/21	12.25	10	10.08	10	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (10) check		13.85	<del>13.85</del> 10	10.07	10.07	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
ORP (mV)	19760167 8/21	12.2	228	243.7	226	+/- 20mV	<input checked="" type="radio"/> Yes <input type="radio"/> No	
DO (%) (1pt, 100% water saturated air cal)			100	99.18	100	+/- 6 % saturation	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 0 NTU			0	0.46	0.46	+/- 0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 1 NTU			1	0.77	0.77	+/- 0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 10 NTU			10	9.83	9.83	+/- 0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	

EQUIPMENT CALIBRATION LOG

Field Technician: Chad Russo Date: 1/19/2021 Time (start): 1030 Time (finish): 1105  
 smarTroll SN: 728134 Turbidity Meter Type: Lanite 2020w SN: 7289-2612  
 Weather Conditions: ~~HOPE~~ 40 F cloudy Facility and Unit: Hammond Project No: 6W6581

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20610025	9.22	4490	4683	4490	+/- 5 %	<input checked="" type="radio"/> Yes No	
pH (4)	8/2021		4	3.97	4	+/- 0.1 SU	<input checked="" type="radio"/> Yes No	
Mid-Day pH (4) check	17340037	9.28	7	7.07	7	+/- 0.1 SU	<input checked="" type="radio"/> Yes No	
pH (7)	8/2021	16.72	4	4.05	4.05	+/- 0.1 SU	<input checked="" type="radio"/> Yes No	
Mid-Day pH (7) check		16.49	7	7.65	7.65	+/- 0.1 SU	<input checked="" type="radio"/> Yes No	
pH (10)	1926102	9.22	10	10.12	10	+/- 0.1 SU	<input checked="" type="radio"/> Yes No	
Mid-Day pH (10) check	8/2021	10.39	16	16.04	16.04	+/- 0.1 SU	Yes No	
ORP (mV)	17460167	8.94	228	247	228	+/- 20mV	<input checked="" type="radio"/> Yes No	
DO (%) (1pt, 100% water saturated air cal)			100	102.04	100	+/- 6 % saturation	<input checked="" type="radio"/> Yes No	
Turbidity 0 NTU			0	0.45	0.45	+/- 0.5 NTU	<input checked="" type="radio"/> Yes No	
Turbidity 1 NTU			1	0.76	0.76	+/- 0.5 NTU	<input checked="" type="radio"/> Yes No	
Turbidity 10 NTU			10	10.13	10.13	+/- 0.5 NTU	<input checked="" type="radio"/> Yes No	



February 2021



**EQUIPMENT CALIBRATION LOG**

Field Technician: Thomas Kessler

Date: 2/8/21

Time (start): 1425

Time (finish): 1500

SmartTroll SN: 728541

Turbidity Meter Type: LaMotte 2020we

SN: 2289-2612

Weather Conditions: sunny, 55°

Facility and Unit: Plant Hammond AP-1/2

Project No: GW6581

**Calibration log**

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20010025	25°	4490	4689.8	4490	+/- 5 %	<input checked="" type="radio"/> Yes <input type="radio"/> No	
pH (4)	08/21	21.32	4.00	4.09	4.00	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (4) check		22.0	4.00	4.03		+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
pH (7)	19340057 08/21	21.10	7.00	7.44	7.60	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (7) check		21.83	7.00	7.02		+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
pH (10)	19320162 08/21	21.83	10.00	10.44	10.60	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (10) check		22.0	10.00	9.96		+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
ORP (mV)	19460167 08/21	21.52	228	221.9	228	+/- 20mV	<input checked="" type="radio"/> Yes <input type="radio"/> No	
DO (%) (1pt, 100% water saturated air cal)			100	103.15	105%	+/- 6 % saturation	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 0 NTU			0	-.27	0	+/- 0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 1 NTU			1.00	0.81	0.93	+/- 0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 10 NTU			10.00	12.3	9.64	+/- 0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	



EQUIPMENT CALIBRATION LOG

Field Technician: Thomas Kessler

Date: 2/19/21

Time (start): 0812

Time (finish): 0900

smarTroll SN: 728541

Turbidity Meter Type: LaMotte 2020we

SN: 2192-6822

Weather Conditions: cloudy, 45°

Facility and Unit: Plant Hammond AP-1/2

Project No.: GW6581

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20010075 08/21	9.05	4490	45539	4490	+/- 5 %	<input checked="" type="radio"/> Yes No	
pH (4)			4.00	4.01	4.00	+/- 0.1 SU	<input checked="" type="radio"/> Yes No	
Mid-Day pH (4) check	<input checked="" type="checkbox"/>	<del>9.05</del>	4.00	<del>4.01</del> 4.06 7.02	<input checked="" type="checkbox"/>	+/- 0.1 SU	<input checked="" type="radio"/> Yes No	good temp = 12.2
pH (7)	19340057 08/21	9.71	7.00	7.02	7.00	+/- 0.1 SU	<input checked="" type="radio"/> Yes No	
Mid-Day pH (7) check	<input checked="" type="checkbox"/>	11.3	7.00	7.01		+/- 0.1 SU	<input checked="" type="radio"/> Yes No	good
pH (10)	19320102 08/21	10.16	10.00	10.19	10.00	+/- 0.1 SU	<input checked="" type="radio"/> Yes No	
Mid-Day pH (10) check	<input checked="" type="checkbox"/>	12.8	10.00	9.96		+/- 0.1 SU	<input checked="" type="radio"/> Yes No	good
ORP (mV)	14760167 08/21	10.24	228	251.2	228	+/- 20mV	<input checked="" type="radio"/> Yes No	
DO (%) (1pt, 100% water saturated air cal)			100	96.7	100	+/- 6% saturation	<input checked="" type="radio"/> Yes No	
Turbidity 0 NTU			0	<del>0.067</del> 0.08	<del>0.08</del>	+/- 0.5 NTU	<input checked="" type="radio"/> Yes No	
Turbidity 1 NTU			1.00	0.63	0.74	+/- 0.5 NTU	<input checked="" type="radio"/> Yes No	
Turbidity 10 NTU			10.00	10.94	11.95	+/- 0.5 NTU	<input checked="" type="radio"/> Yes No	

EQUIPMENT CALIBRATION LOG

Field Technician: Thomas Kessler

Date: 9/10/21

Time (start): 0800

Time (finish): 0900

smarTroll SN: 728541

Turbidity Meter Type: LaMotte 2020we

SN: 2289-2612

Weather Conditions: foggy, 36°

Facility and Unit: Plant Hammond AP-1/2

Project No: GW6581

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	193410057		4490	4500.9	4460	+/- 5 %	<input checked="" type="radio"/> Yes <input type="radio"/> No	
pH (4)	08121	8.47	4.00	4.11	4.00	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (4) check	✓	9.98	4.00	3.96	—	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	good
pH (7)	20010025 08/21	8.62	7.00	7.01	7.00	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (7) check	—	10.3	7.00	7.06	—	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	good
pH (10)	14320102 08/21	8.57	10.00	10.06	10.00	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (10) check	—	10.2	10.00	10.01	—	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	good
ORP (mV)	1446067 08/21	8.61	228	228.5	228	+/- 20mV	<input checked="" type="radio"/> Yes <input type="radio"/> No	
DO (%) (1pt, 100% water saturated air cal)			100	99.17	100	+/- 6% saturation	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 0 NTU			0	0.52	0.00	+/- 0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 1 NTU			1.00	0.45	0.56 1.0	+/- 0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 10 NTU			10.00	11.69	10.16	+/- 0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	

EQUIPMENT CALIBRATION LOG

Field Technician: Thomas Kessler

Date: 2/11/21

Time (start): 0815

Time (finish): 0840

SmartTroll SN: 72541

Turbidity Meter Type: LaMotte 2020we

SN: 2289-2612

Weather Conditions: cloudy 50°

Facility and Unit: Plant Hammond AP-1/2

Project No: GW6581

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20010025	14.90	4490	4516.0	4490	+/- 5 %	<input checked="" type="radio"/> Yes <input type="radio"/> No	
pH (4)	08/21		4.00	4.06	4.00	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (4) check	↓	16.09	4.00	4.09	---	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	good
pH (7)	19340057 06/21	14.90 <del>7.86</del>	7.00	7.04	4.00	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (7) check	↓	16.01	7.00	7.07	---	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	good
pH (10)	19320102 08/21	15.12	10.00	10.05	10.00	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (10) check	↓	16.21	10.00	9.99	---	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	good
ORP (mV)	19460167 09/21	15.22	228	215.9	228	+/- 20mV	<input checked="" type="radio"/> Yes <input type="radio"/> No	
DO (%) (1pt, 100% water saturated air cal)			100	96.9967	100	+/- 6 % saturation	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 0 NTU			0	0.66	0.01	+/- 0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 1 NTU			1.00	0.34	1.00	+/- 0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 10 NTU			10.00	11.48	9.89	+/- 0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	

**EQUIPMENT CALIBRATION LOG**

Field Technician: Thomas Messler

Date: 2/12/20

Time (start): 0815

Time (finish): 0830

smarTroll SN: 7 28541

Turbidity Meter Type: LaMote 2020we

SN: 229-2612

Weather Conditions: Cloudy, 50°

Facility and Unit: Plant Hammond AP-1/2

Project No: GW6581

**Calibration log**

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20010025		4490	4452.0	4490	+/- 5 %	<input checked="" type="radio"/> Yes <input type="radio"/> No	
pH (4)	08/21	13.34	4.00	<del>3.92</del>	4.00	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (4) check	↓	<del>14.00</del> 13.36	4.00	<del>3.92</del> 3.96	<del>4.00</del>	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	speed
pH (7)	19340057 08/12	13.13	7.00	<del>7.01</del>	7.00	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (7) check	↓	14.12	7.00	7.06	—	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	speed
pH (10)	14320102 08/21	13.05	10.00	10.00	10.00	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (10) check	↓	14.6	10.00	10.07	—	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	speed
ORP (mV)	14400167 08/21	12.90	228	232.4	228	+/- 20mV	<input checked="" type="radio"/> Yes <input type="radio"/> No	
DO (%) (1pt, 100% water saturated air cal)			100	98.96	100	+/- 6 % saturation	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 0 NTU			0	0.86	0	+/- 0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 1 NTU			1.00	.39	1	+/- 0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 10 NTU			10.00	10.95	9.93	+/- 0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	

**EQUIPMENT CALIBRATION LOG**

Field Technician: Thomas Kessler

Date: 2/11/21  
15

Time (start): 0835

Time (finish): 0910

smarTroll SN: 728541

Turbidity Meter Type: LaMotte 2020we

SN: 2289-2612

Weather Conditions: Sunny, 38°

Facility and Unit: Plant Hammond AP-1/2

Project No: GW6581

**Calibration log**

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20070025 08/21	5.18	4490	<del>4548.7</del> 4548.7	4440	+/- 5 %	<input checked="" type="radio"/> Yes <input type="radio"/> No	
pH (4)			4.00	4.02	4.00	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (4) check	↓	6.99	4.00	3.91	-	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	good
pH (7)	14340057 08/21	5.51	7.00	7.10	7.00	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (7) check	↓	7.10	7.00	6.97	-	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	good
pH (10)	1432002 08/21	6.03	10.00	10.16	10.00	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (10) check	↓	7.06	10.00	10.02	-	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	good
ORP (mV)	19460167 08/21	6.34	228	239.0	228	+/- 20mV	<input checked="" type="radio"/> Yes <input type="radio"/> No	
DO (%) (1pt, 100% water saturated air cal)			100	109.93	100	+/- 6 % saturation	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 0 NTU			0	0.01	0.00	+/- 0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 1 NTU			1.00	0.24	1.00	+/- 0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 10 NTU			10.00	11.61	10.00	+/- 0.5 NTU	<input type="radio"/> Yes <input type="radio"/> No	

EQUIPMENT CALIBRATION LOG

Field Technician: Thomas Kessler

Date: 2/16/21

Time (start): 0904

Time (finish): 0956

smarTroll SN: 728541

Turbidity Meter Type: LaMote 2020we

SN: 2289-2612

Weather Conditions: Snowing, 20°

Facility and Unit: Plant Hammond AP-1/2

Project No: GW6581

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	26010025	5.44	4490	4177.9	4490	+/- 5 %	<input checked="" type="radio"/> Yes <input type="radio"/> No	
pH (4)	08/21		4.00	4.05	4.00	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (4) check	✓	20.99	4.00	4.00	—	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	good ✓
pH (7)	14340051 08/21	3.55	7.00	7.08	7.00	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (7) check	✓	20.89	7.00	7.09	—	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	good ✓
pH (10)	14320102 12/80	3.40	10.00	10.12	10.0	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (10) check	✓	20.70	10.00	10.01	—	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	good ✓
ORP (mV)	14460167 08/21	3.50	228	232.1	228	+/- 20mV	<input checked="" type="radio"/> Yes <input type="radio"/> No	
DO (%) (1pt, 100% water saturated air cal)			100	100.30	100	+/- 6 % saturation	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 0 NTU			0	0.00	0.00	+/- 0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 1 NTU			1.00	1.85	1.00	+/- 0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 10 NTU			10.00	8.28	9.63	+/- 0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	

**EQUIPMENT CALIBRATION LOG**

Field Technician: Chad Ross Date: 2/8/21 Time (start): 1420 Time (finish): 1450  
 smarTroll SN: 728439 Turbidity Meter Type: LaMotte 2020we SN: 2283-2612  
 Weather Conditions: 50°F sunny Facility and Unit: Plant Hammond AP-1/2 Project No.: GW6581

**Calibration log**

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20010025	19.71	4490	4693.2	4490	+/- 5 %	<input checked="" type="checkbox"/> Yes No	
pH (4)	8/21		4.00	3.93	4	+/- 0.1 SU	<input checked="" type="checkbox"/> Yes No	
Mid-Day pH (4) check	19340057 8/20/21	17.31	4.00	<del>7.38</del>		+/- 0.1 SU	Yes No	
pH (7)			7.00	7.38	7	+/- 0.1 SU	<input checked="" type="checkbox"/> Yes No	
Mid-Day pH (7) check			7.00			+/- 0.1 SU	Yes No	
pH (10)	19320162 8/21	19.49	10.00	10.43	10	+/- 0.1 SU	<input checked="" type="checkbox"/> Yes No	
Mid-Day pH (10) check			10.00			+/- 0.1 SU	Yes No	
ORP (mV)	19460167 8/21	17.58	228	224.3	228	+/- 20mV	<input checked="" type="checkbox"/> Yes No	
DO (%) (1pt, 100% water saturated air cal)			100	99.63	100	+/- 6 % saturation	<input checked="" type="checkbox"/> Yes No	
Turbidity 0 NTU			0	0	0	+/- 0.5 NTU	<input checked="" type="checkbox"/> Yes No	
Turbidity 1 NTU			1.00	0.82	0.82	+/- 0.5 NTU	<input checked="" type="checkbox"/> Yes No	
Turbidity 10 NTU			10.00	9.19	9.81	+/- 0.5 NTU	<input checked="" type="checkbox"/> Yes No	

EQUIPMENT CALIBRATION LOG

Field Technician: Chad Russo

Date: 2/9/2021

Time (start): 0835

Time (finish): 0900

smarTroll SN: 728634

Turbidity Meter Type: LaMotte 2020we

SN: 2283-2612

Weather Conditions: 45°F cloudy

Facility and Unit: Plant Hammond AP-1/2

Project No: GW6581

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	26618625	14.09	4490	4460.1	4490	+/- 5 %	<input checked="" type="checkbox"/> Yes No	
pH (4)	8/2021		4.00	4.04	4	+/- 0.1 SU	<input checked="" type="checkbox"/> Yes No	
Mid-Day pH (4) check	20010625 8/2021	17.98	4.00	4.06	4.06	+/- 0.1 SU	<input checked="" type="checkbox"/> Yes No	
pH (7)	19340057 8/2021	14.40	7.00	7.06	7	+/- 0.1 SU	<input checked="" type="checkbox"/> Yes No	
Mid-Day pH (7) check	19340057 8/2021	19.15	7.00	7.07	7.07	+/- 0.1 SU	<input checked="" type="checkbox"/> Yes No	
pH (10)	19320102 8/2021	14.58	10.00	10.11	10	+/- 0.1 SU	<input checked="" type="checkbox"/> Yes No	
Mid-Day pH (10) check	19320102 5/2021	18.02	10.00	10.03	10.03	+/- 0.1 SU	<input checked="" type="checkbox"/> Yes No	
ORP (mV)	19466167 8/2021	14.70	228	235.1	228	+/- 20mV	<input checked="" type="checkbox"/> Yes No	
DO (%) (1pt, 100% water saturated air cal)			100	100.45	100	+/- 6 % saturation	<input checked="" type="checkbox"/> Yes No	
Turbidity 0 NTU			0	0	0	+/- 0.5 NTU	<input checked="" type="checkbox"/> Yes No	
Turbidity 1 NTU			1.00	1.01	1.01	+/- 0.5 NTU	<input checked="" type="checkbox"/> Yes No	
Turbidity 10 NTU			10.00	10.05	10.05	+/- 0.5 NTU	<input checked="" type="checkbox"/> Yes No	



**EQUIPMENT CALIBRATION LOG**

Field Technician: Chad Russo

Date: ~~2/11/21~~ 2/10/2021

Time (start): 0900

Time (finish): 0930

smarTroll SN: 728634

Turbidity Meter Type: LaMotte 2020we

SN: 2283-2612

Weather Conditions: 40°F overcast

Facility and Unit: Plant Hammond AP-1/2

Project No: GW6581

**Calibration log**

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	2001005 8/2021	12.11	4490	4562	4490	+/- 5 %	<input checked="" type="radio"/> Yes <input type="radio"/> No	
pH (4)			4.00	4.10	4	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (4) check	2001005 8/2021	25.77	4.00	4.06	4.06	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
pH (7)	1934005 8/2021	12.38	7.00	7.03	7	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (7) check	1934005 8/2021	23.32	7.00	7.02	7.02	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
pH (10)	19320102 8/2021	12.52	10.00	10.07	10	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (10) check	19320102 8/2021	21.82	10.00	9.93	9.93	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
ORP (mV)	19460167 8/2021	12.68	228	245.3	228	+/- 20mV	<input checked="" type="radio"/> Yes <input type="radio"/> No	
DO (%) (1pt, 100% water saturated air cal)			100	100.22	100	+/- 6 % saturation	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 0 NTU			0	0	0	+/- 0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 1 NTU			1.00	1.09	1	+/- 0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 10 NTU			10.00	9.87	9.87	+/- 0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	

**EQUIPMENT CALIBRATION LOG**

Field Technician: Chad Russo Date: 2/11/2021 Time (start): 0845 Time (finish): 0710  
 smartTroll SN: 728634 Turbidity Meter Type: LaMotte 2020we SN: 2203-2612  
 Weather Conditions: 50°F raining Facility and Unit: Plant Hammond AP-1/2 Project No: GW6581

**Calibration log**

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20010025 8/2021	15.74	4490	45469	4490	+/- 5 %	<input checked="" type="radio"/> Yes <input type="radio"/> No	
pH (4)			4.00	4	4	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (4) check	<del>19340037</del> 8/16		4.00			+/- 0.1 SU	Yes No	
pH (7)	19340037 8/17/21	16.45	7.00	2.02	7	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (7) check			7.00			+/- 0.1 SU	Yes No	
pH (10)	19320102 8/2021	16.9	10.00	9.98	10	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (10) check			10.00			+/- 0.1 SU	Yes No	
ORP (mV)	19460161 8/2021	17.17	228	237.4	228	+/- 20mV	<input checked="" type="radio"/> Yes <input type="radio"/> No	
DO (%) (1pt, 100% water saturated air cal)			100	99.26	100	+/- 6 % saturation	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 0 NTU			0	0	0	+/- 0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 1 NTU			1.00	1.26	1.26	+/- 0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 10 NTU			10.00	9.70	9.70	+/- 0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	

EQUIPMENT CALIBRATION LOG

Field Technician: Chad Russo

Date: 2/12/21

Time (start): 0830

Time (finish): 0900

SmartTroll SN: 728634

Turbidity Meter Type: LaMotte 2020we

SN: 2287-2612

Weather Conditions: 50°P rain

Facility and Unit: Plant Hammond AP-1/2

Project No.: GW6581

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20016025 8/2021	14.62	4490	5472.3	4490	+/- 5%	<input checked="" type="radio"/> Yes No	
pH (4)			4.00	4	4	+/- 0.1 SU	<input checked="" type="radio"/> Yes No	
Mid-Day pH (4) check	19340057 8/21	14.96	4.00	7.01	7	+/- 0.1 SU	<input checked="" type="radio"/> Yes No	
pH (7)	20010025 8/21	13.00	7.00	4.10	4.10	+/- 0.1 SU	<input checked="" type="radio"/> Yes No	
Mid-Day pH (7) check	19340057 8/21	12.66	7.00	7.04	7.04	+/- 0.1 SU	<input checked="" type="radio"/> Yes No	
pH (10)	19320102 8/2021	15.36	10.00	10.65	10	+/- 0.1 SU	<input checked="" type="radio"/> Yes No	
Mid-Day pH (10) check	19320102 8/2021	12.75	10.00	10.08	10.08	+/- 0.1 SU	<input checked="" type="radio"/> Yes No	
ORP (mV)	19460167 8/2021	14.89	228	242	228	+/- 20mV	<input checked="" type="radio"/> Yes No	
DO (%) (1pt, 100% water saturated air cal)			100	99.15	100	+/- 6% saturation	<input checked="" type="radio"/> Yes No	
Turbidity 0 NTU			0	0	0	+/- 0.5 NTU	<input checked="" type="radio"/> Yes No	
Turbidity 1 NTU			1.00	1.18	1.18	+/- 0.5 NTU	<input checked="" type="radio"/> Yes No	
Turbidity 10 NTU			10.00	9.74	9.74	+/- 0.5 NTU	<input checked="" type="radio"/> Yes No	

EQUIPMENT CALIBRATION LOG

Field Technician: Chad Russo

Date: 2/15/2024

Time (start): 0845

Time (finish): 0900

smarTroll SN: 928634

Turbidity Meter Type: LaMotte 2020we

SN: 2283-2612

Weather Conditions: 45°F overcast

Facility and Unit: Plant Hammond AP-1/2

Project No: GW6581

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20010025 8/2024	2.02	4490	4444.1	4490	+/- 5 %	<input checked="" type="radio"/> Yes No	
pH (4)			4.00	4.05	4	+/- 0.1 SU	<input checked="" type="radio"/> Yes No	
Mid-Day pH (4) check	19340057 8/2024	6.27	4.00	7.03	7	+/- 0.1 SU	<input checked="" type="radio"/> Yes No	
pH (7)	20010025 8/2024	9.47	7.00	4.06	4.06	+/- 0.1 SU	<input checked="" type="radio"/> Yes No	
Mid-Day pH (7) check	19340057 8/2024	9.89	7.00	7.06	7.06	+/- 0.1 SU	<input checked="" type="radio"/> Yes No	
pH (10)	19320102 8/2024	6.77	10.00	10.16	10	+/- 0.1 SU	<input checked="" type="radio"/> Yes No	
Mid-Day pH (10) check	19320102 8/2024	9.96	10.00	10.04	10.04	+/- 0.1 SU	<input checked="" type="radio"/> Yes No	
ORP (mV)	14460167 8/2024	6.82	228	222.555	228	+/- 20mV	<input checked="" type="radio"/> Yes No	
DO (%) (1pt, 100% water saturated air cal)			100	100.40	100	+/- 6 % saturation	<input checked="" type="radio"/> Yes No	
Turbidity 0 NTU			0	0.83	0	+/- 0.5 NTU	<input checked="" type="radio"/> Yes No	
Turbidity 1 NTU			1.00	1.32	1.32	+/- 0.5 NTU	<input checked="" type="radio"/> Yes No	
Turbidity 10 NTU			10.00	9.46	10	+/- 0.5 NTU	<input checked="" type="radio"/> Yes No	

EQUIPMENT CALIBRATION LOG

Field Technician: Chad Russo

Date 2/16/2021

Time (start): 0930

Time (finish): 1000

smarTroll SN: 728634

Turbidity Meter Type: LaMotte 2020we

SN: 2283-2612

Weather Conditions: 20 degrees, Snowing

Facility and Unit: Plant Hammond AP-1/2

Project No.: GW6581

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20010525 8/2021	10.06	4490	4513.4	4490	+/- 5%	<input checked="" type="radio"/> Yes No	
pH (4)			4.00	4.03	4	+/- 0.1 SU	<input checked="" type="radio"/> Yes No	
Mid-Day pH (4) check	↓	7.62	4.00	3.99		+/- 0.1 SU	<input checked="" type="radio"/> Yes No	
pH (7)	19340857 8/2021	9.59	7.00	7.04	7	+/- 0.1 SU	<input checked="" type="radio"/> Yes No	
Mid-Day pH (7) check	↓	7.91	7.00	6.87		+/- 0.1 SU	<input checked="" type="radio"/> Yes No	
pH (10)	19320102 8/2021	9.17	10.00	10.09	10	+/- 0.1 SU	<input checked="" type="radio"/> Yes No	
Mid-Day pH (10) check	↘	9.02	10.00	249.2	228	+/- 0.1 SU	<input checked="" type="radio"/> Yes No	
ORP (mV)	↘	7.0	228	10.02		+/- 20mV	<input checked="" type="radio"/> Yes No	
DO (%) (1pt, 100% water saturated air cal)			100	96.06	100	+/- 6% saturation	<input checked="" type="radio"/> Yes No	
Turbidity 0 NTU			0	0	0	+/- 0.5 NTU	<input checked="" type="radio"/> Yes No	
Turbidity 1 NTU			1.00	1.25	1.25	+/- 0.5 NTU	<input checked="" type="radio"/> Yes No	
Turbidity 10 NTU			10.00	9.56	9.56	+/- 0.5 NTU	<input checked="" type="radio"/> Yes No	

EQUIPMENT CALIBRATION LOG

Field Technician: Aaron Reeder Date: 2-8-2021 Time (start): 1415 Time (finish): 1453  
 smarTroll SN: 728623 Turbidity Meter Type: Lamotte 2020vc SN: 6411-1416  
 Weather Conditions: Sunny 59/43 Facility and Unit: Plant Hammond Project No.: 6V6581

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	201# 20010025	22.11	4490	4412.2	4490	+/- 5 %	<input checked="" type="radio"/> Yes No	
pH (4)	08/2021		4.00	3.48	4.0	+/- 0.1 SU	<input checked="" type="radio"/> Yes No	
Mid-Day pH (4) check	<del>19340057 08/2021</del>	<del>19.59</del>	<del>7.00</del>	<del>7.45</del>	<del>7.00</del>	+/- 0.1 SU	<input checked="" type="radio"/> Yes No	
pH (7)	<del>19340057 8/2021</del>	18.63	7.00	7.45	7.00	+/- 0.1 SU	<input checked="" type="radio"/> Yes No	
Mid-Day pH (7) check	19340057 08/21	18.50	7.00	7.03		+/- 0.1 SU	<input checked="" type="radio"/> Yes No	
pH (10)	19320102 08/2021	18.63	10.00	10.40	10.00	+/- 0.1 SU	<input checked="" type="radio"/> Yes No	
Mid-Day pH (10) check	19320102 08/21	18.60	10.00	10.02		+/- 0.1 SU	<input checked="" type="radio"/> Yes No	
ORP (mV)	19460147 08/2021	18.70	+228	+225	+228	+/- 20mV	<input checked="" type="radio"/> Yes No	
DO (%) (1pt, 100% water saturated air cal)			100%	113.97	100%	+/- 6 % saturation	<input checked="" type="radio"/> Yes No	
Turbidity 0 NTU			0	0.03	0	+/- 0.5 NTU	<input checked="" type="radio"/> Yes No	
Turbidity 1 NTU			1	1.02	1.00	+/- 0.5 NTU	<input checked="" type="radio"/> Yes No	
Turbidity 10 NTU			10	10.05	10.00	+/- 0.5 NTU	<input checked="" type="radio"/> Yes No	



EQUIPMENT CALIBRATION LOG

Field Technician: Aaron Reeder Date: 2-9-2021 Time (start): 0804 Time (finish): 0835  
 smarTroll SN: 728623 Turbidity Meter Type: Lamotte 2020ve SN: 6411-1416  
 Weather Conditions: Cloudy Drizzle Facility and Unit: Plant Hammond Project No.: 606581

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20010025 8-2021	6.51	4490	4543.7	4490	+/- 5 %	<input checked="" type="radio"/> Yes No	
pH (4)		6.59	4.00	3.85	4.00	+/- 0.1 SU	<input checked="" type="radio"/> Yes No	
Mid-Day pH (4) check	↓	8.70	4.00	3.96		+/- 0.1 SU	<input checked="" type="radio"/> Yes No	
pH (7)	19340057 08/2021	8.32	7.00	6.93	7.00	+/- 0.1 SU	<input checked="" type="radio"/> Yes No	
Mid-Day pH (7) check		↓	8.75	7.00	7.02		+/- 0.1 SU	<input checked="" type="radio"/> Yes No
pH (10)	19320102 8-2021	8.78	10.00	10.11	10.00	+/- 0.1 SU	<input checked="" type="radio"/> Yes No	
Mid-Day pH (10) check		↓	8.69	10.00	10.03		+/- 0.1 SU	<input checked="" type="radio"/> Yes No
ORP (mV)	19460167 8-2021	8.76	+228	253.0	228.0	+/- 20mV	<input checked="" type="radio"/> Yes No	
DO (%) (1pt, 100% water saturated air cal)			100%	97.63	100	+/- 6 % saturation	<input checked="" type="radio"/> Yes No	
Turbidity 0 NTU			0	0	0	+/- 0.5 NTU	<input checked="" type="radio"/> Yes No	
Turbidity 1 NTU			1	1.34	1.0	+/- 0.5 NTU	<input checked="" type="radio"/> Yes No	
Turbidity 10 NTU			10	9.45	10	+/- 0.5 NTU	<input checked="" type="radio"/> Yes No	

EQUIPMENT CALIBRATION LOG

Field Technician: Aaron Reeder Date: 2-10-2021 Time (start): 0820 Time (finish): 0843  
 smarTroll SN: 728623 Turbidity Meter Type: Lamotte 2090 VE SN: 6411-1416  
 Weather Conditions: mostly cloudy Hi 70°/Lo 38° Facility and Unit: Plant Hammond Project No.: GW6581

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20010025 08/2021	13.40	4490	4454.4	4490	+/- 5 %	Yes No	
pH (4)	↓		4.00	4.06	4.00	+/- 0.1 SU	Yes No	
Mid-Day pH (4) check	↓	12.5	4.00	4.00		+/- 0.1 SU	Yes No	
pH (7)	19340057 08/2021	13.00 <del>12.76</del>	7.00	7.05	7.00	+/- 0.1 SU	Yes No	
Mid-Day pH (7) check	↓	12.6	7.00	7.06		+/- 0.1 SU	Yes No	
pH (10)	19320102 08/2021	12.97	10.00	10.07	10.00	+/- 0.1 SU	Yes No	
Mid-Day pH (10) check	↓	12.55	10.00	9.98		+/- 0.1 SU	Yes No	
ORP (mV)	19460167 08/2021	11.43	+228	221.8	228.0	+/- 20mV	Yes No	
DO (%) (1pt, 100% water saturated air cal)			100%	104.38	100%	+/- 6 % saturation	Yes No	
Turbidity 0 NTU			0	-0.02	0	+/- 0.5 NTU	Yes No	
Turbidity 1 NTU			1	0.84	1	+/- 0.5 NTU	Yes No	
Turbidity 10 NTU			10	8.87	10	+/- 0.5 NTU	Yes No	



EQUIPMENT CALIBRATION LOG

Field Technician: Aaron Reader

Date: 2-11-2021

Time (start): 0831

Time (finish): 0900

smarTroll SN: 728623

Turbidity Meter Type: LaMotte 2020we

SN: 6411-1416

Weather Conditions: Cloudy Pm. Rain

Facility and Unit: Plant Hammond AP-1/2

Project No.: GW6581

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20010025	10.69	4490	4454.4	4490	+/- 5 %	<input checked="" type="radio"/> Yes No	
pH (4)	08/2021	10.73	4.00	4.00	4.00	+/- 0.1 SU	<input checked="" type="radio"/> Yes No	
Mid-Day pH (4) check	↓	12.6	4.00	4.08		+/- 0.1 SU	<input checked="" type="radio"/> Yes No	
pH (7)	19340057 08/2021	12.03 7.07	7.00	7.07	7.00	+/- 0.1 SU	<input checked="" type="radio"/> Yes No	
Mid-Day pH (7) check	↓	11.9	7.00	7.03		+/- 0.1 SU	<input checked="" type="radio"/> Yes No	
pH (10)	19320102 08/2021	12.54	10.00	10.09	10.00	+/- 0.1 SU	<input checked="" type="radio"/> Yes No	
Mid-Day pH (10) check	↓	12.4	10.00	9.94		+/- 0.1 SU	<input checked="" type="radio"/> Yes No	
ORP (mV)	19460167 08/2021	12.50	228	226.3	228	+/- 20mV	<input checked="" type="radio"/> Yes No	
DO (%) (1pt, 100% water saturated air cal)			100	100.32	100	+/- 6 % saturation	<input checked="" type="radio"/> Yes No	
Turbidity 0 NTU			0	0.10	0.00	+/- 0.5 NTU	<input checked="" type="radio"/> Yes No	
Turbidity 1 NTU			1.00	0.67	1.00	+/- 0.5 NTU	<input checked="" type="radio"/> Yes No	
Turbidity 10 NTU			10.00	9.35	10.00	+/- 0.5 NTU	<input checked="" type="radio"/> Yes No	

EQUIPMENT CALIBRATION LOG

Field Technician: Aaron Reeder

Date: 2-12-2021

Time (start): 0812

Time (finish): 0835

smarTroll SN: 728623

Turbidity Meter Type: LaMotte 2020we

SN: 6411-1416

Weather Conditions: Rain Hi: 52°/Lo: 40°

Facility and Unit: Plant Hammond AP-1/2

Project No.: GW6581

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20010025 08/2021	10.3 <del>10.0</del>	4490	4555.3	4440	+/- 5 %	Yes No	
pH (4)	↓	9.94	4.00	4.05	4.00	+/- 0.1 SU	Yes No	
Mid-Day pH (4) check	↓	10.68	4.00	4.06 <del>4.00</del>		+/- 0.1 SU	Yes No	
pH (7)	19340057 08/2021	10.23	7.00	7.10	7.00	+/- 0.1 SU	Yes No	
Mid-Day pH (7) check	↓	10.73	7.00	7.00 <del>6.93</del>		+/- 0.1 SU	Yes No	
pH (10)	19320102 08/2021	10.36	10.00	10.20	10.00	+/- 0.1 SU	Yes No	
Mid-Day pH (10) check	↓	10.92	10.00	10.02		+/- 0.1 SU	Yes No	
ORP (mV)	19460167 08/2021	10.52	228	228.6	228	+/- 20mV	Yes No	
DO (%) (1pt, 100% water saturated air cal)			100	100.44	100	+/- 6% saturation	Yes No	
Turbidity 0 NTU			0	0	0	+/- 0.5 NTU	Yes No	
Turbidity 1 NTU			1.00	0.43	1.00	+/- 0.5 NTU	Yes No	
Turbidity 10 NTU			10.00	10	10	+/- 0.5 NTU	Yes No	

March 2021

EQUIPMENT CALIBRATION LOG

Field Technician: Chad Russo

Date: 3/10/2021

Time (start): 1215

Time (finish): 1240

SmartTroll SN: 728550

Turbidity Meter Type: LaMotte 2020we

SN: 6411-1416

Weather Conditions: 70°F Sunny

Facility and Unit: Plant Hammond AP-1/2

Project No.: GW6581

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20010025 8/2021	19.77	4490	4449.5	4490	+/- 5 %	<input checked="" type="radio"/> Yes No	
pH (4)			4.00	3.9	4	+/- 0.1 SU	<input checked="" type="radio"/> Yes No	
Mid-Day pH (4) check	20010025 8/2021	21.23	4.00	4.02	4.02	+/- 0.1 SU	<input checked="" type="radio"/> Yes No	
pH (7)	19340057 8/2021	19.11	7.00	6.92	7	+/- 0.1 SU	<input checked="" type="radio"/> Yes No	
Mid-Day pH (7) check	19346057 8/2021	22.04	7.00	7.05	7.05	+/- 0.1 SU	<input checked="" type="radio"/> Yes No	
pH (10)	19320102 8/2021	18.50	10.00	9.98	10	+/- 0.1 SU	<input checked="" type="radio"/> Yes No	
Mid-Day pH (10) check	19326102 8/2021	21.87	10.00	10.01	10.01	+/- 0.1 SU	<input checked="" type="radio"/> Yes No	
ORP (mV)	19460167 8/2021	18.15	228	221.3	228	+/- 20mV	<input checked="" type="radio"/> Yes No	
DO (%) (1pt, 100% water saturated air cal)			100	96.47	100	+/- 6 % saturation	<input checked="" type="radio"/> Yes No	
Turbidity 0 NTU			0	6.39	0.39	+/- 0.5 NTU	<input checked="" type="radio"/> Yes No	
Turbidity 1 NTU			1.00	0.52	0.52	+/- 0.5 NTU	<input checked="" type="radio"/> Yes No	
Turbidity 10 NTU			10.00	9.94	9.94	+/- 0.5 NTU	<input checked="" type="radio"/> Yes No	



**EQUIPMENT CALIBRATION LOG**

Field Technician: Chad Russo

Date: 3/11/2021

Time (start): 0730

Time (finish): 0755

smarTroll SN: 728550

Turbidity Meter Type: LaMotte 2020we

SN: 644-1416

Weather Conditions: 45°F Clear

Facility and Unit: Plant Hammond AP-1/2

Project No.: GW6581

**Calibration log**

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20010025 8/2021	14.99	4490	4582.2	4490	+/- 5 %	<input checked="" type="radio"/> Yes <input type="radio"/> No	
pH (4)			4.00	4.03	4	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (7) check	19340057 8/2021	15.69	4.00	7.03	7	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
pH (7)	20010025 8/2021	25.97	7.00	4.05	4.05	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (7) check	19340057 8/2021	26.07	7.00	6.95	6.95	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
pH (10)	19320102 8/2021	15.96	10.00	10.04	10	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (10) check	19320102 8/2021	25.6	10.00	9.95	9.95	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
ORP (mV)	19460167 8/2021	16.07	228	231.4	228	+/- 20mV	<input checked="" type="radio"/> Yes <input type="radio"/> No	
DO (%) (1pt, 100% water saturated air cal)			100	92.09	100	+/- 6 % saturation	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 0 NTU			0	0	0	+/- 0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 1 NTU			1.00	0.58	0.58	+/- 0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 10 NTU			10.00	10.68	9.75	+/- 0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	

**EQUIPMENT CALIBRATION LOG**

Field Technician: Chad Russo

Date: 3/12/2021

Time (start): 0835

Time (finish): 0855

SmartTroll SN: 228550

Turbidity Meter Type: LaMotte 2020we

SN: 6411-1116

Weather Conditions: 50°F partly cloudy

Facility and Unit: Plant Hammond AP-1/2

Project No.: GW6581

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20010025 8/2021	19.51	4490	4520	4490	+/- 5 %	<input checked="" type="radio"/> Yes No	
pH (4)			4.00	4.02	4	+/- 0.1 SU	<input checked="" type="radio"/> Yes No	
Mid-Day pH (4) check	20010025 8/2021	25.4	4.00	3.96	3.96	+/- 0.1 SU	<input checked="" type="radio"/> Yes No	
pH (7)	19340057 8/2021	19.55	7.00	6.95	7	+/- 0.1 SU	<input checked="" type="radio"/> Yes No	
Mid-Day pH (7) check	19340057 8/2021	24.87	7.00	7.02	7.02	+/- 0.1 SU	<input checked="" type="radio"/> Yes No	
pH (10)	19320102 8/2021	19.49	10.00	9.98	10	+/- 0.1 SU	<input checked="" type="radio"/> Yes No	
Mid-Day pH (10) check	19320102 8/2021	25.18	10.00	10.04	10.04	+/- 0.1 SU	<input checked="" type="radio"/> Yes No	
ORP (mV)	19460167 8/2021	19.29	228	222.3	228	+/- 20mV	<input checked="" type="radio"/> Yes No	
DO (%) (1pt, 100% water saturated air cal)			100	99.82	100	+/- 6 % saturation	<input checked="" type="radio"/> Yes No	
Turbidity 0 NTU			0	0	0	+/- 0.5 NTU	<input checked="" type="radio"/> Yes No	
Turbidity 1 NTU			1.00	1.03	1.03	+/- 0.5 NTU	<input checked="" type="radio"/> Yes No	
Turbidity 10 NTU			10.00	9.62	9.62	+/- 0.5 NTU	<input checked="" type="radio"/> Yes No	

**EQUIPMENT CALIBRATION LOG**

Field Technician: Chad Russo Date: 3/15/2021 Time (start): 0740 Time (finish): 0800  
 SmartTroll SN: 728550 Turbidity Meter Type: LaMotte 2020we SN: 6411-1416  
 Weather Conditions: 60°F cloudy Facility and Unit: Plant Hammond AP-1/2 Project No.: GW6581

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20016625 8/2021	19.11	4490	4576	4490	+/- 5 %	<input checked="" type="radio"/> Yes <input type="radio"/> No	
pH (4)			4.00	4.03	4	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (4) check	20010025 8/2021	20.16	4.00	4.19	4	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
pH (7)	19340057 8/2021		7.00	7.00	7	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (7) check	19340057 8/2021	26.37	7.00	7.11	7	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
pH (10)	19320102 8/2021	19.77	10.00	10.03	10	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (10) check	19320102 8/2021	20.16	10.00	10.04	10	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
ORP (mV)	19460167 8/2021	19.77	228	225.2	228	+/- 20mV	<input checked="" type="radio"/> Yes <input type="radio"/> No	
DO (%) (1pt, 100% water saturated air cal)			100	85.39	100	+/- 6 % saturation	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 0 NTU			0	0.03	0.03	+/- 0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 1 NTU			1.00	0.69	0.69	+/- 0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 10 NTU			10.00	2.89	10.14	+/- 0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	



EQUIPMENT CALIBRATION LOG

Field Technician: Chad Russo

Date: 3/16/2021

Time (start): 0745

Time (finish): 0815

SmartTroll SN: 228550

Turbidity Meter Type: LaMotte 2020we

SN: 6411-1414

Weather Conditions: 50°F raining

Facility and Unit: Plant Hammond AP-1/2

Project No.: GW6581

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20010025 8/2021	18.21	4490	4405	4490	± 5 %	<input checked="" type="radio"/> Yes <input type="radio"/> No	
pH (4)			4.00	3.92	4	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (7) check	19340057 8/2021	18	4.00	6.95	7	± 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
pH (7)	20010025 8/2021	18.5 19.21 68	7.00	<del>6.98</del> 4.02	6.98 4.02	± 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (7) check	19340057 8/2021	19.21	7.00	6.98	6.98	+/- 0.1 SU	<input type="radio"/> Yes <input type="radio"/> No	
pH (10)	19320102 8/2021	12.99	10.00	9.99	10	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (10) check	19320102 8/2021	18.34	10.00	10.03	10.03	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
ORP (mV)	19460167 8/2021	17.81	228	236.8	228	+/- 20mV	<input checked="" type="radio"/> Yes <input type="radio"/> No	
DO (%) (1pt, 100% water saturated air cal)			100	94.10	100	± 6 % saturation	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 0 NTU			0	0	0	+/- 0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 1 NTU			1.00	0.22	6.71	+/- 0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 10 NTU			10.00	7.85	10.25	+/- 0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	



EQUIPMENT CALIBRATION LOG

Field Technician: Chad Russo Date: 8/10/2021 Time (start): 0715 Time (finish): 0735  
 smartTroll SN: 728550 Turbidity Meter Type: LaMotte 2020we SN: 6411-1414  
 Weather Conditions: 50°F cloudy Facility and Unit: Plant Hammond AP-1/2 Project No.: GW6581

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	2001025 8/10/21	15.75	4490	4506.5	4490	+/- 5 %	<input checked="" type="radio"/> Yes <input type="radio"/> No	
pH (4)			4.00	4	4	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (4) check	2001025 8/10/21	16.5	4.00	4.01	4.01	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
pH (7)	19340657 8/10/21	15.73	7.00	7	7	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (7) check	19340657 8/10/21	16.21	7.00	6.93	6.93	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
pH (10)	19320102 8/10/21	15.69	10.00	10.02	10	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (10) check	19320102 8/10/21	16.04	10.00	10.05	10.05	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
ORP (mV)	19460167 8/10/21	15.59	228	221.3	228	+/- 20mV	<input checked="" type="radio"/> Yes <input type="radio"/> No	
DO (%) (1pt, 100% water saturated air cal)			100	88.06	100	+/- 6 % saturation	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 0 NTU			0	0	0	+/- 0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 1 NTU			1.00	0.94	0.94	+/- 0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 10 NTU			10.00	9.61	9.61	+/- 0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	

**EQUIPMENT CALIBRATION LOG**

Field Technician: Chad Russo Date: 3/18/2021 Time (start): 0730 Time (finish): 0810  
 smarTroll SN: 728550 Turbidity Meter Type: LaMotte 2020we SN: 6411-1496  
 Weather Conditions: 60°F cloudy Facility and Unit: Plant Hammond AP-1/2 Project No.: GW6581

**Calibration log**

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20010025 8/2021	17.38	4490	4511.6	4490	+/- 5 %	<input checked="" type="radio"/> Yes <input type="radio"/> No	
pH (4)			4.00	3.99	4	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (4) check	20010025 8/2021	19.76	4.00	4.14	4	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
pH (7)	19340057 8/2021	17.52	7.00	7.0	7.0	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (7) check	19340057 8/2021	20.22	7.00	7.04	7	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
pH (10)	19320102 8/2021	17.54	10.00	10.02	10	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (10) check	19320102 8/2021	20.13	10.00	9.98	10	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
ORP (mV)	19460167 8/2021	17.54	228	223.4	228	+/- 20mV	<input checked="" type="radio"/> Yes <input type="radio"/> No	
DO (%) (1pt, 100% water saturated air cal)			100	71.47	100	+/- 6 % saturation	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 0 NTU			0	0	0	+/- 0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 1 NTU			1.00	1.18	1.18	+/- 0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 10 NTU			10.00	10.42	10.42	+/- 0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	

**EQUIPMENT CALIBRATION LOG**

Field Technician: Chad Russo Date: 3/19/2021 Time (start): 0756 Time (finish): 0820  
 smartTroll SN: 728550 Turbidity Meter Type: LaMotte 2020we SN: 6411-1416  
 Weather Conditions: 50°F cloudy Facility and Unit: Plant Hammond AP-1/2 Project No.: GW6581

**Calibration log**

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20010025 8/2021	14.87	4490	4459.7	4490	+/- 5 %	<input checked="" type="radio"/> Yes <input type="radio"/> No	
pH (4)			4.00	3.97	4	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (4) check			4.00			+/- 0.1 SU	Yes <input type="radio"/> No	
pH (7)	14340057 8/2021	14.97	7.00	6.97	7	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (7) check			7.00			+/- 0.1 SU	Yes <input type="radio"/> No	
pH (10)	19320102 8/2021	15.06	10.00	9.98	10	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (10) check			10.00			+/- 0.1 SU	Yes <input type="radio"/> No	
ORP (mV)	19460167 8/2021	15.13	228	230.9	229	+/- 20mV	<input checked="" type="radio"/> Yes <input type="radio"/> No	
DO (%) (1pt, 100% water saturated air cal)			100	104.34	100	+/- 6 % saturation	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 0 NTU			0	0	0	+/- 0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 1 NTU			1.00	.93	.93	+/- 0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 10 NTU			10.00	9.76	9.76	+/- 0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	



**EQUIPMENT CALIBRATION LOG**

Field Technician: YASHISH TANKOOR

Date: 3-10-2021

Time (start): 11 20

Time (finish): 11 30

SmartTroll SN: 728 563

Turbidity Meter Type: LaMotte 2020we

SN: 710-0711

Weather Conditions: SUNNY, 55°F

Facility and Unit: Plant Hammond AP-1/2

Project No.: GW6581

**Calibration log**

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20010025	18.38	4490	4665	4490	+/- 5 %	<input checked="" type="radio"/> Yes <input type="radio"/> No	
pH (4)	08/21		4.00	3.96	4.00	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
<del>Mid-Day pH (4) check</del>	<del>  </del>		4.00		4.00	<del>+/- 0.1 SU</del>	<del><input checked="" type="radio"/> Yes <input type="radio"/> No</del>	
pH (7)	19340057 8/21	19.08	7.00	6.99	7.00	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
<del>e-Mid-Day pH (7) check</del>	<del>  </del>		7.00		7.00	<del>+/- 0.1 SU</del>	<del><input checked="" type="radio"/> Yes <input type="radio"/> No</del>	
pH (10)	19320102 8/21	18.96	10.00	10.05	10.00	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
<del>Mid-Day pH (10) check</del>	<del>  </del>		10.00		10.00	<del>+/- 0.1 SU</del>	<del><input checked="" type="radio"/> Yes <input type="radio"/> No</del>	
ORP (mV)	19460167 8/21	19.08	228	234.6	228	+/- 20mV	<input checked="" type="radio"/> Yes <input type="radio"/> No	
DO (%) (1pt, 100% water saturated air cal)			100	105.21	100	+/- 6 % saturation	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 0 NTU			0	-0.06	0	+/- 0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 1 NTU			1.00	0.92	1.00	+/- 0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 10 NTU			10.00	10.40	1.00	+/- 0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	

**EQUIPMENT CALIBRATION LOG**

Field Technician: VAISHISH TAJKOR

Date: 3-11-2021

Time (start): 08 04

Time (finish): 08 19

smarTroll SN: 728563

Turbidity Meter Type: LaMotte 2020we

SN: 710-0711

Weather Conditions: SUNNY, 49°F

Facility and Unit: Plant Hammond AP-1/2

Project No.: GW6581

**Calibration log**

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20610025	14.88	4490	4437	4420	+/- 5 %	Yes No	
pH (4)	08/2021		4.00	4.01	4.00	+/- 0.1 SU	Yes No	
Mid-Day pH (4) check	"	24.19	4.00	4.05	4.00	+/- 0.1 SU	Yes No	
pH (7)	19340057 08/2021	15.50	7.00	6.88	7.00	+/- 0.1 SU	Yes No	
Mid-Day pH (7) check	"	23.10	7.00	7.03	7.00	+/- 0.1 SU	Yes No	
pH (10)	19320102 08/2021	15.31	10.00	10.06	10.00	+/- 0.1 SU	Yes No	
Mid-Day pH (10) check	"	21.96	10.00	9.98	10.00	+/- 0.1 SU	Yes No	
ORP (mV)	19460167 08/2021	14.94	228	240.8	228	+/- 20mV	Yes No	
DO (%) (1pt, 100% water saturated air cal)			100	91.19	100	+/- 6 % saturation	Yes No	
Turbidity 0 NTU			0	0.00	0	+/- 0.5 NTU	Yes No	
Turbidity 1 NTU			1.00	1.17	1.00	+/- 0.5 NTU	Yes No	
Turbidity 10 NTU			10.00	10.45	10.00	+/- 0.5 NTU	Yes No	

**EQUIPMENT CALIBRATION LOG**

Field Technician: VASHISH TAVKOR

Date: 3-12-2021

Time (start): 0823

Time (finish): 0837

smarTroll SN: 728 563

Turbidity Meter Type: LaMotte 2020we

SN: 710-0711

Weather Conditions: SONNY, 50°F

Facility and Unit: Plant Hammond AP-1/2

Project No.: GW6581

**Calibration log**

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20610025 08/2024	20.57	4490	<del>4492.6</del> <sup>4392.6</sup> (✓)	4490	± 5 %	Yes No	
pH (4)	"	"	4.00	3.97	4.00	± 0.1 SU	Yes No	
Mid-Day pH (4) check	"	23.92	4.00	4.04	4.00	± 0.1 SU	Yes No	
pH (7)	19340057 08/2024	19.53	7.00	7.01	7.00	± 0.1 SU	Yes No	
Mid-Day pH (7) check	"	22.74	7.00	7.06	7.00	± 0.1 SU	Yes No	
pH (10)	19320102 08/2024	18.78	10.00	10.05	10.00	± 0.1 SU	Yes No	
Mid-Day pH (10) check	"	21.91	10.00	9.98	10.00	± 0.1 SU	Yes No	
ORP (mV)	19460167 08/2024	18.26	228	238.2	228	± 20mV	Yes No	
DO (%) (1pt, 100% water saturated air cal)			100	96.86	100	± 6 % saturation	Yes No	
Turbidity 0 NTU			0	-0.01	0	± 0.5 NTU	Yes No	
Turbidity 1 NTU			1.00	1.11	1.00	± 0.5 NTU	Yes No	
Turbidity 10 NTU			10.00	10.45	10.00	± 0.5 NTU	Yes No	



EQUIPMENT CALIBRATION LOG

Field Technician: VASHISH THAKUR

Date: 3-15-2024

Time (start): 0813

Time (finish): 0824

SmartTroll SN: 728 563

Turbidity Meter Type: LaMotte 2020we

SN: 710-0711

Weather Conditions: CLOUDY, 60°F

Facility and Unit: Plant Hammond AP-1/2

Project No.: GW6581

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20610025 08/21	15.74	4490	4662.8	4490	+/- 5 %	Yes No	
pH (4)	"	"	4.00	3.96	4.00	+/- 0.1 SU	Yes No	
Mid-Day pH (4) check	"	18.52	4.00	4.05	4.00	+/- 0.1 SU	Yes No	
pH (7)	19390057 08/2024	18.72	7.00	6.99	7.00	+/- 0.1 SU	Yes No	
Mid-Day pH (7) check	"	18.26	7.00	7.07	7.00	+/- 0.1 SU	Yes No	
pH (10)	193 20102 08/2021	16.87	10.00	10.08	10.00	+/- 0.1 SU	Yes No	
Mid-Day pH (10) check	"	17.86	10.00	10.02	10.00	+/- 0.1 SU	Yes No	
ORP (mV)	194 0167 08/2021	16.87	228	238.8	228	+/- 20mV	Yes No	
DO (%) (1pt, 100% water saturated air cal)			100	93.38	100	+/- 6 % saturation	Yes No	
Turbidity 0 NTU			0	-0.02	0.00	+/- 0.5 NTU	Yes No	
Turbidity 1 NTU			1.00	1.24	1.00	+/- 0.5 NTU	Yes No	
Turbidity 10 NTU			10.00	9.54	10.00	+/- 0.5 NTU	Yes No	

**EQUIPMENT CALIBRATION LOG**

Field Technician: VASHISH TAJROOP

Date: 3-16-2021

Time (start): 0750

Time (finish): 0810

smarTroll SN: 728 563

Turbidity Meter Type: LaMotte 2020we

SN: 710-0711

Weather Conditions: RAIN, 50°F

Facility and Unit: Plant Hammond AP-1/2

Project No.: GW6581

**Calibration log**

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20610025	16.97	4490	4395.8	4490	+/- 5 %	Yes No	
pH (4)	08/21		4.00	3.99	4.00	+/- 0.1 SU	Yes No	
Mid-Day pH (4) check	"	15.21	4.00	4.08	4.00	+/- 0.1 SU	Yes No	
pH (7)	19340057	17.01	7.00	6.95	7.00	+/- 0.1 SU	Yes No	
Mid-Day pH (7) check	"	15.93	7.00	7.05	7.00	+/- 0.1 SU	Yes No	
pH (10)	19320102	17.01	10.00	9.98	10.00	+/- 0.1 SU	Yes No	
Mid-Day pH (10) check	"	16.28	10.00	10.04	10.00	+/- 0.1 SU	Yes No	
ORP (mV)	19460167	16.93	228	238.7	228	+/- 20mV	Yes No	
DO (%) (1pt, 100% water saturated air cal)			100	99.79	100	+/- 6 % saturation	Yes No	
Turbidity 0 NTU			0	0.03	0	+/- 0.5 NTU	Yes No	
Turbidity 1 NTU			1.00	1.07	1.00	+/- 0.5 NTU	Yes No	
Turbidity 10 NTU			10.00	9.62	10.00	+/- 0.5 NTU	Yes No	



EQUIPMENT CALIBRATION LOG

Field Technician: VASHISHA TANKOR

Date: 3-17-2021

Time (start): 07:30

Time (finish): 07:39

smarTroll SN: 728563

Turbidity Meter Type: LaMotte 2020w

SN: 710-0711

Weather Conditions: SHOWERS/THUNDERSTORMS, 50°F

Facility and Unit: Plant Hammond AP-1/2

Project No.: GW6581

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cat Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20610025	16.07	4490	4469.2	4490	+/- 5 %	Yes No	
pH (4)	08/21		4.00	3.95	4.00	+/- 0.1 SU	Yes No	
Mid-Day pH (4) check	"	18.91	4.00	4.07	4.00	+/- 0.1 SU	Yes No	
pH (7)	19340057 08/21	16.02	7.00	7.00	7.00	+/- 0.1 SU	Yes No	
Mid-Day pH (7) check	"	19.50	7.00	6.99	7.00	+/- 0.1 SU	Yes No	
pH (10)	19320102 08/21	15.76	10.00	10.09	10.00	+/- 0.1 SU	Yes No	
Mid-Day pH (10) check	"	19.28	10.00	10.01	10.00	+/- 0.1 SU	Yes No	
ORP (mV)	19460167 08/21	15.06	228	240.2	228	+/- 20mV	Yes No	
DO (%) (1pt, 100% water saturated air cal)			100	95.73	100	+/- 6 % saturation	Yes No	
Turbidity 0 NTU			0	<0.01	0	+/- 0.5 NTU	Yes No	
Turbidity 1 NTU			1.00	1.10	1.00	+/- 0.5 NTU	Yes No	
Turbidity 10 NTU			10.00	10.87	10.00	+/- 0.5 NTU	Yes No	

EQUIPMENT CALIBRATION LOG

Field Technician: VASHISH TAJWAD Date: 3-~~17~~<sup>18</sup>-2021 Time (start): 0806 Time (finish): 0816

smarTroll SN: 728563 Turbidity Meter Type: LaMotte 2020we SN: 710-0711

Weather Conditions: SHOWERS, STORMS, 50°F Facility and Unit: Plant Hammond AP-1/2 Project No.: GW6581

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20610025 08/21	16.52	4490	4532.6	4490	± 5 %	<input checked="" type="radio"/> Yes No	
pH (4)	"	"	4.00	3.95	4.00	+/- 0.1 SU	<input checked="" type="radio"/> Yes No	
Mid-Day pH (4) check	"	19.31	4.00	4.05	4.00	+/- 0.1 SU	<input checked="" type="radio"/> Yes No	
pH (7)	19340057 08/21	17.03	7.00	6.99	7.00	+/- 0.1 SU	<input checked="" type="radio"/> Yes No	
Mid-Day pH (7) check	"	19.54	7.00	7.01	7.00	+/- 0.1 SU	<input checked="" type="radio"/> Yes No	
pH (10)	19320102 08/21	17.10	10.00	10.04	10.00	+/- 0.1 SU	<input checked="" type="radio"/> Yes No	
Mid-Day pH (10) check	"	19.55	10.00	9.99	10.00	+/- 0.1 SU	<input checked="" type="radio"/> Yes No	
ORP (mV)	19401107 08/21	17.05	228	238.1	228	+/- 20mV	<input checked="" type="radio"/> Yes No	
DO (%) (1pt. 100% water saturated air cal)			100	99.19	100	+/- 6 % saturation	<input checked="" type="radio"/> Yes No	
Turbidity 0 NTU			0	0.00	0	+/- 0.5 NTU	<input checked="" type="radio"/> Yes No	
Turbidity 1 NTU			1.00	1.06	1.00	+/- 0.5 NTU	<input checked="" type="radio"/> Yes No	
Turbidity 10 NTU			10.00	10.45	10.00	+/- 0.5 NTU	<input checked="" type="radio"/> Yes No	

**EQUIPMENT CALIBRATION LOG**

Field Technician: VASHISH TANKAR Date: 3-10-2024 Time (start): 07:40 Time (finish): 07:49  
 smartTroll SN: 728563 Turbidity Meter Type: LaMotte 2020we SN: 710-0711  
 Weather Conditions: Cloudy, 40°F Facility and Unit: Plant Hammond AP-1/2 Project No: GW6581

**Calibration log**

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20610025 08/24	21.06	4490	4366.2	4490	+/- 5 %	Yes No	
pH (4)			4.00	3.93	4.00	+/- 0.1 SU	Yes No	
Mid-Day pH (4) check			4.00			+/- 0.1 SU	Yes No	
pH (7)	19340057 08/24	19.38	7.00	6.92	7.00	+/- 0.1 SU	Yes No	
Mid-Day pH (7) check				7.00			+/- 0.1 SU	Yes No
pH (10)	19320102 08/24	18.70	10.00	9.88	10.00	+/- 0.1 SU	Yes No	
Mid-Day pH (10) check				10.00			+/- 0.1 SU	Yes No
ORP (mV)	19400167 08/24	18.74	228	238.0	229	+/- 20mV	Yes No	
DO (%) (1pt, 100% water saturated air cal)			100	95.71	100	+/- 6 % saturation	Yes No	
Turbidity 0 NTU			0	0.00	0.00	+/- 0.5 NTU	Yes No	
Turbidity 1 NTU			1.00	0.96	1.00	+/- 0.5 NTU	Yes No	
Turbidity 10 NTU			10.00	10.39	10.00	+/- 0.5 NTU	Yes No	



**EQUIPMENT CALIBRATION LOG**

Field Technician: Thomas Kressli

Date: 3/10/21

Time (start): 1130

Time (finish): 1220

smarTroll SN: 728566

Turbidity Meter Type: LaMotte 2020we

SN: 12289-2617

Weather Conditions: Sunny ☀

Facility and Unit: Plant Hammond AP-1/2

Project No.: GW6581

**Calibration log**

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20010028	15.96	4490	4368.3	4490	+/- 5 %	<input checked="" type="radio"/> Yes <input type="radio"/> No	
pH (4)	0821		4.00	4.08	4.0	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (4) check			4.00			+/- 0.1 SU	Yes <input type="radio"/> No	
pH (7)	14340637	15.43	7.00	7.04	<del>7.00</del>	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (7) check	821		7.00				+/- 0.1 SU	Yes <input type="radio"/> No
pH (10)	143 2902	14.89	10.00	9.99	10.00	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (10) check	0821		10.00				+/- 0.1 SU	Yes <input type="radio"/> No
ORP (mV)	144160167	14.39	228	214	228	+/- 20mV	<input checked="" type="radio"/> Yes <input type="radio"/> No	
DO (%) (1pt, 100% water saturated air cal)	0821		100	101.73	100	+/- 6 % saturation	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 0 NTU			0	1.07	0.00	+/- 0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 1 NTU			1.00	1.03	1.03	+/- 0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 10 NTU			10.00	8.23	10.03	+/- 0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	

EQUIPMENT CALIBRATION LOG

Field Technician: Thomas Keshw

Date: 3/11/21

Time (start): 0740

Time (finish): 0810

smatTroll SN: 728566

Turbidity Meter Type: LaMotte 2020we

SN: 2289-2612

Weather Conditions: Sunny, 70°

Facility and Unit: Plant Hammond AP-1/2

Project No.: GW6581

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20016025 08/21	15	4490	4332.5	4490	+/- 5 %	<input checked="" type="radio"/> Yes <input type="radio"/> No	
pH (4)			4.00	3.98	4.00	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (4) check			4.00	<del>3.98</del> <sup>+1.0</sup> 4.09	/	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	within range
pH (7)	19340057	15	7.00	7.04	7.04	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (7) check			7.00	6.98	/	+/- 0.1 SU	Yes <input type="radio"/> No	within Range
pH (10)	1932902 08/21	15	10.00	10.17	10.00	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (10) check			10.00	9.92	/	+/- 0.1 SU	Yes <input type="radio"/> No	within Range
ORP (mV)	1446067 08/21	15	228	237.6	228	+/- 20mV	<input checked="" type="radio"/> Yes <input type="radio"/> No	
DO (%) (1pt, 100% water saturated air cal)			100	93.07	100	+/- 6 % saturation	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 0 NTU			0	0.19	0.00	+/- 0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 1 NTU			1.00	0.43	1.00	+/- 0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 10 NTU			10.00	10.45	10.00	+/- 0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	

EQUIPMENT CALIBRATION LOG

Field Technician: Thomas Kessler

Date: 3/12/21

Time (start): 0715

Time (finish): 0900

SmartTroll SN: 728566

Turbidity Meter Type: LaMotte 2020we

SN: 12889262

Weather Conditions: Sunny, 70°

Facility and Unit: Plant Hammond AP-1/2

Project No.: GW6581

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	<u>20016028</u>	<u>13.18</u>	4490	<u>4471.9</u>	<u>4490</u>	+/- 5 %	<input checked="" type="radio"/> Yes No	
pH (4)	<u>08/21</u>		4.00	<u>4.05</u>	<u>4.00</u>	+/- 0.1 SU	<input checked="" type="radio"/> Yes No	
Mid-Day pH (4) check	<u>/</u>	<u>/</u>	4.00	<u>4.07</u>	<u>/</u>	+/- 0.1 SU	Yes No	<u>within Range</u>
pH (7)	<u>08/21</u> <u>10340057</u>	<u>13.10</u>	7.00	<u>6.99</u>	<u>7.00</u>	+/- 0.1 SU	<input checked="" type="radio"/> Yes No	
Mid-Day pH (7) check	<u>/</u>	<u>/</u>	7.00	<u>7.02</u>	<u>/</u>	+/- 0.1 SU	Yes No	<u>within Range</u>
pH (10)	<u>1032902</u> <u>08/21</u>	<u>13.09</u>	10.00	<u>9.98</u>	<u>10.00</u>	+/- 0.1 SU	<input checked="" type="radio"/> Yes No	
Mid-Day pH (10) check	<u>/</u>	<u>/</u>	10.00	<u>10.9</u>	<u>/</u>	+/- 0.1 SU	Yes No	<u>within Range</u>
ORP (mV)	<u>101460467</u> <u>08/21</u>	<u>13.33</u>	228	<u>243.5</u>	<u>228</u>	+/- 20mV	<input checked="" type="radio"/> Yes No	
DO (%) (1pt, 100% water saturated air cal)			100	<u>96.39</u>		+/- 6 % saturation	Yes No	
Turbidity 0 NTU			0	<u>0.89</u>	<u>0.00</u>	+/- 0.5 NTU	<input checked="" type="radio"/> Yes No	
Turbidity 1 NTU			1.00	<u>1.31</u>	<u>1.05</u>	+/- 0.5 NTU	<input checked="" type="radio"/> Yes No	
Turbidity 10 NTU			10.00	<u>7.99</u>	<u>10.00</u>	+/- 0.5 NTU	<input checked="" type="radio"/> Yes No	



**EQUIPMENT CALIBRATION LOG**

Field Technician: Thomas Veadar

Date: 3/15/21

Time (start): 7:15

Time (finish): 7:45

SmartTroll SN: 728562

Turbidity Meter Type: LaMotte 2020we

SN: 122892612

Weather Conditions: \_\_\_\_\_

Facility and Unit: Plant Hammond AP-1/2

Project No.: GW6581

**Calibration log**

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20010025	15.35	4490	4530.3	4490	+/- 5 %	<input checked="" type="radio"/> Yes <input type="radio"/> No	
pH (4)	08/21		4.00	3.99	4.00	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (4) check	/	/	4.00	4.02	/	+/- 0.1 SU	Yes No	within range
pH (7)	14340057	15.71	7.00	7.04	7.00	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (7) check	08/21		7.00	6.99	/	+/- 0.1 SU	Yes No	within range
pH (10)	14524902	15.84	10.00	10.01	10.00	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (10) check	08/21		10.00	10.00	/	+/- 0.1 SU	Yes No	within range
ORP (mV)	14460167	15.80	228	227.22	228	+/- 20mV	<input checked="" type="radio"/> Yes <input type="radio"/> No	
DO (%) (1pt, 100% water saturated air cal)	1288		100	99.71	100	+/- 6% saturation	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 0 NTU			0	0.00	0.00	+/- 0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 1 NTU			1.00	0.17	1.05	+/- 0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 10 NTU			10.00	10.34	10.00	+/- 0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	

**EQUIPMENT CALIBRATION LOG**

Field Technician: Thomas Wessan

Date: 3/16/21

Time (start): 0730

Time (finish): 0810

SmartTroll SN: 728566

Turbidity Meter Type: LaMotte 2020we

SN: 17289-2612

Weather Conditions: cloudy / ~~light~~ Rainy

Facility and Unit: Plant Hammond AP-1/2

Project No.: GW6581

**Calibration log**

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20010025 08/21	12.94	4490	41523.2	4490	+/- 5 %	<input checked="" type="radio"/> Yes <input type="radio"/> No	
pH (4)			4.00	3.94 ↑	<del>4.00</del> ↑	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (4) check	<del>20010025 08/21</del>	<del>12.94</del>	4.00	4.07	4.00	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
pH (7)	19310057 03/21	13.23	7.00	7.04	7.00	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (7) check	<del>19310057 03/21</del>	<del>13.23</del>	7.00	7.01	<del>7.00</del>	+/- 0.1 SU	<input type="radio"/> Yes <input type="radio"/> No	
pH (10)	1932902 08/21	13.46	10.00	10.06	10.00	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (10) check	<del>1932902 08/21</del>	<del>13.46</del>	10.00	9.97	<del>10.00</del>	+/- 0.1 SU	<input type="radio"/> Yes <input type="radio"/> No	
ORP (mV)	19460167 08/21	13.35	228	230.9	228	+/- 20mV	<input checked="" type="radio"/> Yes <input type="radio"/> No	
DO (%) (1pt, 100% water saturated air cal)			100	95.73	100	+/- 6 % saturation	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 0 NTU			0	0.00	0.00	+/- 0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 1 NTU			1.00	0.27	1.00	+/- 0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 10 NTU			10.00	11.29	10.00	+/- 0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	



**EQUIPMENT CALIBRATION LOG**

Field Technician: Thomas Alston

Date: 3/17

Time (start): 7:20

Time (finish): 0800

smarTroll SN: 728886

Turbidity Meter Type: LaMotte 2020we

SN: 12289-2012

Weather Conditions: cloudy/rainy 50°

Facility and Unit: Plant Hammond AP-1/2

Project No.: GW6581

**Calibration log**

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	26010025 52001002	11.21	4490	4435.6	4490	± 5 %	Yes No	
pH (4)	08/21		4.00	3.99	4.00	+/- 0.1 SU	Yes No	
Mid-Day pH (4) check	/	/	4.00	4.00	/	+/- 0.1 SU	Yes No	within range
pH (7)	19310037 08/21	11.23	7.00	7.05	7.00	+/- 0.1 SU	Yes No	
Mid-Day pH (7) check	/	/	7.00	7.02	/	+/- 0.1 SU	Yes No	
pH (10)	1432402 08/21	<del>11.23</del>	10.00	10.02	/	+/- 0.1 SU	Yes No	
Mid-Day pH (10) check	/	11.29	10.00	10.06	10.00	+/- 0.1 SU	Yes No	
ORP (mV)	14160167 08/21	11.34	228	247.8	228	+/- 20mV	Yes No	
DO (%) (1pt, 100% water saturated air cal)			100	95.72	100	+/- 6 % saturation	Yes No	
Turbidity 0 NTU			0	1.10	0.00	+/- 0.5 NTU	Yes No	
Turbidity 1 NTU			1.00	0.27	1.01	+/- 0.5 NTU	Yes No	
Turbidity 10 NTU			10.00	9.02	10	+/- 0.5 NTU	Yes No	

**EQUIPMENT CALIBRATION LOG**

Field Technician: Thomas Messem

Date: 3/18/21

Time (start): 0730

Time (finish): 8:10

smarTroll SN: 728560

Turbidity Meter Type: LaMotte 2020we

SN: 222-6822

Weather Conditions: cloudy 60°

Facility and Unit: Plant Hammond AP-1/2

Project No.: GW6581

**Calibration log**

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20010028	15.21	4490	4475.5	4490	+/- 5 %	<input checked="" type="checkbox"/> Yes No	
pH (4)	08/21		4.00	4.00	4.00	+/- 0.1 SU	<input checked="" type="checkbox"/> Yes No	
Mid-Day pH (4) check	/	/	4.00	4.01	/	+/- 0.1 SU	Yes No	
pH (7)	14360037	14.44	7.00	7.02	7.00	+/- 0.1 SU	<input checked="" type="checkbox"/> Yes No	
Mid-Day pH (7) check	08/21		7.00	7.06	/	+/- 0.1 SU	Yes No	
pH (10)	1432902	14.44	10.00	10.06	10.00	+/- 0.1 SU	Yes No	
Mid-Day pH (10) check	08/21		10.00	10.00	/	+/- 0.1 SU	Yes No	
ORP (mV)	19460167	14.89	228	222.5	228	+/- 20mV	<input checked="" type="checkbox"/> Yes No	
DO (%) (1 pt, 100% water saturated air cal)	12/20		100	100.98	100.00	+/- 6 % saturation	<input checked="" type="checkbox"/> Yes No	
Turbidity 0 NTU			0	0.06	0.00	+/- 0.5 NTU	<input checked="" type="checkbox"/> Yes No	
Turbidity 1 NTU			1.00	0.11	1.08	+/- 0.5 NTU	<input checked="" type="checkbox"/> Yes No	
Turbidity 10 NTU			10.00	10.94	9.54	+/- 0.5 NTU	<input checked="" type="checkbox"/> Yes No	

EQUIPMENT CALIBRATION LOG

Field Technician: Thomas Kressler Date: 3/19/21 Time (start): 0730 Time (finish): 0815  
 smartroll SN: 728566 Turbidity Meter Type: LaMotte 2020we SN: 6411-1416  
 Weather Conditions: \_\_\_\_\_ Facility and Unit: Plant Hammond AP-1/2 Project No: GW6581

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	<u>2001025</u>	<u>4.94</u>	4490	<u>4547.1</u>	<u>4490</u>	+/- 5 %	<input checked="" type="radio"/> Yes <input type="radio"/> No	
pH (4)	<u>8/21</u>		4.00	<u>4.04</u>	<u>4.0</u>	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (4) check			4.00	<u>4.02</u>	<del>_____</del>	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
pH (7)	<u>19370057</u> <u>8/21</u>	<u>10.13</u>	7.00	<u>7.10</u>	<u>7.00</u>	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (7) check			7.00	<u>7.00</u>	<del>_____</del>	+/- 0.1 SU	<input type="radio"/> Yes <input type="radio"/> No	
pH (10)	<u>19376102</u> <u>8/21</u>		10.00	<u>10.01</u>	<del>_____</del>	+/- 0.1 SU	<input type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (10) check		<u>10.30</u>	10.00	<u>10.05</u>	<u>10.00</u>	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
ORP (mV)	<u>11420167</u> <u>8/21</u>	<u>10.32</u>	228	<u>234.1</u>	<u>228</u>	+/- 20mV	<input checked="" type="radio"/> Yes <input type="radio"/> No	
DO (%) (1pt, 100% water saturated air cal)			100	<u>98.16</u>	<u>100</u>	+/- 6 % saturation	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 0 NTU			0	<u>0</u>	<u>0</u>	+/- 0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 1 NTU			1.00	<u>1.05</u>	<u>1.05</u>	+/- 0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 10 NTU			10.00	<u>9.78</u>	<u>9.98</u>	+/- 0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	



EQUIPMENT CALIBRATION LOG

Field Technician: Chad Russo Date: 3/18/2021 Time (start): 0730 Time (finish): 0810  
 smarTroll SN: 728550 Turbidity Meter Type: LaMotte 2020we SN: 6411-1496  
 Weather Conditions: 60°F cloudy Facility and Unit: Plant Hammond AP-1/2 Project No.: GW6581

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20010025 8/2021	17.38	4490	4511.6	4490	+/- 5 %	<input checked="" type="radio"/> Yes <input type="radio"/> No	
pH (4)			4.00	3.99	4	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (4) check	20010025 8/2021	19.76	4.00	4.14	4	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
pH (7)	19340057 8/2021	17.52	7.00	7.0	7.0	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (7) check	19340057 8/2021	20.22	7.00	7.04	7	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
pH (10)	19320102 8/2021	17.54	10.00	10.02	10	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (10) check	19320102 8/2021	20.13	10.00	9.98	10	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
ORP (mV)	19460167 8/2021	17.54	228	223.4	228	+/- 20mV	<input checked="" type="radio"/> Yes <input type="radio"/> No	
DO (%) (1pt, 100% water saturated air cal)			100	71.47	100	+/- 6 % saturation	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 0 NTU			0	0	0	+/- 0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 1 NTU			1.00	1.18	1.18	+/- 0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 10 NTU			10.00	10.42	10.42	+/- 0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	

**EQUIPMENT CALIBRATION LOG**

Field Technician: Chad Russo Date: 3/19/2021 Time (start): 0756 Time (finish): 0820  
 smartTroll SN: 728550 Turbidity Meter Type: LaMotte 2020we SN: 6411-1416  
 Weather Conditions: 50°F cloudy Facility and Unit: Plant Hammond AP-1/2 Project No.: GW6581

**Calibration log**

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20010025 8/2021	14.87	4490	4459.7	4490	+/- 5 %	<input checked="" type="radio"/> Yes <input type="radio"/> No	
pH (4)			4.00	3.97	4	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (4) check			4.00			+/- 0.1 SU	Yes <input type="radio"/> No	
pH (7)	14340057 8/2021	14.97	7.00	6.97	7	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (7) check			7.00			+/- 0.1 SU	Yes <input type="radio"/> No	
pH (10)	19320102 8/2021	15.06	10.00	9.98	10	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (10) check			10.00			+/- 0.1 SU	Yes <input type="radio"/> No	
ORP (mV)	19460167 8/2021	15.13	228	230.9	229	+/- 20mV	<input checked="" type="radio"/> Yes <input type="radio"/> No	
DO (%) (1pt, 100% water saturated air cal)			100	104.34	100	+/- 6 % saturation	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 0 NTU			0	0	0	+/- 0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 1 NTU			1.00	.93	.93	+/- 0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 10 NTU			10.00	9.76	9.76	+/- 0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	

EQUIPMENT CALIBRATION LOG

Field Technician: VASHISH TAJWAD Date: 3-~~17~~<sup>18</sup>-2021 Time (start): 0806 Time (finish): 0816

smarTroll SN: 728563 Turbidity Meter Type: LaMotte 2020we SN: 710-0711

Weather Conditions: SHOWERS, STORMS, 50°F Facility and Unit: Plant Hammond AP-1/2 Project No.: GW6581

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20610025 08/21	16.52	4490	4532.6	4490	± 5 %	<input checked="" type="radio"/> Yes No	
pH (4)	"	"	4.00	3.95	4.00	+/- 0.1 SU	<input checked="" type="radio"/> Yes No	
Mid-Day pH (4) check	"	19.31	4.00	4.05	4.00	+/- 0.1 SU	<input checked="" type="radio"/> Yes No	
pH (7)	19340057 08/21	17.03	7.00	6.99	7.00	+/- 0.1 SU	<input checked="" type="radio"/> Yes No	
Mid-Day pH (7) check	"	19.54	7.00	7.01	7.00	+/- 0.1 SU	<input checked="" type="radio"/> Yes No	
pH (10)	19320102 08/21	17.10	10.00	10.04	10.00	+/- 0.1 SU	<input checked="" type="radio"/> Yes No	
Mid-Day pH (10) check	"	19.55	10.00	9.99	10.00	+/- 0.1 SU	<input checked="" type="radio"/> Yes No	
ORP (mV)	19401107 08/21	17.05	228	238.1	228	+/- 20mV	<input checked="" type="radio"/> Yes No	
DO (%) (1pt. 100% water saturated air cal)			100	99.19	100	+/- 6 % saturation	<input checked="" type="radio"/> Yes No	
Turbidity 0 NTU			0	0.00	0	+/- 0.5 NTU	<input checked="" type="radio"/> Yes No	
Turbidity 1 NTU			1.00	1.06	1.00	+/- 0.5 NTU	<input checked="" type="radio"/> Yes No	
Turbidity 10 NTU			10.00	10.45	10.00	+/- 0.5 NTU	<input checked="" type="radio"/> Yes No	



**EQUIPMENT CALIBRATION LOG**

Field Technician: VASHISH TANKAR Date: 3-10-2024 Time (start): 07:40 Time (finish): 07:49  
 smartTroll SN: 728563 Turbidity Meter Type: LaMotte 2020we SN: 710-0711  
 Weather Conditions: Cloudy, 40°F Facility and Unit: Plant Hammond AP-1/2 Project No: GW6581

**Calibration log**

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20610025 08/24	21.06	4490	4366.2	4490	+/- 5 %	Yes No	
pH (4)			4.00	3.93	4.00	+/- 0.1 SU	Yes No	
Mid-Day pH (4) check			4.00			+/- 0.1 SU	Yes No	
pH (7)	19340057 08/24	19.38	7.00	6.92	7.00	+/- 0.1 SU	Yes No	
Mid-Day pH (7) check				7.00			+/- 0.1 SU	Yes No
pH (10)	19320102 08/24	18.70	10.00	9.88	10.00	+/- 0.1 SU	Yes No	
Mid-Day pH (10) check				10.00			+/- 0.1 SU	Yes No
ORP (mV)	19400167 08/24	18.74	228	238.0	229	+/- 20mV	Yes No	
DO (%) (1pt, 100% water saturated air cal)			100	95.71	100	+/- 6 % saturation	Yes No	
Turbidity 0 NTU			0	0.00	0.00	+/- 0.5 NTU	Yes No	
Turbidity 1 NTU			1.00	0.96	1.00	+/- 0.5 NTU	Yes No	
Turbidity 10 NTU			10.00	10.39	10.00	+/- 0.5 NTU	Yes No	

**EQUIPMENT CALIBRATION LOG**

Field Technician: Thomas Messem

Date: 3/18/21

Time (start): 0730

Time (finish): 8:10

smarTroll SN: 728560

Turbidity Meter Type: LaMotte 2020we

SN: 222-6822

Weather Conditions: cloudy 60°

Facility and Unit: Plant Hammond AP-1/2

Project No.: GW6581

**Calibration log**

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20010028	15.21	4490	4475.5	4490	+/- 5 %	<input checked="" type="checkbox"/> Yes No	
pH (4)	08/21		4.00	4.00	4.00	+/- 0.1 SU	<input checked="" type="checkbox"/> Yes No	
Mid-Day pH (4) check	/	/	4.00	4.01	/	+/- 0.1 SU	Yes No	
pH (7)	14360037	14.44	7.00	7.02	7.00	+/- 0.1 SU	<input checked="" type="checkbox"/> Yes No	
Mid-Day pH (7) check	08/21		7.00	7.06	/	+/- 0.1 SU	Yes No	
pH (10)	1432902	14.44	10.00	10.06	10.00	+/- 0.1 SU	Yes No	
Mid-Day pH (10) check	08/21		10.00	10.00	/	+/- 0.1 SU	Yes No	
ORP (mV)	19460167	14.89	228	222.5	228	+/- 20mV	<input checked="" type="checkbox"/> Yes No	
DO (%) (1 pt, 100% water saturated air cal)			100	100.98	100.00	+/- 6 % saturation	<input checked="" type="checkbox"/> Yes No	
Turbidity 0 NTU			0	0.06	0.00	+/- 0.5 NTU	<input checked="" type="checkbox"/> Yes No	
Turbidity 1 NTU			1.00	0.11	1.08	+/- 0.5 NTU	<input checked="" type="checkbox"/> Yes No	
Turbidity 10 NTU			10.00	10.94	9.54	+/- 0.5 NTU	<input checked="" type="checkbox"/> Yes No	



EQUIPMENT CALIBRATION LOG

Field Technician: Thomas Kressler Date: 3/19/21 Time (start): 0730 Time (finish): 0815  
 smartroll SN: 728566 Turbidity Meter Type: LaMotte 2020we SN: 6411-1416  
 Weather Conditions: \_\_\_\_\_ Facility and Unit: Plant Hammond AP-1/2 Project No: GW6581

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	<u>2001025</u>		4490	<u>4547.1</u>	<u>4490</u>	+/- 5 %	<input checked="" type="radio"/> Yes <input type="radio"/> No	
pH (4)	<u>8/21</u>	<u>4.99</u>	4.00	<u>4.04</u>	<u>4.0</u>	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (4) check			4.00	<u>4.02</u>	<del>_____</del>	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
pH (7)	<u>19370057</u> <u>8/21</u>	<u>10.13</u>	7.00	<u>7.10</u>	<u>7.00</u>	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (7) check			7.00	<u>7.00</u>	<del>_____</del>	+/- 0.1 SU	<input type="radio"/> Yes <input type="radio"/> No	
pH (10)	<u>19376102</u> <u>8/21</u>		10.00	<u>10.01</u>	<del>_____</del>	+/- 0.1 SU	<input type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (10) check		<u>10.30</u>	10.00	<u>10.05</u>	<u>10.00</u>	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
ORP (mV)	<u>11420167</u> <u>8/21</u>	<u>10.32</u>	228	<u>234.1</u>	<u>228</u>	+/- 20mV	<input checked="" type="radio"/> Yes <input type="radio"/> No	
DO (%) (1pt, 100% water saturated air cal)			100	<u>98.16</u>	<u>100</u>	+/- 6 % saturation	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 0 NTU			0	<u>0</u>	<u>0</u>	+/- 0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 1 NTU			1.00	<u>1.05</u>	<u>1.05</u>	+/- 0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 10 NTU			10.00	<u>9.78</u>	<u>9.98</u>	+/- 0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	

August 2021

EQUIPMENT CALIBRATION LOG

Field Technician: C. CAIN

Date: 8/11/21

Time (start): 1255

Time (finish): 1322

smarTroll SN: 728541

Turbidity Meter Type: LaMotte 2020we

SN: 2953

Weather Conditions: Sunny 96°F

Facility and Unit: Plant Hammond

Project No.: GW6581

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20440203 2/22	30.72	4490	4371	4490	+/- 5 %	<input checked="" type="checkbox"/> Yes No	
pH (4)			4.00	4.01	4.0	+/- 0.1 SU	<input checked="" type="checkbox"/> Yes No	
Mid-Day pH (4) check			4.00			+/- 0.1 SU	Yes No	
pH (7)	19450117 2/22	30.85	7.00	6.97	7.0	+/- 0.1 SU	<input checked="" type="checkbox"/> Yes No	
Mid-Day pH (7) check			7.00			+/- 0.1 SU	Yes No	
pH (10)	21010067 2/22	30.43	10.00	9.92	10.0	+/- 0.1 SU	<input checked="" type="checkbox"/> Yes No	
Mid-Day pH (10) check			10.00			+/- 0.1 SU	Yes No	
ORP (mV)	19460167 2/22	29.73	228	219.7	228	+/- 20mV	<input checked="" type="checkbox"/> Yes No	
DO (%) (1pt, 100% water saturated air cal)			100	102.06	100	+/- 6 % saturation	<input checked="" type="checkbox"/> Yes No	
Turbidity 0 NTU			0	0.11	0.08	+/- 0.5 NTU	<input checked="" type="checkbox"/> Yes No	
Turbidity 1 NTU			1.00	0.75	1.00	+/- 0.5 NTU	<input checked="" type="checkbox"/> Yes No	
Turbidity 10 NTU			10.00	11.67	10.00	+/- 0.5 NTU	<input checked="" type="checkbox"/> Yes No	

EQUIPMENT CALIBRATION LOG

Field Technician: Thomas Kessler

Date: 8/11/2021

Time (start): 1252

Time (finish): 1210

smarTroll SN: 72864

Turbidity Meter Type: LaMotte 2020we

SN: 5573-1515

Weather Conditions: Sunny

Facility and Unit: Plant Hammond AP-1/2

Project No.: GW6581

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	<del>20440203</del>	33.29	4490	4373.6	4490	+/- 5%	<input checked="" type="radio"/> Yes <input type="radio"/> No	
pH (4)	20440203 2/22		4.00	4.08	4.00	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (4) check	" "	/	4.00	4.05	/	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
pH (7)	21660888 6/22	31.37	7.00	7.01	7.00	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (7) check	" "	/	7.00	6.98	/	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
pH (10)	21660189 6/22	30.34	10.00	9.98	10.00	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (10) check	" "	/	10.00	9.92	/	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
ORP (mV)	19460167 2/22	29.88	228	241.2	228	+/- 20mV	<input checked="" type="radio"/> Yes <input type="radio"/> No	
DO (%) (1pt, 100% water saturated air cal)			100	107.43	100	+/- 6% saturation	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 0 NTU			0	0.00	0.00	+/- 0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 1 NTU			1.00	1.57	1.11	+/- 0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 10 NTU			10.00	7.29	9.64	+/- 0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	

EQUIPMENT CALIBRATION LOG

Field Technician: C. CAIN Date: 8/12/21 Time (start): 0720 Time (finish): 0751  
 smarTroll SN: 728541 Turbidity Meter Type: LaMote 2020we SN: 2453  
 Weather Conditions: Cloudy, 75°F Facility and Unit: Plant Hammond Project No.: GW6581

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20440203 02/22	23.79	4490	4511.8	4490	+/- 5 %	<input checked="" type="checkbox"/> No	
pH (4)			4.00	3.98	4.0	+/- 0.1 SU	<input checked="" type="checkbox"/> No	
Mid-Day pH (4) check	20440203 2/22	29.16	4.00	4.03	4.0	+/- 0.1 SU	<input checked="" type="checkbox"/> No	
pH (7)	19450117 2/22	25.45	7.00	6.95	7.0	+/- 0.1 SU	<input checked="" type="checkbox"/> No	
Mid-Day pH (7) check	19450117 2/22	28.69	7.00	7.0	7.0	+/- 0.1 SU	<input checked="" type="checkbox"/> No	
pH (10)	21010067 2/22	25.36	10.00	10.02	10	+/- 0.1 SU	<input checked="" type="checkbox"/> No	
Mid-Day pH (10) check	21010067 2/22	28.25	10.00	10.0	10.0	+/- 0.1 SU	<input checked="" type="checkbox"/> No	
ORP (mV)	19460167 2/22	25.57	228	229.4	228	+/- 20mV	<input checked="" type="checkbox"/> No	
DO (%) (1pt, 100% water saturated air cal)			100	99.16	100	+/- 6 % saturation	<input checked="" type="checkbox"/> No	
Turbidity 0 NTU			0	0.08	0.08	+/- 0.5 NTU	<input checked="" type="checkbox"/> No	
Turbidity 1 NTU			1.00	0.73	1.0	+/- 0.5 NTU	<input checked="" type="checkbox"/> No	
Turbidity 10 NTU			10.00	12.56	10.0	+/- 0.5 NTU	<input checked="" type="checkbox"/> No	

EQUIPMENT CALIBRATION LOG

Field Technician: A. Ramsay Date: 8/12/21 Time (start): 0720 Time (finish): 0745  
 smarTroll SN: 728623 Turbidity Meter Type: LaMotte 2020we SN: 1859-0412  
 Weather Conditions: Sunny, 91 Facility and Unit: Plant Hammond Project No.: GW6581

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	2044023 2/22	23.48	4490	4421.8	4490.0	+/- 5 %	<input checked="" type="radio"/> Yes <input type="radio"/> No	
pH (4)			4.00	3.97	4.00	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (4) check		31.76	4.00	3.97		+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
pH (7)	21080188 6/22	23.70	7.00	6.97	7.00	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (7) check				7.00	7.02		+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No
pH (10)	21080189 6/22	23.54	10.00	9.99	10.00	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (10) check				30.89	10.00	9.98		+/- 0.1 SU
ORP (mV)	1946967 2/22	23.43	228	234.7	228.0	+/- 20mV	<input checked="" type="radio"/> Yes <input type="radio"/> No	
DO (%) (1pt, 100% water saturated air cal)			100	100.60	100.00	+/- 6 % saturation	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 0 NTU			0	0.85	0.00	+/- 0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 1 NTU			1.00	2.32	1.00	+/- 0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 10 NTU			10.00	7.62	10.00	+/- 0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	



EQUIPMENT CALIBRATION LOG

Field Technician: Thomas Kessler

Date: 8/13/21

Time (start): 0715

Time (finish): 0755

smarTroll SN: 725634

Turbidity Meter Type: LaMotte 2020we

SN: 5573-1515

Weather Conditions: Sunny 80°

Facility and Unit: Plant Hammond AP-1/2

Project No.: GW6581

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20440203	25.93	4490	4475.8	4490	+/- 5%	<input checked="" type="radio"/> Yes No	
pH (4)	2/22		4.00	4.04	4.00	+/- 0.1 SU	Yes No	
Mid-Day pH (4) check	" "	/	4.00	4.01	/	+/- 0.1 SU	Yes No	
pH (7)	21680188 6/22	26.09	7.00	7.02	7.00	+/- 0.1 SU	<input checked="" type="radio"/> Yes No	
Mid-Day pH (7) check	" "	/	7.00	6.99	/	+/- 0.1 SU	Yes No	
pH (10)	21080189 6/22	25.55	10.00	9.99	10.00	+/- 0.1 SU	<input checked="" type="radio"/> Yes No	
Mid-Day pH (10) check	" "	/	10.00	10.05	/	+/- 0.1 SU	Yes No	
ORP (mV)	19460167 2/27	25.81	228	225.5	228	+/- 20mV	<input checked="" type="radio"/> Yes No	
DO (%) (1pt, 100% water saturated air cal)			100	96.43	100	+/- 6% saturation	<input checked="" type="radio"/> Yes No	
Turbidity 0 NTU			0	0.62	0.00	+/- 0.5 NTU	Yes No	
Turbidity 1 NTU			1.00	0.96	1.00	+/- 0.5 NTU	Yes No	
Turbidity 10 NTU			10.00	10.16	9.98	+/- 0.5 NTU	Yes No	

EQUIPMENT CALIBRATION LOG

Field Technician: Thomas Keaster Date: 8/16/2021 Time (start): 0745 Time (finish): 0805  
 smarTroll SN: 778634 Turbidity Meter Type: LaMotte 2020we SN: 5573-1215  
 Weather Conditions: cloudy, 80° Facility and Unit: Plant Hammond AP-1/2 Project No.: GW6581

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20440203	24.23	4490	4565.1	4490	+/- 5%	<input checked="" type="radio"/> Yes No	
pH (4)	02/22		4.00	4.12	4.00	+/- 0.1 SU	<input checked="" type="radio"/> Yes No	
Mid-Day pH (4) check	" "		4.00	4.04		+/- 0.1 SU	Yes No	
pH (7)	21086188 6/22	25.34	7.00	6.99	7.00	+/- 0.1 SU	<input checked="" type="radio"/> Yes No	
Mid-Day pH (7) check	" "		7.00	7.03		+/- 0.1 SU	Yes No	
pH (10)	21086189 6/22	25.40	10.00	9.98	10.00	+/- 0.1 SU	<input checked="" type="radio"/> Yes No	
Mid-Day pH (10) check	" "		10.00	9.97		+/- 0.1 SU	Yes No	
ORP (mV)	1446067 2/22	25.41	228	228.1	228	+/- 20mV	<input checked="" type="radio"/> Yes No	
DO (%) (1pt, 100% water saturated air cal)			100	100.48	100.00	+/- 6% saturation	<input checked="" type="radio"/> Yes No	
Turbidity 0 NTU			0	0.92	0.00	+/- 0.5 NTU	<input checked="" type="radio"/> Yes No	
Turbidity 1 NTU			1.00	0.80	1.05	+/- 0.5 NTU	<input checked="" type="radio"/> Yes No	
Turbidity 10 NTU			10.00	10.04	10.00	+/- 0.5 NTU	<input checked="" type="radio"/> Yes No	



EQUIPMENT CALIBRATION LOG

Field Technician: Thomas Kress Date: 8/18/21 Time (start): 0724 Time (finish): 0754  
 smarTroll SN: 226634 Turbidity Meter Type: LaMotte 2020we SN: 5575-1515  
 Weather Conditions: Bunny Facility and Unit: Plant Hammond AP-1/2 Project No.: GW6581

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	205010203	20.34	4490	4403	4490	+/- 5 %	<input checked="" type="radio"/> Yes <input type="radio"/> No	
pH (4)	2122		4.00	4.00	4.0	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (4) check	" "	24.68	4.00	4.09	<del>                    </del>	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
pH (7)	21050188 6/22	20.52	7.00	7.07	7.00	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (7) check	" "	24.09	7.00	6.99	<del>                    </del>	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
pH (10)	21050189 6/2022	20.38	10.00	10.04	10.00	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (10) check	" "	23.66	10.00	9.93	<del>                    </del>	+/- 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
ORP (mV)	1946067 2122	20.38	228	235.0	228	+/- 20mV	<input checked="" type="radio"/> Yes <input type="radio"/> No	
DO (%) (1pt, 100% water saturated air cal)			100	95.07	100	+/- 6 % saturation	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 0 NTU			0	1.21	0.00	+/- 0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 1 NTU			1.00	0.98	1.00	+/- 0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 10 NTU			10.00	9.94	10.00	+/- 0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	

EQUIPMENT CALIBRATION LOG

Field Technician: A. Ramsley

Date: 8/18/21

Time (start): 0730

Time (finish): 0755

smarTroll SN: 728623

Turbidity Meter Type: LaMotte 2020we

SN: 1859-0412

Weather Conditions: Sunny, 91

Facility and Unit: Plant Hammond

Project No.: GW6581

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20440203 2/22	21.28	4490	4521.3	4490.0	+/- 5 %	<input checked="" type="radio"/> Yes No	
pH (4)			4.00	4.02	4.00	+/- 0.1 SU	<input checked="" type="radio"/> Yes No	
Mid-Day pH (4) check	" "		4.00	4.00	—	+/- 0.1 SU	Yes No	
pH (7)	21080188 6/22	21.75	7.00	7.00	7.00	+/- 0.1 SU	<input checked="" type="radio"/> Yes No	
Mid-Day pH (7) check			" "	7.00	7.02	—	+/- 0.1 SU	Yes No
pH (10)	21080189 6/22	21.32	10.00	10.01	10.00	+/- 0.1 SU	<input checked="" type="radio"/> Yes No	
Mid-Day pH (10) check			" "	10.00	10.04	—	+/- 0.1 SU	Yes No
ORP (mV)	19460167 2/22	21.91	228	229.2	228.0	+/- 20mV	<input checked="" type="radio"/> Yes No	
DO (%) (1pt, 100% water saturated air cal)			100	101.24	100.00	+/- 6 % saturation	<input checked="" type="radio"/> Yes No	
Turbidity 0 NTU			0	0.80	0.00	+/- 0.5 NTU	<input checked="" type="radio"/> Yes No	
Turbidity 1 NTU			1.00	0.65	1.00	+/- 0.5 NTU	<input checked="" type="radio"/> Yes No	
Turbidity 10 NTU			10.00	10.95	10.00	+/- 0.5 NTU	<input checked="" type="radio"/> Yes No	

EQUIPMENT CALIBRATION LOG

Field Technician: Co CAIN

Date: 8/19/21

Time (start): 0730

Time (finish): 0800

smarTroll SN: 728541

Turbidity Meter Type: LaMotte 2020we

SN: 2953

Weather Conditions: Sunny 72°F

Facility and Unit: Plant Hammond

Project No.: GW6581

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20440203 2/22	26.51	4490	4360.6	4490	+/- 5 %	<input checked="" type="checkbox"/> Yes No	
pH (4)			4.00	3.42	4.0	+/- 0.1 SU	<input checked="" type="checkbox"/> Yes No	
Mid-Day pH (4) check	20440203 2/22	29.20	4.00	4.07	4.0	+/- 0.1 SU	<input checked="" type="checkbox"/> Yes No	
pH (7)	19450117 2/22	27.04	7.00	6.79	7.0	+/- 0.1 SU	<input checked="" type="checkbox"/> Yes No	
Mid-Day pH (7) check	19450117 2/22	29.16	7.00	7.01	7.0	+/- 0.1 SU	<input checked="" type="checkbox"/> Yes No	
pH (10)	21010067 2/22	27.57	10.00	10.14	10.0	+/- 0.1 SU	<input checked="" type="checkbox"/> Yes No	
Mid-Day pH (10) check	21010067 2/22	28.83	10.00	9.92	10.0	+/- 0.1 SU	<input checked="" type="checkbox"/> Yes No	
ORP (mV)	19460167 2/22	26.93	228	223.5	228	+/- 20mV	<input checked="" type="checkbox"/> Yes No	
DO (%) (1pt, 100% water saturated air cal)			100	100.82	100.0	+/- 6 % saturation	<input checked="" type="checkbox"/> Yes No	
Turbidity 0 NTU			0	0.11	0.10	+/- 0.5 NTU	<input checked="" type="checkbox"/> Yes No	
Turbidity 1 NTU			1.00	0.72	1.00	+/- 0.5 NTU	<input checked="" type="checkbox"/> Yes No	
Turbidity 10 NTU			10.00	13.11	10.0	+/- 0.5 NTU	Yes No	

EQUIPMENT CALIBRATION LOG

Field Technician: Thomas Hussler Date: 8/19 Time (start): 0720 Time (finish): 0815  
 smarTroll SN: 728634 Turbidity Meter Type: LaMotte 2020we SN: 5573-1515  
 Weather Conditions: Sunny Facility and Unit: Plant Hammond AP-1/2 Project No.: GW6581

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	<del>2044029</del>	<del>24.95</del>	4490	41576.1	4490	+/- 5 %	<input checked="" type="radio"/> Yes No	
pH (4)	02122	24.95	4.00	<del>6.94</del> 4.94	<del>4.89</del>	+/- 0.1 SU	<input checked="" type="radio"/> Yes No	pH = 4.00
Mid-Day pH (4) check	" "	" "	4.00	4.01	✓	+/- 0.1 SU	Yes No	
pH (7)	<del>21660188</del> 2212	26.00	7.00	6.95	7.00	+/- 0.1 SU	<input checked="" type="radio"/> Yes No	
Mid-Day pH (7) check	" "	" "	7.00	6.99	✓	+/- 0.1 SU	Yes No	
pH (10)	<del>21050189</del> 06172	26.50	10.00	9.92	10.00	+/- 0.1 SU	<input checked="" type="radio"/> Yes No	
Mid-Day pH (10) check	" "	" "	10.00	9.97	✓	+/- 0.1 SU	Yes No	
ORP (mV)	19460167 7172	26.36	228	218.9	228	+/- 20mV	<input checked="" type="radio"/> Yes No	
DO (%) (1pt, 100% water saturated air cal)			100	84.39	100	+/- 6 % saturation	<input checked="" type="radio"/> Yes No	
Turbidity 0 NTU			0	1.23	0.00	+/- 0.5 NTU	<input checked="" type="radio"/> Yes No	
Turbidity 1 NTU			1.00	0.91	1.00	+/- 0.5 NTU	<input checked="" type="radio"/> Yes No	
Turbidity 10 NTU			10.00	9.69	9.95	+/- 0.5 NTU	<input checked="" type="radio"/> Yes No	



EQUIPMENT CALIBRATION LOG

Field Technician: A. Ramsey

Date: 8/19/21

Time (start): 0735

Time (finish): 0800

smarTroll SN: 728623

Turbidity Meter Type: LaMotte 2020we

SN: 1859-0412

Weather Conditions: Sunny, 91

Facility and Unit: plant hammond

Project No.: GW6581

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20440203 2/22	24.76	4490	4426.1	4490.0	+/- 5 %	<input checked="" type="radio"/> Yes No	
pH (4)			4.00	4.03	4.00	+/- 0.1 SU	<input checked="" type="radio"/> Yes No	
Mid-Day pH (4) check	" "	30.23	4.00	4.01		+/- 0.1 SU	<input checked="" type="radio"/> Yes No	
pH (7)	21080188 6/22	24.92	7.00	7.07	7.00	+/- 0.1 SU	<input checked="" type="radio"/> Yes No	
Mid-Day pH (7) check			" "	30.17	7.00	7.01		+/- 0.1 SU
pH (10)	21080189 6/22	24.86	10.00	10.02	10.00	+/- 0.1 SU	<input checked="" type="radio"/> Yes No	
Mid-Day pH (10) check			" "	30.15	10.00	10.02		+/- 0.1 SU
ORP (mV)	19460167 2/22	25.01	228	222.3	228.0	+/- 20mV	<input checked="" type="radio"/> Yes No	
DO (%) (1pt, 100% water saturated air cal)			100	99.19	100.00	+/- 6 % saturation	<input checked="" type="radio"/> Yes No	
Turbidity 0 NTU			0	1.03	0.00	+/- 0.5 NTU	<input checked="" type="radio"/> Yes No	
Turbidity 1 NTU			1.00	1.51	1.00	+/- 0.5 NTU	<input checked="" type="radio"/> Yes No	
Turbidity 10 NTU			10.00	9.05	10.00	+/- 0.5 NTU	<input checked="" type="radio"/> Yes No	

# APPENDIX D

## Semiannual Remedy Selection and Design Progress Report

*Prepared for*



**Georgia Power Company**  
241 Ralph McGill Blvd NE  
Atlanta, Georgia 30308

# SEMIANNUAL REMEDY SELECTION AND DESIGN PROGRESS REPORT

## PLANT HAMMOND ASH POND 2 (AP-2)

*Prepared by*



**engineers | scientists | innovators**

1255 Roberts Boulevard, Suite 200  
Kennesaw, Georgia 30144

Project Number GW6581B

January 2022

## SEMIANNUAL REMEDY SELECTION AND DESIGN PROGRESS REPORT

### PLANT HAMMOND ASH POND 2 (AP-2)

This *Semiannual Remedy Selection and Design Progress Report, Plant Hammond Ash Pond 2 (AP-2)*, has been prepared in accordance with the United States Environmental Protection Agency Coal Combustion Residual Rule, specifically 40 Code of Federal (CFR) § 257.97(a) and the Georgia Environmental Protection Division Rules for Solid Waste Management 391-3-4-.10(6)(a). This report describes the progress made during the second semiannual period of 2021 in selecting and designing a remedy previously documented in the *Assessment of Corrective Measures Report – Plant Hammond Ash Pond 2 (AP-2)*.

#### Report Prepared by:



---

Whitney B. Law, P.E.  
Georgia Professional Engineer No. 036641

January 31, 2022

Date



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## LIST OF ACRONYMS AND ABBREVIATIONS

ACM	Assessment of Corrective Measures
AEC	anion exchange capacity
AP	ash pond
CCR	coal combustion residuals
CEC	cation exchange capacity
CFR	Code of Federal Regulations
Co	cobalt
CSM	conceptual site model
DPT	direct-push technology
EDXA	energy disperse X-Ray analysis
Fe	iron
GA EPD	Georgia Environmental Protection Division
Georgia Power	Georgia Power Company
Geosyntec	Geosyntec Consultants, Inc.
gpm	gallons per minute
GWPS	Groundwater Protection Standard
$K_d$	distribution coefficient
mg/L	milligrams per liter
mg/kg	milligrams per kilogram
mL	milliliter
MNA	monitored natural attenuation
Mo	molybdenum
ORP	oxidation reduction potential
Pb	lead
PRB	permeable reactive barriers
SEP	sequential extraction procedure
SiREM	SiREM laboratories
SSI	statistically significant increase
SSL	statistically significant level
s.u.	standard units
TOC	total organic carbon
USEPA	United States Environmental Protection Agency
USGS	United States Geological Survey

## 1.0 INTRODUCTION

### 1.1 Purpose

This *Semiannual Remedy Selection and Design Progress Report* (the semiannual progress report) was prepared by Geosyntec Consultants, Inc. (Geosyntec) for Georgia Power Company (Georgia Power) Plant Hammond Ash Pond 2 (AP-2 or Site) in accordance with the United States Environmental Protection Agency (US EPA) Coal Combustion Residual Rule (CCR Rule) (40 Code of Federal Regulations [CFR] 257 Subpart D), specifically 40 CFR 257.97(a), and the Georgia Environmental Protection Division (GA EPD) Rules for Solid Waste Management 391-3-4-.10(6)(a). This progress report describes the progress made since the prior semiannual progress report in selecting and designing a remedy. Potentially applicable groundwater corrective measures were previously described in the *Assessment of Corrective Measures Report – Plant Hammond Ash Pond 2 (AP-2)* (Geosyntec, 2019b) (ACM Report).

The purpose of the ACM Report (and subsequent semiannual progress reports) is to document the process of evaluating and selecting corrective measure(s) to improve groundwater quality. This process is typically iterative and may be composed of multiple steps to analyze the applicability of corrective measures. Once potential corrective measures are identified, they are further evaluated using the criteria outlined in § 257.96(c) and Rule 391-3-4-.10(6)(a). The selected corrective measure must meet the additional protection criteria outlined in § 257.97 and corresponding Rule 391-3-4-10(6)(a). Pursuant to § 257.97(a) and Rule 391-3-4-.10(6)(a), semiannual progress reports have been regularly submitted to document the efforts of evaluating and progressing towards selecting a groundwater corrective measure (Geosyntec, 2020a, 2020b, 2021b, 2021d).

### 1.2 Site Background and Overview of AP-2 Pond Closure

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 four coal-fired electric generating units at Plant Hammond were decommissioned in 2019 and electricity is no longer produced at the Site.

AP-2 is a 21-acre surface impoundment. Dewatered ash from AP-2 is excavated and transported to the nearby Huffaker Road facility, a permitted solid waste disposal location

owned and operated by Georgia Power. Georgia Power will close AP-2 through removal of the CCR material from the CCR unit. The Closure Plan submitted to GA EPD as part of the closure permit application package describes the closure activities and requirements in accordance with § 257.102 and corresponding Rule 391-3-4-.10(7)(b). The proposed closure by removal approach provides a source control measure that reduces the potential for migration of CCR constituents to groundwater. Details of the closure approach are provided in the Initial Written Closure Plan and published in 2016 to Georgia Power's website. Closure permit No. 057-024D(CCR) was approved by GA EPD on June 22, 2020.

### **1.3 Regulatory Program Status and Nature and Extent**

CCR compliance groundwater monitoring-related activities have been performed for AP-2 since May 2016 pursuant to the CCR Rule. Georgia Power initiated the assessment monitoring program in January 2018 after identifying statistically significant increases (SSIs) above background of Appendix III constituents in groundwater.

Statistical analyses of the Appendix IV assessment monitoring groundwater data collected in 2018 identified statistically significant level (SSLs) of cobalt (Co) in compliance monitoring wells HGWC-15 and HGWC-18 at concentrations exceeding the Groundwater Protection Standard (GWPS) (Geosyntec, 2019a). Pursuant to § 257.96, Georgia Power initiated an assessment of corrective measures (ACM) for AP-2 in January 2019. The ACM Report (Geosyntec, 2019b) was submitted to GA EPD in June 2019 and posted to the CCR compliance website in July 2019.

As part of the assessment monitoring program, delineation wells have been installed to delineate Appendix IV constituents and piezometers have been installed to characterize flow conditions downgradient of AP-2 (**Figure 2**; well construction details are provided in **Table 1**). Further, additional upgradient compliance monitoring wells (HGWA-42D, HGWA-43D, and HGWA-44D) were installed in August 2020 to characterize background groundwater quality and flow conditions in deeper zones of the uppermost aquifer. Statistical analysis of the August 2021 semiannual assessment monitoring groundwater data identified SSLs of Co, lead (Pb), and molybdenum (Mo) at concentrations exceeding the noted state or federal GWPS. The Co, Pb, and Mo SSLs have been horizontally and vertically delineated to below the state and federal GWPS. Details regarding statistical analysis and delineation are provided in Sections 4 and 5, respectively, of the *2021 Annual Groundwater Monitoring and Corrective Action Report* (2021 Annual Report) (Geosyntec, 2022).

AP-2 (Federal CCR Rule):

- Co: HGWC-18, MW-33, MW-35

AP-2 (GA EPD CCR Rule):

- Co: HGWC-18, MW-33, MW-35
- Pb: HGWC-14, HGWC-18, and MW-33
- Mo: MW-21D

Iso concentration maps generated from the August 2021 groundwater and September 2021 water data for Co, Pb, and Mo are presented in **Figures 3, 4, and 5** respectively.

Based on GA EPD guidance, constituents in wells with SSLs were further evaluated using the Sen's Slope/Mann Kendall trend test (**Appendix A**). The full report generated from the analyses is provided in Appendix E of the 2021 Annual Report. No statistically significant increasing trends were identified during the August 2021 statistical analyses. A statistically significant decreasing trend was identified for Mo in MW-21D.

Georgia Power will continue to adaptively manage the Site and use ongoing data collection to evaluate the need for additional wells at AP-2. Pursuant to § 257.96, groundwater in the vicinity of AP-2 continues to be monitored during the ACM phase in accordance with the established assessment monitoring program.

#### **1.4 Corrective Measures Evaluated**

As discussed in the ACM Report, the following corrective measures are potentially feasible for use at AP-2. A comparative screening of the corrective measures is provided in **Table 2**.

1. Geochemical Manipulation (In-Situ Injection)
2. Hydraulic Containment
3. Monitored Natural Attenuation (MNA)
4. Permeable Reactive Barrier (PRB)
5. Subsurface Vertical Barrier Walls

The PRB and vertical barrier wall corrective measures were removed from consideration based on data evaluations presented in the August 2020 semiannual progress report

(Geosyntec, 2020b). The rationale for not considering phytoremediation and in-situ solidification/stabilization (ISS) as potentially applicable corrective measures at AP-2 was presented in the ACM Report (Geosyntec, 2019b). There is a lack of available area to plant trees (i.e., phytoremediation) downgradient of the pond and ISS is not an applicable technology at AP-2 since the CCR unit will be closed by removal of CCR materials from the unit.

Georgia Power proactively initiated adaptive site management as outlined in the ACM Report to support the groundwater remedy selection process and address potential changes in site conditions (e.g., successful reduction of constituent concentrations or changing trends) as appropriate. The adaptive site management approach will take existing site conditions, including natural attenuation mechanisms, into account. Characterization activities to evaluate attenuation mechanisms at the Site include collection of data necessary to progressively evaluate the existing and long-term effectiveness of these processes in the aquifer and reduce uncertainty for decision making at each screening step as listed in the USEPA guidelines for MNA of inorganic constituents (USEPA, 1999, 2007 and 2015). The 1999 MNA guidance originally introduced the “tiered approach” with three tiers of site-specific information, or lines of evidence, to evaluate the appropriate use of MNA at certain sites (USEPA, 1999). In 2007, the USEPA issued MNA technical guidance specific to inorganic contaminants (USEPA, 2007) that contained four “tiers.” The 2015 MNA guidance retains these four “tiers”, but describes them as “phases” as described below (USEPA, 2015). This 2015 MNA document for inorganic contaminants expands on and is designed to be a companion to the 1999 and 2007 MNA guidance.

- Phase I: Demonstration that the groundwater plume is *not expanding*.
- Phase II: Determination that the *mechanism and rate* of the attenuation process are sufficient.
- Phase III: Determination that the *capacity* of the aquifer is sufficient to attenuate the mass of contaminant within the plume and the *stability* of the immobilized contaminant is sufficient to resist re-mobilization.
- Phase IV: Design of a *performance monitoring program* based on an understanding of the mechanism of the attenuation process, and establishment of contingency remedies tailored to site-specific characteristics.

Georgia Power will address Phase IV, as appropriate, during the development of the future corrective action monitoring plan, after the final remedy selection report.

The data collection approach and the data interpretation presented within this semiannual progress report are informed by this phased MNA guidance. It is noted, however, that the characterization data collected under this approach are also used to refine the CSM and evaluate other retained potential corrective measures.

### 1.5 Risk Evaluation

In addition to the assessment monitoring program at the Site, Georgia Power conducted a human health and ecological risk evaluation to evaluate Co and Mo SSLs in groundwater at AP-2. The results of the risk evaluation were presented in the *2020 Risk Evaluation Report – Georgia Power Company – Plant Hammond Ash Pond 2*, submitted to GA EPD in January 2021 (Geosyntec, 2021a). The evaluation provides one of many lines of evidence that will be evaluated and factored into the remedy selection process, which will be completed in accordance with § 257.97. Based upon this evaluation, concentrations of Co and Mo detected in groundwater at AP-2 between May 2016 and June 2020 are not expected to pose a risk to human health or the environment (Geosyntec, 2021a). Cobalt and Mo data collected since June 2020 are consistent with data used in the risk evaluation; therefore, the conclusions provided in the *2020 Risk Evaluation Report* are supported by conditions reported during the 2021 reporting period. An updated version of the risk evaluation incorporating data through the spring of 2022 will be submitted with the comprehensive Remedy Selection Report and will include analysis of new constituent well pair SSLs.

As requested by GA EPD, an updated potable well survey of potential groundwater wells within a two-mile radius of AP-2 was conducted in December 2021 through January 2022 and consisted of reviewing federal, state, county records, and online sources. A survey conducted by Environmental Data Resources (EDR) is included in **Appendix B**. Additional federal, state, county records and online sources outside of the EDR survey were also reviewed. The Floyd County Health Department declined Geosyntec's request for information due to department security protocol. The findings from the 2021-2022 well survey are consistent with the 2020 well survey (NewFields, 2020).



## 2.0 SUMMARY OF WORK COMPLETED

The following summarizes the field investigations and data evaluations completed in support of the ACM program since the issuance of the prior semiannual progress report in August 2021 (Geosyntec, 2021d). The routine monitoring events associated with the assessment monitoring program are discussed in the 2021 Annual Report (Geosyntec, 2022).

### 2.1 Field Activities

No additional field investigation activities associated with the ACM efforts were conducted since submitting the previous semiannual progress report in August 2021. The field efforts associated with the data analyses presented herein, including collecting groundwater samples and aquifer solids samples, were discussed in the previously submitted semiannual progress report (Geosyntec, 2021d). The locations of direct-push technology (DPT) boreholes used to collect aquifer solids and the monitoring well network associated with AP-2 are shown on **Figure 2**. As described in the previous semiannual progress report, samples of the aquifer solids and groundwater were shipped to SiREM laboratories (SiREM) located in Guelph, Ontario, for subsequent characterization and batch sorption and desorption studies.

### 2.2 Data Analysis Activities

#### 2.2.1 **Characterization of Aquifer Solids and Sequential Extraction Procedure**

As described in the previous semiannual progress report, one upgradient boring (i.e., DPT-07) and four downgradient borings (DPT-08 through DPT-11) were submitted to SiREM for baseline characterizations. In addition, three samples (i.e., DPT-07, DPT-08, and DPT-11) were submitted for sequential extraction procedures (SEP). The methodologies and the results for the baseline characterizations and the SEP were described in the previous semiannual progress report (Geosyntec, 2021d) and are not repeated herein. These results were used to help select samples for the sorption and desorption studies described below.

#### 2.2.2 **Sorption and Desorption Studies**

As described above, aquifer solids and groundwater samples were shipped to SiREM for laboratory treatability studies to assess the sorption and desorption behavior of Co. In general, sorption studies use soils collected from background locations and groundwater with constituent concentrations above GWPSs to evaluate attenuation mechanisms and

capacity, consistent with Phases II and III of the MNA guidance. Desorption studies can be used to assess attenuation stability for constituents of interest, and generally utilize soils collected proximal to areas with exceedances of GWPSs and groundwater with background constituent concentrations. Sorption tests are used to calculate a site-specific distribution coefficient ( $K_d$ ) between the solid phase and the aqueous phase. The  $K_d$  values can be used in a fate and transport model to estimate future groundwater concentrations and evaluate potential corrective actions at the Site.

### **2.2.2.1 Sorption Studies**

Prior to selecting aquifer solids for the sorption studies, the lithology as well as the chemical and mineralogical characterization data for the samples previously collected from DPT-07 through DPT-11 borings were evaluated for potential differences in characteristics. The baseline characterization study and associated results were presented in a previous semiannual progress report (Geosyntec, 2021d). Please refer to the SiREM report included as **Appendix C** for a summary of all characterization results obtained to date. Both the lithology and the characterization data were generally consistent among the four downgradient DPT locations (i.e., DPT-08 through DPT-11), but the upgradient location DPT-07 was included as a separate sample as this boring exhibited the highest concentrations of naturally occurring Co, Mo, and pyrite. Therefore, the background location DPT-07 and the location DPT-08 downgradient of well HGWC-18 were selected for the sorption studies. Unimpacted groundwater from background well HGWA-5 was used together with the aquifer solids from DPT-07 and DPT-08 to construct batch reactors to evaluate sorption of Co.

Groundwater from HGWA-5 was spiked with Co at five concentration levels. The highest target spike concentration level of Co (i.e., 0.55 mg/L; Level 5) was at least three times higher than the highest Co concentration observed in either CCR pore water or groundwater at the Site. Reactors were constructed in duplicate and incubated for seven days under ambient (i.e., aerobic) conditions consistent with conditions in the aquifer downgradient of AP-2. Samples were collected from the reactors at the beginning of the study (i.e., Day 0) and at the end of the study (Day 7). The samples were analyzed for dissolved Co, pH, and oxidation-reduction potential (ORP). The concentration of Co sorbed to the aquifer solids was calculated based on the concentration difference in the aqueous phase of the initial spike and Day 7 and the mass of aquifer solids in each reactor. A detailed description of the methods and materials used to complete the sorption study is included in the SiREM report provided in **Appendix C**.

Typically, laboratory batch sorption testing results are used to derive a site-specific  $K_d$ , which is accomplished by plotting the concentrations of sorbed constituents (in milligrams per kilogram (mg/kg)) and dissolved constituents remaining in aqueous solution (in mg/L) for each spiked concentration level. These graphs represent sorption isotherms that can be used to calculate a  $K_d$  for each evaluated constituent. This calculation entails using linear regression lines fit to the data using the method of least squares in Microsoft Excel, where the slopes of these regression lines represent the  $K_d$  values for each constituent (USEPA, 2008).

### **2.2.2.2 Desorption Studies**

Similar to the sorption studies, the lithology as well as the chemical and mineralogical characterization data of the five DPT borings were evaluated to determine which aquifer solids should be used for the desorption studies. One of the important characteristics for this evaluation was the total concentration of Co reported in the aquifer solids collected from these boring, but also the location of the borings with respect to impacted wells. Therefore, while not necessarily the boring with the highest Co concentrations, DPT-08 was selected for this study given that it is located downgradient of well HGWC-18 that has historically reported the highest Co groundwater concentrations for the Site. The total Co concentrations were fairly consistent within the five borings, with the lowest Co concentration of 7 mg/kg at DPT-11, and the highest Co concentration of 14 mg/kg at background location DPT-07, with DPT-08 reporting a concentration of 10 mg/kg.

Batch reactors were constructed under ambient (aerobic) conditions (consistent with aquifer conditions downgradient of AP-2) in duplicate using the aquifer solids from DPT-08, which were combined with background groundwater from HGWA-5 to evaluate desorption behavior of Co. As noted previously, more detailed descriptions of the methods and materials are included in the SiREM report provided in **Appendix C**.

### **2.2.3 Hydraulic Capture Zone Analyses**

In addition to the sorption and desorption batch studies, Geosyntec evaluated conceptual layouts of hydraulic containment corrective measures to assess hydraulic capture zones downgradient of wells HGWC-18 and MW-33. Capture zones were assessed using a calibrated three-dimensional (3D), steady-state, numerical groundwater flow model that utilizes United States Geological Survey (USGS) created finite-difference flow modeling code (MODFLOW).

Simulated groundwater elevations were evaluated to assess whether an inward hydraulic gradient can be achieved in select locations with the addition of extraction wells. Pumping rates for groundwater extraction wells were varied between 0.25 and 10 gallons per minute (gpm). The extraction wells were modeled at depths corresponding to the screen intervals of HGWC-18 and MW-33. The numerical groundwater model developed for the AP-2 area and the results of the hydraulic capture zone analyses will be described in detail in the forthcoming comprehensive Remedy Selection Report. Further modeling is recommended to refine the constituent distribution in the subsurface to target specific zones for pumping for improved mass recovery efficiency/effectiveness and to further evaluate the potential remedy performance.

### 3.0 SUMMARY OF RESULTS

The following presents the results of the data analysis efforts outlined in Section 2.

#### 3.1 Sorption and Desorption Study Results

##### 3.1.1 Sorption Results

The results of the batch sorption tests are summarized in **Table 3** and included in the SiREM report provided in **Appendix C**.

As can be seen in **Table 3**, all five spiked concentration levels for Co added to aquifer solids from DPT-07 (background) unexpectedly led to mobilization of Co rather than sorption of Co. While background groundwater was spiked with Co at target concentrations of up to 0.5 mg/L (actual spike Co concentrations were slightly higher, i.e., up to 0.55 mg/L), average Co concentrations in the aqueous phase after combining background aquifer solids with spiked groundwater were as high as 4.08 mg/L after seven days of incubation. At the same time, the average pH of the aqueous solutions decreased to as low as 3.39 standard units (s.u.). Therefore, the Co mobilization is clearly linked to acidification, which is consistent with the observations during groundwater monitoring that low pH conditions lead to elevated Co concentrations at this Site. However, the magnitude of the laboratory results was unexpected, both in terms of the acidity as well as the level of Co concentrations. This is likely due to the fact that background boring DPT-07 contained an abundant amount of pyrite (refer to the baseline mineralogical results presented in Appendix C of the SiREM report, provided herein as **Appendix C**), which likely led to pyrite oxidation and the resulting acidification of the batch reactors. Therefore, since no sorption but only Co mobilization was observed, these batch reactor results could not be used to develop sorption isotherms and/or calculate  $K_d$  values.

As also summarized in **Table 3**, the downgradient sample from DPT-08 indicated some limited sorption of spiked Co onto the aquifer solids, especially at higher spiked Co concentration levels. However, there was also some decrease in pH of approximately one s.u. observed in these batch reactors, which has likely led to some mobilization of Co. This, in turn, masked (or counter-acted) the sorption of spiked Co onto aquifer solids.

Background groundwater from HGWA-5 mixed with background aquifer solids yielded highly acidic groundwater and elevated concentrations of Co. Overall, the acidification, likely associated with oxidation of naturally-occurring pyrite observed in DPT-08 and DPT-07 borings, and the resulting mobilization of Co are consistent with groundwater

monitoring results and the CSM for the Site, which states that low pH conditions within the aquifer lead to mobilization of naturally-occurring Co.

### 3.1.2 Desorption Results

The results of the desorption batch study are summarized in **Table 4**. As described in Section 2.2.2.2, aquifer solids from boring DPT-08 located downgradient of HGWC-18 (**Figure 2**) were used to evaluate desorption behavior of Co under ambient (aerobic) conditions, which is consistent with aquifer conditions around AP-2.

As can be seen in **Table 4**, following incubation of aquifer materials from DPT-08 with background groundwater from HGWA-5, Co concentrations in the aqueous solution increased from 0.059 mg/L at the beginning of the study to 0.141 mg/L at the end of the seven-day incubation period. Again, the pH decreased by approximately one s.u. during the incubation period. Therefore, background groundwater will lead to mobilization of Co, which is consistent with the findings of the sorption study discussed above. Note that the Co concentration of 0.141 mg/L is consistent with the Co concentrations detected in well HGWC-18 during routine groundwater monitoring events. Overall, both the sorption as well as the desorption study results are consistent with the CSM that states that low pH conditions mobilize naturally-occurring Co at this Site.

### 3.1.3 Hydraulic Capture Zone Analyses

Geosyntec evaluated conceptual layouts of a hydraulic containment corrective measure using extraction wells to assess hydraulic capture zones in vicinity of wells HGWC-18 and MW-33 reporting federal SSLs of Co.

A preliminary screening level analysis in the vicinity of MW-33, indicates that a 125-foot linear array of extraction wells, pumping at varying rates is predicted to produce a sufficient hydraulic gradient to control the migration of potentially impacted groundwater downgradient of this well while a 100-foot linear array at HGWC-18 may achieve similar results. These initial results support the retention of hydraulic capture as an appropriate corrective measure and may be appropriate as an interim measure. Hydraulic capture zone results will be described in more detail in the forthcoming comprehensive Remedy Selection Report.

#### 4.0 UPDATED CONCEPTUAL SITE MODEL

AP-2 will be closed by removal of CCR materials from the unit, thereby providing a source control measure that reduces potential for migration of CCR-related constituents to groundwater. The additional data collected since the issuance of the previous semiannual progress report in August 2021 (Geosyntec, 2021d) are consistent with and support the CSM described in the August 2021 progress update.

- Cobalt appears to be mostly mobilized through low pH conditions. There are similar relationships between pH and Co concentration observed in upgradient well HGWA-2 and downgradient well HGWC-18.
- The laboratory sorption batch studies indicated that aquifer solids from a background location (i.e., DPT-07) led to substantial mobilization of Co of up to approximately 4 mg/L when reacted with background groundwater; aquifer solids from a downgradient location (i.e., DPT-08) provided some indication of Co sorption, but also led to some mobilization of Co that counter-acted the sorption of spiked Co in groundwater.
- The laboratory desorption batch studies using aquifer materials from DPT-08 (i.e., downgradient of well HGWC-18) and background groundwater showed mobilization of Co consistent with concentrations observed in well HGWC-18.
- Groundwater monitoring results and laboratory batch study results are consistent with each other and support the CSM that low pH conditions, which are in part attributable to pyrite oxidation as demonstrated through the sorption study results, lead to mobilization of naturally-occurring Co.

## 5.0 UPDATED EVALUATION OF CORRECTIVE MEASURES

As discussed during the previous reporting period, three potential corrective measures were retained for further evaluation. Data collected during the past six months reported in the current progress report have not resulted in the elimination of additional corrective measures.

- Geochemical Injections:
  - Geochemical injections include the use of an injection well network, or other means of introducing reagents or air into the subsurface, to provide suitable reagents for either anaerobic or aerobic attenuation of Co, and possibly Mo. Injections could also be used to adjust pH conditions to affect attenuation of constituents, especially Co. This potential corrective measure may still be feasible around well HGWC-18 and potentially south of AP-2, most likely through locally adjusting the groundwater pH to immobilize Co via (ad-)sorption under higher pH conditions. Additional evaluation is required to determine efficacy of this corrective measure to treat Mo in bedrock where the SSL has been identified (MW-21D). Based on the results of the laboratory sorption and desorption studies, aquifer materials have the potential to create highly acidic conditions that lead to the mobilization of Co. Therefore, pH adjustment appears to be a viable option, but natural conditions could create ongoing acidifying processes (i.e., mainly through pyrite oxidation) in certain areas that might counteract pH adjustments and Co attenuation.
  
- Hydraulic Containment:
  - Hydraulic containment refers to the use of groundwater extraction to induce a hydraulic gradient for hydraulic capture or control the migration of impacted groundwater downgradient of the permitted unit. This approach uses extraction wells or trenches to capture groundwater, which may subsequently require above-ground treatment and permitted discharge to a receiving water feature, reinjection into the groundwater, or reuse. Hydraulic containment is applicable to a variable mix of inorganic constituents, including dissolved Co and Mo, and this potential corrective measure may still be feasible through targeted extraction of impacted groundwater at AP-2. A screening level analysis indicates that hydraulic containment remains a viable corrective measure. However, there are



logistical challenges and permitting considerations associated with the aboveground treatment approach of the extracted groundwater.

- Monitored Natural Attenuation:
  - MNA relies on natural attenuation processes to achieve site-specific remediation objectives within a reasonable timeframe relative to more active methods. Under certain conditions (e.g., through sorption, mineral precipitation or oxidation-reduction [redox] reactions), MNA effectively reduces the dissolved concentrations of inorganic constituents in groundwater. MNA may either be a stand-alone corrective measure or be part of a combination of corrective measures to address groundwater impacts. However, site-specific conditions, including the abundance of pyrite, appear to create an acidifying environment in the subsurface that leads to mobilization of Co. These conditions may result in localized areas where attenuation processes are counter-acted.

Continued groundwater monitoring and updates to the statistical analyses will further refine the CSM and allow for the continued evaluation of an appropriate groundwater corrective measure at the Site.

## 6.0 PLANNED ACTIVITIES & ANTICIPATED SCHEDULE

The proposed closure by removal approach provides a source control measure that reduces the potential for migration of CCR constituents to groundwater. During the pond closure by removal of CCR, temporary changes in site conditions may occur that must be considered as part of remedy selection. Georgia Power proactively initiated adaptive site management as outlined in the ACM Report (Geosyntec, 2019b) to support the remedial strategy and address potential changes in site conditions as appropriate. The adaptive site management approach may be adjusted over the Site's life cycle as new site information and technologies become available. To this end, Georgia Power will continue its data collection efforts as necessary in support of efforts to refine the CSM and to further evaluate the feasibility of the corrective measures retained for further evaluation. Once sufficient data are available to select one or more specific corrective measures, necessary steps will be taken to design and implement a remedy for AP-2 in accordance with § 257.98.

Supplementary data collection and evaluation activities proposed to be completed during the next semiannual reporting period are presented include:

- *Install a new shallow background well at location DPT-07 to evaluate whether laboratory observations of strong acidification and concurrent Co mobilization can be replicated in the field.*

Georgia Power will continue to prepare semiannual progress reports to document AP-2 groundwater conditions, results associated with additional data collection, and the progress in selecting and designing a groundwater remedy in accordance with § 257.97(a). Georgia Power will include future semiannual progress reports in routine groundwater monitoring and corrective action reports. Record keeping, notifications, and publicly accessible internet site requirements for the semiannual progress reports will be provided in accordance with § 257.105(h)(12), § 257.106(h)(9), and § 257.107(h)(9), respectively.

## 7.0 REFERENCES

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# TABLES

**Table 1**  
Monitoring Well Network Summary  
Plant Hammond AP-2, Floyd County, Georgia

Well ID	Hydraulic Location	Installation Date	Northing <sup>(1)</sup>	Easting <sup>(1)</sup>	Ground Surface Elevation (ft)	Top of Casing Elevation <sup>(2)</sup> (ft)	Top of Screen Elevation <sup>(2)</sup> (ft)	Bottom of Screen Elevation <sup>(2)</sup> (ft)	Well Depth (ft BTOC) <sup>(3)</sup>	Screen Interval Length (ft)
<b>Compliance Monitoring Well</b>										
HGWA-1	Upgradient	12/3/2014	1550423.32	1940770.00	592.32	595.21	573.12	563.12	32.49	10
HGWA-2	Upgradient	12/2/2015	1549796.87	1939845.15	585.29	587.92	570.29	560.29	27.95	10
HGWA-3	Upgradient	12/2/2015	1549794.41	1939833.39	585.23	587.74	553.23	543.23	44.51	10
HGWA-4	Upgradient	12/3/2014	1549930.45	1939385.45	584.94	587.60	572.24	562.24	25.76	10
HGWA-5	Upgradient	12/10/2015	1548633.33	1937184.17	580.52	583.24	564.92	554.92	28.72	10
HGWA-6	Upgradient	12/11/2015	1548636.35	1937177.73	580.72	583.38	543.72	533.72	49.66	10
HGWA-42D	Upgradient	8/27/2020	1549363.72	1938443.86	583.39	586.17	528.39	518.39	65.25	10
HGWA-43D	Upgradient	8/26/2020	1550422.85	1940753.81	592.08	595.08	544.08	534.08	61.25	10
HGWA-44D	Upgradient	8/25/2020	1550409.13	1940756.19	592.01	594.79	491.76	481.76	113.50	10
HGWC-14	Downgradient	10/16/2014	1547998.96	1938406.27	594.67	597.25	564.67	554.67	42.98	10
HGWC-15	Downgradient	10/20/2014	1547875.33	1937854.92	578.73	581.49	553.93	543.93	37.96	10
HGWC-16	Downgradient	10/21/2014	1548209.83	1937540.33	577.36	580.02	557.36	547.36	33.06	10
HGWC-17	Downgradient	10/22/2014	1548449.71	1937538.98	581.51	584.30	566.91	556.91	27.79	10
HGWC-18	Downgradient	10/22/2014	1548821.27	1937558.32	581.36	584.18	566.86	556.86	27.71	10
<b>Delineation Monitoring Well</b>										
MW-21D	Downgradient	11/19/2018	1548814.86	1937555.78	581.16	583.84	542.36	532.36	51.88	10
MW-22	Downgradient	11/15/2018	1547854.68	1937832.04	576.05	578.51	551.45	541.45	37.47	10
MW-23D	Downgradient	11/15/2018	1547876.55	1937843.89	579.06	581.30	529.46	519.46	62.24	10
MW-37D	Downgradient	5/8/2020	1548803.01	1937551.05	580.95	583.58	514.65	504.65	76.63	10
<b>Piezometer</b>										
MW-8	Downgradient	10/29/2014	1548171.86	1940016.70	584.25	586.93	565.05	555.05	32.28	10
MW-9	Downgradient	10/29/2014	1548131.38	1938922.16	588.42	590.95	569.12	559.12	32.95	10
MW-12	Downgradient	10/21/2014	1547853.78	1937525.46	580.59	583.27	555.84	545.84	37.83	10
MW-16	Downgradient	10/27/2014	1549104.17	1937940.06	571.70	574.22	562.20	552.20	23.42	10
MW-17	Downgradient	10/28/2014	1549163.28	1938345.81	583.68	586.78	568.98	558.98	29.09	10
MW-18	Downgradient	10/29/2014	1548984.15	1938712.73	589.75	592.28	571.05	561.05	32.42	10
MW-33	Downgradient	11/21/2019	1547973.50	1938412.13	591.19	593.92	566.60	556.60	37.72	10
MW-34D	Downgradient	5/6/2020	1547996.82	1938392.20	593.83	596.51	530.48	520.48	73.68	10
MW-35	Downgradient	5/13/2020	1547905.33	1938417.82	571.88	574.40	558.70	548.70	23.52	10
MW-36D	Downgradient	5/7/2020	1548435.43	1937538.19	581.44	584.10	534.12	524.12	57.65	10

Notes:

ft = feet

BTOC = below top of casing

(1) Coordinates in North American Datum (NAD) 1983, State Plane, Georgia-West, feet. Survey completed by GEL Solutions dated May 19, 2020 and September 10, 2020 (for wells HGWA-42D, HGWA-43D, and HGWA-44D).

(2) Elevations referenced to the North American Vertical Datum of 1988 (NAVD88). Survey completed by GEL Solutions dated May 19, 2020 and September 10, 2020 (for wells HGWA-42D, HGWA-43D, and HGWA-44D).

(3) Total well depth accounts for sump if data provided on well construction logs.

**Table 2**  
Evaluation of Remedial Technologies  
Plant Hammond AP-2, Floyd County, Georgia

Corrective Measure	Regulatory Citation for Criteria:		40 CFR 257.96(C)(1)		40 CFR 257.96(C)(1)
	Description	Performance	Reliability	Ease of Implementation	
<b>Geochemical Approaches (In-Situ Injection)</b>	Use of an injection well network, or other means of introducing reagents or air into the subsurface, to provide suitable reagents for either anaerobic or aerobic attenuation of cobalt (Co). Under anaerobic conditions, Co would be attenuated within sparingly soluble sulfide minerals. Under aerobic conditions, soluble iron or manganese and oxygen (either via air sparging or through a chemical oxidant) would be injected to promote the formation of iron or manganese (oxy-) hydroxides for subsequent sorption of Co (and potentially molybdenum (Mo)) onto these mineral phases. If sufficient iron is present in groundwater, the use of air sparging alone may be considered to precipitate iron (oxy-) hydroxides for sorption. In-situ chemical oxidation (ISCO) or in-situ chemical reduction (ISCR) can be used to chemically alter the redox environment in the subsurface to affect the mobility of certain inorganic compounds, including Co. However, the main attenuation mechanism for Co and Mo is sorption, which is more dependent on pH than redox. Furthermore, groundwater monitoring data at AP-2 as well as sorption and desorption laboratory batch studies have indicated that the main mobilization mechanism for Co at AP-2 is low (acidic) pH. Therefore, this approach also includes the use of an alkaline amendment to raise the groundwater pH to promote Co attenuation.	The effective immobilization of Co has been shown under aerobic and anaerobic conditions; however, the anaerobic approach (involving the injection of an electron donor together with iron or manganese and sulfur) requires careful study and testing. While aerobic approaches involving sorption are somewhat less complex, they may be reversible compared to mineral precipitation. Based on the results of the laboratory sorption and desorption studies, aquifer materials have the potential to create highly acidic conditions that lead to the mobilization of Co. Therefore, pH adjustment via injections appears to be a viable option, but natural conditions could create ongoing acidifying processes (i.e., mainly through pyrite oxidation) in certain areas that might counter-act pH adjustments and Co attenuation. While both Co and Mo can be remediated with geochemical injections, the immobilization of Mo using geochemical injections is not well established and is still considered experimental at this time.	Reliability dependent on permeability of the subsurface and the amount and distribution of secondary iron or manganese (oxy-) hydroxides (for aerobic approach), or electron donors and soluble iron or manganese and sulfur that can be consistently distributed (for anaerobic approach), as well as alkaline amendments for groundwater pH adjustment. Reliable technology if injected materials can be distributed throughout the impacted aquifer. Bench- and/or pilot-scale treatability testing programs are needed to understand the biogeochemical processes that would effectively reduce migration of Co and Mo in groundwater. Laboratory sorption and desorption batch studies have indicated that natural processes (mainly pyrite oxidation) can create acidic conditions that promote Co mobilization on an ongoing basis, which might counter-act groundwater pH adjustment.	Moderate. Installation of injection well network or other injection infrastructure would be required. Alternative installation approaches may be considered, such as along the downgradient edge of impacted groundwater, which would function similar to a PRB application. Potential for clogging of aquifer matrix and/or injection well infrastructure. Chemical distribution during injections (i.e., radius of influence) needs to be evaluated.	
<b>Hydraulic Containment ("Pump and Treat")</b>	Hydraulic containment refers to the use of groundwater extraction to induce a hydraulic gradient for hydraulic capture or control the migration of impacted groundwater. This approach uses extraction wells or trenches to capture groundwater, which may subsequently require above-ground treatment and permitted discharge to a receiving water feature, reinjection into the groundwater, or reuse (e.g., land application, CCR conditioning, etc.). It is applicable to a variable mix of inorganic constituents, including dissolved Co and/or Mo.	Hydraulic containment is effective, but it is unclear whether full groundwater remediation can be achieved given that acidifying process naturally occurring at the Site may counter-act any corrective measure(s), including pump and treat. At AP-2, implementation of the corrective measure is contingent on completing additional assessment activities (i.e. high-resolution site characterization, additional pump tests, flow modeling, and capture zone analysis). However, a preliminary screening level analysis indicates that hydraulic containment can be obtained with strategic placement of extraction wells. Further modeling is recommended to refine the constituent distribution in the subsurface to target specific zones for pumping for improved mass recovery efficiency/effectiveness and to refine the data from the screening analysis to evaluate remedy performance.	Generally reliable for hydraulic containment, but uncertainty exists whether groundwater remediation goals can be achieved within a reasonable time frame. The laboratory sorption/desorption batch studies suggest that acidifying processes that are naturally occurring at the Site may continue to mobilize Co for a prolonged period of time that may make it impossible to reach GWPS within a reasonable time frame.	Moderate. Proven approach, and supplemental installation of extraction wells/trenches is fairly straightforward. The extracted groundwater may potentially require an above-ground treatment system. A variety of sorption and precipitation approaches exist for ex-situ treatment of Co and/or Mo. Operation and maintenance (O&M) requirements are expected to include upkeep of infrastructure components (pumps, pipes, tanks, instrumentation and controls, above-ground treatment system) and handling of treatment residuals.	
<b>Monitored Natural Attenuation (MNA)</b>	MNA relies on natural attenuation processes to achieve site-specific remediation objectives within a reasonable time frame relative to more active methods. Under certain conditions (e.g., through sorption, mineral precipitation or oxidation-reduction reactions), MNA effectively reduces the dissolved concentrations of inorganic constituents in groundwater. Attenuation mechanisms for inorganic constituents at CCR sites, including Co and Mo at AP-2, are either physical (e.g. dilution, dispersion, flushing, and related processes) or chemical (sorption or oxidation reduction reactions). Chemical attenuation processes include precipitation and sorption reactions such as adsorption on the surfaces of soil minerals, absorption into the matrix of soil minerals, or partitioning into organic matter. Further, oxidation-reduction (redox) reactions, via abiotic or biotic processes, can transform the valence states of some inorganic constituents to less soluble and thus less mobile forms. For Co and Mo, main attenuation processes include sorption to iron and manganese oxides (Co and Mo), aluminum oxides (Mo), and formation of sparingly soluble sulfide minerals (Co and Mo).	Physical and chemical MNA mechanisms for Co and/or Mo, including dilution, dispersion, sorption, and oxidation reduction reactions, can be effective at achieving GWPS within a reasonable time frame. Source control will improve the mass balance such that the buffer capacity of the aquifer is unlikely to be exhausted, and the attenuation processes already at work for Co and Mo at AP-2 will further enhance ongoing MNA. However, site-specific conditions, including the abundance of pyrite, appear to create an acidifying environment in the subsurface that leads to mobilization of Co. These conditions have the potential to counter-act attenuation processes.	Reliable as long as the aquifer conditions that result in Co and/or Mo attenuation remain favorable and/or are being enhanced and sufficient attenuation capacity is present. MNA is reliable and can either be used as a stand-alone corrective measure for groundwater impacted by dissolved Co or Mo, or in combination with a second technology. However, site-specific conditions, including the abundance of pyrite, appear to create an acidifying environment in the subsurface that leads to mobilization of Co. These conditions have the potential to counter-act attenuation processes.	Reasonably implementable with respect to infrastructure, but moderate to complex with respect to documentation. Proven approach, but additional data are needed to show that the existing attenuation capacity is sufficient to meet site objectives within a reasonable timeframe. A monitoring well network already exists to implement future groundwater monitoring efforts.	
<b>Permeable Reactive Barrier</b>	Permeable reactive barrier (PRB) technology typically involves the installation of a permeable subsurface wall constructed with reactive media for the removal of constituents as groundwater passes through. Either ZVI-Carbon matrix or solid carbon (bio-barrier) are currently proposed for the concurrent removal of Co and Mo. The carbon could be composed of peat moss, mulch or another carbon source. Exact placement of the PRB is contingent on finalization of the nature and extent characterization. PRB walls are typically keyed into the bedrock. While the shallow groundwater in the residuum and fractured bedrock is connected to the groundwater in more competent bedrock, the higher permeability/conductivity of the PRB is not expected to impede groundwater flow. PRBs can also be constructed as "funnel and gate" systems, where a barrier wall directs groundwater to a smaller "treatment gate" filled with reactive media.	PRBs have been shown to effectively address Co (and to a lesser degree Mo) in groundwater if the right mix of reactive materials (e.g., ZVI and carbon) is selected for removal/immobilization of the constituent. The approach is expected to achieve GWPS for Co and possibly Mo as impacted groundwater passes through the reactive barrier. Additional testing is required to select the appropriate sorptive media mix. However, depending on the placement of the PRB (which is generally placed downgradient of a source zone), groundwater downgradient of the PRB may not be treated and may not achieve GWPS.	Reliable groundwater corrective measure, but loss of reactivity over time may require re-installation depending on the duration of the remedy. Additional data collection, including conducting a bench and/or pilot study, is needed to better characterize current attenuation mechanisms and/or select the appropriate reactive media mix for a PRB wall.	Moderate to difficult. Trenching would be required to install a mix of reactive materials in the subsurface. Continuous trenching may be the most feasible construction method. Installation methods and materials are readily available. Once installed, treatment will be passive and O&M requirements are minimal if replacement of the PRB is not necessary. Technically infeasible to construct a PRB at the required depths to address the aquifer zone in the vicinity of MW-21D (>30 ft into bedrock).	
<b>Subsurface Vertical Barrier Walls</b>	This approach involves placing a barrier to groundwater flow in the subsurface, frequently around a source area, to prevent future migration of dissolved constituents in groundwater from beneath the source to downgradient areas. In general, barrier walls are designed to provide containment; localized treatment achieved through the sorption or chemical precipitation reactions from construction of the walls are incidental to the design objective. Barrier walls can also be used in downgradient applications; to limit discharge to a surface water feature or to reduce aquifer recharge from an adjacent surface water feature when groundwater extraction wells are placed near one. A variety of barrier materials can be used, including cement and/or bentonite slurries, geomembrane composite materials, or driven materials such as steel or vinyl sheet pile. Groundwater extraction from upgradient of the barrier is required to avoid groundwater mounding behind the barrier.	Barrier walls are a proven technology for seepage control and/or groundwater cutoff at impoundments. Slurry walls are limited by the depth of installation; sheet piling and trenching are typically limited to depths of approximately 50 feet below ground surface (ft bgs); specialty drilling/installation techniques can achieve depths greater up to approximately 90 ft bgs. However, site-specific geologic and technology-specific considerations may limit this depth to shallower installations. Within the context of AP-2, a barrier wall might be used in conjunction with a "funnel and gate" system for a PRB rather than a stand-alone technology. As such, groundwater with Co and Mo above GWPS could either be directed to "treatment gates" for passive treatment (in a PRB) or migration of impacted groundwater could be minimized via barrier wall installation. Additional subsurface investigations, aquifer testing, and compatibility testing with site-specific groundwater will be needed.	Generally reliable as a barrier to groundwater flow; however, treatment of downgradient groundwater is incidental and not the primary objective.	Moderate to difficult. Trenching would-be required to fill in the various slurry mixes; alternatively, sheet pile installations could be accomplished without excavation of trenches. The application of barrier walls is limited by the depth of installation, which similar to PRBs, should be keyed into a low permeability layer such as a thick clay layer or bedrock. Installation methods and materials are readily available. Once installed, above-ground infrastructure to pump and treat groundwater will be required. O&M requirements are expected to include upkeep of infrastructure components (pumps, pipes, tanks, instrumentation and controls, above-ground treatment system) and handling of treatment residuals. Technically infeasible to construct a barrier wall at the required depths to address the aquifer zone in the vicinity of MW-21D (>30 ft into bedrock).	

**Table 2**  
Evaluation of Remedial Technologies  
Plant Hammond AP-2, Floyd County, Georgia

Corrective Measure	40 CFR 257.96(C)(1) Potential Impacts	40 CFR 257.96(C)(2) Time Requirement to Begin/Complete	40 CFR 257.96(C)(3) Institutional Requirements
<p align="center"><b>Geochemical Approaches (In-Situ Injection)</b></p>	<p>Minimal impacts are expected if remedy works as designed, based on a thorough pre-design investigation, geochemical modeling, and bench/pilot study results. Redox-altering as well as pH-altering processes have the potential to mobilize naturally-occurring constituents as an unintended consequence if not properly studied and implemented.</p>	<p>Installation of the injection network can be accomplished relatively quickly (1 to 2 months). However, a thorough pre-design investigation, geochemical modeling, and/or bench- and/or pilot-testing will be required to obtain design parameters prior to design and construction of the corrective measure, which may take up to 24 months. Once installed, the time required to achieve groundwater protection standards (GWPS) within the treatment area may be relatively quick but depends on the attenuation process kinetics of each targeted constituent. The time for complete distribution of the injected materials throughout the treatment area is also variable.</p>	<p>Deed restrictions may be necessary until in-situ treatment has achieved GWPS. A new UIC permit (for in-situ injections) would be required to implement this corrective measure. No other institutional requirements are expected at this time.</p>
<p align="center"><b>Hydraulic Containment ("Pump and Treat")</b></p>	<p>Moderate. The main potential impacts are related to the presence and operation of an on-site above-ground water treatment facility and related infrastructure to convey and treat extracted groundwater. Pumping activity may unintentionally alter the geochemistry within the hydraulic capture zone.</p>	<p>Installation of extraction wells and/or trenches can be accomplished relatively quickly (1 to 2 months). However, additional aquifer testing, system design and installation, and permit approval may be required, which may take up to 24 months. The initiation of the approach would be contingent on the start-up of the wastewater treatment infrastructure. Hydraulic containment can be achieved relatively quickly after startup of the extraction system, but uncertainty exists with respect to the time to achieve GWPS.</p>	<p>Depending on the effluent management strategy, modifications to the existing NPDES permit may be required, or obtaining a new underground injection control (UIC) permit may be needed if groundwater reinjection is chosen. In addition, deed restrictions may be required as long as groundwater conditions are above regulatory standards for unrestricted use.</p>
<p align="center"><b>Monitored Natural Attenuation (MNA)</b></p>	<p>None. MNA relies on the natural processes active in the aquifer matrix to reduce constituent concentrations without disturbing the surface or the subsurface.</p>	<p>The infrastructure to initiate MNA is already in place. Data to demonstrate attenuation mechanisms and capacity have been collected over the past 18 months and are believed to be sufficient to evaluate MNA as a corrective measure. Naturally acidifying processes appear to be the main mechanism to mobilize Co at AP-2, and GWPS may therefore not be achievable within a reasonable time frame using MNA.</p>	<p>MNA may require the implementation of institutional controls, such as deed restrictions, to preclude potential exposure to groundwater within the footprint of impacted groundwater until GWPS are achieved.</p>
<p align="center"><b>Permeable Reactive Barrier</b></p>	<p>Minimal impacts are expected following the construction of the remedy. However, ZVI has the potential to create anaerobic conditions downgradient of the PRB wall that may mobilize redox-sensitive naturally-occurring constituents. These conditions need to be carefully monitored. Short-term impacts during the construction of the remedy can be mitigated through appropriate planning and health and safety measures.</p>	<p>Installation of a PRB can be accomplished relatively quickly (6 to 12 months), depending on the final location and configuration. However, bench- and/or pilot-testing would be required to obtain design parameters prior to design and construction of the remedy, which may take up to 24 months. Once installed, the time to achieve GWPS downgradient of the PRB is anticipated to be relatively quick. However, depending on the placement of the PRB (which is generally placed downgradient of a source zone), groundwater downgradient of the PRB may not be treated and may not achieve GWPS within a reasonable time frame.</p>	<p>Deed restrictions may be necessary for groundwater areas upgradient of the PRB (if not installed along the waste boundary). No other institutional requirements are expected at this time.</p>
<p align="center"><b>Subsurface Vertical Barrier Walls</b></p>	<p>Minimal impacts are expected following the construction of the remedy. Short-term impacts during the construction of the remedy can be mitigated through appropriate planning and health and safety measures. Changes to groundwater flow patterns due to installation of the barrier wall are expected, which can affect other aspects of groundwater corrective action. Pumping activity may unintentionally alter the geochemistry within the hydraulic capture zone that may result in the mobilization of other constituents that may require treatment.</p>	<p>Installation of a barrier wall can be accomplished relatively quickly (6 to 12 months), depending on the final location and configuration. However, some design phase and additional aquifer and compatibility testing will be required, which may take up to 24 months. Once installed, preventing migration of constituents dissolved in groundwater is anticipated to be relatively quick. Since this approach does not treat the downgradient area of impacted groundwater but prevents migration from a source area, it will likely have to be maintained long-term and coupled with other approaches.</p>	<p>Deed restrictions may be necessary for groundwater areas downgradient of the barrier wall until remedial goals are met. No other institutional requirements are expected at this time.</p>



**Table 2**  
Evaluation of Remedial Technologies  
Plant Hammond AP-2, Floyd County, Georgia

Corrective Measure	40 CFR 257.96(C)(3) Other Env or Public Health Requirements	Relative Costs	Evaluation of Retainage
<p align="center"><b>Geochemical Approaches (In-Situ Injection)</b></p>	<p>Based on the results of the Risk Evaluation Report (Geosyntec, 2021a), SSL-related constituents (Co, Mo) evaluated from AP-2 are not expected to pose a risk to human health or the environment; therefore, no further risk evaluation for groundwater is warranted based on the current data set. Georgia Power will proactively evaluate the data and update this evaluation, if necessary. Potential for mobilization of redox-sensitive and/or pH-sensitive constituents exists during implementation of an anaerobic attenuation approach. Following installation, the remedy is passive.</p>	<p>Medium (depending on expanse of injection network required and injectate volume required per derived design parameters)</p>	<p>Retained for further analysis; could be applied to immobilize Co as a sparingly-soluble mineral, or could be applied to raise the groundwater pH to promote immobilization through sorption mechanisms. Additional evaluation required to determine efficacy to treat Mo in bedrock.</p>
<p align="center"><b>Hydraulic Containment ("Pump and Treat")</b></p>	<p>Based on the results of the Risk Evaluation Report (Geosyntec, 2021a), SSL-related constituents (Co, Mo) evaluated from AP-2 are not expected to pose a risk to human health or the environment; therefore, no further risk evaluation for groundwater is warranted based on the current data set. Georgia Power will proactively evaluate the data and update this evaluation, if necessary. Above-ground treatment components may need to be present for an extended period of time, generating residuals requiring management and disposal.</p>	<p>Medium to high (depending on remedy duration, complexity of above-ground treatment system, and volume of water processed)</p>	<p>Retained for further analysis; extracted water could be routed to wastewater treatment infrastructure built for dewatering and closure of ponds at the Site; however, this may pose permitting challenges and may require the installation of separate water treatment infrastructure. Corrective measure generally accepted by most stake-holders. Preliminary screening level capture zone analyses indicates that this could be considered an effective measure to maintain hydraulic control along Coosa River and/or the unnamed creek west of AP-2 should closure construction activities require an interim groundwater treatment configuration.</p>
<p align="center"><b>Monitored Natural Attenuation (MNA)</b></p>	<p>Little to no physical disruption to remediation areas and no adverse construction-related impacts are expected on the surrounding community. Based on the results of the Risk Evaluation Report (Geosyntec, 2021a), SSL-related constituents (Co, Mo) evaluated from AP-2 are not expected to pose a risk to human health or the environment; therefore, no further risk evaluation for groundwater is warranted based on the current data set. Georgia Power will proactively evaluate the data and update this evaluation, if necessary.</p>	<p>Low to medium</p>	<p>Retained for further analysis; may be used as a stand-alone corrective measure or in conjunction with other potential groundwater corrective measures. Further evaluation required to determine possible impacts of naturally occurring pyrite that create an acidifying environment in the subsurface that leads to the mobilization of Co, resulting in localized areas where attenuation processes are counter-acted.</p>
<p align="center"><b>Permeable Reactive Barrier</b></p>	<p>Based on the results of the Risk Evaluation Report (Geosyntec, 2021a), SSL-related constituents (Co, Mo) evaluated from AP-2 are not expected to pose a risk to human health or the environment; therefore, no further risk evaluation for groundwater is warranted based on the current data set. Georgia Power will proactively evaluate the data and update this evaluation, if necessary. Following installation, the remedy is passive. However, certain treatment media (such as ZVI) have the potential to mobilize naturally-occurring constituents downgradient of the PRB.</p>	<p>Medium to high (for installation) - minimal O&amp;M requirements if replacement is not necessary</p>	<p>Not retained for further analysis; does not address downgradient groundwater when installed along the compliance boundary; impractical to construct a wall at the required depths (&gt;30ft into bedrock); potential for increased maintenance due to potential biofouling and mineral precipitation.</p>
<p align="center"><b>Subsurface Vertical Barrier Walls</b></p>	<p>Based on the results of the Risk Evaluation Report (Geosyntec, 2021a), SSL-related constituents (Co, Mo) evaluated from AP-2 are not expected to pose a risk to human health or the environment; therefore, no further risk evaluation for groundwater is warranted based on the current data set. Georgia Power will proactively evaluate the data and update this evaluation, if necessary. Due to the need for groundwater extraction associated with barrier walls, above-ground treatment components may need to be present for an extended period of time, generating residuals requiring management and disposal.</p>	<p>Medium to high (depending on length and depth of wall, remedy duration and complexity of above-ground treatment system)</p>	<p>Not retained for further analysis; should be considered as part of source control, which is unnecessary in the context of closure by removal of CCR; impractical to construct a wall at the required depths (&gt;30ft into bedrock); furthermore, does not address downgradient groundwater when installed along the compliance boundary.</p>

**Table 3**  
Summary of Sorption Test Results  
Plant Hammond AP-2, Floyd County, Georgia

Groundwater Sample ID	Site Material Sample ID	Treatment <sup>(1)</sup>	Date	Day <sup>(2)</sup>	Replicate	Dissolved Cobalt (mg/L)	Mass of Aquifer Solids in Reactor (g)	Mass of Water in Reactor (g)	Sorbed Cobalt (mg/kg) <sup>(3)</sup>	pH (s.u.)	ORP (mV)	
HGWA-5	DPT07(10-20)	Concentration Level 1	7/5/2021	0	<i>Spiked Aqueous Concentration</i>	<b>0.10</b>	--	--	--	--	--	
					HAP2DPT07_13a	1.54	100.01	146.90	--	4.23	200	
					HAP2DPT07_14a	1.49	99.39	146.72	--	4.24	204	
			<b>Average Concentration (mg/L)</b>	<b>1.52</b>	<b>99.70</b>	<b>146.81</b>	--	<b>4.24</b>	<b>202</b>			
			7/12/2021	7	HAP2DPT07_13b	3.25	99.93	145.33	--	3.41	217	
					HAP2DPT07_14b	3.46	99.44	147.76	--	3.43	246	
		<b>Average Concentration (mg/L)</b>			<b>3.36</b>	<b>99.69</b>	<b>146.55</b>	--	<b>3.42</b>	<b>232</b>		
		Concentration Level 2	7/5/2021	0	<i>Spiked Aqueous Concentration</i>	<b>0.23</b>	--	--	--	--	--	--
					HAP2DPT07_15a	1.43	100.43	146.98	--	4.33	225	
					HAP2DPT07_16a	1.50	98.91	150.58	--	4.30	220	
			<b>Average Concentration (mg/L)</b>	<b>1.47</b>	<b>99.67</b>	<b>148.78</b>	--	<b>4.32</b>	<b>223</b>			
			7/12/2021	7	HAP2DPT07_15b	3.35	99.31	151.66	--	3.83	239	
					HAP2DPT07_16b	3.74	99.40	144.75	--	3.28	279	
		<b>Average Concentration (mg/L)</b>			<b>3.55</b>	<b>99.36</b>	<b>148.21</b>	--	<b>3.56</b>	<b>259</b>		
		Concentration Level 3	7/6/2021	0	<i>Spiked Aqueous Concentration</i>	<b>0.33</b>	--	--	--	--	--	--
					HAP2DPT07_17a	1.65	99.98	142.28	--	4.27	155	
					HAP2DPT07_18a	1.84	102.74	143.34	--	4.26	204	
			<b>Average Concentration (mg/L)</b>	<b>1.75</b>	<b>101.36</b>	<b>142.81</b>	--	<b>4.27</b>	<b>180</b>			
			7/13/2021	7	HAP2DPT07_17b	3.65	99.34	144.06	--	3.26	233	
					HAP2DPT07_18b	3.73	100.36	144.28	--	3.76	226	
		<b>Average Concentration (mg/L)</b>			<b>3.69</b>	<b>99.85</b>	<b>144.17</b>	--	<b>3.51</b>	<b>230</b>		
		Concentration Level 4	7/7/2021	0	<i>Spiked Aqueous Concentration</i>	<b>0.44</b>	--	--	--	--	--	--
					HAP2DPT07_19a	1.76	99.39	147.67	--	4.33	216	
					HAP2DPT07_20a	1.82	98.81	144.32	--	4.24	222	
<b>Average Concentration (mg/L)</b>	<b>1.79</b>		<b>99.10</b>	<b>146.00</b>	--	<b>4.29</b>	<b>219</b>					
7/14/2021	7		HAP2DPT07_19b	3.90	98.01	147.56	--	3.45	238			
			HAP2DPT07_20b	3.82	95.32	142.30	--	3.38	260			
		<b>Average Concentration (mg/L)</b>	<b>3.86</b>	<b>96.67</b>	<b>144.93</b>	--	<b>3.42</b>	<b>249</b>				
Concentration Level 5	7/8/2021	0	<i>Spiked Aqueous Concentration</i>	<b>0.55</b>	--	--	--	--	--	--		
			HAP2DPT07_21a	1.49	100.57	149.16	--	4.29	186			
			HAP2DPT07_22a	1.57	98.63	145.82	--	4.45	187			
	<b>Average Concentration (mg/L)</b>	<b>1.53</b>	<b>99.60</b>	<b>147.49</b>	--	<b>4.37</b>	<b>187</b>					
	7/15/2021	7	HAP2DPT07_21b	4.10	99.53	146.80	--	3.27	233			
			HAP2DPT07_22b	4.06	99.60	142.89	--	3.51	230			
<b>Average Concentration (mg/L)</b>			<b>4.08</b>	<b>99.57</b>	<b>144.85</b>	--	<b>3.39</b>	<b>232</b>				

Notes:

-- = Not applicable

mg/L = milligrams per liter

mV = millivolts

ORP = oxidation reduction potential

s.u. = standard units

(1) The highest spike concentration (Level 5) of cobalt was at least three times greater than the highest cobalt concentration observed in either coal combustion residue pore water or groundwater at the Site.

(2) Day 0 samples were collected approximately one hour after reactor setup.

(3) The sorbed concentration per unit mass of aquifer solids is calculated as shown in the equation below. An increase in the final aqueous concentration versus the spiked concentrations indicates that that desorption occurred, thus the sorbed concentration is not applicable.

$$S_{Solids} = \frac{(C_{Spike} - C_{Final}) \times M_{Water}}{M_{Solids} \times \rho_{Water}}$$

Where:

$S_{Solids}$  = sorbed concentration per unit mass of aquifer solids (mg/kg)

$C_{Spike,Final}$  = dissolved concentration of the initial spike or final dissolved concentration at Day 0 or Day 7 (mg/L)

$M_{Solids,Water}$  = mass of water or aquifer solids in reactor (g)

$\rho_{Water}$  = density of water (equal to 1 L/kg)

**Table 3**  
Summary of Sorption Test Results  
Plant Hammond AP-2, Floyd County, Georgia

Groundwater Sample ID	Site Material Sample ID	Treatment <sup>(1)</sup>	Date	Day <sup>(2)</sup>	Replicate	Dissolved Cobalt (mg/L)	Mass of Aquifer Solids in Reactor (g)	Mass of Water in Reactor (g)	Sorbed Cobalt (mg/kg) <sup>(3)</sup>	pH (s.u.)	ORP (mV)	
HGWA-5	DPT08(10-20)	Concentration Level 1	7/5/2021	0	<i>Spiked Aqueous Concentration</i>	<i>0.10</i>	--	--	--	--	--	
					HAP2DPT08_23a	0.0844	99.33	147.32	0.02	6.51	172	
					HAP2DPT08_24a	0.0789	98.53	149.37	0.03	6.45	166	
			<b>Average Concentration (mg/L)</b>	<b>0.0817</b>	<b>98.93</b>	<b>148.35</b>	<b>0.02</b>	<b>6.48</b>	<b>169</b>			
			7/12/2021	7	HAP2DPT08_23b	0.114	99.71	144.41	--	5.64	263	
					HAP2DPT08_24b	0.116	98.79	144.37	--	5.29	265	
		<b>Average Concentration (mg/L)</b>			<b>0.115</b>	<b>99.25</b>	<b>144.39</b>	--	<b>5.47</b>	<b>264</b>		
		Concentration Level 2	7/5/2021	0	<i>Spiked Aqueous Concentration</i>	<i>0.23</i>	--	--	--	--	--	--
					HAP2DPT08_25a	0.102	98.33	145.41	0.18	6.50	155	
					HAP2DPT08_26a	0.0926	100.04	146.41	0.20	6.44	155	
			<b>Average Concentration (mg/L)</b>	<b>0.0973</b>	<b>99.19</b>	<b>145.91</b>	<b>0.19</b>	<b>6.47</b>	<b>155</b>			
			7/12/2021	7	HAP2DPT08_25b	0.122	100.02	145.82	0.15	5.55	257	
					HAP2DPT08_26b	0.138	99.36	147.40	0.13	5.45	261	
		<b>Average Concentration (mg/L)</b>			<b>0.130</b>	<b>99.69</b>	<b>146.61</b>	<b>0.14</b>	<b>5.50</b>	<b>259</b>		
		Concentration Level 3	7/6/2021	0	<i>Spiked Aqueous Concentration</i>	<i>0.33</i>	--	--	--	--	--	--
					HAP2DPT08_27a	0.120	99.56	143.51	0.31	6.51	114	
					HAP2DPT08_28a	0.113	100.01	143.96	0.32	6.45	116	
			<b>Average Concentration (mg/L)</b>	<b>0.117</b>	<b>99.79</b>	<b>143.74</b>	<b>0.31</b>	<b>6.48</b>	<b>115</b>			
			7/13/2021	7	HAP2DPT08_27b	0.149	98.24	140.75	0.26	5.61	190	
					HAP2DPT08_28b	0.129	99.48	141.75	0.29	5.51	188	
		<b>Average Concentration (mg/L)</b>			<b>0.139</b>	<b>98.86</b>	<b>141.25</b>	<b>0.28</b>	<b>5.56</b>	<b>189</b>		
		Concentration Level 4	7/7/2021	0	<i>Spiked Aqueous Concentration</i>	<i>0.44</i>	--	--	--	--	--	--
					HAP2DPT08_29a	0.138	99.87	144.46	0.44	6.36	196	
					HAP2DPT08_30a	0.150	100.51	142.51	0.41	6.48	194	
			<b>Average Concentration (mg/L)</b>	<b>0.144</b>	<b>100.19</b>	<b>143.49</b>	<b>0.43</b>	<b>6.42</b>	<b>195</b>			
			7/14/2021	7	HAP2DPT08_29b	0.0948	100.00	144.76	0.50	5.69	156	
					HAP2DPT08_30b	0.131	98.51	147.71	0.46	5.65	155	
		<b>Average Concentration (mg/L)</b>			<b>0.113</b>	<b>99.26</b>	<b>146.24</b>	<b>0.48</b>	<b>5.67</b>	<b>156</b>		
Concentration Level 5	7/8/2021	0	<i>Spiked Aqueous Concentration</i>	<i>0.55</i>	--	--	--	--	--	--		
			HAP2DPT08_31a	0.191	100.07	143.34	0.52	6.43	160			
			HAP2DPT08_32a	0.168	100.36	143.84	0.55	6.54	156			
	<b>Average Concentration (mg/L)</b>	<b>0.180</b>	<b>100.22</b>	<b>143.59</b>	<b>0.53</b>	<b>6.49</b>	<b>158</b>					
	7/15/2021	7	HAP2DPT08_31b	0.168	99.64	147.27	0.57	5.42	164			
			HAP2DPT08_32b	0.140	100.47	143.23	0.59	5.57	164			
<b>Average Concentration (mg/L)</b>			<b>0.154</b>	<b>100.06</b>	<b>145.25</b>	<b>0.58</b>	<b>5.50</b>	<b>164</b>				

Notes:

-- = Not applicable

mg/L = milligrams per liter

mV = millivolts

ORP = oxidation reduction potential

s.u. = standard units

(1) The highest spike concentration (Level 5) of cobalt was at least three times greater than the highest cobalt concentration observed in either coal combustion residue pore water or groundwater at the Site.

(2) Day 0 samples were collected approximately one hour after reactor setup.

(3) The sorbed concentration per unit mass of aquifer solids is calculated as shown in the equation below. An increase in the final aqueous concentration versus the spiked concentrations indicates that that desorption occurred, thus the sorbed concentration is not applicable.

$$S_{Solids} = \frac{(C_{Spike} - C_{Final}) \times M_{Water}}{M_{Solids} \times \rho_{Water}}$$

Where:

$S_{Solids}$  = sorbed concentration per unit mass of aquifer solids (mg/kg)

$C_{Spike,Final}$  = dissolved concentration of the initial spike or final dissolved concentration at Day 0 or Day 7 (mg/L)

$M_{Solids,Water}$  = mass of water or aquifer solids in reactor (g)

$\rho_{Water}$  = density of water (equal to 1 L/kg)

**Table 4**  
 Summary of Desorption Test Dissolved Metals Results  
 Plant Hammond AP-2, Floyd County, Georgia

Groundwater Sample ID	Site Material Sample ID	Chemical Characteristics (Baseline Characterization) <sup>(1)</sup>	Treatment	Date	Day <sup>(2)</sup>	Replicate	Dissolved Cobalt (mg/L)	pH (s.u.)	ORP (mV)
HGWA-5	DPT08	<b>Aquifer Solids:</b> <b>Cobalt:</b> 10 mg/kg <b>Groundwater:</b> <b>Cobalt:</b> <0.00039 to 0.0013 J mg/L <b>pH:</b> 6.63 s.u. <b>ORP:</b> 6.1 mV	Ambient Conditions	8/31/2021	0	HAP2DPT08_7a	0.0571	6.50	241
						HAP2DPT08_8a	0.0605	6.45	232
						<b>Average Concentration (mg/L)</b>	<b>0.0588</b>	<b>6.48</b>	<b>237</b>
				9/8/2021	7	HAP2DPT08_7b	0.114	5.66	160
						HAP2DPT08_8b	0.167	5.38	172
						<b>Average Concentration (mg/L)</b>	<b>0.141</b>	<b>5.52</b>	<b>166</b>

Notes:

< = Indicates the constituent was not detected above the analytical method detection limit (MDL)

J = Indicates the constituent was estimated and detected between the MDL and the reporting limit (RL)

mg/kg = milligrams per kilogram

mg/L = milligrams per liter

mV = millivolts

ORP = oxidation reduction potential

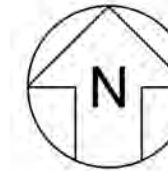
s.u. = standard units

(1) Reported cobalt concentrations in HGWA-5 groundwater were measured during the 2021 semiannual sampling events. Reported pH and ORP values were measured during batch sample collection on 5/26/21 and are consistent with values observed during the 2021 semiannual sampling events.


(2) Day 0 samples were collected approximately one hour after reactor setup.

# FIGURES





**Legend**

 Plant Hammond Property Boundary



Notes:  
1. Aerial photograph source: Google Earth Pro, August 2019.



**SITE LOCATION MAP**

GEORGIA POWER COMPANY  
PLANT HAMMOND AP-2  
FLOYD COUNTY, GEORGIA

Prepared For:  Georgia Power

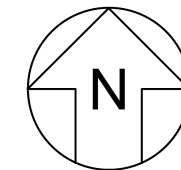
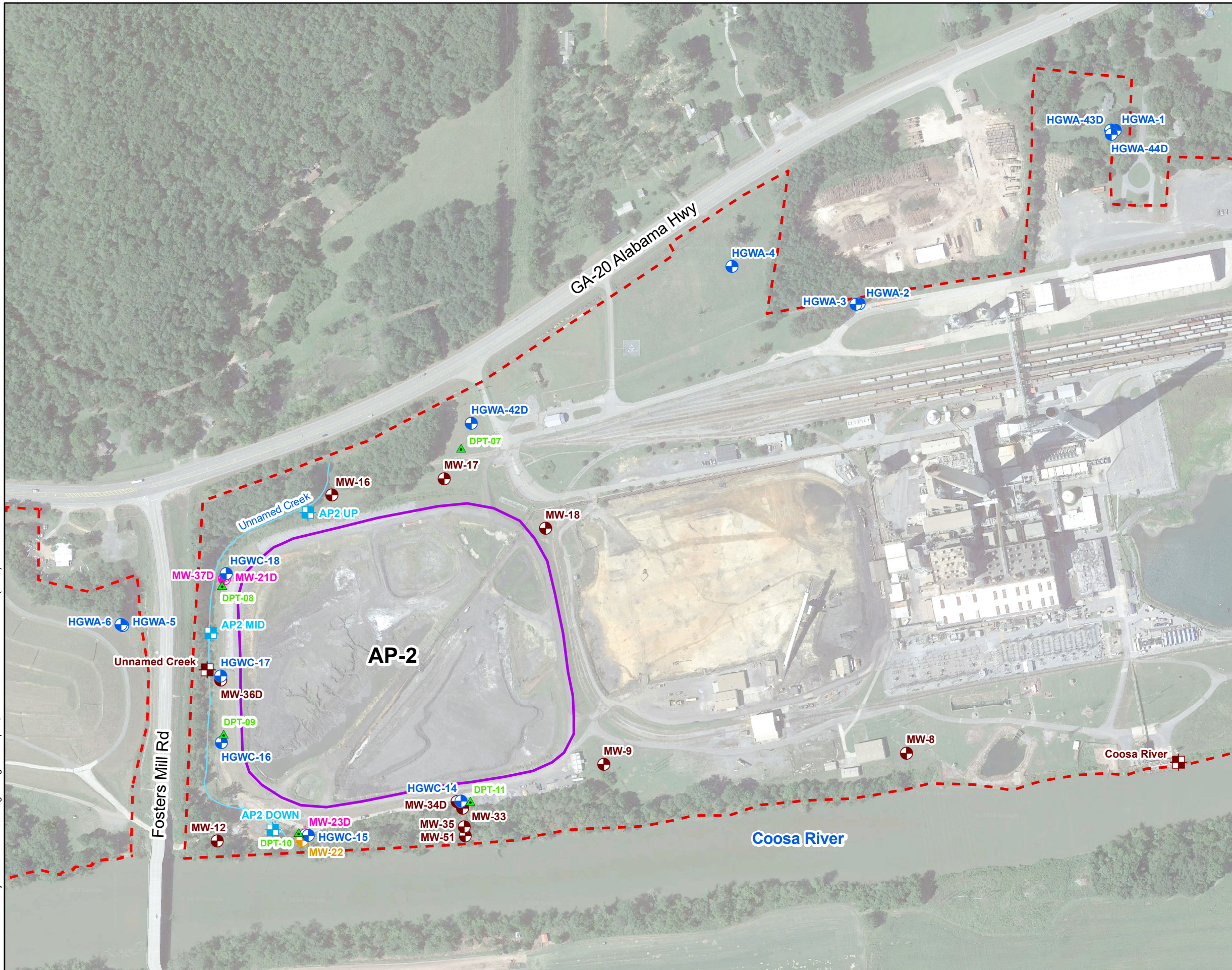
Prepared By: 

KENNESAW, GA

JANUARY 2022

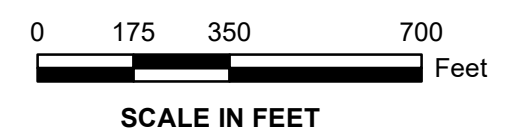
**FIGURE**  
**1**





- LEGEND**
- Compliance Monitoring Well
  - Horizontal Delineation Well
  - Vertical Delineation Well
  - Piezometer
  - Surface Water Level Gauge Point
  - Surface Water Sample Point
  - ▲ DPT Borehole (unsurveyed location)
  - - - PlantBoundAP4
  - Unnamed Creek
  - Approximate AP-2 Boundary
  - - - Plant Hammond Property Boundary

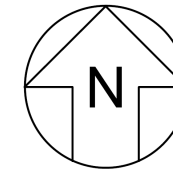
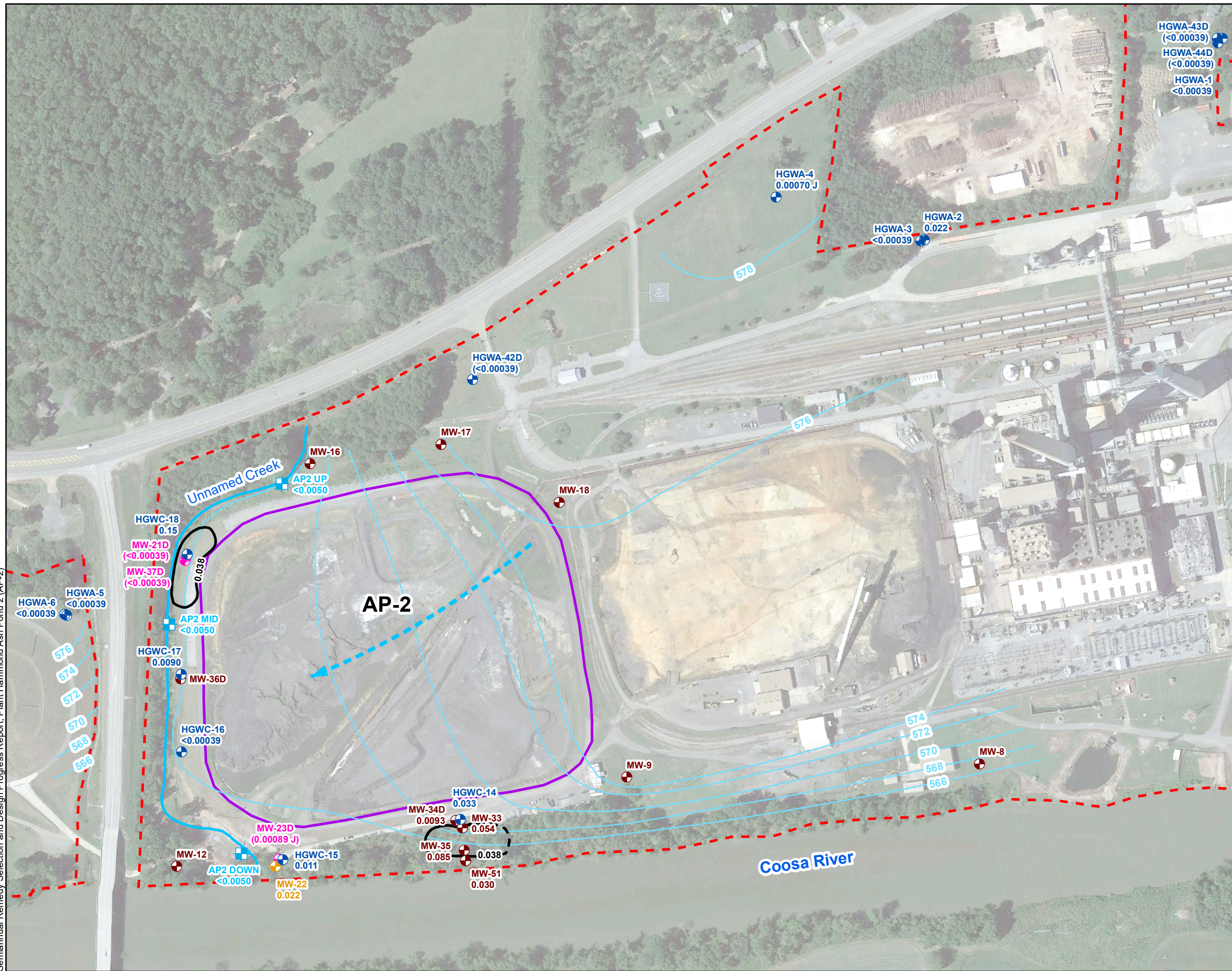
Note:  
 1. Four upstream Coosa River surface water sampling locations, Downstream, Upstream, H-0.5, and H-2, are not shown on the figure and located at (1939949.33, 1547880.85), (1941929.29, 1548194.63), (1942375.24, 1548207.69), and 1943448.96, 1543373.73, respectively.  
 2. Aerial photograph source: Google Earth Pro, August 2019.



**MONITORING WELL NETWORK AND SAMPLING LOCATION MAP**  
 GEORGIA POWER COMPANY  
 PLANT HAMMOND AP-2  
 ROME, FLOYD COUNTY, GEORGIA

Prepared For: Georgia Power  
 Prepared By: Geosyntec consultants  
 KENNESAW, GA    JANUARY 2022



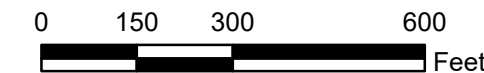


**LEGEND**

- Compliance Monitoring Well
- Horizontal Delineation Well
- Vertical Delineation Well (Not Used for Contouring)
- Piezometer
- Surface Water Sample Point
- State GWPS Cobalt Iso-Concentration Contour (mg/L) (inferred where dashed)
- Groundwater Elevation Iso-Contour
- ➔ Approximate Groundwater Flow
- Approximate AP-2 Boundary
- Plant Hammond Property Boundary

**Notes:**

1. Concentration data from groundwater samples collected during the August 2021 semiannual monitoring event. Surface water data collected in September 2021. Data reported for wells screened deeper in the aquifer were not used to generate the iso-concentration contour (HGWA-42D, HGWA-43D, HGWA-44D, MW-21D, MW-23D, MW-37D). Concentrations are reported in mg/L.
2. Water level elevation recorded on August 11, 2021. Elevation provided in feet (ft) referenced to the North American Vertical Datum (NAVD) 88.
3. The state and federal Groundwater Protection Standard (GWPS) for cobalt is 0.038 mg/L.
4. Aerial photograph source: Google Earth Pro, August 2019.



SCALE IN FEET

**ISO-CONCENTRATION MAP  
COBALT - AUGUST 2021**

GEORGIA POWER COMPANY  
PLANT HAMMOND AP-2  
ROME, FLOYD COUNTY, GEORGIA

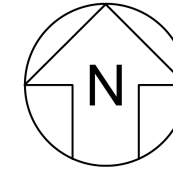
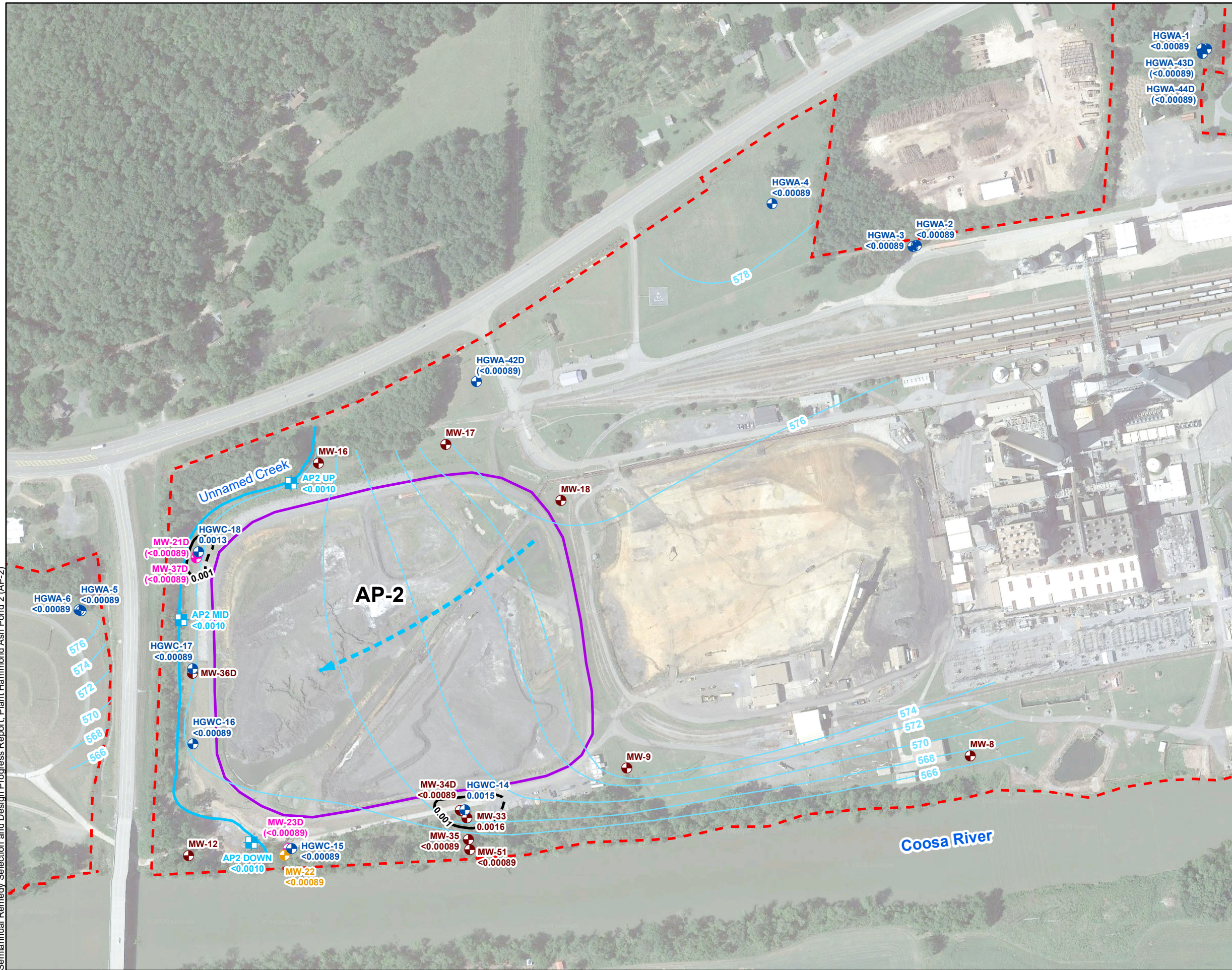
Prepared For: Georgia Power

Prepared By: Geosyntec  
consultants

**FIGURE  
3**

KENNESAW, GA    JANUARY 2022



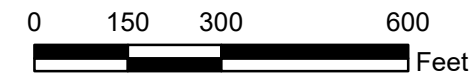


**LEGEND**

- Compliance Monitoring Well
- Horizontal Delineation Well
- Vertical Delineation Well (Not Used for Contouring)
- Piezometer
- Surface Water Sample Point
- State GWPS Lead Iso-Concentration Contour (mg/L) (inferred where dashed)
- Groundwater Elevation Iso-Contour
- Approximate Groundwater Flow
- Approximate AP-2 Boundary
- Plant Hammond Property Boundary

**Notes:**

1. Concentration data from groundwater samples collected during the August 2021 semiannual monitoring event. Surface water data collected in September 2021. Data reported for wells screened deeper in the aquifer were not used to generate the iso-concentration contour (HGWA-42D, HGWA-43D, HGWA-44D, MW-21D, MW-23D, MW-37D). Concentrations are reported in mg/L.
2. Water level elevation recorded on August 11, 2021. Elevation provided in feet (ft) referenced to the North American Vertical Datum (NAVD) 88.
3. The state Groundwater Protection Standard (GWPS) for lead is 0.001 mg/L; the federal GWPS is 0.015 mg/L.
4. Aerial photograph source: Google Earth Pro, August 2019.



**SCALE IN FEET**

**ISO-CONCENTRATION MAP  
LEAD - AUGUST 2021**

GEORGIA POWER COMPANY  
PLANT HAMMOND AP-2  
ROME, FLOYD COUNTY, GEORGIA

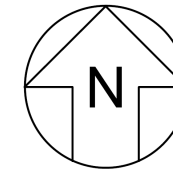
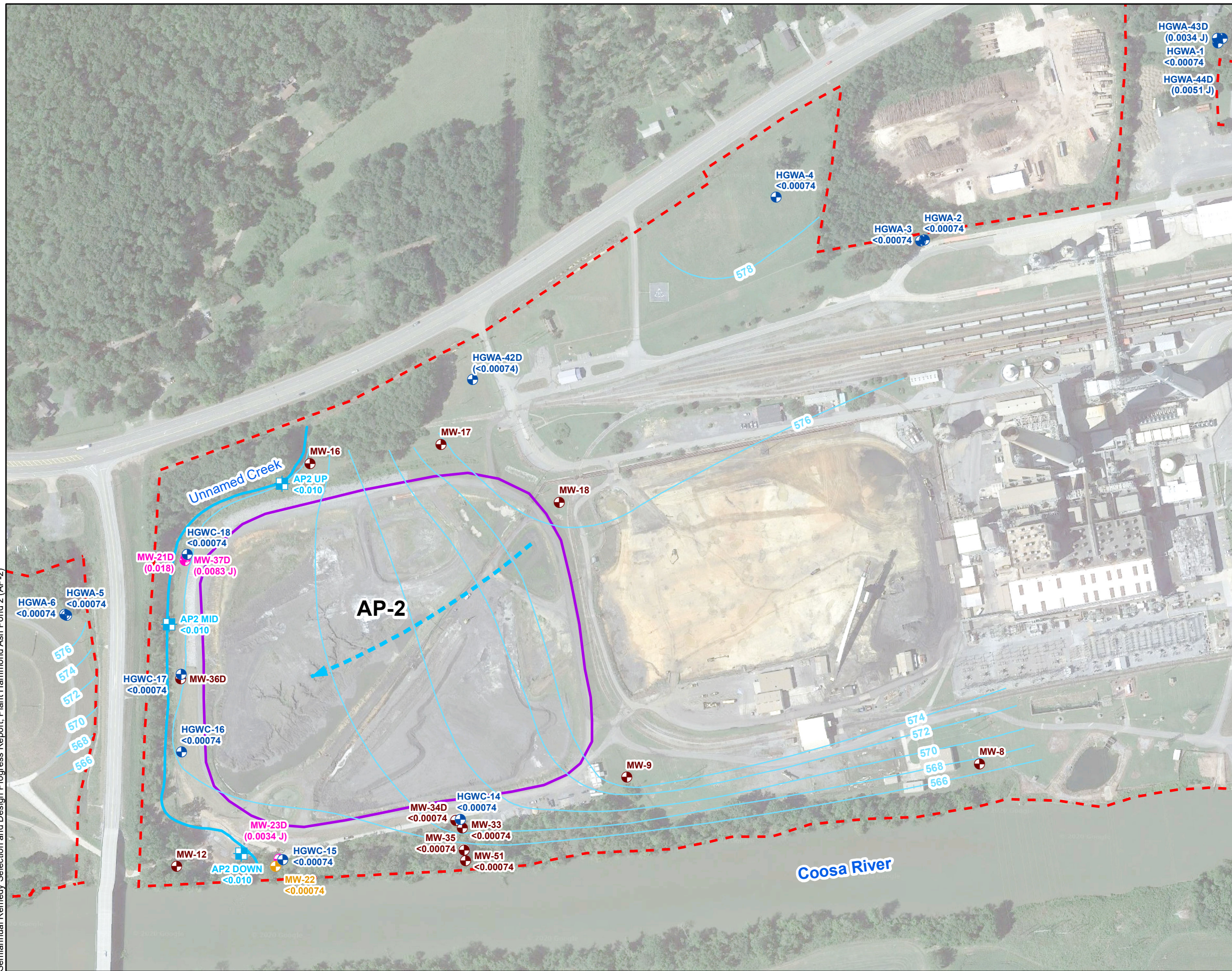
Prepared For: Georgia Power

Prepared By: Geosyntec  
consultants

**FIGURE  
4**

KENNESAW, GA      JANUARY 2022



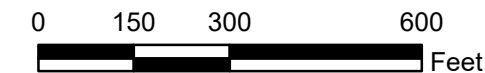


**LEGEND**

- Compliance Monitoring Well
- Horizontal Delineation Well
- Vertical Delineation Well (Not Used for Contouring)
- Piezometer
- Surface Water Sample Point
- Groundwater Elevation Iso-Contour
- ▶ Approximate Groundwater Flow
- ▭ Approximate AP-2 Boundary
- ▭ Plant Hammond Property Boundary

**Notes:**

1. Concentration data from groundwater samples collected during the August 2021 semiannual monitoring event. Surface water data collected in September 2021. Data reported for wells screened deeper in the aquifer were not used to generate the iso-concentration contour (HGWA-42D, HGWA-43D, HGWA-44D, MW-21D, MW-23D, MW-37D). Concentrations are reported in mg/L.
2. Water level elevation recorded on August 11, 2021. Elevation provided in feet (ft) referenced to the North American Vertical Datum (NAVD) 88.
3. All molybdenum concentrations reported for the compliance monitoring wells are less than the state Groundwater Protection Standard (GWPS) of 0.010 mg/L, therefore no contours are depicted. A statistically significant level (SSL) of molybdenum above the state GWPS is reported for vertical delineation well MW-21D.
4. Aerial photograph source: Google Earth Pro, August 2019.



**SCALE IN FEET**

**ISO-CONCENTRATION MAP  
MOLYBDENUM - AUGUST 2021**

GEORGIA POWER COMPANY  
PLANT HAMMOND AP-2  
ROME, FLOYD COUNTY, GEORGIA

Prepared For: Georgia Power

Prepared By: Geosyntec  
consultants

KENNESAW, GA    JANUARY 2022

**FIGURE  
5**



# APPENDIX A

## Appendix IV Constituents Trend Tests

# Appendix IV Trend Tests - Significant Results

Plant Hammond Client: Southern Company Data: Hammond AP-2 Printed 11/2/2021, 10:40 AM

<u>Constituent</u>	<u>Well</u>	<u>Slope</u>	<u>Calc.</u>	<u>Critical</u>	<u>Sig.</u>	<u>N</u>	<u>%NDs</u>	<u>Normality</u>	<u>Xform</u>	<u>Alpha</u>	<u>Method</u>
<b>Molybdenum (mg/L)</b>	<b>MW-21D</b>	<b>-0.01052</b>	<b>-36</b>	<b>-30</b>	<b>Yes</b>	<b>10</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>

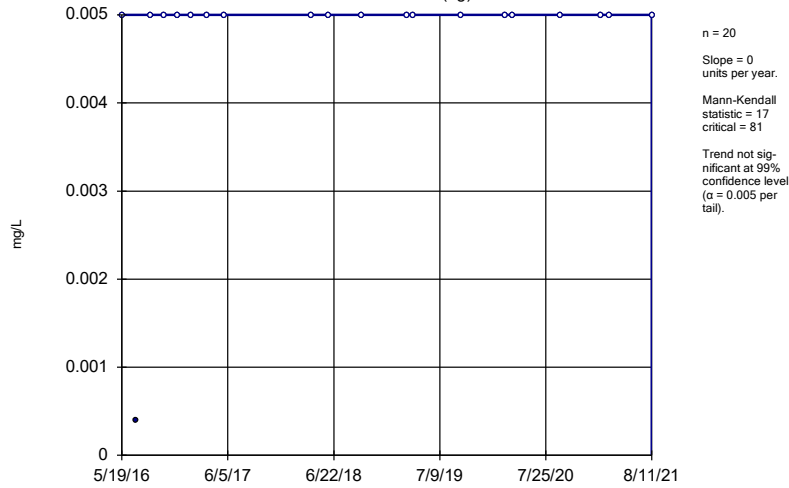
# Appendix IV Trend Tests - All Results

Plant Hammond    Client: Southern Company    Data: Hammond AP-2    Printed 11/2/2021, 10:40 AM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Cobalt (mg/L)	HGWA-1 (bg)	0	17	81	No	20	95	n/a	n/a	0.01	NP
Cobalt (mg/L)	HGWA-2 (bg)	-0.001281	-52	-81	No	20	0	n/a	n/a	0.01	NP
Cobalt (mg/L)	HGWA-3 (bg)	0	0	81	No	20	100	n/a	n/a	0.01	NP
Cobalt (mg/L)	HGWA-4 (bg)	0	-67	-81	No	20	75	n/a	n/a	0.01	NP
Cobalt (mg/L)	HGWA-42D (bg)	0	2	18	No	7	85.71	n/a	n/a	0.01	NP
Cobalt (mg/L)	HGWA-43D (bg)	0	0	18	No	7	100	n/a	n/a	0.01	NP
Cobalt (mg/L)	HGWA-44D (bg)	0	0	18	No	7	100	n/a	n/a	0.01	NP
Cobalt (mg/L)	HGWA-5 (bg)	0	4	81	No	20	25	n/a	n/a	0.01	NP
Cobalt (mg/L)	HGWA-6 (bg)	0	0	81	No	20	100	n/a	n/a	0.01	NP
Cobalt (mg/L)	HGWC-18	-0.00945	-81	-81	No	20	0	n/a	n/a	0.01	NP
Cobalt (mg/L)	MW-33	0.001272	3	18	No	7	0	n/a	n/a	0.01	NP
Cobalt (mg/L)	MW-35	0.003568	2	12	No	5	0	n/a	n/a	0.01	NP
Lead (mg/L)	HGWA-1 (bg)	0	-26	-68	No	18	83.33	n/a	n/a	0.01	NP
Lead (mg/L)	HGWA-2 (bg)	-0.000003012	-48	-68	No	18	55.56	n/a	n/a	0.01	NP
Lead (mg/L)	HGWA-3 (bg)	0	7	68	No	18	83.33	n/a	n/a	0.01	NP
Lead (mg/L)	HGWA-4 (bg)	0	-49	-68	No	18	66.67	n/a	n/a	0.01	NP
Lead (mg/L)	HGWA-42D (bg)	0.00122	12	18	No	7	42.86	n/a	n/a	0.01	NP
Lead (mg/L)	HGWA-43D (bg)	0.0003578	13	18	No	7	14.29	n/a	n/a	0.01	NP
Lead (mg/L)	HGWA-44D (bg)	0.0008343	2	18	No	7	28.57	n/a	n/a	0.01	NP
Lead (mg/L)	HGWA-5 (bg)	0	13	68	No	18	88.89	n/a	n/a	0.01	NP
Lead (mg/L)	HGWA-6 (bg)	0	-3	-68	No	18	88.89	n/a	n/a	0.01	NP
Lead (mg/L)	HGWC-14	-0.00003088	-30	-68	No	18	5.556	n/a	n/a	0.01	NP
Lead (mg/L)	HGWC-18	-0.00004794	-40	-68	No	18	5.556	n/a	n/a	0.01	NP
Lead (mg/L)	MW-33	0	-3	-14	No	6	0	n/a	n/a	0.01	NP
Molybdenum (mg/L)	HGWA-1 (bg)	0	0	68	No	18	100	n/a	n/a	0.01	NP
Molybdenum (mg/L)	HGWA-2 (bg)	0	0	68	No	18	100	n/a	n/a	0.01	NP
Molybdenum (mg/L)	HGWA-3 (bg)	0	0	68	No	18	100	n/a	n/a	0.01	NP
Molybdenum (mg/L)	HGWA-4 (bg)	0	0	68	No	18	100	n/a	n/a	0.01	NP
Molybdenum (mg/L)	HGWA-42D (bg)	0	7	18	No	7	71.43	n/a	n/a	0.01	NP
Molybdenum (mg/L)	HGWA-43D (bg)	-0.001109	-4	-18	No	7	0	n/a	n/a	0.01	NP
Molybdenum (mg/L)	HGWA-44D (bg)	0.003529	12	18	No	7	0	n/a	n/a	0.01	NP
Molybdenum (mg/L)	HGWA-5 (bg)	0	0	68	No	18	100	n/a	n/a	0.01	NP
Molybdenum (mg/L)	HGWA-6 (bg)	0	19	68	No	18	88.89	n/a	n/a	0.01	NP
<b>Molybdenum (mg/L)</b>	<b>MW-21D</b>	<b>-0.01052</b>	<b>-36</b>	<b>-30</b>	<b>Yes</b>	<b>10</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>

### Sen's Slope Estimator

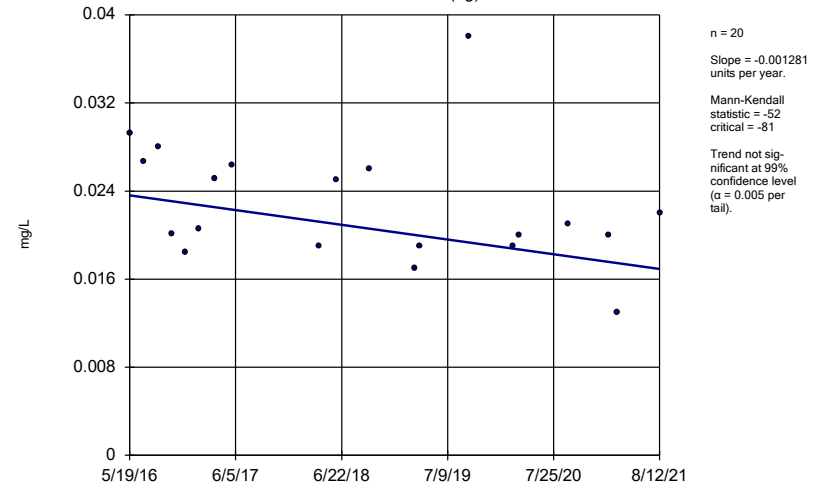
HGWA-1 (bg)



Constituent: Cobalt Analysis Run 11/2/2021 10:38 AM View: Appendix IV Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator

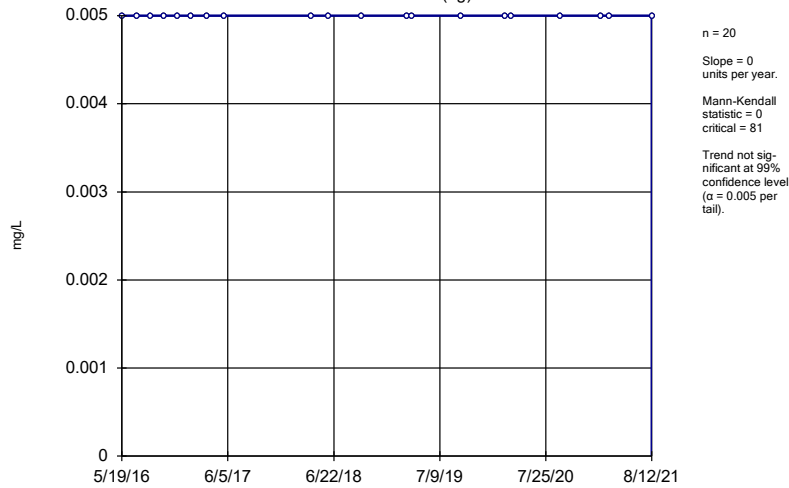
HGWA-2 (bg)



Constituent: Cobalt Analysis Run 11/2/2021 10:38 AM View: Appendix IV Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator

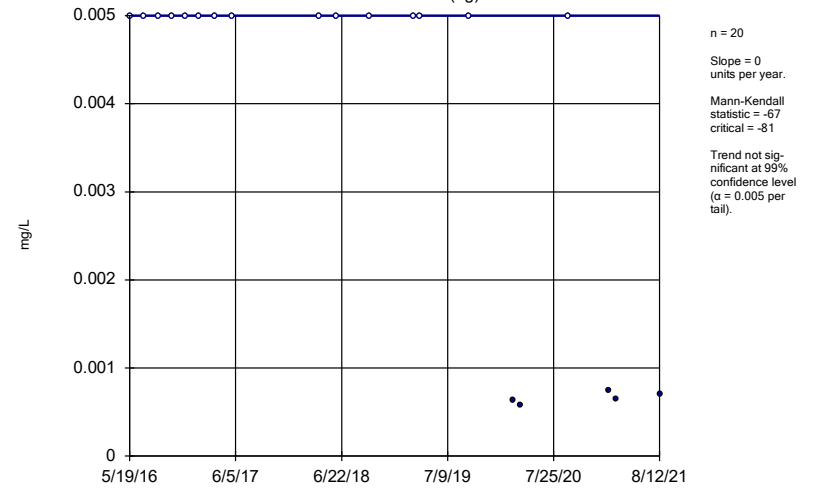
HGWA-3 (bg)



Constituent: Cobalt Analysis Run 11/2/2021 10:38 AM View: Appendix IV Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator

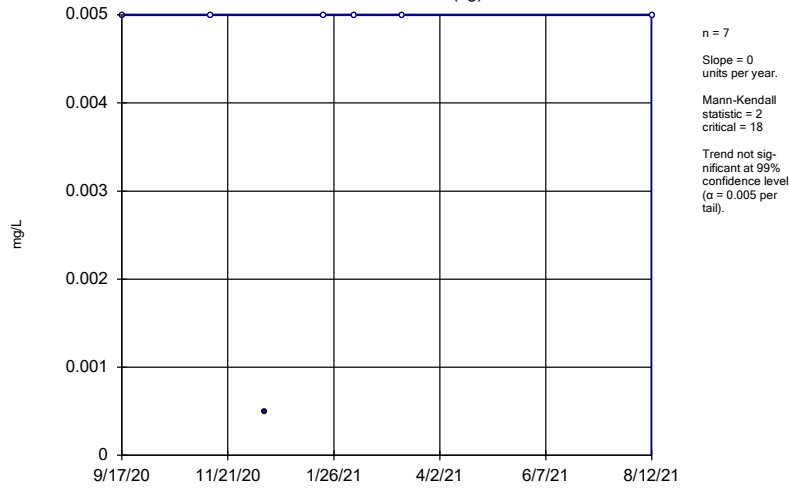
HGWA-4 (bg)



Constituent: Cobalt Analysis Run 11/2/2021 10:38 AM View: Appendix IV Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator

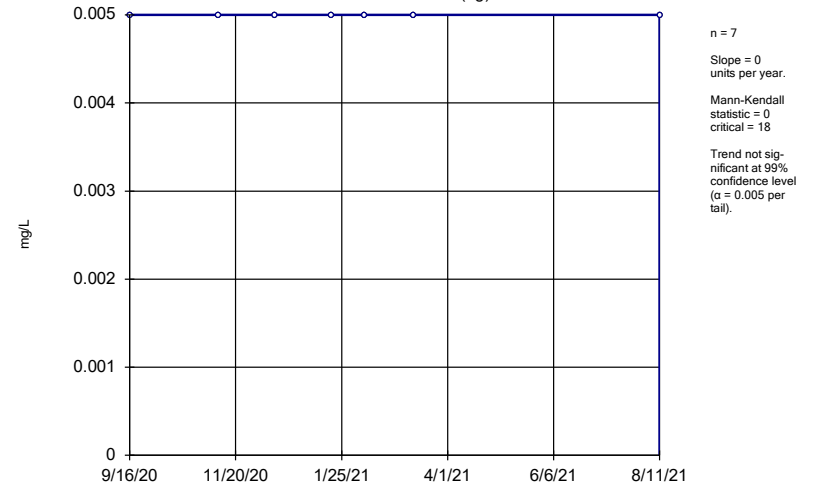
HGWA-42D (bg)



Constituent: Cobalt Analysis Run 11/2/2021 10:38 AM View: Appendix IV Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-2

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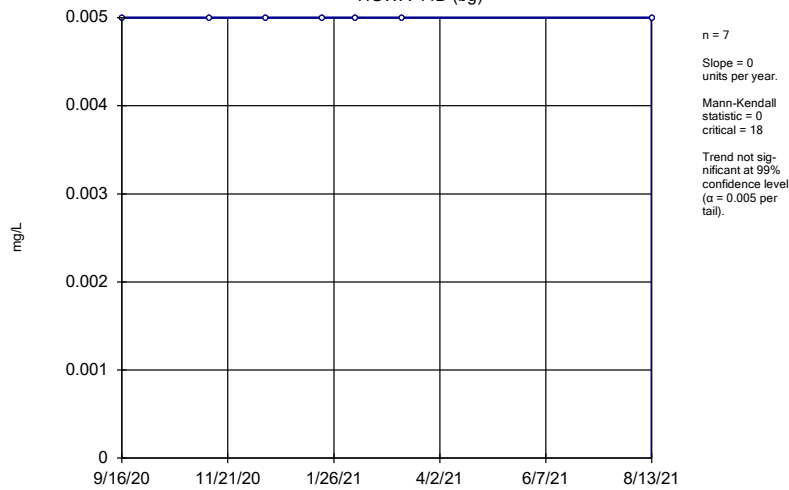
HGWA-43D (bg)



Constituent: Cobalt Analysis Run 11/2/2021 10:38 AM View: Appendix IV Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-2

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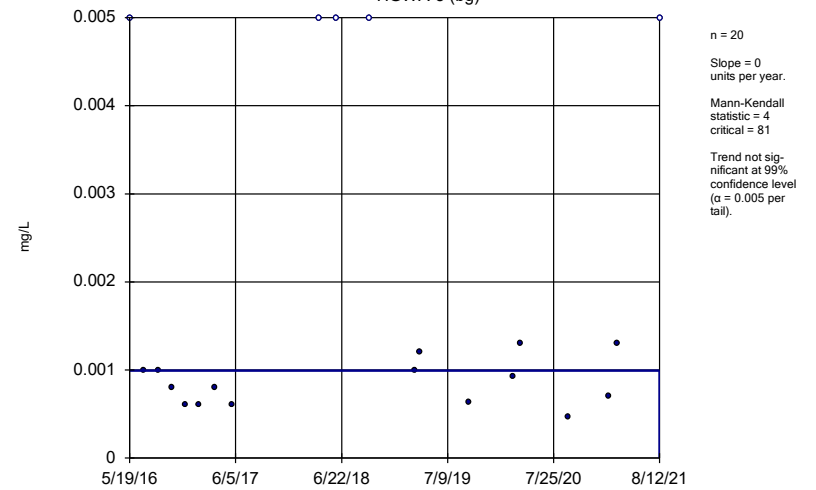
HGWA-44D (bg)



Constituent: Cobalt Analysis Run 11/2/2021 10:38 AM View: Appendix IV Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator

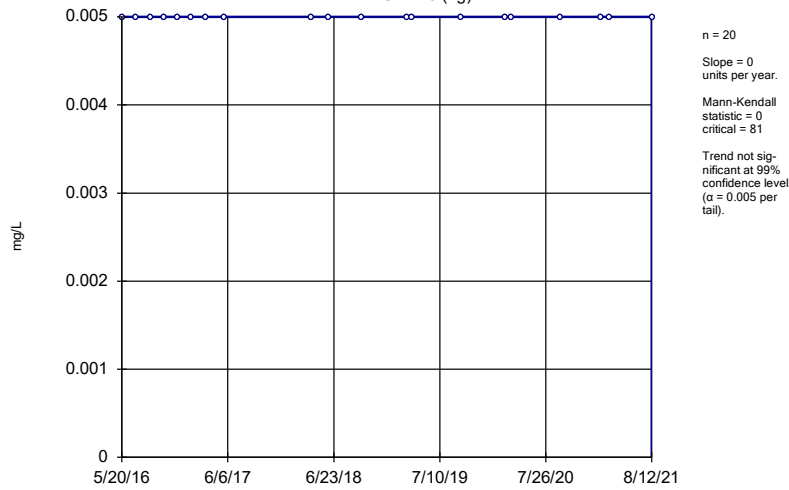
HGWA-5 (bg)



Constituent: Cobalt Analysis Run 11/2/2021 10:38 AM View: Appendix IV Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator

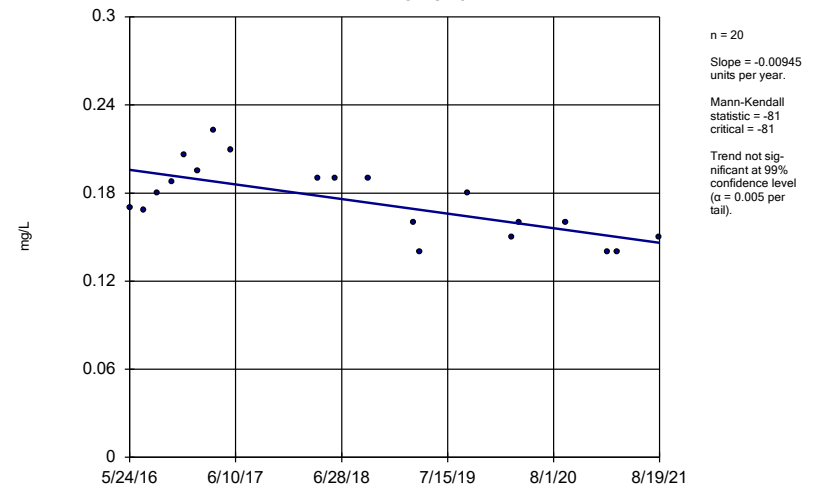
HGWA-6 (bg)



Constituent: Cobalt Analysis Run 11/2/2021 10:38 AM View: Appendix IV Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator

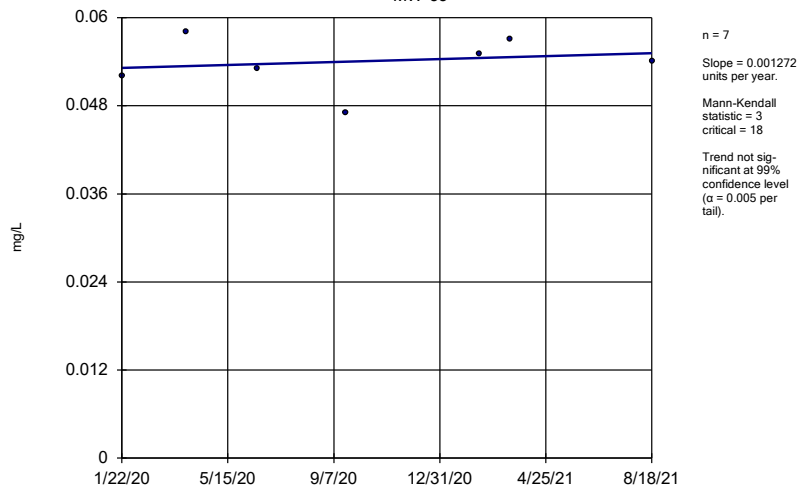
HGWC-18



Constituent: Cobalt Analysis Run 11/2/2021 10:38 AM View: Appendix IV Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator

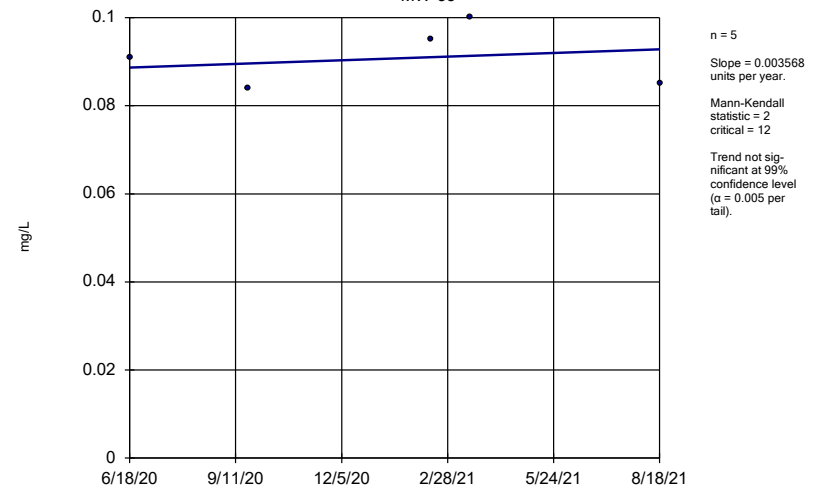
MW-33



Constituent: Cobalt Analysis Run 11/2/2021 10:38 AM View: Appendix IV Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator

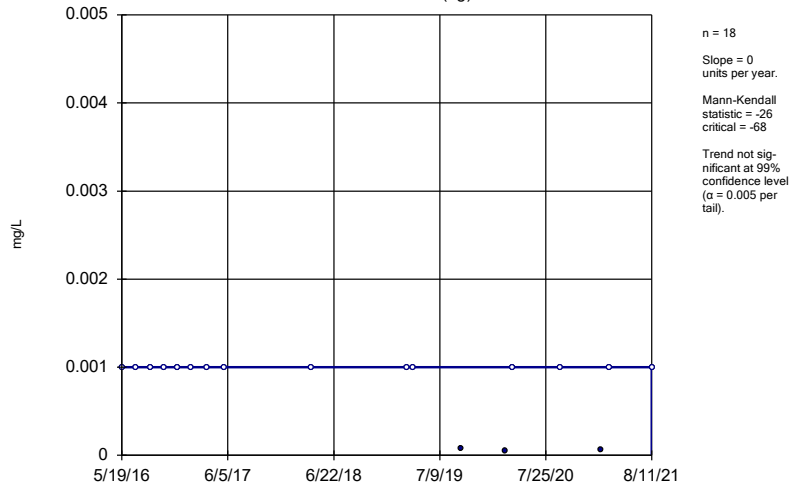
MW-35



Constituent: Cobalt Analysis Run 11/2/2021 10:38 AM View: Appendix IV Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-2

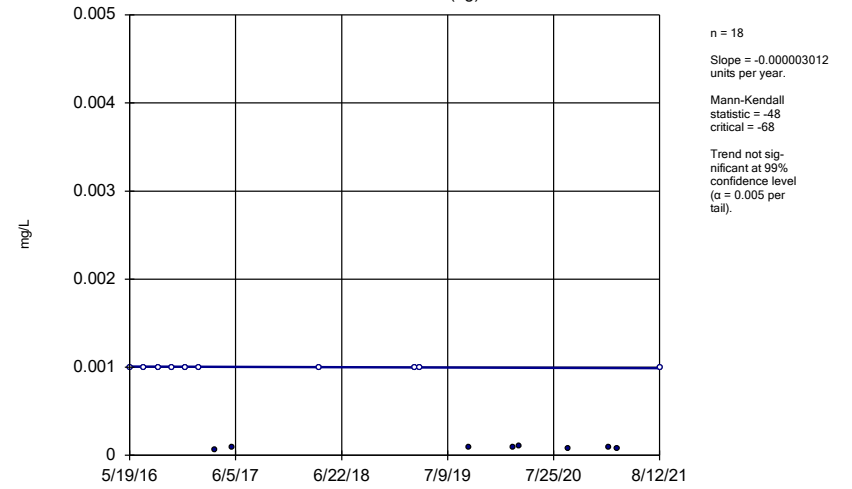


### Sen's Slope Estimator HGWA-1 (bg)



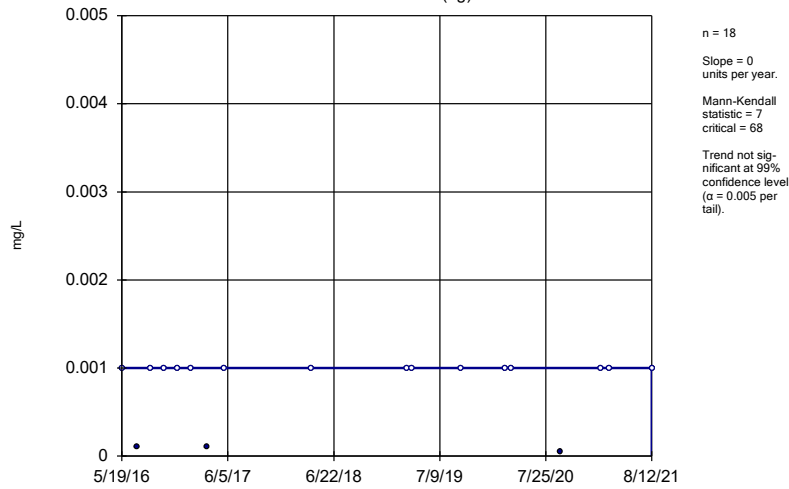
Constituent: Lead Analysis Run 11/2/2021 10:38 AM View: Appendix IV Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator HGWA-2 (bg)



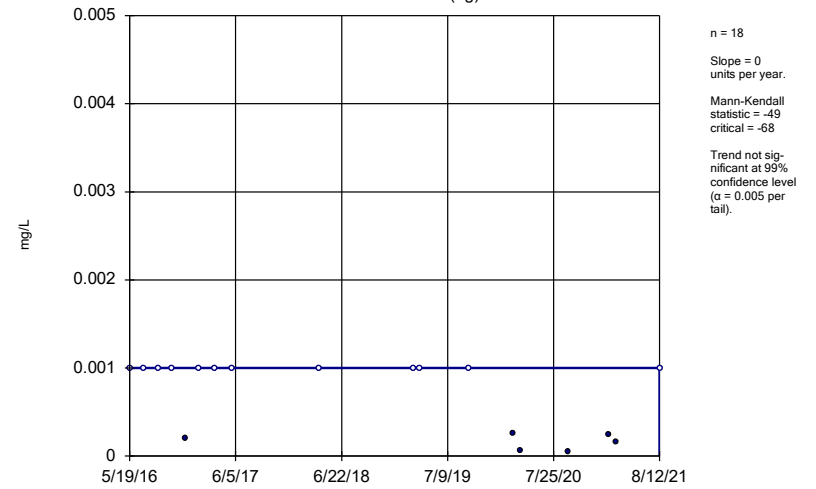
Constituent: Lead Analysis Run 11/2/2021 10:38 AM View: Appendix IV Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator HGWA-3 (bg)



Constituent: Lead Analysis Run 11/2/2021 10:38 AM View: Appendix IV Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-2

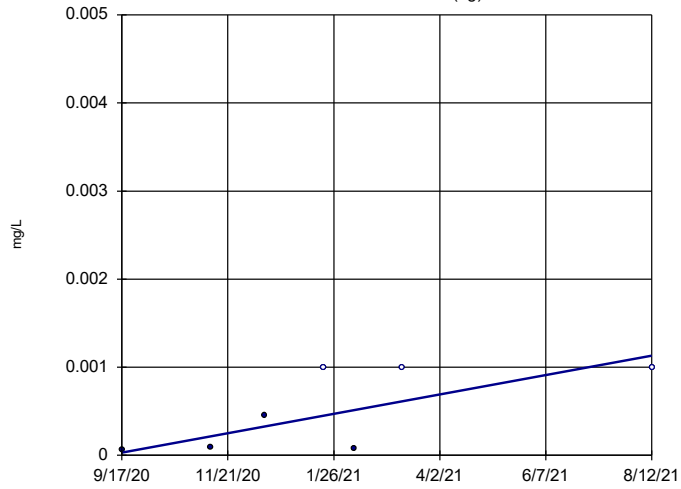
### Sen's Slope Estimator HGWA-4 (bg)



Constituent: Lead Analysis Run 11/2/2021 10:38 AM View: Appendix IV Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator

HGWA-42D (bg)

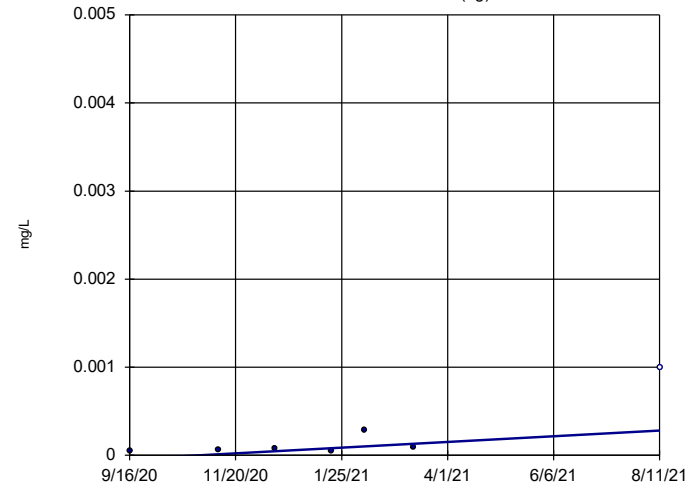


n = 7  
Slope = 0.00122 units per year.  
Mann-Kendall statistic = 12  
critical = 18  
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Lead Analysis Run 11/2/2021 10:38 AM View: Appendix IV Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator

HGWA-43D (bg)

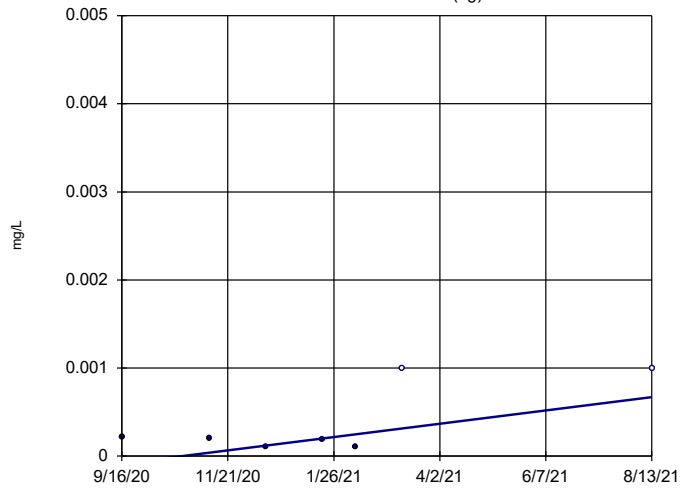


n = 7  
Slope = 0.0003578 units per year.  
Mann-Kendall statistic = 13  
critical = 18  
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Lead Analysis Run 11/2/2021 10:38 AM View: Appendix IV Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator

HGWA-44D (bg)

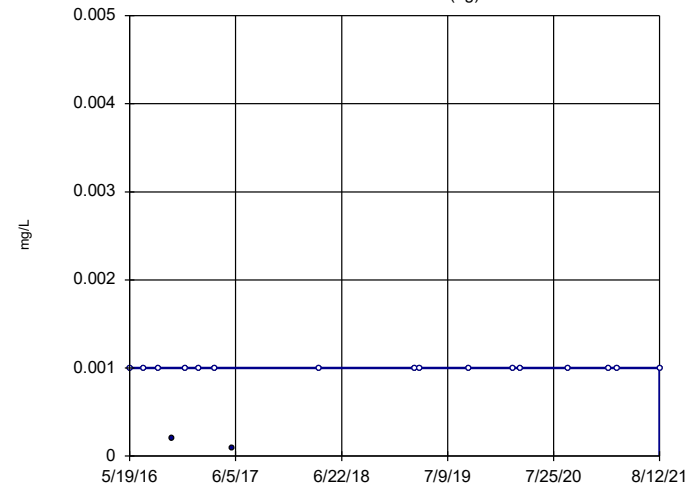


n = 7  
Slope = 0.0008343 units per year.  
Mann-Kendall statistic = 2  
critical = 18  
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Lead Analysis Run 11/2/2021 10:38 AM View: Appendix IV Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator

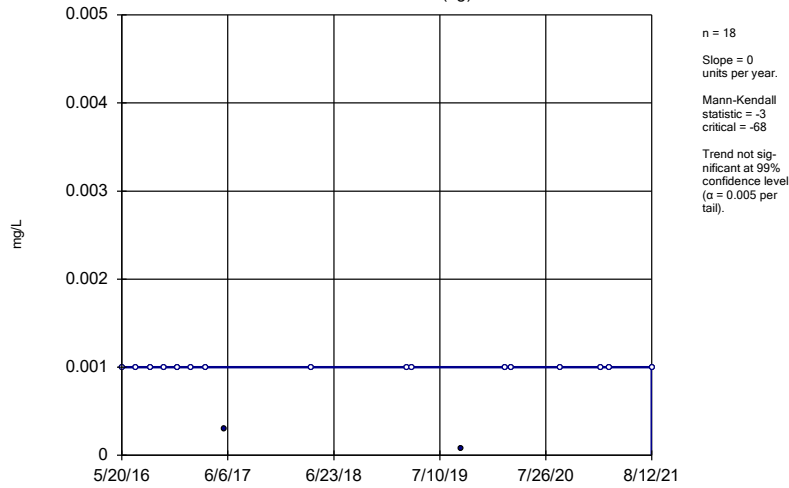
HGWA-5 (bg)



n = 18  
Slope = 0 units per year.  
Mann-Kendall statistic = 13  
critical = 68  
Trend not significant at 99% confidence level (α = 0.005 per tail).

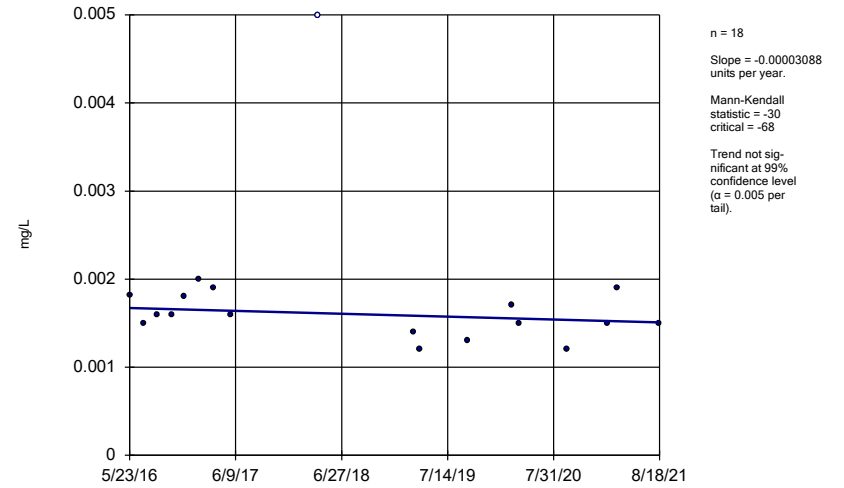
Constituent: Lead Analysis Run 11/2/2021 10:38 AM View: Appendix IV Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sen's Slope Estimator  
HGWA-6 (bg)



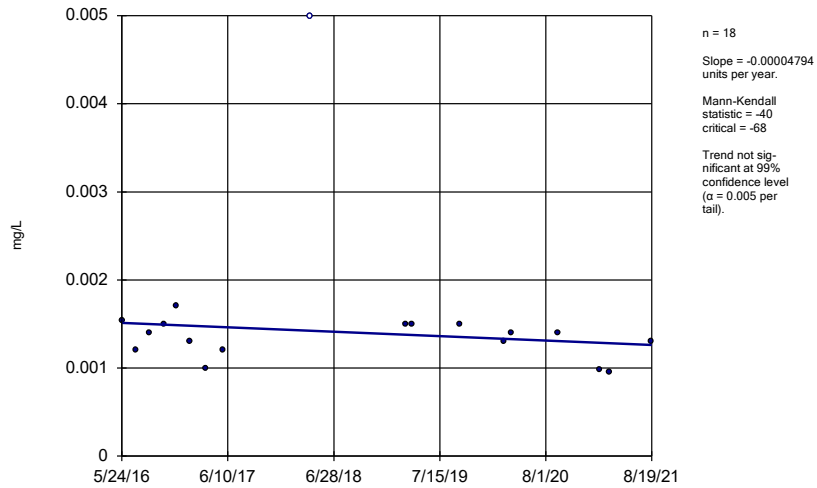
Constituent: Lead Analysis Run 11/2/2021 10:39 AM View: Appendix IV Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sen's Slope Estimator  
HGWC-14



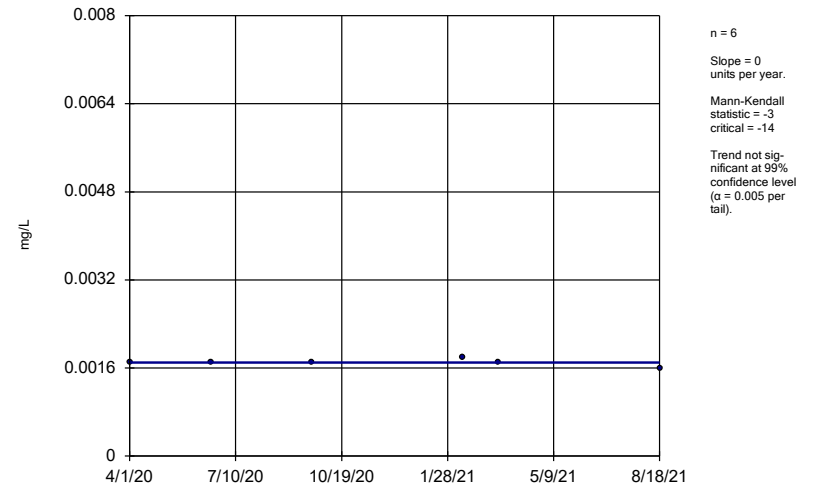
Constituent: Lead Analysis Run 11/2/2021 10:39 AM View: Appendix IV Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sen's Slope Estimator  
HGWC-18



Constituent: Lead Analysis Run 11/2/2021 10:39 AM View: Appendix IV Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-2

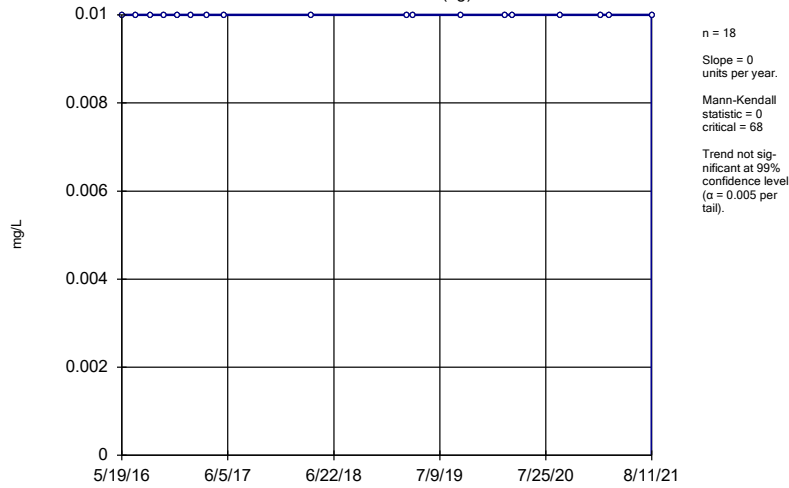
Sen's Slope Estimator  
MW-33



Constituent: Lead Analysis Run 11/2/2021 10:39 AM View: Appendix IV Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator

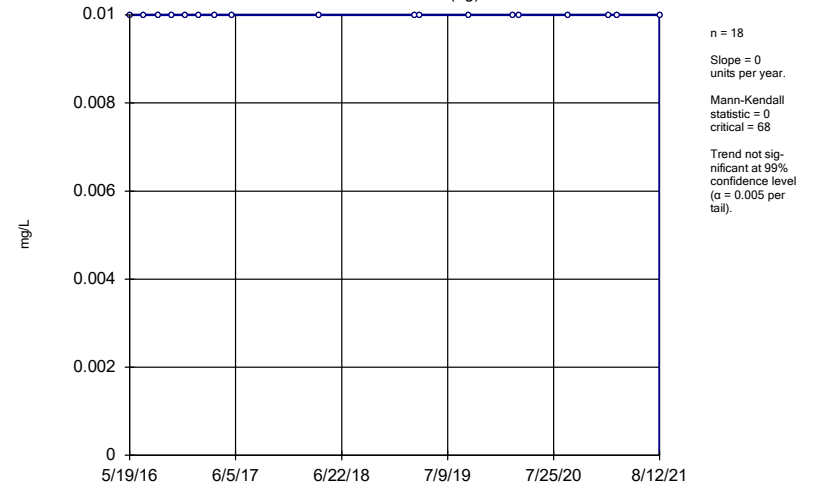
HGWA-1 (bg)



Constituent: Molybdenum Analysis Run 11/2/2021 10:39 AM View: Appendix IV Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator

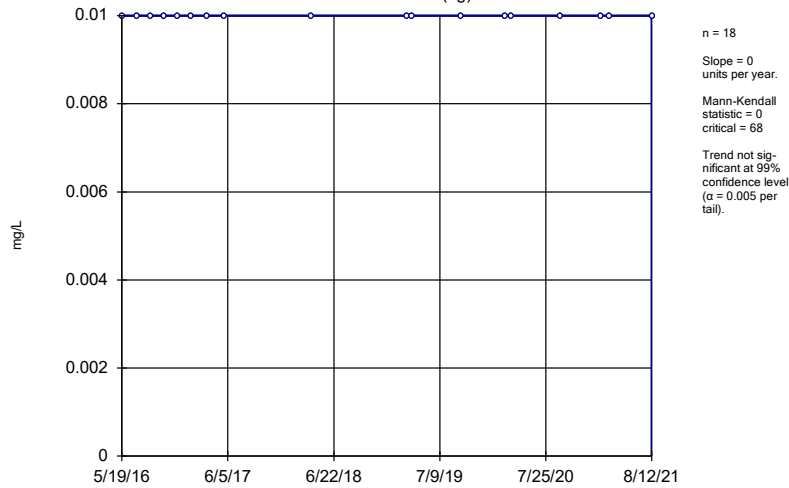
HGWA-2 (bg)



Constituent: Molybdenum Analysis Run 11/2/2021 10:39 AM View: Appendix IV Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator

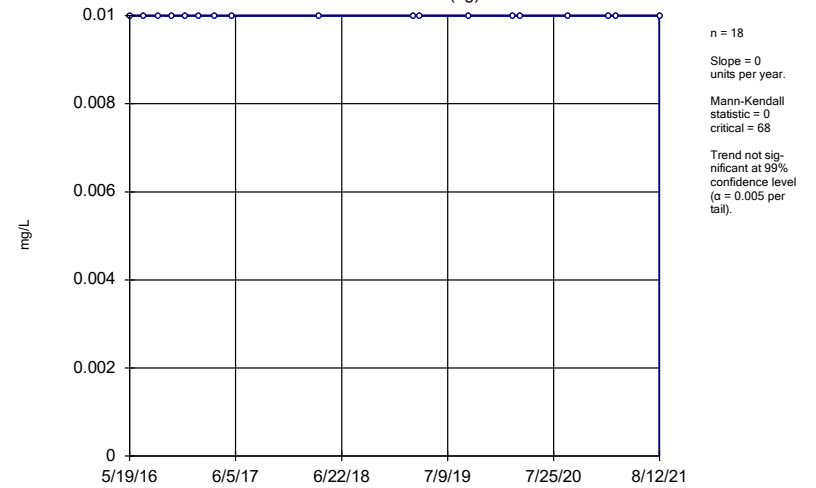
HGWA-3 (bg)



Constituent: Molybdenum Analysis Run 11/2/2021 10:39 AM View: Appendix IV Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator

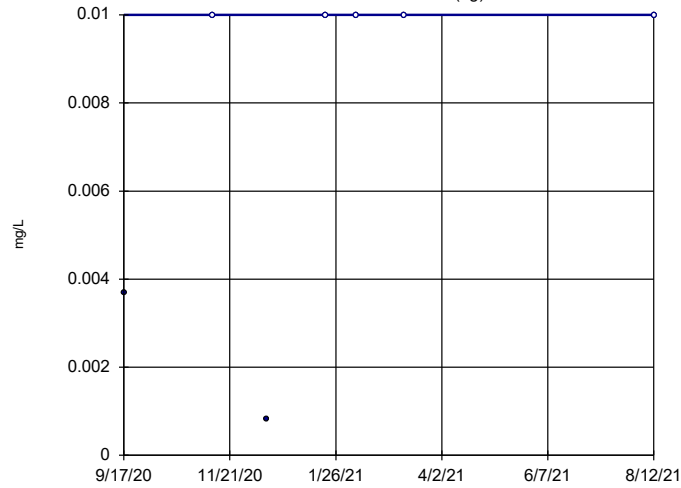
HGWA-4 (bg)



Constituent: Molybdenum Analysis Run 11/2/2021 10:39 AM View: Appendix IV Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator

HGWA-42D (bg)

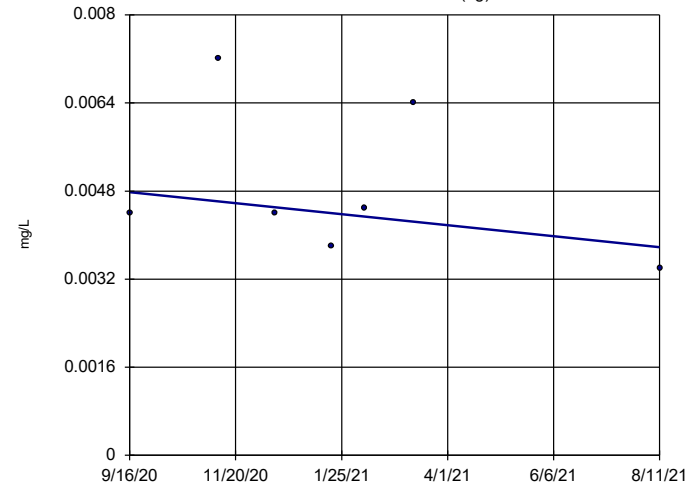


n = 7  
Slope = 0  
units per year.  
Mann-Kendall  
statistic = 7  
critical = 18  
Trend not sig-  
nificant at 99%  
confidence level  
( $\alpha = 0.005$  per  
tail).

Constituent: Molybdenum Analysis Run 11/2/2021 10:39 AM View: Appendix IV Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator

HGWA-43D (bg)

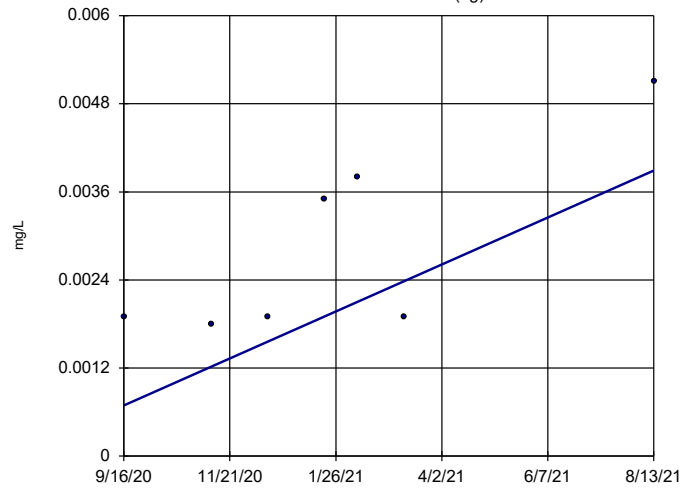


n = 7  
Slope = -0.001109  
units per year.  
Mann-Kendall  
statistic = -4  
critical = -18  
Trend not sig-  
nificant at 99%  
confidence level  
( $\alpha = 0.005$  per  
tail).

Constituent: Molybdenum Analysis Run 11/2/2021 10:39 AM View: Appendix IV Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator

HGWA-44D (bg)

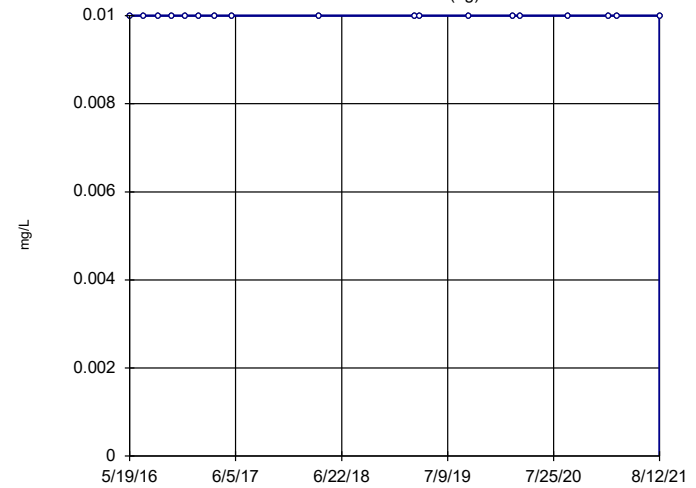


n = 7  
Slope = 0.003529  
units per year.  
Mann-Kendall  
statistic = 12  
critical = 18  
Trend not sig-  
nificant at 99%  
confidence level  
( $\alpha = 0.005$  per  
tail).

Constituent: Molybdenum Analysis Run 11/2/2021 10:39 AM View: Appendix IV Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator

HGWA-5 (bg)

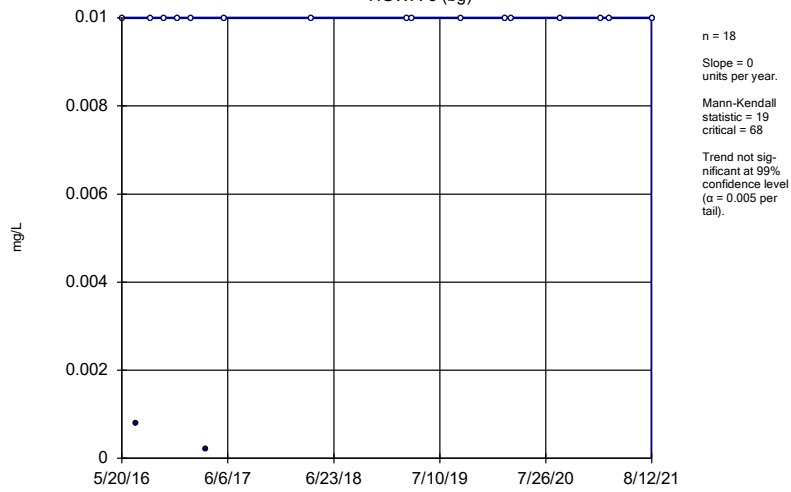


n = 18  
Slope = 0  
units per year.  
Mann-Kendall  
statistic = 0  
critical = 68  
Trend not sig-  
nificant at 99%  
confidence level  
( $\alpha = 0.005$  per  
tail).

Constituent: Molybdenum Analysis Run 11/2/2021 10:39 AM View: Appendix IV Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator

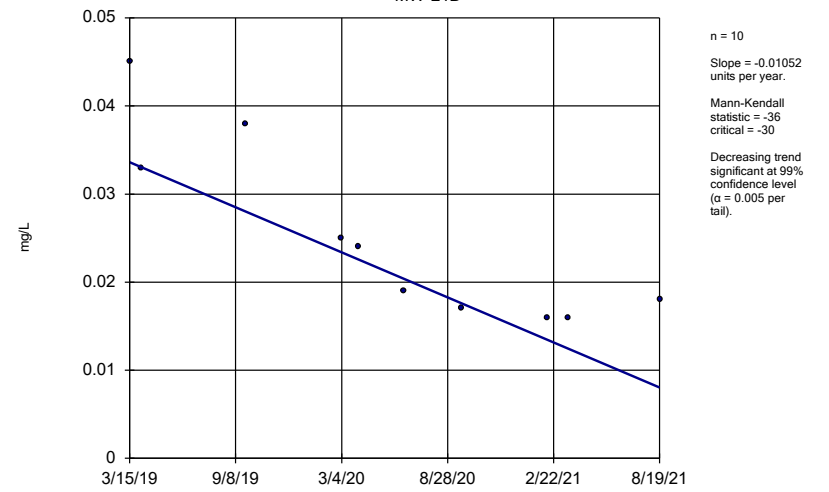
HGWA-6 (bg)



Constituent: Molybdenum Analysis Run 11/2/2021 10:39 AM View: Appendix IV Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator

MW-21D



Constituent: Molybdenum Analysis Run 11/2/2021 10:39 AM View: Appendix IV Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-2

# APPENDIX B

## Well Survey Report

**Plant Hammond**  
5963 Alabama Hwy  
Rome, GA 30165

Inquiry Number: 06760773.1r  
November 22, 2021

## The EDR GeoCheck® Report



6 Armstrong Road, 4th floor  
Shelton, CT 06484  
Toll Free: 800.352.0050  
[www.edrnet.com](http://www.edrnet.com)



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***Thank you for your business.***  
Please contact EDR at 1-800-352-0050  
with any questions or comments.

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# GEOCHECK® - PHYSICAL SETTING SOURCE REPORT

## TARGET PROPERTY ADDRESS

PLANT HAMMOND  
5963 ALABAMA HWY  
ROME, GA 30165

## TARGET PROPERTY COORDINATES

Latitude (North): 34.251229 - 34° 15' 4.42"  
Longitude (West): 85.351141 - 85° 21' 4.11"  
Universal Transverse Mercator: Zone 16  
UTM X (Meters): 651830.0  
UTM Y (Meters): 3791046.8  
Elevation: 578 ft. above sea level

## USGS TOPOGRAPHIC MAP

Target Property Map: 34085-C3 ROCK MOUNTAIN, GA  
Version Date: 1985  
  
South Map: 34085-B3 LIVINGSTON, GA  
Version Date: 1982

EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principle investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

# GEOCHECK<sup>®</sup> - PHYSICAL SETTING SOURCE SUMMARY

## GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

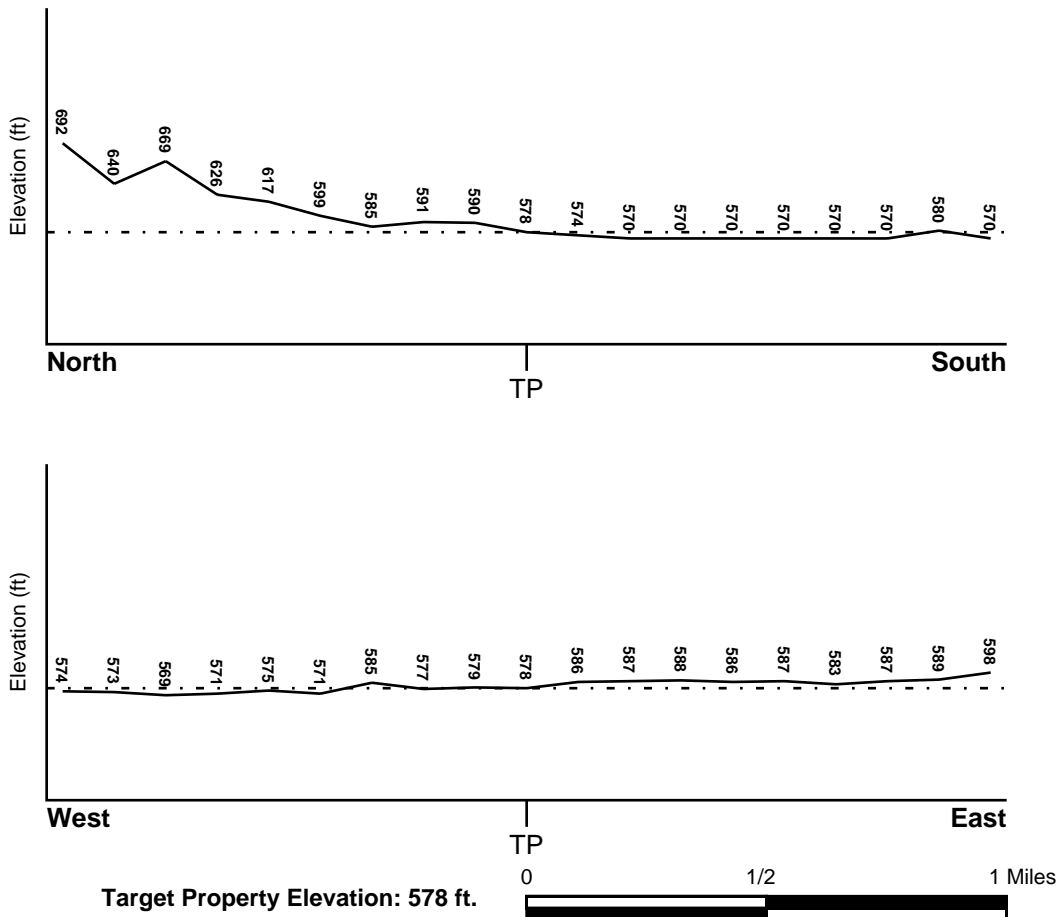
## TOPOGRAPHIC INFORMATION

Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

## TARGET PROPERTY TOPOGRAPHY

General Topographic Gradient: General SSW

## SURROUNDING TOPOGRAPHY: ELEVATION PROFILES



Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

# GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

## HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

## **FEMA FLOOD ZONE**

<u>Flood Plain Panel at Target Property</u>	<u>FEMA Source Type</u>
13115C0163E	FEMA FIRM Flood data
<u>Additional Panels in search area:</u>	<u>FEMA Source Type</u>
13115C0164E	FEMA FIRM Flood data
13115C0252E	FEMA FIRM Flood data
13115C0251E	FEMA FIRM Flood data

## **NATIONAL WETLAND INVENTORY**

<u>NWI Quad at Target Property</u>	<u>NWI Electronic Data Coverage</u>
ROCK MOUNTAIN	YES - refer to the Overview Map and Detail Map

## **HYDROGEOLOGIC INFORMATION**

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

## **AQUIFLOW®**

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

<u>MAP ID</u>	<u>LOCATION FROM TP</u>	<u>GENERAL DIRECTION GROUNDWATER FLOW</u>
Not Reported		

## GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

### GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

### GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

#### ROCK STRATIGRAPHIC UNIT

Era: Paleozoic  
System: Cambrian  
Series: Cambrian  
Code: C (decoded above as Era, System & Series)

#### GEOLOGIC AGE IDENTIFICATION

Category: Stratified Sequence

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

### DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps. The following information is based on Soil Conservation Service STATSGO data.

Soil Component Name: ETOWAH

Soil Surface Texture: loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained. Soils have intermediate water holding capacity. Depth to water table is more than 6 feet.

Hydric Status: Soil does not meet the requirements for a hydric soil.

Corrosion Potential - Uncoated Steel: LOW

Depth to Bedrock Min: > 60 inches

Depth to Bedrock Max: > 60 inches

## GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Permeability Rate (in/hr)	Soil Reaction (pH)
	Upper	Lower		AASHTO Group	Unified Soil		
1	0 inches	7 inches	loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 2.00 Min: 0.60	Max: 5.50 Min: 4.50
2	7 inches	38 inches	silty clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay Soils.	Max: 2.00 Min: 0.60	Max: 5.50 Min: 4.50
3	38 inches	70 inches	silty clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay Soils.	Max: 2.00 Min: 0.60	Max: 5.50 Min: 4.50

### OTHER SOIL TYPES IN AREA

Based on Soil Conservation Service STATSGO data, the following additional subordinant soil types may appear within the general area of target property.

Soil Surface Textures: silt loam  
clay loam

Surficial Soil Types: silt loam  
clay loam

Shallow Soil Types: sandy clay loam  
clay loam  
silty clay loam  
silty clay

Deeper Soil Types: clay loam  
stratified  
clay  
cherty - clay loam  
weathered bedrock  
loam

### LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

# GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

## WELL SEARCH DISTANCE INFORMATION

<u>DATABASE</u>	<u>SEARCH DISTANCE (miles)</u>
Federal USGS	2.000
Federal FRDS PWS	2.000
State Database	2.000

## **FEDERAL USGS WELL INFORMATION**

<u>MAP ID</u>	<u>WELL ID</u>	<u>LOCATION FROM TP</u>
B3	USGS40000266955	1/8 - 1/4 Mile NNE
C5	USGS40000266962	1/4 - 1/2 Mile NNE
D7	USGS40000266956	1/4 - 1/2 Mile NE
C10	USGS40000266965	1/2 - 1 Mile NNE
D12	USGS40000266957	1/2 - 1 Mile ENE
E14	USGS40000266972	1/2 - 1 Mile NNE
E17	USGS40000266968	1/2 - 1 Mile NE
F18	USGS40000266981	1/2 - 1 Mile NNE
G21	USGS40000266978	1 - 2 Miles ENE
H22	USGS40000266969	1 - 2 Miles ENE
H25	USGS40000266975	1 - 2 Miles ENE
I27	USGS40000266890	1 - 2 Miles South

## **FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION**

<u>MAP ID</u>	<u>WELL ID</u>	<u>LOCATION FROM TP</u>
No PWS System Found		

Note: PWS System location is not always the same as well location.

## **STATE DATABASE WELL INFORMATION**

<u>MAP ID</u>	<u>WELL ID</u>	<u>LOCATION FROM TP</u>
A1	0000004168	1/8 - 1/4 Mile North
A2	0000004169	1/8 - 1/4 Mile North
B4	0000004171	1/8 - 1/4 Mile NNE
C6	0000004175	1/4 - 1/2 Mile NNE
D8	0000004172	1/4 - 1/2 Mile NE
C9	0000004177	1/2 - 1 Mile NNE
D11	0000004173	1/2 - 1 Mile ENE
I3	0000004170	1/2 - 1 Mile WNW
E15	0000004181	1/2 - 1 Mile NNE
E16	0000004179	1/2 - 1 Mile NE
F19	0000004188	1/2 - 1 Mile NNE
G20	0000004185	1 - 2 Miles ENE
H23	0000004180	1 - 2 Miles ENE
H24	0000004183	1 - 2 Miles ENE

## GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

### STATE DATABASE WELL INFORMATION

MAP ID

126

WELL ID

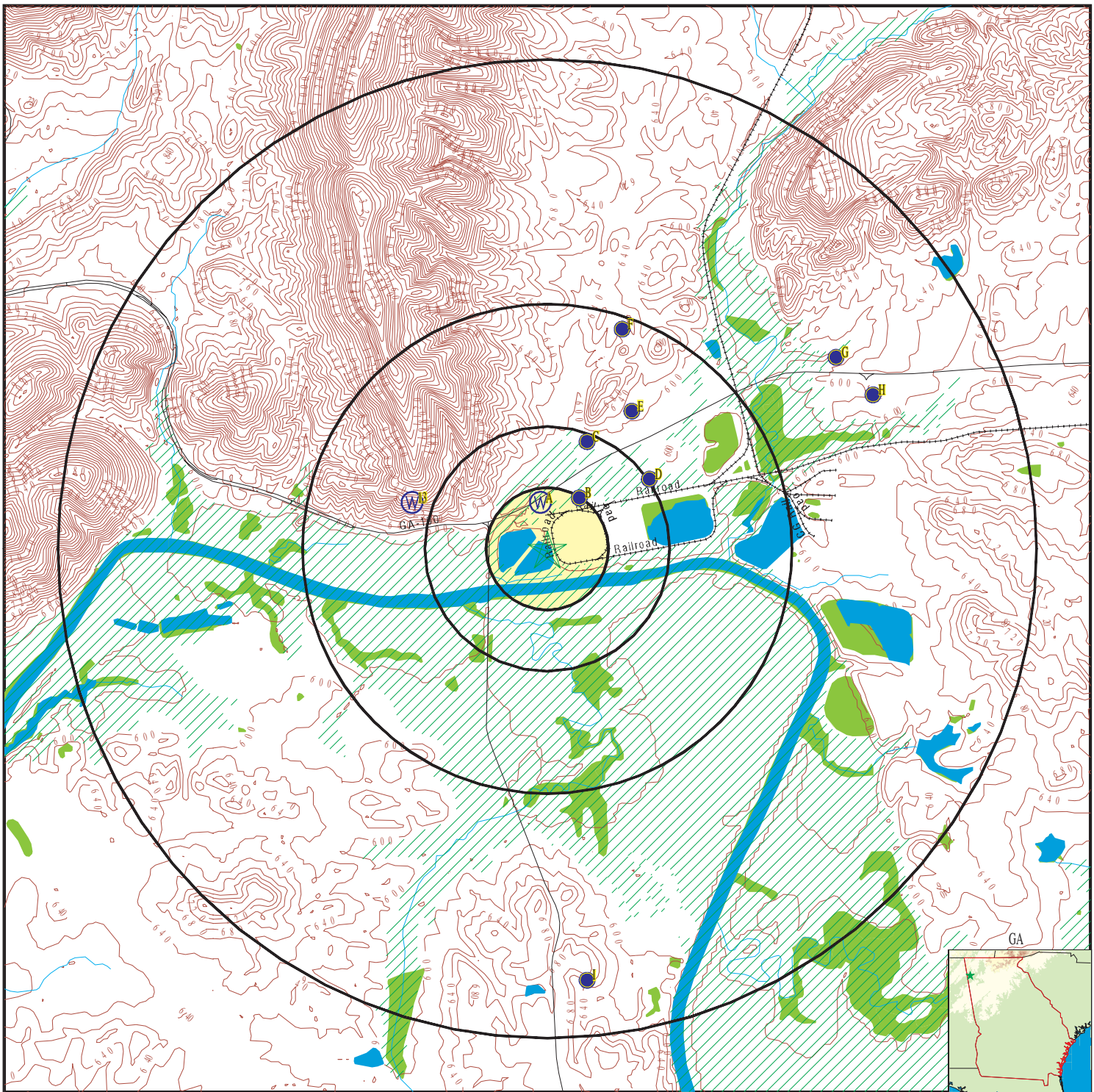
0000004144

LOCATION  
FROM TP

1 - 2 Miles South



# PHYSICAL SETTING SOURCE MAP - 06760773.1r



- County Boundary
- Major Roads
- Contour Lines
- Earthquake epicenter, Richter 5 or greater
- Water Wells
- Public Water Supply Wells
- Cluster of Multiple Icons

- Groundwater Flow Direction
- Indeterminate Groundwater Flow at Location
- Groundwater Flow Varies at Location
- 100-year flood zone
- 500-year flood zone
- National Wetland Inventory
- Wildlife Areas

SITE NAME: Plant Hammond  
 ADDRESS: 5963 Alabama Hwy  
 Rome GA 30165  
 LAT/LONG: 34.251229 / 85.351141

CLIENT: Geosyntec Consultants  
 CONTACT: Christine Hug  
 INQUIRY #: 06760773.1r  
 DATE: November 22, 2021 1:00 pm

# GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID  
Direction  
Distance  
Elevation

Database      EDR ID Number

**A1**  
**North**  
**1/8 - 1/4 Mile**  
**Higher**

**GA WELLS      000004168**

County code:	115	Well num:	03JJS2
Remarks:	JOE EARLY	Lat:	341514
Lon:	0852106	Latlon datum:	NAD27
Alt:	590	Alt datum:	NGVD29
Depth:	Not Reported	Depth to casing:	Not Reported
Casing dia:	Not Reported	Casing matl:	Not Reported
Depth to top:	Not Reported	Depth to bot:	Not Reported
Opening type:	Not Reported	Constr date:	Not Reported
Discharge:	208.3	Prim use:	Not Reported
Aquifer code:	Not Reported	Edr id:	000004168

**A2**  
**North**  
**1/8 - 1/4 Mile**  
**Higher**

**GA WELLS      000004169**

County code:	115	Well num:	03JJS2
Remarks:	JOE EARLY	Lat:	341514
Lon:	0852106	Latlon datum:	NAD27
Alt:	590	Alt datum:	NGVD29
Depth:	Not Reported	Depth to casing:	Not Reported
Casing dia:	Not Reported	Casing matl:	Not Reported
Depth to top:	Not Reported	Depth to bot:	Not Reported
Opening type:	Not Reported	Constr date:	Not Reported
Discharge:	208.3	Prim use:	Not Reported
Aquifer code:	Not Reported	Edr id:	000004169

**B3**  
**NNE**  
**1/8 - 1/4 Mile**  
**Higher**

**FED USGS      USGS40000266955**

Organization ID:	USGS-GA	Organization Name:	USGS Georgia Water Science Center
Monitor Location:	03JJ41	Type:	Well
Description:	GA POWER, PLANT HAMMOND	HUC:	03150105
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Valley and Ridge aquifers	Formation Type:	Conasauga Formation
Aquifer Type:	Not Reported	Construction Date:	19511101
Well Depth:	411	Well Depth Units:	ft
Well Hole Depth:	411	Well Hole Depth Units:	ft

**B4**  
**NNE**  
**1/8 - 1/4 Mile**  
**Higher**

**GA WELLS      000004171**

County code:	115	Well num:	03JJ41
Remarks:	GA POWER, PLANT HAMMOND	Lat:	341515
Lon:	0852056	Latlon datum:	NAD27
Alt:	586.00	Alt datum:	NGVD29

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Depth: 411	Depth to casing: 44.5
Casing dia: 12.	Casing matl: Not Reported
Depth to top: 44.5	Depth to bot: 411.
Opening type: X	Constr date: 19551101
Discharge: 69.60	Prim use: N
Aquifer code: 371CNSG	Edr id: 000004171

**C5**  
**NNE**  
**1/4 - 1/2 Mile**  
**Higher**

**FED USGS      USGS40000266962**

Organization ID: USGS-GA	Organization Name: USGS Georgia Water Science Center
Monitor Location: 03JJ31	Type: Well
Description: RUTH BRIDGES	HUC: 03150105
Drainage Area: Not Reported	Drainage Area Units: Not Reported
Contrib Drainage Area: Not Reported	Contrib Drainage Area Unts: Not Reported
Aquifer: Valley and Ridge aquifers	Formation Type: Floyd Shale
Aquifer Type: Not Reported	Construction Date: 1949
Well Depth: 96	Well Depth Units: ft
Well Hole Depth: Not Reported	Well Hole Depth Units: Not Reported

Ground water levels, Number of Measurements: 1	Level reading date: 1961-11-07
Feet below surface: 20	Feet to sea level: Not Reported
Note: Not Reported	

**C6**  
**NNE**  
**1/4 - 1/2 Mile**  
**Higher**

**GA WELLS      000004175**

County code: 115	Well num: 03JJ31
Remarks: RUTH BRIDGES	Lat: 341524
Lon: 0852052	Latlon datum: NAD27
Alt: 590	Alt datum: NGVD29
Depth: 96	Depth to casing: 20
Casing dia: 6	Casing matl: Not Reported
Depth to top: 20	Depth to bot: 96
Opening type: X	Constr date: 1949
Discharge: 10	Prim use: H
Aquifer code: 331FLYD	Edr id: 000004175

**D7**  
**NE**  
**1/4 - 1/2 Mile**  
**Higher**

**FED USGS      USGS40000266956**

Organization ID: USGS-GA	Organization Name: USGS Georgia Water Science Center
Monitor Location: 03JJ35	Type: Well
Description: GA. POWER CO. WELL NO.3	HUC: 03150105
Drainage Area: Not Reported	Drainage Area Units: Not Reported
Contrib Drainage Area: Not Reported	Contrib Drainage Area Unts: Not Reported
Aquifer: Valley and Ridge aquifers	Formation Type: Conasauga Formation
Aquifer Type: Not Reported	Construction Date: 195111
Well Depth: 405	Well Depth Units: ft
Well Hole Depth: Not Reported	Well Hole Depth Units: Not Reported

# GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID  
Direction  
Distance  
Elevation

Database      EDR ID Number

**D8**  
**NE**  
**1/4 - 1/2 Mile**  
**Higher**

**GA WELLS      000004172**

County code:	115	Well num:	03JJ35
Remarks:	GA. POWER CO. WELL NO.3	Lat:	341518
Lon:	0852041	Latlon datum:	NAD27
Alt:	590.0	Alt datum:	NGVD29
Depth:	405.0	Depth to casing:	22.0
Casing dia:	12.0	Casing matl:	Not Reported
Depth to top:	22.0	Depth to bot:	405.0
Opening type:	X	Constr date:	195111
Discharge:	Not Reported	Prim use:	Not Reported
Aquifer code:	371CNSG	Edr id:	000004172

**C9**  
**NNE**  
**1/2 - 1 Mile**  
**Higher**

**GA WELLS      000004177**

County code:	115	Well num:	03JJ14
Remarks:	MRS. ARTHUR L. LLOYD	Lat:	341530
Lon:	0852056	Latlon datum:	NAD27
Alt:	595	Alt datum:	NGVD29
Depth:	87	Depth to casing:	21
Casing dia:	6	Casing matl:	Not Reported
Depth to top:	21	Depth to bot:	87
Opening type:	X	Constr date:	1948
Discharge:	16.7	Prim use:	H
Aquifer code:	371CNSG	Edr id:	000004177

**C10**  
**NNE**  
**1/2 - 1 Mile**  
**Higher**

**FED USGS      USGS40000266965**

Organization ID:	USGS-GA	Organization Name:	USGS Georgia Water Science Center
Monitor Location:	03JJ14	Type:	Well
Description:	MRS. ARTHUR L. LLOYD	HUC:	03150105
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Valley and Ridge aquifers	Formation Type:	Conasauga Formation
Aquifer Type:	Not Reported	Construction Date:	1948
Well Depth:	87	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

Ground water levels,Number of Measurements:	1	Level reading date:	1948
Feet below surface:	4	Feet to sea level:	Not Reported
Note:	Not Reported		

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID  
Direction  
Distance  
Elevation

Database      EDR ID Number

**D11**  
**ENE**  
**1/2 - 1 Mile**  
**Higher**

**GA WELLS      0000004173**

County code:	115	Well num:	03JJ40
Remarks:	GA POWER CO, HAMMOND PLNT	Lat:	341520
Lon:	0852035	Latlon datum:	NAD27
Alt:	590	Alt datum:	NGVD29
Depth:	405	Depth to casing:	Not Reported
Casing dia:	Not Reported	Casing matl:	Not Reported
Depth to top:	Not Reported	Depth to bot:	Not Reported
Opening type:	Not Reported	Constr date:	195111
Discharge:	40.	Prim use:	N
Aquifer code:	371CNSG	Edr id:	0000004173

**D12**  
**ENE**  
**1/2 - 1 Mile**  
**Higher**

**FED USGS      USGS40000266957**

Organization ID:	USGS-GA	Organization Name:	USGS Georgia Water Science Center
Monitor Location:	03JJ40	Type:	Well
Description:	GA POWER CO, HAMMOND PLNT	HUC:	03150105
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Valley and Ridge aquifers	Formation Type:	Conasauga Formation
Aquifer Type:	Not Reported	Construction Date:	195111
Well Depth:	405	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

Ground water levels,Number of Measurements:	1	Level reading date:	1951-11
Feet below surface:	15	Feet to sea level:	Not Reported
Note:	Not Reported		

**13**  
**WNW**  
**1/2 - 1 Mile**  
**Higher**

**GA WELLS      0000004170**

County code:	115	Well num:	03JJ47
Remarks:	A.A. LOONEY	Lat:	341514
Lon:	0852139	Latlon datum:	NAD27
Alt:	800	Alt datum:	NGVD29
Depth:	Not Reported	Depth to casing:	Not Reported
Casing dia:	Not Reported	Casing matl:	Not Reported
Depth to top:	Not Reported	Depth to bot:	Not Reported
Opening type:	Not Reported	Constr date:	Not Reported
Discharge:	Not Reported	Prim use:	Not Reported
Aquifer code:	Not Reported	Edr id:	0000004170

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID  
Direction  
Distance  
Elevation

Database      EDR ID Number

**E14**  
**NNE**  
**1/2 - 1 Mile**  
**Higher**

**FED USGS      USGS40000266972**

Organization ID:	USGS-GA	Organization Name:	USGS Georgia Water Science Center
Monitor Location:	03JJ13	Type:	Well
Description:	ARTHUR W. LLOYD	HUC:	03150105
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Valley and Ridge aquifers	Formation Type:	Floyd Shale
Aquifer Type:	Not Reported	Construction Date:	1955
Well Depth:	72	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

Ground water levels, Number of Measurements:	1	Level reading date:	1955
Feet below surface:	15.0	Feet to sea level:	Not Reported
Note:	Not Reported		

**E15**  
**NNE**  
**1/2 - 1 Mile**  
**Higher**

**GA WELLS      0000004181**

County code:	115	Well num:	03JJ13
Remarks:	ARTHUR W. LLOYD	Lat:	341533
Lon:	0852047	Latlon datum:	NAD27
Alt:	625	Alt datum:	NGVD29
Depth:	72	Depth to casing:	28
Casing dia:	6	Casing matl:	Not Reported
Depth to top:	28	Depth to bot:	72
Opening type:	X	Constr date:	1955
Discharge:	15	Prim use:	H
Aquifer code:	331FLYD	Edr id:	0000004181

**E16**  
**NE**  
**1/2 - 1 Mile**  
**Higher**

**GA WELLS      0000004179**

County code:	115	Well num:	03JJ12
Remarks:	DEWEY H. WORTHY JR.	Lat:	341534
Lon:	0852038	Latlon datum:	NAD27
Alt:	600	Alt datum:	NGVD29
Depth:	60	Depth to casing:	55
Casing dia:	6	Casing matl:	Not Reported
Depth to top:	55	Depth to bot:	60
Opening type:	X	Constr date:	196106
Discharge:	10	Prim use:	H
Aquifer code:	331FLYD	Edr id:	0000004179

# GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID  
 Direction  
 Distance  
 Elevation

Database      EDR ID Number

**E17**  
**NE**  
**1/2 - 1 Mile**  
**Higher**

**FED USGS      USGS40000266968**

Organization ID:	USGS-GA	Organization Name:	USGS Georgia Water Science Center
Monitor Location:	03JJ12	Type:	Well
Description:	DEWEY H. WORTHY JR.	HUC:	03150105
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Units:	Not Reported
Aquifer:	Valley and Ridge aquifers	Formation Type:	Floyd Shale
Aquifer Type:	Not Reported	Construction Date:	196106
Well Depth:	60	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

Ground water levels,Number of Measurements:	1	Level reading date:	1961-11-07
Feet below surface:	15.35	Feet to sea level:	Not Reported
Note:	Not Reported		

**F18**  
**NNE**  
**1/2 - 1 Mile**  
**Higher**

**FED USGS      USGS40000266981**

Organization ID:	USGS-GA	Organization Name:	USGS Georgia Water Science Center
Monitor Location:	03JJ15	Type:	Well
Description:	ROME CRAFT	HUC:	03150105
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Units:	Not Reported
Aquifer:	Valley and Ridge aquifers	Formation Type:	Floyd Shale
Aquifer Type:	Not Reported	Construction Date:	1958
Well Depth:	205	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

Ground water levels,Number of Measurements:	1	Level reading date:	1958
Feet below surface:	40.0	Feet to sea level:	Not Reported
Note:	Not Reported		

**F19**  
**NNE**  
**1/2 - 1 Mile**  
**Higher**

**GA WELLS      000004188**

County code:	115	Well num:	03JJ15
Remarks:	ROME CRAFT	Lat:	341551
Lon:	0852045	Latlon datum:	NAD27
Alt:	640	Alt datum:	NGVD29
Depth:	205	Depth to casing:	179
Casing dia:	6	Casing matl:	Not Reported
Depth to top:	179	Depth to bot:	205
Opening type:	X	Constr date:	1958
Discharge:	6.5	Prim use:	C
Aquifer code:	331FLYD	Edr id:	000004188

# GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID  
Direction  
Distance  
Elevation

Database      EDR ID Number

**G20**  
**ENE**  
**1 - 2 Miles**  
**Higher**

**GA WELLS      0000004185**

County code:	115	Well num:	03JJ16
Remarks:	C.W. AKRIDGE	Lat:	341545
Lon:	0851950	Latlon datum:	NAD27
Alt:	590	Alt datum:	NGVD29
Depth:	89	Depth to casing:	7
Casing dia:	6	Casing matl:	Not Reported
Depth to top:	7	Depth to bot:	89
Opening type:	X	Constr date:	1941
Discharge:	5	Prim use:	H
Aquifer code:	331FLYD	Edr id:	0000004185

**G21**  
**ENE**  
**1 - 2 Miles**  
**Higher**

**FED USGS      USGS40000266978**

Organization ID:	USGS-GA	Organization Name:	USGS Georgia Water Science Center
Monitor Location:	03JJ16	Type:	Well
Description:	C.W. AKRIDGE	HUC:	03150105
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Valley and Ridge aquifers	Formation Type:	Floyd Shale
Aquifer Type:	Not Reported	Construction Date:	1941
Well Depth:	89	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

**H22**  
**ENE**  
**1 - 2 Miles**  
**Higher**

**FED USGS      USGS40000266969**

Organization ID:	USGS-GA	Organization Name:	USGS Georgia Water Science Center
Monitor Location:	03JJ17	Type:	Well
Description:	C.W. AKRIDGE	HUC:	03150105
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Valley and Ridge aquifers	Formation Type:	Floyd Shale
Aquifer Type:	Not Reported	Construction Date:	1945
Well Depth:	157	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

**H23**  
**ENE**  
**1 - 2 Miles**  
**Higher**

**GA WELLS      0000004180**

County code:	115	Well num:	03JJ17
Remarks:	C.W. AKRIDGE	Lat:	341535
Lon:	0851942	Latlon datum:	NAD27
Alt:	605	Alt datum:	NGVD29



## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Depth:	157	Depth to casing:	Not Reported
Casing dia:	6.0	Casing matl:	Not Reported
Depth to top:	Not Reported	Depth to bot:	Not Reported
Opening type:	Not Reported	Constr date:	1945
Discharge:	5	Prim use:	H
Aquifer code:	331FLYD	Edr id:	0000004180

**H24  
ENE  
1 - 2 Miles  
Higher**

**GA WELLS      0000004183**

County code:	115	Well num:	03JJ18
Remarks:	C.H. JOHNSON	Lat:	341539
Lon:	0851939	Latlon datum:	NAD27
Alt:	600	Alt datum:	NGVD29
Depth:	96	Depth to casing:	35
Casing dia:	6	Casing matl:	Not Reported
Depth to top:	35	Depth to bot:	96
Opening type:	X	Constr date:	1959
Discharge:	Not Reported	Prim use:	H
Aquifer code:	331FLYD	Edr id:	0000004183

**H25  
ENE  
1 - 2 Miles  
Higher**

**FED USGS      USGS40000266975**

Organization ID:	USGS-GA	Organization Name:	USGS Georgia Water Science Center
Monitor Location:	03JJ18	Type:	Well
Description:	C.H. JOHNSON	HUC:	03150105
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Valley and Ridge aquifers	Formation Type:	Floyd Shale
Aquifer Type:	Not Reported	Construction Date:	1959
Well Depth:	96	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

Ground water levels,Number of Measurements:	1	Level reading date:	1961-11-07
Feet below surface:	33.28	Feet to sea level:	Not Reported
Note:	Not Reported		

**I26  
South  
1 - 2 Miles  
Higher**

**GA WELLS      0000004144**

County code:	115	Well num:	03HH27
Remarks:	SIDNEY EVANS	Lat:	341332
Lon:	0852054	Latlon datum:	NAD27
Alt:	660.0	Alt datum:	NGVD29
Depth:	129.0	Depth to casing:	50.0
Casing dia:	6.0	Casing matl:	Not Reported
Depth to top:	50.0	Depth to bot:	129.0
Opening type:	X	Constr date:	1956
Discharge:	9.0	Prim use:	H
Aquifer code:	371CNSG	Edr id:	0000004144

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID  
 Direction  
 Distance  
 Elevation

Database      EDR ID Number

**I27**  
**South**  
**1 - 2 Miles**  
**Higher**

**FED USGS      USGS40000266890**

Organization ID:	USGS-GA	Organization Name:	USGS Georgia Water Science Center
Monitor Location:	03HH27	Type:	Well
Description:	SIDNEY EVANS	HUC:	03150105
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Valley and Ridge aquifers	Formation Type:	Conasauga Formation
Aquifer Type:	Not Reported	Construction Date:	1956
Well Depth:	129	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

# GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS RADON

## AREA RADON INFORMATION

Federal EPA Radon Zone for FLOYD County: 2

- Note: Zone 1 indoor average level > 4 pCi/L.  
 : Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.  
 : Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for FLOYD COUNTY, GA

Number of sites tested: 14

<u>Area</u>	<u>Average Activity</u>	<u>% &lt;4 pCi/L</u>	<u>% 4-20 pCi/L</u>	<u>% &gt;20 pCi/L</u>
Living Area - 1st Floor	1.586 pCi/L	93%	7%	0%
Living Area - 2nd Floor	Not Reported	Not Reported	Not Reported	Not Reported
Basement	1.767 pCi/L	100%	0%	0%

# PHYSICAL SETTING SOURCE RECORDS SEARCHED

## TOPOGRAPHIC INFORMATION

### USGS 7.5' Digital Elevation Model (DEM)

Source: United States Geologic Survey

EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

## HYDROLOGIC INFORMATION

**Flood Zone Data:** This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.

Source: FEMA

Telephone: 877-336-2627

Date of Government Version: 2003, 2015

**NWI:** National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

### State Wetlands Data: Wetlands Inventory

Source: Georgia GIS Clearinghouse

Telephone: 706-542-1581

## HYDROGEOLOGIC INFORMATION

### AQUIFLOW<sup>R</sup> Information System

Source: EDR proprietary database of groundwater flow information

EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

## GEOLOGIC INFORMATION

### Geologic Age and Rock Stratigraphic Unit

Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

### STATSGO: State Soil Geographic Database

Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)

The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

### SSURGO: Soil Survey Geographic Database

Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)

Telephone: 800-672-5559

SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Service, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

# PHYSICAL SETTING SOURCE RECORDS SEARCHED

## LOCAL / REGIONAL WATER AGENCY RECORDS

### FEDERAL WATER WELLS

#### PWS: Public Water Systems

Source: EPA/Office of Drinking Water

Telephone: 202-564-3750

Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

#### PWS ENF: Public Water Systems Violation and Enforcement Data

Source: EPA/Office of Drinking Water

Telephone: 202-564-3750

Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

#### USGS Water Wells: USGS National Water Inventory System (NWIS)

This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

### STATE RECORDS

#### Georgia Public Supply Wells

Source: Georgia Department of Community Affairs

Telephone: 404-894-0127

#### USGS Georgia Water Wells

Source: USGS, Georgia District Office

Telephone: 770-903-9100

## OTHER STATE DATABASE INFORMATION

### DNR Managed Lands

Source: Department of Natural Resources

Telephone: 706-557-3032

This dataset provides 1:24,000-scale data depicting boundaries of land parcels making up the public lands managed by the Georgia Department of Natural Resources (GDNR). It includes polygon representations of State Parks, State Historic Parks, State Conservation Parks, State Historic Sites, Wildlife Management Areas, Public Fishing Areas, Fish Hatcheries, Natural Areas and other specially-designated areas. The data were collected and located by the Georgia Department of Natural Resources. Boundaries were digitized from survey plats or other information.

### RADON

#### Area Radon Information

Source: USGS

Telephone: 703-356-4020

The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

#### EPA Radon Zones

Source: EPA

Telephone: 703-356-4020

Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

### OTHER

#### Airport Landing Facilities: Private and public use landing facilities

Source: Federal Aviation Administration, 800-457-6656

#### Epicenters: World earthquake epicenters, Richter 5 or greater

Source: Department of Commerce, National Oceanic and Atmospheric Administration

Earthquake Fault Lines: The fault lines displayed on EDR's Topographic map are digitized quaternary faultlines, prepared in 1975 by the United State Geological Survey

# PHYSICAL SETTING SOURCE RECORDS SEARCHED

## STREET AND ADDRESS INFORMATION

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## APPENDIX C

# SiREM Laboratory Sorption and Desorption Treatability Study and Site Material Characterization Report

**Prepared for:**

Geosyntec Consultants, Inc.  
1255 Roberts Blvd, Suite 200  
Kennesaw, Georgia 30144

**FINAL**

# **Laboratory Sorption and Desorption Treatability Study and Site Material Characterization**

Hammond Ash Pond-2, Floyd County, Georgia

**Prepared by:**



130 Stone Rd W  
Guelph, Ontario N1G 3Z2

SiREM Ref: GW6581B

27 January 2022

[siremlab.com](http://siremlab.com)



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## LIST OF ABBREVIATIONS

%	percent
°C	degrees Celsius
µg/g	micrograms per gram
µm	micrometers
AEC	anion exchange capacity
AP	Ash Pond
CEC	cation exchange capacity
Co	cobalt
EDXA	energy dispersive X-ray analysis
g	grams
g/L	grams per liter
g/mL	grams per milliliter
Geosyntec	Geosyntec Consultants, Inc.
HDPE	high density polyethylene
ICP-MS	inductively coupled plasma-mass spectrometry
L	liter
Li	lithium
meq/100g	milliequivalents per 100 grams
mg/kg	milligrams per kilogram
mg/L	milligrams per liter
min	minutes
mL	milliliter
mV	millivolts
ORP	oxidation-reduction potential
RPM	revolutions per minute
SEM	scanning electron microscopy
SEP	sequential extraction procedure
SGS	SGS Environmental
SiREM	SiREM Laboratory
TOC	total organic carbon
XRD	X-ray diffraction

## 1. INTRODUCTION

Geosyntec Consultants, Inc. (Geosyntec) retained SiREM Laboratory (SiREM) to characterize geologic materials and perform a laboratory treatability study to assess the sorption and desorption behaviour of cobalt (Co) in groundwater and geologic materials from the Hammond Ash Pond (AP)-2 site in Floyd County, GA (the Site).

The geologic materials were collected by Geosyntec personnel on 26 January 2021, 27 January 2021 and 2 February 2021 and were received by SiREM on 23 March 2021. The groundwater labelled HGWA-5, which is groundwater from a background well, was collected by Geosyntec personnel on 26 May 2021 and was received by SiREM on 31 May 2021. Upon arrival at SiREM, geological material and groundwater were stored at 4 degrees Celsius (°C) until required for reactor construction. Geological material samples were submitted for baseline characterization prior to the sorption and desorption tests and locations for testing were selected based on the baseline characterization results. The chain of custodies received with these samples are provided in Appendix A.

The remainder of this report is divided into two sections. Section 2 presents the experimental materials and methods and Section 3 presents the results.

## 2. MATERIALS AND METHODS

The following sections describe the materials and methods used for geologic material baseline characterization (Section 2.1), sorption test reactor construction and incubation (Section 2.2), desorption test reactor construction and incubation (Section 2.3), and sorption and desorption test sampling and analysis (Section 2.4).

### 2.1 Site Geologic Material Baseline Characterization

Geologic material baseline characterization was completed through SiREM<sup>MNA</sup>™ testing and included anion exchange capacity (AEC), cation exchange capacity (CEC), total sulfur, total sulfide, total organic carbon (TOC) content, total metals, X-ray diffraction (XRD), scanning electron microscopy (SEM) with energy dispersive X-ray analysis (EDXA) and a follow up sequential extraction procedure (SEP) on select aquifer solid samples.

On 25 March 2021 geologic material samples were individually homogenized and subsampled in a chemical fume hood prior to shipping to an external laboratory for analysis. Samples for SEP were stored in the cold room until the results from the total metals analysis were received. Samples for SEP were then subsampled in a chemical fume hood and shipped to the external laboratory for analysis. The samples were shipped to external laboratories for analysis as outlined in the summary table below. Prior to performing the XRD analysis, SGS Environmental (SGS, Lakefield, ON) performed whole rock analysis on the samples to have as a reference for the mineral identification by XRD.

Parameter	Method	Laboratory
Total sulfur, total sulfide and organic carbon content	ASTM E1915-13	SGS, Lakefield, Ontario
Total metals	EPA 200.8	
Whole Rock Analysis	Borate Fusion and Xray Fluorescence Spectrometry	
XRD	Rietveld refinement method	
SEM and EDXA	SGS Internal method	
CEC	EPA method SW9081	SGS, Guelph, Ontario
AEC	Modified EPA method SW9081	Specialty Analytical, Clackamas, Oregon
Sequential extraction procedure	Methods SW846, 6010B and 3010A for SEP Steps 1-7	Eurofins TestAmerica, Knoxville, Tennessee

## 2.2 Sorption Test Reactor Construction and Incubation

Two sample locations of geological material were selected from the Hammond AP-2 Site to be tested for the sorption test. On 25 March 2021 the material from the DPT07 (10-20) and DPT08 (10-20) locations were homogenized by manually mixing for reproducibility between replicates. Reactors were constructed on 2 July 2021 by filling 250 milliliter (mL) (nominal volume) high density polyethylene (HDPE) Nalgene® bottles (Systems Plus, New Hamburg, ON) with 100 grams (g) of homogenized geologic material. Reactors were constructed in duplicate with an additional set of duplicate reactors constructed to be used for sampling at Time 0.

After adding geologic material to enough reactors to represent five testing concentration conditions on 2 July 2021, five separate volumes of HGWA-5 Site groundwater were spiked with Co to target the concentration levels for the sorption test as listed in Table 1A. For each concentration level, 1.4 liters (L) of Site groundwater was spiked with Co as a 3 gram per liter (g/L) cobalt chloride (Sigma-Aldrich, Oakville, ON) stock solution. Once the groundwater for each concentration level was spiked, the reactors containing geologic material were each amended with 150 mL of the appropriately spiked groundwater. Note that “target” spiked concentrations and “actual concentrations” (as determined by subsequent laboratory analyses) may not be exactly the same. However, the sorption calculations used the measured spiked concentrations and not the target concentrations.

After construction on 5, 6, 7 and 8 July 2021, the reactors were placed on an end-over-end tumbler at room temperature and mixed for a period of 7 days. Table 1A summarizes the details of reactor

construction, incubation, amendments, sampling schedule and parameters of the sorption test reactors.

### 2.3 Desorption Test Reactor Construction and Incubation

One sample location from Hammond AP-2 was selected to be tested for the desorption test. Using the materials from the DPT08 (10-20) location used in the sorption test were used to evaluate desorption of Co from aquifer materials collected in the vicinity of a Co-impacted well. Reactors were constructed by filling 250 mL (nominal volume) HDPE Nalgene® bottles (Systems Plus, New Hamburg, ON) with 100 g of geologic material and 150 mL of HGWA-5 Site groundwater.

Reactors were constructed in duplicate with an additional set of duplicate reactors constructed to be used for sampling at Time 0. One set of reactors were incubated at ambient conditions to evaluate desorption of Co. After construction on 8 September 2021, ambient condition reactors were placed on an end-over-end tumbler at room temperature and continually mixed for 7 days.

Table 1B summarizes the reactor construction, incubation, amendments, sampling schedule and parameters of the desorption test reactors.

### 2.4 Sorption and Desorption Test Sampling and Analysis

#### 2.4.1 Reactor Sampling

Aqueous samples were collected from the sorption test reactors at Time 0 and after 7 days of incubation. Aqueous samples from the spiked Site groundwater from each concentration level which had not been combined with Site geological material was also sampled at Time 0. Aqueous samples were collected from the desorption test reactors at time 0 and after 7 days of incubation. Both sorption and desorption test reactors and the groundwater sampled at baseline were sampled for analysis of pH, oxidation-reduction potential (ORP), and dissolved metals.

Prior to sampling, contents of the reactors were transferred to 250 mL centrifuge bottles and centrifuged for 5 minutes (min) at 5,000 revolutions per minute (RPM) to separate the solid and aqueous phases. Once separated, the supernatant was sampled using 30 mL HDPE plastic syringes (Fisher Scientific, Whitby, ON).

The sampling and analytical methods employed by SiREM and SGS are described in Sections 2.3.2 to 2.3.4.

#### 2.4.2 Analysis of pH

The pH measurements were performed using an Oakton pH spear with a combination pH electrode (Oakton, Vernon Hills, IL). A 0.5 mL sample was collected and placed into a 1.5 mL micro-centrifuge tube. The pH was measured on the lab bench. The pH spear was calibrated at each sampling event according to the manufacturer's instructions using pH 4.0, 7.0 and 10 standards.

### 2.4.3 Analysis of ORP

The ORP measurements performed using an Omega PHH-127 Multi-Parameter Water Quality Monitor with ORP Probe (Omega, Laval, QC). A 1.2 mL sample was collected and placed in a 5 mL Thermo-Fisher vial. The ORP was measured on the lab bench immediately after sampling. The ORP probe was tested at each sampling event according to the manufacturer's instructions using Zobell's solution.

### 2.4.4 Analysis of Dissolved Metals at SGS Environmental

Analysis of dissolved metals was completed at SGS Environmental (SGS) in Lakefield, ON using an inductively coupled plasma-mass spectrometer (ICP-MS) based on Standard Method 3030B, EPA Method 200.8 and NIOSH 7300 Issue 2.

A 30 mL sample was collected and filtered through a 0.45 micrometer ( $\mu\text{m}$ ) nylon syringe filter (Mandel Scientific, Guelph, ON) into a 30 mL HDPE bottle with a nitric acid preservative. Once collected, the samples were packaged on ice in a cooler and shipped overnight to SGS.

## 3. RESULTS

Appendix B presents the results of the baseline chemical characterization, Appendix C presents the baseline mineralogical results and Appendix D present the SEP results. Appendices E and F present the results of the sorption and desorption tests respectively. The tables in Appendices E and F present results for dissolved metals, pH and ORP as well as the recorded masses of Site geological materials and Site groundwater amended to each respective reactor. AEC and CEC are presented in units of milliequivalents per 100 grams (meq/100g). Total sulfur, total sulfide, TOC, whole rock analysis, XRD are presented as a percentage (%) of the total weight of the geologic material. Bulk metals results are presented in units of micrograms per gram ( $\mu\text{g/g}$ ). SEP results are presented in milligrams per kilogram (mg/kg). Concentrations of dissolved metals are provided in milligrams per liter (mg/L), ORP results are provided in millivolts (mV) and reactor weights are provided in g. The volume of Site groundwater amended to each reactor was calculated from the measured mass of water added to the reactor using a density of 1 gram per milliliter (g/mL). The external laboratory reports are presented in Appendix G.

## TABLES



**TABLE 1A: SUMMARY OF SORPTION TEST REACTORS, CONTROLS, TREATMENTS, AND AMENDMENTS**  
Hammond Ash Pond-2, Floyd County, Georgia

Groundwater Sample ID	Geologic Material Sample ID	Treatment	Number of Reactors	Number of Sacrificial Reactors	Reactor Numbers	Incubation Period and Sampling Frequency	Reactor Contents		Amendments	Analyses	
							Groundwater (L)	Geologic Material (kg)	Cobalt	Dissolved Co	pH/ORP
HGWA-5	DPT07(32-42)	Concentration Level 1	2	2	13 & 14	7 Days (Sampled at Time 0 and on Day 7)	0.150	0.100	Spiked with 0.1 mg/L Cobalt.	4	4
		Concentration Level 2	2	2	15 & 16		0.150	0.100	Spiked with 0.2 mg/L Cobalt.	4	4
		Concentration Level 3	2	2	17 & 18		0.150	0.100	Spiked with 0.3 mg/L Cobalt.	4	4
		Concentration Level 4	2	2	19 & 20		0.150	0.100	Spiked with 0.4 mg/L Cobalt.	4	4
		Concentration Level 5	2	2	21 & 22		0.150	0.100	Spiked with 0.5 mg/L Cobalt.	4	4
	DPT08(10-20)	Concentration Level 1	2	2	23 & 24	7 Days (Sampled at Time 0 and on Day 7)	0.150	0.100	Spiked with 0.1 mg/L Cobalt.	4	4
		Concentration Level 2	2	2	25 & 26		0.150	0.100	Spiked with 0.2 mg/L Cobalt.	4	4
		Concentration Level 3	2	2	27 & 28		0.150	0.100	Spiked with 0.3 mg/L Cobalt.	4	4
		Concentration Level 4	2	2	29 & 30		0.150	0.100	Spiked with 0.4 mg/L Cobalt.	4	4
		Concentration Level 5	2	2	31 & 32		0.150	0.100	Spiked with 0.5 mg/L Cobalt.	4	4

**Notes:**

- - not applicable
- Co - cobalt
- mg/L - milligrams per liter
- ID - identification
- kg - kilogram
- L - liter
- ORP - oxidation-reduction potential

**TABLE 1B: SUMMARY OF DESORPTION TEST REACTORS, CONTROLS, TREATMENTS, AND AMENDMENTS**  
Hammond Ash Pond-2, Floyd County, Georgia

Location	Groundwater Sample ID	Geologic Material Sample ID	Treatment	Number of Reactors	Number of Sacrificial Reactors	Reactor Numbers	Incubation Period and Sampling Frequency	Reactor Contents		Analyses		
								Groundwater (L)	Geologic Material (kg)	Dissolved Co	Target Constituents	pH/ORP
Hammond AP-2	HGWA-5	DPT08	Ambient Conditions	2	2	7 & 8	7 Days (Sampled at Time 0 and on Day 7)	0.150	0.100	4	Co	4

**Notes:**

- - not applicable
- Co - cobalt
- ID - identification
- kg - kilogram
- L - liter
- mL - milliliters
- mV - millivolt
- ORP - oxidation-reduction potential

]

**APPENDIX A:**  
**Chain of Custody Documentation**



# Chain-of-Custody Form

siremlab.com

130 Stone Road West  
Guelph ON, Canada N1G 3Z2  
(519) 822-2265

Lab #  
**S-7677**

*Project Name Hammond AP1 AP2 AP3 ACM evaluation			*Project # GW6581B/14; GW6581/22			<b>Analysis</b>															
*Project Manager Whitney Law			*Company Geosyntec Consultants			2	2	2	2	2	2	2							<b>Preservative Key</b>		
*Email Address wlaw@geosyntec.com						Anion exchange capacity (AEC)	Cation exchange capacity (CEC)	Total sulfur	Total sulfide	Organic carbon content	X-ray diff. SEM, EDXA	Total metal conc (see notes)	<del>W/L 3/18/21</del>						0. None		
Address (Street) 1255 Roberts Blvd, NW, Suite 200																			1. HCL		
City Kennesaw		State/Province GA		Country USA															2. Other <u>ICE</u>		
*Phone # 678-202-9573																			3. Other _____		
*Sampler's Signature		*Sampler's Printed Name																	4. Other _____		
																			5. Other _____		
															6. Other _____						
<b>Client Sample ID</b>			<b>Sampling</b>		<b>Matrix</b>	<b># of Containers</b>													<b>Other Information</b>		
			<b>Date</b>	<b>Time</b>																	
DPT07_AP1_012821_32-42			1/28/21		S	2	X	X	X	X	X	X	X	X	X	X	Rept total conc for: Mo, Li, F, As, Fe, Al, Mg				
DPT11_AP2_012721_30-40			01/27/21		S	2	X	X	X	X	X	X	X	X	X	X	Rept total conc for: Mo, Co, Li, Fe, Al, Mg				
DPT08_AP2_012621_10-20			1/26/21		S	2	X	X	X	X	X	X	X	X	X	X	Rept total conc for: Mo, Co, Li, Fe, Al, Mg				
DPT07_AP2_020221_10-20			2/2/21		S	2	X	X	X	X	X	X	X	X	X	X	Rept total conc for: Mo, Co, Li, Fe, Al, Mg				
DPT01_AP3_012921_10-18			1/29/21		S	2	X	X	X	X	X	X	X	X	X	X	Rept total conc for: Mo, Li, Fe, Al, Mn				
DPT03_AP3_020121_13-18			2/1/21		S	1	X	X	X	X	X	X	X	X	X	X	Rept total conc for: Mo, Li, Fe, Al, Mn				
DPT02_AP3_020121_13-18			2/1/21		S	1	X	X	X	X	X	X	X	X	X	X	Rept total conc for: Mo, Li, Fe, Al, Mn				
DPT04_AP3_020121_13-21			2/1/21		S	2	X	X	X	X	X	X	X	X	X	X	Rept total conc for: Mo, Li, Fe, Al, Mn				
DPT09_AP2_012621_20-30			1/26/21		S	2	X	X	X	X	X	X	X	X	X	X	Rept total conc for: Mo, Co, Li, Fe, Al, Mg				
DPT10_AP2_012721_25-35			1/27/21		S	2	X	X	X	X	X	X	X	X	X	X	Rept total conc for: Mo, Co, Li, Fe, Al, Mg				

<b>Billing Information</b>		<b>Turnaround Time Requested</b>		<b>For Lab Use Only</b>				<b>For Lab Use Only</b>			
P.O. #		Normal <input checked="" type="checkbox"/>		Cooler Condition: <u>Good.</u>							
*Bill To: Speak with PM on how to partition invoice		Rush <input type="checkbox"/>		Cooler Temperature: <u>14°C</u>							
				Custody Seals: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>							
								Proposal #: _____			

<b>Relinquished By:</b>		<b>Received By:</b>		<b>Relinquished By:</b>		<b>Received By:</b>		<b>Relinquished By:</b>		<b>Received By:</b>	
Signature <i>W Law</i>		Signature <i>N Brent</i>		Signature		Signature		Signature		Signature	
Printed Name Whitney Law		Printed Name <i>Natasha Brent</i>		Printed Name		Printed Name		Printed Name		Printed Name	
Firm Geosyntec Consultants		Firm <i>SIREM</i>		Firm		Firm		Firm		Firm	
Date/Time 3/18/21, 16:00		Date/Time <i>23 Mar 21 13:55</i>		Date/Time		Date/Time		Date/Time		Date/Time	

Distribution: White - return to Originator; Yellow - Lab Copy; Pink - Retained by Client  
\* Mandatory Fields



# Chain-of-Custody Form

siremlab.com

130 Stone Rd. W  
Guelph, ON N1G 3Z2  
(519) 822-2265

Lab #  
S-8072

*Project Name Remedial ACM Evaluation		*Project # G626581 B114		Analysis										
*Project Manager Whitney Law		*Company Geosyntec Consultants												
*Email Address w.law@geosyntec.com				Preservative Key										
Address (Street) 1255 Roberts Blvd, W/W suite 200														
City Kennesaw	State/Province Ga	Country USA			Other Information									
*Phone # 678 202 9573														
*Sampler's Signature Thomas Kessel	*Sampler's Printed Name Thomas Kessel				Gene-Trac DHC Gene-Trac FGA Gene-Trac DHB Gene-Trac DHG Gene-Trac NGS Volatile Fatty Acids Dissolved hydrocarbon gases Treatability Study									
Client Sample ID H-GW-5		Sampling Date: 5/26/21 Time: 1447 Matrix: W # of Containers: 4												

Billing Information		Turnaround Time Requested		For Lab Use Only		For Lab Use Only	
P.O #		Normal <input type="checkbox"/> Rush <input type="checkbox"/>		Cooler Condition: good		Received 3 of the A-5, last one was Sample 12-2	
*Bill To: G626581/14/01				Cooler Temperature: 11°C			
				Custody Seals: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Proposal #:	

Relinquished By: Signature: <i>Thomas Kessel</i>		Received By: Signature: <i>Jordan Linkletter</i>		Relinquished By: Signature:		Received By: Signature:		Relinquished By: Signature:		Received By: Signature:	
Printed Name: Thomas Kessel		Printed Name: Jordan Linkletter		Printed Name:		Printed Name:		Printed Name:		Printed Name:	
Firm: Geosyntec		Firm: SiREM		Firm:		Firm:		Firm:		Firm:	
Date/Time: 5/27/21 1200		Date/Time: 05/31/21 1:00 pm		Date/Time:		Date/Time:		Date/Time:		Date/Time:	

Distribution: White - return to Originator; Yellow - Lab Copy; Pink - Retained by Client  
\* Mandatory Fields

**APPENDIX B:  
Baseline Chemical Characterization Results**

**Analytical Results**

**SiREM File Reference: S-7677**

Client: Geosyntec Consultants Inc.  
Client Project Number: GW6581B/14;GW6581/22  
Date Samples Received: March 23, 2021  
Date Samples Analyzed: April 4, 12, 13 and 29, 2021

Client Sample ID	Laboratory Sample ID	Client Sample Date	Anion Exchange Capacity	Cation Exchange Capacity	Total Sulfur	Total Sulfide	Total Organic Carbon
			meq/100g	meq/100g	%	%	%
DPT11_AP2_012721_30-40	S-7677-2	27-Jan-21	6.78	8.98	0.034	0.04	0.11
DPT08_AP2_012621_10-20	S-7677-3	26-Jan-21	5.96	6.61	0.033	0.05	0.16
DPT07_AP2_020221_10-20	S-7677-4	2-Feb-21	6.84	10.25	0.811	0.85	1.06
DPT09_AP2_012621_20-30	S-7677-9	26-Jan-21	5.17	11.91	0.030	0.04	0.48
DPT10 AP2 012721 25-35	S-7677-10	27-Jan-21	6.19	10.62	0.014	< 0.04	0.15

**Comments:**

% - percent  
< - compound not detected, the associated value is the detection limit  
meq/100g - milliequivalents per 100 grams

Analyst:



Kela Ashworth, B.Sc.  
Senior Laboratory Technician

Results approved:



Michael Healey, B.Sc.  
Laboratory Supervisor I

Date:

27-Aug-21

**Analytical Results - Total Metals**

**SiREM File Reference: S- S-7677**

Client: Geosyntec Consultants Inc.  
Client Project Number: GW6581B/14;GW6581/22  
Date Samples Received: March 23, 2021  
Date Samples Analyzed: April 15, 2021

Client Sample ID	Laboratory Sample ID	Client Sample Date	Molybdenum	Lithium	Cobalt	Arsenic	Iron	Aluminum	Manganese
			µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g
DPT11_AP2_012721_30-40	S-7677-2	27-Jan-21	1.0	27	7	4.6	39,000	57,000	190
DPT08_AP2_012621_10-20	S-7677-3	26-Jan-21	1.0	45	10	8.2	24,000	48,000	230
DPT07_AP2_020221_10-20	S-7677-4	2-Feb-21	2.2	46	14	9.4	31,000	77,000	170
DPT09_AP2_012621_20-30	S-7677-9	26-Jan-21	0.8	35	13	4.7	27,000	59,000	380
DPT10_AP2_012721_25-35	S-7677-10	27-Jan-21	0.9	33	14	5.3	36,000	69,000	540

**Comments:**

µg/g - microgram per gram

Analyst:

*Kela Ashworth*

Kela Ashworth, B.Sc.  
Senior Laboratory Technician

Results approved:

*Michael Healey*

Michael Healey, B.Sc.  
Laboratory Supervisor I

Date:

27-Aug-21



**Analytical Results - Whole Rock Analysis**

**SiREM File Reference: S- S-7677**

Client: Geosyntec Consultants Inc.  
Client Project Number: GW6581B/14;GW6581/22  
Date Samples Received: March 23, 2021  
Date Samples Analyzed: April 6, 2021

Client Sample ID	Laboratory Sample ID	Client Sample Date	Quartz (SiO2)	Aluminum Oxide (Al2O3)	Ferric Oxide (Fe2O3)	Magnesium Oxide (MgO)	Calcium Oxide (CaO)	Sodium Oxide (Na2O)	Potassium Oxide (K2O)	Titanium Dioxide (TiO2)	Phosphorous Pentoxide (P2O5)	Manganese Oxide (MnO)	Chromium (III) Oxide (Cr2O3)	Vanadium Oxide (V2O5)	Loss on Ignition
			%	%	%	%	%	%	%	%	%	%	%	%	%
DPT11_AP2_012721_30-40	S-7677-2	27-Jan-21	72.2	11.9	6.23	0.61	0.19	0.12	1.40	0.97	0.09	0.02	< 0.01	0.02	5.90
DPT08_AP2_012621_10-20	S-7677-3	26-Jan-21	78.6	10.3	3.90	0.46	0.14	0.14	1.53	0.60	0.07	0.04	0.01	< 0.01	4.03
DPT07_AP2_020221_10-20	S-7677-4	2-Feb-21	65.6	16.3	4.99	1.04	0.24	0.39	2.70	0.74	0.11	0.02	0.03	0.02	7.11
DPT09_AP2_012621_20-30	S-7677-9	26-Jan-21	72.9	12.0	4.17	0.66	0.38	0.26	1.54	0.96	0.07	0.06	< 0.01	0.01	6.11
DPT10_AP2_012721_25-35	S-7677-10	27-Jan-21	67.3	14.2	5.66	1.03	0.43	0.56	2.21	1.02	0.12	0.07	0.01	0.01	6.69

**Comments:**  
< - compound not detected, the associated value is the reporting limit.  
% - percent

Analyst:

*Kela Ashworth*

Kela Ashworth, B.Sc.  
Senior Laboratory Technician

Results approved:

*Michael Healey*

Michael Healey, B.Sc.  
Laboratory Supervisor I

Date:

27-Aug-21

**APPENDIX C:  
Baseline Mineralogical Results**

**Analytical Results - Rietveld Quantitative X-Ray Diffraction**

**SIREM File Reference: S- S-7677**

Client: Geosyntec Consultants Inc.  
Client Project Number: GW6581B/14;GW6581/22  
Date Samples Received: March 23, 2021  
Date Samples Analyzed: April 16, 2021

Client Sample ID	Laboratory Sample ID	Client Sample Date	Quartz	Kaolinite	Muscovite	Microcline	Rutile	Albite	Anatase	Pyrite	Orthoclase	Calcite	Diopside
			wt %	wt %	wt %	wt %	wt %	wt %	wt %	wt %	wt %	wt %	wt %
DPT11_AP2_012721_30-40	S-7677-2	27-Jan-21	59.3	19.1	16.4	1.5	0.9	2.3	0.5	-	-	-	-
DPT08_AP2_012621_10-20	S-7677-3	26-Jan-21	65.6	12.7	17.2	1.7	0.5	2.1	0.2	-	-	-	-
DPT07_AP2_020221_10-20	S-7677-4	2-Feb-21	43.7	12.7	33.1	3.0	1.1	4.5	0.8	1.3	-	-	-
DPT09_AP2_012621_20-30	S-7677-9	26-Jan-21	62.6	20.4	7.9	-	0.3	4.3	1.0	0.4	0.6	0.2	2.4
DPT10_AP2_012721_25-35	S-7677-10	27-Jan-21	45.1	22.0	23.0	-	0.7	7.0	0.4	-	1.9	-	-

**Comments:**  
-- not identified by analyst  
wt % - weight percent

Analyst:

*Kela Ashworth*

Kela Ashworth, B.Sc.  
Senior Laboratory Technician

Results approved:

*Michael Healey*

Michael Healey, B.Sc.  
Laboratory Supervisor I

Date:

27-Aug-21

**APPENDIX D:  
Sequential Extraction Procedure Results**

**Analytical Results - Sequential Extraction Procedure**

**SiREM File Reference: S- S-7677**

Client: Geosyntec Consultants Inc.  
Client Project Number: GW6581B/14;GW6581/22  
Date Samples Received: March 23, 2021  
Date Samples Analyzed: April 20, 2021

Client Sample ID	Laboratory Sample ID	Client Sample Date	SEP Step 1	SEP Step 2	SEP Step 3	SEP Step 4	SEP Step 5	SEP Step 6	SEP Step 7	SEP Sum of Steps 1-7	Total	
			Cobalt	Cobalt	Cobalt	Cobalt	Cobalt	Cobalt	Cobalt	Cobalt	Cobalt	Cobalt
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
DPT11_AP2_012721_30-40	S-7677-2	27-Jan-21	<0.23	<0.24	0.33 J	2.1 J	<0.77	2.0 J	1.4 J	5.9	7.0 J	
DPT08_AP2_012621_10-20	S-7677-3	26-Jan-21	1 J	0.3 J	5.7	2.6 J	<0.68	1.8 J	0.41 J	12	7.5	
DPT07_AP2_020221_10-20	S-7677-4	2-Feb-21	7.7 J	0.79 J	0.25 J	0.68 J	2.2 J	2.2 J	0.64 J	14	11	

**Comments:**  
 < - compound not detected, the associated value is the method detection limit.  
 J - result is less than the reporting limit, but greater than or equal to the method detection limit and the concentration is an approximate value.  
 mg/kg - milligram per kilogram

Analyst:



Kela Ashworth, B.Sc.  
Senior Laboratory Technician

Results approved:



Michael Healey, B.Sc.  
Laboratory Supervisor I

Date:

27-Aug-21

**APPENDIX E:  
Summary of Sorption Test Dissolved Metals, ORP and pH Results**

APPENDIX E: SUMMARY OF SORPTION TEST DISSOLVED METALS, ORP AND pH RESULTS  
Hammond Ash Pond-2, Floyd County, Georgia

SIREM

Groundwater Sample ID	Site Material	Treatment	Date	Day	Replicate	Dissolved Cobalt	Reactor Weight	Reactor + Soil Weight	Mass Soil	Reactor, Soil + Water Weight	Mass Water	pH	ORP	
						mg/L	g	g	g	g	g		mV	
HGWA-5	DPT07(32-42)	Concentration Level 1	5-Jul-21	0	Spiked Aqueous Concentration	0.10	--	--	--	--	--	--	--	
					HAP2DPT07_13a	1.54	37.46	137	100.01	284	146.90	4.23	200	
					HAP2DPT07_14a	1.49	37.03	136	99.39	283	146.72	4.24	204	
		Average Concentration (mg/L)	1.52	37.25	137	99.70	284	146.81	4.24	202				
		12-Jul-21	7	HAP2DPT07_13b	3.25	37.16	137	99.93	282	145.33	3.41	217		
				HAP2DPT07_14b	3.46	37.04	136	99.44	284	147.76	3.43	246		
				Average Concentration (mg/L)	3.36	37.10	137	99.69	283	146.55	3.42	232		
		Concentration Level 2	5-Jul-21	0	Spiked Aqueous Concentration	0.23	--	--	--	--	--	--	--	--
					HAP2DPT07_15a	1.43	37.08	138	100.43	284	146.98	4.33	225	
					HAP2DPT07_16a	1.50	37.37	136	98.91	287	150.58	4.30	220	
		Average Concentration (mg/L)	1.47	37.23	137	99.67	286	148.78	4.32	223				
		12-Jul-21	7	HAP2DPT07_15b	3.35	37.03	136	99.31	288	151.66	3.83	239		
				HAP2DPT07_16b	3.74	37.05	136	99.40	281	144.75	3.28	279		
				Average Concentration (mg/L)	3.55	37.04	136	99.36	285	148.21	3.56	259		
		Concentration Level 3	6-Jul-21	0	Spiked Aqueous Concentration	0.33	--	--	--	--	--	--	--	--
					HAP2DPT07_17a	1.65	37.35	137	99.98	280	142.28	4.27	155	
					HAP2DPT07_18a	1.84	36.93	140	102.74	283	143.34	4.26	204	
		Average Concentration (mg/L)	1.75	37.14	139	101.36	281	142.81	4.27	180				
		13-Jul-21	7	HAP2DPT07_17b	3.65	37.48	137	99.34	281	144.06	3.26	233		
				HAP2DPT07_18b	3.73	37.55	138	100.36	282	144.28	3.76	226		
				Average Concentration (mg/L)	3.69	37.52	137	99.85	282	144.17	3.51	230		
		Concentration Level 4	7-Jul-21	0	Spiked Aqueous Concentration	0.44	--	--	--	--	--	--	--	--
					HAP2DPT07_19a	1.76	36.98	136	99.39	284	147.67	4.33	216	
					HAP2DPT07_20a	1.82	37.37	136	98.81	281	144.32	4.24	222	
		Average Concentration (mg/L)	1.79	37.18	136	99.10	282	146.00	4.29	219				
		14-Jul-21	7	HAP2DPT07_19b	3.90	36.93	135	98.01	283	147.56	3.45	238		
				HAP2DPT07_20b	3.82	36.99	132	95.32	275	142.30	3.38	280		
				Average Concentration (mg/L)	3.86	36.96	134	96.67	279	144.93	3.42	249		
		Concentration Level 5	8-Jul-21	0	Spiked Aqueous Concentration	0.55	--	--	--	--	--	--	--	--
					HAP2DPT07_21a	1.49	36.94	138	100.57	287	149.16	4.29	186	
HAP2DPT07_22a	1.57				37.05	136	98.63	282	145.82	4.45	187			
Average Concentration (mg/L)	1.53	37.00	137	99.60	284	147.49	4.37	187						
15-Jul-21	7	HAP2DPT07_21b	4.10	36.82	136	99.53	283	146.80	3.27	233				
		HAP2DPT07_22b	4.06	37.28	137	99.60	280	142.89	3.51	230				
		Average Concentration (mg/L)	4.08	37.05	137	99.57	281	144.85	3.39	232				
HGWA-5	DPT08(10-20)	Concentration Level 1	5-Jul-21	0	Spiked Aqueous Concentration	0.10	--	--	--	--	--	--	--	
					HAP2DPT08_23a	0.0844	36.93	136	99.33	284	147.32	6.51	172	
					HAP2DPT08_24a	0.0789	36.94	135	98.53	285	149.37	6.45	166	
		Average Concentration (mg/L)	0.0817	36.94	136	98.93	284	148.35	6.48	169				
		12-Jul-21	7	HAP2DPT08_23b	0.114	37.03	137	99.71	281	144.41	5.64	263		
				HAP2DPT08_24b	0.116	37.08	136	98.79	280	144.37	5.29	265		
				Average Concentration (mg/L)	0.115	37.06	136	99.25	281	144.39	5.47	264		
		Concentration Level 2	5-Jul-21	0	Spiked Aqueous Concentration	0.23	--	--	--	--	--	--	--	--
					HAP2DPT08_25a	0.102	37.33	136	98.33	281	145.41	6.50	155	
					HAP2DPT08_26a	0.0926	36.91	137	100.04	283	146.41	6.44	155	
		Average Concentration (mg/L)	0.0973	37.12	136	99.19	282	145.91	6.47	155				
		12-Jul-21	7	HAP2DPT08_25b	0.122	37.06	137	100.02	283	145.82	5.55	257		
				HAP2DPT08_26b	0.138	36.86	136	99.36	284	147.40	5.45	261		
				Average Concentration (mg/L)	0.130	36.96	137	99.69	283	146.61	5.50	259		
		Concentration Level 3	6-Jul-21	0	Spiked Aqueous Concentration	0.33	--	--	--	--	--	--	--	--
					HAP2DPT08_27a	0.120	37.07	137	99.56	280	143.51	6.51	114	
					HAP2DPT08_28a	0.113	36.60	137	100.01	281	143.96	6.45	116	
		Average Concentration (mg/L)	0.117	36.84	137	99.79	280	143.74	6.48	115				
		13-Jul-21	7	HAP2DPT08_27b	0.149	37.00	135	98.24	276	140.75	5.61	190		
				HAP2DPT08_28b	0.129	36.66	136	99.48	278	141.75	5.51	188		
				Average Concentration (mg/L)	0.139	36.83	136	98.86	277	141.25	5.56	189		
		Concentration Level 4	7-Jul-21	0	Spiked Aqueous Concentration	0.44	--	--	--	--	--	--	--	--
					HAP2DPT08_29a	0.138	36.60	136	99.87	281	144.46	6.36	156	
					HAP2DPT08_30a	0.150	36.64	137	100.51	280	142.51	6.48	155	
		Average Concentration (mg/L)	0.144	36.62	137	100.19	280	143.49	6.42	156				
		14-Jul-21	7	HAP2DPT08_29b	0.0948	36.60	137	100.00	281	144.76	5.69	196		
				HAP2DPT08_30b	0.131	36.63	135	98.51	283	147.71	5.85	194		
				Average Concentration (mg/L)	0.113	36.62	136	99.26	282	146.24	5.67	195		
		Concentration Level 5	8-Jul-21	0	Spiked Aqueous Concentration	0.55	--	--	--	--	--	--	--	--
					HAP2DPT08_31a	0.191	36.63	137	100.07	280	143.34	6.43	160	
HAP2DPT08_32a	0.168				36.59	137	100.36	281	143.84	6.54	156			
Average Concentration (mg/L)	0.180	36.61	137	100.22	280	143.59	6.49	158						
15-Jul-21	7	HAP2DPT08_31b	0.168	36.59	136	99.64	284	147.27	5.42	164				
		HAP2DPT08_32b	0.140	36.63	137	100.47	280	143.23	5.57	164				
		Average Concentration (mg/L)	0.154	36.61	137	100.06	282	145.25	5.50	164				

Notes:

- - not applicable
- < - compound not detected, the associated value is the detection limit
- mg/L - milligrams per liter
- mL - milliliter
- ND - not detected
- g - grams
- mL - milliliters
- mV - millivolts
- ORP - oxidation reduction potential

**APPENDIX F:  
Summary of Desorption Test Dissolved Metals, ORP and pH Results**



APPENDIX F: SUMMARY OF DESORPTION TEST DISSOLVED METALS, ORP AND pH RESULTS  
Hammond Ash Pond-2, Floyd County, Georgia

SIREM

Groundwater Sample ID	Site Material	Chemical Characteristics (Baseline Characterization)	Treatment	Date	Day	Replicate	Dissolved Cobalt	Reactor Weight	Reactor + Soil Weight	Mass Soil	Reactor, Soil + Water Weight	Mass Water	pH	ORP
							mg/L	g	g	g	g	g		
HGWA-5	DPT08 (10-20)	Cobalt: 10 µg/g	Ambient Conditions	31-Aug-21	0	HAP2DPT08 7a	0.0571	36.33	136.55	100.22	286.48	149.93	6.50	241
						HAP2DPT08 8a	0.0605	36.35	136.68	100.33	287.99	151.31	6.45	232
						<b>Average Concentration (mg/L)</b>	<b>0.0588</b>	<b>36.34</b>	<b>136.62</b>	<b>100.28</b>	<b>287.24</b>	<b>150.62</b>	<b>6.48</b>	<b>237</b>
				15-Sep-21	7*	HAP2DPT08 7b	0.114	36.27	138.80	102.53	289.81	151.01	5.66	160
						HAP2DPT08 8b	0.167	36.38	136.50	100.12	286.13	149.63	5.38	172
						<b>Average Concentration (mg/L)</b>	<b>0.141</b>	<b>36.33</b>	<b>137.65</b>	<b>101.33</b>	<b>287.97</b>	<b>150.32</b>	<b>5.52</b>	<b>166</b>

Notes:

- \* Samples for Day 7 sampling were prepared on 8 September 2021
- < - compound not detected, the associated value is the detection limit
- g - grams
- mg/kg - milligrams per kilogram
- mg/L - milligrams per liter
- ND - not detected
- ORP - oxidation-reduction potential

**APPENDIX G:  
External Laboratory Reports**

12-January-2022

**SiREM Laboratory**  
Attn : Kela Ashworth

**Date Rec. :** 26 March 2021  
**LR Report:** CA14601-MAR21

130 Stone Rd. W  
Guelph, ON  
N1G 3Z2, Canada

**Copy:** #1

Phone: 519-822-2265  
Fax:519-822-3151

## CERTIFICATE OF ANALYSIS

### S-7677\_2\_DPT11AP2

Sample ID	Sample Date & Time	Ag µg/g	Al µg/g	As µg/g	Ba µg/g	Be µg/g	Bi µg/g	Ca µg/g
1: Analysis Start Date		15-Apr-21	15-Apr-21	15-Apr-21	15-Apr-21	15-Apr-21	15-Apr-21	15-Apr-21
2: Analysis Start Time		19:04	19:04	19:04	19:04	19:04	19:04	19:04
3: Analysis Completed Date		16-Apr-21	16-Apr-21	16-Apr-21	16-Apr-21	16-Apr-21	16-Apr-21	16-Apr-21
4: Analysis Completed Time		10:28	10:28	10:28	10:28	10:28	10:28	10:28
6: S-7677_2_DPT11AP2	25-Mar-21	< 1	57000	4.6	260	1.3	0.25	1300

Sample ID	Cd µg/g	Co µg/g	Cr µg/g	Cu µg/g	Fe µg/g	K µg/g	Li µg/g	Mg µg/g
1: Analysis Start Date	15-Apr-21	15-Apr-21	15-Apr-21	15-Apr-21	15-Apr-21	15-Apr-21	15-Apr-21	15-Apr-21
2: Analysis Start Time	19:04	19:04	19:04	19:04	19:04	19:04	19:04	19:04
3: Analysis Completed Date	16-Apr-21	16-Apr-21	16-Apr-21	16-Apr-21	16-Apr-21	16-Apr-21	16-Apr-21	16-Apr-21
4: Analysis Completed Time	10:28	10:28	10:28	10:28	10:28	10:28	10:28	10:28
6: S-7677_2_DPT11AP2	0.03	7	56	13	39000	10000	27	3500

Sample ID	Mn µg/g	Mo µg/g	Ni µg/g	Pb µg/g	Sb µg/g	Se µg/g	Sn µg/g	Sr µg/g
1: Analysis Start Date	15-Apr-21	15-Apr-21	15-Apr-21	15-Apr-21	15-Apr-21	15-Apr-21	15-Apr-21	15-Apr-21
2: Analysis Start Time	19:04	19:04	19:04	19:04	19:04	19:04	19:04	19:04
3: Analysis Completed Date	16-Apr-21	16-Apr-21	16-Apr-21	16-Apr-21	16-Apr-21	16-Apr-21	16-Apr-21	16-Apr-21
4: Analysis Completed Time	10:28	10:28	10:28	10:28	10:28	10:28	10:28	10:28
6: S-7677_2_DPT11AP2	190	1.0	19	18	< 0.8	< 0.7	< 6	40

Sample ID	Ti µg/g	Tl µg/g	U µg/g	V µg/g	Y µg/g	Zn µg/g	S %	C %
1: Analysis Start Date	15-Apr-21	15-Apr-21	15-Apr-21	15-Apr-21	15-Apr-21	15-Apr-21	12-Apr-21	12-Apr-21
2: Analysis Start Time	19:04	19:04	19:04	19:04	19:04	19:04	10:54	10:54
3: Analysis Completed Date	16-Apr-21	16-Apr-21	16-Apr-21	16-Apr-21	16-Apr-21	16-Apr-21	13-Apr-21	13-Apr-21

**SGS Canada Inc.**

P.O. Box 4300 - 185 Concession St.  
 Lakefield - Ontario - KOL 2H0  
 Phone: 705-652-2000 FAX: 705-652-6365

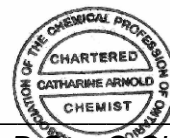
**Project : S-7677**

**LR Report : CA14601-MAR21**

Sample ID	Ti µg/g	Tl µg/g	U µg/g	V µg/g	Y µg/g	Zn µg/g	S %	C %
4: Analysis Completed Time	10:28	10:28	10:28	10:28	10:28	10:28	11:02	11:00
6: S-7677_2_DPT11AP2	3900	0.47	2.6	67	16	49	0.034	0.128

Sample ID	Sulphide %	TOC %
1: Analysis Start Date	13-Apr-21	12-Apr-21 ---
2: Analysis Start Time	07:21	13:24 ---
3: Analysis Completed Date	13-Apr-21	13-Apr-21 ---
4: Analysis Completed Time	11:02	11:00 ---
6: S-7677_2_DPT11AP2	0.04	0.114 1

*Catharine Arnold*  
 Catharine Arnold, B.Sc., C.Chem  
 Project Specialist,  
 Environment, Health & Safety



12-January-2022

**SiREM Laboratory**  
Attn : Kela Ashworth

**Date Rec. :** 26 March 2021  
**LR Report:** CA14601-MAR21

130 Stone Rd. W  
Guelph, ON  
N1G 3Z2, Canada

**Copy:** #1

Phone: 519-822-2265  
Fax:519-822-3151

## CERTIFICATE OF ANALYSIS

### S-7677\_3\_DPT08AP2

Sample ID	Sample Date & Time	Ag µg/g	Al µg/g	As µg/g	Ba µg/g	Be µg/g	Bi µg/g	Ca µg/g
1: Analysis Start Date		15-Apr-21	15-Apr-21	15-Apr-21	15-Apr-21	15-Apr-21	15-Apr-21	15-Apr-21
2: Analysis Start Time		19:04	19:04	19:04	19:04	19:04	19:04	19:04
3: Analysis Completed Date		16-Apr-21	16-Apr-21	16-Apr-21	16-Apr-21	16-Apr-21	16-Apr-21	16-Apr-21
4: Analysis Completed Time		10:28	10:28	10:28	10:28	10:28	10:28	10:28
7: S-7677_3_DPT08AP2	25-Mar-21	< 1	48000	8.2	200	1.3	0.20	1100

Sample ID	Cd µg/g	Co µg/g	Cr µg/g	Cu µg/g	Fe µg/g	K µg/g	Li µg/g	Mg µg/g
1: Analysis Start Date	15-Apr-21	15-Apr-21	15-Apr-21	15-Apr-21	15-Apr-21	15-Apr-21	15-Apr-21	15-Apr-21
2: Analysis Start Time	19:04	19:04	19:04	19:04	19:04	19:04	19:04	19:04
3: Analysis Completed Date	16-Apr-21	16-Apr-21	16-Apr-21	16-Apr-21	16-Apr-21	16-Apr-21	16-Apr-21	16-Apr-21
4: Analysis Completed Time	10:28	10:28	10:28	10:28	10:28	10:28	10:28	10:28
7: S-7677_3_DPT08AP2	0.33	10	57	13	24000	11000	45	2500

Sample ID	Mn µg/g	Mo µg/g	Ni µg/g	Pb µg/g	Sb µg/g	Se µg/g	Sn µg/g	Sr µg/g
1: Analysis Start Date	15-Apr-21	15-Apr-21	15-Apr-21	15-Apr-21	15-Apr-21	15-Apr-21	15-Apr-21	15-Apr-21
2: Analysis Start Time	19:04	19:04	19:04	19:04	19:04	19:04	19:04	19:04
3: Analysis Completed Date	16-Apr-21	16-Apr-21	16-Apr-21	16-Apr-21	16-Apr-21	16-Apr-21	16-Apr-21	16-Apr-21
4: Analysis Completed Time	10:28	10:28	10:28	10:28	10:28	10:28	10:28	10:28
7: S-7677_3_DPT08AP2	230	1.0	24	16	< 0.8	< 0.7	< 6	79

Sample ID	Ti µg/g	Tl µg/g	U µg/g	V µg/g	Y µg/g	Zn µg/g	S %	C %
1: Analysis Start Date	15-Apr-21	15-Apr-21	15-Apr-21	15-Apr-21	15-Apr-21	15-Apr-21	12-Apr-21	12-Apr-21
2: Analysis Start Time	19:04	19:04	19:04	19:04	19:04	19:04	10:54	10:54
3: Analysis Completed Date	16-Apr-21	16-Apr-21	16-Apr-21	16-Apr-21	16-Apr-21	16-Apr-21	13-Apr-21	13-Apr-21

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**Project : S-7677**

**LR Report : CA14601-MAR21**

Sample ID	Ti µg/g	Tl µg/g	U µg/g	V µg/g	Y µg/g	Zn µg/g	S %	C %
4: Analysis Completed Time	10:28	10:28	10:28	10:28	10:28	10:28	11:02	11:00
7: S-7677_3_DPT08AP2	2600	0.36	1.6	71	14	59	0.033	0.167

Sample ID	Sulphide %	TOC %
1: Analysis Start Date	13-Apr-21	12-Apr-21 ---
2: Analysis Start Time	07:21	13:24 ---
3: Analysis Completed Date	13-Apr-21	13-Apr-21 ---
4: Analysis Completed Time	11:02	11:00 ---
7: S-7677_3_DPT08AP2	0.05	0.155 1

*Catharine Arnold*  
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 Project Specialist,  
 Environment, Health & Safety

12-January-2022

**SiREM Laboratory**  
Attn : Kela Ashworth

**Date Rec. :** 26 March 2021  
**LR Report:** CA14601-MAR21

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## CERTIFICATE OF ANALYSIS

### S-7677\_4\_DPT07AP2

Sample ID	Sample Date & Time	Ag µg/g	Al µg/g	As µg/g	Ba µg/g	Be µg/g	Bi µg/g	Ca µg/g
1: Analysis Start Date		15-Apr-21	15-Apr-21	15-Apr-21	15-Apr-21	15-Apr-21	15-Apr-21	15-Apr-21
2: Analysis Start Time		19:04	19:04	19:04	19:04	19:04	19:04	19:04
3: Analysis Completed Date		16-Apr-21	16-Apr-21	16-Apr-21	16-Apr-21	16-Apr-21	16-Apr-21	16-Apr-21
4: Analysis Completed Time		10:28	10:28	10:28	10:28	10:28	10:28	10:28
8: S-7677_4_DPT07AP2	25-Mar-21	< 1	77000	9.4	280	2.4	0.37	1900

Sample ID	Cd µg/g	Co µg/g	Cr µg/g	Cu µg/g	Fe µg/g	K µg/g	Li µg/g	Mg µg/g
1: Analysis Start Date	15-Apr-21	15-Apr-21	15-Apr-21	15-Apr-21	15-Apr-21	15-Apr-21	15-Apr-21	15-Apr-21
2: Analysis Start Time	19:04	19:04	19:04	19:04	19:04	19:04	19:04	19:04
3: Analysis Completed Date	16-Apr-21	16-Apr-21	16-Apr-21	16-Apr-21	16-Apr-21	16-Apr-21	16-Apr-21	16-Apr-21
4: Analysis Completed Time	10:28	10:28	10:28	10:28	10:28	10:28	10:28	10:28
8: S-7677_4_DPT07AP2	0.58	14	150	22	31000	20000	46	5800

Sample ID	Mn µg/g	Mo µg/g	Ni µg/g	Pb µg/g	Sb µg/g	Se µg/g	Sn µg/g	Sr µg/g
1: Analysis Start Date	15-Apr-21	15-Apr-21	15-Apr-21	15-Apr-21	15-Apr-21	15-Apr-21	15-Apr-21	15-Apr-21
2: Analysis Start Time	19:04	19:04	19:04	19:04	19:04	19:04	19:04	19:04
3: Analysis Completed Date	16-Apr-21	16-Apr-21	16-Apr-21	16-Apr-21	16-Apr-21	16-Apr-21	16-Apr-21	16-Apr-21
4: Analysis Completed Time	10:28	10:28	10:28	10:28	10:28	10:28	10:28	10:28
8: S-7677_4_DPT07AP2	170	2.2	55	19	1.2	4.7	< 6	150

Sample ID	Ti µg/g	Tl µg/g	U µg/g	V µg/g	Y µg/g	Zn µg/g	S %	C %
1: Analysis Start Date	15-Apr-21	15-Apr-21	15-Apr-21	15-Apr-21	15-Apr-21	15-Apr-21	12-Apr-21	12-Apr-21
2: Analysis Start Time	19:04	19:04	19:04	19:04	19:04	19:04	10:54	10:54
3: Analysis Completed Date	16-Apr-21	16-Apr-21	16-Apr-21	16-Apr-21	16-Apr-21	16-Apr-21	13-Apr-21	13-Apr-21

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**Project : S-7677**

**LR Report : CA14601-MAR21**

Sample ID	Ti µg/g	Tl µg/g	U µg/g	V µg/g	Y µg/g	Zn µg/g	S %	C %
4: Analysis Completed Time	10:28	10:28	10:28	10:28	10:28	10:28	11:02	11:00
8: S-7677_4_DPT07AP2	3300	0.64	3.0	150	30	120	0.811	1.09

Sample ID	Sulphide %	TOC %	
1: Analysis Start Date	13-Apr-21	12-Apr-21	---
2: Analysis Start Time	07:21	13:24	---
3: Analysis Completed Date	13-Apr-21	13-Apr-21	---
4: Analysis Completed Time	11:02	11:00	---
8: S-7677_4_DPT07AP2	0.85	1.06	1

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12-January-2022

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**Date Rec. :** 26 March 2021  
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## CERTIFICATE OF ANALYSIS

### S-7677\_9\_DPT09AP2

Sample ID	Sample Date & Time	Ag µg/g	Al µg/g	As µg/g	Ba µg/g	Be µg/g	Bi µg/g	Ca µg/g
1: Analysis Start Date		15-Apr-21	15-Apr-21	15-Apr-21	15-Apr-21	15-Apr-21	15-Apr-21	15-Apr-21
2: Analysis Start Time		19:04	19:04	19:04	19:04	19:04	19:04	19:04
3: Analysis Completed Date		16-Apr-21	16-Apr-21	16-Apr-21	16-Apr-21	16-Apr-21	16-Apr-21	16-Apr-21
4: Analysis Completed Time		10:28	10:28	10:28	10:28	10:28	10:28	10:28
13: S-7677_9_DPT09AP2	25-Mar-21	< 1	59000	4.7	410	1.9	0.25	2600

Sample ID	Cd µg/g	Co µg/g	Cr µg/g	Cu µg/g	Fe µg/g	K µg/g	Li µg/g	Mg µg/g
1: Analysis Start Date	15-Apr-21	15-Apr-21	15-Apr-21	15-Apr-21	15-Apr-21	15-Apr-21	15-Apr-21	15-Apr-21
2: Analysis Start Time	19:04	19:04	19:04	19:04	19:04	19:04	19:04	19:04
3: Analysis Completed Date	16-Apr-21	16-Apr-21	16-Apr-21	16-Apr-21	16-Apr-21	16-Apr-21	16-Apr-21	16-Apr-21
4: Analysis Completed Time	10:28	10:28	10:28	10:28	10:28	10:28	10:28	10:28
13: S-7677_9_DPT09AP2	0.36	13	60	14	27000	12000	35	3800

Sample ID	Mn µg/g	Mo µg/g	Ni µg/g	Pb µg/g	Sb µg/g	Se µg/g	Sn µg/g	Sr µg/g
1: Analysis Start Date	15-Apr-21	15-Apr-21	15-Apr-21	15-Apr-21	15-Apr-21	15-Apr-21	15-Apr-21	15-Apr-21
2: Analysis Start Time	19:04	19:04	19:04	19:04	19:04	19:04	19:04	19:04
3: Analysis Completed Date	16-Apr-21	16-Apr-21	16-Apr-21	16-Apr-21	16-Apr-21	16-Apr-21	16-Apr-21	16-Apr-21
4: Analysis Completed Time	10:28	10:28	10:28	10:28	10:28	10:28	10:28	10:28
13: S-7677_9_DPT09AP2	380	0.8	25	20	< 0.8	< 0.7	< 6	55

Sample ID	Ti µg/g	Tl µg/g	U µg/g	V µg/g	Y µg/g	Zn µg/g	S %	C %
1: Analysis Start Date	15-Apr-21	15-Apr-21	15-Apr-21	15-Apr-21	15-Apr-21	15-Apr-21	12-Apr-21	12-Apr-21
2: Analysis Start Time	19:04	19:04	19:04	19:04	19:04	19:04	10:54	10:54
3: Analysis Completed Date	16-Apr-21	16-Apr-21	16-Apr-21	16-Apr-21	16-Apr-21	16-Apr-21	13-Apr-21	13-Apr-21

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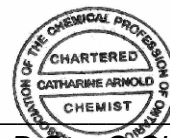
**Project : S-7677**

**LR Report : CA14601-MAR21**

Sample ID	Ti µg/g	Tl µg/g	U µg/g	V µg/g	Y µg/g	Zn µg/g	S %	C %
4: Analysis Completed Time	10:28	10:28	10:28	10:28	10:28	10:28	11:02	11:00
13: S-7677_9_DPT09AP2	3800	0.57	2.9	75	31	85	0.030	0.496

Sample ID	Sulphide %	TOC %
1: Analysis Start Date	13-Apr-21	12-Apr-21 ---
2: Analysis Start Time	07:21	13:24 ---
3: Analysis Completed Date	13-Apr-21	13-Apr-21 ---
4: Analysis Completed Time	11:02	11:00 ---
13: S-7677_9_DPT09AP2	0.04	0.479 1

*Catharine Arnold*  
 Catharine Arnold, B.Sc., C.Chem  
 Project Specialist,  
 Environment, Health & Safety



12-January-2022

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## CERTIFICATE OF ANALYSIS

### S-7677\_10\_DPT10AP2

Sample ID	Sample Date & Time	Ag µg/g	Al µg/g	As µg/g	Ba µg/g	Be µg/g	Bi µg/g	Ca µg/g
1: Analysis Start Date		15-Apr-21	15-Apr-21	15-Apr-21	15-Apr-21	15-Apr-21	15-Apr-21	15-Apr-21
2: Analysis Start Time		19:04	19:04	19:04	19:04	19:04	19:04	19:04
3: Analysis Completed Date		16-Apr-21	16-Apr-21	16-Apr-21	16-Apr-21	16-Apr-21	16-Apr-21	16-Apr-21
4: Analysis Completed Time		10:28	10:28	10:28	10:28	10:28	10:28	10:28
14: S-7677_10_DPT10AP2	25-Mar-21	< 1	69000	5.3	500	1.8	0.25	3000

Sample ID	Cd µg/g	Co µg/g	Cr µg/g	Cu µg/g	Fe µg/g	K µg/g	Li µg/g	Mg µg/g
1: Analysis Start Date	15-Apr-21	15-Apr-21	15-Apr-21	15-Apr-21	15-Apr-21	15-Apr-21	15-Apr-21	15-Apr-21
2: Analysis Start Time	19:04	19:04	19:04	19:04	19:04	19:04	19:04	19:04
3: Analysis Completed Date	16-Apr-21	16-Apr-21	16-Apr-21	16-Apr-21	16-Apr-21	16-Apr-21	16-Apr-21	16-Apr-21
4: Analysis Completed Time	10:28	10:28	10:28	10:28	10:28	10:28	10:28	10:28
14: S-7677_10_DPT10AP2	0.14	14	57	24	36000	17000	33	5800

Sample ID	Mn µg/g	Mo µg/g	Ni µg/g	Pb µg/g	Sb µg/g	Se µg/g	Sn µg/g	Sr µg/g
1: Analysis Start Date	15-Apr-21	15-Apr-21	15-Apr-21	15-Apr-21	15-Apr-21	15-Apr-21	15-Apr-21	15-Apr-21
2: Analysis Start Time	19:04	19:04	19:04	19:04	19:04	19:04	19:04	19:04
3: Analysis Completed Date	16-Apr-21	16-Apr-21	16-Apr-21	16-Apr-21	16-Apr-21	16-Apr-21	16-Apr-21	16-Apr-21
4: Analysis Completed Time	10:28	10:28	10:28	10:28	10:28	10:28	10:28	10:28
14: S-7677_10_DPT10AP2	540	0.9	24	20	< 0.8	< 0.7	< 6	66

Sample ID	Ti µg/g	Tl µg/g	U µg/g	V µg/g	Y µg/g	Zn µg/g	S %	C %
1: Analysis Start Date	15-Apr-21	15-Apr-21	15-Apr-21	15-Apr-21	15-Apr-21	15-Apr-21	12-Apr-21	12-Apr-21
2: Analysis Start Time	19:04	19:04	19:04	19:04	19:04	19:04	10:54	10:54
3: Analysis Completed Date	16-Apr-21	16-Apr-21	16-Apr-21	16-Apr-21	16-Apr-21	16-Apr-21	13-Apr-21	13-Apr-21

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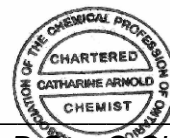
**Project : S-7677**


**LR Report : CA14601-MAR21**

Sample ID	Ti µg/g	Tl µg/g	U µg/g	V µg/g	Y µg/g	Zn µg/g	S %	C %
4: Analysis Completed Time	10:28	10:28	10:28	10:28	10:28	10:28	11:02	11:00
14: S-7677_10_DPT10AP2	4000	0.62	2.9	81	25	82	0.014	0.179

Sample ID	Sulphide %	TOC %
1: Analysis Start Date	13-Apr-21	12-Apr-21 ---
2: Analysis Start Time	07:21	13:24 ---
3: Analysis Completed Date	13-Apr-21	13-Apr-21 ---
4: Analysis Completed Time	11:02	11:00 ---
14: S-7677_10_DPT10AP2	< 0.04	0.151 1

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 Catharine Arnold, B.Sc., C.Chem  
 Project Specialist,  
 Environment, Health & Safety



	<b>Minerals Geochemistry Lakefield Laboratory</b>	Revision <b>2.7</b> Doc Type <b>Method Summary</b> Method No: <b>GO/GC/GT_XR</b> Code <b>F76V</b> Service <b>Testing</b> Issued Date <b>23/Sep/2014</b>
<b>Minerals</b>	<b>Preparation and Determination of Major Element Oxides, LOI and Rare Earth Oxides in Oxide Ores, and Process Control and Trade Products by Borate Fusion and Xray Fluorescence Spectrometry</b> [SiO <sub>2</sub> , Al <sub>2</sub> O <sub>3</sub> , Fe <sub>2</sub> O <sub>3</sub> , MgO, CaO, Na <sub>2</sub> O, K <sub>2</sub> O, P <sub>2</sub> O <sub>5</sub> , MnO, TiO <sub>2</sub> , Cr <sub>2</sub> O <sub>3</sub> ; V <sub>2</sub> O <sub>5</sub> ; LOI; additions BaO; Ce <sub>2</sub> O <sub>3</sub> ; Nd <sub>2</sub> O <sub>3</sub> , La <sub>2</sub> O <sub>3</sub> ; Pr <sub>2</sub> O <sub>3</sub> , Sm <sub>2</sub> O <sub>3</sub> ; Nb <sub>2</sub> O <sub>5</sub> , ThO <sub>2</sub> , Ta <sub>2</sub> O <sub>5</sub> ; SnO <sub>2</sub> ; SrO; ZrO <sub>2</sub> ; HfO <sub>2</sub> ; Y <sub>2</sub> O <sub>3</sub> ; WO <sub>3</sub> ; U <sub>3</sub> O <sub>8</sub> ; Co; Ni ; XRF]	Approved by <b>K. Patel</b>

**1. Parameter(s) measured, unit(s):**

Silicon Dioxide (SiO<sub>2</sub>), Aluminum Oxide (Al<sub>2</sub>O<sub>3</sub>), Iron(III) Oxide (Fe<sub>2</sub>O<sub>3</sub>), Magnesium Oxide (MgO), Calcium Oxide (CaO), Sodium Oxide (Na<sub>2</sub>O), Potassium Oxide (K<sub>2</sub>O), Phosphorus Pentoxide (P<sub>2</sub>O<sub>5</sub>), Manganese Oxide (MnO), Titanium Dioxide (TiO<sub>2</sub>), Chromium (III) Oxide (Cr<sub>2</sub>O<sub>3</sub>), Vanadium Oxide (V<sub>2</sub>O<sub>5</sub>), LOI, in %

Barium Oxide (BaO), Cerium (III) Oxide (Ce<sub>2</sub>O<sub>3</sub>), Neodymium Oxide (Nd<sub>2</sub>O<sub>3</sub>), Lanthanum Oxide (La<sub>2</sub>O<sub>3</sub>), Praseodymium Oxide (Pr<sub>2</sub>O<sub>3</sub>), Samarium Oxide (Sm<sub>2</sub>O<sub>3</sub>), Niobium Pentoxide (Nb<sub>2</sub>O<sub>5</sub>), Thorium Dioxide (ThO<sub>2</sub>), Tantalum Pentoxide (Ta<sub>2</sub>O<sub>5</sub>), Tin Dioxide (SnO<sub>2</sub>) Uranium Oxide (U<sub>3</sub>O<sub>8</sub>), Cobalt (Co), Nickel (Ni), Strontium Oxide (SrO), Zirconium Dioxide (ZrO<sub>2</sub>), Hafnium Oxide (HfO<sub>2</sub>), Yttrium Oxide (Y<sub>2</sub>O<sub>3</sub>), Tungsten Trioxide (WO<sub>3</sub>) in % can be added as additions

**2. Typical sample size:**

0.2 to 0.5g, 1g additional for LOI analysis

**3. Type of sample applicable (media):**

Rocks, oxide ores, concentrates and catalysts

**4. Sample preparation technique used:**

Samples are crushed and pulverized according to client specified instructions or default preparation procedures. This method is used to report, in percentage, the whole rock suite (SiO<sub>2</sub>, Al<sub>2</sub>O<sub>3</sub>, Fe<sub>2</sub>O<sub>3</sub>, MgO, CaO, Na<sub>2</sub>O, K<sub>2</sub>O, P<sub>2</sub>O<sub>5</sub>, MnO, TiO<sub>2</sub>, Cr<sub>2</sub>O<sub>3</sub>, V<sub>2</sub>O<sub>5</sub>). Sample preparation entails the formation of a homogenous glass disk by the fusion of the sample and a lithium tetraborate/lithium metaborate mixture. The LOI is determined separately and gravimetrically at 1000°C.

**5. Method of analysis used:**

The prepared disks are analyzed by wavelength dispersion X-ray fluorescence (WD-XRF). The

LOI is included in the matrix correction calculations, which are performed by the XRF software.

**6. Data reduction by:**

Computer, on line, data fed to Laboratory Information Management System with secure audit trail.

**7. Figures of Merit:**

This method has been fully validated for the range of samples typically analyzed. Method validation includes the use of reference materials, replicates, duplicates and blanks to calculate accuracy, precision, linearity, range, limit of detection, reporting limit, specificity and measurement uncertainty.

The reporting limits has been determined according to the following

Element	Report Limit %
SiO <sub>2</sub>	0.01
Al <sub>2</sub> O <sub>3</sub>	0.01
MgO	0.01
Na <sub>2</sub> O	0.01
K <sub>2</sub> O	0.01
CaO	0.01
P <sub>2</sub> O <sub>5</sub>	0.01
TiO <sub>2</sub>	0.01
Cr <sub>2</sub> O <sub>3</sub>	0.01
V <sub>2</sub> O <sub>5</sub>	0.01
Fe <sub>2</sub> O <sub>3</sub>	0.01
MnO	0.01
LOI	-10

\*upper limit for all elements is 100%. A negative LOI indicates a gain on ignition

**8. Quality control:**

Quality control materials include method blanks, replicates and reference materials and are randomly inserted with the frequency set according to method protocols at ~12% for ore grade analysis and 18% for process control analysis. Quality control materials will also include BRM (Barren reference materials, or preparations blanks) and preparation duplicates if samples have been taken through the sample reduction process. Party quality samples are assayed in replicate, umpire quality samples are in triplicate. Calibration materials that cover the range upon method set-up; calibration check performed daily.

**9. Accreditation:**

The Standards Council of Canada has accredited this test in conformance with the requirements of ISO/IEC 17025. See [www.scc.ca/en/search/palcan](http://www.scc.ca/en/search/palcan) for scope of accreditation.

Note: Scopes of accreditation are site specific, please check with the local representative.

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**Project :** S-7677

12-January-2022

**SiREM Laboratory**

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**Date Rec. :** 26 March 2021  
**LR Report:** CA14602-MAR21  
**Reference:** P.O# 800003210A

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## CERTIFICATE OF ANALYSIS

### S-7677\_2\_DPT11AP2

Sample ID	Sample Date & Time	SiO2 %	Al2O3 %	Fe2O3 %	MgO %	CaO %	Na2O %	K2O %	TiO2 %	P2O5 %	MnO %	Cr2O3 %
6: S-7677_2_DPT11AP2	25-Mar-21	72.2	11.9	6.23	0.61	0.19	0.12	1.40	0.97	0.09	0.02	< 0.01

Sample ID	V2O5 %	LOI %	Sum %
6: S-7677_2_DPT11AP2	0.02	5.90	99.6

*Catharine Arnold*



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**Project :** S-7677

12-January-2022

**SiREM Laboratory**  
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**Date Rec. :** 26 March 2021  
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**Reference:** P.O# 800003210A

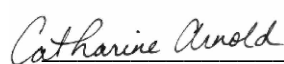

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## CERTIFICATE OF ANALYSIS

### S-7677\_3\_DPT08AP2

Sample ID	Sample Date & Time	SiO2 %	Al2O3 %	Fe2O3 %	MgO %	CaO %	Na2O %	K2O %	TiO2 %	P2O5 %	MnO %	Cr2O3 %
7: S-7677_3_DPT08AP2	25-Mar-21	78.6	10.3	3.90	0.46	0.14	0.14	1.53	0.60	0.07	0.04	0.01

Sample ID	V2O5 %	LOI %	Sum %
7: S-7677_3_DPT08AP2	< 0.01	4.03	99.8

  
  
**Catharine Arnold, B.Sc., C.Chem**  
**Project Specialist,**  
**Environment, Health & Safety**



**SGS Canada Inc.**

P.O. Box 4300 - 185 Concession St.  
 Lakefield - Ontario - K0L 2H0  
 Phone: 705-652-2000 FAX: 705-652-6365

**Project :** S-7677

12-January-2022

**SiREM Laboratory**

Attn : Kela Ashworth

130 Stone Rd. W, Guelph  
 Canada, N1G 3Z2  
 Phone: 519-822-2265, Fax:519-822-3151

**Date Rec. :** 26 March 2021  
**LR Report:** CA14602-MAR21  
**Reference:** P.O# 800003210A

**Copy:** #1

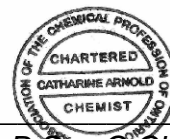
## CERTIFICATE OF ANALYSIS

### S-7677\_4\_DPT07AP2

Sample ID	Sample Date & Time	SiO2 %	Al2O3 %	Fe2O3 %	MgO %	CaO %	Na2O %	K2O %	TiO2 %	P2O5 %	MnO %	Cr2O3 %
8: S-7677_4_DPT07AP2	25-Mar-21	65.6	16.3	4.99	1.04	0.24	0.39	2.70	0.74	0.11	0.02	0.03

Sample ID	V2O5 %	LOI %	Sum %
8: S-7677_4_DPT07AP2	0.02	7.11	99.3

*Catharine Arnold*



**Catharine Arnold, B.Sc., C.Chem**  
 Project Specialist,  
 Environment, Health & Safety

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**Date Rec. :** 26 March 2021  
**LR Report:** CA14602-MAR21  
**Reference:** P.O# 800003210A

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## CERTIFICATE OF ANALYSIS

### S-7677\_9\_DPT09AP2

Sample ID	Sample Date & Time	SiO2 %	Al2O3 %	Fe2O3 %	MgO %	CaO %	Na2O %	K2O %	TiO2 %	P2O5 %	MnO %	Cr2O3 %
13: S-7677_9_DPT09AP2	25-Mar-21	72.9	12.0	4.17	0.66	0.38	0.26	1.54	0.96	0.07	0.06	< 0.01

Sample ID	V2O5 %	LOI %	Sum %
13: S-7677_9_DPT09AP2	0.01	6.11	99.1

*Catharine Arnold*



**Catharine Arnold, B.Sc., C.Chem**  
**Project Specialist,**  
**Environment, Health & Safety**

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**Date Rec. :** 26 March 2021  
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**Reference:** P.O# 800003210A

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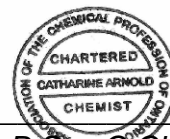
## CERTIFICATE OF ANALYSIS

### S-7677\_10\_DPT10AP2

Sample ID	Sample Date & Time	SiO2 %	Al2O3 %	Fe2O3 %	MgO %	CaO %	Na2O %	K2O %	TiO2 %	P2O5 %	MnO %	Cr2O3 %
14: S-7677_10_DPT10AP2	25-Mar-21	67.3	14.2	5.66	1.03	0.43	0.56	2.21	1.02	0.12	0.07	0.01

Sample ID	V2O5 %	LOI %	Sum %
14: S-7677_10_DPT10AP2	0.01	6.69	99.4

*Catharine Arnold*



**Catharine Arnold, B.Sc., C.Chem**  
**Project Specialist,**  
**Environment, Health & Safety**



## Quantitative X-Ray Diffraction by Rietveld Refinement

**Report Prepared for:** Environmental Services

**Project Number/ LIMS No.** Custom MIN/MI5060-MAR21

**Sample Receipt:** March 30, 2021

**Sample Analysis:** April 12, 2021

**Reporting Date:** May 5, 2021

---

**Instrument:** BRUKER AXS D8 Advance Diffractometer

**Test Conditions:** Co radiation, 35 kV, 40 mA  
Regular Scanning: Step: 0.02°, Step time: 1s, 2θ range: 3-80°

**Interpretations :** PDF2/PDF4 powder diffraction databases issued by the International Center for Diffraction Data (ICDD). DiffracPlus Eva and Topas software.

**Detection Limit :** 0.5-2%. Strongly dependent on crystallinity.

---

**Contents:**

- 1) Method Summary
- 2) Quantitative XRD Results
- 3) XRD Pattern(s)

---

Kim Gibbs, H.B.Sc., P.Ge.  
Senior Mineralogist

---

Huyun Zhou, Ph.D., P.Ge.  
Senior Mineralogist

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## Method Summary

The Rietveld Method of Mineral Identification by XRD (ME-LR-MIN-MET-MN-D05) method used by SGS Minerals Services is accredited to the requirements of ISO/IEC 17025.

### ***Mineral Identification and Interpretation:***

Mineral identification and interpretation involves matching the diffraction pattern of an unknown material to patterns of single-phase reference materials. The reference patterns are compiled by the Joint Committee on Powder Diffraction Standards - International Center for Diffraction Data (JCPDS-ICDD) database and released on software as Powder Diffraction Files (PDF).

Interpretations do not reflect the presence of non-crystalline and/or amorphous compounds, except when internal standards have been added by request. Mineral proportions may be strongly influenced by crystallinity, crystal structure and preferred orientations. Mineral or compound identification and quantitative analysis results should be accompanied by supporting chemical assay data or other additional tests.

### ***Quantitative Rietveld Analysis:***

Quantitative Rietveld Analysis is performed by using Topas 4.2 (Bruker AXS), a graphics based profile analysis program built around a non-linear least squares fitting system, to determine the amount of different phases present in a multicomponent sample. Whole pattern analyses are predicated by the fact that the X-ray diffraction pattern is a total sum of both instrumental and specimen factors. Unlike other peak intensity-based methods, the Rietveld method uses a least squares approach to refine a theoretical line profile until it matches the obtained experimental patterns.

Rietveld refinement is completed with a set of minerals specifically identified for the sample. Zero values indicate that the mineral was included in the refinement calculations, but the calculated concentration was less than 0.05wt%. Minerals not identified by the analyst are not included in refinement calculations for specific samples and are indicated with a dash.

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### Summary of Rietveld Quantitative Analysis X-Ray Diffraction Results

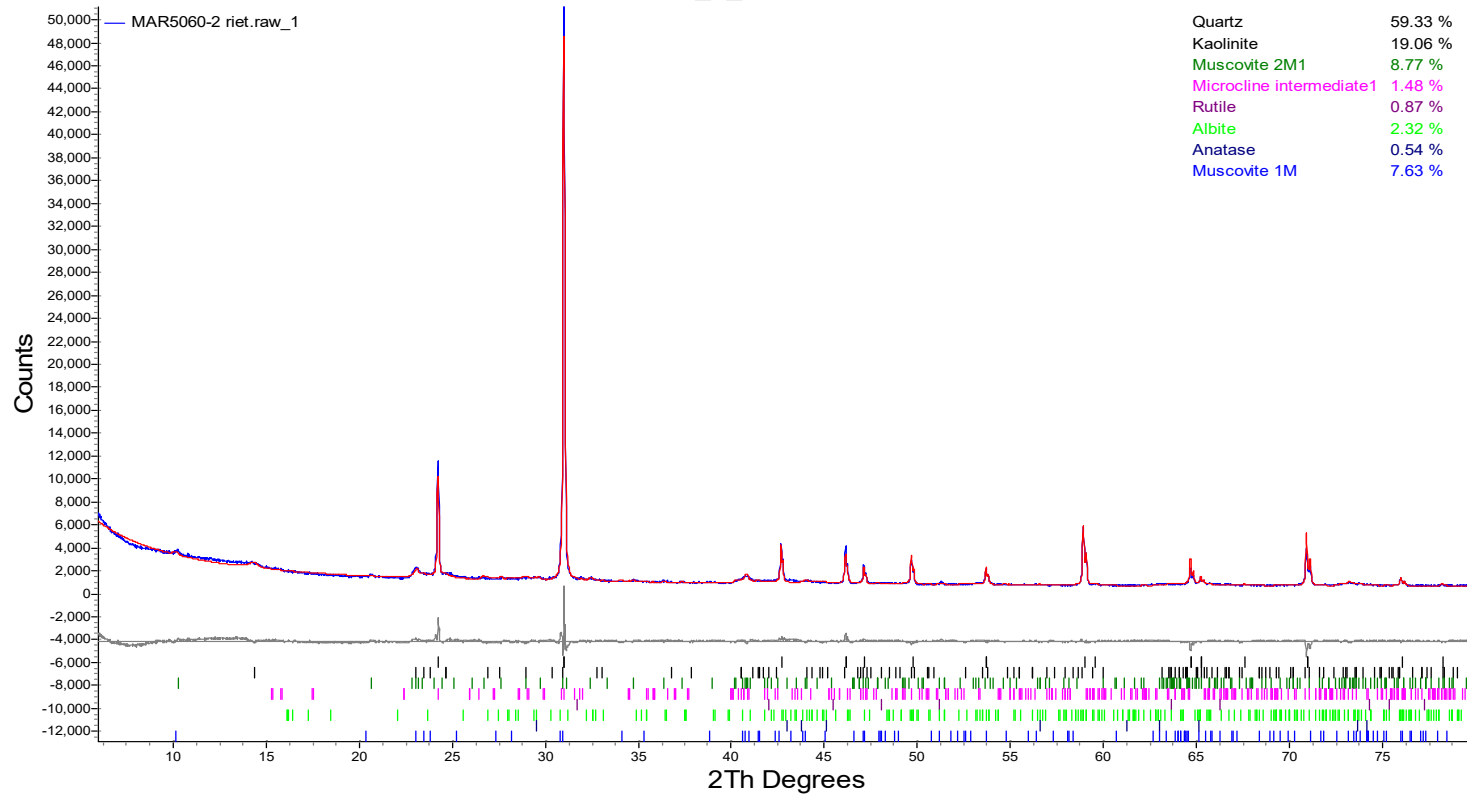
Mineral/Compound	S-7677_2_DPT11AP2 MAR5060-02
	(wt %)
Quartz	59.3
Kaolinite	19.1
Muscovite	16.4
Microcline	1.5
Rutile	0.9
Albite	2.3
Anatase	0.5
TOTAL	100

*The weight percent quantities indicated have been normalized to a sum of 100%.*

*The quantity of amorphous material has not been determined.*

Mineral/Compound	Formula
Quartz	SiO <sub>2</sub>
Kaolinite	Al <sub>2</sub> Si <sub>2</sub> O <sub>5</sub> (OH) <sub>4</sub>
Muscovite	KAl <sub>2</sub> (AlSi <sub>3</sub> O <sub>10</sub> )(OH) <sub>2</sub>
Microcline	KAlSi <sub>3</sub> O <sub>8</sub>
Rutile	TiO <sub>2</sub>
Albite	NaAlSi <sub>3</sub> O <sub>8</sub>
Anatase	TiO <sub>2</sub>

S-7677\_2\_DPT11AP2





## Quantitative X-Ray Diffraction by Rietveld Refinement

**Report Prepared for:** Environmental Services

**Project Number/ LIMS No.** Custom MIN/MI5060-MAR21

**Sample Receipt:** March 30, 2021

**Sample Analysis:** April 12, 2021

**Reporting Date:** May 5, 2021

---

**Instrument:** BRUKER AXS D8 Advance Diffractometer

**Test Conditions:** Co radiation, 35 kV, 40 mA  
Regular Scanning: Step: 0.02°, Step time: 1s, 2θ range: 3-80°

**Interpretations :** PDF2/PDF4 powder diffraction databases issued by the International Center for Diffraction Data (ICDD). DiffracPlus Eva and Topas software.

**Detection Limit :** 0.5-2%. Strongly dependent on crystallinity.

---

**Contents:**

- 1) Method Summary
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- 3) XRD Pattern(s)

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Kim Gibbs, H.B.Sc., P.Geol.  
Senior Mineralogist

---

Huyun Zhou, Ph.D., P.Geol.  
Senior Mineralogist

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## Method Summary

The Rietveld Method of Mineral Identification by XRD (ME-LR-MIN-MET-MN-D05) method used by SGS Minerals Services is accredited to the requirements of ISO/IEC 17025.

### ***Mineral Identification and Interpretation:***

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### ***Quantitative Rietveld Analysis:***

Quantitative Rietveld Analysis is performed by using Topas 4.2 (Bruker AXS), a graphics based profile analysis program built around a non-linear least squares fitting system, to determine the amount of different phases present in a multicomponent sample. Whole pattern analyses are predicated by the fact that the X-ray diffraction pattern is a total sum of both instrumental and specimen factors. Unlike other peak intensity-based methods, the Rietveld method uses a least squares approach to refine a theoretical line profile until it matches the obtained experimental patterns.

Rietveld refinement is completed with a set of minerals specifically identified for the sample. Zero values indicate that the mineral was included in the refinement calculations, but the calculated concentration was less than 0.05wt%. Minerals not identified by the analyst are not included in refinement calculations for specific samples and are indicated with a dash.

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### Summary of Rietveld Quantitative Analysis X-Ray Diffraction Results

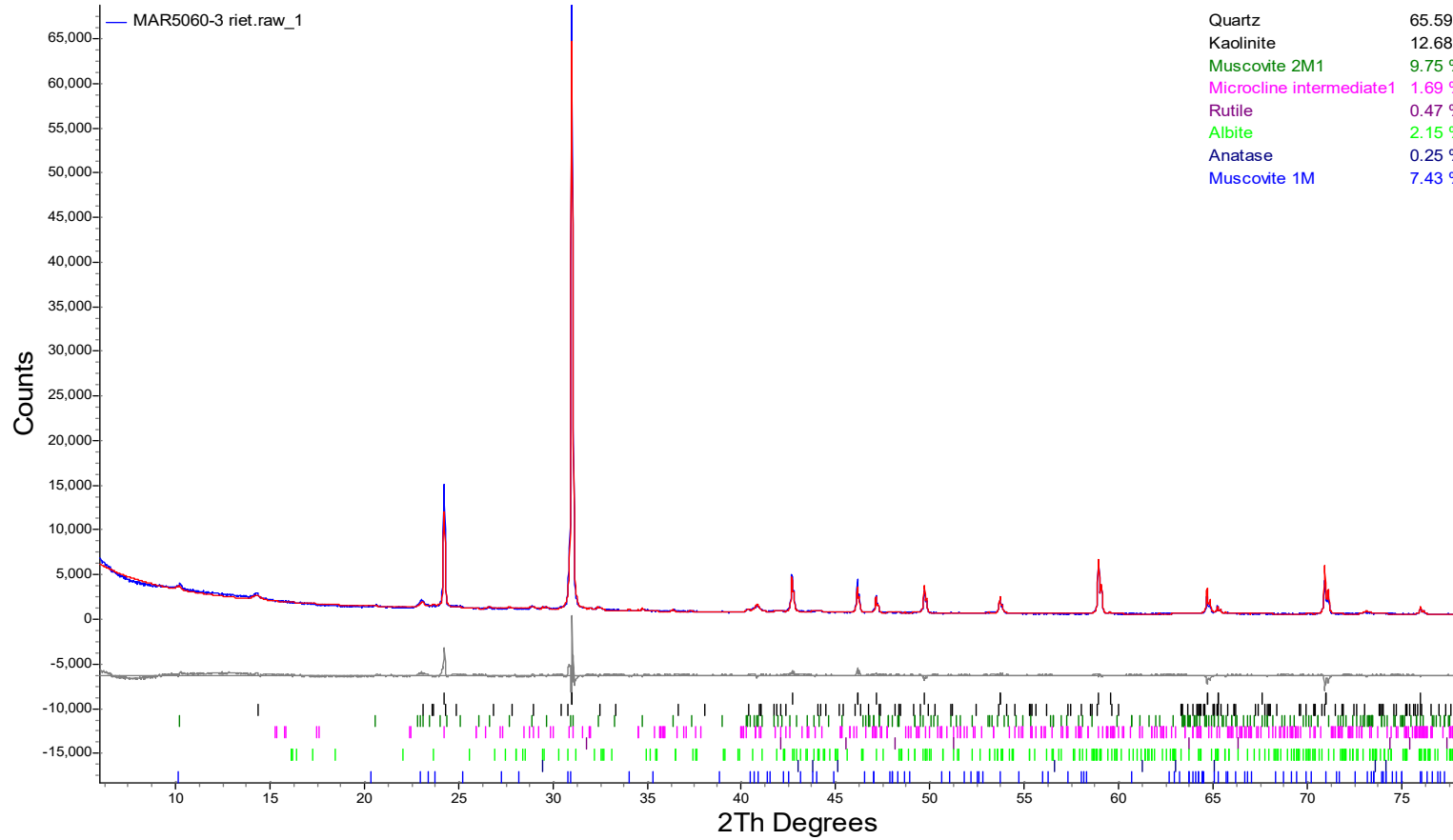
Mineral/Compound	S-7677_3_DPT08AP2 MAR5060-03
	(wt %)
Quartz	65.6
Kaolinite	12.7
Muscovite	17.2
Microcline	1.7
Rutile	0.5
Albite	2.1
Anatase	0.2
TOTAL	100

*The weight percent quantities indicated have been normalized to a sum of 100%.*

*The quantity of amorphous material has not been determined.*

Mineral/Compound	Formula
Quartz	SiO <sub>2</sub>
Kaolinite	Al <sub>2</sub> Si <sub>2</sub> O <sub>5</sub> (OH) <sub>4</sub>
Muscovite	KAl <sub>2</sub> (AlSi <sub>3</sub> O <sub>10</sub> )(OH) <sub>2</sub>
Microcline	KAlSi <sub>3</sub> O <sub>8</sub>
Rutile	TiO <sub>2</sub>
Albite	NaAlSi <sub>3</sub> O <sub>8</sub>
Anatase	TiO <sub>2</sub>

S-7677\_3\_DPT08AP2





## Quantitative X-Ray Diffraction by Rietveld Refinement

**Report Prepared for:** Environmental Services

**Project Number/ LIMS No.** Custom MIN/MI5060-MAR21

**Sample Receipt:** March 30, 2021

**Sample Analysis:** April 12, 2021

**Reporting Date:** May 5, 2021

---

**Instrument:** BRUKER AXS D8 Advance Diffractometer

**Test Conditions:** Co radiation, 35 kV, 40 mA  
Regular Scanning: Step: 0.02°, Step time: 1s, 2θ range: 3-80°

**Interpretations :** PDF2/PDF4 powder diffraction databases issued by the International Center for Diffraction Data (ICDD). DiffracPlus Eva and Topas software.

**Detection Limit :** 0.5-2%. Strongly dependent on crystallinity.

---

**Contents:**

- 1) Method Summary
- 2) Quantitative XRD Results
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Kim Gibbs, H.B.Sc., P.Geol.  
Senior Mineralogist

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Huyun Zhou, Ph.D., P.Geol.  
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## Method Summary

The Rietveld Method of Mineral Identification by XRD (ME-LR-MIN-MET-MN-D05) method used by SGS Minerals Services is accredited to the requirements of ISO/IEC 17025.

### ***Mineral Identification and Interpretation:***

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### ***Quantitative Rietveld Analysis:***

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Rietveld refinement is completed with a set of minerals specifically identified for the sample. Zero values indicate that the mineral was included in the refinement calculations, but the calculated concentration was less than 0.05wt%. Minerals not identified by the analyst are not included in refinement calculations for specific samples and are indicated with a dash.

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### Summary of Rietveld Quantitative Analysis X-Ray Diffraction Results

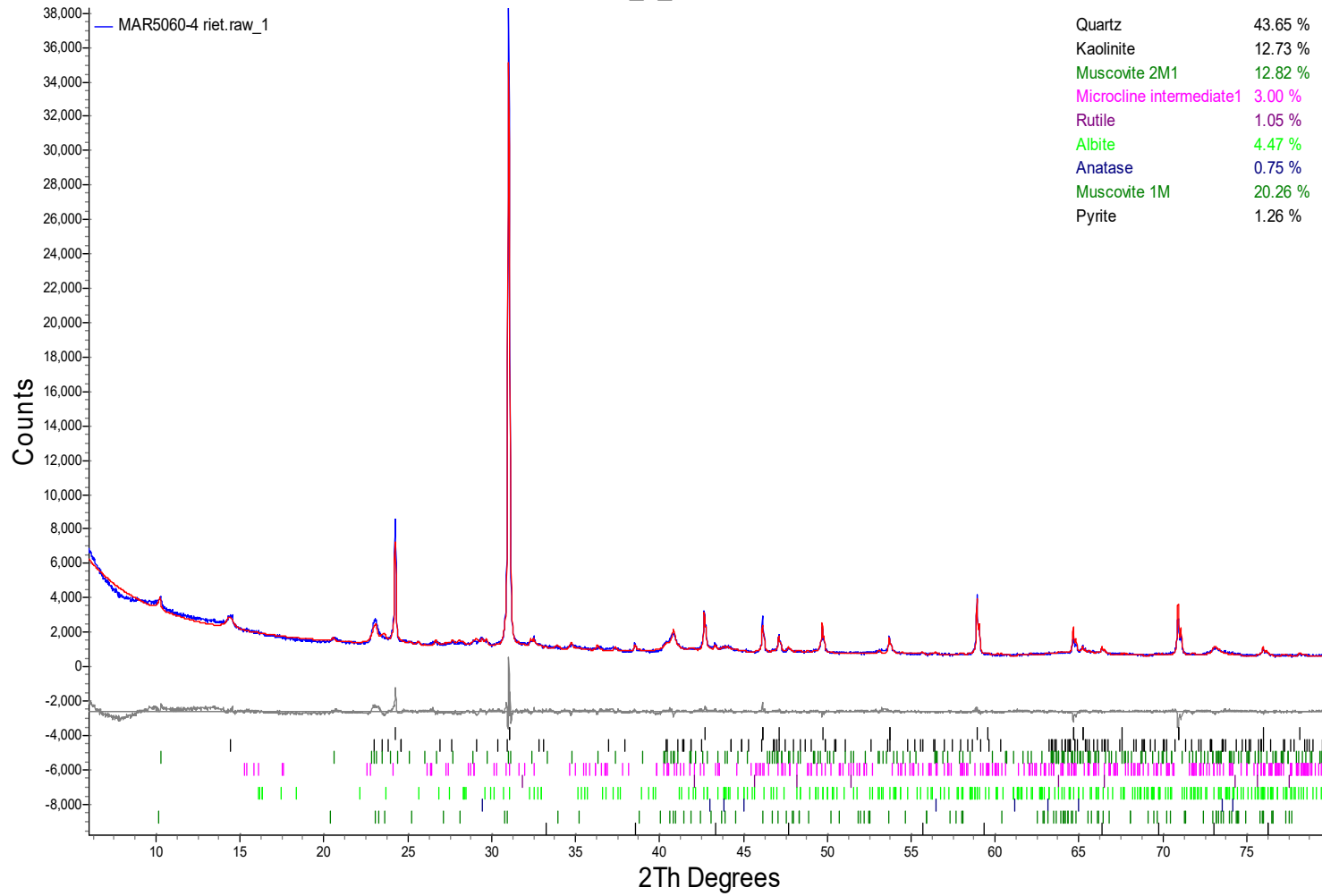
Mineral/Compound	S-7677_4_DPT07AP2
	MAR5060-04 (wt %)
Quartz	43.7
Kaolinite	12.7
Muscovite	33.1
Microcline	3.0
Rutile	1.1
Albite	4.5
Anatase	0.8
Pyrite	1.3
TOTAL	100

*The weight percent quantities indicated have been normalized to a sum of 100%.*

*The quantity of amorphous material has not been determined.*

Mineral/Compound	Formula
Quartz	SiO <sub>2</sub>
Kaolinite	Al <sub>2</sub> Si <sub>2</sub> O <sub>5</sub> (OH) <sub>4</sub>
Muscovite	KAl <sub>2</sub> (AlSi <sub>3</sub> O <sub>10</sub> )(OH) <sub>2</sub>
Microcline	KAlSi <sub>3</sub> O <sub>8</sub>
Rutile	TiO <sub>2</sub>
Albite	NaAlSi <sub>3</sub> O <sub>8</sub>
Anatase	TiO <sub>2</sub>
Pyrite	FeS <sub>2</sub>

S-7677\_4\_DPT07AP2





## Quantitative X-Ray Diffraction by Rietveld Refinement

**Report Prepared for:** Environmental Services

**Project Number/ LIMS No.** Custom MIN/MI5060-MAR21

**Sample Receipt:** March 30, 2021

**Sample Analysis:** April 12, 2021

**Reporting Date:** May 5, 2021

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**Instrument:** BRUKER AXS D8 Advance Diffractometer

**Test Conditions:** Co radiation, 35 kV, 40 mA  
Regular Scanning: Step: 0.02°, Step time: 1s, 2θ range: 3-80°

**Interpretations :** PDF2/PDF4 powder diffraction databases issued by the International Center for Diffraction Data (ICDD). DiffracPlus Eva and Topas software.

**Detection Limit :** 0.5-2%. Strongly dependent on crystallinity.

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- 1) Method Summary
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Kim Gibbs, H.B.Sc., P.Geol.  
Senior Mineralogist

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Huyun Zhou, Ph.D., P.Geol.  
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## Method Summary

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### Summary of Rietveld Quantitative Analysis X-Ray Diffraction Results

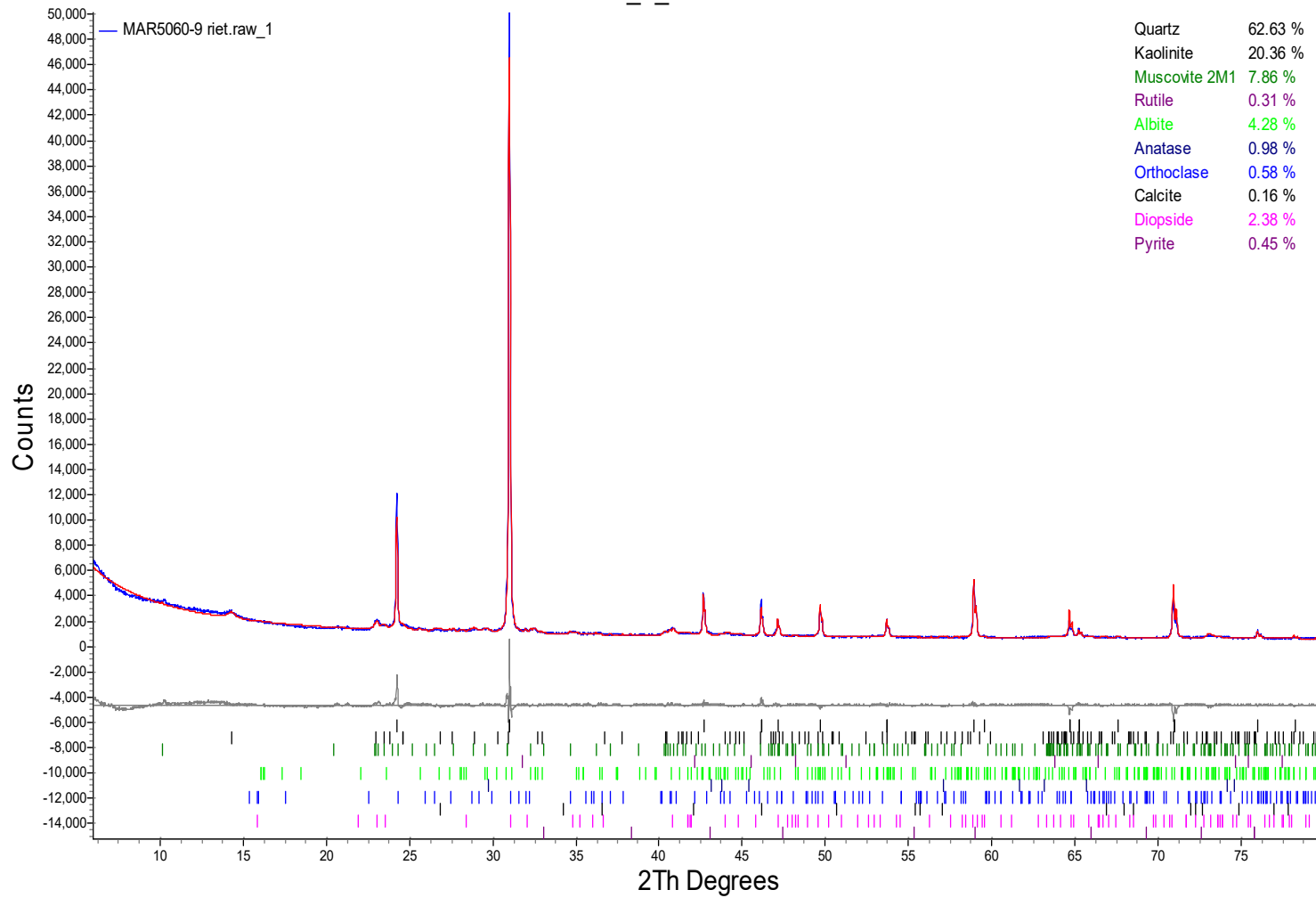
Mineral/Compound	S-7677_9_DPT09AP2 MAR5060-09
	(wt %)
Quartz	62.6
Kaolinite	20.4
Muscovite	7.9
Rutile	0.3
Albite	4.3
Anatase	1.0
Pyrite	0.4
Orthoclase	0.6
Calcite	0.2
Diopside	2.4
TOTAL	100

*The weight percent quantities indicated have been normalized to a sum of 100%.*

*The quantity of amorphous material has not been determined.*

Mineral/Compound	Formula
Quartz	SiO <sub>2</sub>
Kaolinite	Al <sub>2</sub> Si <sub>2</sub> O <sub>5</sub> (OH) <sub>4</sub>
Muscovite	KAl <sub>2</sub> (AlSi <sub>3</sub> O <sub>10</sub> )(OH) <sub>2</sub>
Rutile	TiO <sub>2</sub>
Albite	NaAlSi <sub>3</sub> O <sub>8</sub>
Anatase	TiO <sub>2</sub>
Pyrite	FeS <sub>2</sub>
Orthoclase	KAlSi <sub>3</sub> O <sub>8</sub>
Calcite	CaCO <sub>3</sub>
Diopside	CaMgSi <sub>2</sub> O <sub>6</sub>

S-7677\_9\_DPT09AP2





## Quantitative X-Ray Diffraction by Rietveld Refinement

**Report Prepared for:** Environmental Services

**Project Number/ LIMS No.** Custom MIN/MI5060-MAR21

**Sample Receipt:** March 30, 2021

**Sample Analysis:** April 12, 2021

**Reporting Date:** May 5, 2021

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**Instrument:** BRUKER AXS D8 Advance Diffractometer

**Test Conditions:** Co radiation, 35 kV, 40 mA  
Regular Scanning: Step: 0.02°, Step time: 1s, 2θ range: 3-80°

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Senior Mineralogist

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Interpretations do not reflect the presence of non-crystalline and/or amorphous compounds, except when internal standards have been added by request. Mineral proportions may be strongly influenced by crystallinity, crystal structure and preferred orientations. Mineral or compound identification and quantitative analysis results should be accompanied by supporting chemical assay data or other additional tests.

### ***Quantitative Rietveld Analysis:***

Quantitative Rietveld Analysis is performed by using Topas 4.2 (Bruker AXS), a graphics based profile analysis program built around a non-linear least squares fitting system, to determine the amount of different phases present in a multicomponent sample. Whole pattern analyses are predicated by the fact that the X-ray diffraction pattern is a total sum of both instrumental and specimen factors. Unlike other peak intensity-based methods, the Rietveld method uses a least squares approach to refine a theoretical line profile until it matches the obtained experimental patterns.

Rietveld refinement is completed with a set of minerals specifically identified for the sample. Zero values indicate that the mineral was included in the refinement calculations, but the calculated concentration was less than 0.05wt%. Minerals not identified by the analyst are not included in refinement calculations for specific samples and are indicated with a dash.

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**WARNING:** The sample(s) to which the findings recorded herein (the "Findings") relate was(were) drawn and / or provided by the Client or by a third party acting at the Client's direction. The Findings constitute no warranty of the sample's representativeness of any goods and strictly relate to the sample(s). The Company accepts no liability with regard to the origin or source from which the sample(s) is/are said to be extracted.

### Summary of Rietveld Quantitative Analysis X-Ray Diffraction Results

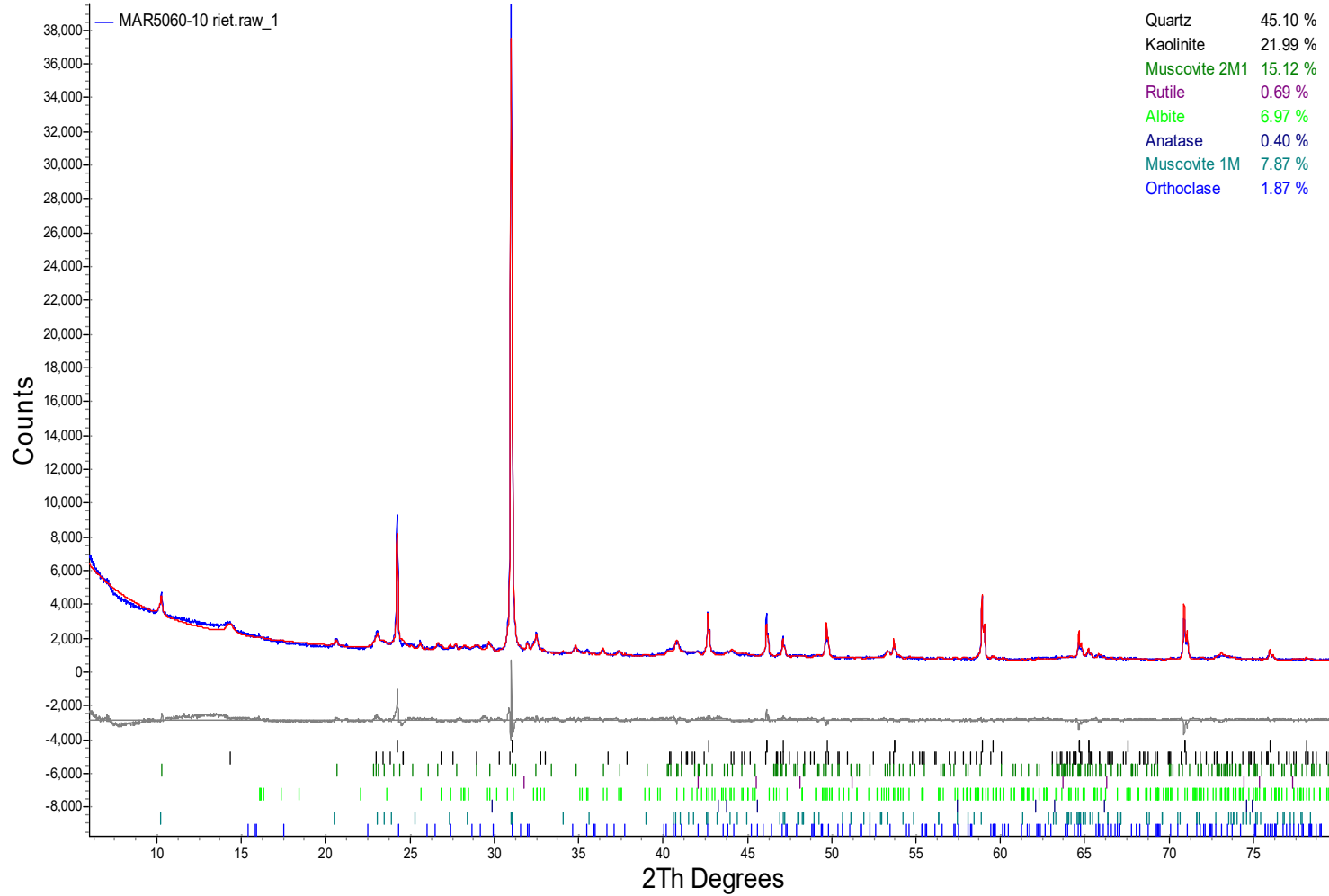
Mineral/Compound	S-7677_10_DPT10AP2 MAR5060-10
	(wt %)
Quartz	45.1
Kaolinite	22.0
Muscovite	23.0
Rutile	0.7
Albite	7.0
Anatase	0.4
Orthoclase	1.9
TOTAL	100

*The weight percent quantities indicated have been normalized to a sum of 100%.*

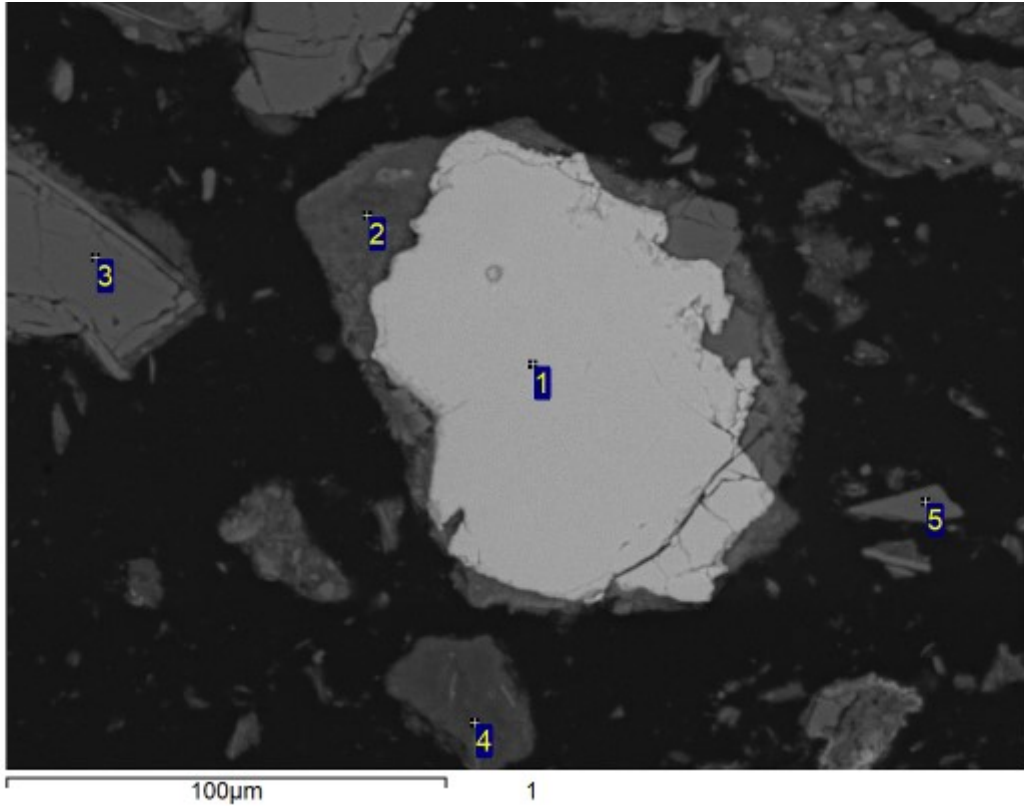
*The quantity of amorphous material has not been determined.*

Mineral/Compound	Formula
Quartz	SiO <sub>2</sub>
Kaolinite	Al <sub>2</sub> Si <sub>2</sub> O <sub>5</sub> (OH) <sub>4</sub>
Muscovite	KAl <sub>2</sub> (AlSi <sub>3</sub> O <sub>10</sub> )(OH) <sub>2</sub>
Rutile	TiO <sub>2</sub>
Albite	NaAlSi <sub>3</sub> O <sub>8</sub>
Anatase	TiO <sub>2</sub>
Orthoclase	KAlSi <sub>3</sub> O <sub>8</sub>

## S-7677\_10\_DPT10AP2



Sample Notes:  
S-7677\_2\_DPT11AP2



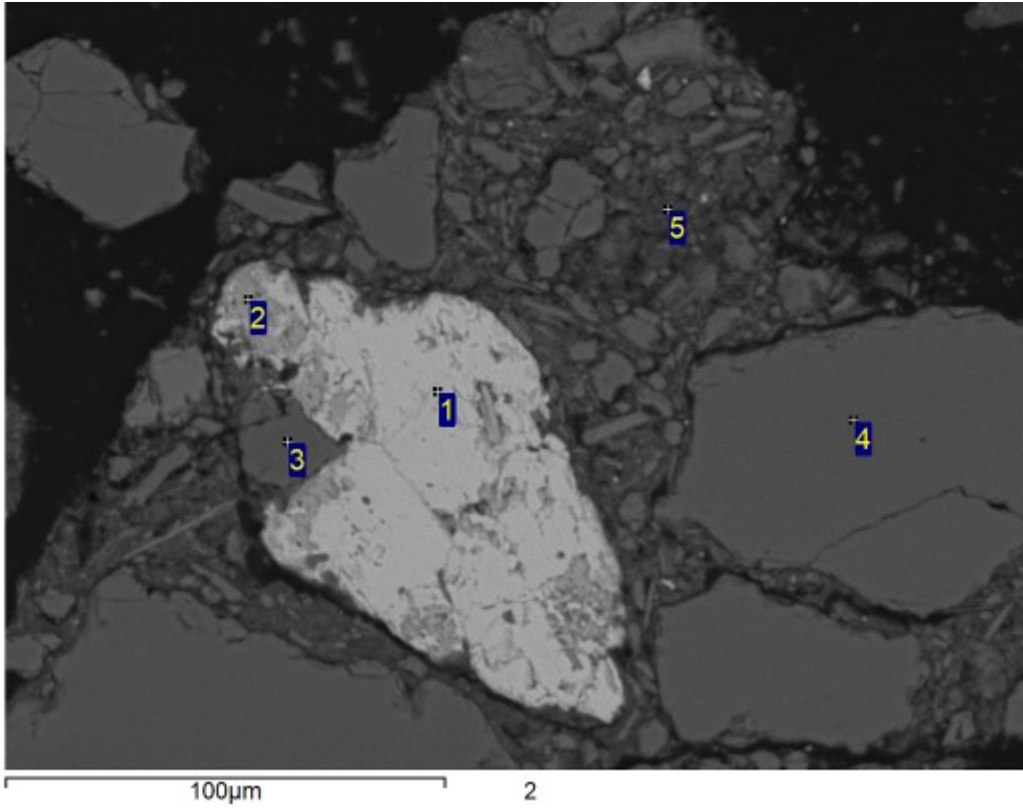
Processing option : All elements analysed (Normalised)

Spectrum	O	Mg	Al	Si	S	Cl	K	Ca	Ti	Mn	Fe	Total	Mineral ID
1	33.6								32.2	3.2	31.0	100.0	Ilmenite
2	47.1	0.5	14.5	19.5	0.6		1.2		0.5		16.0	100.0	Fe-Oxide/Oxyhydroxide/Kaolinite mixture
3	51.0			49.0								100.0	Quartz
4	46.2		17.5	24.5	1.5	0.4	1.7	0.5	0.4		7.3	100.0	Fe-Oxide/Oxyhydroxide/Kaolinite mixture
5	51.8			48.2								100.0	Quartz

All results in weight%



Sample Notes:  
S-7677\_2\_DPT11AP2

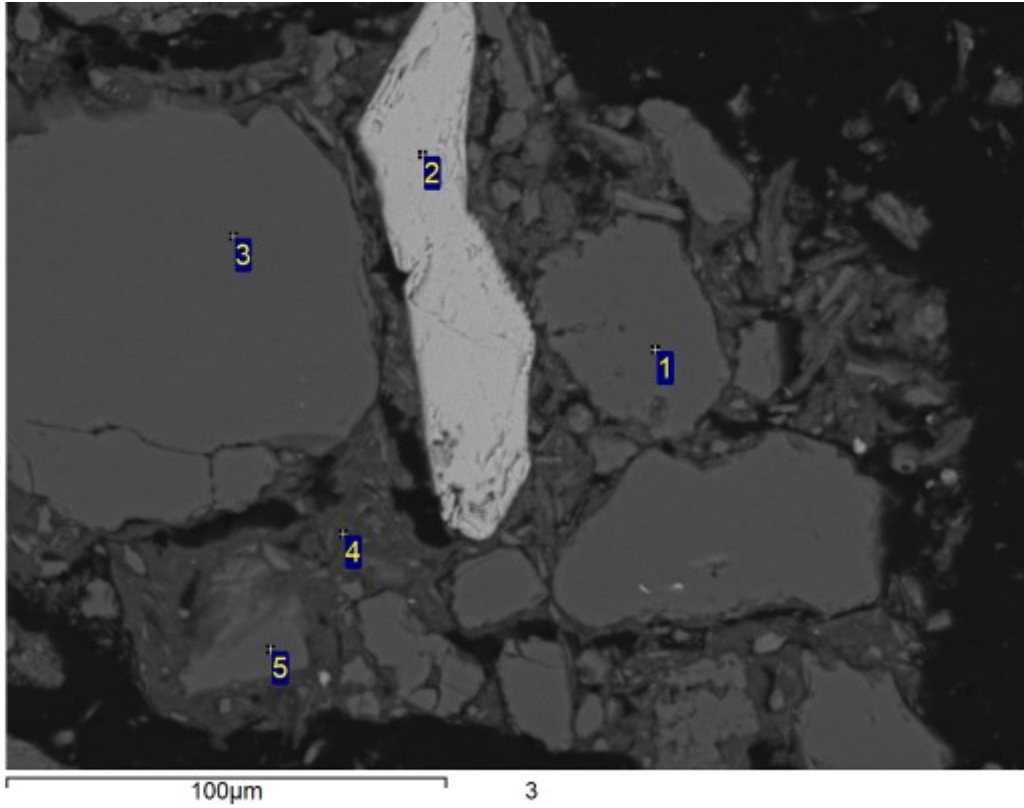


Processing option : All elements analysed (Normalised)

Spectrum	O	Al	Si	K	Ti	Mn	Fe	Total	Mineral ID
1	34.1				31.4	3.6	31.0	100.0	Ilmenite
2	40.7				58.7		0.6	100.0	Rutile
3	51.3		48.7					100.0	Quartz
4	51.3		48.7					100.0	Quartz
5	43.2	8.7	40.3	4.0	0.6		3.2	100.0	Muscovite

All results in weight%

Sample Notes:  
S-7677\_2\_DPT11AP2

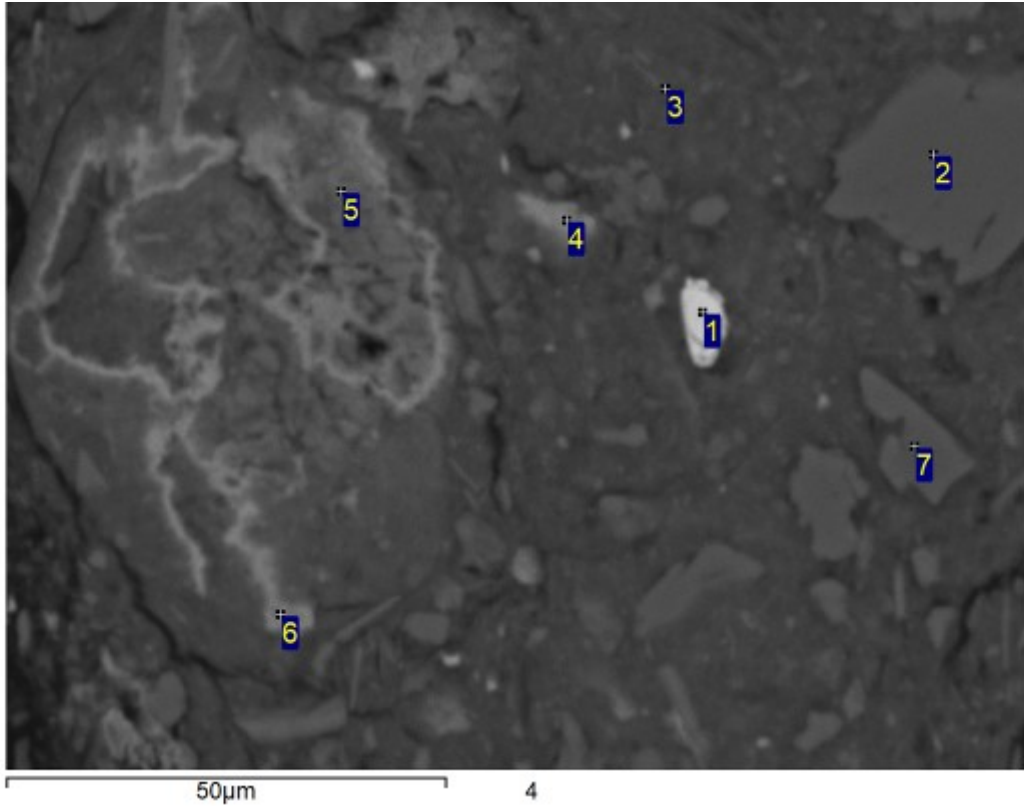


Processing option : All elements analysed (Normalised)

Spectrum	O	Mg	Al	Si	K	Ti	Mn	Fe	Total	Mineral ID
1	51.3			48.7					100.0	Quartz
2	32.8					30.0	1.6	35.6	100.0	Ilmenite
3	51.0			49.0					100.0	Quartz
4	44.6	0.6	19.3	28.4	2.1	1.5		3.4	100.0	Muscovite
5	51.6			48.4					100.0	Quartz

All results in weight%

Sample Notes:  
S-7677\_2\_DPT11AP2

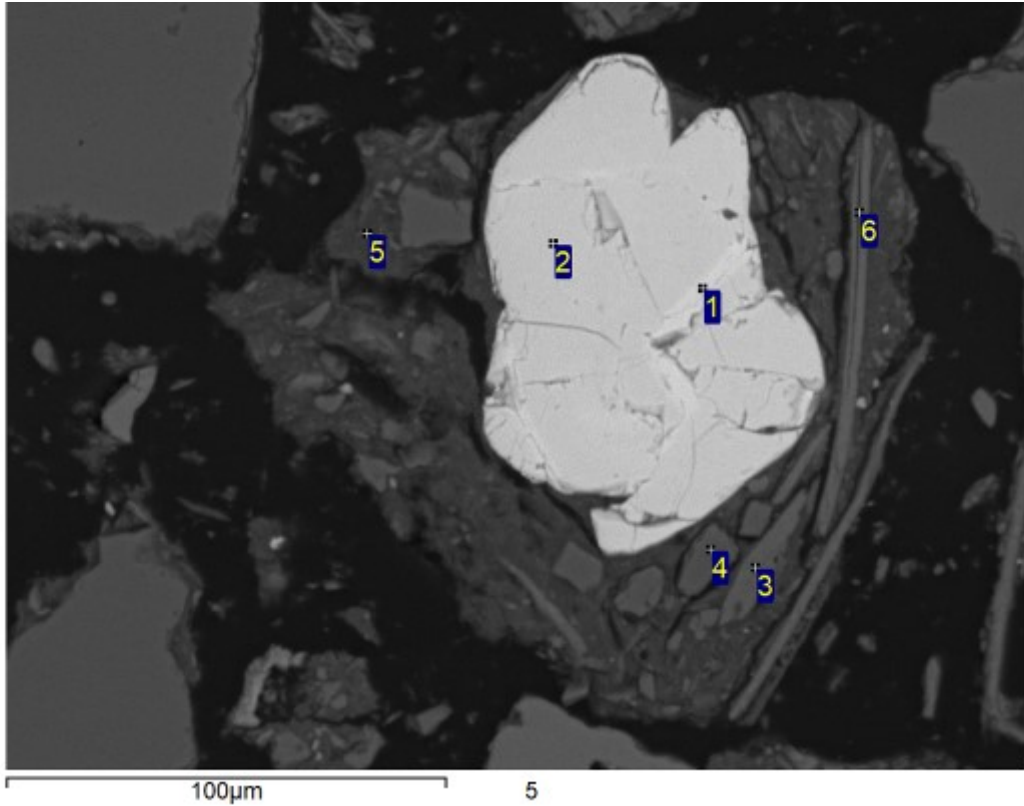


Processing option : All elements analysed (Normalised)

Spectrum	O	Mg	Al	Si	S	K	Fe	Zr	Total	Mineral ID
1	33.7			15.9			0.6	49.7	100.0	Zircon
2	51.2			48.8					100.0	Quartz
3	39.0	0.6	16.9	22.5		2.3	18.8		100.0	Fe-Oxide/Oxyhydroxide/Kaolinite mixture
4	41.8		8.2	11.1	0.4	0.5	38.0		100.0	Fe-Oxide/Oxyhydroxide/Kaolinite mixture
5	37.6		12.8	11.2	0.5	1.0	36.9		100.0	Fe-Oxide/Oxyhydroxide/Kaolinite mixture
6	40.9		10.0	8.8	0.6	0.6	39.1		100.0	Fe-Oxide/Oxyhydroxide/Kaolinite mixture
7	53.2			46.8					100.0	Quartz

All results in weight%

Sample Notes:  
S-7677\_2\_DPT11AP2

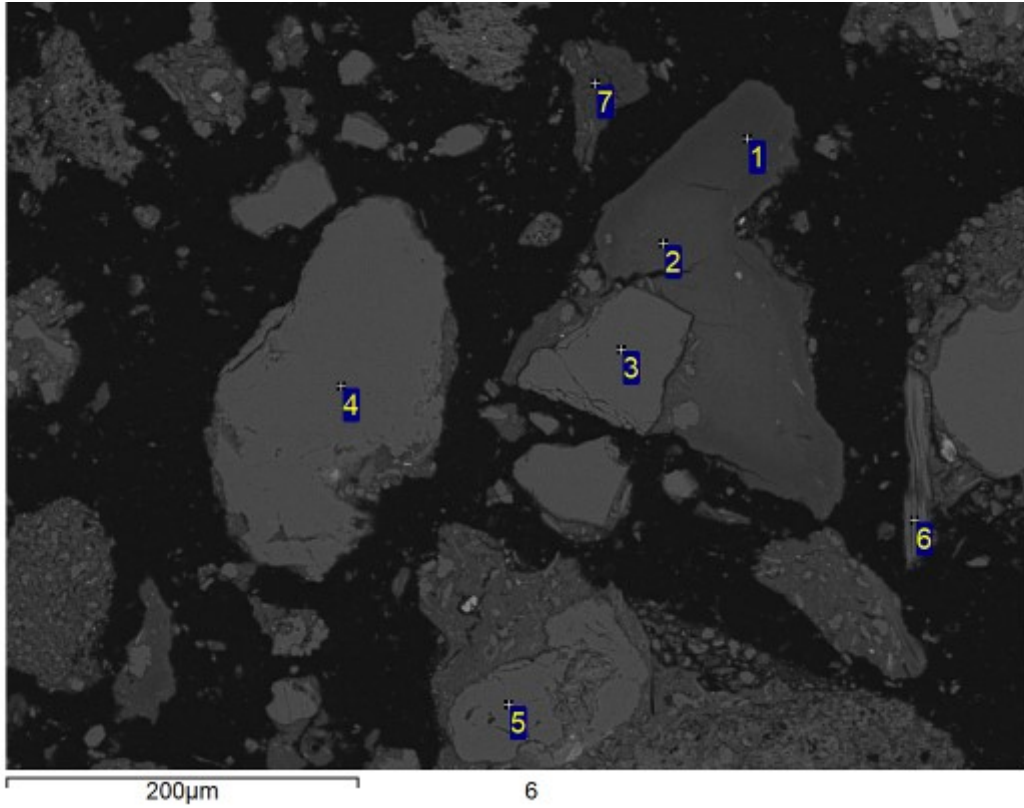


Processing option : All elements analysed (Normalised)

Spectrum	O	Na	Mg	Al	Si	S	K	Ti	Fe	Zr	Hf	Total	Mineral ID
1	32.6				16.1					48.9	2.4	100.0	Zircon
2	33.3				16.0					50.8		100.0	Zircon
3	48.7	0.6	0.8	17.5	23.1		7.8	0.6	0.9			100.0	Mica
4	52.8				47.2							100.0	Quartz
5	45.0			16.9	31.9	0.7	1.8	0.6	3.1			100.0	Kaolinite/Mica
6	47.7	0.4	0.5	17.9	23.7		8.3	0.3	1.1			100.0	Mica

All results in weight%

Sample Notes:  
S-7677\_2\_DPT11AP2

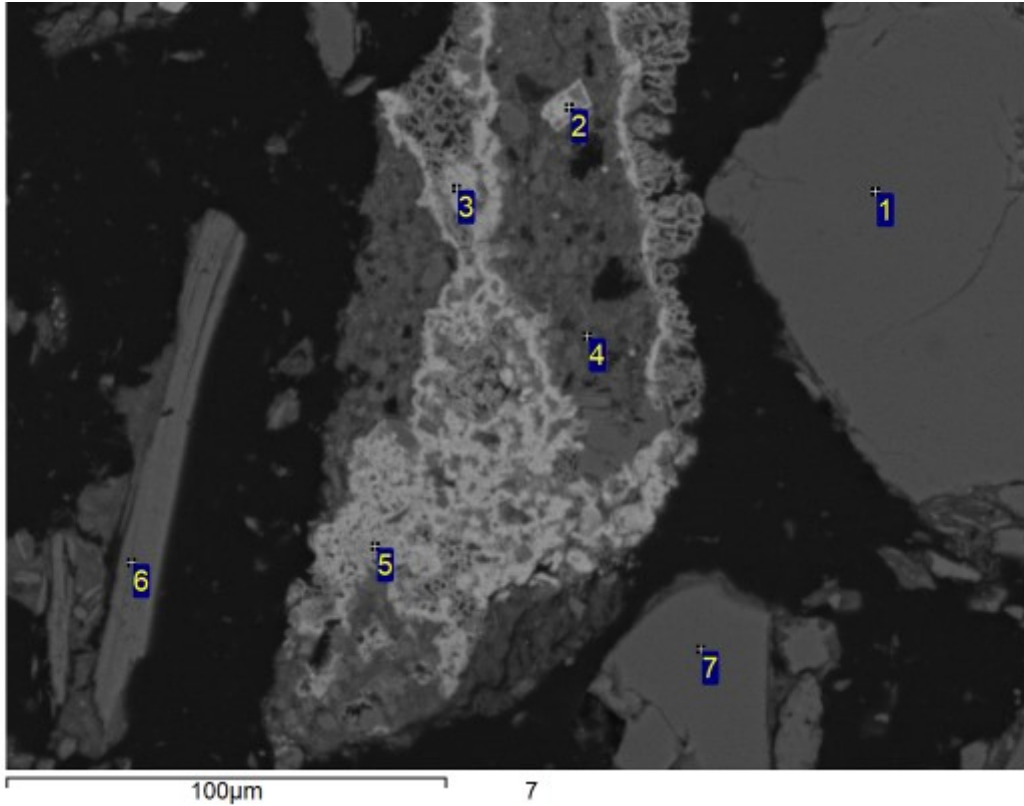


Processing option : All elements analysed (Normalised)

Spectrum	O	Mg	Al	Si	S	Cl	K	Ti	Fe	Total	Mineral ID
1	45.1	0.7	18.1	23.2	2.3		1.3	0.4	8.9	100.0	Fe-Oxide/Oxyhydroxide/Kaolinite mixture
2	44.2	0.7	18.6	24.0			1.4	0.7	10.4	100.0	Fe-Oxide/Oxyhydroxide/Kaolinite mixture
3	51.3			48.7						100.0	Quartz
4	51.1			48.9						100.0	Quartz
5	49.9			49.4					0.7	100.0	Quartz
6	45.9	0.6	17.7	23.1		0.5	9.0	0.6	2.6	100.0	Mica
7	40.8		10.5	44.9	1.1		1.5		1.2	100.0	Kaolinite/Mica

All results in weight%

Sample Notes:  
S-7677\_2\_DPT11AP2

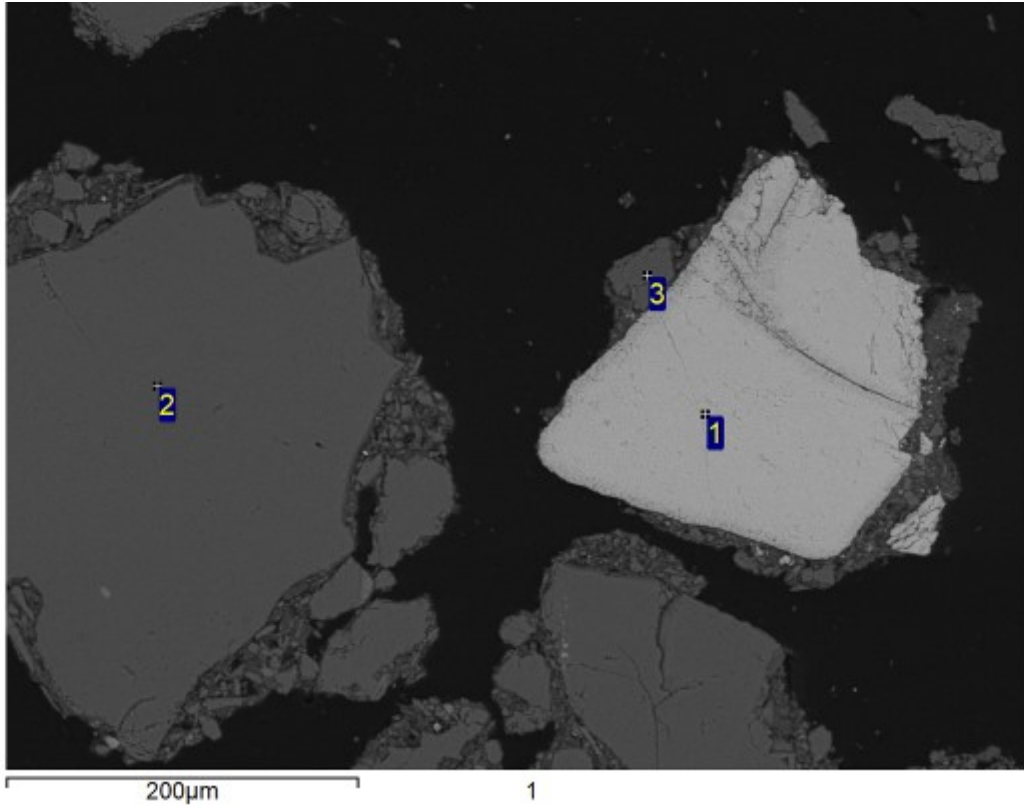


Processing option : All elements analysed (Normalised)

Spectrum	O	Na	Mg	Al	Si	P	K	Ti	Fe	Total	Mineral ID
1	51.3				48.7					100.0	Quartz
2	36.1			1.1	2.7				60.0	100.0	Fe-Oxide/Oxyhydroxide
3	39.2			1.5	2.7	0.4			56.2	100.0	Fe-Oxide/Oxyhydroxide
4	53.1		1.1	4.5	38.1		1.2		2.1	100.0	Quartz
5	35.4			2.6	3.5	0.8			57.8	100.0	Fe-Oxide/Oxyhydroxide
6	48.7	1.4		18.6	22.6		7.3	0.4	1.0	100.0	K-Feldspar
7	51.4				48.6					100.0	Quartz

All results in weight%

Sample Notes:  
S-7677\_3\_DPT08AP2

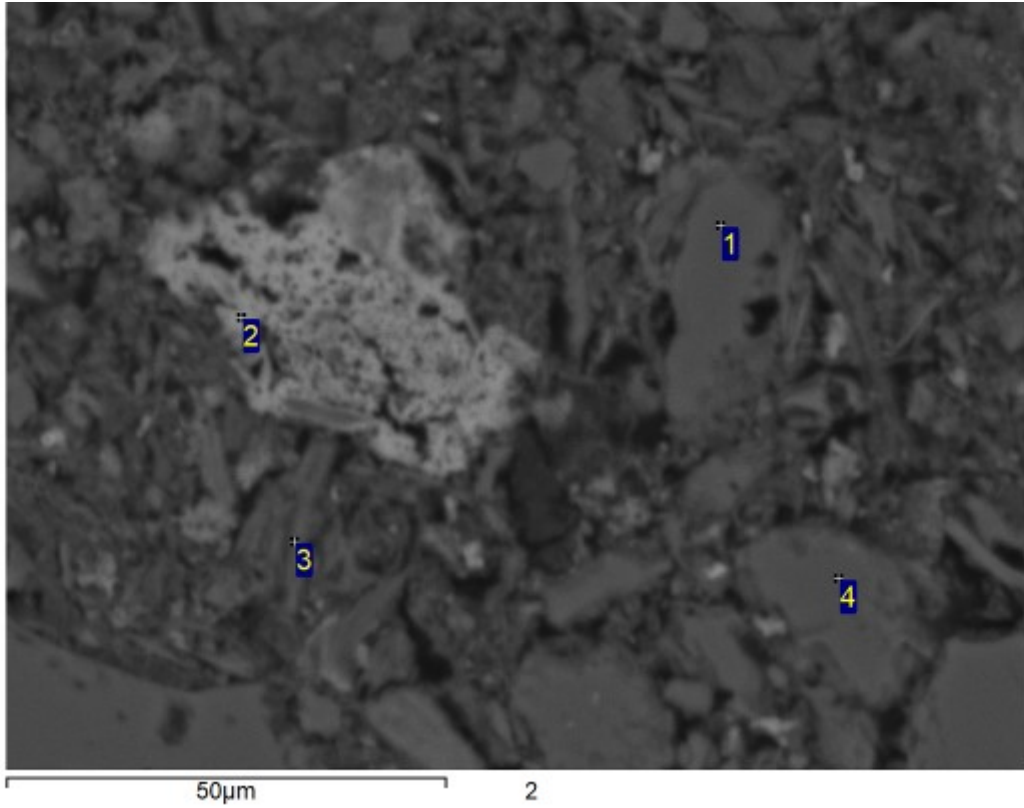


Processing option : All elements analysed (Normalised)

Spectrum	O	Si	Ti	Mn	Fe	Total	Mineral ID
1	33.0		31.2	0.6	35.2	100.0	Ilmenite
2	51.2	48.8				100.0	Quartz
3	51.0	49.0				100.0	Quartz

All results in weight%

Sample Notes:  
S-7677\_3\_DPT08AP2



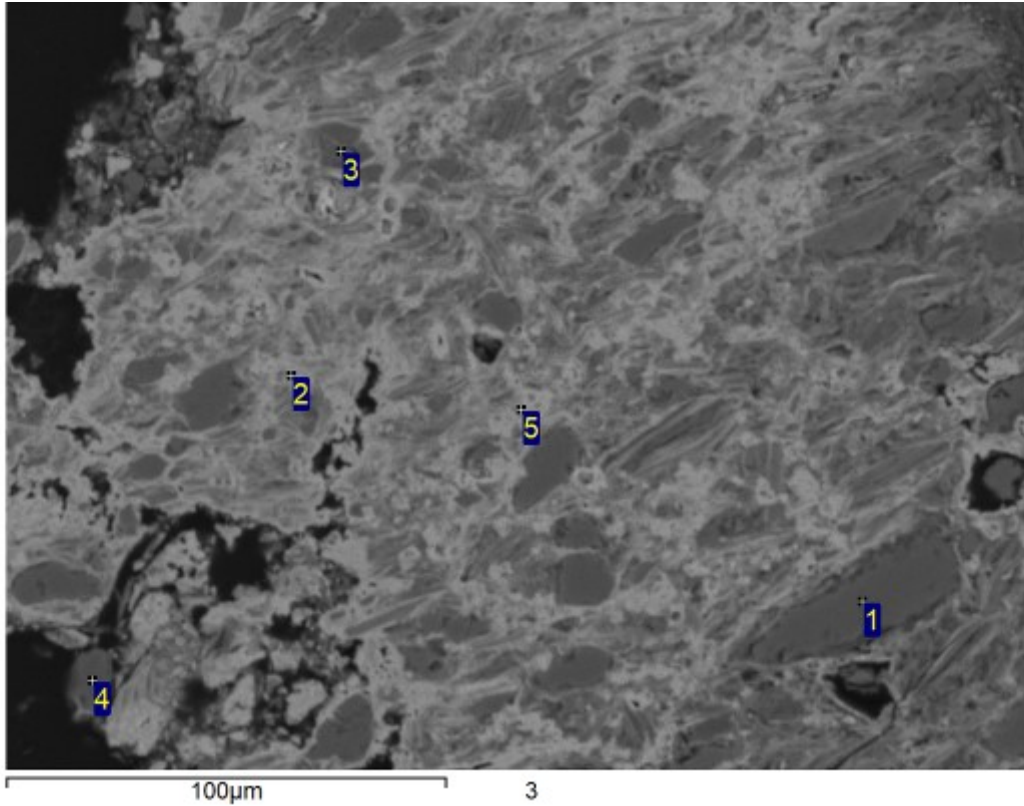
Processing option : All elements analysed (Normalised)

Spectrum	O	Na	Mg	Al	Si	P	K	Fe	Total	Mineral ID
1	52.3				47.7				100.0	Quartz
2	41.8			4.5	3.3	0.7		49.7	100.0	Fe-Oxide/Oxyhydroxide
3	45.9	0.5	0.8	16.7	26.8		5.5	3.8	100.0	Mica
4	52.1				47.9				100.0	Quartz

All results in weight%



Sample Notes:  
S-7677\_3\_DPT08AP2

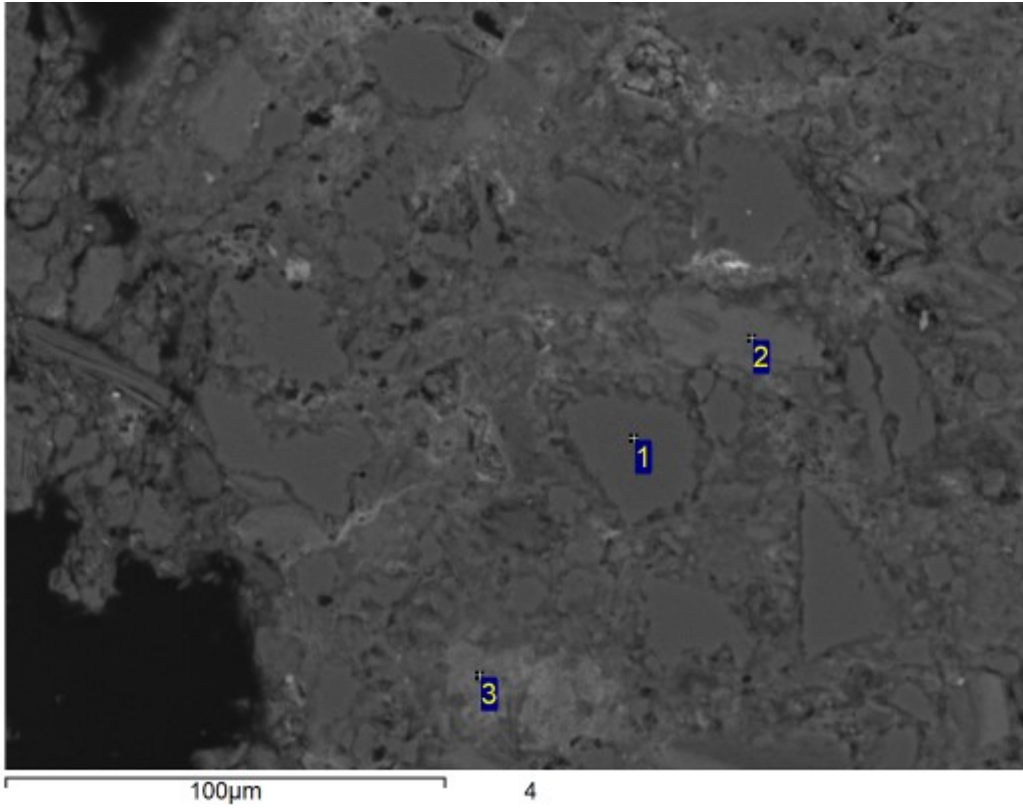


Processing option : All elements analysed (Normalised)

Spectrum	O	Al	Si	P	K	Fe	Total	Mineral ID
1	51.2		48.3			0.5	100.0	Quartz
2	43.4	3.6	4.9	0.4	0.5	47.2	100.0	Fe-Oxide/Oxyhydroxide
3	53.0	0.5	44.8			1.7	100.0	Quartz
4	50.4		48.9			0.7	100.0	Quartz
5	43.6	6.0	8.3		1.4	40.7	100.0	Fe-Oxide/Oxyhydroxide

All results in weight%

Sample Notes:  
S-7677\_3\_DPT08AP2

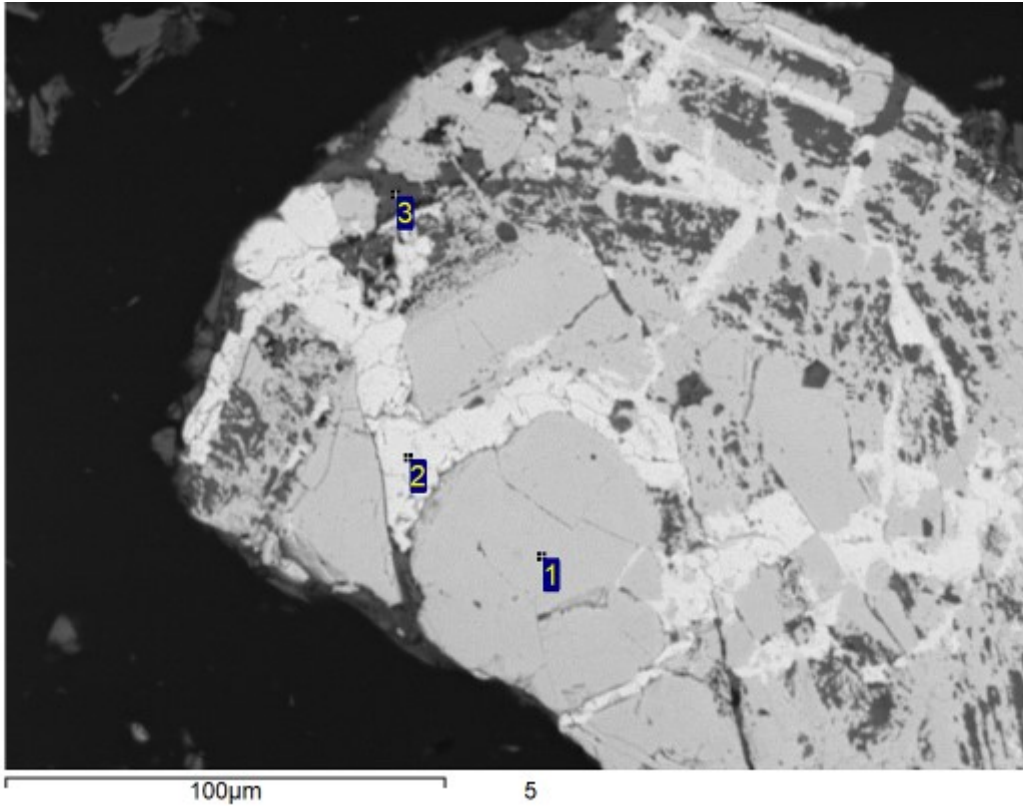


Processing option : All elements analysed (Normalised)

Spectrum	O	Mg	Al	Si	K	Ca	Fe	Total	Mineral ID
1	51.3			48.7				100.0	Quartz
2	47.6	1.1	15.2	23.3	9.0		3.8	100.0	K-feldspar
3	41.6	1.5	11.4	16.4	0.6	0.7	27.9	100.0	Fe-Oxide/Oxyhydroxide/Kaolinite mixture

All results in weight%

Sample Notes:  
S-7677\_3\_DPT08AP2

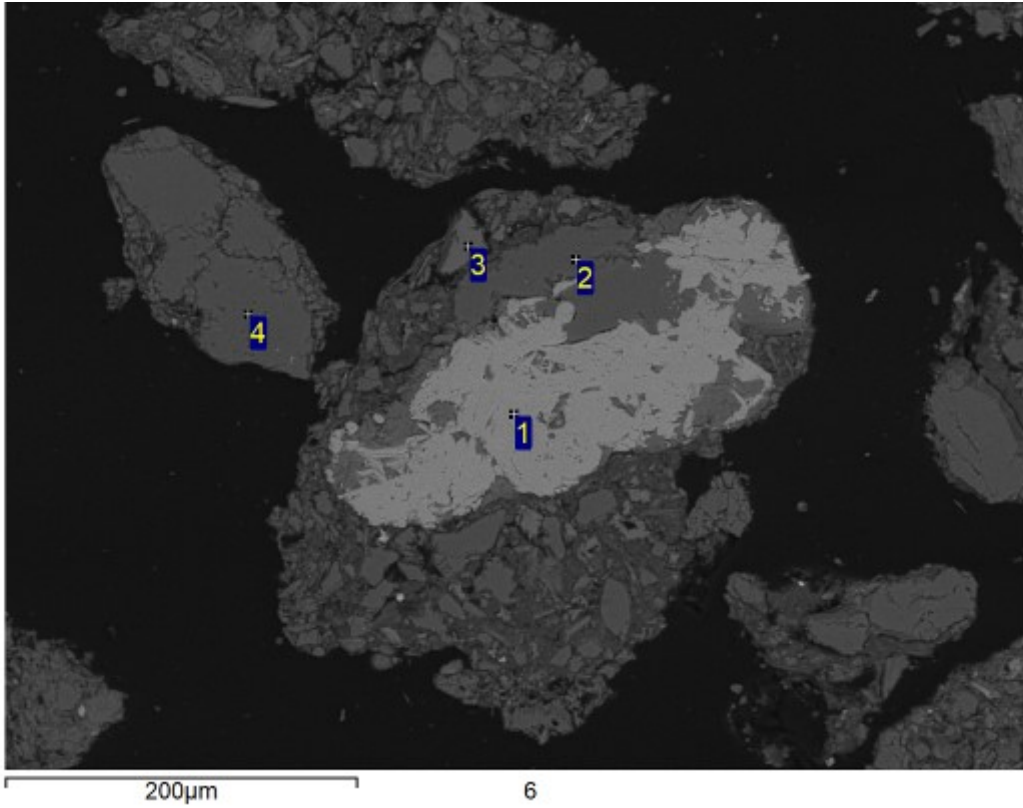


Processing option : All elements analysed (Normalised)

Spectrum	O	Si	P	Y	Zr	Yb	Ta	Total	Mineral ID
1	33.1	15.8			51.1			100.0	Zircon
2	40.1		18.0	35.6		3.4	2.9	100.0	Xenotime
3	50.6	46.7			2.7			100.0	Quartz

All results in weight%

Sample Notes:  
S-7677\_3\_DPT08AP2

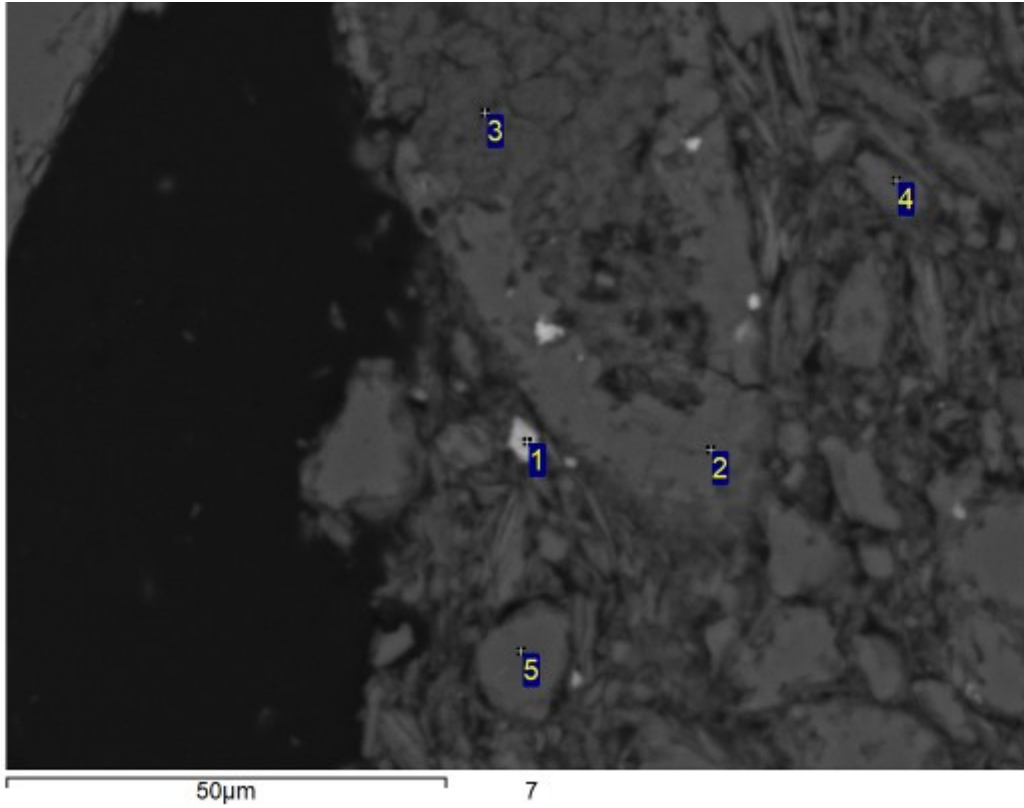


Processing option : All elements analysed (Normalised)

Spectrum	O	Al	Si	K	Ti	Fe	Total	Mineral ID
1	41.0				59.0		100.0	Rutile
2	51.2		48.8				100.0	Quartz
3	44.5	9.5	32.0	14.0			100.0	K-Feldspar
4	51.2	3.6	42.7	1.7	0.3	0.4	100.0	Quartz

All results in weight%

Sample Notes:  
S-7677\_3\_DPT08AP2

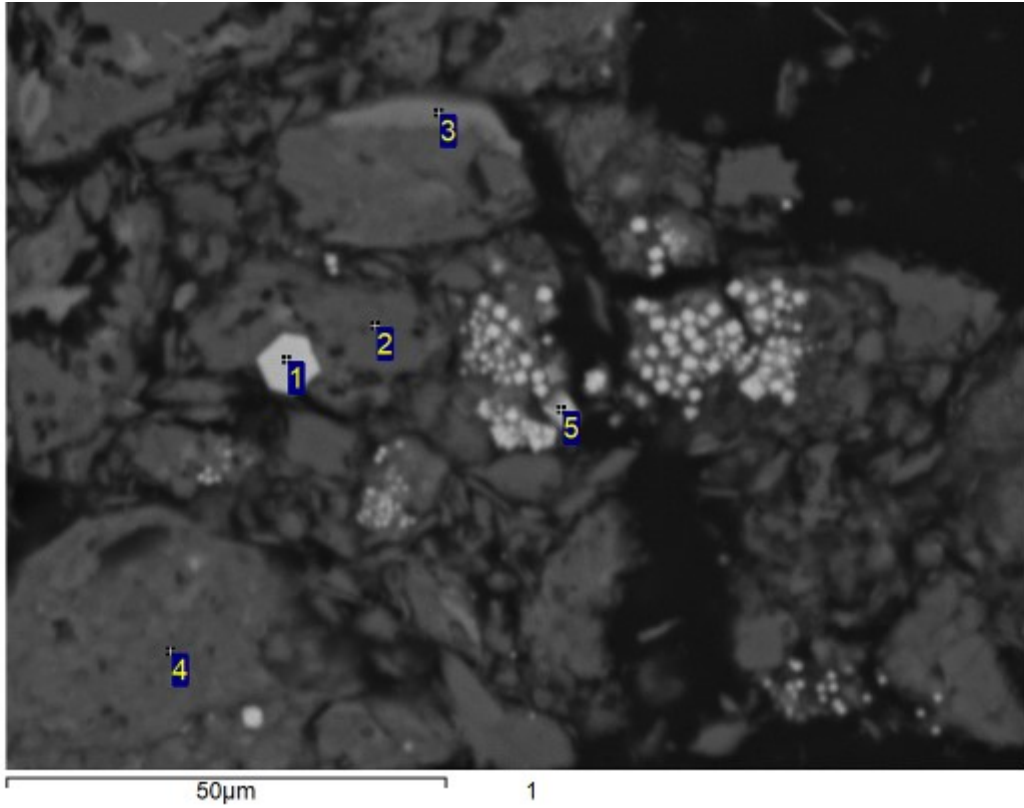


Processing option : All elements analysed (Normalised)

Spectrum	O	Al	Si	S	K	Fe	As	Total	Mineral ID
1	10.2	1.5	3.1	47.3		36.3	1.6	100.0	Pyrite
2	51.0	0.3	48.7					100.0	Quartz
3	51.1	23.1	25.8					100.0	Kaolinite
4	49.0	1.4	49.4		0.2			100.0	Quartz
5	52.2		47.8					100.0	Quartz

All results in weight%

Sample Notes:  
S-7677\_4\_DPT07AP2

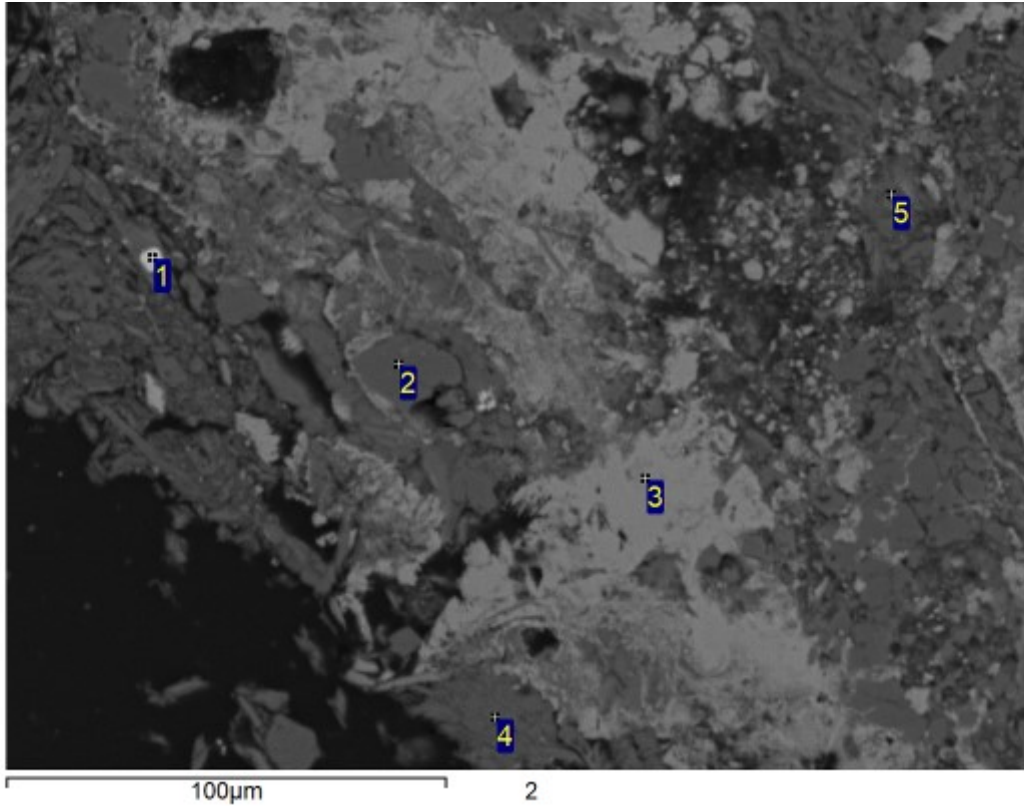


Processing option : All elements analysed (Normalised)

Spectrum	O	Na	Mg	Al	Si	S	K	Ti	Fe	Total	Mineral ID
1						55.5			44.5	100.0	Pyrite
2	51.9			3.3	43.4		0.8		0.6	100.0	Quartz
3	44.7		3.8	13.4	13.9		0.6		23.6	100.0	Chlorite?
4	47.3	0.4	1.1	13.9	30.2		5.0	0.3	1.9	100.0	K-Feldspar
5	8.2			1.0	1.6	49.2			39.9	100.0	Pyrite

All results in weight%

Sample Notes:  
S-7677\_4\_DPT07AP2



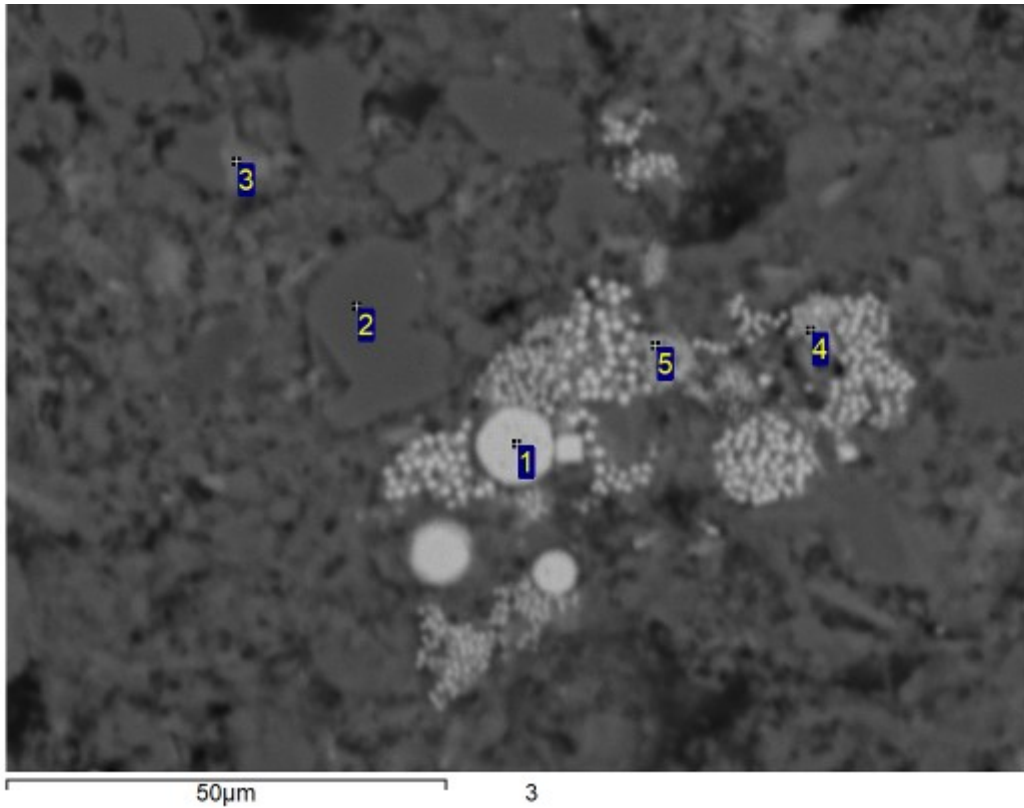
Processing option : All elements analysed (Normalised)

Spectrum	O	Na	Mg	Al	Si	S	K	Ca	Mn	Fe	Total	Mineral ID
1						54.9				45.1	100.0	Pyrite
2	47.9	8.1		9.9	33.1			0.4		0.5	100.0	Albite
3	42.9							5.0	2.7	49.5	100.0	Siderite?
4	46.3	0.4	1.3	18.0	26.3		4.1			3.6	100.0	Altered K-Feldspar
5	51.4	0.3	0.7	10.3	32.4		2.9			2.1	100.0	Altered K-Feldspar

All results in weight%



Sample Notes:  
S-7677\_4\_DPT07AP2



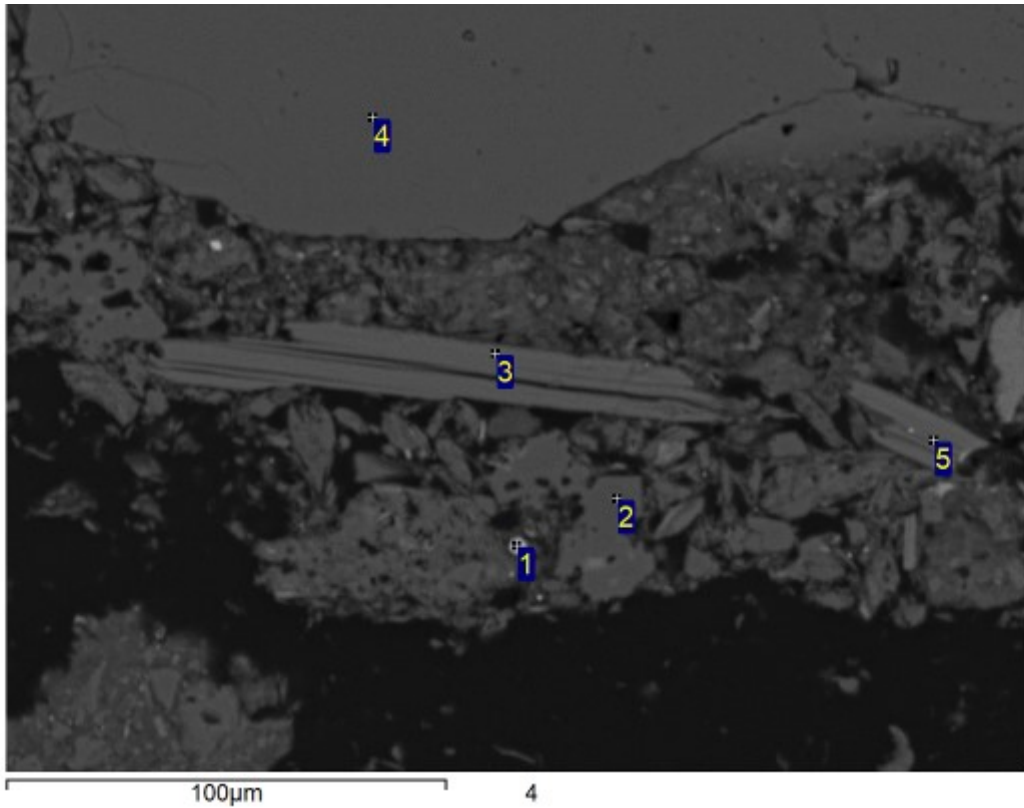
Processing option : All elements analysed (Normalised)

Spectrum	O	Mg	Al	Si	S	K	Ti	Fe	Total	Mineral ID
1					54.8			45.2	100.0	Pyrite
2	51.2			48.8					100.0	Quartz
3	43.5	2.7	10.0	21.7				22.2	100.0	Fe-Oxide/Oxyhydroxide/Kaolinite mixture
4	29.7	1.3	4.4	16.5	22.5	0.4	0.5	24.7	100.0	Pyrite/Kaolinite mixture
5	28.7	1.5	5.4	7.2	27.1			30.1	100.0	Pyrite/Kaolinite mixture

All results in weight%



Sample Notes:  
S-7677\_4\_DPT07AP2

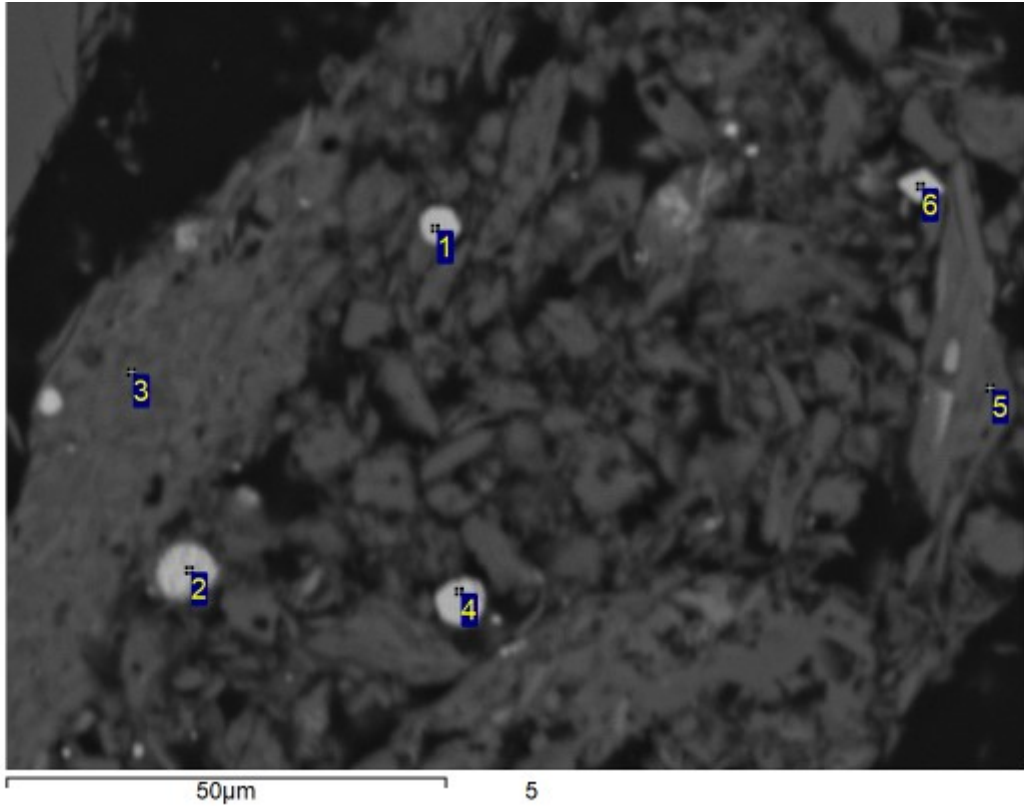


Processing option : All elements analysed (Normalised)

Spectrum	O	Na	Mg	Al	Si	S	K	Ca	Ti	Fe	Total	Mineral ID
1					0.9	56.2				43.0	100.0	Pyrite
2	54.5				34.0			11.1		0.4	100.0	Quartz
3	48.4	0.6		18.8	22.8		8.3		0.4	0.8	100.0	Mica
4	50.1				49.9						100.0	Quartz
5	48.1	0.4	0.8	16.6	22.7		8.2		0.5	2.6	100.0	Mica

All results in weight%

Sample Notes:  
S-7677\_4\_DPT07AP2

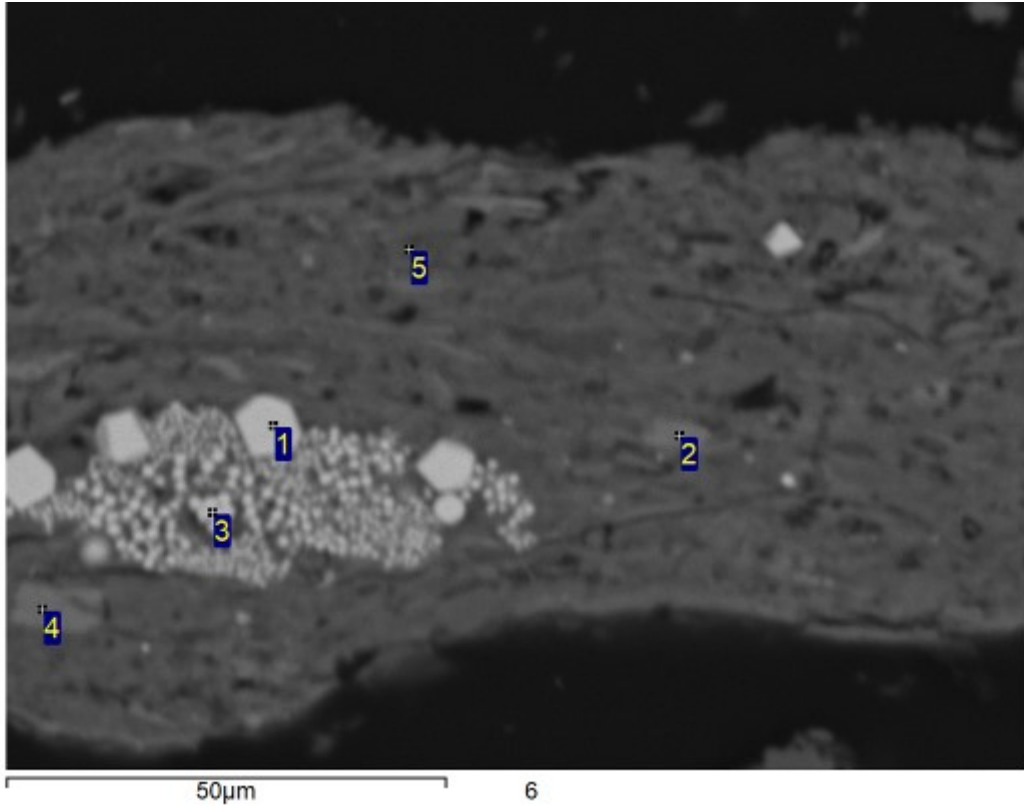


Processing option : All elements analysed (Normalised)

Spectrum	O	Mg	Al	Si	S	K	Ca	Ti	Mn	Fe	Total	Mineral ID
1				0.7	54.8					44.4	100.0	Pyrite
2			0.5	1.1	54.1					44.3	100.0	Pyrite
3	48.7	1.1	14.3	27.8		5.1		0.4		2.6	100.0	Mica
4			0.8	1.5	52.9					44.7	100.0	Pyrite
5	47.8	1.0	11.8	33.7		3.3	0.5			2.0	100.0	Mica
6	22.7		6.6	11.9	31.0	2.0			0.4	25.3	100.0	Pyrite/K-Feldspar Mixture

All results in weight%

Sample Notes:  
S-7677\_4\_DPT07AP2

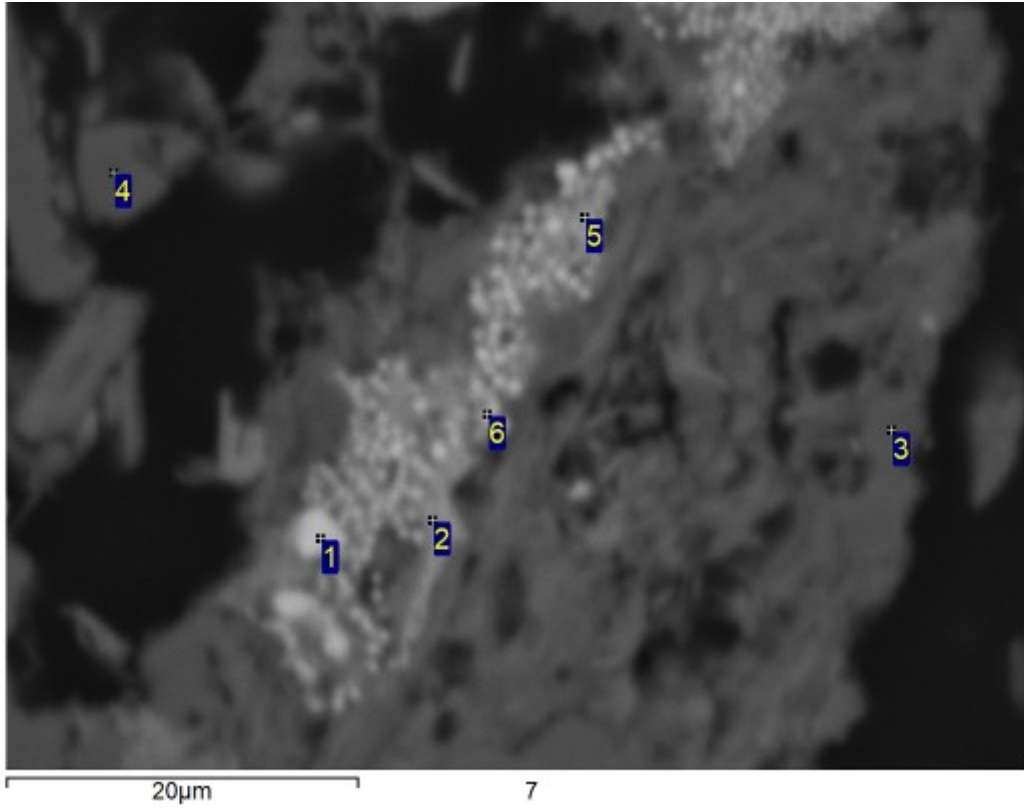


Processing option : All elements analysed (Normalised)

Spectrum	O	Mg	Al	Si	S	K	Ti	Mn	Fe	Total	Mineral ID
1					54.9				45.1	100.0	Pyrite
2	44.3	5.3	12.6	14.4		0.5		0.4	22.6	100.0	Chlorite
3	6.2		1.7	2.3	49.3				40.5	100.0	Pyrite
4	44.3	6.3	11.3	13.6					24.5	100.0	Chlorite
5	44.0	1.1	12.3	32.2		4.2	1.0		5.3	100.0	Mica

All results in weight%

Sample Notes:  
S-7677\_4\_DPT07AP2

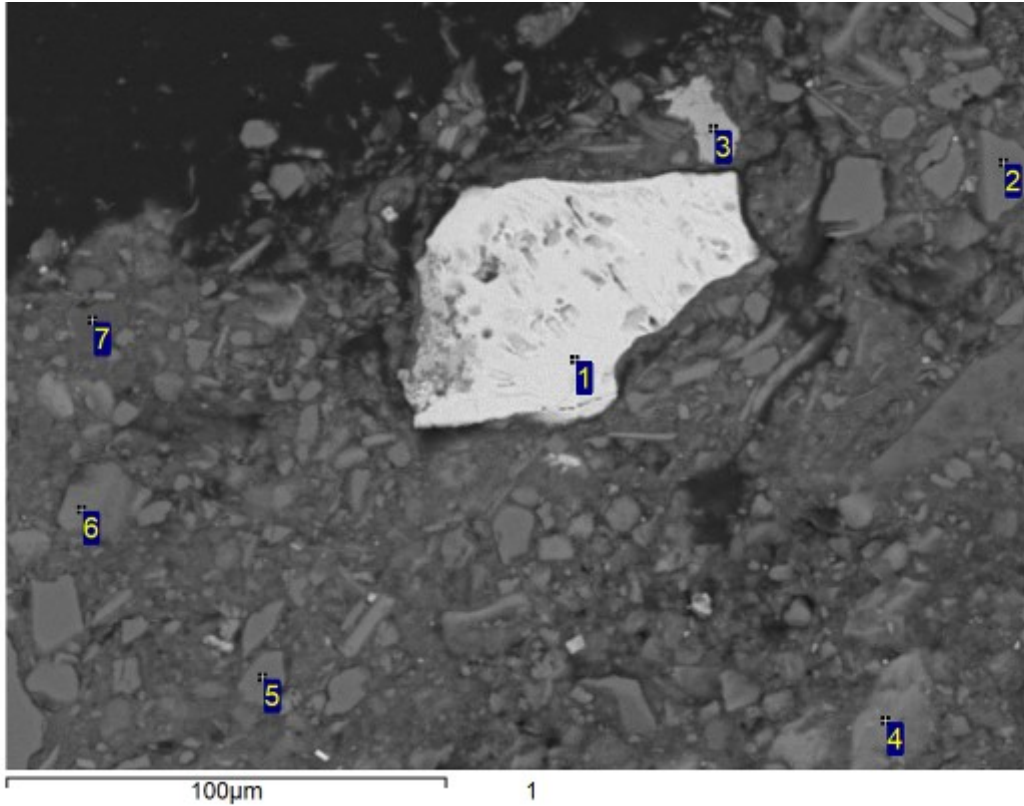


Processing option : All elements analysed (Normalised)

Spectrum	O	Na	Mg	Al	Si	S	K	Fe	Total	Mineral ID
1				0.5	1.0	54.6		43.9	100.0	Pyrite
2	18.9		0.7	5.0	8.7	29.5	0.9	36.4	100.0	Pyrite
3	52.2			2.7	44.0		0.7	0.4	100.0	Quartz
4	47.1	8.1		9.9	34.9				100.0	Kaolinite
5	24.3		1.2	4.0	5.9	30.7	0.3	33.5	100.0	Pyrite/Kaolinite mixture
6	24.9			4.5	7.7	32.3	0.5	30.1	100.0	Pyrite/Kaolinite mixture

All results in weight%

Sample Notes:  
S-7677\_9\_DPT09AP2

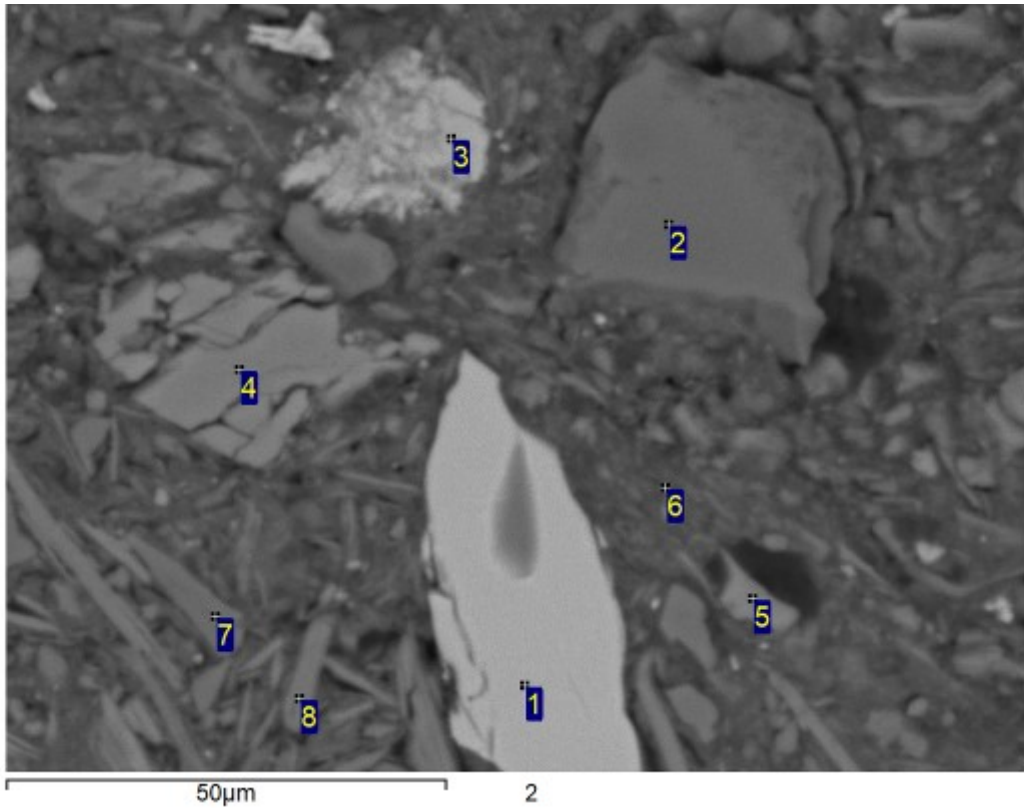


Processing option : All elements analysed (Normalised)

Spectrum	O	Na	Mg	Al	Si	K	Ca	Ti	Mn	Fe	Total	Mineral ID
1	33.5							29.4	0.8	36.3	100.0	Ilmenite
2	51.2				48.8						100.0	Quartz
3	41.6			0.6	0.6		3.8		17.8	35.6	100.0	Fe-Mn-Oxide?
4	46.4		6.4	11.0	16.6		0.9	1.0		17.5	100.0	Fe-Oxide/Chlorite
5	51.6				48.4						100.0	Quartz
6	45.4	1.0	0.7	17.1	27.2	6.8				1.7	100.0	K-Feldspar
7	61.4			36.3	2.3						100.0	Al-Oxide

All results in weight%

Sample Notes:  
S-7677\_9\_DPT09AP2

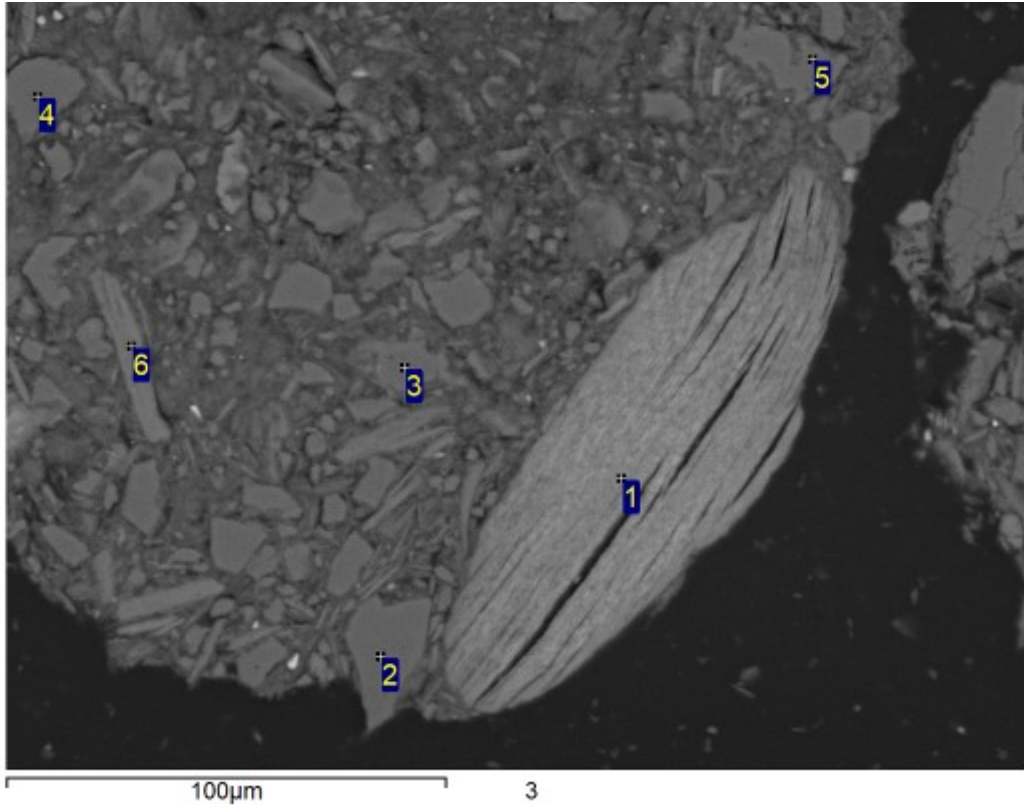


Processing option : All elements analysed (Normalised)

Spectrum	O	Na	Mg	Al	Si	Cl	K	Ca	Ti	Mn	Fe	Total	Mineral ID
1	41.0								59.0			100.0	Rutile
2	51.0				49.0							100.0	Quartz
3	41.8			0.9	1.7			3.1		16.8	35.8	100.0	Fe-Mn-Oxide?
4	45.0	0.4		9.6	31.8		13.1					100.0	K-Feldspar
5	46.4	0.3		9.7	31.2		12.4					100.0	K-Feldspar
6	50.3		0.8	16.2	24.6	0.3	2.4	0.4	0.6		4.4	100.0	Fe-Oxide/K-Feldspar mixture
7	51.5				48.5							100.0	Quartz
8	48.6	0.6	0.9	17.3	23.2		6.8		0.6		1.9	100.0	K-Feldspar

All results in weight%

Sample Notes:  
S-7677\_9\_DPT09AP2

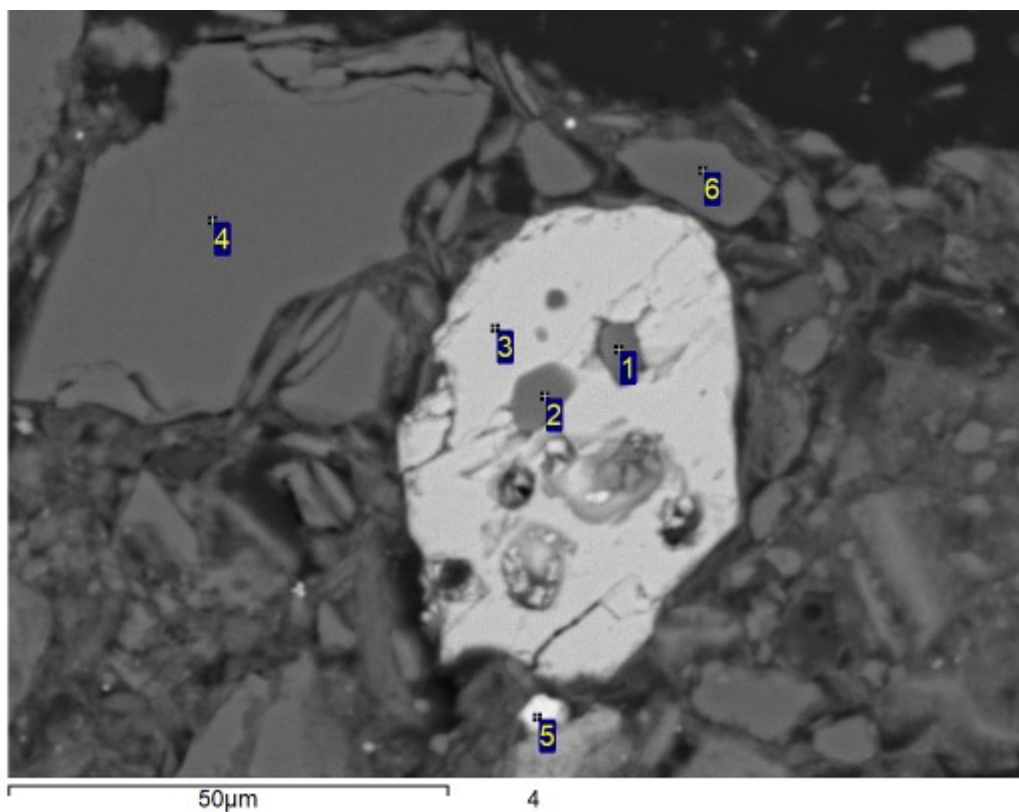


Processing option : All elements analysed (Normalised)

Spectrum	O	Mg	Al	Si	K	Ca	Ti	Fe	Total	Mineral ID
1	42.6	3.6	7.2	13.3	0.4	0.9	1.2	30.7	100.0	Mica
2	51.1			48.9					100.0	Quartz
3	51.3			48.7					100.0	Quartz
4	50.9			49.1					100.0	Quartz
5	51.8			48.2					100.0	Quartz
6	43.2	1.1	16.6	25.5	9.3			4.3	100.0	Mica

All results in weight%

Sample Notes:  
S-7677\_9\_DPT09AP2



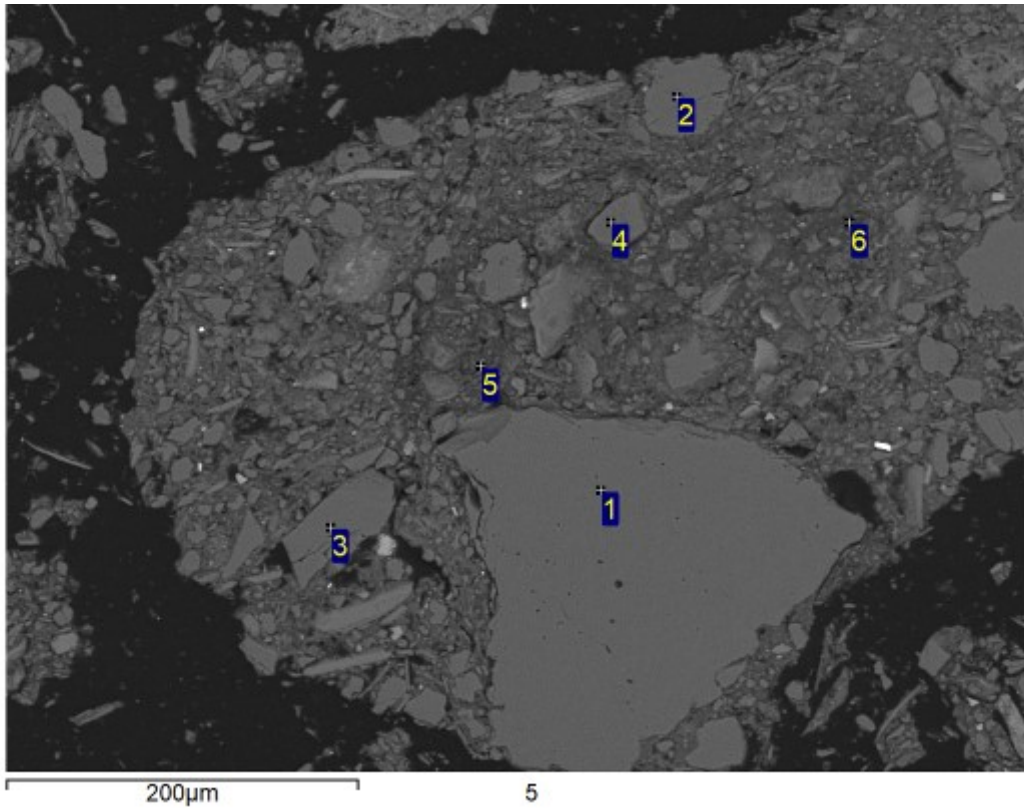
Processing option : All elements analysed (Normalised)

Spectrum	O	Na	Al	Si	Ca	Ti	Mn	Fe	Zr	Total	Mineral ID
1	53.1			44.6		1.3		1.0		100.0	Quartz
2	47.2	5.2	12.8	27.2	5.0	1.5		1.2		100.0	Plagioclase
3	33.4					31.2	1.1	34.3		100.0	Ilmenite
4	51.4			48.6						100.0	Quartz
5	41.4		1.2	14.8		0.4		0.5	41.7	100.0	Zircon
6	51.4			48.6						100.0	Quartz

All results in weight%



Sample Notes:  
S-7677\_9\_DPT09AP2

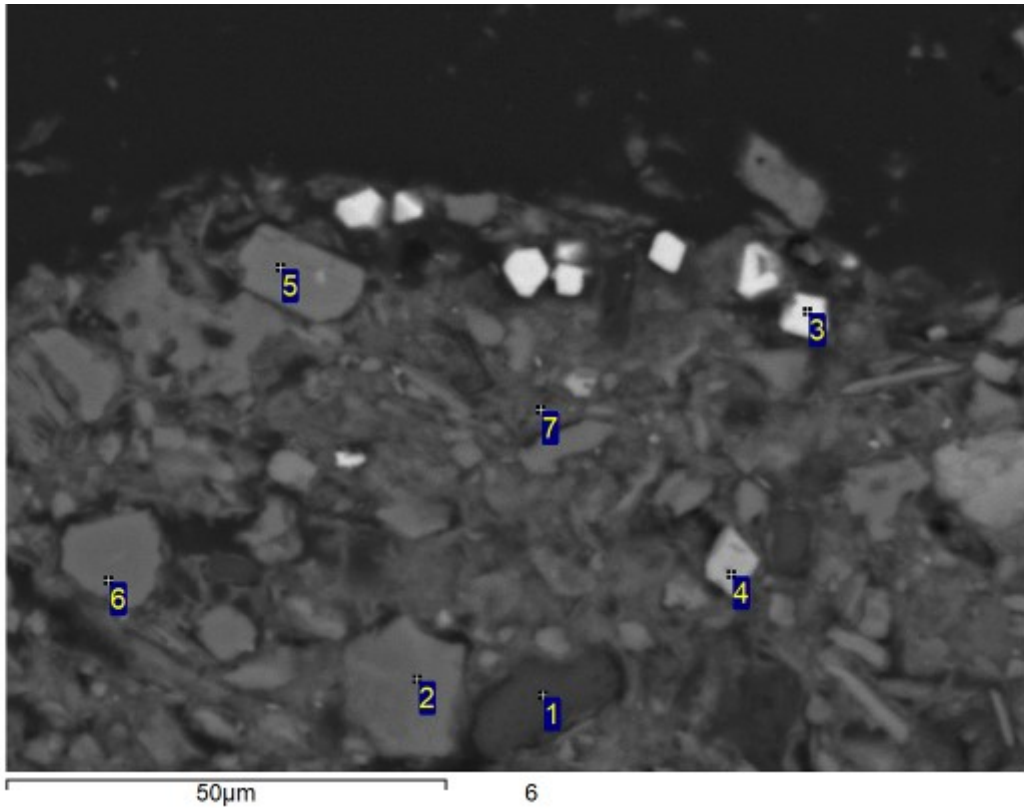


Processing option : All elements analysed (Normalised)

Spectrum	O	Mg	Al	Si	S	Cl	K	Ti	Fe	Total	Mineral ID
1	51.1			48.9						100.0	Quartz
2	45.5			54.5						100.0	Quartz
3	51.0			49.0						100.0	Quartz
4	50.4			49.6						100.0	Quartz
5	47.5	0.8	14.1	29.4	0.7		3.4	0.6	3.6	100.0	Fe-Oxide/Mica mixture
6	36.3	1.0	14.3	29.2	1.0	0.8	3.3		14.2	100.0	Fe-Oxide/Mica mixture

All results in weight%

Sample Notes:  
S-7677\_9\_DPT09AP2

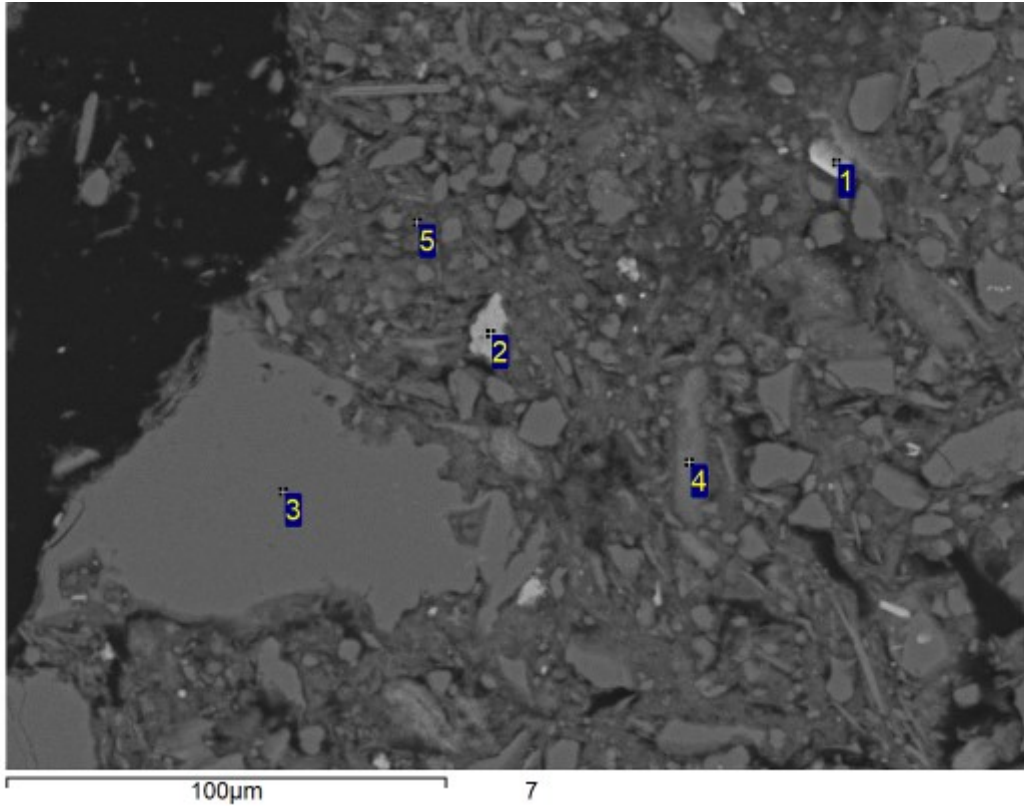


Processing option : All elements analysed (Normalised)

Spectrum	O	Mg	Al	Si	S	Cl	K	Ca	Ti	Fe	Ta	Total	Mineral ID
1	53.9	1.1	8.2	14.2	2.7		0.8	8.8	2.9	7.3		100.0	Altered amphibole?
2	55.4			44.6								100.0	Quartz
3					55.0					43.8	1.2	100.0	Pyrite
4	45.1		0.5	2.9					51.6			100.0	Rutile
5	47.2		18.6	23.4			9.6			1.2		100.0	K-Feldspar
6	50.1		1.3	47.9			0.3			0.3		100.0	Quartz
7	48.1	0.6	17.9	27.8		0.4	2.2	0.4		2.6		100.0	Altered K-Feldspar/Micas

All results in weight%

Sample Notes:  
S-7677\_9\_DPT09AP2

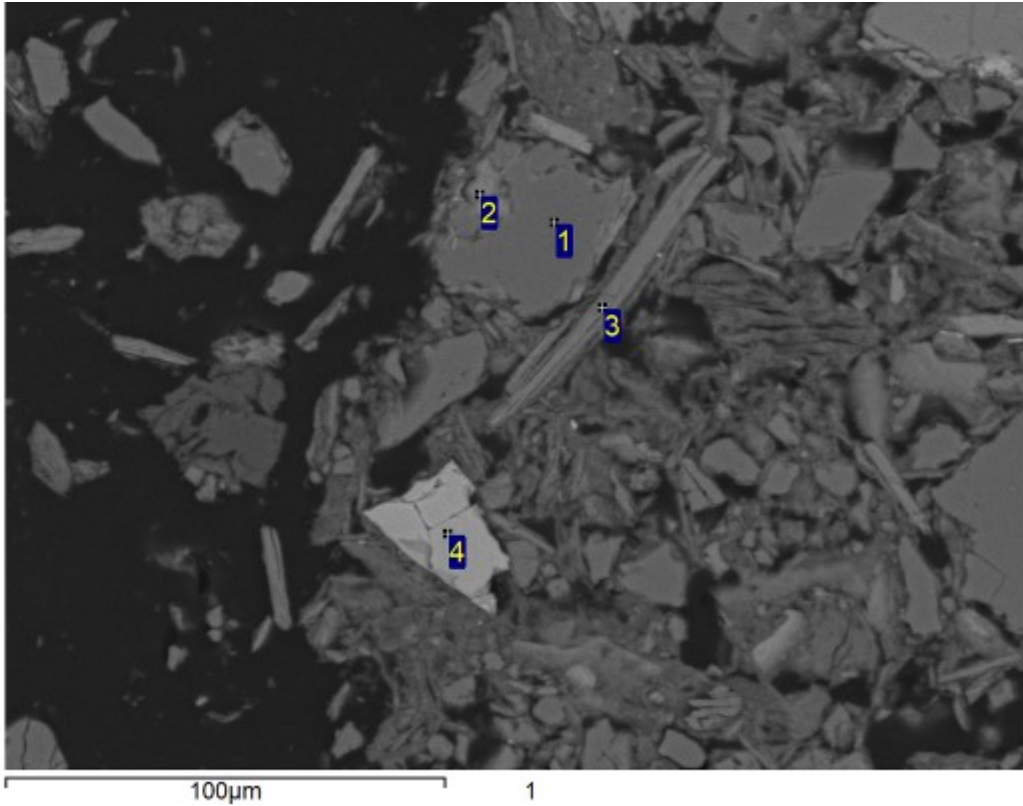


Processing option : All elements analysed (Normalised)

Spectrum	O	Na	Mg	Al	Si	K	Ti	Mn	Fe	Total	Mineral ID
1	49.7			0.7	1.0		29.5	1.8	17.4	100.0	Ilmenite
2	43.5			2.4	3.5	1.0	48.5		1.1	100.0	Rutile
3	50.8				49.2					100.0	Quartz
4	48.0	0.9	0.7	16.6	24.0	5.7			4.0	100.0	Mica
5	40.0		1.2	16.1	26.9	3.8	0.6		11.5	100.0	Fe-Oxide/K-Feldspar mixture

All results in weight%

Sample Notes:  
S-7677\_10\_DPT10AP2

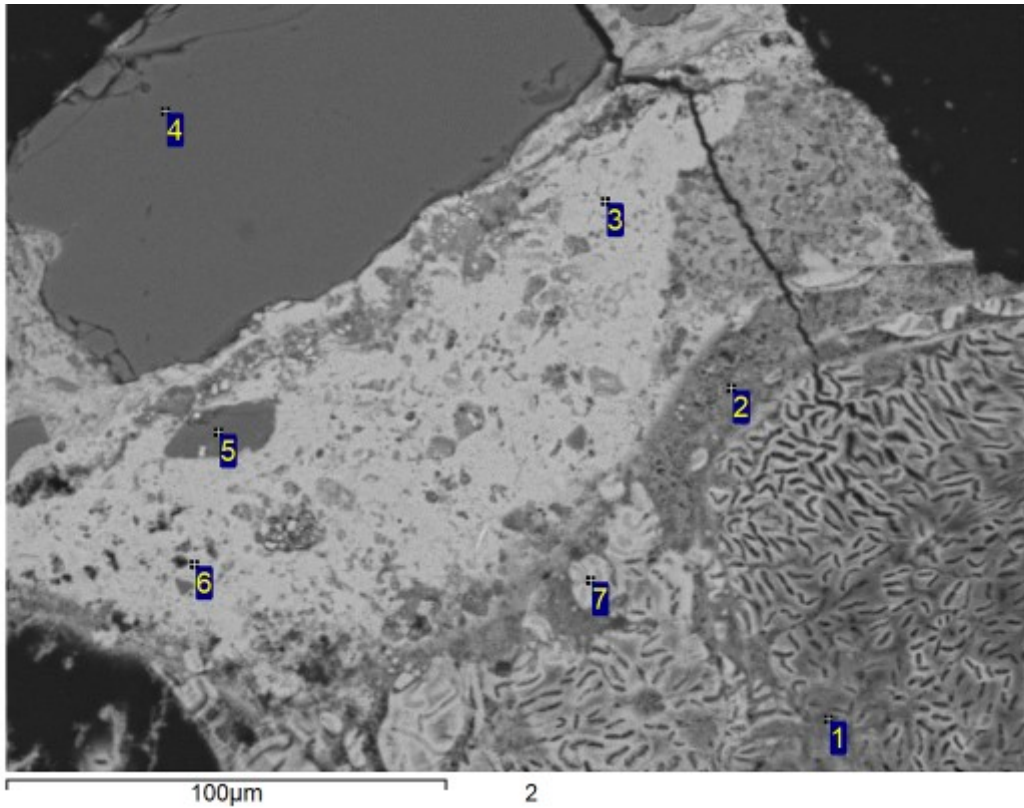


Processing option : All elements analysed (Normalised)

Spectrum	O	Na	Mg	Al	Si	K	Ca	Ti	Mn	Fe	Total	Mineral ID
1	50.7				49.3						100.0	Quartz
2	49.9		6.5	9.5	15.3					18.8	100.0	Biotite
3	45.1	0.6	0.7	17.7	24.6	8.5		0.4		2.4	100.0	K-Feldspar
4	39.4		1.4	11.0	18.9		1.7		2.7	24.9	100.0	Garnet

All results in weight%

Sample Notes:  
S-7677\_10\_DPT10AP2

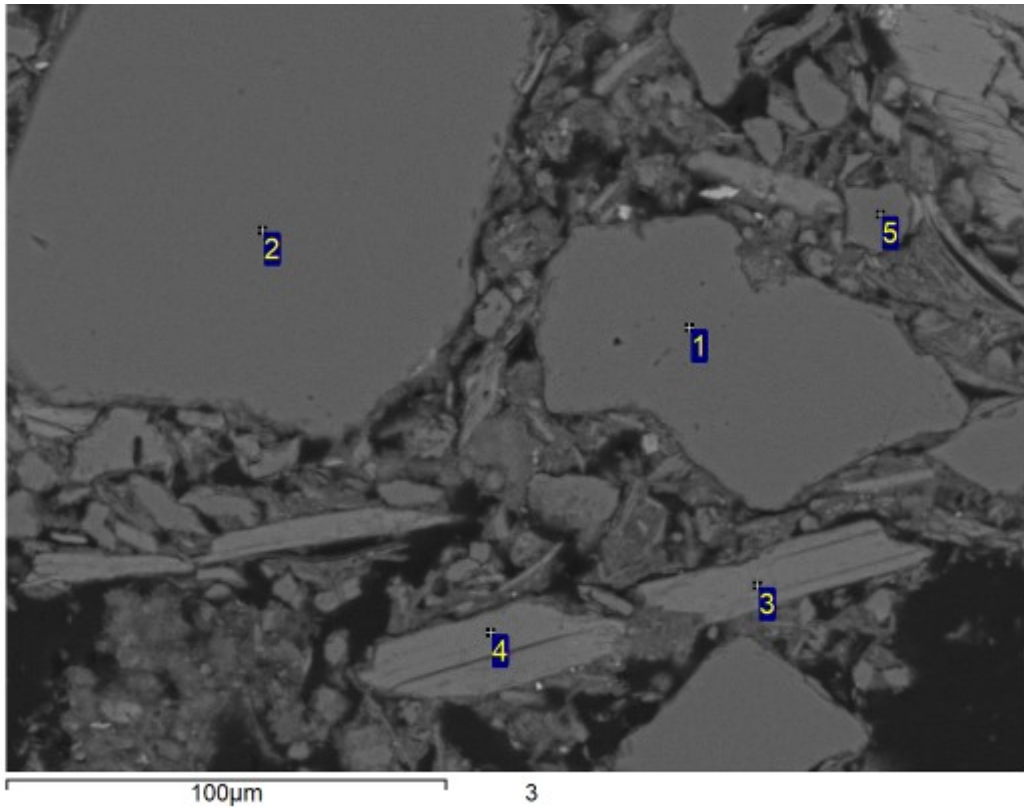


Processing option : All elements analysed (Normalised)

Spectrum	O	Al	Si	P	Cl	Fe	Total	Mineral ID
1	31.4	1.5	2.7	1.4	0.7	62.3	100.0	Fe-Oxide/Oxyhydroxide
2	33.6	1.6	2.3	1.3	0.7	60.5	100.0	Fe-Oxide/Oxyhydroxide
3	40.2	0.9	3.1			55.8	100.0	Fe-Oxide/Oxyhydroxide
4	51.2		48.8				100.0	Quartz
5	51.0		48.2			0.9	100.0	Quartz
6	40.0		2.7	0.6		56.7	100.0	Fe-Oxide/Oxyhydroxide
7	34.8		2.6	0.7		61.8	100.0	Fe-Oxide/Oxyhydroxide

All results in weight%

Sample Notes:  
S-7677\_10\_DPT10AP2

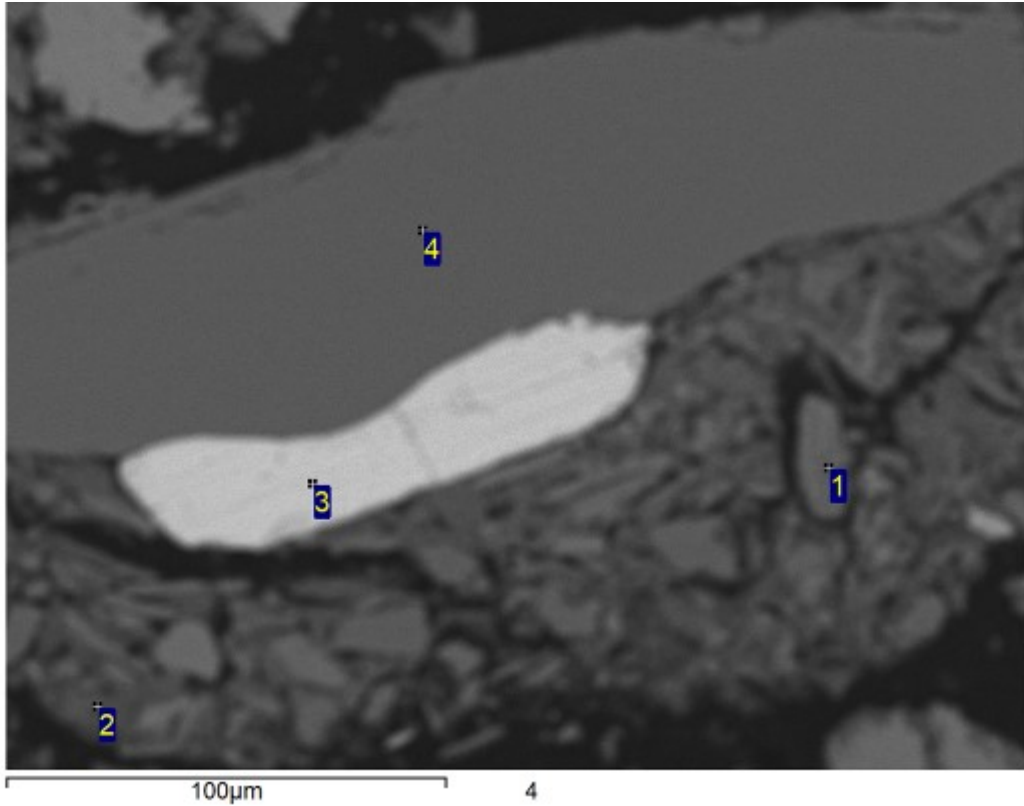


Processing option : All elements analysed (Normalised)

Spectrum	O	Na	Mg	Al	Si	K	Ti	Fe	Total	Mineral ID
1	50.9				49.1				100.0	Quartz
2	50.7				49.3				100.0	Quartz
3	48.5		0.8	16.6	22.7	8.8	0.6	1.9	100.0	Muscovite
4	47.3	0.4	0.9	17.1	23.1	8.8	0.7	1.8	100.0	Muscovite
5	46.0		0.4	1.6	49.4			2.4	100.0	Quartz

All results in weight%

Sample Notes:  
S-7677\_10\_DPT10AP2



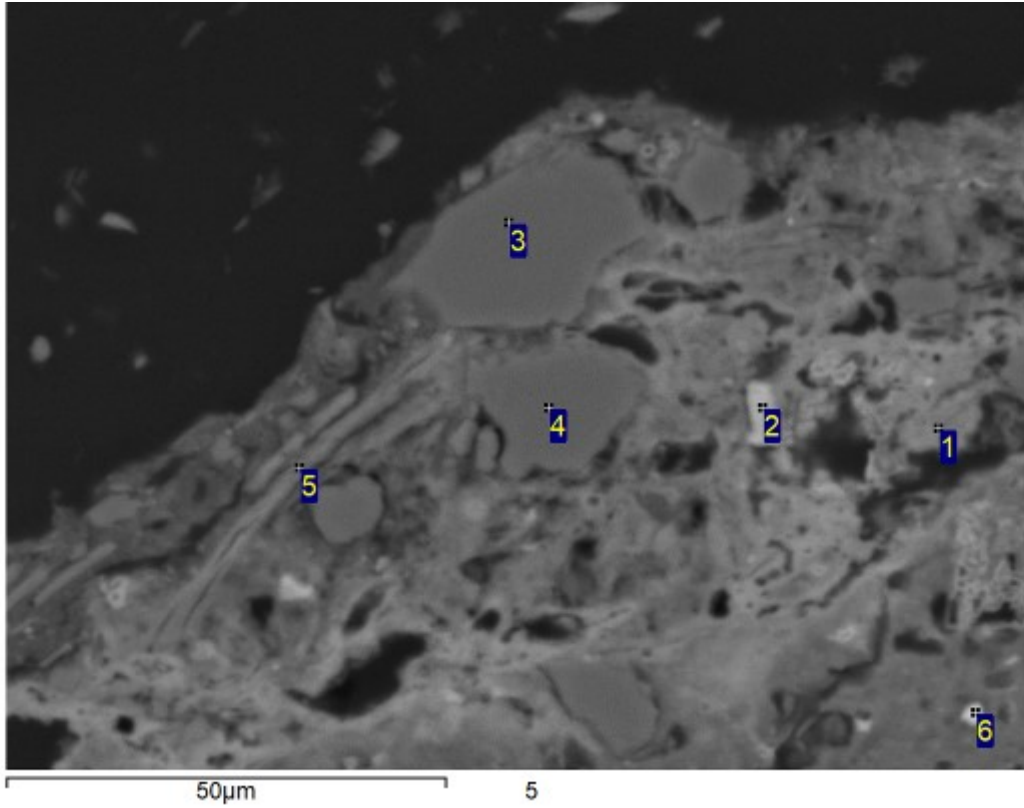
Processing option : All elements analysed (Normalised)

Spectrum	O	Na	Mg	Al	Si	K	Ti	Fe	Total	Mineral ID
1	48.0	0.4	0.8	16.2	23.0	8.0	0.3	3.2	100.0	Muscovite
2	43.1		1.1	16.0	26.9	2.1	0.9	9.8	100.0	Fe-Oxide/Oxyhydroxide/K-Feldspar mixture
3	32.7						12.6	54.7	100.0	Ilmenite
4	51.9				48.1				100.0	Quartz

All results in weight%



Sample Notes:  
S-7677\_10\_DPT10AP2



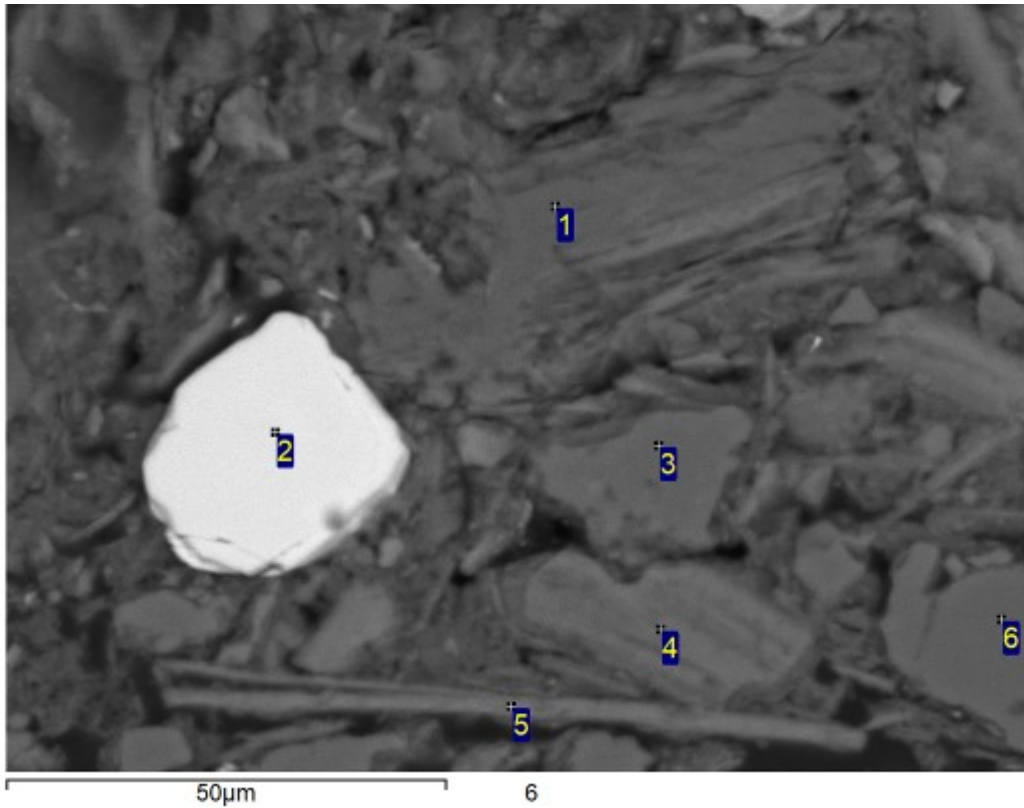
Processing option : All elements analysed (Normalised)

Spectrum	O	Mg	Al	Si	P	K	Ca	Ti	Cr	Mn	Fe	Zn	Total	Mineral ID
1	42.0	3.8	8.7	17.7		0.3	0.9			0.6	26.0		100.0	Fe-Oxide /Oxyhydroxide/Kaolinite mixture
2	42.6		4.6	4.2	0.7						47.9		100.0	Fe-Oxide
3	50.6			49.4									100.0	Quartz
4	50.0			50.0									100.0	Quartz
5	45.8	6.1	10.6	20.2		3.2		0.9			13.1		100.0	Mica
6	42.3	0.7	5.8	6.8		0.9			22.3	1.3	18.5	1.4	100.0	Chromite

All results in weight%



Sample Notes:  
S-7677\_10\_DPT10AP2

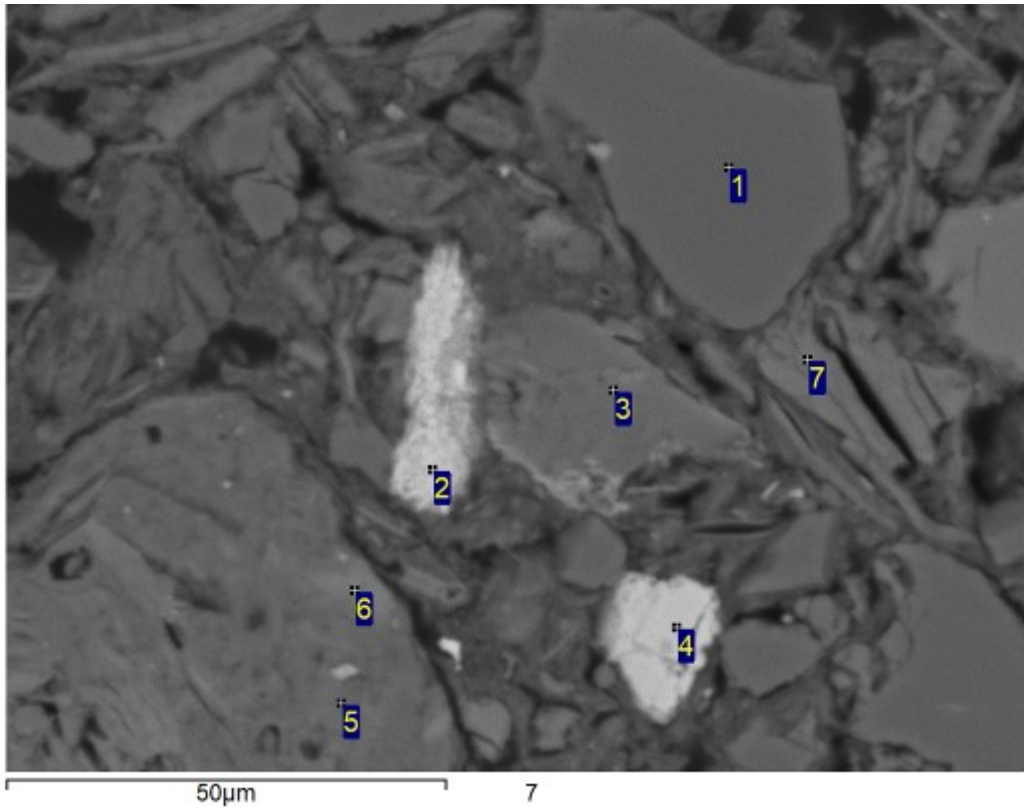


Processing option : All elements analysed (Normalised)

Spectrum	O	Na	Mg	Al	Si	K	Ti	Fe	Zr	Hf	Total	Mineral ID
1	55.0			19.7	22.6	0.5		2.2			100.0	Kaolinite
2	32.3				15.6				50.4	1.7	100.0	Zircon
3	52.1				47.9						100.0	Quartz
4	49.4		0.9	17.6	23.3	7.6		1.2			100.0	Mica
5	46.6	0.4	0.8	17.3	24.3	8.0	0.4	2.2			100.0	Mica
6	50.9				49.1						100.0	Quartz

All results in weight%

Sample Notes:  
S-7677\_10\_DPT10AP2



Processing option : All elements analysed (Normalised)

Spectrum	O	Na	Mg	Al	Si	K	Ca	Ti	Mn	Fe	Total	Mineral ID
1	50.9				49.1						100.0	Quartz
2	31.1			0.7	0.9			1.8		65.4	100.0	Fe-Oxide/Oxyhydroxide
3	49.3	0.9	0.4	18.2	21.9	7.1				2.2	100.0	K-Feldspar
4	33.3							30.1	1.4	35.2	100.0	Ilmenite
5	46.9		2.8	10.4	29.3	2.1	0.4			8.2	100.0	Fe-Oxide/Oxyhydroxide/Mica mixture
6	47.8		5.3	12.1	17.8	1.5	0.5			15.1	100.0	Fe-Oxide/Oxyhydroxide/Mica mixture
7	47.3		6.0	11.5	21.3	2.8	0.7	1.3		9.1	100.0	Fe-Oxide/Oxyhydroxide/Mica mixture

All results in weight%

F402001 SGS LAKEFIELD RESEARCH  
 PO BOX 4300  
 185 CONCESSION STREET  
 LAKEFIELD, ONTARIO ON K0L 2H0  
 CANADA

**Received:** 31-Mar-2021  
**Completed:** 29-Apr-2021  
**Order Reference:** Kela Ashworth - S767 CEC

Laboratory ID:	GS21-00731.002
Client Sample #:	S-7677-2
Description:	S-7677_2_DPT11AP2
CEC Actual (meq/100g)	8.98

**Report File Reference Number: 0000206181**

**NOTE:**

The analysis report above refers to the time and place of testing, and strictly to the supplied sample(s) only, without reference to any other matter. This report does not evidence or refer to any consignment or shipment or/and SGS sampling and inspection.

**Signed and dated in Guelph, ON  
 On 13-Jan-2022**

**For and on behalf of SGS Canada Inc., Agriculture and Food**



**Jack Legg, CCA-ON, 4R NMS**  
 Branch Manager, Agronomist

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 CANADA

**Received:** 31-Mar-2021  
**Completed:** 29-Apr-2021  
**Order Reference:** Kela Ashworth - S767 CEC

Laboratory ID:	GS21-00731.003
Client Sample #:	S-7677-3
Description:	S-7677_3_DPT08AP2

CEC Actual (meq/100g)	6.61
-----------------------	------

**Report File Reference Number: 0000206183**

**NOTE:**

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**Signed and dated in Guelph, ON  
 On 13-Jan-2022**

**For and on behalf of SGS Canada Inc., Agriculture and Food**



**Jack Legg, CCA-ON, 4R NMS**  
 Branch Manager, Agronomist

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 CANADA

**Received:** 31-Mar-2021  
**Completed:** 29-Apr-2021  
**Order Reference:** Kela Ashworth - S767 CEC

Laboratory ID:	GS21-00731.004
Client Sample #:	S-7677-4
Description:	S-7677_4_DPT07AP2

CEC Actual (meq/100g)	10.25
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**Report File Reference Number: 0000206185**

Page 1 of 1

**NOTE:**

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**Signed and dated in Guelph, ON  
 On 13-Jan-2022**

**For and on behalf of SGS Canada Inc., Agriculture and Food**



**Jack Legg, CCA-ON, 4R NMS**  
 Branch Manager, Agronomist

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 CANADA

**Received:** 31-Mar-2021  
**Completed:** 29-Apr-2021  
**Order Reference:** Kela Ashworth - S767 CEC

Laboratory ID:	GS21-00731.009
Client Sample #:	S-7677-9
Description:	S-7677_9_DPT09AP2

CEC Actual (meq/100g)	11.91
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**Report File Reference Number: 0000206195**

**NOTE:**  
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**Jack Legg, CCA-ON, 4R NMS**  
 Branch Manager, Agronomist

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**On 13-Jan-2022**

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 CANADA

**Received:** 31-Mar-2021  
**Completed:** 29-Apr-2021  
**Order Reference:** Kela Ashworth - S767 CEC

Laboratory ID:	GS21-00731.010
Client Sample #:	S-7677-10
Description:	S-7677_10_DPT10AP2

CEC Actual (meq/100g)	10.62
-----------------------	-------

**Report File Reference Number: 0000206197**

Page 1 of 1

**NOTE:**  
 The analysis report above refers to the time and place of testing, and strictly to the supplied sample(s) only, without reference to any other matter. This report does not evidence or refer to any consignment or shipment or/and SGS sampling and inspection.

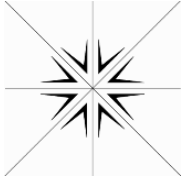
**For and on behalf of SGS Canada Inc., Agriculture and Food**



**Jack Legg, CCA-ON, 4R NMS**  
 Branch Manager, Agronomist

**Signed and dated in Guelph, ON**  
**On 13-Jan-2022**

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# Specialty Analytical

9011 SE Janssen Rd  
Clackamas, OR 97015  
TEL: (503) 607-1331

Website: [www.specialtyanalytical.com](http://www.specialtyanalytical.com)

---

January 25, 2022

Kela Ashworth  
SiREM Lab  
130 Stone Road West  
Guelph, Ontario N1G3Z2  
TEL: (519) 822-2265  
FAX:

RE: S-7677

Order No.: 2201248

Dear Kela Ashworth:

There were no problems with the analysis and all data for associated QC met EPA or laboratory specifications, except where noted in the Case Narrative, or as qualified with flags. Results apply only to the samples analyzed. Without approval of the laboratory, the reproduction of this report is only permitted in its entirety.

If you have any questions regarding these tests, please feel free to call.

Sincerely,

A handwritten signature in black ink, appearing to read "Marty French". The signature is written in a cursive, slightly slanted style.

Marty French  
Lab Director



# Specialty Analytical

WO#: 2201248  
Date Reported: 1/25/2022

CLIENT: SiREM Lab  
Project: S-7677

Lab ID: 2201248-001 Matrix: SOIL  
Client Sample ID S-7677\_2\_DPT11AP2 Collection Date: 3/25/2021

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>ANION EXCHANGE CAPACITY</b>				<b>SW9081</b>		Analyst: EG
Anion Exchange Capacity	6.78	0.000200		meq/100g	1	4/1/2021 10:39:06 AM

Lab ID: 2201248-002 Matrix: SOIL  
Client Sample ID S-7677\_3\_DPT08AP2 Collection Date: 3/25/2021

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>ANION EXCHANGE CAPACITY</b>				<b>SW9081</b>		Analyst: EG
Anion Exchange Capacity	5.96	0.000200		meq/100g	1	4/1/2021 10:40:06 AM

Lab ID: 2201248-003 Matrix: SOIL  
Client Sample ID S-7677\_4\_DPT07AP2 Collection Date: 3/25/2021

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>ANION EXCHANGE CAPACITY</b>				<b>SW9081</b>		Analyst: EG
Anion Exchange Capacity	6.84	0.000200		meq/100g	1	4/1/2021 10:41:06 AM

Lab ID: 2201248-004 Matrix: SOIL  
Client Sample ID S-7677\_9\_DPT09AP2 Collection Date: 3/25/2021

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>ANION EXCHANGE CAPACITY</b>				<b>SW9081</b>		Analyst: EG
Anion Exchange Capacity	5.17	0.000200		meq/100g	1	4/1/2021 10:47:06 AM

Lab ID: 2201248-005 Matrix: SOIL  
Client Sample ID S-7677\_10\_DPT10AP2 Collection Date: 3/25/2021

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>ANION EXCHANGE CAPACITY</b>				<b>SW9081</b>		Analyst: EG
Anion Exchange Capacity	6.19	0.000200		meq/100g	1	4/1/2021 10:48:06 AM

Qualifiers: H Holding times for preparation or analysis exceeded

# QC SUMMARY REPORT

WO#: 2201248

1/25/2022

## Specialty Analytical

**Client:** SiREM Lab

**Project:** S-7677

**TestCode:** AEC\_S

Sample ID: <b>2201248-003ADUP</b>	SampType: <b>DUP</b>	TestCode: <b>AEC_S</b>	Units: <b>meq/100g</b>	Prep Date:	RunNo: <b>39875</b>						
Client ID: <b>S-7677_4_DPT07AP</b>	Batch ID: <b>R39875</b>	TestNo: <b>SW9081</b>	Analysis Date: <b>4/1/2021</b>	SeqNo: <b>513304</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Anion Exchange Capacity	7.21	0.000200						6.836	5.36	20	

**Qualifiers:** H Holding times for preparation or analysis exceeded



Specialty Analytical  
 9011 SE Jannsen Rd  
 Clackamas, Oregon 97015  
 TEL: 503-607-1331 FAX: 503-607-1336  
 Website: www.specialtyanalytical.com

# Sample Receipt Checklist

Client Name SIREM

Work Order Number 2201248

RcptNo: 1

Date and Time Received 3/29/2021 9:10:00 AM

Received by: Katherine Lynch

Completed by

Reviewed by:

Completed Date: 1/25/2022 11:11:39 AM

Reviewed Date: 1/25/2022 11:11:42 AM

Carrier name: FedEx

- Chain of custody present? Yes  No
- Chain of custody signed when relinquished and received? Yes  No
- Chain of custody agrees with sample labels? Yes  No  Not Present
- Are matrices correctly identified on Chain of custody? Yes  No
- Is it clear what analyses were requested? Yes  No
- Custody seals intact on sample bottles? Yes  No  Not Present
- Samples in proper container/bottle? Yes  No
- Were correct preservatives used and noted? Yes  No  NA
- Sample containers intact? Yes  No
- Sufficient sample volume for indicated test? Yes  No
- Were container labels complete (ID, Pres, Date)? Yes  No
- All samples received within holding time? Yes  No
- Was an attempt made to cool the samples? Yes  No  NA
- All samples received at a temp. of > 0° C to 6.0° C? Yes  No  NA

Approved by client.

Preservative added to bottles:

- Sample Temp. taken and recorded upon receipt? Yes  No  To 10.1 °C
- Water - Were bubbles absent in VOC vials? Yes  No  No Vials
- Water - Was there Chlorine Present? Yes  No  NA
- Water - pH acceptable upon receipt? Yes  No  NA
- Are Samples considered acceptable? Yes  No

- Custody Seals present? Yes  No
- Traffic Report or Packing Lists present? Yes  No
- Airbill or Sticker? Air Bill  Sticker  Not Present
- Airbill No:
- Sample Tags Present? Yes  No
- Sample Tags Listed on COC? Yes  No
- Tag Numbers:
- Sample Condition? Intact  Broken  Leaking

Case Number:

SDG:

SAS:

Adjusted? \_\_\_\_\_ Checked by \_\_\_\_\_

Any No and/or NA (not applicable) response must be detailed in the comments section be



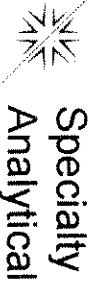
Specialty Analytical  
9011 SE Jannsen Rd  
Clackamas, Oregon 97015  
TEL: 503-607-1331 FAX: 503-607-1336  
Website: [www.specialtyanalytical.com](http://www.specialtyanalytical.com)

## Sample Receipt Checklist

---

Client Contacted?  Yes  No  NA Person Contacted: \_\_\_\_\_  
Contact Mode:  Phone:  Fax:  Email:  In Person: \_\_\_\_\_ Comments:  
Client Instructions: \_\_\_\_\_ Job split 1/25/22 at client request.  
Date Contacted: \_\_\_\_\_ Contacted By: \_\_\_\_\_  
Regarding: \_\_\_\_\_  
CorrectiveAction: \_\_\_\_\_

---



9011 SE Janssen Rd  
Clackamas, OR 97015  
Phone: 503-607-1331  
Fax: 503-607-1336

Chain of Custody Record

Date: \_\_\_\_\_ Page: 1 of 1

Project Name: \_\_\_\_\_

Project No: S-7677

PO No: \_\_\_\_\_

Laboratory Project No (Internal): 2103288

Temperature on Receipt: 10.1 °C

Cooling: Yes (Cooler) Shipped Via: FedEx

Custody Seal: Y (N) Intact / Broken Cooler / Bottle

MDL  TIER IV  EDD

Sample Disposal:  Return to client  Disposal by lab (after 60 days)

Client: SIREM Lab  
Address: 130 Stone Road West  
City, State, Zip: Guelph, Ontario, N1G 3Z2  
Telephone: 519-822-2265

Collected by: Kela Ashworth  
State Collected: OR  WA  OTHER

Report To (PM): Kela Ashworth

AP Email: accountspayablecan@siremlab.com

PM Email: kashworth@siremlab.com

Sample Name	Sample Date	Sample Time	Sample Matrix*	# of Containers	Anion Exchange Capacity	Requested Tests	Anion Exchange Capacity	Comments
1 S-7677_1_DPT07AP1	25-Mar-21		S	1	✓			
2 S-7677_2_DPT11AP2	25-Mar-21		S	1	✓			
3 S-7677_3_DPT08AP2	25-Mar-21		S	1	✓			
4 S-7677_4_DPT07AP2	25-Mar-21		S	1	✓			
5 S-7677_5_DPT01AP3	25-Mar-21		S	1	✓			
6 S-7677_6_DPT03AP3	25-Mar-21		S	1	✓			
7 S-7677_7_DPT02AP3	25-Mar-21		S	1	✓			
8 S-7677_8_DPT04AP3	25-Mar-21		S	1	✓			
9 S-7677_9_DPT09AP2	25-Mar-21		S	1	✓			
10 S-7677_10_DPT10AP2	25-Mar-21		S	1	✓			

\* Matrix: A = Air, AQ = Aqueous, L = Liquid, O = Oil, P = Product, S = Soil, SD = Sediment, S = Solid, W = Water, DW = Drinking Water, GW = Ground Water, SW = Storm Water, WW = Waste Water, M = Miscellaneous

Turn-around Time: Standard (5-7 Business):  3 Day:  2 Day:  Next Day:  Same Day:

Expedited turn-around requests should be coordinated in advance

Relinquished  Date/Time: 25 March 21 / 10:30  
Received  Date/Time: 3-29-2021 9:10

Relinquished  Date/Time: \_\_\_\_\_  
Received  Date/Time: \_\_\_\_\_



Specialty Analytical  
9011 SE Jannsen Ra  
Clackamas, Oregon 97015  
TEL: 503-607-1331 FAX: 503-607-1336  
Website: www.specialtyanalytical.com

## Definition Only

WO#: 2201248  
Date: 1/25/2022

---

### Definitions:

#### KEY TO FLAGS

A: This sample contains a Gasoline Range Organic not identified as a specific hydrocarbon product. The result was qualified against gasoline calibration standards.

A1: This sample contains a Diesel Range Organic not identified as a specific hydrocarbon product. The result was qualified against diesel calibration standards.

A2: This sample contains a Lube Oil Range Organic not identified as a specific hydrocarbon product. The result was qualified against lube oil calibration standards.

A3: The results was determined to be Non-Detect based on hydrocarbon pattern recognition. The product was carry-over from another hydrocarbon type.

A4: The product appears to be aged or degraded.

B: The blank exhibited a positive result greater than the reporting limit for this compound.

CN: See Case Narrative.

E: Result exceeds the calibration range for this compound. The result should be considered an estimate.

F: The positive result for this hydrocarbon is due to single component contamination. The product does not match any hydrocarbon in the fuels library.

FS: Follow-up testing is suggested.

G: Result may be biased high due to biogenic interferences. Clean up is recommended.

H: Sample was analyzed outside recommended holding time.

HT: At client's request, samples was analyzed outside of recommended holding time.

HP: Sample was analyzed outside recommended holding time due to VOA having pH >2.

J: The results for this analyte is between the MDL and the PQL and should be considered an

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Clackamas, Oregon 97015  
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Website: [www.specialtyanalytical.com](http://www.specialtyanalytical.com)

## Definition Only

WO#: 2201248  
Date: 1/25/2022

---

### Definitions:

estimated concentration.

K: Diesel result is biased high due to amount of Oil contained in the sample.

L: Diesel result is biased high due to amount of Gasoline contained in the sample.

M: Oil result is biased high due to amount of Diesel contained in the sample.

N: Gasoline result is biased high due to amount of Diesel contained in the sample.

MC: Sample concentration is greater than 4x the spiked value, the spiked value is considered insignificant.

MI: Result is outside control limits due to matrix interference.

NH: Sample matrix is non-homogeneous

MSA: Value determined by Method of Standard Addition.

O: Laboratory Control Standard (LCS) exceeded laboratory control limits but meets CCV criteria. Data meets EPA requirements.

Q: Detection levels elevated due to sample matrix.

R: RPD control limits were exceeded

RF: Duplicate failed due to result being at or near the method-reporting limit.

RP: Matrix spike values exceed established QC limits; post digestion spike is in control.

S: Recovery is outside control limits.

SC: CCV or LCS exceeded high recovery control limits, but associated samples are non-detect. Data meets EPA requirements.

SL: LCS exceeded recovery control limits, but associated MS/MSD passing. Data meets EPA requirements.

---

## ANALYTICAL REPORT

Eurofins TestAmerica, Knoxville  
5815 Middlebrook Pike  
Knoxville, TN 37921  
Tel: (865)291-3000

Laboratory Job ID: 140-22793-1  
Client Project/Site: S-7677 SiREMNA  
Revision: 1

For:  
Sirem, div of Geosyntec Consultants  
130 Stone Rd West  
Guelph, Ontario N1G 3Z2

Attn: Kela Ashworth



Authorized for release by:  
7/14/2021 4:34:00 PM

Ryan Henry, Project Manager I  
(865)291-3000  
[williamr.henry@eurofinset.com](mailto:williamr.henry@eurofinset.com)

### LINKS

Review your project  
results through  
**TotalAccess**

Have a Question?



Visit us at:

[www.eurofinsus.com/Env](http://www.eurofinsus.com/Env)

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*





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# Definitions/Glossary

Client: Sirem, div of Geosyntec Consultants  
Project/Site: S-7677 SiREMNA

Job ID: 140-22793-1

## Qualifiers

### Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

# Case Narrative

Client: Sirem, div of Geosyntec Consultants  
Project/Site: S-7677 SiREMNA

Job ID: 140-22793-1

## Job ID: 140-22793-1

### Laboratory: Eurofins TestAmerica, Knoxville

#### Narrative

#### Job Narrative 140-22793-1

#### Receipt

The samples were received on 4/22/2021 at 10:30am and arrived in good condition. The temperature of the cooler at receipt was 9.6° C.

#### Receipt Exceptions

The following samples were received at the laboratory outside the required temperature criteria: S-7677\_2\_DPT11AP2 (140-22793-1), S-7677\_3\_DPT08AP2 (140-22793-2) and S-7677\_4\_DPT07AP2 (140-22793-3). The client was contacted regarding this issue, and the laboratory was instructed to proceed with analysis.

#### Metals

##### 7 Step Sequential Extraction Procedure

These soil samples were prepared and analyzed using Eurofins TestAmerica Knoxville standard operating procedure KNOX-MT-0008, "7 Step Sequential Extraction Procedure". SW-846 Method 6010B as incorporated in Eurofins TestAmerica Knoxville standard operating procedure KNOX-MT-0007 was used to perform the final instrument analyses.

An aliquot of each sample was sequentially extracted using the steps listed below:

- Step 1 - Exchangeable Fraction: A 5 gram aliquot of sample was extracted with 25 mL of 1M magnesium sulfate (MgSO<sub>4</sub>), centrifuged and filtered. 5 mL of the resulting leachate was digested using method 3010A and analyzed by method 6010B. Results are reported in mg/kg on a dry weight basis.
- Step 2 - Carbonate Fraction: The sample residue from step 1 was extracted with 25 mL of 1M sodium acetate/acetic acid (NaOAc/HOAc) at pH 5, centrifuged and filtered. 5 mL of the resulting leachate was digested using method 3010A and analyzed by method 6010B. Results are reported in mg/kg on a dry weight basis.
- Step 3 - Non-crystalline Materials Fraction: The sample residue from step 2 was extracted with 25 mL of 0.2M ammonium oxalate (pH 3), centrifuged and filtered. 5 mL of the resulting leachate was digested using method 3010A and analyzed by method 6010B. Results are reported in mg/kg on a dry weight basis.
- Step 4 - Metal Hydroxide Fraction: The sample residue from step 3 was extracted with 25 mL of 1M hydroxylamine hydrochloride solution in 25% v/v acetic acid, centrifuged and filtered. 5 mL of the resulting leachate was digested using method 3010A and analyzed by method 6010B. Results are reported in mg/kg on a dry weight basis.
- Step 5 - Organic-bound Fraction: The sample residue from step 4 was extracted three times with 25 mL of 5% sodium hypochlorite (NaClO) at pH 9.5, centrifuged and filtered. The resulting leachates were combined and 5 mL were digested using method 3010A and analyzed by method 6010B. Results are reported in mg/kg on a dry weight basis.
- Step 6 - Acid/Sulfide Fraction: The sample residue from step 5 was extracted with 25 mL of a 3:1:2 v/v solution of HCl-HNO<sub>3</sub>-H<sub>2</sub>O, centrifuged and filtered. 5 mL of the resulting leachate was diluted to 50 mL with reagent water and analyzed by method 6010B. Results are reported in mg/kg on a dry weight basis.
- Step 7 - Residual Fraction: A 1.0 g aliquot of the sample residue from step 6 was digested using HF, HNO<sub>3</sub>, HCl and H<sub>3</sub>BO<sub>3</sub>. The digestate was analyzed by ICP using method 6010B. Results are reported in mg/kg on a dry weight basis.

In addition, a 1.0 g aliquot of the original sample was digested using HF, HNO<sub>3</sub>, HCl and H<sub>3</sub>BO<sub>3</sub>. The digestate was analyzed by ICP using method 6010B. Total metal results are reported in mg/kg on a dry weight basis.

Results were calculated using the following equation:

$$\text{Result, } \mu\text{g/g or mg/Kg, dry weight} = (C \times V \times V1 \times D) / (W \times S \times V2)$$

Where:

- C = Concentration from instrument readout,  $\mu\text{g/mL}$
- V = Final volume of digestate, mL
- D = Instrument dilution factor
- V1 = Total volume of leachate, mL
- V2 = Volume of leachate digested, mL

# Case Narrative

Client: Sirem, div of Geosyntec Consultants  
Project/Site: S-7677 SiREMNA

Job ID: 140-22793-1

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## Job ID: 140-22793-1 (Continued)

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### Laboratory: Eurofins TestAmerica, Knoxville (Continued)

W = Wet weight of sample, g  
S = Percent solids/100

A method blank, laboratory control sample and laboratory control sample duplicate were prepared and analyzed with each SEP step in order to provide information about both the presence of elements of interest in the extraction solutions, and the recovery of elements of interest from the extraction solutions. Results outside of laboratory QC limits do not reflect out of control performance, but rather the effect of the extraction solution upon the analyte.

A laboratory sample duplicate was prepared and analyzed with each batch of samples in order to provide information regarding the reproducibility of the procedure.

#### SEP Report Notes:

The final report lists the results for each step, the result for the total digestion of the sample, and a sum of the results of steps 1 through 7 by element.

Magnesium was not reported for step 1 because the extraction solution for this step (magnesium sulfate) contains high levels of magnesium. Sodium was not reported for steps 2 and 5 since the extraction solutions for these steps contain high levels of sodium. The sum of steps 1 through 7 is much higher than the total result for sodium and magnesium due to the magnesium and sodium introduced by the extraction solutions.

The digestates for steps 1, 2 and 5 were analyzed at a dilution due to instrument problems caused by the high solids content of the digestates. The reporting limits were adjusted accordingly.

Methods 6010B, 6010B SEP: The following samples were diluted due to the presence of titanium which interferes with Cobalt: S-7677\_2\_DPT11AP2 (140-22793-1), S-7677\_3\_DPT08AP2 (140-22793-2) and S-7677\_4\_DPT07AP2 (140-22793-3). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

# Sample Summary

Client: Sirem, div of Geosyntec Consultants  
Project/Site: S-7677 SiREMNA

Job ID: 140-22793-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
140-22793-1	S-7677_2_DPT11AP2	Solid	04/20/21 00:00	04/22/21 10:30	
140-22793-2	S-7677_3_DPT08AP2	Solid	04/20/21 00:00	04/22/21 10:30	
140-22793-3	S-7677_4_DPT07AP2	Solid	04/20/21 00:00	04/22/21 10:30	

1

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# Client Sample Results

Client: Sirem, div of Geosyntec Consultants  
 Project/Site: S-7677 SiREMNA

Job ID: 140-22793-1

**Client Sample ID: S-7677\_2\_DPT11AP2**

**Lab Sample ID: 140-22793-1**

Date Collected: 04/20/21 00:00

Matrix: Solid

Date Received: 04/22/21 10:30

Percent Solids: 78.0

**Method: 6010B SEP - SEP Metals (ICP) - Step 1**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	ND		13	0.23	mg/Kg	☼	04/29/21 08:00	05/05/21 13:39	4

**Method: 6010B SEP - SEP Metals (ICP) - Step 2**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	ND		9.6	0.24	mg/Kg	☼	04/30/21 08:00	05/05/21 15:16	3

**Method: 6010B SEP - SEP Metals (ICP) - Step 3**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	0.33	J	3.2	0.058	mg/Kg	☼	05/03/21 08:00	05/05/21 16:35	1

**Method: 6010B SEP - SEP Metals (ICP) - Step 4**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	2.1	J	3.2	0.068	mg/Kg	☼	05/04/21 08:00	05/10/21 14:47	1

**Method: 6010B SEP - SEP Metals (ICP) - Step 5**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	ND		48	0.77	mg/Kg	☼	05/06/21 08:00	05/10/21 16:25	5

**Method: 6010B SEP - SEP Metals (ICP) - Step 6**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	2.0	J	3.2	0.059	mg/Kg	☼	05/06/21 08:00	05/10/21 17:44	1

**Method: 6010B SEP - SEP Metals (ICP) - Step 7**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	1.4	J	16	0.17	mg/Kg	☼	05/10/21 08:00	05/11/21 17:59	5

**Method: 6010B SEP - SEP Metals (ICP) - Sum of Steps 1-7**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	5.9		2.5	0.023	mg/Kg			05/13/21 10:05	1

**Method: 6010B - SEP Metals (ICP) - Total**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	7.0	J	16	0.17	mg/Kg	☼	04/27/21 08:00	05/11/21 19:03	5

# Client Sample Results

Client: Sirem, div of Geosyntec Consultants  
 Project/Site: S-7677 SiREMNA

Job ID: 140-22793-1

**Client Sample ID: S-7677\_3\_DPT08AP2**

**Lab Sample ID: 140-22793-2**

Date Collected: 04/20/21 00:00

Matrix: Solid

Date Received: 04/22/21 10:30

Percent Solids: 88.1

**Method: 6010B SEP - SEP Metals (ICP) - Step 1**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	1.0	J	11	0.20	mg/Kg	☼	04/29/21 08:00	05/05/21 13:58	4

**Method: 6010B SEP - SEP Metals (ICP) - Step 2**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	0.30	J	8.5	0.21	mg/Kg	☼	04/30/21 08:00	05/05/21 15:21	3

**Method: 6010B SEP - SEP Metals (ICP) - Step 3**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	5.7		2.8	0.051	mg/Kg	☼	05/03/21 08:00	05/05/21 16:55	1

**Method: 6010B SEP - SEP Metals (ICP) - Step 4**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	2.6	J	2.8	0.060	mg/Kg	☼	05/04/21 08:00	05/10/21 15:06	1

**Method: 6010B SEP - SEP Metals (ICP) - Step 5**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	ND		43	0.68	mg/Kg	☼	05/06/21 08:00	05/10/21 16:30	5

**Method: 6010B SEP - SEP Metals (ICP) - Step 6**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	1.8	J	2.8	0.052	mg/Kg	☼	05/06/21 08:00	05/10/21 18:04	1

**Method: 6010B SEP - SEP Metals (ICP) - Step 7**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	0.41	J	5.7	0.059	mg/Kg	☼	05/10/21 08:00	05/11/21 18:04	2

**Method: 6010B SEP - SEP Metals (ICP) - Sum of Steps 1-7**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	12		2.5	0.023	mg/Kg			05/13/21 10:05	1

**Method: 6010B - SEP Metals (ICP) - Total**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	7.5		5.7	0.059	mg/Kg	☼	04/27/21 08:00	05/11/21 19:08	2

# Client Sample Results

Client: Sirem, div of Geosyntec Consultants  
 Project/Site: S-7677 SiREMNA

Job ID: 140-22793-1

**Client Sample ID: S-7677\_4\_DPT07AP2**

**Lab Sample ID: 140-22793-3**

Date Collected: 04/20/21 00:00

Matrix: Solid

Date Received: 04/22/21 10:30

Percent Solids: 84.0

**Method: 6010B SEP - SEP Metals (ICP) - Step 1**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	7.7	J	12	0.21	mg/Kg	☼	04/29/21 08:00	05/05/21 14:03	4

**Method: 6010B SEP - SEP Metals (ICP) - Step 2**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	0.79	J	8.9	0.23	mg/Kg	☼	04/30/21 08:00	05/05/21 15:26	3

**Method: 6010B SEP - SEP Metals (ICP) - Step 3**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	0.25	J	3.0	0.054	mg/Kg	☼	05/03/21 08:00	05/05/21 17:00	1

**Method: 6010B SEP - SEP Metals (ICP) - Step 4**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	0.68	J	3.0	0.063	mg/Kg	☼	05/04/21 08:00	05/10/21 15:11	1

**Method: 6010B SEP - SEP Metals (ICP) - Step 5**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	2.2	J	45	0.71	mg/Kg	☼	05/06/21 08:00	05/10/21 16:35	5

**Method: 6010B SEP - SEP Metals (ICP) - Step 6**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	2.2	J	3.0	0.055	mg/Kg	☼	05/06/21 08:00	05/10/21 18:09	1

**Method: 6010B SEP - SEP Metals (ICP) - Step 7**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	0.64	J	6.0	0.062	mg/Kg	☼	05/10/21 08:00	05/11/21 18:08	2

**Method: 6010B SEP - SEP Metals (ICP) - Sum of Steps 1-7**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	14		2.5	0.023	mg/Kg			05/13/21 10:05	1

**Method: 6010B - SEP Metals (ICP) - Total**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	11		6.0	0.062	mg/Kg	☼	04/27/21 08:00	05/11/21 19:13	2



# Default Detection Limits

Client: Sirem, div of Geosyntec Consultants  
Project/Site: S-7677 SiREMNA

Job ID: 140-22793-1

## Method: 6010B SEP - SEP Metals (ICP) - Step 1

Prep: 3010A

SEP: Exchangeable

Analyte	RL	MDL	Units
Cobalt	2.5	0.045	mg/Kg

## Method: 6010B SEP - SEP Metals (ICP) - Step 2

Prep: 3010A

SEP: Carbonate

Analyte	RL	MDL	Units
Cobalt	2.5	0.063	mg/Kg

## Method: 6010B SEP - SEP Metals (ICP) - Step 3

Prep: 3010A

SEP: Non-Crystalline

Analyte	RL	MDL	Units
Cobalt	2.5	0.045	mg/Kg

## Method: 6010B SEP - SEP Metals (ICP) - Step 4

Prep: 3010A

SEP: Metal Hydroxide

Analyte	RL	MDL	Units
Cobalt	2.5	0.053	mg/Kg

## Method: 6010B SEP - SEP Metals (ICP) - Step 5

Prep: 3010A

SEP: Organic-Bound

Analyte	RL	MDL	Units
Cobalt	7.5	0.12	mg/Kg

## Method: 6010B SEP - SEP Metals (ICP) - Step 6

SEP: Acid/Sulfide

Analyte	RL	MDL	Units
Cobalt	2.5	0.046	mg/Kg

## Method: 6010B SEP - SEP Metals (ICP) - Step 7

Prep: Residual

Analyte	RL	MDL	Units
Cobalt	2.5	0.026	mg/Kg

## Method: 6010B SEP - SEP Metals (ICP) - Sum of Steps 1-7

Analyte	RL	MDL	Units
Cobalt	2.5	0.023	mg/Kg

## Method: 6010B - SEP Metals (ICP) - Total

Prep: Total

Analyte	RL	MDL	Units
Cobalt	2.5	0.026	mg/Kg

# QC Sample Results

Client: Sirem, div of Geosyntec Consultants  
 Project/Site: S-7677 SiREMNA

Job ID: 140-22793-1

## Method: 6010B - SEP Metals (ICP) - Total

Lab Sample ID: MB 140-49213/13-A  
 Matrix: Solid  
 Analysis Batch: 49736

Client Sample ID: Method Blank  
 Prep Type: Total/NA  
 Prep Batch: 49213

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	ND		2.5	0.026	mg/Kg		04/27/21 08:00	05/11/21 12:55	1

Lab Sample ID: LCS 140-49213/14-A  
 Matrix: Solid  
 Analysis Batch: 49736

Client Sample ID: Lab Control Sample  
 Prep Type: Total/NA  
 Prep Batch: 49213

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cobalt	5.00	5.03		mg/Kg		101	80 - 125

Lab Sample ID: LCSD 140-49213/15-A  
 Matrix: Solid  
 Analysis Batch: 49736

Client Sample ID: Lab Control Sample Dup  
 Prep Type: Total/NA  
 Prep Batch: 49213

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cobalt	5.00	5.04		mg/Kg		101	80 - 125	0	30

## Method: 6010B SEP - SEP Metals (ICP)

Lab Sample ID: MB 140-49214/12-B ^4  
 Matrix: Solid  
 Analysis Batch: 49543

Client Sample ID: Method Blank  
 Prep Type: Step 1  
 Prep Batch: 49305

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	ND		10	0.18	mg/Kg		04/29/21 08:00	05/05/21 13:00	4

Lab Sample ID: LCS 140-49214/13-B ^5  
 Matrix: Solid  
 Analysis Batch: 49543

Client Sample ID: Lab Control Sample  
 Prep Type: Step 1  
 Prep Batch: 49305

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cobalt	5.00	4.82	J	mg/Kg		96	80 - 120

Lab Sample ID: LCSD 140-49214/14-B ^5  
 Matrix: Solid  
 Analysis Batch: 49543

Client Sample ID: Lab Control Sample Dup  
 Prep Type: Step 1  
 Prep Batch: 49305

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cobalt	5.00	4.81	J	mg/Kg		96	80 - 120	0	30

Lab Sample ID: MB 140-49306/12-B ^3  
 Matrix: Solid  
 Analysis Batch: 49543

Client Sample ID: Method Blank  
 Prep Type: Step 2  
 Prep Batch: 49358

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	ND		7.5	0.19	mg/Kg		04/30/21 08:00	05/05/21 14:22	3

# QC Sample Results

Client: Sirem, div of Geosyntec Consultants  
 Project/Site: S-7677 SiREMNA

Job ID: 140-22793-1

## Method: 6010B SEP - SEP Metals (ICP) (Continued)

**Lab Sample ID: LCS 140-49306/13-B ^5**  
**Matrix: Solid**  
**Analysis Batch: 49543**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Step 2**  
**Prep Batch: 49358**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cobalt	5.00	4.44	J	mg/Kg		89	80 - 120

**Lab Sample ID: LCSD 140-49306/14-B ^5**  
**Matrix: Solid**  
**Analysis Batch: 49543**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Step 2**  
**Prep Batch: 49358**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Cobalt	5.00	4.49	J	mg/Kg		90	80 - 120	1	30

**Lab Sample ID: MB 140-49359/12-B**  
**Matrix: Solid**  
**Analysis Batch: 49543**

**Client Sample ID: Method Blank**  
**Prep Type: Step 3**  
**Prep Batch: 49393**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	ND		2.5	0.045	mg/Kg		05/03/21 08:00	05/05/21 15:56	1

**Lab Sample ID: LCS 140-49359/13-B**  
**Matrix: Solid**  
**Analysis Batch: 49543**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Step 3**  
**Prep Batch: 49393**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cobalt	5.00	4.75		mg/Kg		95	80 - 120

**Lab Sample ID: LCSD 140-49359/14-B**  
**Matrix: Solid**  
**Analysis Batch: 49543**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Step 3**  
**Prep Batch: 49393**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Cobalt	5.00	4.69		mg/Kg		94	80 - 120	1	30

**Lab Sample ID: MB 140-49394/12-B**  
**Matrix: Solid**  
**Analysis Batch: 49686**

**Client Sample ID: Method Blank**  
**Prep Type: Step 4**  
**Prep Batch: 49441**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	ND		2.5	0.053	mg/Kg		05/04/21 08:00	05/10/21 14:08	1

**Lab Sample ID: LCS 140-49394/13-B**  
**Matrix: Solid**  
**Analysis Batch: 49686**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Step 4**  
**Prep Batch: 49441**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cobalt	5.00	5.32		mg/Kg		106	80 - 120

**Lab Sample ID: LCSD 140-49394/14-B**  
**Matrix: Solid**  
**Analysis Batch: 49686**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Step 4**  
**Prep Batch: 49441**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Cobalt	5.00	5.15		mg/Kg		103	80 - 120	3	30

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# QC Sample Results

Client: Sirem, div of Geosyntec Consultants  
 Project/Site: S-7677 SiREMNA

Job ID: 140-22793-1

## Method: 6010B SEP - SEP Metals (ICP)

**Lab Sample ID: MB 140-49442/12-B ^5**  
**Matrix: Solid**  
**Analysis Batch: 49686**

**Client Sample ID: Method Blank**  
**Prep Type: Step 5**  
**Prep Batch: 49541**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	ND		38	0.60	mg/Kg		05/06/21 08:00	05/10/21 15:31	5

**Lab Sample ID: LCS 140-49442/13-B ^5**  
**Matrix: Solid**  
**Analysis Batch: 49686**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Step 5**  
**Prep Batch: 49541**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cobalt	15.0	0.795	J	mg/Kg		5	1 - 60

**Lab Sample ID: LCSD 140-49442/14-B ^5**  
**Matrix: Solid**  
**Analysis Batch: 49686**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Step 5**  
**Prep Batch: 49541**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cobalt	15.0	0.638	J	mg/Kg		4	1 - 60	22	30

**Lab Sample ID: MB 140-49542/12-A**  
**Matrix: Solid**  
**Analysis Batch: 49686**

**Client Sample ID: Method Blank**  
**Prep Type: Step 6**  
**Prep Batch: 49542**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	ND		2.5	0.046	mg/Kg		05/06/21 08:00	05/10/21 17:05	1

**Lab Sample ID: LCS 140-49542/13-A**  
**Matrix: Solid**  
**Analysis Batch: 49686**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Step 6**  
**Prep Batch: 49542**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cobalt	5.00	4.97		mg/Kg		99	80 - 120

**Lab Sample ID: LCSD 140-49542/14-A**  
**Matrix: Solid**  
**Analysis Batch: 49686**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Step 6**  
**Prep Batch: 49542**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cobalt	5.00	4.74		mg/Kg		95	80 - 120	5	30

**Lab Sample ID: MB 140-49611/12-A**  
**Matrix: Solid**  
**Analysis Batch: 49736**

**Client Sample ID: Method Blank**  
**Prep Type: Step 7**  
**Prep Batch: 49611**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	ND		2.5	0.026	mg/Kg		05/10/21 08:00	05/11/21 12:41	1

**Lab Sample ID: LCS 140-49611/13-A**  
**Matrix: Solid**  
**Analysis Batch: 49736**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Step 7**  
**Prep Batch: 49611**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cobalt	5.00	5.06		mg/Kg		101	80 - 125

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# QC Sample Results

Client: Sirem, div of Geosyntec Consultants  
 Project/Site: S-7677 SiREMNA

Job ID: 140-22793-1

## Method: 6010B SEP - SEP Metals (ICP)

Lab Sample ID: LCSD 140-49611/14-A  
 Matrix: Solid  
 Analysis Batch: 49736

Client Sample ID: Lab Control Sample Dup  
 Prep Type: Step 7  
 Prep Batch: 49611

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cobalt	5.00	5.01		mg/Kg		100	80 - 125	1	30

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13

# QC Association Summary

Client: Sirem, div of Geosyntec Consultants  
Project/Site: S-7677 SiREMNA

Job ID: 140-22793-1

## Metals

### Prep Batch: 49213

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-22793-1	S-7677_2_DPT11AP2	Total/NA	Solid	Total	
140-22793-2	S-7677_3_DPT08AP2	Total/NA	Solid	Total	
140-22793-3	S-7677_4_DPT07AP2	Total/NA	Solid	Total	
MB 140-49213/13-A	Method Blank	Total/NA	Solid	Total	
LCS 140-49213/14-A	Lab Control Sample	Total/NA	Solid	Total	
LCSD 140-49213/15-A	Lab Control Sample Dup	Total/NA	Solid	Total	

### SEP Batch: 49214

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-22793-1	S-7677_2_DPT11AP2	Step 1	Solid	Exchangeable	
140-22793-2	S-7677_3_DPT08AP2	Step 1	Solid	Exchangeable	
140-22793-3	S-7677_4_DPT07AP2	Step 1	Solid	Exchangeable	
MB 140-49214/12-B ^4	Method Blank	Step 1	Solid	Exchangeable	
LCS 140-49214/13-B ^5	Lab Control Sample	Step 1	Solid	Exchangeable	
LCSD 140-49214/14-B ^5	Lab Control Sample Dup	Step 1	Solid	Exchangeable	

### Prep Batch: 49305

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-22793-1	S-7677_2_DPT11AP2	Step 1	Solid	3010A	49214
140-22793-2	S-7677_3_DPT08AP2	Step 1	Solid	3010A	49214
140-22793-3	S-7677_4_DPT07AP2	Step 1	Solid	3010A	49214
MB 140-49214/12-B ^4	Method Blank	Step 1	Solid	3010A	49214
LCS 140-49214/13-B ^5	Lab Control Sample	Step 1	Solid	3010A	49214
LCSD 140-49214/14-B ^5	Lab Control Sample Dup	Step 1	Solid	3010A	49214

### SEP Batch: 49306

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-22793-1	S-7677_2_DPT11AP2	Step 2	Solid	Carbonate	
140-22793-2	S-7677_3_DPT08AP2	Step 2	Solid	Carbonate	
140-22793-3	S-7677_4_DPT07AP2	Step 2	Solid	Carbonate	
MB 140-49306/12-B ^3	Method Blank	Step 2	Solid	Carbonate	
LCS 140-49306/13-B ^5	Lab Control Sample	Step 2	Solid	Carbonate	
LCSD 140-49306/14-B ^5	Lab Control Sample Dup	Step 2	Solid	Carbonate	

### Prep Batch: 49358

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-22793-1	S-7677_2_DPT11AP2	Step 2	Solid	3010A	49306
140-22793-2	S-7677_3_DPT08AP2	Step 2	Solid	3010A	49306
140-22793-3	S-7677_4_DPT07AP2	Step 2	Solid	3010A	49306
MB 140-49306/12-B ^3	Method Blank	Step 2	Solid	3010A	49306
LCS 140-49306/13-B ^5	Lab Control Sample	Step 2	Solid	3010A	49306
LCSD 140-49306/14-B ^5	Lab Control Sample Dup	Step 2	Solid	3010A	49306

### SEP Batch: 49359

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-22793-1	S-7677_2_DPT11AP2	Step 3	Solid	Non-Crystalline	
140-22793-2	S-7677_3_DPT08AP2	Step 3	Solid	Non-Crystalline	
140-22793-3	S-7677_4_DPT07AP2	Step 3	Solid	Non-Crystalline	
MB 140-49359/12-B	Method Blank	Step 3	Solid	Non-Crystalline	
LCS 140-49359/13-B	Lab Control Sample	Step 3	Solid	Non-Crystalline	
LCSD 140-49359/14-B	Lab Control Sample Dup	Step 3	Solid	Non-Crystalline	

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# QC Association Summary

Client: Sirem, div of Geosyntec Consultants  
Project/Site: S-7677 SiREMNA

Job ID: 140-22793-1

## Metals

### Prep Batch: 49393

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-22793-1	S-7677_2_DPT11AP2	Step 3	Solid	3010A	49359
140-22793-2	S-7677_3_DPT08AP2	Step 3	Solid	3010A	49359
140-22793-3	S-7677_4_DPT07AP2	Step 3	Solid	3010A	49359
MB 140-49359/12-B	Method Blank	Step 3	Solid	3010A	49359
LCS 140-49359/13-B	Lab Control Sample	Step 3	Solid	3010A	49359
LCSD 140-49359/14-B	Lab Control Sample Dup	Step 3	Solid	3010A	49359

### SEP Batch: 49394

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-22793-1	S-7677_2_DPT11AP2	Step 4	Solid	Metal Hydroxide	
140-22793-2	S-7677_3_DPT08AP2	Step 4	Solid	Metal Hydroxide	
140-22793-3	S-7677_4_DPT07AP2	Step 4	Solid	Metal Hydroxide	
MB 140-49394/12-B	Method Blank	Step 4	Solid	Metal Hydroxide	
LCS 140-49394/13-B	Lab Control Sample	Step 4	Solid	Metal Hydroxide	
LCSD 140-49394/14-B	Lab Control Sample Dup	Step 4	Solid	Metal Hydroxide	

### Prep Batch: 49441

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-22793-1	S-7677_2_DPT11AP2	Step 4	Solid	3010A	49394
140-22793-2	S-7677_3_DPT08AP2	Step 4	Solid	3010A	49394
140-22793-3	S-7677_4_DPT07AP2	Step 4	Solid	3010A	49394
MB 140-49394/12-B	Method Blank	Step 4	Solid	3010A	49394
LCS 140-49394/13-B	Lab Control Sample	Step 4	Solid	3010A	49394
LCSD 140-49394/14-B	Lab Control Sample Dup	Step 4	Solid	3010A	49394

### SEP Batch: 49442

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-22793-1	S-7677_2_DPT11AP2	Step 5	Solid	Organic-Bound	
140-22793-2	S-7677_3_DPT08AP2	Step 5	Solid	Organic-Bound	
140-22793-3	S-7677_4_DPT07AP2	Step 5	Solid	Organic-Bound	
MB 140-49442/12-B ^5	Method Blank	Step 5	Solid	Organic-Bound	
LCS 140-49442/13-B ^5	Lab Control Sample	Step 5	Solid	Organic-Bound	
LCSD 140-49442/14-B ^5	Lab Control Sample Dup	Step 5	Solid	Organic-Bound	

### Prep Batch: 49541

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-22793-1	S-7677_2_DPT11AP2	Step 5	Solid	3010A	49442
140-22793-2	S-7677_3_DPT08AP2	Step 5	Solid	3010A	49442
140-22793-3	S-7677_4_DPT07AP2	Step 5	Solid	3010A	49442
MB 140-49442/12-B ^5	Method Blank	Step 5	Solid	3010A	49442
LCS 140-49442/13-B ^5	Lab Control Sample	Step 5	Solid	3010A	49442
LCSD 140-49442/14-B ^5	Lab Control Sample Dup	Step 5	Solid	3010A	49442

### SEP Batch: 49542

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-22793-1	S-7677_2_DPT11AP2	Step 6	Solid	Acid/Sulfide	
140-22793-2	S-7677_3_DPT08AP2	Step 6	Solid	Acid/Sulfide	
140-22793-3	S-7677_4_DPT07AP2	Step 6	Solid	Acid/Sulfide	
MB 140-49542/12-A	Method Blank	Step 6	Solid	Acid/Sulfide	
LCS 140-49542/13-A	Lab Control Sample	Step 6	Solid	Acid/Sulfide	
LCSD 140-49542/14-A	Lab Control Sample Dup	Step 6	Solid	Acid/Sulfide	

Eurofins TestAmerica, Knoxville

# QC Association Summary

Client: Sirem, div of Geosyntec Consultants  
 Project/Site: S-7677 SiREMNA

Job ID: 140-22793-1

## Metals

### Analysis Batch: 49543

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-22793-1	S-7677_2_DPT11AP2	Step 1	Solid	6010B SEP	49305
140-22793-1	S-7677_2_DPT11AP2	Step 2	Solid	6010B SEP	49358
140-22793-1	S-7677_2_DPT11AP2	Step 3	Solid	6010B SEP	49393
140-22793-2	S-7677_3_DPT08AP2	Step 1	Solid	6010B SEP	49305
140-22793-2	S-7677_3_DPT08AP2	Step 2	Solid	6010B SEP	49358
140-22793-2	S-7677_3_DPT08AP2	Step 3	Solid	6010B SEP	49393
140-22793-3	S-7677_4_DPT07AP2	Step 1	Solid	6010B SEP	49305
140-22793-3	S-7677_4_DPT07AP2	Step 2	Solid	6010B SEP	49358
140-22793-3	S-7677_4_DPT07AP2	Step 3	Solid	6010B SEP	49393
MB 140-49214/12-B ^4	Method Blank	Step 1	Solid	6010B SEP	49305
MB 140-49306/12-B ^3	Method Blank	Step 2	Solid	6010B SEP	49358
MB 140-49359/12-B	Method Blank	Step 3	Solid	6010B SEP	49393
LCS 140-49214/13-B ^5	Lab Control Sample	Step 1	Solid	6010B SEP	49305
LCS 140-49306/13-B ^5	Lab Control Sample	Step 2	Solid	6010B SEP	49358
LCS 140-49359/13-B	Lab Control Sample	Step 3	Solid	6010B SEP	49393
LCSD 140-49214/14-B ^5	Lab Control Sample Dup	Step 1	Solid	6010B SEP	49305
LCSD 140-49306/14-B ^5	Lab Control Sample Dup	Step 2	Solid	6010B SEP	49358
LCSD 140-49359/14-B	Lab Control Sample Dup	Step 3	Solid	6010B SEP	49393

### Prep Batch: 49611

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-22793-1	S-7677_2_DPT11AP2	Step 7	Solid	Residual	
140-22793-2	S-7677_3_DPT08AP2	Step 7	Solid	Residual	
140-22793-3	S-7677_4_DPT07AP2	Step 7	Solid	Residual	
MB 140-49611/12-A	Method Blank	Step 7	Solid	Residual	
LCS 140-49611/13-A	Lab Control Sample	Step 7	Solid	Residual	
LCSD 140-49611/14-A	Lab Control Sample Dup	Step 7	Solid	Residual	

### Analysis Batch: 49686

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-22793-1	S-7677_2_DPT11AP2	Step 4	Solid	6010B SEP	49441
140-22793-1	S-7677_2_DPT11AP2	Step 5	Solid	6010B SEP	49541
140-22793-1	S-7677_2_DPT11AP2	Step 6	Solid	6010B SEP	49542
140-22793-2	S-7677_3_DPT08AP2	Step 4	Solid	6010B SEP	49441
140-22793-2	S-7677_3_DPT08AP2	Step 5	Solid	6010B SEP	49541
140-22793-2	S-7677_3_DPT08AP2	Step 6	Solid	6010B SEP	49542
140-22793-3	S-7677_4_DPT07AP2	Step 4	Solid	6010B SEP	49441
140-22793-3	S-7677_4_DPT07AP2	Step 5	Solid	6010B SEP	49541
140-22793-3	S-7677_4_DPT07AP2	Step 6	Solid	6010B SEP	49542
MB 140-49394/12-B	Method Blank	Step 4	Solid	6010B SEP	49441
MB 140-49442/12-B ^5	Method Blank	Step 5	Solid	6010B SEP	49541
MB 140-49542/12-A	Method Blank	Step 6	Solid	6010B SEP	49542
LCS 140-49394/13-B	Lab Control Sample	Step 4	Solid	6010B SEP	49441
LCS 140-49442/13-B ^5	Lab Control Sample	Step 5	Solid	6010B SEP	49541
LCS 140-49542/13-A	Lab Control Sample	Step 6	Solid	6010B SEP	49542
LCSD 140-49394/14-B	Lab Control Sample Dup	Step 4	Solid	6010B SEP	49441
LCSD 140-49442/14-B ^5	Lab Control Sample Dup	Step 5	Solid	6010B SEP	49541
LCSD 140-49542/14-A	Lab Control Sample Dup	Step 6	Solid	6010B SEP	49542



# QC Association Summary

Client: Sirem, div of Geosyntec Consultants  
 Project/Site: S-7677 SiREMNA

Job ID: 140-22793-1

## Metals

### Analysis Batch: 49736

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-22793-1	S-7677_2_DPT11AP2	Step 7	Solid	6010B SEP	49611
140-22793-1	S-7677_2_DPT11AP2	Total/NA	Solid	6010B	49213
140-22793-2	S-7677_3_DPT08AP2	Step 7	Solid	6010B SEP	49611
140-22793-2	S-7677_3_DPT08AP2	Total/NA	Solid	6010B	49213
140-22793-3	S-7677_4_DPT07AP2	Step 7	Solid	6010B SEP	49611
140-22793-3	S-7677_4_DPT07AP2	Total/NA	Solid	6010B	49213
MB 140-49213/13-A	Method Blank	Total/NA	Solid	6010B	49213
MB 140-49611/12-A	Method Blank	Step 7	Solid	6010B SEP	49611
LCS 140-49213/14-A	Lab Control Sample	Total/NA	Solid	6010B	49213
LCS 140-49611/13-A	Lab Control Sample	Step 7	Solid	6010B SEP	49611
LCSD 140-49213/15-A	Lab Control Sample Dup	Total/NA	Solid	6010B	49213
LCSD 140-49611/14-A	Lab Control Sample Dup	Step 7	Solid	6010B SEP	49611

### Analysis Batch: 49785

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-22793-1	S-7677_2_DPT11AP2	Sum of Steps 1-7	Solid	6010B SEP	
140-22793-2	S-7677_3_DPT08AP2	Sum of Steps 1-7	Solid	6010B SEP	
140-22793-3	S-7677_4_DPT07AP2	Sum of Steps 1-7	Solid	6010B SEP	

## General Chemistry

### Analysis Batch: 49285

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-22793-1	S-7677_2_DPT11AP2	Total/NA	Solid	Moisture	
140-22793-2	S-7677_3_DPT08AP2	Total/NA	Solid	Moisture	
140-22793-3	S-7677_4_DPT07AP2	Total/NA	Solid	Moisture	

# Lab Chronicle

Client: Sirem, div of Geosyntec Consultants  
 Project/Site: S-7677 SiREMNA

Job ID: 140-22793-1

**Client Sample ID: S-7677\_2\_DPT11AP2**

**Lab Sample ID: 140-22793-1**

**Date Collected: 04/20/21 00:00**

**Matrix: Solid**

**Date Received: 04/22/21 10:30**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Sum of Steps 1-7	Analysis	6010B SEP		1			49785	05/13/21 10:05	DKW	TAL KNX
	Instrument ID: NOEQUIP									
Total/NA	Analysis	Moisture		1			49285	04/28/21 07:50	BKD	TAL KNX
	Instrument ID: NOEQUIP									

**Client Sample ID: S-7677\_2\_DPT11AP2**

**Lab Sample ID: 140-22793-1**

**Date Collected: 04/20/21 00:00**

**Matrix: Solid**

**Date Received: 04/22/21 10:30**

**Percent Solids: 78.0**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	Total			1.000 g	50 mL	49213	04/27/21 08:00	KNC	TAL KNX
Total/NA	Analysis	6010B		5			49736	05/11/21 19:03	KNC	TAL KNX
	Instrument ID: DUO									
Step 1	SEP	Exchangeable			5.000 g	25 mL	49214	04/28/21 08:00	KNC	TAL KNX
Step 1	Prep	3010A			5 mL	50 mL	49305	04/29/21 08:00	KNC	TAL KNX
Step 1	Analysis	6010B SEP		4			49543	05/05/21 13:39	KNC	TAL KNX
	Instrument ID: DUO									
Step 2	SEP	Carbonate			5.000 g	25 mL	49306	04/29/21 08:00	KNC	TAL KNX
Step 2	Prep	3010A			5.00 mL	50.0 mL	49358	04/30/21 08:00	KNC	TAL KNX
Step 2	Analysis	6010B SEP		3			49543	05/05/21 15:16	KNC	TAL KNX
	Instrument ID: DUO									
Step 3	SEP	Non-Crystalline			5.00 g	25.0 mL	49359	04/30/21 08:00	KNC	TAL KNX
Step 3	Prep	3010A			5.00 mL	50.0 mL	49393	05/03/21 08:00	KNC	TAL KNX
Step 3	Analysis	6010B SEP		1			49543	05/05/21 16:35	KNC	TAL KNX
	Instrument ID: DUO									
Step 4	SEP	Metal Hydroxide			5.00 g	25.0 mL	49394	05/03/21 08:00	KNC	TAL KNX
Step 4	Prep	3010A			5.00 mL	50.0 mL	49441	05/04/21 08:00	KNC	TAL KNX
Step 4	Analysis	6010B SEP		1			49686	05/10/21 14:47	KNC	TAL KNX
	Instrument ID: DUO									
Step 5	SEP	Organic-Bound			5.00 g	75.00 mL	49442	05/04/21 08:00	KNC	TAL KNX
Step 5	Prep	3010A			5.00 mL	50.0 mL	49541	05/06/21 08:00	KNC	TAL KNX
Step 5	Analysis	6010B SEP		5			49686	05/10/21 16:25	KNC	TAL KNX
	Instrument ID: DUO									
Step 6	SEP	Acid/Sulfide			5.00 g	250.0 mL	49542	05/06/21 08:00	KNC	TAL KNX
Step 6	Analysis	6010B SEP		1			49686	05/10/21 17:44	KNC	TAL KNX
	Instrument ID: DUO									
Step 7	Prep	Residual			1.000 g	50 mL	49611	05/10/21 08:00	KNC	TAL KNX
Step 7	Analysis	6010B SEP		5			49736	05/11/21 17:59	KNC	TAL KNX
	Instrument ID: DUO									

# Lab Chronicle

Client: Sirem, div of Geosyntec Consultants  
 Project/Site: S-7677 SiREMNA

Job ID: 140-22793-1

**Client Sample ID: S-7677\_3\_DPT08AP2**

**Lab Sample ID: 140-22793-2**

**Date Collected: 04/20/21 00:00**

**Matrix: Solid**

**Date Received: 04/22/21 10:30**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Sum of Steps 1-7	Analysis	6010B SEP		1			49785	05/13/21 10:05	DKW	TAL KNX
	Instrument ID: NOEQUIP									
Total/NA	Analysis	Moisture		1			49285	04/28/21 07:50	BKD	TAL KNX
	Instrument ID: NOEQUIP									

**Client Sample ID: S-7677\_3\_DPT08AP2**

**Lab Sample ID: 140-22793-2**

**Date Collected: 04/20/21 00:00**

**Matrix: Solid**

**Date Received: 04/22/21 10:30**

**Percent Solids: 88.1**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	Total			1.000 g	50 mL	49213	04/27/21 08:00	KNC	TAL KNX
Total/NA	Analysis	6010B		2			49736	05/11/21 19:08	KNC	TAL KNX
	Instrument ID: DUO									
Step 1	SEP	Exchangeable			5.000 g	25 mL	49214	04/28/21 08:00	KNC	TAL KNX
Step 1	Prep	3010A			5 mL	50 mL	49305	04/29/21 08:00	KNC	TAL KNX
Step 1	Analysis	6010B SEP		4			49543	05/05/21 13:58	KNC	TAL KNX
	Instrument ID: DUO									
Step 2	SEP	Carbonate			5.000 g	25 mL	49306	04/29/21 08:00	KNC	TAL KNX
Step 2	Prep	3010A			5.00 mL	50.0 mL	49358	04/30/21 08:00	KNC	TAL KNX
Step 2	Analysis	6010B SEP		3			49543	05/05/21 15:21	KNC	TAL KNX
	Instrument ID: DUO									
Step 3	SEP	Non-Crystalline			5.00 g	25.0 mL	49359	04/30/21 08:00	KNC	TAL KNX
Step 3	Prep	3010A			5.00 mL	50.0 mL	49393	05/03/21 08:00	KNC	TAL KNX
Step 3	Analysis	6010B SEP		1			49543	05/05/21 16:55	KNC	TAL KNX
	Instrument ID: DUO									
Step 4	SEP	Metal Hydroxide			5.00 g	25.0 mL	49394	05/03/21 08:00	KNC	TAL KNX
Step 4	Prep	3010A			5.00 mL	50.0 mL	49441	05/04/21 08:00	KNC	TAL KNX
Step 4	Analysis	6010B SEP		1			49686	05/10/21 15:06	KNC	TAL KNX
	Instrument ID: DUO									
Step 5	SEP	Organic-Bound			5.00 g	75.00 mL	49442	05/04/21 08:00	KNC	TAL KNX
Step 5	Prep	3010A			5.00 mL	50.0 mL	49541	05/06/21 08:00	KNC	TAL KNX
Step 5	Analysis	6010B SEP		5			49686	05/10/21 16:30	KNC	TAL KNX
	Instrument ID: DUO									
Step 6	SEP	Acid/Sulfide			5.00 g	250.0 mL	49542	05/06/21 08:00	KNC	TAL KNX
Step 6	Analysis	6010B SEP		1			49686	05/10/21 18:04	KNC	TAL KNX
	Instrument ID: DUO									
Step 7	Prep	Residual			1.000 g	50 mL	49611	05/10/21 08:00	KNC	TAL KNX
Step 7	Analysis	6010B SEP		2			49736	05/11/21 18:04	KNC	TAL KNX
	Instrument ID: DUO									

# Lab Chronicle

Client: Sirem, div of Geosyntec Consultants  
 Project/Site: S-7677 SiREMNA

Job ID: 140-22793-1

**Client Sample ID: S-7677\_4\_DPT07AP2**

**Lab Sample ID: 140-22793-3**

**Date Collected: 04/20/21 00:00**

**Matrix: Solid**

**Date Received: 04/22/21 10:30**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Sum of Steps 1-7	Analysis	6010B SEP		1			49785	05/13/21 10:05	DKW	TAL KNX
	Instrument ID: NOEQUIP									
Total/NA	Analysis	Moisture		1			49285	04/28/21 07:50	BKD	TAL KNX
	Instrument ID: NOEQUIP									

**Client Sample ID: S-7677\_4\_DPT07AP2**

**Lab Sample ID: 140-22793-3**

**Date Collected: 04/20/21 00:00**

**Matrix: Solid**

**Date Received: 04/22/21 10:30**

**Percent Solids: 84.0**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	Total			1.000 g	50 mL	49213	04/27/21 08:00	KNC	TAL KNX
Total/NA	Analysis	6010B		2			49736	05/11/21 19:13	KNC	TAL KNX
	Instrument ID: DUO									
Step 1	SEP	Exchangeable			5.000 g	25 mL	49214	04/28/21 08:00	KNC	TAL KNX
Step 1	Prep	3010A			5 mL	50 mL	49305	04/29/21 08:00	KNC	TAL KNX
Step 1	Analysis	6010B SEP		4			49543	05/05/21 14:03	KNC	TAL KNX
	Instrument ID: DUO									
Step 2	SEP	Carbonate			5.000 g	25 mL	49306	04/29/21 08:00	KNC	TAL KNX
Step 2	Prep	3010A			5.00 mL	50.0 mL	49358	04/30/21 08:00	KNC	TAL KNX
Step 2	Analysis	6010B SEP		3			49543	05/05/21 15:26	KNC	TAL KNX
	Instrument ID: DUO									
Step 3	SEP	Non-Crystalline			5.00 g	25.0 mL	49359	04/30/21 08:00	KNC	TAL KNX
Step 3	Prep	3010A			5.00 mL	50.0 mL	49393	05/03/21 08:00	KNC	TAL KNX
Step 3	Analysis	6010B SEP		1			49543	05/05/21 17:00	KNC	TAL KNX
	Instrument ID: DUO									
Step 4	SEP	Metal Hydroxide			5.00 g	25.0 mL	49394	05/03/21 08:00	KNC	TAL KNX
Step 4	Prep	3010A			5.00 mL	50.0 mL	49441	05/04/21 08:00	KNC	TAL KNX
Step 4	Analysis	6010B SEP		1			49686	05/10/21 15:11	KNC	TAL KNX
	Instrument ID: DUO									
Step 5	SEP	Organic-Bound			5.00 g	75.00 mL	49442	05/04/21 08:00	KNC	TAL KNX
Step 5	Prep	3010A			5.00 mL	50.0 mL	49541	05/06/21 08:00	KNC	TAL KNX
Step 5	Analysis	6010B SEP		5			49686	05/10/21 16:35	KNC	TAL KNX
	Instrument ID: DUO									
Step 6	SEP	Acid/Sulfide			5.00 g	250.0 mL	49542	05/06/21 08:00	KNC	TAL KNX
Step 6	Analysis	6010B SEP		1			49686	05/10/21 18:09	KNC	TAL KNX
	Instrument ID: DUO									
Step 7	Prep	Residual			1.000 g	50 mL	49611	05/10/21 08:00	KNC	TAL KNX
Step 7	Analysis	6010B SEP		2			49736	05/11/21 18:08	KNC	TAL KNX
	Instrument ID: DUO									

# Lab Chronicle

Client: Sirem, div of Geosyntec Consultants  
Project/Site: S-7677 SiREMNA

Job ID: 140-22793-1

**Client Sample ID: Method Blank**

**Lab Sample ID: MB 140-49213/13-A**

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	Total			1.000 g	50 mL	49213	04/27/21 08:00	KNC	TAL KNX
Total/NA	Analysis	6010B		1			49736	05/11/21 12:55	KNC	TAL KNX
Instrument ID: DUO										

**Client Sample ID: Method Blank**

**Lab Sample ID: MB 140-49214/12-B ^4**

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 1	SEP	Exchangeable			5.000 g	25 mL	49214	04/28/21 08:00	KNC	TAL KNX
Step 1	Prep	3010A			5 mL	50 mL	49305	04/29/21 08:00	KNC	TAL KNX
Step 1	Analysis	6010B SEP		4			49543	05/05/21 13:00	KNC	TAL KNX
Instrument ID: DUO										

**Client Sample ID: Method Blank**

**Lab Sample ID: MB 140-49306/12-B ^3**

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 2	SEP	Carbonate			5.000 g	25 mL	49306	04/29/21 08:00	KNC	TAL KNX
Step 2	Prep	3010A			5.00 mL	50.0 mL	49358	04/30/21 08:00	KNC	TAL KNX
Step 2	Analysis	6010B SEP		3			49543	05/05/21 14:22	KNC	TAL KNX
Instrument ID: DUO										

**Client Sample ID: Method Blank**

**Lab Sample ID: MB 140-49359/12-B**

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 3	SEP	Non-Crystalline			5.00 g	25.0 mL	49359	04/30/21 08:00	KNC	TAL KNX
Step 3	Prep	3010A			5.00 mL	50.0 mL	49393	05/03/21 08:00	KNC	TAL KNX
Step 3	Analysis	6010B SEP		1			49543	05/05/21 15:56	KNC	TAL KNX
Instrument ID: DUO										

**Client Sample ID: Method Blank**

**Lab Sample ID: MB 140-49394/12-B**

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 4	SEP	Metal Hydroxide			5.00 g	25.0 mL	49394	05/03/21 08:00	KNC	TAL KNX
Step 4	Prep	3010A			5.00 mL	50.0 mL	49441	05/04/21 08:00	KNC	TAL KNX
Step 4	Analysis	6010B SEP		1			49686	05/10/21 14:08	KNC	TAL KNX
Instrument ID: DUO										

# Lab Chronicle

Client: Sirem, div of Geosyntec Consultants  
 Project/Site: S-7677 SiREMNA

Job ID: 140-22793-1

## Client Sample ID: Method Blank

Date Collected: N/A

Date Received: N/A

## Lab Sample ID: MB 140-49442/12-B ^5

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 5	SEP	Organic-Bound			5.00 g	75.00 mL	49442	05/04/21 08:00	KNC	TAL KNX
Step 5	Prep	3010A			5.00 mL	50.0 mL	49541	05/06/21 08:00	KNC	TAL KNX
Step 5	Analysis	6010B SEP		5			49686	05/10/21 15:31	KNC	TAL KNX
Instrument ID: DUO										

## Client Sample ID: Method Blank

Date Collected: N/A

Date Received: N/A

## Lab Sample ID: MB 140-49542/12-A

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 6	SEP	Acid/Sulfide			5.00 g	250.0 mL	49542	05/06/21 08:00	KNC	TAL KNX
Step 6	Analysis	6010B SEP		1			49686	05/10/21 17:05	KNC	TAL KNX
Instrument ID: DUO										

## Client Sample ID: Method Blank

Date Collected: N/A

Date Received: N/A

## Lab Sample ID: MB 140-49611/12-A

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 7	Prep	Residual			1.000 g	50 mL	49611	05/10/21 08:00	KNC	TAL KNX
Step 7	Analysis	6010B SEP		1			49736	05/11/21 12:41	KNC	TAL KNX
Instrument ID: DUO										

## Client Sample ID: Lab Control Sample

Date Collected: N/A

Date Received: N/A

## Lab Sample ID: LCS 140-49213/14-A

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	Total			1.000 g	50 mL	49213	04/27/21 08:00	KNC	TAL KNX
Total/NA	Analysis	6010B		1			49736	05/11/21 13:00	KNC	TAL KNX
Instrument ID: DUO										

## Client Sample ID: Lab Control Sample

Date Collected: N/A

Date Received: N/A

## Lab Sample ID: LCS 140-49214/13-B ^5

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 1	SEP	Exchangeable			5.000 g	25 mL	49214	04/28/21 08:00	KNC	TAL KNX
Step 1	Prep	3010A			5 mL	50 mL	49305	04/29/21 08:00	KNC	TAL KNX
Step 1	Analysis	6010B SEP		5			49543	05/05/21 13:05	KNC	TAL KNX
Instrument ID: DUO										

# Lab Chronicle

Client: Sirem, div of Geosyntec Consultants  
 Project/Site: S-7677 SiREMNA

Job ID: 140-22793-1

## Client Sample ID: Lab Control Sample

## Lab Sample ID: LCS 140-49306/13-B ^5

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 2	SEP	Carbonate			5.000 g	25 mL	49306	04/29/21 08:00	KNC	TAL KNX
Step 2	Prep	3010A			5.00 mL	50.0 mL	49358	04/30/21 08:00	KNC	TAL KNX
Step 2	Analysis	6010B SEP		5			49543	05/05/21 14:27	KNC	TAL KNX
Instrument ID: DUO										

## Client Sample ID: Lab Control Sample

## Lab Sample ID: LCS 140-49359/13-B

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 3	SEP	Non-Crystalline			5.00 g	25.0 mL	49359	04/30/21 08:00	KNC	TAL KNX
Step 3	Prep	3010A			5.00 mL	50.0 mL	49393	05/03/21 08:00	KNC	TAL KNX
Step 3	Analysis	6010B SEP		1			49543	05/05/21 16:01	KNC	TAL KNX
Instrument ID: DUO										

## Client Sample ID: Lab Control Sample

## Lab Sample ID: LCS 140-49394/13-B

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 4	SEP	Metal Hydroxide			5.00 g	25.0 mL	49394	05/03/21 08:00	KNC	TAL KNX
Step 4	Prep	3010A			5.00 mL	50.0 mL	49441	05/04/21 08:00	KNC	TAL KNX
Step 4	Analysis	6010B SEP		1			49686	05/10/21 14:13	KNC	TAL KNX
Instrument ID: DUO										

## Client Sample ID: Lab Control Sample

## Lab Sample ID: LCS 140-49442/13-B ^5

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 5	SEP	Organic-Bound			5.00 g	75.00 mL	49442	05/04/21 08:00	KNC	TAL KNX
Step 5	Prep	3010A			5.00 mL	50.0 mL	49541	05/06/21 08:00	KNC	TAL KNX
Step 5	Analysis	6010B SEP		5			49686	05/10/21 15:36	KNC	TAL KNX
Instrument ID: DUO										

## Client Sample ID: Lab Control Sample

## Lab Sample ID: LCS 140-49542/13-A

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 6	SEP	Acid/Sulfide			5.00 g	250.0 mL	49542	05/06/21 08:00	KNC	TAL KNX
Step 6	Analysis	6010B SEP		1			49686	05/10/21 17:10	KNC	TAL KNX
Instrument ID: DUO										



# Lab Chronicle

Client: Sirem, div of Geosyntec Consultants  
 Project/Site: S-7677 SiREMNA

Job ID: 140-22793-1

## Client Sample ID: Lab Control Sample

## Lab Sample ID: LCS 140-49611/13-A

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 7	Prep	Residual			1.000 g	50 mL	49611	05/10/21 08:00	KNC	TAL KNX
Step 7	Analysis	6010B SEP		1			49736	05/11/21 12:46	KNC	TAL KNX
Instrument ID: DUO										

## Client Sample ID: Lab Control Sample Dup

## Lab Sample ID: LCSD 140-49213/15-A

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	Total			1.000 g	50 mL	49213	04/27/21 08:00	KNC	TAL KNX
Total/NA	Analysis	6010B		1			49736	05/11/21 13:05	KNC	TAL KNX
Instrument ID: DUO										

## Client Sample ID: Lab Control Sample Dup

## Lab Sample ID: LCSD 140-49214/14-B ^5

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 1	SEP	Exchangeable			5.000 g	25 mL	49214	04/28/21 08:00	KNC	TAL KNX
Step 1	Prep	3010A			5 mL	50 mL	49305	04/29/21 08:00	KNC	TAL KNX
Step 1	Analysis	6010B SEP		5			49543	05/05/21 13:10	KNC	TAL KNX
Instrument ID: DUO										

## Client Sample ID: Lab Control Sample Dup

## Lab Sample ID: LCSD 140-49306/14-B ^5

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 2	SEP	Carbonate			5.000 g	25 mL	49306	04/29/21 08:00	KNC	TAL KNX
Step 2	Prep	3010A			5.00 mL	50.0 mL	49358	04/30/21 08:00	KNC	TAL KNX
Step 2	Analysis	6010B SEP		5			49543	05/05/21 14:32	KNC	TAL KNX
Instrument ID: DUO										

## Client Sample ID: Lab Control Sample Dup

## Lab Sample ID: LCSD 140-49359/14-B

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 3	SEP	Non-Crystalline			5.00 g	25.0 mL	49359	04/30/21 08:00	KNC	TAL KNX
Step 3	Prep	3010A			5.00 mL	50.0 mL	49393	05/03/21 08:00	KNC	TAL KNX
Step 3	Analysis	6010B SEP		1			49543	05/05/21 16:05	KNC	TAL KNX
Instrument ID: DUO										



# Lab Chronicle

Client: Sirem, div of Geosyntec Consultants  
 Project/Site: S-7677 SiREMNA

Job ID: 140-22793-1

## Client Sample ID: Lab Control Sample Dup

Lab Sample ID: LCSD 140-49394/14-B

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 4	SEP	Metal Hydroxide			5.00 g	25.0 mL	49394	05/03/21 08:00	KNC	TAL KNX
Step 4	Prep	3010A			5.00 mL	50.0 mL	49441	05/04/21 08:00	KNC	TAL KNX
Step 4	Analysis	6010B SEP		1			49686	05/10/21 14:17	KNC	TAL KNX
Instrument ID: DUO										

## Client Sample ID: Lab Control Sample Dup

Lab Sample ID: LCSD 140-49442/14-B ^5

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 5	SEP	Organic-Bound			5.00 g	75.00 mL	49442	05/04/21 08:00	KNC	TAL KNX
Step 5	Prep	3010A			5.00 mL	50.0 mL	49541	05/06/21 08:00	KNC	TAL KNX
Step 5	Analysis	6010B SEP		5			49686	05/10/21 15:41	KNC	TAL KNX
Instrument ID: DUO										

## Client Sample ID: Lab Control Sample Dup

Lab Sample ID: LCSD 140-49542/14-A

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 6	SEP	Acid/Sulfide			5.00 g	250.0 mL	49542	05/06/21 08:00	KNC	TAL KNX
Step 6	Analysis	6010B SEP		1			49686	05/10/21 17:15	KNC	TAL KNX
Instrument ID: DUO										

## Client Sample ID: Lab Control Sample Dup

Lab Sample ID: LCSD 140-49611/14-A

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 7	Prep	Residual			1.000 g	50 mL	49611	05/10/21 08:00	KNC	TAL KNX
Step 7	Analysis	6010B SEP		1			49736	05/11/21 12:50	KNC	TAL KNX
Instrument ID: DUO										

### Laboratory References:

TAL KNX = Eurofins TestAmerica, Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

# Accreditation/Certification Summary

Client: Sirem, div of Geosyntec Consultants  
 Project/Site: S-7677 SiREMNA

Job ID: 140-22793-1

## Laboratory: Eurofins TestAmerica, Knoxville

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
	AFCEE	N/A	
ANAB	Dept. of Defense ELAP	L2311	02-13-22
ANAB	Dept. of Energy	L2311.01	02-13-22
ANAB	ISO/IEC 17025	L2311	02-13-22
Arkansas DEQ	State	88-0688	06-17-21
California	State	2423	06-30-22
Colorado	State	TN00009	02-28-22
Connecticut	State	PH-0223	09-30-21
Florida	NELAP	E87177	06-30-21
Georgia (DW)	State	906	12-11-22
Hawaii	State	NA	12-11-21
Kansas	NELAP	E-10349	10-31-21
Kentucky (DW)	State	90101	12-31-21
Louisiana	NELAP	83979	06-30-21
Louisiana (DW)	State	LA019	12-31-21
Maryland	State	277	03-31-22
Michigan	State	9933	12-11-22
Nevada	State	TN00009	07-12-21
New Hampshire	NELAP	299919	01-17-22
New Jersey	NELAP	TN001	06-30-21
New York	NELAP	10781	03-31-22
North Carolina (DW)	State	21705	07-31-21
North Carolina (WW/SW)	State	64	12-31-21
Ohio VAP	State	CL0059	06-02-23
Oklahoma	State	9415	08-31-21
Oregon	NELAP	TNI0189	01-01-22
Pennsylvania	NELAP	68-00576	12-31-21
Tennessee	State	02014	12-11-22
Texas	NELAP	T104704380-18-12	08-31-21
US Fish & Wildlife	US Federal Programs	058448	07-31-21
USDA	US Federal Programs	P330-19-00236	08-20-22
Utah	NELAP	TN00009	07-31-21
Virginia	NELAP	460176	09-14-21
Washington	State	C593	01-19-22
West Virginia (DW)	State	9955C	01-02-22
West Virginia DEP	State	345	04-30-22
Wisconsin	State	998044300	08-31-21

# Method Summary

Client: Sirem, div of Geosyntec Consultants  
Project/Site: S-7677 SIREMNA

Job ID: 140-22793-1

Method	Method Description	Protocol	Laboratory
6010B	SEP Metals (ICP) - Total	SW846	TAL KNX
6010B SEP	SEP Metals (ICP)	SW846	TAL KNX
Moisture	Percent Moisture	EPA	TAL KNX
3010A	Preparation, Total Metals	SW846	TAL KNX
Acid/Sulfide	Sequential Extraction Procedure, Acid/Sulfide Fraction	TAL-KNOX	TAL KNX
Carbonate	Sequential Extraction Procedure, Carbonate Fraction	TAL-KNOX	TAL KNX
Exchangeable	Sequential Extraction Procedure, Exchangeable Fraction	TAL-KNOX	TAL KNX
Metal Hydroxide	Sequential Extraction Procedure, Metal Hydroxide Fraction	TAL-KNOX	TAL KNX
Non-Crystalline	Sequential Extraction Procedure, Non-crystalline Materials	TAL-KNOX	TAL KNX
Organic-Bound	Sequential Extraction Procedure, Organic Bound Fraction	TAL-KNOX	TAL KNX
Residual	Sequential Extraction Procedure, Residual Fraction	TAL-KNOX	TAL KNX
Total	Preparation, Total Material	TAL-KNOX	TAL KNX

#### Protocol References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL-KNOX = TestAmerica Laboratories, Knoxville, Facility Standard Operating Procedure.

#### Laboratory References:

TAL KNX = Eurofins TestAmerica, Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

# Chain of Custody Record



TestAmerica Laboratories, Inc. d/b/a Eurofins TestAmerica

Regulatory Program:  DW  NPDES  RCRA  Other:

<b>Project Manager:</b> Kela Ashworth Email: kashworth@stremilab.com Tel/Fax:		<b>Site Contact:</b> Lab Contact:		<b>Date:</b> Carrier:		<b>COC No.:</b> _____ of _____ COCs	
<b>Client Contact</b> SIREM 130 Stone Road West Guelph, Ontario, N1G 2Z3 519-822-2265 (xxx) xxx-xxxx FAX Project Name: S-7677 SIREMNA Site: P O # 800003206		<b>Analysis Turnaround Time</b> <input type="checkbox"/> CALENDAR DAYS <input type="checkbox"/> WORKING DAYS TAT if different from Below _____ <input type="checkbox"/> 2 weeks <input type="checkbox"/> 1 week <input type="checkbox"/> 2 days <input type="checkbox"/> 1 day		<b>Filtered Sample (Y/N)</b> Perform MS / MSD (Y/N)		<b>Sample Specific Notes:</b> SEP for Cobalt SEP for Cobalt SEP for Cobalt SEP for Lithium & Molybdenum SEP for Lithium & Molybdenum SEP for Lithium & Molybdenum	
Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Sequential Extraction Procedure	
S-7677_2_DPT11AP2	20-Apr-21		S	S	1	X	
S-7677_3_DPT08AP2			S	S	1	X	
S-7677_4_DPT07AP2			S	S	1	X	
S-7677_5_DPT01AP3			S	S	1	X	
S-7677_6_DPT03AP3			S	S	1	X	
S-7677_7_DPT02AP3			S	S	1	X	
NO CUSTODY SEALS RECEIVED AT 17:08 / 17.0.C HAS 42221 WORTH-FES X# 77349743 87416 INT PD							
<b>Preservation Used:</b> 1= Ice, 2= HCl; 3= H2SO4; 4= HNO3; 5= NaOH; 6= Other <b>Possible Hazard Identification:</b> Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.							
<b>Special Instructions/QC Requirements &amp; Comments:</b> <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Return to Client <input type="checkbox"/> Disposal by Lab <input type="checkbox"/> Archive for _____ Months							
<b>Custody Seal No.:</b> SIREM Company: SIREM		<b>Received by:</b> Date/Time: 16:30 2/10/21 Received by: [Signature]		<b>Company:</b> EPA X#X Company:		<b>Therm ID No.:</b> Date/Time: 4-22-21 12:30 Date/Time:	
<b>Relinquished by:</b> Kela Ashworth		<b>Relinquished by:</b>		<b>Received in Laboratory by:</b>		<b>Date/Time:</b>	



EUROFINS/TESTAMERICA KNOXVILLE SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST Log In Number:

Review Items	Yes	No	NA	If No, what was the problem?	Comments/Actions Taken
1. Are the shipping containers intact?	/				
2. Were ambient air containers received intact?			/	<input type="checkbox"/> Containers, Broken	
3. The coolers/containers custody seal if present, is it intact?			/	<input type="checkbox"/> Checked in lab <input type="checkbox"/> Yes <input type="checkbox"/> NA	
4. Is the cooler temperature within limits? (> freezing temp. of water to 6 °C, VOST: 10°C) Thermometer ID : <u>SC70</u> Correction factor: <u>-0.2°C</u>		/		<input type="checkbox"/> Cooler Out of Temp, Client Contacted, Proceed/Cancel <input type="checkbox"/> Cooler Out of Temp, Same Day Receipt	
5. Were all of the sample containers received intact?	/			<input type="checkbox"/> Containers, Broken	
6. Were samples received in appropriate containers?	/			<input type="checkbox"/> Containers, Improper; Client Contacted; Proceed/Cancel	
7. Do sample container labels match COC? (IDs, Dates, Times)	/			<input type="checkbox"/> COC & Samples Do Not Match <input type="checkbox"/> COC Incorrect/Incomplete <input type="checkbox"/> COC Not Received	
8. Were all of the samples listed on the COC received?	/			<input type="checkbox"/> Sample Received, Not on COC <input type="checkbox"/> Sample on COC, Not Received <input type="checkbox"/> COC; No Date/Time; Client Contacted	
9. Is the date/time of sample collection noted?	/				Labeling Verified by: _____ Date: _____
10. Was the sampler identified on the COC?	/		/	<input type="checkbox"/> Sampler Not Listed on COC	pH test strip lot number: _____
11. Is the client and project name/# identified?	/			<input type="checkbox"/> COC Incorrect/Incomplete	
12. Are tests/parameters listed for each sample?	/			<input type="checkbox"/> COC No tests on COC	
13. Is the matrix of the samples noted?	/			<input type="checkbox"/> COC Incorrect/Incomplete	
14. Was COC relinquished? (Signed/Dated/Timed)	/			<input type="checkbox"/> COC Incorrect/Incomplete	Box 16A: pH Preservation Box 18A: Residual Chlorine
15. Were samples received within holding time?				<input type="checkbox"/> Holding Time - Receipt	Preservative: _____
16. Were samples received with correct chemical preservative (excluding Encore)?			/	<input type="checkbox"/> pH Adjusted, pH Included (See box 16A) <input type="checkbox"/> Incorrect Preservative	Lot Number: _____ Exp Date: _____ Analyst: _____
17. Were VOA samples received without headspace?			/	<input type="checkbox"/> Headspace (VOA only) <input type="checkbox"/> Residual Chlorine	Date: _____ Time: _____
18. Did you check for residual chlorine, if necessary? (e.g. 1613B, 1668) Chlorine test strip lot number: _____			/		
19. For 1613B water samples is pH<9?			/	<input type="checkbox"/> If no, notify lab to adjust	
20. For rad samples was sample activity info. Provided?			/	<input type="checkbox"/> Project missing info	
Project #: <u>14006308</u> PM Instructions: <u>NA</u>					

Sample Receiving Associate: Randy Brown Date: 4-28-21

QA026R32.doc, 062719





SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.  
Lakefield - Ontario - KOL 2HO  
Phone: 705-652-2000 FAX: 705-652-6365

**SiREM Laboratory**

Attn : Michael Healey

130 Stone Road W  
Guelph, ON  
N1G 3Z2, Canada

Phone: 519-822-2265  
Fax:519-822-3151

**Project :** Hammond MNA

20-July-2021

**Date Rec. :** 09 July 2021  
**LR Report:** CA13335-JUL21  
**Reference:** P.O# 80000321DA

**Copy:** #1

# CERTIFICATE OF ANALYSIS

## Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: HAP2DPT07_13 a	6: HAP2DPT07_14 a	7: HAP2DPT07_15 a	8: HAP2DPT07_16 a	9: HAP2DPT07_17 a	10: HAP2DPT07_18 a	11: HAP2DPT07_19 a
Sample Date & Time					05-Jul-21	05-Jul-21	05-Jul-21	05-Jul-21	06-Jul-21	06-Jul-21	07-Jul-21
Temperature Upon Receipt [°C]	---	---	---	---	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Silver (dissolved) [mg/L]	14-Jul-21	09:11	16-Jul-21	16:36	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
Aluminum (dissolved) [mg/L]	14-Jul-21	09:11	16-Jul-21	16:36	20.9	20.7	19.6	18.8	20.0	22.7	20.8
Arsenic (dissolved) [mg/L]	14-Jul-21	09:11	16-Jul-21	16:36	0.0052	0.0050	0.0050	0.0049	0.0051	0.0058	0.0050
Barium (dissolved) [mg/L]	14-Jul-21	09:11	16-Jul-21	16:36	0.00527	0.00535	0.00645	0.00630	0.00541	0.00530	0.00560
Beryllium (dissolved) [mg/L]	14-Jul-21	09:11	16-Jul-21	16:36	0.0199	0.0197	0.0196	0.0199	0.0219	0.0231	0.0245
Boron (dissolved) [mg/L]	14-Jul-21	09:11	16-Jul-21	16:36	0.016	0.007	0.009	0.007	0.020	0.010	0.021
Bismuth (dissolved) [mg/L]	14-Jul-21	09:11	16-Jul-21	16:36	0.00001	0.00002	0.00001	0.00001	0.00001	0.00002	0.00025
Calcium (dissolved) [mg/L]	14-Jul-21	09:11	16-Jul-21	16:36	165	165	150	157	174	179	177
Cadmium (dissolved) [mg/L]	14-Jul-21	09:11	16-Jul-21	16:36	0.0638	0.0636	0.0597	0.0599	0.0609	0.0734	0.0673
Cobalt (dissolved) [mg/L]	14-Jul-21	09:11	16-Jul-21	16:36	1.54	1.49	1.43	1.50	1.65	1.84	1.76
Chromium (dissolved) [mg/L]	14-Jul-21	09:11	16-Jul-21	16:36	0.0405	0.0344	0.0286	0.0357	0.0257	0.0278	0.0227
Copper (dissolved) [mg/L]	14-Jul-21	09:11	16-Jul-21	16:36	0.406	0.389	0.371	0.386	0.364	0.417	0.370
Iron (dissolved) [mg/L]	14-Jul-21	09:11	16-Jul-21	16:36	103	102	88.1	89.2	98.7	108	102
Potassium (dissolved) [mg/L]	14-Jul-21	09:11	16-Jul-21	16:36	0.221	0.219	0.247	0.248	0.217	0.237	0.186
Lithium (dissolved) [mg/L]	14-Jul-21	09:11	16-Jul-21	16:36	0.0600	0.0586	0.0574	0.0609	0.0679	0.0724	0.0799
Magnesium (dissolved) [mg/L]	14-Jul-21	09:11	16-Jul-21	16:36	17.8	18.0	17.4	18.5	20.4	21.9	24.0
Manganese (dissolved) [mg/L]	14-Jul-21	09:11	20-Jul-21	10:08	15.9	15.1	14.2	14.9	16.0	18.5	16.9
Molybdenum (dissolved) [mg/L]	14-Jul-21	09:11	16-Jul-21	16:37	< 0.00004	< 0.00004	< 0.00004	< 0.00004	< 0.00004	< 0.00004	< 0.00004

Online LIMS

0002571988



SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.  
Lakefield - Ontario - KOL 2HO  
Phone: 705-652-2000 FAX: 705-652-6365

Project : Hammond MNA

LR Report : CA13335-JUL21

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: HAP2DPT07_13 a	6: HAP2DPT07_14 a	7: HAP2DPT07_15 a	8: HAP2DPT07_16 a	9: HAP2DPT07_17 a	10: HAP2DPT07_18 a	11: HAP2DPT07_19 a
Sodium (dissolved) [mg/L]	14-Jul-21	09:11	16-Jul-21	16:37	3.07	3.17	3.02	3.17	3.50	3.24	3.74
Nickel (dissolved) [mg/L]	14-Jul-21	09:11	16-Jul-21	16:37	2.89	2.81	2.63	2.76	2.79	3.19	2.94
Lead (dissolved) [mg/L]	14-Jul-21	09:11	16-Jul-21	16:37	0.00018	0.00017	0.00021	0.00018	0.00019	0.00020	0.00026
Antimony (dissolved) [mg/L]	14-Jul-21	09:11	16-Jul-21	16:37	< 0.0009	< 0.0009	< 0.0009	< 0.0009	< 0.0009	< 0.0009	< 0.0009
Selenium (dissolved) [mg/L]	14-Jul-21	09:11	16-Jul-21	16:37	0.127	0.125	0.119	0.115	0.122	0.139	0.131
Tin (dissolved) [mg/L]	14-Jul-21	09:11	16-Jul-21	16:37	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006
Strontium (dissolved) [mg/L]	14-Jul-21	09:11	16-Jul-21	16:37	0.231	0.232	0.212	0.213	0.231	0.253	0.228
Titanium (dissolved) [mg/L]	14-Jul-21	09:11	16-Jul-21	16:37	0.00011	0.00013	0.00009	0.00013	0.00010	0.00008	0.00014
Thallium (dissolved) [mg/L]	14-Jul-21	09:11	16-Jul-21	16:37	0.000017	0.000019	0.000019	0.000018	0.000019	0.000019	0.000016
Uranium (dissolved) [mg/L]	14-Jul-21	09:11	16-Jul-21	16:37	0.0215	0.0212	0.0214	0.0209	0.0178	0.0216	0.0181
Vanadium (dissolved) [mg/L]	14-Jul-21	09:11	16-Jul-21	16:37	0.00048	0.00042	0.00032	0.00035	0.00038	0.00042	0.00045
Tungsten (dissolved) [mg/L]	14-Jul-21	09:11	16-Jul-21	16:37	0.00012	0.00013	0.00012	0.00010	0.00014	0.00013	0.00014
Yttrium (dissolved) [mg/L]	14-Jul-21	09:11	16-Jul-21	16:37	0.945	0.950	0.887	0.873	0.927	1.04	0.876
Zinc (dissolved) [mg/L]	14-Jul-21	09:11	20-Jul-21	10:08	16.6	16.1	15.0	15.6	15.8	18.1	16.9

Analysis	12: HAP2DPT07_20 a	13: HAP2DPT07_21 a	14: HAP2DPT07_22 a	15: HAP2DPT08_23 a	16: HAP2DPT08_24 a	17: HAP2DPT08_25 a	18: HAP2DPT08_26 a	19: HAP2DPT08_27 a	20: HAP2DPT08_28 a	21: HAP2DPT08_29 a	22: HAP2DPT08_30 a
Sample Date & Time	07-Jul-21	08-Jul-21	08-Jul-21	05-Jul-21	05-Jul-21	05-Jul-21	05-Jul-21	06-Jul-21	06-Jul-21	07-Jul-21	07-Jul-21
Temperature Upon Receipt [°C]	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Silver (dissolved) [mg/L]	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
Aluminum (dissolved) [mg/L]	21.6	13.0	14.9	0.011	0.002	0.003	0.003	0.003	0.020	0.011	0.023
Arsenic (dissolved) [mg/L]	0.0053	0.0038	0.0042	0.0002	0.0002	0.0003	0.0002	< 0.0002	0.0002	0.0002	0.0002
Barium (dissolved) [mg/L]	0.00537	0.00756	0.00728	0.00388	0.00414	0.00390	0.00394	0.00378	0.00403	0.00605	0.00605
Beryllium (dissolved) [mg/L]	0.0248	0.0199	0.0218	0.000046	0.000007	0.000022	0.000007	< 0.000007	0.000088	0.000075	0.000063
Boron (dissolved) [mg/L]	0.014	0.023	0.023	0.400	0.419	0.376	0.454	0.344	0.447	0.376	0.413
Bismuth (dissolved) [mg/L]	0.00024	0.00002	0.00002	0.00002	0.00002	0.00003	0.00002	0.00002	0.00003	0.00029	0.00030
Calcium (dissolved) [mg/L]	197	142	146	42.0	42.4	40.5	42.1	40.1	43.8	40.4	41.7
Cadmium (dissolved) [mg/L]	0.0660	0.0475	0.0525	0.00172	0.00172	0.00188	0.00163	0.00144	0.00150	0.00221	0.00163
Cobalt (dissolved) [mg/L]	1.82	1.49	1.57	0.0844	0.0789	0.102	0.0926	0.120	0.113	0.138	0.150
Chromium (dissolved) [mg/L]	0.0253	0.0154	0.0147	< 0.00008	< 0.00008	< 0.00008	< 0.00008	< 0.00008	< 0.00008	0.00020	0.00018
Copper (dissolved) [mg/L]	0.391	0.259	0.312	0.0004	0.0002	0.0003	0.0002	< 0.0002	0.0005	0.0004	0.0006
Iron (dissolved) [mg/L]	100	71.1	77.6	0.043	< 0.007	0.008	< 0.007	< 0.007	0.097	0.036	0.096
Potassium (dissolved) [mg/L]	0.190	0.280	0.254	2.58	2.52	2.49	2.59	2.20	2.60	2.54	2.47
Lithium (dissolved) [mg/L]	0.0795	0.0753	0.0792	0.0062	0.0063	0.0068	0.0065	0.0055	0.0065	0.0063	0.0063

OnLine LIMS

0002571988





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**Project :** Hammond MNA

**LR Report :** CA13335-JUL21

Analysis	12:	13:	14:	15:	16:	17:	18:	19:	20:	21:	22:
	HAP2DPT07_20 a	HAP2DPT07_21 a	HAP2DPT07_22 a	HAP2DPT08_23 a	HAP2DPT08_24 a	HAP2DPT08_25 a	HAP2DPT08_26 a	HAP2DPT08_27 a	HAP2DPT08_28 a	HAP2DPT08_29 a	HAP2DPT08_30 a
Magnesium (dissolved) [mg/L]	23.2	23.4	24.0	8.74	9.09	8.82	9.23	8.43	9.10	8.73	9.02
Manganese (dissolved) [mg/L]	16.8	12.7	13.7	1.03	1.09	1.06	1.07	1.02	1.04	0.998	1.06
Molybdenum (dissolved) [mg/L]	< 0.00004	< 0.00004	< 0.00004	< 0.00004	0.00004	0.00005	< 0.00004	0.00006	< 0.00004	0.00004	< 0.00004
Sodium (dissolved) [mg/L]	3.72	4.95	4.57	7.78	7.94	7.88	8.03	7.50	7.95	8.08	8.11
Nickel (dissolved) [mg/L]	3.04	2.16	2.45	0.0742	0.0687	0.0694	0.0678	0.0619	0.0696	0.0731	0.0703
Lead (dissolved) [mg/L]	0.00025	0.00014	0.00013	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009	0.00013	0.00013
Antimony (dissolved) [mg/L]	< 0.0009	< 0.0009	< 0.0009	< 0.0009	< 0.0009	< 0.0009	< 0.0009	< 0.0009	< 0.0009	< 0.0009	< 0.0009
Selenium (dissolved) [mg/L]	0.132	0.0873	0.101	0.00554	0.00597	0.00606	0.00656	0.00503	0.00661	0.00578	0.00610
Tin (dissolved) [mg/L]	< 0.00006	< 0.00006	< 0.00006	0.00009	0.00010	0.00011	0.00009	0.00009	0.00009	0.00009	0.00010
Strontium (dissolved) [mg/L]	0.259	0.195	0.194	0.0939	0.0955	0.0906	0.0931	0.0900	0.0951	0.0913	0.0934
Titanium (dissolved) [mg/L]	0.00010	0.00012	0.00011	< 0.00005	0.00005	< 0.00005	0.00006	< 0.00005	0.00006	0.00007	0.00005
Thallium (dissolved) [mg/L]	0.000017	0.000016	0.000015	0.000007	0.000006	0.000008	0.000007	0.000006	0.000006	0.000007	0.000006
Uranium (dissolved) [mg/L]	0.0183	0.0123	0.0136	0.000029	0.000017	0.000014	0.000013	0.000014	0.000044	0.000043	0.000039
Vanadium (dissolved) [mg/L]	0.00045	0.00013	0.00016	0.00003	0.00003	0.00003	0.00002	0.00004	0.00003	0.00003	0.00002
Tungsten (dissolved) [mg/L]	0.00012	0.00010	0.00011	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002
Yttrium (dissolved) [mg/L]	0.960	0.659	0.748	0.00098	0.00066	0.00060	0.00060	0.00056	0.00132	0.00083	0.00138
Zinc (dissolved) [mg/L]	16.9	9.32	13.3	0.040	0.034	0.033	0.033	0.027	0.045	0.041	0.046

Analysis	23:	24:
	HAP2DPT08_31 a	HAP2DPT08_32 a
Sample Date & Time	08-Jul-21	08-Jul-21
Temperature Upon Receipt [°C]	4.0	4.0
Silver (dissolved) [mg/L]	< 0.00005	< 0.00005
Aluminum (dissolved) [mg/L]	0.017	0.004
Arsenic (dissolved) [mg/L]	0.0002	0.0002
Barium (dissolved) [mg/L]	0.00429	0.00409
Beryllium (dissolved) [mg/L]	0.000086	< 0.000007
Boron (dissolved) [mg/L]	0.406	0.418
Bismuth (dissolved) [mg/L]	0.00002	0.00002
Calcium (dissolved) [mg/L]	43.2	40.6
Cadmium (dissolved) [mg/L]	0.00206	0.00182
Cobalt (dissolved) [mg/L]	0.191	0.168
Chromium (dissolved) [mg/L]	< 0.00008	< 0.00008
Copper (dissolved) [mg/L]	0.0005	0.0002



Analysis	23:	24:
	HAP2DPT08_31 a	HAP2DPT08_32 a
Iron (dissolved) [mg/L]	0.078	< 0.007
Potassium (dissolved) [mg/L]	2.55	2.44
Lithium (dissolved) [mg/L]	0.0064	0.0060
Magnesium (dissolved) [mg/L]	8.95	8.92
Manganese (dissolved) [mg/L]	1.15	1.05
Molybdenum (dissolved) [mg/L]	< 0.00004	0.00005
Sodium (dissolved) [mg/L]	8.24	8.02
Nickel (dissolved) [mg/L]	0.0758	0.0698
Lead (dissolved) [mg/L]	< 0.00009	< 0.00009
Antimony (dissolved) [mg/L]	< 0.0009	< 0.0009
Selenium (dissolved) [mg/L]	0.00654	0.00584
Tin (dissolved) [mg/L]	0.00010	0.00009
Strontium (dissolved) [mg/L]	0.0957	0.0919
Titanium (dissolved) [mg/L]	0.00010	0.00009
Thallium (dissolved) [mg/L]	0.000005	0.000005
Uranium (dissolved) [mg/L]	0.000049	0.000014
Vanadium (dissolved) [mg/L]	0.00003	0.00003
Tungsten (dissolved) [mg/L]	< 0.00002	< 0.00002
Yttrium (dissolved) [mg/L]	0.00116	0.00057
Zinc (dissolved) [mg/L]	0.045	0.037

*Chris Sullivan*



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**Project :** Hammond MNA

27-July-2021

**SiREM Laboratory**

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**Date Rec. :** 16 July 2021  
**LR Report:** CA13515-JUL21  
**Reference:** P.O# 800003210A

**Copy:** #1

# CERTIFICATE OF ANALYSIS

## Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: HAP2DPT07_13 b	6: HAP2DPT07_14 b	7: HAP2DPT07_15 b	8: HAP2DPT07_16 b	9: HAP2DPT07_17 b
Sample Date & Time					12-Jul-21	12-Jul-21	12-Jul-21	12-Jul-21	13-Jul-21
Temp Upon Receipt [°C]	---	---	---	---	14.0	14.0	14.0	14.0	14.0
Ag (diss) [mg/L]	20-Jul-21	11:35	26-Jul-21	13:32	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
Al (diss) [mg/L]	20-Jul-21	11:35	26-Jul-21	13:32	51.2	51.8	28.9	62.0	61.8
As (diss) [mg/L]	20-Jul-21	11:35	26-Jul-21	13:32	0.0179	0.0187	0.0149	0.0208	0.0203
Ba (diss) [mg/L]	20-Jul-21	11:35	26-Jul-21	13:32	0.00928	0.00917	0.0109	0.00872	0.0108
Be (diss) [mg/L]	20-Jul-21	11:35	26-Jul-21	13:32	0.0807	0.0791	0.0501	0.0885	0.0879
B (diss) [mg/L]	20-Jul-21	11:35	26-Jul-21	13:32	0.207	0.123	0.133	0.104	0.098
Bi (diss) [mg/L]	20-Jul-21	11:35	26-Jul-21	13:32	0.00002	0.00002	0.00004	0.00003	0.00007
Ca (diss) [mg/L]	20-Jul-21	11:35	26-Jul-21	13:32	381	368	392	365	383
Cd (diss) [mg/L]	20-Jul-21	11:35	26-Jul-21	13:32	0.133	0.145	0.137	0.148	0.140
Co (diss) [mg/L]	20-Jul-21	11:35	26-Jul-21	13:32	3.25	3.46	3.35	3.74	3.65
Cr (diss) [mg/L]	20-Jul-21	11:35	26-Jul-21	13:32	0.0186	0.0218	0.00892	0.0558	0.0325
Cu (diss) [mg/L]	20-Jul-21	11:35	26-Jul-21	13:32	1.59	1.19	0.625	1.58	1.77
Fe (diss) [mg/L]	20-Jul-21	11:35	26-Jul-21	13:32	236	249	310	236	229
K (diss) [mg/L]	20-Jul-21	11:35	26-Jul-21	13:32	2.76	2.68	3.63	2.87	2.63
Li (diss) [mg/L]	20-Jul-21	11:35	26-Jul-21	13:32	0.228	0.254	0.256	0.274	0.267
Mg (diss) [mg/L]	20-Jul-21	11:35	26-Jul-21	13:32	74.0	81.7	87.3	78.2	79.7
Mn (diss) [mg/L]	20-Jul-21	11:35	26-Jul-21	13:32	41.5	45.3	51.0	41.4	38.1
Mo (diss) [mg/L]	20-Jul-21	11:35	26-Jul-21	13:32	0.00037	0.00005	< 0.00004	< 0.00004	< 0.00004
Na (diss) [mg/L]	20-Jul-21	11:35	26-Jul-21	13:32	9.83	9.96	10.3	9.33	9.33
Ni (diss) [mg/L]	20-Jul-21	11:35	26-Jul-21	13:32	6.13	6.45	6.10	7.01	6.61
Pb (diss) [mg/L]	20-Jul-21	11:35	26-Jul-21	13:32	0.00012	0.00019	0.00017	0.00017	0.00016
Sb (diss) [mg/L]	20-Jul-21	11:35	26-Jul-21	13:32	< 0.0009	< 0.0009	< 0.0009	< 0.0009	0.0011
Se (diss) [mg/L]	20-Jul-21	11:35	26-Jul-21	13:33	0.255	0.263	0.251	0.249	0.267
Sn (diss) [mg/L]	20-Jul-21	11:35	26-Jul-21	13:33	0.00013	0.00008	0.00008	0.00016	0.00022
Sr (diss) [mg/L]	20-Jul-21	11:35	26-Jul-21	13:33	0.658	0.559	0.552	0.584	0.651
Ti (diss) [mg/L]	20-Jul-21	11:35	26-Jul-21	13:33	0.00057	0.00017	0.00011	0.00035	0.00022
Tl (diss) [mg/L]	20-Jul-21	11:35	26-Jul-21	13:33	0.000070	0.000100	0.000090	0.000090	0.000090
U (diss) [mg/L]	20-Jul-21	11:35	26-Jul-21	13:33	0.0270	0.0265	0.0130	0.0314	0.0300
V (diss) [mg/L]	20-Jul-21	11:35	26-Jul-21	13:33	0.00194	0.00261	0.00119	0.00474	0.00436
W (diss) [mg/L]	20-Jul-21	11:35	26-Jul-21	13:33	0.00103	0.00107	0.00100	0.00102	0.00115
Y (diss) [mg/L]	20-Jul-21	11:35	26-Jul-21	13:33	2.49	2.49	2.04	2.68	2.66
Zn (diss) [mg/L]	20-Jul-21	11:35	26-Jul-21	13:33	28.5	30.2	28.4	32.1	31.1

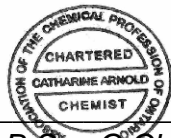
Online LIMS

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Analysis	10:	11:	12:	13:	14:	15:	16:	17:
	HAP2DPT07_18 b	HAP2DPT07_19 b	HAP2DPT07_20 b	HAP2DPT07_21 b	HAP2DPT07_22 b	HAP2DPT07_23 b	HAP2DPT07_24 b	HAP2DPT07_25 b
Sample Date & Time	13-Jul-21	14-Jul-21	14-Jul-21	15-Jul-21	15-Jul-21	12-Jul-21	12-Jul-21	12-Jul-21
Temp Upon Receipt [°C]	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0
Ag (diss) [mg/L]	< 0.00005	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
Al (diss) [mg/L]	30.5	56.5	58.5	66.7	50.8	0.019	0.016	0.008
As (diss) [mg/L]	0.0164	0.0211	0.0208	0.0234	0.0207	0.0012	0.0013	0.0012
Ba (diss) [mg/L]	0.0104	0.00809	0.00808	0.00713	0.00828	0.0277	0.0358	0.0351
Be (diss) [mg/L]	0.0538	0.0824	0.0838	0.0866	0.0758	0.000080	0.000063	0.000031
B (diss) [mg/L]	0.123	0.103	0.098	0.093	0.111	0.894	0.742	0.805
Bi (diss) [mg/L]	0.00006	0.00006	0.00003	0.00002	0.00002	0.00004	0.00002	0.00003
Ca (diss) [mg/L]	407	412	397	409	431	51.8	48.9	55.8
Cd (diss) [mg/L]	0.143	0.155	0.155	0.154	0.157	0.00432	0.00455	0.00390
Co (diss) [mg/L]	3.73	3.90	3.82	4.10	4.06	0.114	0.116	0.122
Cr (diss) [mg/L]	0.0106	0.0200	0.0217	0.0389	0.0151	0.00047	0.00012	0.00015
Cu (diss) [mg/L]	0.628	1.60	1.68	1.79	1.43	0.0019	0.0011	0.0008
Fe (diss) [mg/L]	352	230	221	229	252	0.690	< 0.007	< 0.007
K (diss) [mg/L]	3.06	3.14	2.02	1.85	2.34	5.57	6.30	6.52
Li (diss) [mg/L]	0.291	0.292	0.283	0.283	0.291	0.0206	0.0126	0.0132
Mg (diss) [mg/L]	86.5	85.5	84.2	81.0	93.0	13.6	10.3	11.9
Mn (diss) [mg/L]	60.9	47.6	47.0	44.2	55.2	3.39	3.29	3.62
Mo (diss) [mg/L]	< 0.00004	0.00013	< 0.00004	< 0.00004	< 0.00004	0.00009	< 0.00004	< 0.00004
Na (diss) [mg/L]	10.2	11.0	9.59	8.93	9.78	11.4	8.72	9.20
Ni (diss) [mg/L]	6.66	7.01	6.93	7.22	7.14	0.110	0.113	0.116
Pb (diss) [mg/L]	0.00016	0.00041	0.00014	0.00015	0.00018	0.00023	0.00020	0.00013
Sb (diss) [mg/L]	< 0.0009	< 0.0009	< 0.0009	< 0.0009	< 0.0009	< 0.0009	< 0.0009	< 0.0009
Se (diss) [mg/L]	0.272	0.266	0.256	0.251	0.257	0.0139	0.0150	0.0149
Sn (diss) [mg/L]	0.00011	0.00064	0.00013	0.00015	0.00028	0.00064	0.00026	0.00022
Sr (diss) [mg/L]	0.577	0.569	0.539	0.549	0.559	0.142	0.138	0.151
Ti (diss) [mg/L]	0.00036	0.00055	0.00023	0.00032	0.00029	0.00035	< 0.00005	0.00005
Tl (diss) [mg/L]	0.000090	0.000110	0.000110	0.000100	0.000100	0.000030	0.000020	0.000017
U (diss) [mg/L]	0.0134	0.0272	0.0301	0.0318	0.0236	0.000050	0.000012	0.000011
V (diss) [mg/L]	0.00130	0.00277	0.00268	0.00397	0.00170	0.00010	0.00005	0.00007
W (diss) [mg/L]	0.00090	0.00120	0.00107	0.00102	0.00108	0.00028	< 0.00002	< 0.00002
Y (diss) [mg/L]	2.15	2.58	2.68	2.76	2.62	0.00075	0.00139	0.00084
Zn (diss) [mg/L]	30.2	32.4	32.3	32.8	32.6	0.145	0.080	0.061

Analysis	18:	19:	20:	21:	22:	23:	24:
	HAP2DPT07_26 b	HAP2DPT07_27 b	HAP2DPT07_28 b	HAP2DPT07_29 b	HAP2DPT07_30 b	HAP2DPT07_31 b	HAP2DPT07_32 b
Sample Date & Time	12-Jul-21	13-Jul-21	13-Jul-21	14-Jul-21	14-Jul-21	15-Jul-21	15-Jul-21
Temp Upon Receipt [°C]	14.0	14.0	14.0	14.0	14.0	14.0	14.0
Ag (diss) [mg/L]	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
Al (diss) [mg/L]	0.012	0.005	0.004	0.002	0.003	0.011	0.004
As (diss) [mg/L]	0.0010	0.0015	0.0016	0.0007	0.0012	0.0016	0.0012
Ba (diss) [mg/L]	0.0348	0.0336	0.0334	0.0336	0.0317	0.0351	0.0342
Be (diss) [mg/L]	0.000055	0.000029	0.000032	0.000025	0.000027	0.000040	0.000029
B (diss) [mg/L]	0.854	0.869	0.894	0.810	0.920	0.886	0.869
Bi (diss) [mg/L]	0.00002	< 0.00001	< 0.00001	0.00001	< 0.00001	< 0.00001	0.00001
Ca (diss) [mg/L]	57.8	60.5	57.7	55.7	58.3	60.1	59.3
Cd (diss) [mg/L]	0.00426	0.00635	0.00469	0.00238	0.00323	0.00430	0.00324
Co (diss) [mg/L]	0.138	0.149	0.129	0.0948	0.131	0.168	0.140
Cr (diss) [mg/L]	0.00013	< 0.00008	< 0.00008	< 0.00008	< 0.00008	< 0.00008	< 0.00008

Analysis	18: HAP2DPT07_26 b	19: HAP2DPT07_27 b	20: HAP2DPT07_28 b	21: HAP2DPT07_29 b	22: HAP2DPT07_30 b	23: HAP2DPT07_31 b	24: HAP2DPT07_32 b
Cu (diss) [mg/L]	0.0010	0.0007	0.0007	0.0004	0.0005	0.0010	0.0005
Fe (diss) [mg/L]	< 0.007	< 0.007	< 0.007	< 0.007	< 0.007	0.007	< 0.007
K (diss) [mg/L]	6.57	6.83	6.59	6.27	6.26	6.95	6.72
Li (diss) [mg/L]	0.0131	0.0150	0.0140	0.0119	0.0129	0.0169	0.0144
Mg (diss) [mg/L]	11.5	12.5	12.0	11.3	12.2	12.4	12.0
Mn (diss) [mg/L]	4.09	4.51	3.46	2.87	3.54	4.85	3.83
Mo (diss) [mg/L]	< 0.00004	< 0.00004	< 0.00004	< 0.00004	< 0.00004	< 0.00004	< 0.00004
Na (diss) [mg/L]	9.15	10.5	8.92	8.93	9.41	8.93	8.96
Ni (diss) [mg/L]	0.124	0.126	0.111	0.0914	0.114	0.141	0.111
Pb (diss) [mg/L]	0.00010	< 0.00009	0.00013	< 0.00009	< 0.00009	0.00016	< 0.00009
Sb (diss) [mg/L]	< 0.0009	< 0.0009	< 0.0009	< 0.0009	< 0.0009	< 0.0009	< 0.0009
Se (diss) [mg/L]	0.0134	0.0164	0.0138	0.0130	0.0144	0.0151	0.0149
Sn (diss) [mg/L]	0.00024	0.00020	0.00021	0.00020	0.00018	0.00021	0.00022
Sr (diss) [mg/L]	0.164	0.166	0.152	0.152	0.150	0.163	0.155
Ti (diss) [mg/L]	0.00011	< 0.00005	0.00005	0.00008	0.00005	< 0.00005	< 0.00005
Tl (diss) [mg/L]	0.000027	0.000019	0.000017	0.000015	0.000016	0.000026	0.000019
U (diss) [mg/L]	0.000012	0.000012	0.000010	0.000011	0.000010	0.000011	0.000011
V (diss) [mg/L]	0.00008	0.00006	0.00005	0.00004	0.00005	0.00005	0.00004
W (diss) [mg/L]	< 0.00002	0.00005	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002
Y (diss) [mg/L]	0.00159	0.00136	0.00089	0.00078	0.00084	0.00127	0.00089
Zn (diss) [mg/L]	0.087	0.063	0.062	0.042	0.060	0.085	0.058

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**Project :** Hammond MNA

24-August-2021

**Date Rec. :** 12 August 2021  
**LR Report:** CA15238-AUG21  
**Reference:** P.O# 800003210A

**Copy:** #1

# CERTIFICATE OF ANALYSIS

## Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time Completed	3: Analysis Completed Date	4: Analysis Completed Time	5: HAP1DPT06_[1]	6: HAP1DPT06_[2]	7: HAP1DPT06_[3]	8: HAP1DPT06_[4]	9: HAP1DPT06_[5]	10: HAP1DPT06_[6]
Sample Date & Time					29-Jun-21	29-Jun-21	30-Jun-21	30-Jun-21	30-Jun-21	30-Jun-21
Temp Upon Receipt [°C]	---	---	---	---	13.0	13.0	13.0	13.0	13.0	13.0
Ag (diss) [mg/L]	17-Aug-21	12:55	18-Aug-21	16:51	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
Al (diss) [mg/L]	17-Aug-21	12:55	18-Aug-21	16:51	0.004	0.004	< 0.001	< 0.001	< 0.001	< 0.001
As (diss) [mg/L]	17-Aug-21	12:55	18-Aug-21	16:51	0.0631	0.112	0.280	0.560	1.12	1.70
Ba (diss) [mg/L]	17-Aug-21	12:55	18-Aug-21	16:51	0.0435	0.0430	0.0411	0.0419	0.0427	0.0419
Be (diss) [mg/L]	17-Aug-21	12:55	18-Aug-21	16:51	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007
B (diss) [mg/L]	17-Aug-21	12:55	18-Aug-21	16:51	0.018	0.018	0.017	0.016	0.017	0.017
Bi (diss) [mg/L]	17-Aug-21	12:55	18-Aug-21	16:51	0.00060	0.00050	0.00032	0.00031	0.00025	0.00020
Ca (diss) [mg/L]	17-Aug-21	12:55	18-Aug-21	16:51	129	125	129	128	127	125
Cd (diss) [mg/L]	17-Aug-21	12:55	18-Aug-21	16:51	0.000013	0.000015	0.000032	0.000088	0.000157	0.000357
Co (diss) [mg/L]	17-Aug-21	12:55	18-Aug-21	16:51	0.000051	0.000059	0.000052	0.000078	0.000058	0.000046
Cr (diss) [mg/L]	17-Aug-21	12:55	18-Aug-21	16:51	< 0.00008	0.00012	< 0.00008	< 0.00008	< 0.00008	< 0.00008
Cu (diss) [mg/L]	17-Aug-21	12:55	18-Aug-21	16:52	0.0003	0.0003	0.0002	< 0.0002	< 0.0002	< 0.0002
Fe (diss) [mg/L]	17-Aug-21	12:55	18-Aug-21	16:52	< 0.007	< 0.007	< 0.007	< 0.007	< 0.007	< 0.007
K (diss) [mg/L]	17-Aug-21	12:55	18-Aug-21	16:52	0.305	0.292	0.298	0.291	0.293	0.294
Li (diss) [mg/L]	17-Aug-21	12:55	18-Aug-21	16:52	0.0074	0.0131	0.0283	0.0412	0.0569	0.0709

OnLine LIMS

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Project : Hammond MNA

LR Report : CA15238-AUG21

Analysis	1: Analysis Start Date	2: Analysis Start Time Completed	3: Analysis Completed Date	4: Analysis Completed Time	5: HAP1DPT06_[1]	6: HAP1DPT06_[2]	7: HAP1DPT06_[3]	8: HAP1DPT06_[4]	9: HAP1DPT06_[5]	10: HAP1DPT06_[6]
Mg (diss) [mg/L]	17-Aug-21	12:55	18-Aug-21	16:52	4.31	4.12	4.24	4.16	4.12	3.97
Mn (diss) [mg/L]	17-Aug-21	12:55	18-Aug-21	16:52	0.0242	0.0235	0.0235	0.0230	0.0205	0.0106
Mo (diss) [mg/L]	17-Aug-21	12:55	18-Aug-21	16:52	0.0142	0.0522	0.105	0.261	0.587	1.20
Na (diss) [mg/L]	17-Aug-21	12:55	18-Aug-21	16:52	56.6	55.4	56.2	56.5	56.0	60.9
Ni (diss) [mg/L]	17-Aug-21	12:55	18-Aug-21	16:52	0.0002	0.0003	0.0003	0.0002	0.0002	0.0002
Pb (diss) [mg/L]	17-Aug-21	12:55	18-Aug-21	16:52	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009
Sb (diss) [mg/L]	17-Aug-21	12:55	18-Aug-21	16:58	< 0.0009	< 0.0009	< 0.0009	< 0.0009	< 0.0009	< 0.0009
Se (diss) [mg/L]	17-Aug-21	12:55	18-Aug-21	16:58	0.00010	0.00010	0.00008	0.00011	0.00011	0.00012
Sn (diss) [mg/L]	17-Aug-21	12:55	18-Aug-21	16:58	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006
Sr (diss) [mg/L]	17-Aug-21	12:55	18-Aug-21	16:58	0.390	0.389	0.389	0.425	0.402	0.387
Ti (diss) [mg/L]	17-Aug-21	12:55	18-Aug-21	16:58	< 0.00005	0.00010	< 0.00005	0.00011	0.00020	0.00026
Tl (diss) [mg/L]	17-Aug-21	12:55	18-Aug-21	16:58	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005
U (diss) [mg/L]	17-Aug-21	12:55	18-Aug-21	16:58	0.000743	0.000734	0.000705	0.000677	0.000740	0.000730
V (diss) [mg/L]	17-Aug-21	12:55	18-Aug-21	16:58	0.00021	0.00018	0.00019	0.00018	0.00021	0.00018
W (diss) [mg/L]	17-Aug-21	12:55	18-Aug-21	16:58	0.00007	0.00007	0.00008	0.00010	0.00014	0.00018
Y (diss) [mg/L]	17-Aug-21	12:55	18-Aug-21	16:58	0.00007	0.00007	0.00006	0.00007	0.00007	0.00006
Zn (diss) [mg/L]	17-Aug-21	12:55	18-Aug-21	16:58	0.003	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002

Analysis	11: HAP2DPT07&8 _[1]	12: HAP2DPT07&8 _[2]	13: HAP2DPT07&8 _[3]	14: HAP2DPT07&8 _[4]	15: HAP2DPT07&8 _[5]	16: HAP3DPT01_[1]	17: HAP3DPT01_[2]	18: HAP3DPT01_[3]	19: HAP3DPT01_[4]	20: HAP3DPT01_[5]
Sample Date & Time	05-Jul-12	05-Jul-12	06-Jul-12	07-Jul-12	08-Jul-12	13-Jul-12	13-Jul-12	14-Jul-12	14-Jul-12	14-Jul-12
Temp Upon Receipt [°C]	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0
Ag (diss) [mg/L]	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
Al (diss) [mg/L]	0.003	0.003	0.002	0.007	0.003	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
As (diss) [mg/L]	0.0008	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	0.0002	< 0.0002	< 0.0002
Ba (diss) [mg/L]	0.0397	0.0412	0.0410	0.0413	0.0403	0.0424	0.0414	0.0415	0.0413	0.0407
Be (diss) [mg/L]	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007
B (diss) [mg/L]	0.006	0.006	0.006	0.006	0.006	0.005	0.005	0.005	0.004	0.005
Bi (diss) [mg/L]	0.00001	< 0.00001	< 0.00001	0.00007	0.00001	0.00002	0.00001	0.00002	< 0.00001	< 0.00001

Online LIMS

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**Project :** Hammond MNA  
**LR Report :** CA15238-AUG21

Analysis	11:	12:	13:	14:	15:	16:	17:	18:	19:	20:
	HAP2DPT07&8 _ [1]	HAP2DPT07&8 _ [2]	HAP2DPT07&8 _ [3]	HAP2DPT07&8 _ [4]	HAP2DPT07&8 _ [5]	HAP3DPT01 _ [1]	HAP3DPT01 _ [2]	HAP3DPT01 _ [3]	HAP3DPT01 _ [4]	HAP3DPT01 _ [5]
Ca (diss) [mg/L]	31.6	32.7	31.9	31.0	31.6	30.6	30.8	31.0	30.8	30.9
Cd (diss) [mg/L]	0.000010	0.000003	0.000003	0.000005	0.000007	0.000015	0.000013	0.000039	0.000031	0.000057
Co (diss) [mg/L]	0.0970	0.227	0.332	0.441	0.552	0.000643	0.000626	0.000627	0.000656	0.000659
Cr (diss) [mg/L]	< 0.00008	< 0.00008	< 0.00008	0.00011	< 0.00008	< 0.00008	< 0.00008	< 0.00008	< 0.00008	< 0.00008
Cu (diss) [mg/L]	0.0027	0.0013	0.0010	0.0011	0.0005	< 0.0002	0.0040	< 0.0002	< 0.0002	< 0.0002
Fe (diss) [mg/L]	< 0.007	< 0.007	< 0.007	< 0.007	< 0.007	< 0.007	< 0.007	< 0.007	< 0.007	< 0.007
K (diss) [mg/L]	0.693	0.702	0.713	0.710	0.729	0.752	0.753	0.770	0.757	0.747
Li (diss) [mg/L]	0.0021	0.0021	0.0019	0.0019	0.0019	0.0149	0.0306	0.0430	0.0558	0.0705
Mg (diss) [mg/L]	6.29	6.24	6.16	6.04	6.14	6.06	5.91	6.26	6.04	5.97
Mn (diss) [mg/L]	0.0844	0.0863	0.0851	0.0858	0.0868	0.0852	0.0851	0.0865	0.0854	0.0856
Mo (diss) [mg/L]	0.0109	0.00017	0.00010	0.00011	0.00010	0.0330	0.0501	0.0886	0.103	0.165
Na (diss) [mg/L]	8.02	7.86	7.87	7.72	8.05	7.84	7.86	8.01	7.95	7.89
Ni (diss) [mg/L]	0.0004	0.0004	0.0004	0.0004	0.0003	0.0003	0.0013	0.0004	0.0003	0.0004
Pb (diss) [mg/L]	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009
Sb (diss) [mg/L]	< 0.0009	< 0.0009	< 0.0009	< 0.0009	< 0.0009	< 0.0009	< 0.0009	< 0.0009	< 0.0009	< 0.0009
Se (diss) [mg/L]	< 0.00004	< 0.00004	< 0.00004	< 0.00004	< 0.00004	< 0.00004	< 0.00004	< 0.00004	< 0.00004	< 0.00004
Sn (diss) [mg/L]	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006
Sr (diss) [mg/L]	0.0764	0.0773	0.0753	0.0734	0.0746	0.0738	0.0739	0.0747	0.0734	0.0740
Ti (diss) [mg/L]	< 0.00005	0.00008	0.00008	< 0.00005	< 0.00005	< 0.00005	< 0.00005	0.00007	< 0.00005	0.00008
Tl (diss) [mg/L]	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005
U (diss) [mg/L]	0.000043	0.000024	0.000012	0.000012	0.000011	0.000035	0.000010	0.000032	0.000010	0.000030
V (diss) [mg/L]	0.00002	< 0.00001	0.00001	0.00002	0.00001	0.00002	0.00001	0.00002	< 0.00001	0.00001
W (diss) [mg/L]	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002
Y (diss) [mg/L]	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002
Zn (diss) [mg/L]	0.012	0.006	0.005	0.005	0.004	0.002	< 0.002	< 0.002	< 0.002	< 0.002

Analysis	21:	22:	23:	24:	25:	26:
	BAP1DPT0543& 44 [1]	BAP1DPT0545& 46 [2]	BAP1DPT0547& 43 [3]	BAP1DPT0549& 50 [4]	BAP1DPT0551& 52 [5]	BAP1DT05 [6]
Sample Date & Time	22-Jul-12	29-Jul-12	29-Jul-12	30-Jul-12	30-Jul-12	03-Aug-21

OnLine LIMS

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Project : Hammond MNA  
LR Report : CA15238-AUG21

Analysis	21: BAP1DPT0543& 44_[1]	22: BAP1DPT0545& 46_[2]	23: BAP1DPT0547& 43_[3]	24: BAP1DPT0549& 50_[4]	25: BAP1DPT0551& 52_[5]	26: BAP1DT05_[6]
Temp Upon Receipt [°C]	13.0	13.0	13.0	13.0	13.0	13.0
Ag (diss) [mg/L]	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
Al (diss) [mg/L]	0.001	< 0.001	< 0.001	0.001	0.001	0.002
As (diss) [mg/L]	0.0111	0.0218	0.0433	0.0659	0.0861	0.106
Ba (diss) [mg/L]	0.140	0.140	0.143	0.139	0.142	0.143
Be (diss) [mg/L]	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007
B (diss) [mg/L]	0.008	0.008	0.008	0.007	0.007	0.007
Bi (diss) [mg/L]	0.00015	0.00011	0.00015	0.00008	0.00010	0.00011
Ca (diss) [mg/L]	47.3	48.0	46.6	48.0	46.4	45.9
Cd (diss) [mg/L]	0.000050	0.000080	0.000175	0.000248	0.000446	0.000679
Co (diss) [mg/L]	0.0102	0.0194	0.0384	0.0586	0.0761	0.0950
Cr (diss) [mg/L]	0.00032	0.00024	0.00029	0.00027	0.00026	0.00022
Cu (diss) [mg/L]	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	0.0006
Fe (diss) [mg/L]	< 0.007	< 0.007	< 0.007	< 0.007	< 0.007	< 0.007
K (diss) [mg/L]	1.79	1.77	1.80	1.77	1.77	1.78
Li (diss) [mg/L]	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Mg (diss) [mg/L]	21.7	21.5	22.0	21.6	21.3	21.5
Mn (diss) [mg/L]	0.00035	0.00020	0.00019	0.00023	0.00026	0.00018
Mo (diss) [mg/L]	0.113	0.276	0.566	0.860	1.39	2.18
Na (diss) [mg/L]	3.50	3.50	3.71	3.86	4.03	4.59
Ni (diss) [mg/L]	< 0.0001	< 0.0001	0.0001	0.0001	< 0.0001	0.0002
Pb (diss) [mg/L]	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009
Sb (diss) [mg/L]	< 0.0009	< 0.0009	< 0.0009	< 0.0009	< 0.0009	< 0.0009
Se (diss) [mg/L]	0.00040	0.00043	0.00043	0.00037	0.00044	0.00039
Sn (diss) [mg/L]	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006
Sr (diss) [mg/L]	0.0546	0.0545	0.0528	0.0546	0.0534	0.0534
Ti (diss) [mg/L]	0.00006	0.00010	0.00021	0.00023	0.00036	0.00055
Tl (diss) [mg/L]	0.000157	0.000166	0.000154	0.000161	0.000164	0.000167
U (diss) [mg/L]	0.000670	0.000678	0.000662	0.000614	0.000643	0.000640
V (diss) [mg/L]	0.00060	0.00058	0.00059	0.00060	0.00058	0.00056
W (diss) [mg/L]	0.00005	0.00008	0.00010	0.00013	0.00020	0.00030


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Analysis	21: BAP1DPT0543& 44_[1]	22: BAP1DPT0545& 46_[2]	23: BAP1DPT0547& 43_[3]	24: BAP1DPT0549& 50_[4]	25: BAP1DPT0551& 52_[5]	26: BAP1DT05_[6]
Y (diss) [mg/L]	0.00008	0.00008	0.00009	0.00009	0.00009	0.00009
Zn (diss) [mg/L]	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002

*Catharine Arnold*



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**Project :** Hammond MNA

14-September-2021

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**Date Rec. :** 03 September 2021  
**LR Report:** CA12171-SEP21  
**Reference:** P.O# 800003210A

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# CERTIFICATE OF ANALYSIS

## Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: HAP1DPT02_1a	6: HAP1DPT02_2a	7: HAP1DPT04XR F_3/5a	8: HAP1DPT04XR F_4/6a	9: HAP2DPT08_7a
Sample Date & Time					31-Aug-21	31-Aug-21	31-Aug-21	31-Aug-21	31-Aug-21
Temp Upon Receipt [°C]	---	---	---	---	11.0	11.0	11.0	11.0	11.0
Ag (diss) [mg/L]	10-Sep-21	15:00	14-Sep-21	11:43	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
Al (diss) [mg/L]	10-Sep-21	15:00	14-Sep-21	11:43	0.003	0.002	0.003	0.003	0.002
As (diss) [mg/L]	10-Sep-21	15:00	14-Sep-21	11:43	< 0.0002	< 0.0002	0.0007	0.0007	< 0.0002
Ba (diss) [mg/L]	10-Sep-21	15:00	14-Sep-21	11:43	0.0421	0.0420	0.0403	0.0405	0.00396
Be (diss) [mg/L]	10-Sep-21	15:00	14-Sep-21	11:43	< 0.000007	< 0.000007	0.000008	0.000016	0.000007
B (diss) [mg/L]	10-Sep-21	15:00	14-Sep-21	11:43	0.165	0.148	0.106	0.113	0.293
Bi (diss) [mg/L]	10-Sep-21	15:00	14-Sep-21	11:43	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Ca (diss) [mg/L]	10-Sep-21	15:00	14-Sep-21	11:43	124	122	110	112	40.0
Cd (diss) [mg/L]	10-Sep-21	15:00	14-Sep-21	11:43	0.000003	0.000003	< 0.000003	< 0.000003	0.00176
Co (diss) [mg/L]	10-Sep-21	15:00	14-Sep-21	11:43	0.000053	0.000053	0.000084	0.000095	0.0571
Cr (diss) [mg/L]	10-Sep-21	15:00	14-Sep-21	11:43	0.00055	0.00049	0.00059	0.00045	0.00048
Cu (diss) [mg/L]	10-Sep-21	15:00	14-Sep-21	11:48	< 0.0002	< 0.0002	< 0.0002	< 0.0002	0.0002
Fe (diss) [mg/L]	10-Sep-21	15:00	14-Sep-21	11:48	< 0.007	< 0.007	0.008	0.008	< 0.007
K (diss) [mg/L]	10-Sep-21	15:00	14-Sep-21	11:48	1.91	1.88	2.38	2.36	2.16
Li (diss) [mg/L]	10-Sep-21	15:00	14-Sep-21	11:48	0.0012	0.0013	0.0043	0.0046	0.0078
Mg (diss) [mg/L]	10-Sep-21	15:00	14-Sep-21	11:48	6.74	6.69	5.94	5.77	8.23
Mn (diss) [mg/L]	10-Sep-21	15:00	14-Sep-21	11:48	0.00316	0.00232	0.0182	0.0196	0.997
Mo (diss) [mg/L]	10-Sep-21	15:00	14-Sep-21	11:48	0.00725	0.00752	0.00658	0.00656	0.00011
Na (diss) [mg/L]	10-Sep-21	15:00	14-Sep-21	11:48	46.4	47.1	54.7	54.6	7.41
Ni (diss) [mg/L]	10-Sep-21	15:00	14-Sep-21	11:48	0.0003	0.0003	0.0009	0.0010	0.0667
Pb (diss) [mg/L]	10-Sep-21	15:00	14-Sep-21	11:48	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009
Sb (diss) [mg/L]	10-Sep-21	15:00	14-Sep-21	11:48	< 0.0009	< 0.0009	< 0.0009	< 0.0009	< 0.0009
Se (diss) [mg/L]	10-Sep-21	15:00	14-Sep-21	11:48	0.00010	0.00010	0.00097	0.00084	0.00709
Sn (diss) [mg/L]	10-Sep-21	15:00	14-Sep-21	11:48	< 0.00006	< 0.00006	0.00081	0.00080	0.00006
Sr (diss) [mg/L]	10-Sep-21	15:00	14-Sep-21	11:48	0.771	0.755	0.573	0.568	0.0992
Ti (diss) [mg/L]	10-Sep-21	15:00	14-Sep-21	11:48	0.00013	0.00007	0.00015	0.00015	0.00011
Tl (diss) [mg/L]	10-Sep-21	15:00	14-Sep-21	11:48	< 0.000005	< 0.000005	0.000012	0.000013	0.000008
U (diss) [mg/L]	10-Sep-21	15:00	14-Sep-21	11:48	0.000540	0.000567	0.000739	0.000738	0.000015
V (diss) [mg/L]	10-Sep-21	15:00	14-Sep-21	11:48	0.00007	0.00007	0.00030	0.00029	0.00004
W (diss) [mg/L]	10-Sep-21	15:00	14-Sep-21	11:48	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002
Y (diss) [mg/L]	10-Sep-21	15:00	14-Sep-21	11:48	0.00029	0.00026	0.00080	0.00079	0.00062
Zn (diss) [mg/L]	10-Sep-21	15:00	14-Sep-21	11:48	< 0.002	0.003	< 0.002	< 0.002	0.049

Online LIMS

0002640169

Analysis	10: HAP2DPT08_8a	11: HAP3DPT02_9a	12: HAP3DPT02_10 a	13: BAP1DPT02_11 a	14: BAP1DPT02_12 a
Sample Date & Time	31-Aug-21	31-Aug-21	31-Aug-21	31-Aug-21	31-Aug-21
Temp Upon Receipt [°C]	11.0	11.0	11.0	11.0	11.0
Ag (diss) [mg/L]	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
Al (diss) [mg/L]	0.001	0.001	0.002	0.005	0.005
As (diss) [mg/L]	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Ba (diss) [mg/L]	0.00396	0.0270	0.0276	0.0373	0.0382
Be (diss) [mg/L]	0.000009	< 0.000007	< 0.000007	0.000009	0.000009
B (diss) [mg/L]	0.324	0.227	0.230	0.108	0.110
Bi (diss) [mg/L]	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Ca (diss) [mg/L]	40.0	66.7	69.0	42.3	42.2
Cd (diss) [mg/L]	0.00200	< 0.000003	< 0.000003	0.000011	0.000014
Co (diss) [mg/L]	0.0605	0.000027	0.000032	0.000142	0.000164
Cr (diss) [mg/L]	0.00039	0.00098	0.00088	0.00125	0.00108
Cu (diss) [mg/L]	0.0003	0.0004	< 0.0002	< 0.0002	< 0.0002
Fe (diss) [mg/L]	< 0.007	< 0.007	< 0.007	< 0.007	< 0.007
K (diss) [mg/L]	2.22	1.86	2.03	1.58	1.59
Li (diss) [mg/L]	0.0083	0.0057	0.0065	0.0005	0.0005
Mg (diss) [mg/L]	8.59	5.48	5.91	13.6	13.7
Mn (diss) [mg/L]	1.02	0.00050	0.00042	0.0137	0.0131
Mo (diss) [mg/L]	0.00022	0.0112	0.0139	0.00026	0.00029
Na (diss) [mg/L]	7.57	5.22	5.13	3.97	4.07
Ni (diss) [mg/L]	0.0714	0.0002	0.0002	0.0014	0.0013
Pb (diss) [mg/L]	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009
Sb (diss) [mg/L]	< 0.0009	< 0.0009	< 0.0009	< 0.0009	< 0.0009
Se (diss) [mg/L]	0.00767	0.00074	0.00073	0.00041	0.00048
Sn (diss) [mg/L]	0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006
Sr (diss) [mg/L]	0.103	0.427	0.454	0.0861	0.0866
Ti (diss) [mg/L]	0.00006	0.00012	0.00013	0.00018	0.00019
Tl (diss) [mg/L]	0.000006	0.000007	< 0.000005	0.000021	0.000030
U (diss) [mg/L]	0.000016	0.000472	0.000485	0.000081	0.000089
V (diss) [mg/L]	0.00002	0.00028	0.00029	0.00006	0.00007
W (diss) [mg/L]	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002
Y (diss) [mg/L]	0.00071	0.00007	0.00008	0.00143	0.00142
Zn (diss) [mg/L]	0.056	< 0.002	< 0.002	< 0.002	< 0.002

*Catharine Arnold*  
**Catharine Arnold, B.Sc., C.Chem**  
**Project Specialist,**  
**Environment, Health & Safety**



**SGS Canada Inc.**

P.O. Box 4300 - 185 Concession St.  
Lakefield - Ontario - KOL 2H0  
Phone: 705-652-2000 FAX: 705-652-6365

**Project :** Hammond MNA

22-September-2021

**SiREM Laboratory**

Attn : Kela Ashworth

130 Stone Rd. W  
Guelph, ON  
N1G 3Z2, Canada

Phone: 519-822-2265  
Fax:519-822-3151

**Date Rec. :** 16 September 2021  
**LR Report:** CA15375-SEP21  
**Reference:** P.O# 800003210A

**Copy:** #1

# CERTIFICATE OF ANALYSIS

## Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: HAP1DPT02_1 b	6: HAP1DPT02_2 b	7: HAP1DPT04XR F_3b	8: HAP1DPT04XR F_4b	9: HAP1DPT04XR F_5b
Sample Date & Time					15-Sep-21	15-Sep-21	15-Sep-21	15-Sep-21	15-Sep-21
Temp Upon Receipt [°C]	---	---	---	---	9.0	9.0	9.0	9.0	9.0
Ag (diss) [mg/L]	21-Sep-21	15:10	22-Sep-21	14:19	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
Al (diss) [mg/L]	21-Sep-21	15:10	22-Sep-21	14:19	0.002	0.002	0.006	0.004	0.003
As (diss) [mg/L]	21-Sep-21	15:10	22-Sep-21	14:19	< 0.0002	< 0.0002	0.0031	0.0030	0.0012
Ba (diss) [mg/L]	21-Sep-21	15:10	22-Sep-21	14:19	0.0382	0.0399	0.0462	0.0433	0.0496
Be (diss) [mg/L]	21-Sep-21	15:10	22-Sep-21	14:19	< 0.000007	0.000009	0.000034	0.000025	0.000022
B (diss) [mg/L]	21-Sep-21	15:10	22-Sep-21	14:19	0.651	0.602	0.281	0.312	0.281
Bi (diss) [mg/L]	21-Sep-21	15:10	22-Sep-21	14:19	0.00002	0.00001	0.00001	0.00001	0.00002
Ca (diss) [mg/L]	21-Sep-21	15:10	22-Sep-21	14:19	89.2	89.4	74.2	80.1	83.1
Cd (diss) [mg/L]	21-Sep-21	15:10	22-Sep-21	14:19	0.000013	< 0.000003	0.000004	0.000006	0.000009
Co (diss) [mg/L]	21-Sep-21	15:10	22-Sep-21	14:19	0.000077	0.000074	0.000122	0.000165	0.000617
Cr (diss) [mg/L]	21-Sep-21	15:10	22-Sep-21	14:19	0.00174	0.00214	0.00108	0.00095	0.00053
Cu (diss) [mg/L]	21-Sep-21	15:10	22-Sep-21	14:19	< 0.0002	< 0.0002	0.0005	0.0005	0.0005
Fe (diss) [mg/L]	21-Sep-21	15:10	22-Sep-21	14:19	< 0.007	< 0.007	0.016	0.016	0.010
K (diss) [mg/L]	21-Sep-21	15:10	22-Sep-21	14:19	3.44	3.42	4.56	4.46	2.89
Li (diss) [mg/L]	21-Sep-21	15:10	22-Sep-21	14:19	0.0005	0.0007	0.0048	0.0040	0.0015
Mg (diss) [mg/L]	21-Sep-21	15:10	22-Sep-21	14:19	9.55	8.93	5.41	5.76	6.11
Mn (diss) [mg/L]	21-Sep-21	15:10	22-Sep-21	14:19	0.00296	0.00213	0.0339	0.0324	0.231
Mo (diss) [mg/L]	21-Sep-21	15:10	22-Sep-21	14:19	0.00956	0.00967	0.0124	0.0113	0.00896
Na (diss) [mg/L]	21-Sep-21	15:10	22-Sep-21	14:19	38.6	36.9	58.6	63.7	61.3
Ni (diss) [mg/L]	21-Sep-21	15:10	22-Sep-21	14:19	0.0005	0.0005	0.0016	0.0015	0.0011
Pb (diss) [mg/L]	21-Sep-21	15:10	22-Sep-21	14:19	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009
Sb (diss) [mg/L]	21-Sep-21	15:10	22-Sep-21	14:19	< 0.0009	< 0.0009	< 0.0009	< 0.0009	< 0.0009
Se (diss) [mg/L]	21-Sep-21	15:10	22-Sep-21	14:19	0.00020	0.00022	0.00134	0.00115	0.00070
Sn (diss) [mg/L]	21-Sep-21	15:10	22-Sep-21	14:19	0.00013	0.00012	0.00121	0.00118	0.00135
Sr (diss) [mg/L]	21-Sep-21	15:10	22-Sep-21	14:19	0.727	0.720	0.392	0.413	0.441
Ti (diss) [mg/L]	21-Sep-21	15:10	22-Sep-21	14:19	< 0.00005	0.00022	0.00021	0.00023	0.00017
Tl (diss) [mg/L]	21-Sep-21	15:10	22-Sep-21	14:19	< 0.000005	< 0.000005	0.000016	0.000015	0.000013
U (diss) [mg/L]	21-Sep-21	15:10	22-Sep-21	14:19	0.000173	0.000190	0.00285	0.00240	0.00104
V (diss) [mg/L]	21-Sep-21	15:10	22-Sep-21	14:19	0.00013	0.00010	0.00065	0.00075	0.00066
W (diss) [mg/L]	21-Sep-21	15:10	22-Sep-21	14:19	< 0.00002	< 0.00002	0.00004	0.00004	< 0.00002
Y (diss) [mg/L]	21-Sep-21	15:10	22-Sep-21	14:19	0.00013	0.00009	0.00046	0.00047	0.00043
Zn (diss) [mg/L]	21-Sep-21	15:10	22-Sep-21	14:19	< 0.002	0.003	0.002	0.003	0.002

Online LIMS

0002450084

Analysis	10: HAP1DPT04XR F_6b	11: HAP2DPT08_7 b	12: HAP2DPT08_8 b	13: HAP2DPT02_9 b	14: HAP2DPT02_1 0b	15: BAP1DPT02_1 1b	16: BAP1DPT02_1 2b
Sample Date & Time	15-Sep-21	15-Sep-21	15-Sep-21	15-Sep-21	15-Sep-21	15-Sep-21	15-Sep-21
Temp Upon Receipt [°C]	9.0	9.0	9.0	9.0	9.0	9.0	9.0
Ag (diss) [mg/L]	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
Al (diss) [mg/L]	0.002	0.007	0.014	0.007	0.003	0.005	0.003
As (diss) [mg/L]	0.0012	0.0016	0.0028	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Ba (diss) [mg/L]	0.0430	0.0280	0.0306	0.0291	0.0302	0.0112	0.0113
Be (diss) [mg/L]	0.000018	0.000039	0.000068	< 0.000007	< 0.000007	0.000099	0.000086
B (diss) [mg/L]	0.309	0.872	0.836	0.285	0.290	0.498	0.547
Bi (diss) [mg/L]	0.00001	0.00001	< 0.00001	0.00001	0.00001	0.00002	< 0.00001
Ca (diss) [mg/L]	69.6	48.4	51.6	63.9	67.5	11.8	12.5
Cd (diss) [mg/L]	0.000016	0.00420	0.0120	0.000007	0.000005	0.000041	0.000035
Co (diss) [mg/L]	0.000911	0.114	0.167	0.000085	0.000076	0.000005	0.000012
Cr (diss) [mg/L]	0.00051	0.00045	0.00049	0.00215	0.00246	0.00136	0.00150
Cu (diss) [mg/L]	0.0006	0.0009	0.0028	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Fe (diss) [mg/L]	0.009	< 0.007	< 0.007	0.010	< 0.007	< 0.007	< 0.007
K (diss) [mg/L]	2.53	5.54	5.93	3.90	3.98	1.24	1.37
Li (diss) [mg/L]	0.0008	0.0172	0.0243	0.0077	0.0077	0.0005	0.0005
Mg (diss) [mg/L]	5.64	12.5	13.7	7.25	7.80	3.28	3.49
Mn (diss) [mg/L]	0.381	3.60	5.05	0.00059	0.00051	0.0120	0.0126
Mo (diss) [mg/L]	0.00414	0.00017	0.00047	0.0534	0.0542	0.00005	0.00010
Na (diss) [mg/L]	60.3	10.4	10.1	5.57	5.65	4.85	4.90
Ni (diss) [mg/L]	0.0015	0.117	0.151	0.0003	0.0003	0.0014	0.0016
Pb (diss) [mg/L]	< 0.00009	0.00011	0.00058	< 0.00009	< 0.00009	< 0.00009	< 0.00009
Sb (diss) [mg/L]	< 0.0009	< 0.0009	< 0.0009	< 0.0009	< 0.0009	< 0.0009	< 0.0009
Se (diss) [mg/L]	0.00050	0.0148	0.0159	0.00047	0.00066	0.00050	0.00043
Sn (diss) [mg/L]	0.00125	0.00014	0.00014	0.00011	0.00012	< 0.00006	< 0.00006
Sr (diss) [mg/L]	0.366	0.147	0.152	0.539	0.572	0.0297	0.0306
Ti (diss) [mg/L]	0.00017	0.00011	0.00007	0.00030	0.00010	0.00011	0.00010
Tl (diss) [mg/L]	0.000009	0.000014	0.000020	0.000006	0.000008	0.000020	0.000016
U (diss) [mg/L]	0.000268	0.000018	0.000027	0.00143	0.00171	0.000011	0.000025
V (diss) [mg/L]	0.00045	0.00007	0.00005	0.00041	0.00044	0.00008	0.00008
W (diss) [mg/L]	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002
Y (diss) [mg/L]	0.00047	0.00100	0.00157	0.00016	0.00012	0.00048	0.00034
Zn (diss) [mg/L]	0.004	0.087	0.127	< 0.002	< 0.002	0.008	0.004

*Catharine Arnold*  
**Catharine Arnold, B.Sc., C.Chem**  
**Project Specialist,**  
**Environment, Health & Safety**





# APPENDIX E

## Statistical Analysis Reports

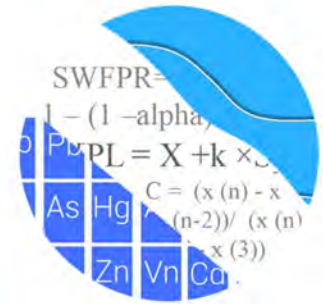
March 2021



## GROUNDWATER STATS CONSULTING

August 24, 2021

Southern Company Services  
Attn: Ms. Kristen Jurinko  
241 Ralph McGill Blvd NE, Bin 10160  
Atlanta, Georgia 30308



Re: Plant Hammond Ash Pond 2 (AP-2)  
March 2021 Statistical Analysis

Dear Ms. Jurinko,

Groundwater Stats Consulting, formerly the statistical consulting division of Sanitas Technologies, is pleased to provide the March 2021 Semi-Annual Groundwater Detection and Assessment Monitoring Statistical summary of groundwater data for Georgia Power Company's Plant Hammond AP-2. 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).

The monitoring well network, as provided by Southern Company Services, consists of the following:

- **Upgradient wells:** HGWA-1, HGWA-2, HGWA-3, HGWA-4, HGWA-5, HGWA-6, HGWA-42D, HGWA-43D, and HGWA-44D
- **Downgradient wells:** HGWC-14, HGWC-15, HGWC-16, HGWC-17, and HGWC-18
- **Delineation wells:** MW-21D, MW-22, MW-23D, and MW-37D
- **Piezometers:** MW-33 and MW-35

Sampling began for the CCR program in 2016, and at least 8 samples were collected for all wells except for newer upgradient wells HGWA-42D, HGWA-43D, and HGWA-44D and delineation wells. Sampling began in 2019 for delineation wells MW-21D, MW-22, and

MW-23D; and in 2020 for upgradient wells HGWA-42D, HGWA-43D, HGWA-44D, delineation well MW-37D, and piezometers MW-33 and MW-35.

Delineation wells and piezometers are included on time series and box plots for all parameters. When a minimum of 4 samples is available, these wells and piezometers are evaluated using confidence intervals for the Appendix IV constituents.

Data were sent electronically to Groundwater Stats Consulting, and the statistical analysis was reviewed by Kristina Rayner, Groundwater Statistician and Founder of Groundwater Stats Consulting. The statistical analysis was performed according to the groundwater data screening that was performed in April 2018 by GSC and approved by Dr. Cameron, PhD Statistician with MacStat Consulting and primary author of the USEPA Unified Guidance.

The CCR program consists of the constituents listed below. The terms “parameters” and “constituents” are used interchangeably.

- **Appendix III** (Detection Monitoring) - boron, calcium, chloride, fluoride, pH, sulfate, and TDS
- **Appendix IV** (Assessment Monitoring) – arsenic, barium, beryllium, cadmium, chromium, cobalt, combined radium 226 + 228, fluoride, lead, lithium, molybdenum, selenium, and thallium

Note that when there are no detections present in downgradient wells for a given constituent, statistical analyses are not required. A summary of well/constituent pairs with 100% non-detects follows this letter. Additionally, annual Scan events are conducted to determine which Appendix IV constituents are detected in downgradient wells and, therefore, require statistical analysis. Any constituents that are not detected do not require statistical analysis. During the Scan event conducted in February 2021, mercury was not detected; therefore, this constituent was not required to be sampled in subsequent events. Data for mercury were plotted on time series graphs and box plots, but were not analyzed with confidence intervals.

For all constituents, a substitution of the most recent reporting limit is used for nondetect data. In the case of lithium, a reporting limit of 0.03 mg/L was substituted across all wells which is the most recent reporting limit by the laboratory.

Time series plots for Appendix III and IV parameters at all wells are provided for the purpose of screening data at these wells (Figure A). Additionally, a separate section of box plots is included for all constituents at upgradient and downgradient wells (Figure B). The

time series plots are used to initially screen for suspected outliers and trends, while the box plots provide visual representation of variation within individual wells and between all wells. When values in background are flagged as outliers, they may be seen in a lighter font and as a disconnected symbol on the graphs. No values were flagged as outliers (Figure C).

In earlier analyses, data at all wells were evaluated 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 to demonstrate that the selected statistical methods for Appendix III parameters comply with the USEPA Unified Guidance. The EPA suggests that 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 1-of-2 resamples 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. Non-detects are handled as follows:

- No statistical analyses are required on wells and analytes containing 100% non-detects (USEPA Unified Guidance, 2009, Chapter 6).
- When data contain <15% non-detects in background, simple substitution of one-half the reporting limit is utilized in the statistical analysis. The reporting limit utilized for non-detects is the most recent practical quantification limit (PQL) as reported by the laboratory.

- When data contain between 15-50% non-detects, the Kaplan-Meier non-detect adjustment is applied to the background data. This technique adjusts the mean and standard deviation of the historical concentrations to account for concentrations below the reporting limit.
- Nonparametric prediction limits are used on data containing greater than 50% non-detects.

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.

### **Statistical Evaluation of Appendix III Parameters – March 2021**

All Appendix III parameters were analyzed using interwell prediction limits. Background (upgradient) well data were re-assessed for potential outliers during this analysis. When values in background have been flagged as outliers, they may be seen in a lighter font and as a disconnected symbol on the graphs. No new values were flagged, and no values have been flagged as outliers (Figure C).

Interwell prediction limits, combined with a 1-of-2 resample plan, were constructed for all Appendix III parameters using all historical upgradient well data through March 2021 (Figure D). Downgradient measurements were compared to these interwell background limits. Interwell prediction limits use all available 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 statistically significant increases (SSIs).

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 confirm 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; therefore, no further action is necessary. If no resample is collected, the initial exceedance is automatically confirmed.

When the March 2021 compliance data from downgradient wells were compared to interwell prediction limits, several exceedances were noted. A summary table of these findings is provided along with the prediction limits (Figure D).

When prediction limit exceedances are identified in downgradient wells, data are further evaluated using the Sen's Slope/Mann Kendall trend test to determine whether concentrations are statistically increasing, decreasing, or stable (Figure E). Upgradient 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. Upgradient trends are an indication of natural variability in groundwater unrelated to practices at the site. A summary of the trend test results follows this letter. Statistically significant trends were noted for the following well/constituent pairs:

Increasing trends:

- Boron: HGWA-2 (upgradient) and HGWC-16
- Calcium: HGWC-16
- Chloride: HGWC-16 and HGWC-17
- pH: HGWC-14
- Sulfate: HGWA-2 and HGWA-3 (both upgradient)
- TDS: HGWC-16 and HGWC-17

Decreasing trends:

- Chloride: HGWA-4 (upgradient), HGWC-14, and HGWC-18
- pH: HGWA-4 (upgradient)
- TDS: HGWA-4 (upgradient) and HGWC-14

### **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 (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. Confidence intervals are provided for Appendix IV well/constituent pairs with detections and with current reported data. The methods are described below.

## Statistical Evaluation of Appendix IV Parameters – March 2021

Site specific background limits were calculated as upper one-sided interwell tolerance limits (UTLs) on pooled upgradient data for each of the Appendix IV constituents (Figure F). When varying detection limits were present in upgradient wells, all non-detects were substituted with the most recent reporting limit. Parametric tolerance limits were used when data follow a normal or transformed-normal distribution. When data contained greater than 50% non-detects or did not follow a normal or transformed-normal distribution, non-parametric tolerance limits were used. The background limits were then used when determining the groundwater protection standard (GWPS) under 40 CFR §257.95(h) and Georgia EPD Rule 391-3-4-.10(6)(a) (Figure G).

As described in 40 CFR §257.95(h) (1-3), 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, CCR-rule specified levels have been specified 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

On July 30, 2018, USEPA revised the Federal CCR Rule updating GWPS for cobalt, lead, lithium, and molybdenum as described above in 40 CFR §257.95(h)(2). Georgia EPD has not incorporated the updated GWPS into the current Georgia EPD Rules for Solid Waste Management 391-3-4-.10(6)(a); therefore, for sites regulated under Georgia EPD Rules, the GWPS is:

- The MCL or
- The background concentration when an MCL is not established or when the background concentration is higher than the MCL.

Following the above Georgia EPD Rule requirements and the CCR Rule, State and Federal GWPS were established for statistical comparison of Appendix IV constituents for the March 2021 sample event (Figures G and H, respectively). As mentioned above, delineation wells and piezometers were included when a minimum of 4 samples were available. Note that a GWPS is established for mercury; however, since it was not sampled during the March 2021 sampling event, no statistical comparison with confidence intervals is required.

To complete the statistical comparison to GWPS, confidence intervals were constructed for each of the Appendix IV constituents in each downgradient well. The Sanitas software was used to calculate the tolerance limits and the confidence intervals—either parametric or nonparametric as appropriate. For the State requirements, confidence intervals were compared to the GWPS established using the Georgia EPD Rules 391-3-4-.10(6)(a). For the Federal requirements, confidence intervals were compared to the GWPS prepared according to the CCR Rule. 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. Note the reporting limits changes for the following constituents:

- Beryllium from <0.003 mg/L to <0.0005 mg/L
- Cadmium from <0.0025 mg/L to <0.0005 mg/L
- Chromium from <0.01 mg/L to <0.025 mg/L
- Lead from <0.005 mg/L to <0.001 mg/L
- Mercury from <0.001 mg/L to <0.0005 mg/L
- Selenium from <0.01 mg/L to <0.005 mg/L

As a result, background limits changed for these constituents, except for chromium. However, in all cases, except for lead which uses the background limit as the GWPS for State confidence intervals, the established MCL or CCR Rule-Specified Levels for the constituents mentioned above were higher than the background limits. Therefore, these GWPS were not affected. Additionally, some of the confidence intervals constructed on downgradient wells resulted in decreased upper and lower confidence limits since all historical non-detects within a given well are replaced with the most recent reporting limit. Summaries of the confidence interval results, along with graphical comparison against GWPS for both State and Federal requirements, follow this letter (Figures I and J, respectively). The following confidence interval exceedances were identified:

State:

- Cobalt: HGWC-18, MW-33, and MW-35
- Lead: HGWC-14, HGWC-18, and MW-33
- Molybdenum: MW-21D

Federal:

- Cobalt: HGWC-18, MW-33, and MW-35

Note that all concentrations through February 2021 for lead at wells HGWC-14, HGWC-18, and MW-33 have been reported as estimated values below the historical



practical quantitation limit (PQL) of 0.005 mg/L. No confidence interval exceedances were previously noted.

During this analysis, a decrease in the reporting limit for lead resulted in a GWPS (background limit) of 0.001 mg/L; and confidence intervals constructed on the estimated values for this constituent exceeded the state GWPS for wells HGWC-14, HGWC-18, and MW-33. Earlier reported non-detect values were also based on the reporting limit in use at the time of measurement; therefore, the exact values are unknown. As more data are collected, the GWPS and confidence intervals will be recalculated using only the more recent data measured with the lower reporting limit. Similar logic applies to the other constituents for which the reporting limits changed.

Additional confidence intervals were constructed for lead at these wells using the historical GWPS of 0.005 mg/L and no exceedances were noted. The Sen's Slope/Mann Kendall trend test was also used to evaluate the measurements of lead at wells HGWC-14, HGWC-18, and MW-33 to determine whether the reported estimated concentrations are increasing, decreasing, or remaining stable over time. The trend tests show that all reported estimated concentrations are stable over time with no statistically significant increasing or decreasing trends.

Thank you for the opportunity to assist you in the statistical analysis of groundwater quality for Hammond AP-2. If you have any questions or comments, please feel free to contact us.

For Groundwater Stats Consulting,



Andrew T. Collins  
Project Manager



Kristina L. Rayner  
Groundwater Statistician



# 100% Non-Detects: Appendix IV

Analysis Run 5/5/2021 10:30 AM View: Appendix IV - Confidence Intervals  
Plant Hammond Client: Southern Company Data: Hammond AP-2

Antimony (mg/L)

HGWC-15, HGWC-16, HGWC-17, HGWC-18, MW-21D, MW-22, MW-23D

Beryllium (mg/L)

HGWC-15, HGWC-16, MW-21D, MW-23D

Cadmium (mg/L)

HGWC-16, MW-21D, MW-37D

Lithium (mg/L)

HGWC-14

Mercury (mg/L)

HGWC-14, HGWC-15, HGWC-16, HGWC-17, MW-21D, MW-22, MW-23D, MW-33, MW-35, MW-37D

Molybdenum (mg/L)

HGWC-14, HGWC-16, HGWC-17, HGWC-18, MW-33, MW-35

Selenium (mg/L)

MW-21D, MW-23D, MW-37D

Thallium (mg/L)

HGWC-15, HGWC-16, MW-21D, MW-22, MW-23D, MW-37D

# Appendix III Interwell Prediction Limits - Significant Results

Plant Hammond Client: Southern Company Data: Hammond AP-2 Printed 5/5/2021, 9:44 AM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Boron (mg/L)	HGWC-14	0.4	n/a	3/17/2021	11.8	Yes	111	n/a	n/a	5.405	n/a	n/a	0.0001613	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-15	0.4	n/a	3/16/2021	2.4	Yes	111	n/a	n/a	5.405	n/a	n/a	0.0001613	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-16	0.4	n/a	3/17/2021	2.7	Yes	111	n/a	n/a	5.405	n/a	n/a	0.0001613	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-17	0.4	n/a	3/18/2021	6.8	Yes	111	n/a	n/a	5.405	n/a	n/a	0.0001613	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-18	0.4	n/a	3/18/2021	8.9	Yes	111	n/a	n/a	5.405	n/a	n/a	0.0001613	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-14	138.6	n/a	3/17/2021	572	Yes	111	3.83	0.611	0	None	ln(x)	0.001504	Param Inter 1 of 2
Calcium (mg/L)	HGWC-15	138.6	n/a	3/16/2021	196	Yes	111	3.83	0.611	0	None	ln(x)	0.001504	Param Inter 1 of 2
Calcium (mg/L)	HGWC-16	138.6	n/a	3/17/2021	198	Yes	111	3.83	0.611	0	None	ln(x)	0.001504	Param Inter 1 of 2
Calcium (mg/L)	HGWC-17	138.6	n/a	3/18/2021	266	Yes	111	3.83	0.611	0	None	ln(x)	0.001504	Param Inter 1 of 2
Calcium (mg/L)	HGWC-18	138.6	n/a	3/18/2021	407	Yes	111	3.83	0.611	0	None	ln(x)	0.001504	Param Inter 1 of 2
Chloride (mg/L)	HGWC-14	20.4	n/a	3/17/2021	233	Yes	111	n/a	n/a	0	n/a	n/a	0.0001613	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-15	20.4	n/a	3/16/2021	103	Yes	111	n/a	n/a	0	n/a	n/a	0.0001613	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-16	20.4	n/a	3/17/2021	93.8	Yes	111	n/a	n/a	0	n/a	n/a	0.0001613	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-17	20.4	n/a	3/18/2021	138	Yes	111	n/a	n/a	0	n/a	n/a	0.0001613	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-18	20.4	n/a	3/18/2021	90.2	Yes	111	n/a	n/a	0	n/a	n/a	0.0001613	NP Inter (normality) 1 of 2
Field pH (s.u.)	HGWC-14	7.92	4.9	3/17/2021	4.72	Yes	138	n/a	n/a	0	n/a	n/a	0.0002064	NP Inter (normality) 1 of 2
Field pH (s.u.)	HGWC-18	7.92	4.9	3/18/2021	4.54	Yes	138	n/a	n/a	0	n/a	n/a	0.0002064	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-14	85.9	n/a	3/17/2021	1300	Yes	111	n/a	n/a	3.604	n/a	n/a	0.0001613	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-15	85.9	n/a	3/16/2021	379	Yes	111	n/a	n/a	3.604	n/a	n/a	0.0001613	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-16	85.9	n/a	3/17/2021	250	Yes	111	n/a	n/a	3.604	n/a	n/a	0.0001613	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-17	85.9	n/a	3/18/2021	447	Yes	111	n/a	n/a	3.604	n/a	n/a	0.0001613	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-18	85.9	n/a	3/18/2021	1050	Yes	111	n/a	n/a	3.604	n/a	n/a	0.0001613	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-14	496	n/a	3/17/2021	1640	Yes	111	n/a	n/a	0	n/a	n/a	0.0001613	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-16	496	n/a	3/17/2021	768	Yes	111	n/a	n/a	0	n/a	n/a	0.0001613	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-17	496	n/a	3/18/2021	1020	Yes	111	n/a	n/a	0	n/a	n/a	0.0001613	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-18	496	n/a	3/18/2021	1390	Yes	111	n/a	n/a	0	n/a	n/a	0.0001613	NP Inter (normality) 1 of 2

# Appendix III Interwell Prediction Limits - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-2 Printed 5/5/2021, 9:44 AM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Boron (mg/L)	HGWC-14	0.4	n/a	3/17/2021	11.8	Yes	111	n/a	n/a	5.405	n/a	n/a	0.0001613	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-15	0.4	n/a	3/16/2021	2.4	Yes	111	n/a	n/a	5.405	n/a	n/a	0.0001613	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-16	0.4	n/a	3/17/2021	2.7	Yes	111	n/a	n/a	5.405	n/a	n/a	0.0001613	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-17	0.4	n/a	3/18/2021	6.8	Yes	111	n/a	n/a	5.405	n/a	n/a	0.0001613	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-18	0.4	n/a	3/18/2021	8.9	Yes	111	n/a	n/a	5.405	n/a	n/a	0.0001613	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-14	138.6	n/a	3/17/2021	572	Yes	111	3.83	0.611	0	None	ln(x)	0.001504	Param Inter 1 of 2
Calcium (mg/L)	HGWC-15	138.6	n/a	3/16/2021	196	Yes	111	3.83	0.611	0	None	ln(x)	0.001504	Param Inter 1 of 2
Calcium (mg/L)	HGWC-16	138.6	n/a	3/17/2021	198	Yes	111	3.83	0.611	0	None	ln(x)	0.001504	Param Inter 1 of 2
Calcium (mg/L)	HGWC-17	138.6	n/a	3/18/2021	266	Yes	111	3.83	0.611	0	None	ln(x)	0.001504	Param Inter 1 of 2
Calcium (mg/L)	HGWC-18	138.6	n/a	3/18/2021	407	Yes	111	3.83	0.611	0	None	ln(x)	0.001504	Param Inter 1 of 2
Chloride (mg/L)	HGWC-14	20.4	n/a	3/17/2021	233	Yes	111	n/a	n/a	0	n/a	n/a	0.0001613	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-15	20.4	n/a	3/16/2021	103	Yes	111	n/a	n/a	0	n/a	n/a	0.0001613	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-16	20.4	n/a	3/17/2021	93.8	Yes	111	n/a	n/a	0	n/a	n/a	0.0001613	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-17	20.4	n/a	3/18/2021	138	Yes	111	n/a	n/a	0	n/a	n/a	0.0001613	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-18	20.4	n/a	3/18/2021	90.2	Yes	111	n/a	n/a	0	n/a	n/a	0.0001613	NP Inter (normality) 1 of 2
Field pH (s.u.)	HGWC-14	7.92	4.9	3/17/2021	4.72	Yes	138	n/a	n/a	0	n/a	n/a	0.0002064	NP Inter (normality) 1 of 2
Field pH (s.u.)	HGWC-15	7.92	4.9	3/16/2021	6.08	No	138	n/a	n/a	0	n/a	n/a	0.0002064	NP Inter (normality) 1 of 2
Field pH (s.u.)	HGWC-16	7.92	4.9	3/17/2021	7.19	No	138	n/a	n/a	0	n/a	n/a	0.0002064	NP Inter (normality) 1 of 2
Field pH (s.u.)	HGWC-17	7.92	4.9	3/18/2021	6.43	No	138	n/a	n/a	0	n/a	n/a	0.0002064	NP Inter (normality) 1 of 2
Field pH (s.u.)	HGWC-18	7.92	4.9	3/18/2021	4.54	Yes	138	n/a	n/a	0	n/a	n/a	0.0002064	NP Inter (normality) 1 of 2
Fluoride (mg/L)	HGWC-14	0.74	n/a	3/17/2021	0.076J	No	138	n/a	n/a	31.88	n/a	n/a	0.0001032	NP Inter (normality) 1 of 2
Fluoride (mg/L)	HGWC-15	0.74	n/a	3/16/2021	0.1ND	No	138	n/a	n/a	31.88	n/a	n/a	0.0001032	NP Inter (normality) 1 of 2
Fluoride (mg/L)	HGWC-16	0.74	n/a	3/17/2021	0.1ND	No	138	n/a	n/a	31.88	n/a	n/a	0.0001032	NP Inter (normality) 1 of 2
Fluoride (mg/L)	HGWC-17	0.74	n/a	3/18/2021	0.057J	No	138	n/a	n/a	31.88	n/a	n/a	0.0001032	NP Inter (normality) 1 of 2
Fluoride (mg/L)	HGWC-18	0.74	n/a	3/18/2021	0.64	No	138	n/a	n/a	31.88	n/a	n/a	0.0001032	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-14	85.9	n/a	3/17/2021	1300	Yes	111	n/a	n/a	3.604	n/a	n/a	0.0001613	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-15	85.9	n/a	3/16/2021	379	Yes	111	n/a	n/a	3.604	n/a	n/a	0.0001613	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-16	85.9	n/a	3/17/2021	250	Yes	111	n/a	n/a	3.604	n/a	n/a	0.0001613	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-17	85.9	n/a	3/18/2021	447	Yes	111	n/a	n/a	3.604	n/a	n/a	0.0001613	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-18	85.9	n/a	3/18/2021	1050	Yes	111	n/a	n/a	3.604	n/a	n/a	0.0001613	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-14	496	n/a	3/17/2021	1640	Yes	111	n/a	n/a	0	n/a	n/a	0.0001613	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-15	496	n/a	3/16/2021	92	No	111	n/a	n/a	0	n/a	n/a	0.0001613	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-16	496	n/a	3/17/2021	768	Yes	111	n/a	n/a	0	n/a	n/a	0.0001613	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-17	496	n/a	3/18/2021	1020	Yes	111	n/a	n/a	0	n/a	n/a	0.0001613	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-18	496	n/a	3/18/2021	1390	Yes	111	n/a	n/a	0	n/a	n/a	0.0001613	NP Inter (normality) 1 of 2

# Trend Tests - Prediction Limit Exceedances - Significant Results

Plant Hammond    Client: Southern Company    Data: Hammond AP-2    Printed 5/5/2021, 10:25 AM

<u>Constituent</u>	<u>Well</u>	<u>Slope</u>	<u>Calc.</u>	<u>Critical</u>	<u>Sig.</u>	<u>N</u>	<u>%NDs</u>	<u>Normality</u>	<u>Xform</u>	<u>Alpha</u>	<u>Method</u>
Boron (mg/L)	HGWA-2 (bg)	0.00257	72	58	Yes	16	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-16	0.2888	80	58	Yes	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWC-16	13.53	89	58	Yes	16	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWA-4 (bg)	-0.357	-85	-58	Yes	16	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWC-14	-90.69	-67	-58	Yes	16	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWC-16	14.74	110	58	Yes	16	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWC-17	15.05	68	58	Yes	16	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWC-18	-36.81	-60	-58	Yes	16	0	n/a	n/a	0.01	NP
Field pH (s.u.)	HGWA-4 (bg)	-0.2968	-107	-81	Yes	20	0	n/a	n/a	0.01	NP
Field pH (s.u.)	HGWC-14	0.04839	82	81	Yes	20	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-2 (bg)	1.382	64	58	Yes	16	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-3 (bg)	1.676	67	58	Yes	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-4 (bg)	-35.66	-61	-58	Yes	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWC-14	-252	-73	-58	Yes	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWC-16	53.96	84	58	Yes	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWC-17	80.13	71	58	Yes	16	6.25	n/a	n/a	0.01	NP

# Trend Tests - Prediction Limit Exceedances - All Results

Plant Hammond    Client: Southern Company    Data: Hammond AP-2    Printed 5/5/2021, 10:25 AM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Boron (mg/L)	HGWA-1 (bg)	-0.0001741	-4	-58	No	16	0	n/a	n/a	0.01	NP
<b>Boron (mg/L)</b>	<b>HGWA-2 (bg)</b>	<b>0.00257</b>	<b>72</b>	<b>58</b>	<b>Yes</b>	<b>16</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Boron (mg/L)	HGWA-3 (bg)	-0.0004025	-20	-58	No	16	12.5	n/a	n/a	0.01	NP
Boron (mg/L)	HGWA-4 (bg)	-0.001192	-46	-58	No	16	6.25	n/a	n/a	0.01	NP
Boron (mg/L)	HGWA-42D (bg)	-0.08634	-4	-12	No	5	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWA-43D (bg)	-0.02892	-4	-12	No	5	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWA-44D (bg)	0.3386	8	12	No	5	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWA-5 (bg)	-0.0001291	-7	-58	No	16	12.5	n/a	n/a	0.01	NP
Boron (mg/L)	HGWA-6 (bg)	-0.0004206	-18	-58	No	16	6.25	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-14	-0.9086	-30	-58	No	16	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-15	0.09551	48	58	No	16	0	n/a	n/a	0.01	NP
<b>Boron (mg/L)</b>	<b>HGWC-16</b>	<b>0.2888</b>	<b>80</b>	<b>58</b>	<b>Yes</b>	<b>16</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Boron (mg/L)	HGWC-17	0.2301	36	58	No	16	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-18	-0.03739	-3	-58	No	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-1 (bg)	4.009	44	58	No	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-2 (bg)	0.3424	16	58	No	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-3 (bg)	2.789	48	58	No	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-4 (bg)	-9.588	-56	-58	No	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-42D (bg)	-1.953	-2	-12	No	5	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-43D (bg)	-5.439	-2	-12	No	5	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-44D (bg)	-14.84	-4	-12	No	5	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-5 (bg)	-0.1834	-11	-58	No	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-6 (bg)	0.3313	14	58	No	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWC-14	-3.085	-4	-58	No	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWC-15	7.289	36	58	No	16	0	n/a	n/a	0.01	NP
<b>Calcium (mg/L)</b>	<b>HGWC-16</b>	<b>13.53</b>	<b>89</b>	<b>58</b>	<b>Yes</b>	<b>16</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Calcium (mg/L)	HGWC-17	26.03	55	58	No	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWC-18	10.86	36	58	No	16	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWA-1 (bg)	0.7206	33	58	No	16	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWA-2 (bg)	-0.2299	-53	-58	No	16	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWA-3 (bg)	-0.07881	-28	-58	No	16	0	n/a	n/a	0.01	NP
<b>Chloride (mg/L)</b>	<b>HGWA-4 (bg)</b>	<b>-0.357</b>	<b>-85</b>	<b>-58</b>	<b>Yes</b>	<b>16</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Chloride (mg/L)	HGWA-42D (bg)	-2.81	-6	-12	No	5	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWA-43D (bg)	0.5656	3	12	No	5	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWA-44D (bg)	9.78	10	12	No	5	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWA-5 (bg)	-0.07921	-34	-58	No	16	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWA-6 (bg)	-0.08552	-42	-58	No	16	0	n/a	n/a	0.01	NP
<b>Chloride (mg/L)</b>	<b>HGWC-14</b>	<b>-90.69</b>	<b>-67</b>	<b>-58</b>	<b>Yes</b>	<b>16</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Chloride (mg/L)	HGWC-15	-23.47	-56	-58	No	16	0	n/a	n/a	0.01	NP
<b>Chloride (mg/L)</b>	<b>HGWC-16</b>	<b>14.74</b>	<b>110</b>	<b>58</b>	<b>Yes</b>	<b>16</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
<b>Chloride (mg/L)</b>	<b>HGWC-17</b>	<b>15.05</b>	<b>68</b>	<b>58</b>	<b>Yes</b>	<b>16</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
<b>Chloride (mg/L)</b>	<b>HGWC-18</b>	<b>-36.81</b>	<b>-60</b>	<b>-58</b>	<b>Yes</b>	<b>16</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Field pH (s.u.)	HGWA-1 (bg)	-0.03025	-50	-81	No	20	0	n/a	n/a	0.01	NP
Field pH (s.u.)	HGWA-2 (bg)	-0.02029	-21	-81	No	20	0	n/a	n/a	0.01	NP
Field pH (s.u.)	HGWA-3 (bg)	-0.008407	-12	-81	No	20	0	n/a	n/a	0.01	NP
<b>Field pH (s.u.)</b>	<b>HGWA-4 (bg)</b>	<b>-0.2968</b>	<b>-107</b>	<b>-81</b>	<b>Yes</b>	<b>20</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Field pH (s.u.)	HGWA-42D (bg)	0.08202	7	14	No	6	0	n/a	n/a	0.01	NP
Field pH (s.u.)	HGWA-43D (bg)	0.2971	4	14	No	6	0	n/a	n/a	0.01	NP
Field pH (s.u.)	HGWA-44D (bg)	0.1043	8	14	No	6	0	n/a	n/a	0.01	NP
Field pH (s.u.)	HGWA-5 (bg)	-0.03997	-68	-81	No	20	0	n/a	n/a	0.01	NP
Field pH (s.u.)	HGWA-6 (bg)	-0.02632	-36	-81	No	20	0	n/a	n/a	0.01	NP
<b>Field pH (s.u.)</b>	<b>HGWC-14</b>	<b>0.04839</b>	<b>82</b>	<b>81</b>	<b>Yes</b>	<b>20</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Field pH (s.u.)	HGWC-18	-0.02175	-65	-81	No	20	0	n/a	n/a	0.01	NP

# Trend Tests - Prediction Limit Exceedances - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-2 Printed 5/5/2021, 10:25 AM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Sulfate (mg/L)	HGWA-1 (bg)	3.385	39	58	No	16	0	n/a	n/a	0.01	NP
<b>Sulfate (mg/L)</b>	<b>HGWA-2 (bg)</b>	<b>1.382</b>	<b>64</b>	<b>58</b>	<b>Yes</b>	<b>16</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
<b>Sulfate (mg/L)</b>	<b>HGWA-3 (bg)</b>	<b>1.676</b>	<b>67</b>	<b>58</b>	<b>Yes</b>	<b>16</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Sulfate (mg/L)	HGWA-4 (bg)	-0.7193	-56	-58	No	16	18.75	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-42D (bg)	-0.1049	-1	-12	No	5	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-43D (bg)	-8.995	-8	-12	No	5	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-44D (bg)	-2.396	-2	-12	No	5	20	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-5 (bg)	-0.06144	-5	-58	No	16	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-6 (bg)	0.1251	10	58	No	16	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-14	51.27	24	58	No	16	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-15	-0.5501	-3	-58	No	16	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-16	5.214	45	58	No	16	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-17	14.46	45	58	No	16	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-18	32.74	53	58	No	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-1 (bg)	3.302	10	58	No	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-2 (bg)	-1.42	-11	-58	No	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-3 (bg)	-0.3672	-5	-58	No	16	0	n/a	n/a	0.01	NP
<b>Total Dissolved Solids (mg/L)</b>	<b>HGWA-4 (bg)</b>	<b>-35.66</b>	<b>-61</b>	<b>-58</b>	<b>Yes</b>	<b>16</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Total Dissolved Solids (mg/L)	HGWA-42D (bg)	-69.36	-4	-12	No	5	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-43D (bg)	-24.14	-2	-12	No	5	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-44D (bg)	31.49	4	12	No	5	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-5 (bg)	-7.443	-42	-58	No	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-6 (bg)	-1.111	-9	-58	No	16	0	n/a	n/a	0.01	NP
<b>Total Dissolved Solids (mg/L)</b>	<b>HGWC-14</b>	<b>-252</b>	<b>-73</b>	<b>-58</b>	<b>Yes</b>	<b>16</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
<b>Total Dissolved Solids (mg/L)</b>	<b>HGWC-16</b>	<b>53.96</b>	<b>84</b>	<b>58</b>	<b>Yes</b>	<b>16</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
<b>Total Dissolved Solids (mg/L)</b>	<b>HGWC-17</b>	<b>80.13</b>	<b>71</b>	<b>58</b>	<b>Yes</b>	<b>16</b>	<b>6.25</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Total Dissolved Solids (mg/L)	HGWC-18	-18.27	-21	-58	No	16	0	n/a	n/a	0.01	NP

# Upper Tolerance Limits Summary Table

Plant Hammond Client: Southern Company Data: Hammond AP-2 Printed 5/5/2021, 10:00 AM

Constituent	Upper Lim.	Lower Lim.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Antimony (mg/L)	0.003	n/a	n/a	99	n/a	n/a	79.8	n/a	n/a	0.006232	NP Inter(NDs)
Arsenic (mg/L)	0.005	n/a	n/a	132	n/a	n/a	81.06	n/a	n/a	0.001147	NP Inter(NDs)
Barium (mg/L)	0.46	n/a	n/a	132	n/a	n/a	0	n/a	n/a	0.001147	NP Inter(normality)
Beryllium (mg/L)	0.0005	n/a	n/a	120	n/a	n/a	84.17	n/a	n/a	0.002122	NP Inter(NDs)
Cadmium (mg/L)	0.0005	n/a	n/a	132	n/a	n/a	93.18	n/a	n/a	0.001147	NP Inter(NDs)
Chromium (mg/L)	0.019	n/a	n/a	120	n/a	n/a	82.5	n/a	n/a	0.002122	NP Inter(NDs)
Cobalt (mg/L)	0.038	n/a	n/a	132	n/a	n/a	69.7	n/a	n/a	0.001147	NP Inter(NDs)
Combined Radium 226 + 228 (pCi/L)	1.684	n/a	n/a	132	0.7837	0.2727	0	None	sqrt(x)	0.05	Inter
Fluoride (mg/L)	0.74	n/a	n/a	138	n/a	n/a	31.88	n/a	n/a	0.0008431	NP Inter(normality)
Lead (mg/L)	0.001	n/a	n/a	120	n/a	n/a	67.5	n/a	n/a	0.002122	NP Inter(NDs)
Lithium (mg/L)	0.034	n/a	n/a	132	n/a	n/a	20.45	n/a	n/a	0.001147	NP Inter(normality)
Mercury (mg/L)	0.0005	n/a	n/a	87	n/a	n/a	90.8	n/a	n/a	0.01153	NP Inter(NDs)
Molybdenum (mg/L)	0.01	n/a	n/a	120	n/a	n/a	86.67	n/a	n/a	0.002122	NP Inter(NDs)
Selenium (mg/L)	0.005	n/a	n/a	132	n/a	n/a	98.48	n/a	n/a	0.001147	NP Inter(NDs)
Thallium (mg/L)	0.001	n/a	n/a	132	n/a	n/a	98.48	n/a	n/a	0.001147	NP Inter(NDs)

<b>PLANT HAMMOND AP-2 GWPS (State)</b>				
<b>Constituent Name</b>	<b>MCL</b>	<b>CCR-Rule Specified</b>	<b>Background Limit</b>	<b>State GWPS</b>
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		0.46	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		0.0019	0.1
Cobalt, Total (mg/L)	n/a	0.006	0.038	0.038
Combined Radium, Total (pCi/L)	5		1.68	5
Fluoride, Total (mg/L)	4		0.74	4
Lead, Total (mg/L)	n/a	0.015	0.001	0.001
Lithium, Total (mg/L)	n/a	0.04	0.034	0.034
Mercury, Total (mg/L)	0.002		0.0005	0.002
Molybdenum, Total (mg/L)	n/a	0.1	0.01	0.01
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*



<b>PLANT HAMMOND AP-2 GWPS (Federal)</b>				
<b>Constituent Name</b>	<b>MCL</b>	<b>CCR-Rule Specified</b>	<b>Background Limit</b>	<b>Federal GWPS</b>
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		0.46	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		0.0019	0.1
Cobalt, Total (mg/L)	n/a	0.006	0.038	0.038
Combined Radium, Total (pCi/L)	5		1.68	5
Fluoride, Total (mg/L)	4		0.74	4
Lead, Total (mg/L)	n/a	0.015	0.001	0.015
Lithium, Total (mg/L)	n/a	0.04	0.034	0.04
Mercury, Total (mg/L)	0.002		0.0005	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*

## State Confidence Intervals - Significant Results

Plant Hammond Client: Southern Company Data: Hammond AP-2 Printed 5/5/2021, 11:29 AM

<u>Constituent</u>	<u>Well</u>	<u>Upper Lim.</u>	<u>Lower Lim.</u>	<u>Compliance</u>	<u>Sig.</u>	<u>N</u>	<u>Mean</u>	<u>Std. Dev.</u>	<u>%NDs</u>	<u>ND Adj.</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Cobalt (mg/L)	HGWC-18	0.19	0.1614	0.038	Yes	19	0.1757	0.02444	0	None	No	0.01	Param.
Cobalt (mg/L)	MW-33	0.05914	0.04819	0.038	Yes	6	0.05367	0.003983	0	None	No	0.01	Param.
Cobalt (mg/L)	MW-35	0.1078	0.07716	0.038	Yes	4	0.0925	0.006758	0	None	No	0.01	Param.
Lead (mg/L)	HGWC-14	0.001735	0.001385	0.001	Yes	17	0.00156	0.0002796	5.882	None	No	0.01	Param.
Lead (mg/L)	HGWC-18	0.001458	0.001175	0.001	Yes	17	0.001316	0.0002265	5.882	None	No	0.01	Param.
Lead (mg/L)	MW-33	0.0018	0.0017	0.001	Yes	5	0.00172	0.00004472	0	None	No	0.031	NP (normality)
Molybdenum (mg/L)	MW-21D	0.03607	0.01571	0.01	Yes	9	0.02589	0.01054	0	None	No	0.01	Param.

# State Confidence Intervals - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-2 Printed 5/5/2021, 11:29 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Antimony (mg/L)	HGWC-14	0.003	0.00043	0.006	No	13	0.002595	0.0009899	84.62	None	No	0.01	NP (NDs)
Arsenic (mg/L)	HGWC-14	0.0089	0.0032	0.01	No	19	0.008125	0.007668	15.79	None	No	0.01	NP (normality)
Arsenic (mg/L)	HGWC-15	0.025	0.0008	0.01	No	19	0.02112	0.009199	84.21	None	No	0.01	NP (NDs)
Arsenic (mg/L)	HGWC-16	0.025	0.0012	0.01	No	19	0.01989	0.01017	78.95	None	No	0.01	NP (NDs)
Arsenic (mg/L)	HGWC-17	0.025	0.00097	0.01	No	19	0.01865	0.01092	73.68	None	No	0.01	NP (NDs)
Arsenic (mg/L)	HGWC-18	0.007066	0.004844	0.01	No	19	0.005955	0.001897	0	None	No	0.01	Param.
Arsenic (mg/L)	MW-21D	0.025	0.00019	0.01	No	9	0.01694	0.01209	66.67	None	No	0.002	NP (NDs)
Arsenic (mg/L)	MW-22	0.025	0.00045	0.01	No	8	0.02193	0.00868	87.5	None	No	0.004	NP (NDs)
Arsenic (mg/L)	MW-23D	0.025	0.00082	0.01	No	8	0.01898	0.01115	75	None	No	0.004	NP (NDs)
Arsenic (mg/L)	MW-33	0.008872	0.002648	0.01	No	5	0.00576	0.001857	0	None	No	0.01	Param.
Arsenic (mg/L)	MW-35	0.025	0.005	0.01	No	4	0.01023	0.009859	25	None	No	0.0625	NP (normality)
Arsenic (mg/L)	MW-37D	0.004094	0.0006745	0.01	No	4	0.007588	0.01162	25	Kaplan-Meier	ln(x)	0.01	Param.
Barium (mg/L)	HGWC-14	0.023	0.019	2	No	19	0.025	0.01827	5.263	None	No	0.01	NP (normality)
Barium (mg/L)	HGWC-15	0.02874	0.01955	2	No	19	0.02414	0.007845	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-16	0.113	0.1002	2	No	19	0.1066	0.01093	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-17	0.02636	0.02358	2	No	19	0.02497	0.002378	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-18	0.0339	0.029	2	No	19	0.03406	0.0163	5.263	None	No	0.01	NP (normality)
Barium (mg/L)	MW-21D	0.07538	0.04662	2	No	9	0.061	0.01489	0	None	No	0.01	Param.
Barium (mg/L)	MW-22	0.03673	0.01702	2	No	8	0.02688	0.009296	0	None	No	0.01	Param.
Barium (mg/L)	MW-23D	0.082	0.056	2	No	8	0.06288	0.008357	0	None	No	0.004	NP (normality)
Barium (mg/L)	MW-33	0.02943	0.02217	2	No	5	0.0258	0.002168	0	None	No	0.01	Param.
Barium (mg/L)	MW-35	0.03443	0.02307	2	No	4	0.02875	0.0025	0	None	No	0.01	Param.
Barium (mg/L)	MW-37D	0.2153	0.07971	2	No	4	0.1475	0.02986	0	None	No	0.01	Param.
Beryllium (mg/L)	HGWC-14	0.00058	0.00043	0.004	No	17	0.0004794	0.00007862	11.76	None	No	0.01	NP (normality)
Beryllium (mg/L)	HGWC-17	0.0005	0.000067	0.004	No	17	0.0004479	0.000147	88.24	None	No	0.01	NP (NDs)
Beryllium (mg/L)	HGWC-18	0.003463	0.002759	0.004	No	17	0.00304	0.000771	5.882	None	x^2	0.01	Param.
Beryllium (mg/L)	MW-22	0.0005	0.000047	0.004	No	8	0.0003364	0.000226	62.5	None	No	0.004	NP (NDs)
Beryllium (mg/L)	MW-33	0.001159	0.0008766	0.004	No	5	0.001018	0.00008438	0	None	No	0.01	Param.
Beryllium (mg/L)	MW-35	0.0008122	0.0001528	0.004	No	4	0.0004825	0.0001452	0	None	No	0.01	Param.
Beryllium (mg/L)	MW-37D	0.0005	0.00012	0.004	No	4	0.000405	0.00019	75	None	No	0.0625	NP (NDs)
Cadmium (mg/L)	HGWC-14	0.0005	0.0001	0.005	No	19	0.000302	0.0001954	47.37	None	No	0.01	NP (normality)
Cadmium (mg/L)	HGWC-15	0.002277	0.001559	0.005	No	19	0.001948	0.0006767	0	None	sqrt(x)	0.01	Param.
Cadmium (mg/L)	HGWC-17	0.0005	0.00007	0.005	No	19	0.0004774	0.00009865	94.74	None	No	0.01	NP (NDs)
Cadmium (mg/L)	HGWC-18	0.002362	0.001856	0.005	No	19	0.002063	0.0005188	5.263	None	x^2	0.01	Param.
Cadmium (mg/L)	MW-22	0.002179	0.001156	0.005	No	8	0.001645	0.0006169	0	None	x^3	0.01	Param.
Cadmium (mg/L)	MW-23D	0.0006	0.00045	0.005	No	8	0.000515	0.00004721	62.5	None	No	0.004	NP (NDs)
Cadmium (mg/L)	MW-33	0.0002327	0.0001473	0.005	No	5	0.00019	0.0000255	0	None	No	0.01	Param.
Cadmium (mg/L)	MW-35	0.002623	-0.0001083	0.005	No	4	0.001258	0.0006016	0	None	No	0.01	Param.
Chromium (mg/L)	HGWC-14	0.025	0.00066	0.1	No	17	0.02212	0.008123	88.24	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-15	0.025	0.0012	0.1	No	17	0.02071	0.009549	82.35	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-16	0.025	0.0021	0.1	No	17	0.02078	0.009409	82.35	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-17	0.025	0.0018	0.1	No	17	0.02078	0.009403	82.35	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-18	0.025	0.00063	0.1	No	17	0.02068	0.009623	82.35	None	No	0.01	NP (NDs)
Chromium (mg/L)	MW-21D	0.025	0.00057	0.1	No	9	0.01959	0.01074	77.78	None	No	0.002	NP (NDs)
Chromium (mg/L)	MW-22	0.025	0.0004	0.1	No	8	0.01889	0.01131	75	None	No	0.004	NP (NDs)
Chromium (mg/L)	MW-23D	0.025	0.00083	0.1	No	8	0.01896	0.01118	75	None	No	0.004	NP (NDs)
Chromium (mg/L)	MW-33	0.025	0.00069	0.1	No	5	0.02014	0.01087	80	None	No	0.031	NP (NDs)
Chromium (mg/L)	MW-35	0.025	0.00079	0.1	No	4	0.01291	0.01397	50	None	No	0.0625	NP (normality)
Chromium (mg/L)	MW-37D	0.008014	0.000295	0.1	No	4	0.01405	0.01272	50	Kaplan-Meier	sqrt(x)	0.01	Param.
Cobalt (mg/L)	HGWC-14	0.02913	0.02366	0.038	No	19	0.02587	0.006039	5.263	None	x^2	0.01	Param.
Cobalt (mg/L)	HGWC-15	0.04702	0.02999	0.038	No	19	0.03851	0.01454	0	None	No	0.01	Param.
Cobalt (mg/L)	HGWC-16	0.005	0.00037	0.038	No	19	0.004508	0.001474	89.47	None	No	0.01	NP (NDs)
Cobalt (mg/L)	HGWC-17	0.01619	0.01429	0.038	No	19	0.01524	0.001623	0	None	No	0.01	Param.
<b>Cobalt (mg/L)</b>	<b>HGWC-18</b>	<b>0.19</b>	<b>0.1614</b>	<b>0.038</b>	<b>Yes</b>	<b>19</b>	<b>0.1757</b>	<b>0.02444</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.01</b>	<b>Param.</b>
Cobalt (mg/L)	MW-21D	0.005	0.00034	0.038	No	9	0.004482	0.001553	88.89	None	No	0.002	NP (NDs)

# State Confidence Intervals - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-2 Printed 5/5/2021, 11:29 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Cobalt (mg/L)	MW-22	0.04027	0.02448	0.038	No	8	0.03238	0.007444	0	None	No	0.01	Param.
Cobalt (mg/L)	MW-23D	0.001215	0.00097	0.038	No	8	0.001093	0.0001156	0	None	No	0.01	Param.
<b>Cobalt (mg/L)</b>	<b>MW-33</b>	<b>0.05914</b>	<b>0.04819</b>	<b>0.038</b>	<b>Yes</b>	<b>6</b>	<b>0.05367</b>	<b>0.003983</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.01</b>	<b>Param.</b>
<b>Cobalt (mg/L)</b>	<b>MW-35</b>	<b>0.1078</b>	<b>0.07716</b>	<b>0.038</b>	<b>Yes</b>	<b>4</b>	<b>0.0925</b>	<b>0.006758</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.01</b>	<b>Param.</b>
Cobalt (mg/L)	MW-37D	0.002148	-0.0001679	0.038	No	4	0.002995	0.002352	50	Kaplan-Meier	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-14	1.654	1.179	5	No	19	1.417	0.406	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-15	0.9507	0.4764	5	No	19	0.7136	0.405	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-16	1.008	0.5368	5	No	19	0.7724	0.4023	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-17	1.05	0.6723	5	No	19	0.8614	0.323	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-18	2.288	1.727	5	No	19	2.008	0.479	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-21D	1.194	0.401	5	No	9	0.7951	0.4745	0	None	sqrt(x)	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-22	1.301	0.3473	5	No	8	0.8241	0.4499	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-23D	1.206	0.5544	5	No	8	0.8801	0.3073	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-33	3.245	0.5646	5	No	5	1.905	0.7997	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-35	5.143	-1.186	5	No	4	1.979	1.394	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-37D	2.476	-0.7417	5	No	4	0.867	0.7086	0	None	No	0.01	Param.
Fluoride (mg/L)	HGWC-14	0.2344	0.08602	4	No	20	0.186	0.1617	20	Kaplan-Meier	sqrt(x)	0.01	Param.
Fluoride (mg/L)	HGWC-15	0.17	0.09	4	No	20	0.1457	0.1246	40	None	No	0.01	NP (normality)
Fluoride (mg/L)	HGWC-16	0.1744	0.04649	4	No	20	0.1624	0.1221	50	Kaplan-Meier	sqrt(x)	0.01	Param.
Fluoride (mg/L)	HGWC-17	0.16	0.07	4	No	20	0.1747	0.2184	35	None	No	0.01	NP (normality)
Fluoride (mg/L)	HGWC-18	0.6613	0.4237	4	No	20	0.5425	0.2091	5	None	No	0.01	Param.
Fluoride (mg/L)	MW-21D	0.1	0.1	4	No	9	0.1	5.0e-10	88.89	None	No	0.002	NP (NDs)
Fluoride (mg/L)	MW-22	0.28	0.1	4	No	8	0.1263	0.06301	75	None	No	0.004	NP (NDs)
Fluoride (mg/L)	MW-23D	0.16	0.1	4	No	8	0.1125	0.02375	75	None	No	0.004	NP (NDs)
Fluoride (mg/L)	MW-33	0.3611	0.0956	4	No	6	0.2283	0.09663	0	None	No	0.01	Param.
Fluoride (mg/L)	MW-35	0.1143	0.03769	4	No	4	0.082	0.0207	25	Kaplan-Meier	No	0.01	Param.
Fluoride (mg/L)	MW-37D	0.1156	0.03593	4	No	4	0.07575	0.01754	0	None	No	0.01	Param.
<b>Lead (mg/L)</b>	<b>HGWC-14</b>	<b>0.001735</b>	<b>0.001385</b>	<b>0.001</b>	<b>Yes</b>	<b>17</b>	<b>0.00156</b>	<b>0.0002796</b>	<b>5.882</b>	<b>None</b>	<b>No</b>	<b>0.01</b>	<b>Param.</b>
Lead (mg/L)	HGWC-15	0.001	0.0002	0.001	No	17	0.0007897	0.0003918	70.59	None	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-16	0.001	0.000094	0.001	No	17	0.0005308	0.0004573	47.06	None	No	0.01	NP (normality)
Lead (mg/L)	HGWC-17	0.001	0.000088	0.001	No	17	0.0005768	0.0004634	52.94	None	No	0.01	NP (NDs)
<b>Lead (mg/L)</b>	<b>HGWC-18</b>	<b>0.001458</b>	<b>0.001175</b>	<b>0.001</b>	<b>Yes</b>	<b>17</b>	<b>0.001316</b>	<b>0.0002265</b>	<b>5.882</b>	<b>None</b>	<b>No</b>	<b>0.01</b>	<b>Param.</b>
Lead (mg/L)	MW-21D	0.001	0.000047	0.001	No	9	0.0006476	0.0004571	55.56	None	No	0.002	NP (NDs)
Lead (mg/L)	MW-22	0.001	0.000036	0.001	No	8	0.0006538	0.0004782	62.5	None	No	0.004	NP (NDs)
Lead (mg/L)	MW-23D	0.001	0.000051	0.001	No	8	0.0007764	0.0004151	75	None	No	0.004	NP (NDs)
<b>Lead (mg/L)</b>	<b>MW-33</b>	<b>0.0018</b>	<b>0.0017</b>	<b>0.001</b>	<b>Yes</b>	<b>5</b>	<b>0.00172</b>	<b>0.00004472</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.031</b>	<b>NP (normality)</b>
Lead (mg/L)	MW-35	0.001367	-0.000187	0.001	No	4	0.00059	0.0003422	0	None	No	0.01	Param.
Lead (mg/L)	MW-37D	0.002073	-0.0008688	0.001	No	4	0.000793	0.0007149	25	Kaplan-Meier	No	0.01	Param.
Lithium (mg/L)	HGWC-15	0.007937	0.00179	0.034	No	19	0.01033	0.01019	31.58	Kaplan-Meier	x^(1/3)	0.01	Param.
Lithium (mg/L)	HGWC-16	0.0043	0.0028	0.034	No	19	0.004068	0.002738	5.263	None	No	0.01	NP (normality)
Lithium (mg/L)	HGWC-17	0.015	0.0011	0.034	No	19	0.008423	0.007124	52.63	None	No	0.01	NP (NDs)
Lithium (mg/L)	HGWC-18	0.01461	0.01234	0.034	No	19	0.01347	0.001942	0	None	No	0.01	Param.
Lithium (mg/L)	MW-21D	0.02597	0.02114	0.034	No	9	0.02356	0.002506	0	None	No	0.01	Param.
Lithium (mg/L)	MW-22	0.002	0.0011	0.034	No	8	0.00135	0.0002928	0	None	No	0.004	NP (normality)
Lithium (mg/L)	MW-23D	0.002602	0.002123	0.034	No	8	0.002363	0.0002264	0	None	No	0.01	Param.
Lithium (mg/L)	MW-33	0.001268	0.0008245	0.034	No	5	0.001046	0.0001322	0	None	No	0.01	Param.
Lithium (mg/L)	MW-35	0.005274	0.003226	0.034	No	4	0.00425	0.0004509	0	None	No	0.01	Param.
Lithium (mg/L)	MW-37D	0.04105	0.02795	0.034	No	4	0.0345	0.002887	0	None	No	0.01	Param.
Molybdenum (mg/L)	HGWC-15	0.01	0.0007	0.01	No	17	0.009453	0.002256	94.12	None	No	0.01	NP (NDs)
<b>Molybdenum (mg/L)</b>	<b>MW-21D</b>	<b>0.03607</b>	<b>0.01571</b>	<b>0.01</b>	<b>Yes</b>	<b>9</b>	<b>0.02589</b>	<b>0.01054</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.01</b>	<b>Param.</b>
Molybdenum (mg/L)	MW-22	0.01	0.00013	0.01	No	8	0.008766	0.00349	87.5	None	No	0.004	NP (NDs)
Molybdenum (mg/L)	MW-23D	0.005782	0.001794	0.01	No	8	0.00375	0.002632	12.5	None	ln(x)	0.01	Param.
Molybdenum (mg/L)	MW-37D	0.02709	0.008412	0.01	No	4	0.01775	0.004113	0	None	No	0.01	Param.
Selenium (mg/L)	HGWC-14	0.01318	0.006823	0.05	No	19	0.01	0.005427	0	None	No	0.01	Param.
Selenium (mg/L)	HGWC-15	0.005	0.0041	0.05	No	19	0.004322	0.001509	78.95	None	No	0.01	NP (NDs)

# State Confidence Intervals - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-2 Printed 5/5/2021, 11:29 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Selenium (mg/L)	HGWC-16	0.005	0.000089	0.05	No	19	0.004742	0.001127	94.74	None	No	0.01	NP (NDs)
Selenium (mg/L)	HGWC-17	0.005	0.0023	0.05	No	19	0.00441	0.001448	84.21	None	No	0.01	NP (NDs)
Selenium (mg/L)	HGWC-18	0.03425	0.01795	0.05	No	19	0.0261	0.01392	5.263	None	No	0.01	Param.
Selenium (mg/L)	MW-22	0.005	0.002	0.05	No	8	0.004625	0.001061	87.5	None	No	0.004	NP (NDs)
Selenium (mg/L)	MW-33	0.04314	-0.001136	0.05	No	5	0.021	0.01321	0	None	No	0.01	Param.
Selenium (mg/L)	MW-35	0.04671	-0.008206	0.05	No	4	0.01925	0.01209	0	None	No	0.01	Param.
Thallium (mg/L)	HGWC-14	0.000306	0.00028	0.002	No	19	0.0002972	0.00003063	0	None	No	0.01	NP (normality)
Thallium (mg/L)	HGWC-17	0.001	0.00011	0.002	No	19	0.0006737	0.0004391	63.16	None	No	0.01	NP (NDs)
Thallium (mg/L)	HGWC-18	0.001	0.00015	0.002	No	19	0.0005174	0.0004233	42.11	None	No	0.01	NP (normality)
Thallium (mg/L)	MW-33	0.0003207	0.0002473	0.002	No	5	0.000284	0.00002191	0	None	No	0.01	Param.
Thallium (mg/L)	MW-35	0.001	0.00013	0.002	No	4	0.0007825	0.000435	75	None	No	0.0625	NP (NDs)

# Federal Confidence Intervals - Significant Results

Plant Hammond Client: Southern Company Data: Hammond AP-2 Printed 5/5/2021, 11:24 AM

<u>Constituent</u>	<u>Well</u>	<u>Upper Lim.</u>	<u>Lower Lim.</u>	<u>Compliance</u>	<u>Sig.</u>	<u>N</u>	<u>Mean</u>	<u>Std. Dev.</u>	<u>%NDs</u>	<u>ND Adj.</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Cobalt (mg/L)	HGWC-18	0.19	0.1614	0.038	Yes	19	0.1757	0.02444	0	None	No	0.01	Param.
Cobalt (mg/L)	MW-33	0.05914	0.04819	0.038	Yes	6	0.05367	0.003983	0	None	No	0.01	Param.
Cobalt (mg/L)	MW-35	0.1078	0.07716	0.038	Yes	4	0.0925	0.006758	0	None	No	0.01	Param.

# Federal Confidence Intervals - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-2 Printed 5/5/2021, 11:24 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Antimony (mg/L)	HGWC-14	0.003	0.00043	0.006	No	13	0.002595	0.0009899	84.62	None	No	0.01	NP (NDs)
Arsenic (mg/L)	HGWC-14	0.0089	0.0032	0.01	No	19	0.008125	0.007668	15.79	None	No	0.01	NP (normality)
Arsenic (mg/L)	HGWC-15	0.025	0.0008	0.01	No	19	0.02112	0.009199	84.21	None	No	0.01	NP (NDs)
Arsenic (mg/L)	HGWC-16	0.025	0.0012	0.01	No	19	0.01989	0.01017	78.95	None	No	0.01	NP (NDs)
Arsenic (mg/L)	HGWC-17	0.025	0.00097	0.01	No	19	0.01865	0.01092	73.68	None	No	0.01	NP (NDs)
Arsenic (mg/L)	HGWC-18	0.007066	0.004844	0.01	No	19	0.005955	0.001897	0	None	No	0.01	Param.
Arsenic (mg/L)	MW-21D	0.025	0.00019	0.01	No	9	0.01694	0.01209	66.67	None	No	0.002	NP (NDs)
Arsenic (mg/L)	MW-22	0.025	0.00045	0.01	No	8	0.02193	0.00868	87.5	None	No	0.004	NP (NDs)
Arsenic (mg/L)	MW-23D	0.025	0.00082	0.01	No	8	0.01898	0.01115	75	None	No	0.004	NP (NDs)
Arsenic (mg/L)	MW-33	0.008872	0.002648	0.01	No	5	0.00576	0.001857	0	None	No	0.01	Param.
Arsenic (mg/L)	MW-35	0.025	0.005	0.01	No	4	0.01023	0.009859	25	None	No	0.0625	NP (normality)
Arsenic (mg/L)	MW-37D	0.004094	0.0006745	0.01	No	4	0.007588	0.01162	25	Kaplan-Meier	ln(x)	0.01	Param.
Barium (mg/L)	HGWC-14	0.023	0.019	2	No	19	0.025	0.01827	5.263	None	No	0.01	NP (normality)
Barium (mg/L)	HGWC-15	0.02874	0.01955	2	No	19	0.02414	0.007845	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-16	0.113	0.1002	2	No	19	0.1066	0.01093	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-17	0.02636	0.02358	2	No	19	0.02497	0.002378	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-18	0.0339	0.029	2	No	19	0.03406	0.0163	5.263	None	No	0.01	NP (normality)
Barium (mg/L)	MW-21D	0.07538	0.04662	2	No	9	0.061	0.01489	0	None	No	0.01	Param.
Barium (mg/L)	MW-22	0.03673	0.01702	2	No	8	0.02688	0.009296	0	None	No	0.01	Param.
Barium (mg/L)	MW-23D	0.082	0.056	2	No	8	0.06288	0.008357	0	None	No	0.004	NP (normality)
Barium (mg/L)	MW-33	0.02943	0.02217	2	No	5	0.0258	0.002168	0	None	No	0.01	Param.
Barium (mg/L)	MW-35	0.03443	0.02307	2	No	4	0.02875	0.0025	0	None	No	0.01	Param.
Barium (mg/L)	MW-37D	0.2153	0.07971	2	No	4	0.1475	0.02986	0	None	No	0.01	Param.
Beryllium (mg/L)	HGWC-14	0.00058	0.00043	0.004	No	17	0.0004794	0.00007862	11.76	None	No	0.01	NP (normality)
Beryllium (mg/L)	HGWC-17	0.0005	0.000067	0.004	No	17	0.0004479	0.000147	88.24	None	No	0.01	NP (NDs)
Beryllium (mg/L)	HGWC-18	0.003463	0.002759	0.004	No	17	0.00304	0.000771	5.882	None	x^2	0.01	Param.
Beryllium (mg/L)	MW-22	0.0005	0.000047	0.004	No	8	0.0003364	0.000226	62.5	None	No	0.004	NP (NDs)
Beryllium (mg/L)	MW-33	0.001159	0.0008766	0.004	No	5	0.001018	0.00008438	0	None	No	0.01	Param.
Beryllium (mg/L)	MW-35	0.0008122	0.0001528	0.004	No	4	0.0004825	0.0001452	0	None	No	0.01	Param.
Beryllium (mg/L)	MW-37D	0.0005	0.00012	0.004	No	4	0.000405	0.00019	75	None	No	0.0625	NP (NDs)
Cadmium (mg/L)	HGWC-14	0.0005	0.0001	0.005	No	19	0.000302	0.0001954	47.37	None	No	0.01	NP (normality)
Cadmium (mg/L)	HGWC-15	0.002277	0.001559	0.005	No	19	0.001948	0.0006767	0	None	sqrt(x)	0.01	Param.
Cadmium (mg/L)	HGWC-17	0.0005	0.00007	0.005	No	19	0.0004774	0.00009865	94.74	None	No	0.01	NP (NDs)
Cadmium (mg/L)	HGWC-18	0.002362	0.001856	0.005	No	19	0.002063	0.0005188	5.263	None	x^2	0.01	Param.
Cadmium (mg/L)	MW-22	0.002179	0.001156	0.005	No	8	0.001645	0.0006169	0	None	x^3	0.01	Param.
Cadmium (mg/L)	MW-23D	0.0006	0.00045	0.005	No	8	0.000515	0.00004721	62.5	None	No	0.004	NP (NDs)
Cadmium (mg/L)	MW-33	0.0002327	0.0001473	0.005	No	5	0.00019	0.0000255	0	None	No	0.01	Param.
Cadmium (mg/L)	MW-35	0.002623	-0.0001083	0.005	No	4	0.001258	0.0006016	0	None	No	0.01	Param.
Chromium (mg/L)	HGWC-14	0.025	0.00066	0.1	No	17	0.02212	0.008123	88.24	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-15	0.025	0.0012	0.1	No	17	0.02071	0.009549	82.35	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-16	0.025	0.0021	0.1	No	17	0.02078	0.009409	82.35	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-17	0.025	0.0018	0.1	No	17	0.02078	0.009403	82.35	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-18	0.025	0.00063	0.1	No	17	0.02068	0.009623	82.35	None	No	0.01	NP (NDs)
Chromium (mg/L)	MW-21D	0.025	0.00057	0.1	No	9	0.01959	0.01074	77.78	None	No	0.002	NP (NDs)
Chromium (mg/L)	MW-22	0.025	0.0004	0.1	No	8	0.01889	0.01131	75	None	No	0.004	NP (NDs)
Chromium (mg/L)	MW-23D	0.025	0.00083	0.1	No	8	0.01896	0.01118	75	None	No	0.004	NP (NDs)
Chromium (mg/L)	MW-33	0.025	0.00069	0.1	No	5	0.02014	0.01087	80	None	No	0.031	NP (NDs)
Chromium (mg/L)	MW-35	0.025	0.00079	0.1	No	4	0.01291	0.01397	50	None	No	0.0625	NP (normality)
Chromium (mg/L)	MW-37D	0.008014	0.000295	0.1	No	4	0.01405	0.01272	50	Kaplan-Meier	sqrt(x)	0.01	Param.
Cobalt (mg/L)	HGWC-14	0.02913	0.02366	0.038	No	19	0.02587	0.006039	5.263	None	x^2	0.01	Param.
Cobalt (mg/L)	HGWC-15	0.04702	0.02999	0.038	No	19	0.03851	0.01454	0	None	No	0.01	Param.
Cobalt (mg/L)	HGWC-16	0.005	0.00037	0.038	No	19	0.004508	0.001474	89.47	None	No	0.01	NP (NDs)
Cobalt (mg/L)	HGWC-17	0.01619	0.01429	0.038	No	19	0.01524	0.001623	0	None	No	0.01	Param.
<b>Cobalt (mg/L)</b>	<b>HGWC-18</b>	<b>0.19</b>	<b>0.1614</b>	<b>0.038</b>	<b>Yes</b>	<b>19</b>	<b>0.1757</b>	<b>0.02444</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.01</b>	<b>Param.</b>
Cobalt (mg/L)	MW-21D	0.005	0.00034	0.038	No	9	0.004482	0.001553	88.89	None	No	0.002	NP (NDs)

# Federal Confidence Intervals - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-2 Printed 5/5/2021, 11:24 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Cobalt (mg/L)	MW-22	0.04027	0.02448	0.038	No	8	0.03238	0.007444	0	None	No	0.01	Param.
Cobalt (mg/L)	MW-23D	0.001215	0.00097	0.038	No	8	0.001093	0.0001156	0	None	No	0.01	Param.
<b>Cobalt (mg/L)</b>	<b>MW-33</b>	<b>0.05914</b>	<b>0.04819</b>	<b>0.038</b>	<b>Yes</b>	<b>6</b>	<b>0.05367</b>	<b>0.003983</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.01</b>	<b>Param.</b>
<b>Cobalt (mg/L)</b>	<b>MW-35</b>	<b>0.1078</b>	<b>0.07716</b>	<b>0.038</b>	<b>Yes</b>	<b>4</b>	<b>0.0925</b>	<b>0.006758</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.01</b>	<b>Param.</b>
Cobalt (mg/L)	MW-37D	0.002148	-0.0001679	0.038	No	4	0.002995	0.002352	50	Kaplan-Meier	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-14	1.654	1.179	5	No	19	1.417	0.406	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-15	0.9507	0.4764	5	No	19	0.7136	0.405	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-16	1.008	0.5368	5	No	19	0.7724	0.4023	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-17	1.05	0.6723	5	No	19	0.8614	0.323	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-18	2.288	1.727	5	No	19	2.008	0.479	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-21D	1.194	0.401	5	No	9	0.7951	0.4745	0	None	sqrt(x)	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-22	1.301	0.3473	5	No	8	0.8241	0.4499	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-23D	1.206	0.5544	5	No	8	0.8801	0.3073	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-33	3.245	0.5646	5	No	5	1.905	0.7997	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-35	5.143	-1.186	5	No	4	1.979	1.394	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-37D	2.476	-0.7417	5	No	4	0.867	0.7086	0	None	No	0.01	Param.
Fluoride (mg/L)	HGWC-14	0.2344	0.08602	4	No	20	0.186	0.1617	20	Kaplan-Meier	sqrt(x)	0.01	Param.
Fluoride (mg/L)	HGWC-15	0.17	0.09	4	No	20	0.1457	0.1246	40	None	No	0.01	NP (normality)
Fluoride (mg/L)	HGWC-16	0.1744	0.04649	4	No	20	0.1624	0.1221	50	Kaplan-Meier	sqrt(x)	0.01	Param.
Fluoride (mg/L)	HGWC-17	0.16	0.07	4	No	20	0.1747	0.2184	35	None	No	0.01	NP (normality)
Fluoride (mg/L)	HGWC-18	0.6613	0.4237	4	No	20	0.5425	0.2091	5	None	No	0.01	Param.
Fluoride (mg/L)	MW-21D	0.1	0.1	4	No	9	0.1	5.0e-10	88.89	None	No	0.002	NP (NDs)
Fluoride (mg/L)	MW-22	0.28	0.1	4	No	8	0.1263	0.06301	75	None	No	0.004	NP (NDs)
Fluoride (mg/L)	MW-23D	0.16	0.1	4	No	8	0.1125	0.02375	75	None	No	0.004	NP (NDs)
Fluoride (mg/L)	MW-33	0.3611	0.0956	4	No	6	0.2283	0.09663	0	None	No	0.01	Param.
Fluoride (mg/L)	MW-35	0.1143	0.03769	4	No	4	0.082	0.0207	25	Kaplan-Meier	No	0.01	Param.
Fluoride (mg/L)	MW-37D	0.1156	0.03593	4	No	4	0.07575	0.01754	0	None	No	0.01	Param.
Lead (mg/L)	HGWC-14	0.001735	0.001385	0.015	No	17	0.00156	0.0002796	5.882	None	No	0.01	Param.
Lead (mg/L)	HGWC-15	0.001	0.0002	0.015	No	17	0.0007897	0.0003918	70.59	None	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-16	0.001	0.000094	0.015	No	17	0.0005308	0.0004573	47.06	None	No	0.01	NP (normality)
Lead (mg/L)	HGWC-17	0.001	0.000088	0.015	No	17	0.0005768	0.0004634	52.94	None	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-18	0.001458	0.001175	0.015	No	17	0.001316	0.0002265	5.882	None	No	0.01	Param.
Lead (mg/L)	MW-21D	0.001	0.000047	0.015	No	9	0.0006476	0.0004571	55.56	None	No	0.002	NP (NDs)
Lead (mg/L)	MW-22	0.001	0.000036	0.015	No	8	0.0006538	0.0004782	62.5	None	No	0.004	NP (NDs)
Lead (mg/L)	MW-23D	0.001	0.000051	0.015	No	8	0.0007764	0.0004151	75	None	No	0.004	NP (NDs)
Lead (mg/L)	MW-33	0.0018	0.0017	0.015	No	5	0.00172	0.0004472	0	None	No	0.031	NP (normality)
Lead (mg/L)	MW-35	0.001367	-0.000187	0.015	No	4	0.00059	0.0003422	0	None	No	0.01	Param.
Lead (mg/L)	MW-37D	0.002073	-0.0008688	0.015	No	4	0.000793	0.0007149	25	Kaplan-Meier	No	0.01	Param.
Lithium (mg/L)	HGWC-15	0.007937	0.00179	0.04	No	19	0.01033	0.01019	31.58	Kaplan-Meier	x^(1/3)	0.01	Param.
Lithium (mg/L)	HGWC-16	0.0043	0.0028	0.04	No	19	0.004068	0.002738	5.263	None	No	0.01	NP (normality)
Lithium (mg/L)	HGWC-17	0.015	0.0011	0.04	No	19	0.008423	0.007124	52.63	None	No	0.01	NP (NDs)
Lithium (mg/L)	HGWC-18	0.01461	0.01234	0.04	No	19	0.01347	0.001942	0	None	No	0.01	Param.
Lithium (mg/L)	MW-21D	0.02597	0.02114	0.04	No	9	0.02356	0.002506	0	None	No	0.01	Param.
Lithium (mg/L)	MW-22	0.002	0.0011	0.04	No	8	0.00135	0.0002928	0	None	No	0.004	NP (normality)
Lithium (mg/L)	MW-23D	0.002602	0.002123	0.04	No	8	0.002363	0.0002264	0	None	No	0.01	Param.
Lithium (mg/L)	MW-33	0.001268	0.0008245	0.04	No	5	0.001046	0.0001322	0	None	No	0.01	Param.
Lithium (mg/L)	MW-35	0.005274	0.003226	0.04	No	4	0.00425	0.0004509	0	None	No	0.01	Param.
Lithium (mg/L)	MW-37D	0.04105	0.02795	0.04	No	4	0.0345	0.002887	0	None	No	0.01	Param.
Molybdenum (mg/L)	HGWC-15	0.01	0.0007	0.1	No	17	0.009453	0.002256	94.12	None	No	0.01	NP (NDs)
Molybdenum (mg/L)	MW-21D	0.03607	0.01571	0.1	No	9	0.02589	0.01054	0	None	No	0.01	Param.
Molybdenum (mg/L)	MW-22	0.01	0.00013	0.1	No	8	0.008766	0.00349	87.5	None	No	0.004	NP (NDs)
Molybdenum (mg/L)	MW-23D	0.005782	0.001794	0.1	No	8	0.00375	0.002632	12.5	None	ln(x)	0.01	Param.
Molybdenum (mg/L)	MW-37D	0.02709	0.008412	0.1	No	4	0.01775	0.004113	0	None	No	0.01	Param.
Selenium (mg/L)	HGWC-14	0.01318	0.006823	0.05	No	19	0.01	0.005427	0	None	No	0.01	Param.
Selenium (mg/L)	HGWC-15	0.005	0.0041	0.05	No	19	0.004322	0.001509	78.95	None	No	0.01	NP (NDs)



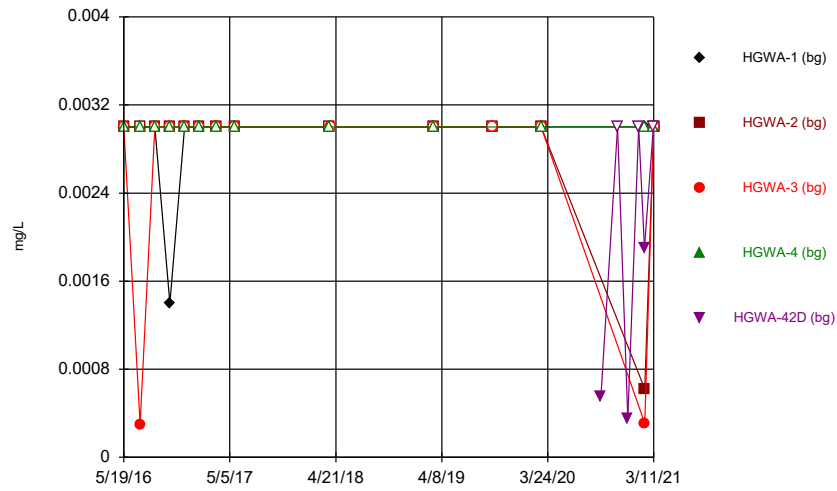
# Federal Confidence Intervals - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-2 Printed 5/5/2021, 11:24 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Selenium (mg/L)	HGWC-16	0.005	0.000089	0.05	No	19	0.004742	0.001127	94.74	None	No	0.01	NP (NDs)
Selenium (mg/L)	HGWC-17	0.005	0.0023	0.05	No	19	0.00441	0.001448	84.21	None	No	0.01	NP (NDs)
Selenium (mg/L)	HGWC-18	0.03425	0.01795	0.05	No	19	0.0261	0.01392	5.263	None	No	0.01	Param.
Selenium (mg/L)	MW-22	0.005	0.002	0.05	No	8	0.004625	0.001061	87.5	None	No	0.004	NP (NDs)
Selenium (mg/L)	MW-33	0.04314	-0.001136	0.05	No	5	0.021	0.01321	0	None	No	0.01	Param.
Selenium (mg/L)	MW-35	0.04671	-0.008206	0.05	No	4	0.01925	0.01209	0	None	No	0.01	Param.
Thallium (mg/L)	HGWC-14	0.000306	0.00028	0.002	No	19	0.0002972	0.00003063	0	None	No	0.01	NP (normality)
Thallium (mg/L)	HGWC-17	0.001	0.00011	0.002	No	19	0.0006737	0.0004391	63.16	None	No	0.01	NP (NDs)
Thallium (mg/L)	HGWC-18	0.001	0.00015	0.002	No	19	0.0005174	0.0004233	42.11	None	No	0.01	NP (normality)
Thallium (mg/L)	MW-33	0.0003207	0.0002473	0.002	No	5	0.000284	0.00002191	0	None	No	0.01	Param.
Thallium (mg/L)	MW-35	0.001	0.00013	0.002	No	4	0.0007825	0.000435	75	None	No	0.0625	NP (NDs)

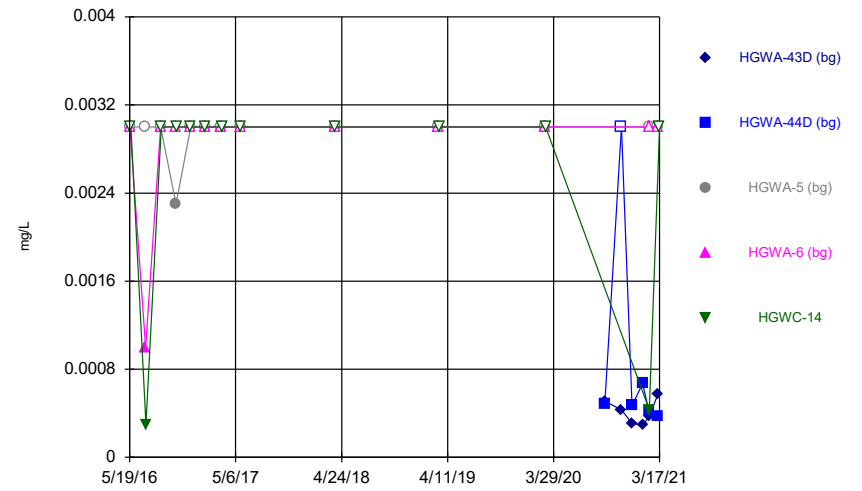
FIGURE A.

### Time Series



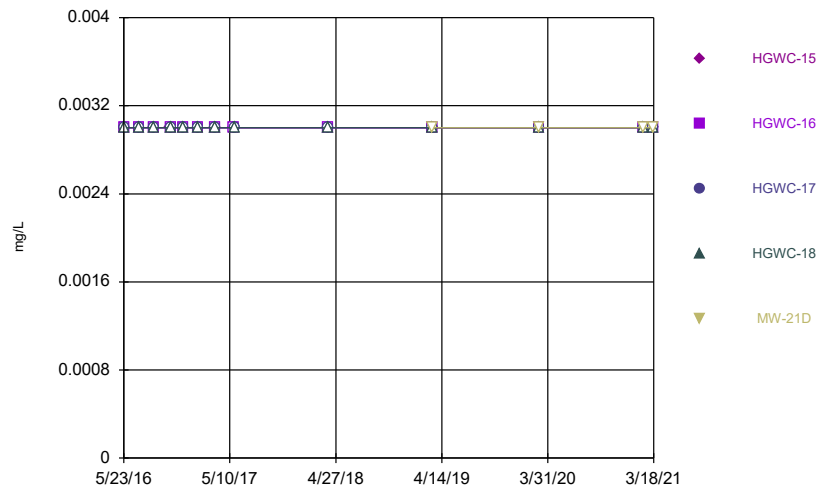
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Plant Hammond Client: Southern Company Data: Hammond AP-2

### Time Series



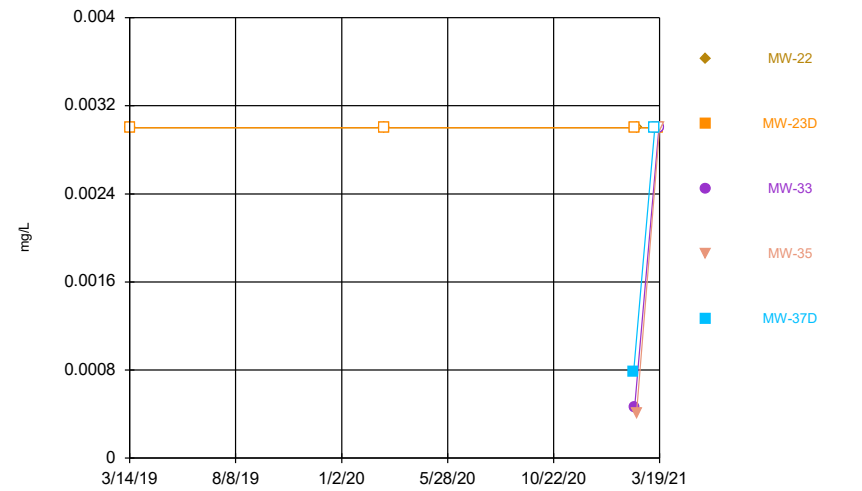
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### Time Series



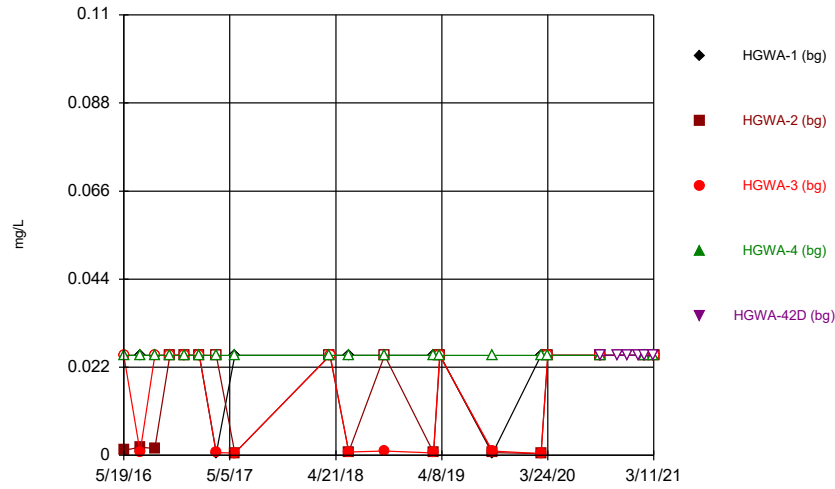
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### Time Series



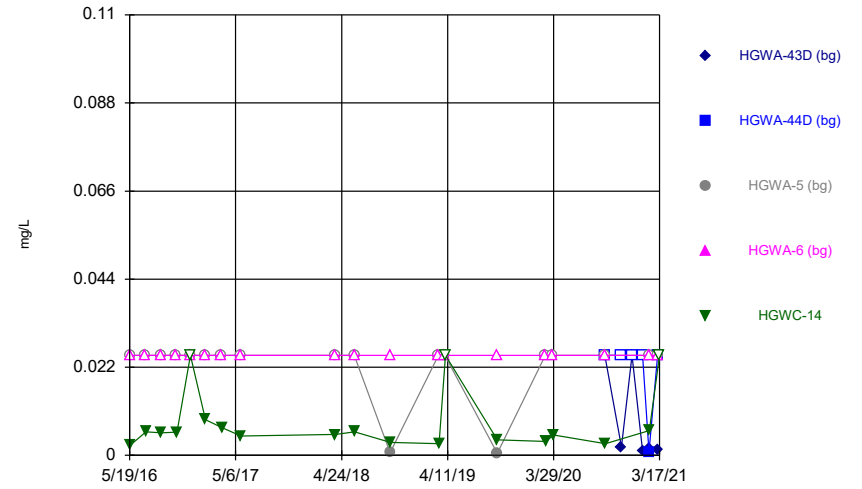
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Plant Hammond Client: Southern Company Data: Hammond AP-2

Time Series



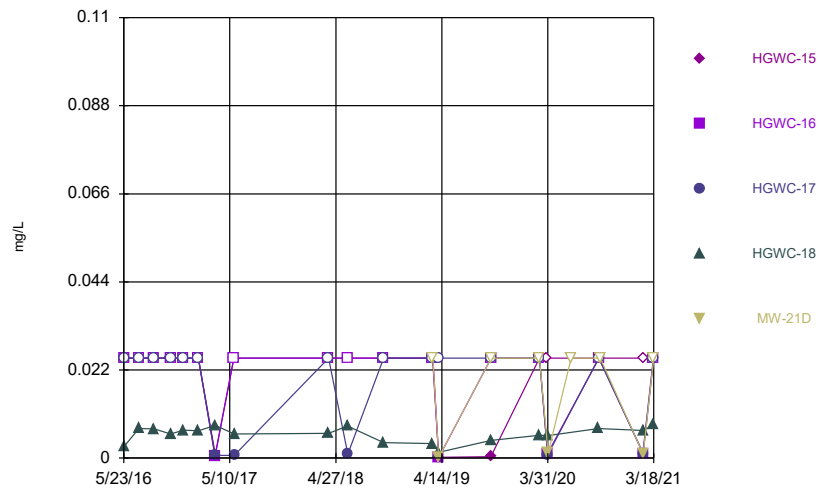
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 Plant Hammond Client: Southern Company Data: Hammond AP-2

Time Series



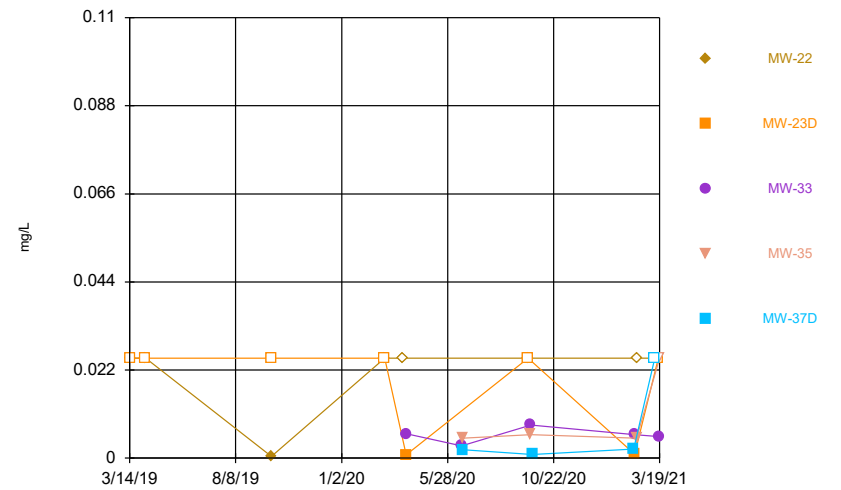
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 Plant Hammond Client: Southern Company Data: Hammond AP-2

Time Series



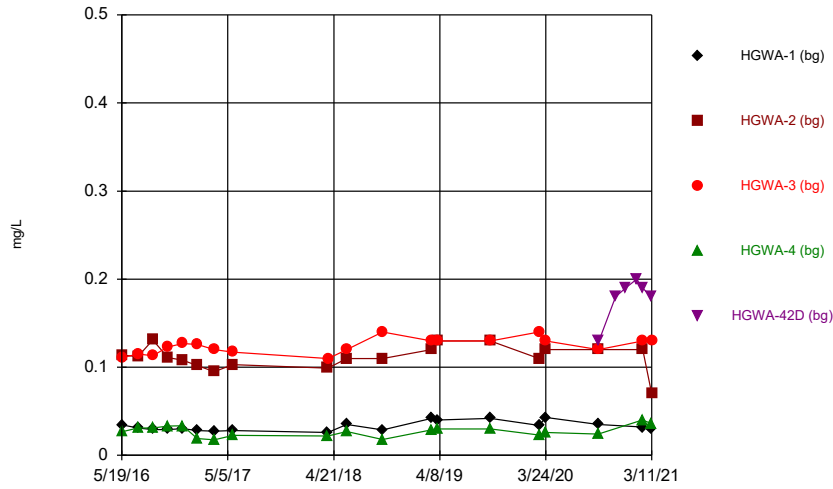
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 Plant Hammond Client: Southern Company Data: Hammond AP-2

Time Series



Constituent: Arsenic Analysis Run 5/4/2021 7:43 PM  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

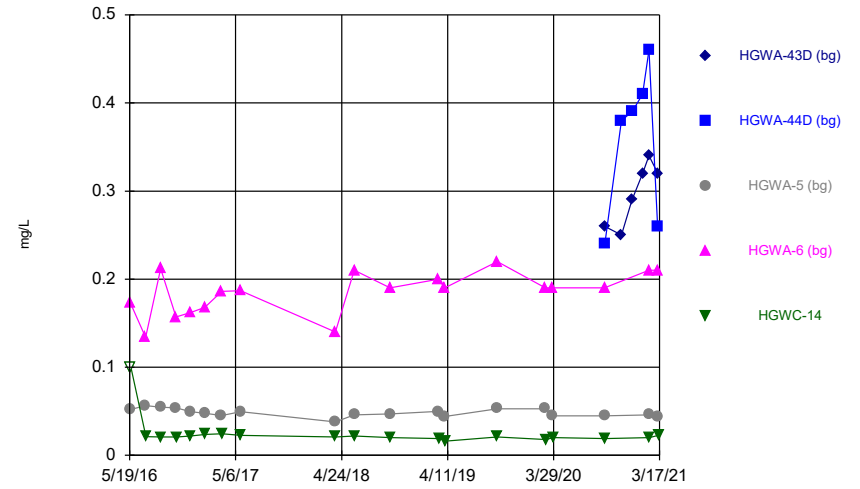
Time Series



Constituent: Barium Analysis Run 5/4/2021 7:43 PM  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

Hollow symbols indicate censored values.

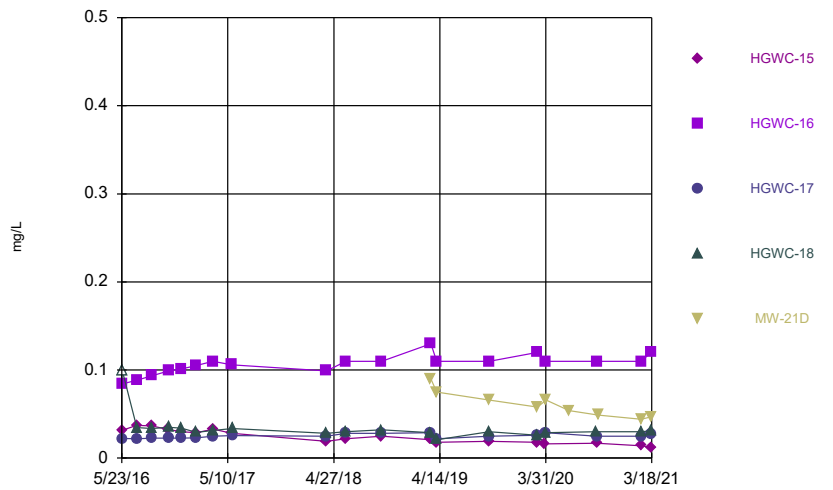
Time Series



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 Plant Hammond Client: Southern Company Data: Hammond AP-2

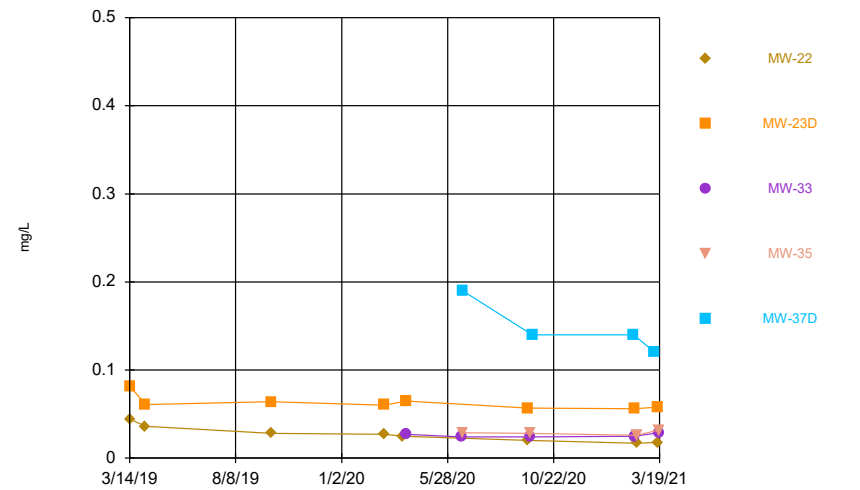
Hollow symbols indicate censored values.

Time Series



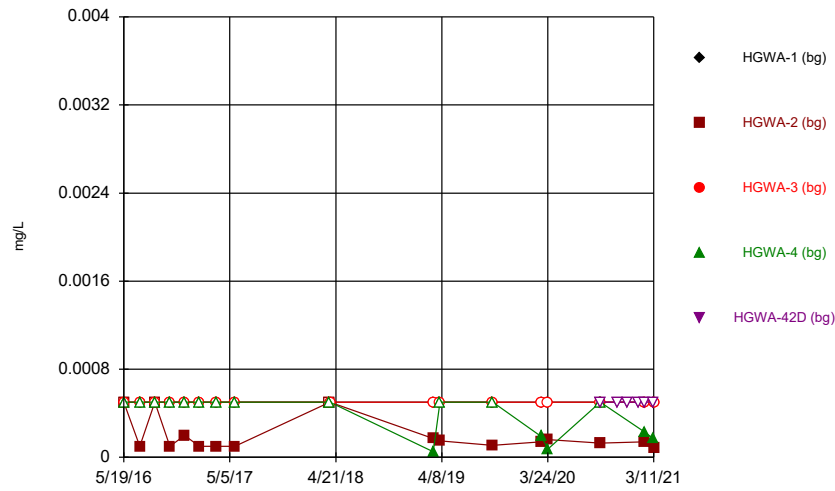
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 Plant Hammond Client: Southern Company Data: Hammond AP-2

Time Series



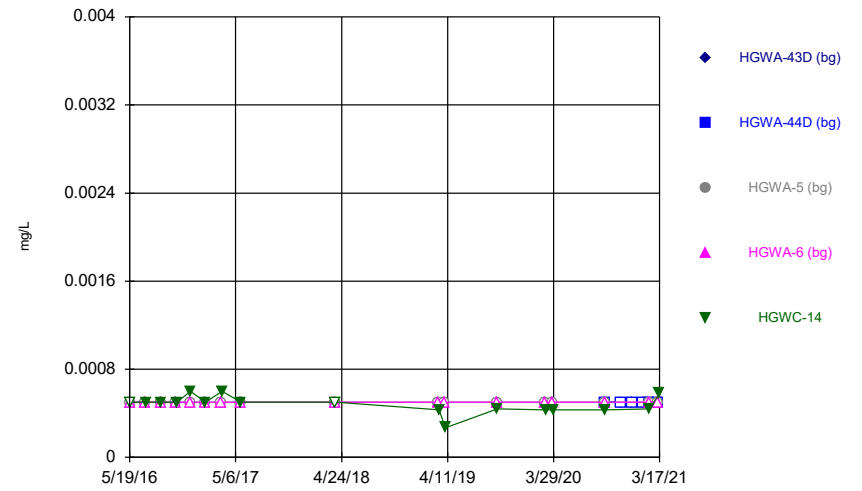
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 Plant Hammond Client: Southern Company Data: Hammond AP-2

Time Series



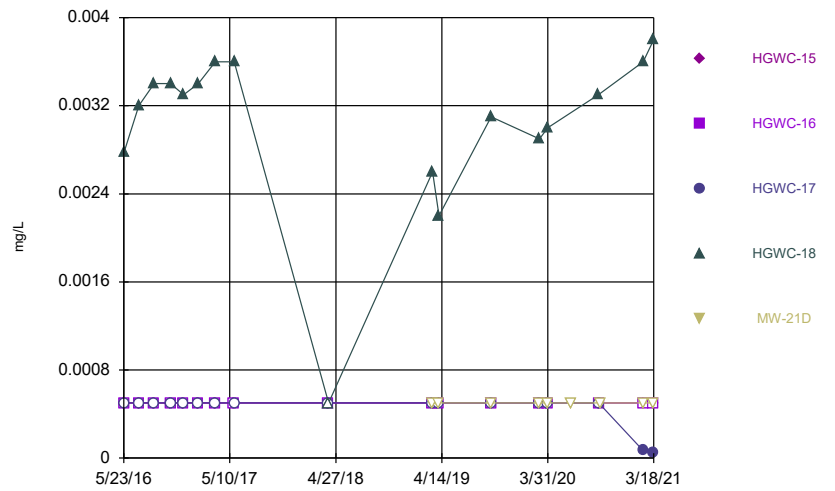
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Plant Hammond Client: Southern Company Data: Hammond AP-2

Time Series



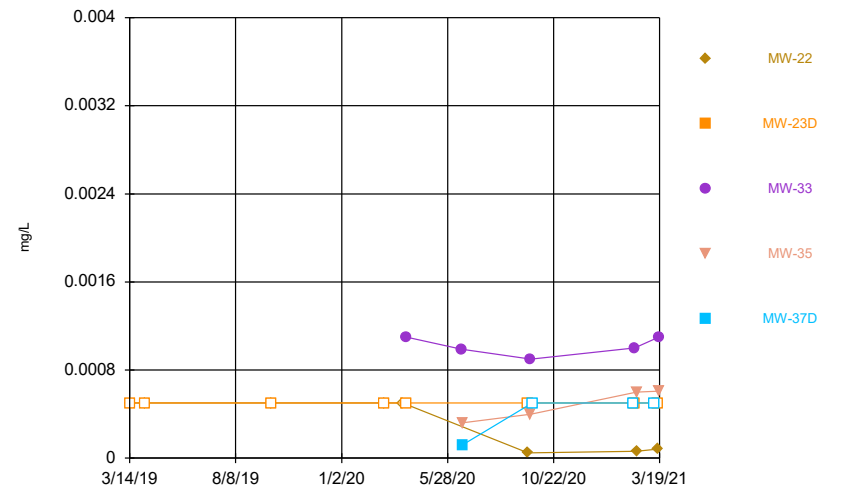
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Time Series



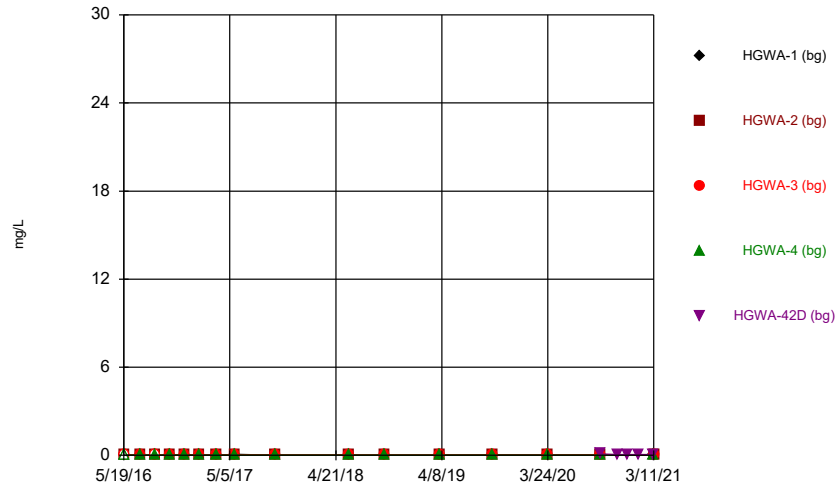
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Time Series



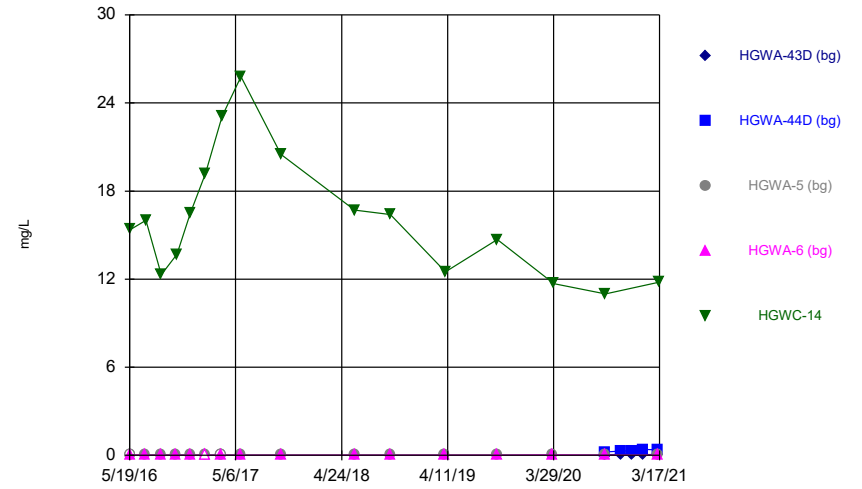
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Plant Hammond Client: Southern Company Data: Hammond AP-2

Time Series



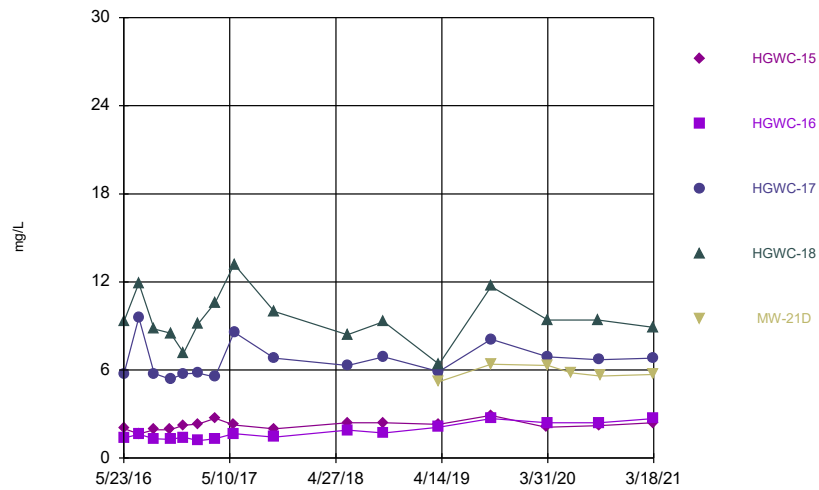
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Time Series



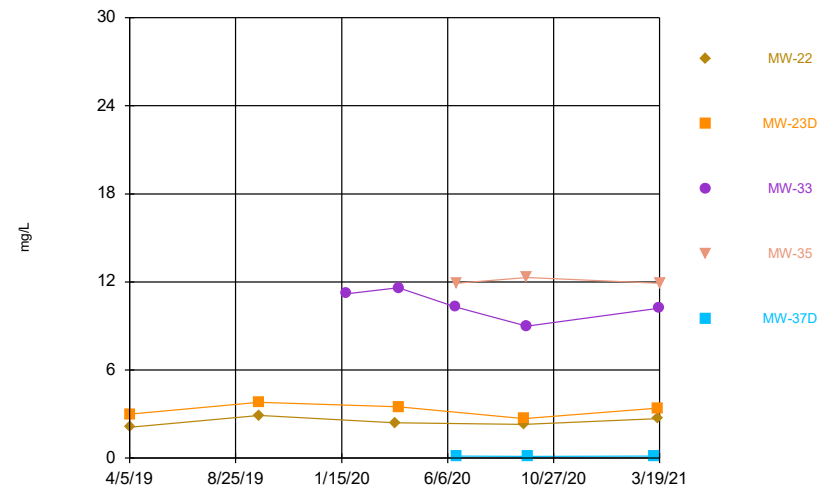
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Time Series



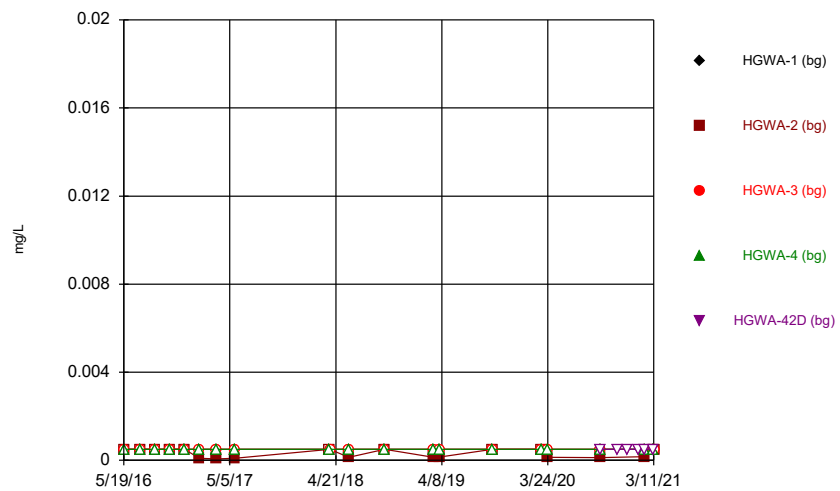
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Time Series



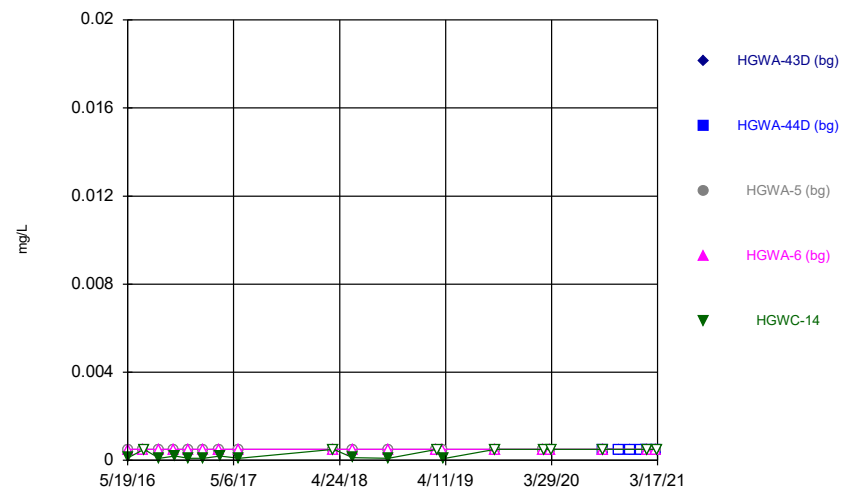
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### Time Series



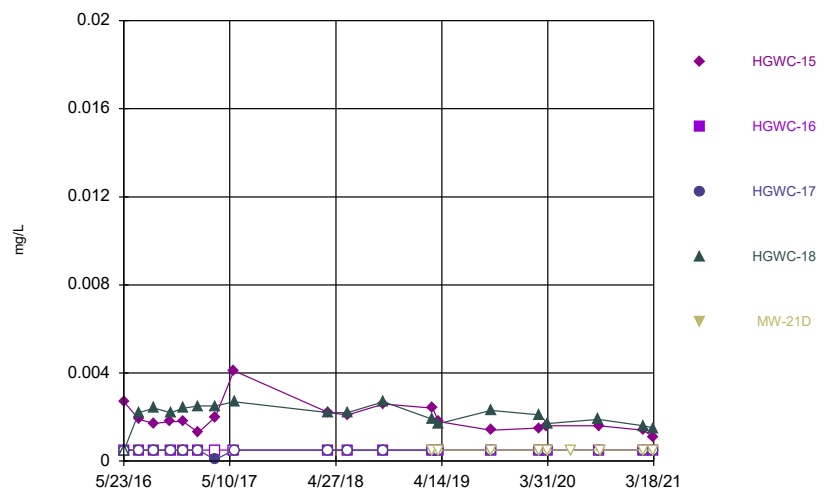
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Plant Hammond Client: Southern Company Data: Hammond AP-2

### Time Series



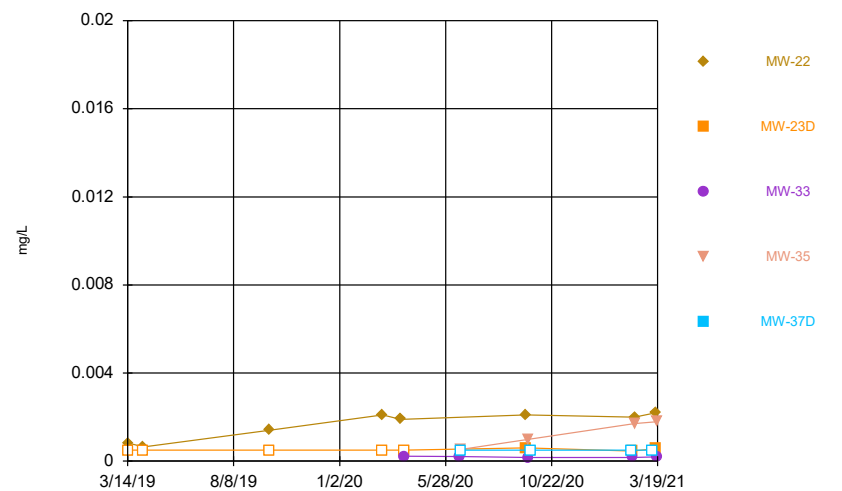
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Plant Hammond Client: Southern Company Data: Hammond AP-2

### Time Series



Constituent: Cadmium Analysis Run 5/4/2021 7:43 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

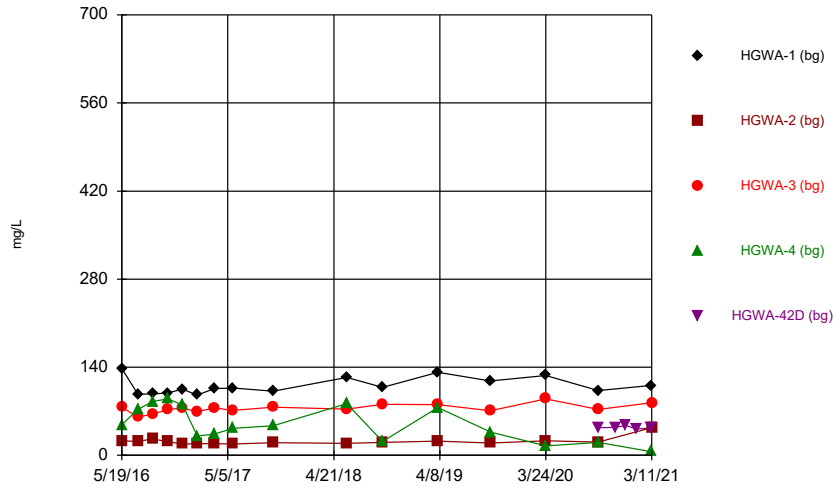
### Time Series



Constituent: Cadmium Analysis Run 5/4/2021 7:43 PM  
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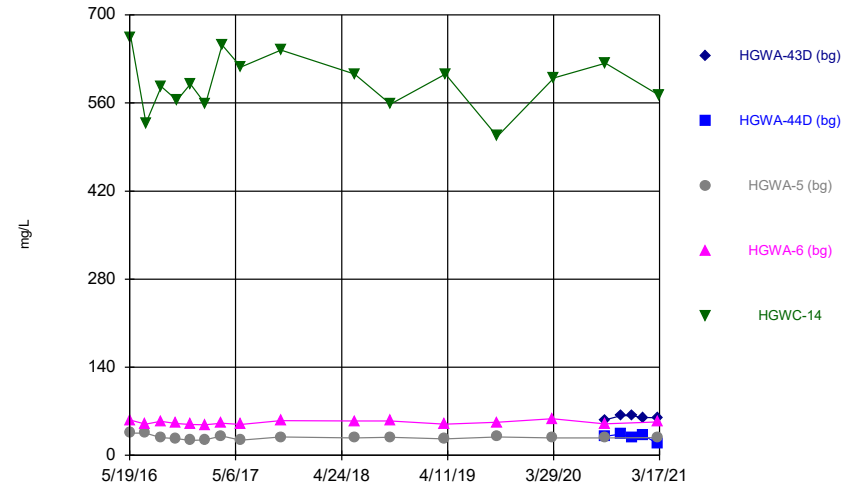


Time Series



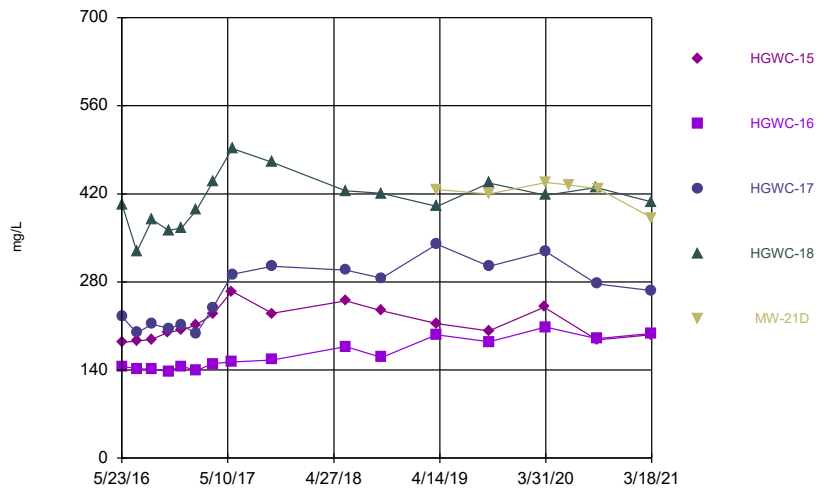
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 Plant Hammond Client: Southern Company Data: Hammond AP-2

Time Series



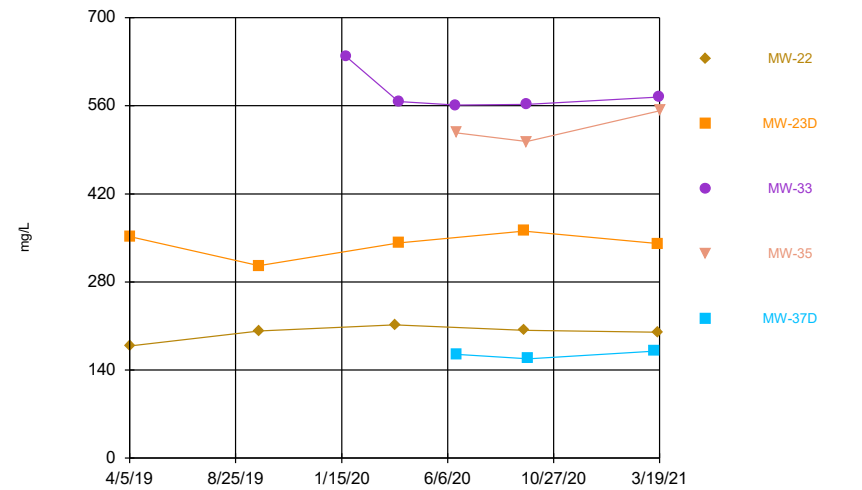
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 Plant Hammond Client: Southern Company Data: Hammond AP-2

Time Series



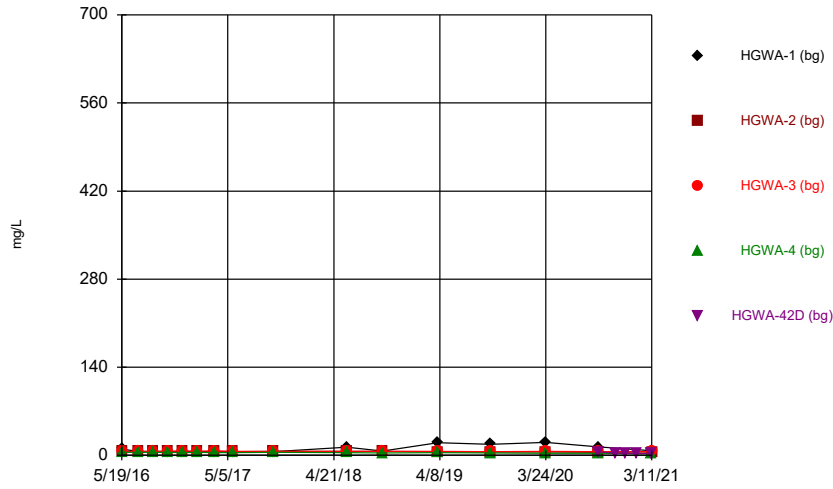
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Time Series



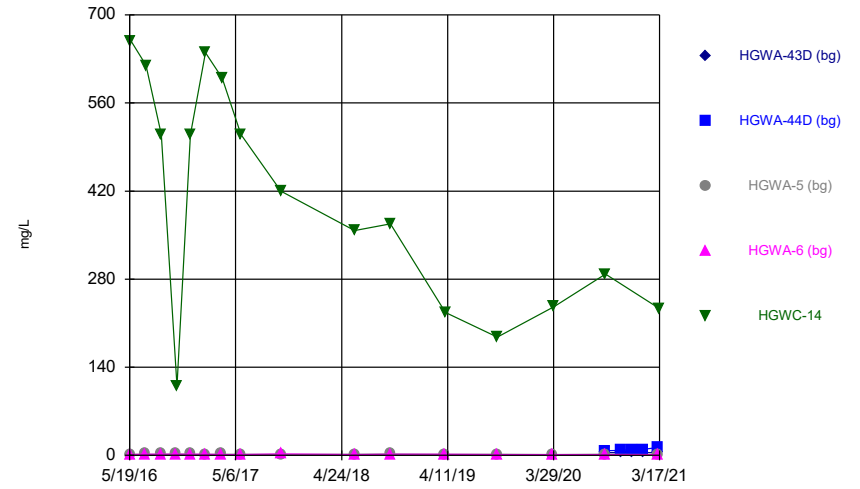
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Time Series



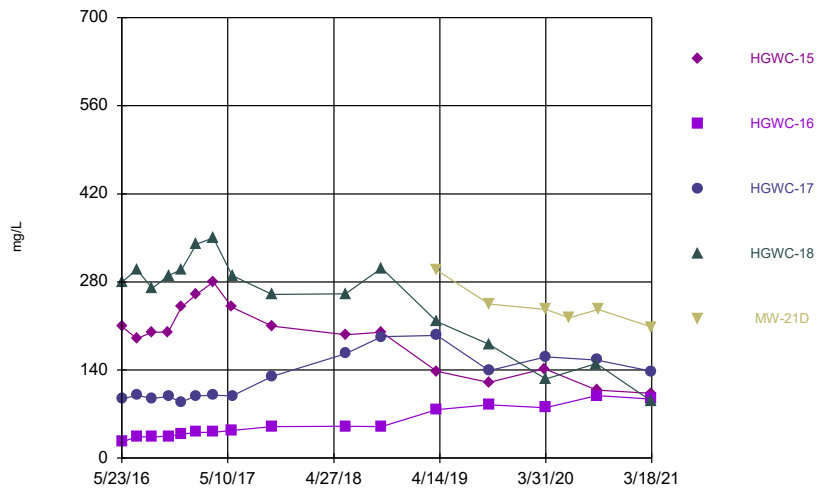
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 Plant Hammond Client: Southern Company Data: Hammond AP-2

Time Series



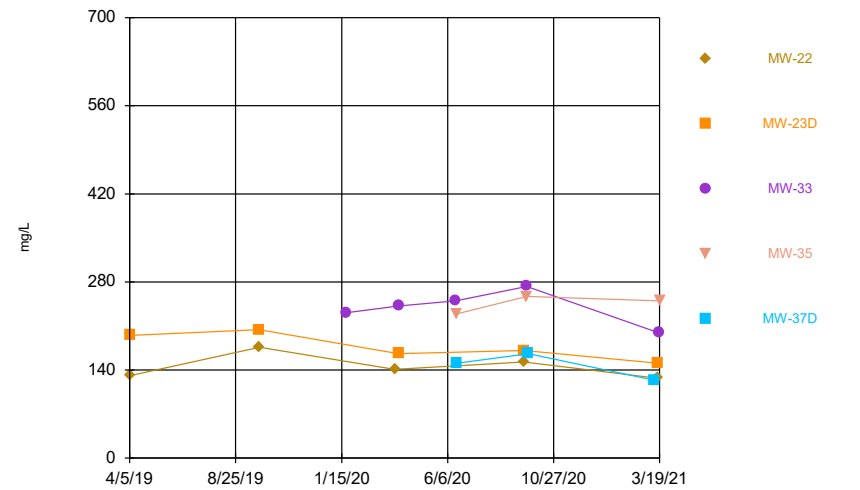
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Time Series



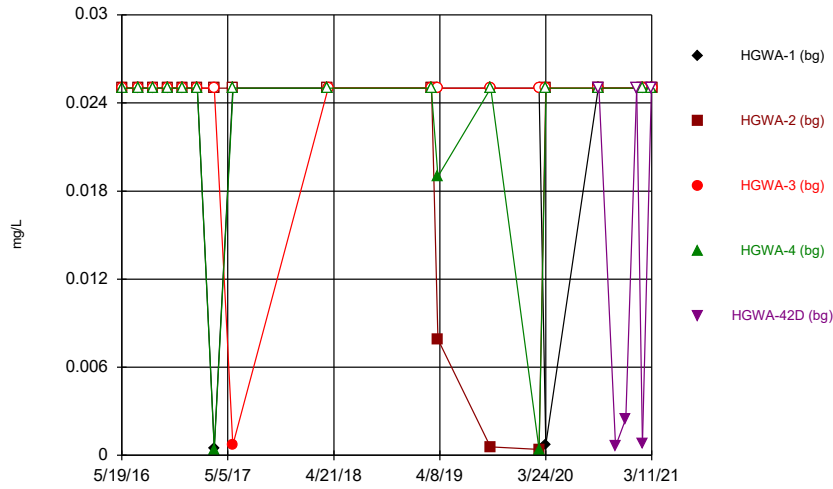
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Time Series



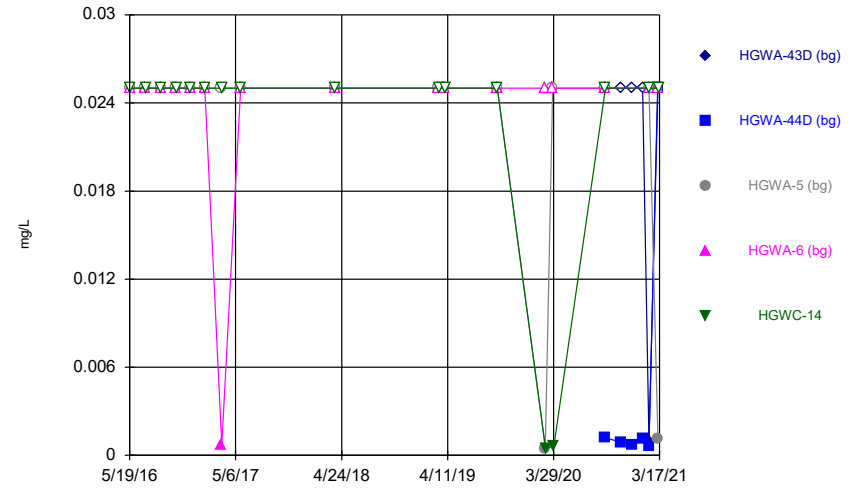
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Time Series



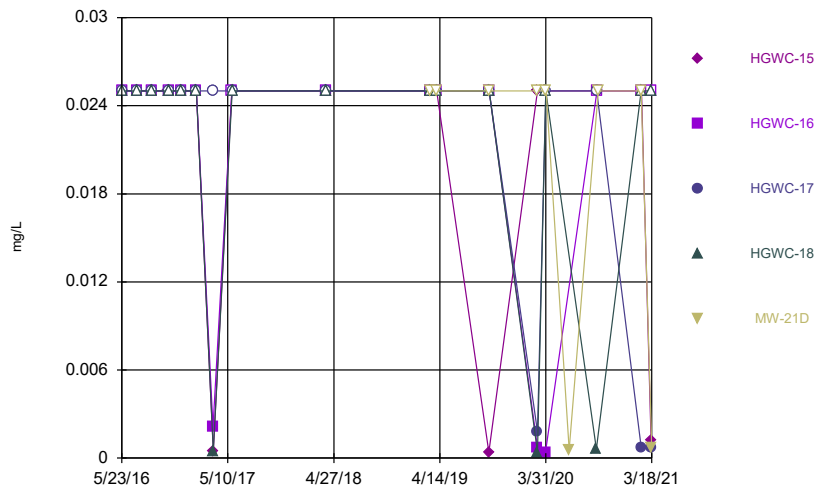
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Time Series



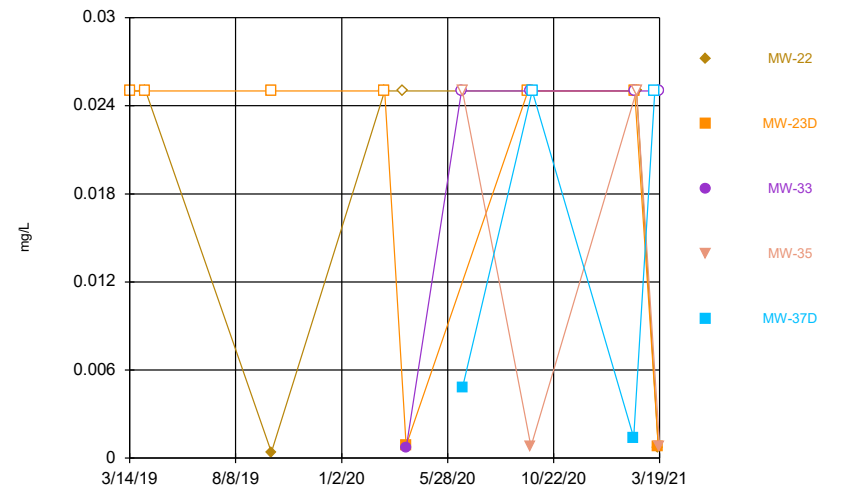
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Time Series



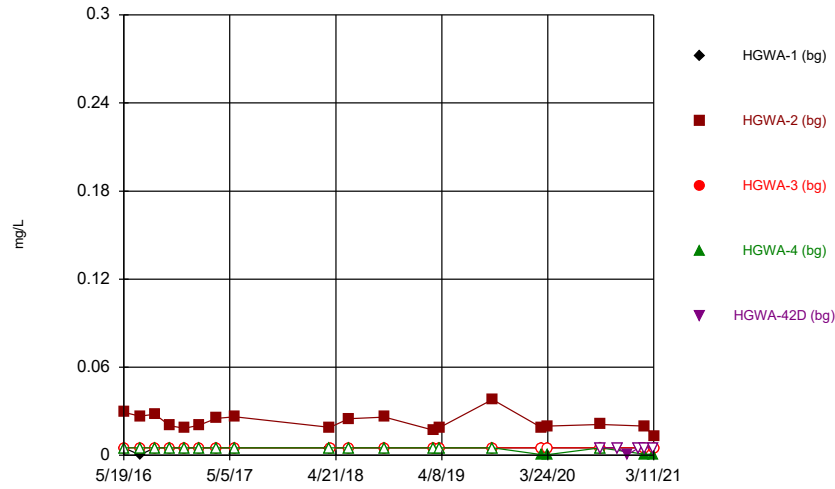
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Time Series



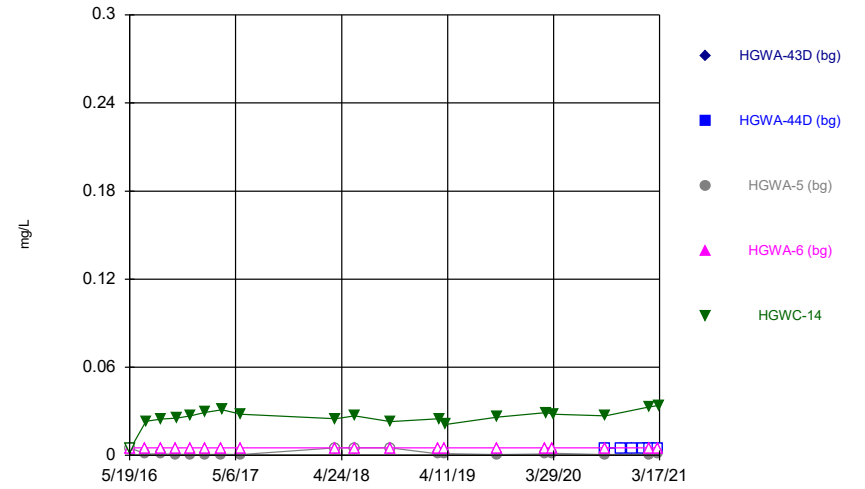
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Time Series



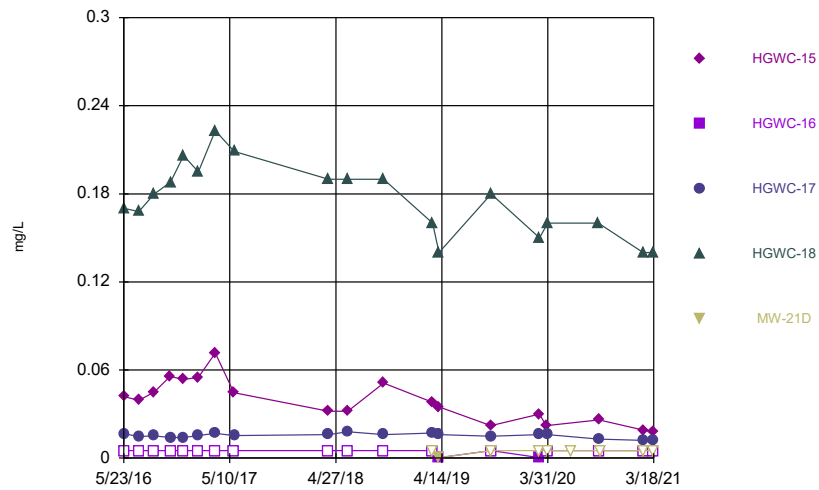
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Plant Hammond Client: Southern Company Data: Hammond AP-2

Time Series



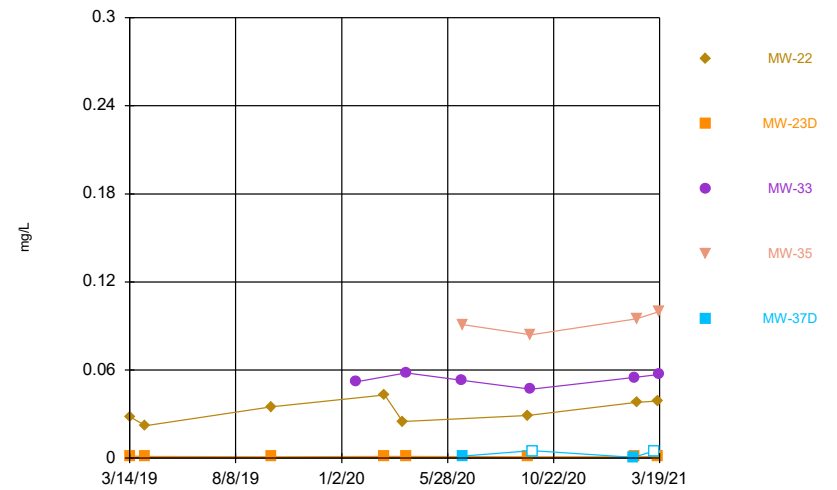
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Time Series



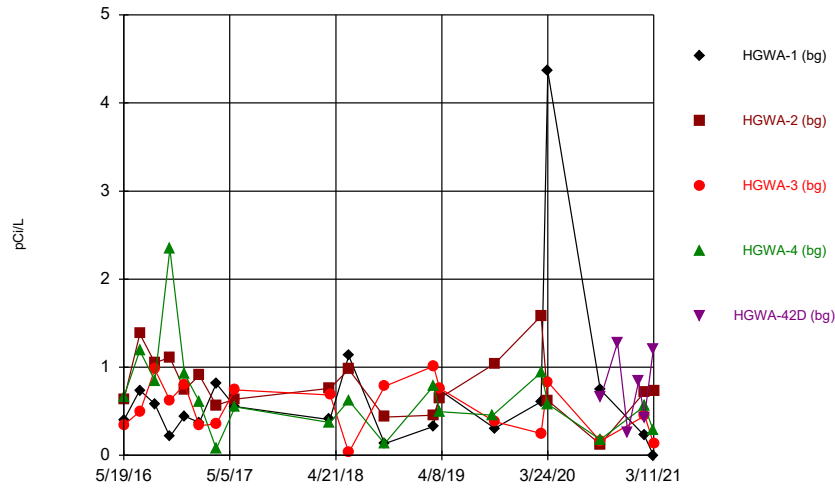
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Time Series



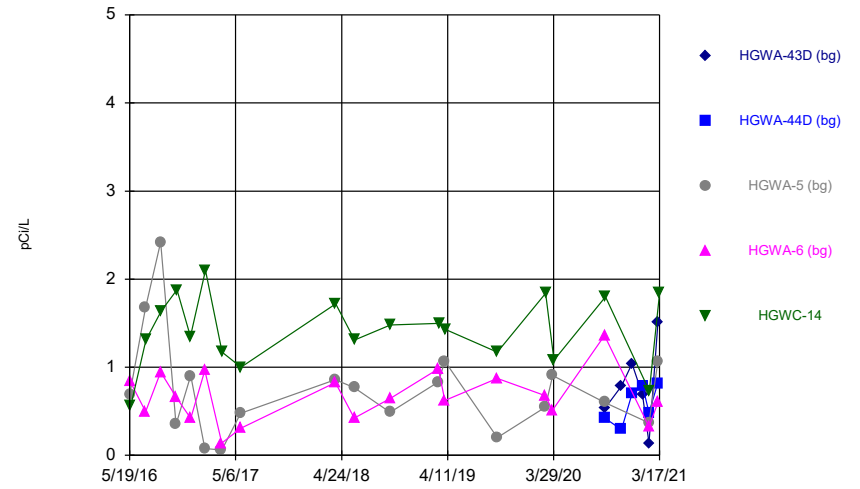
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### Time Series



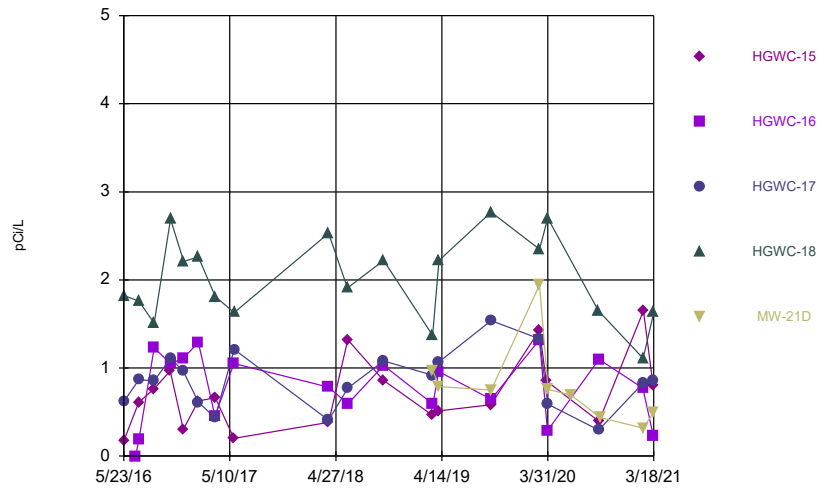
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### Time Series



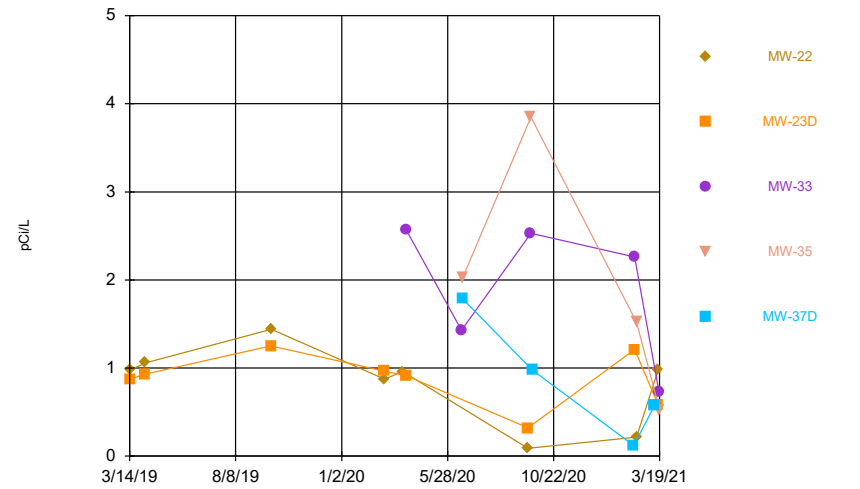
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### Time Series



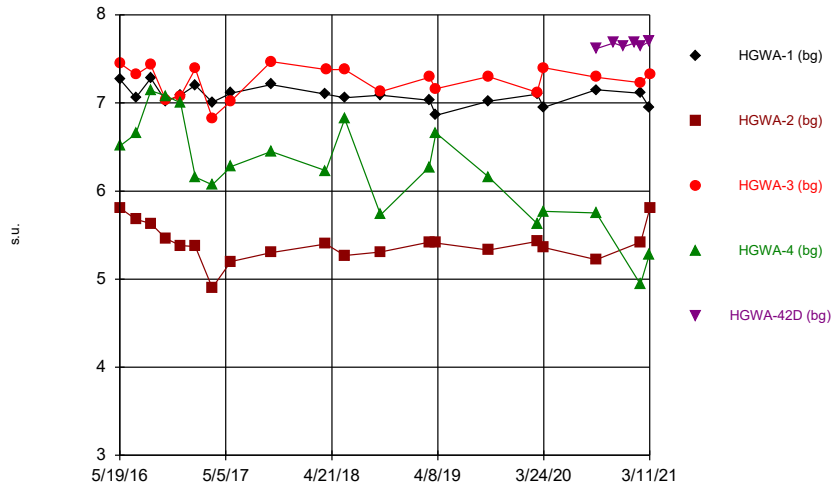
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### Time Series



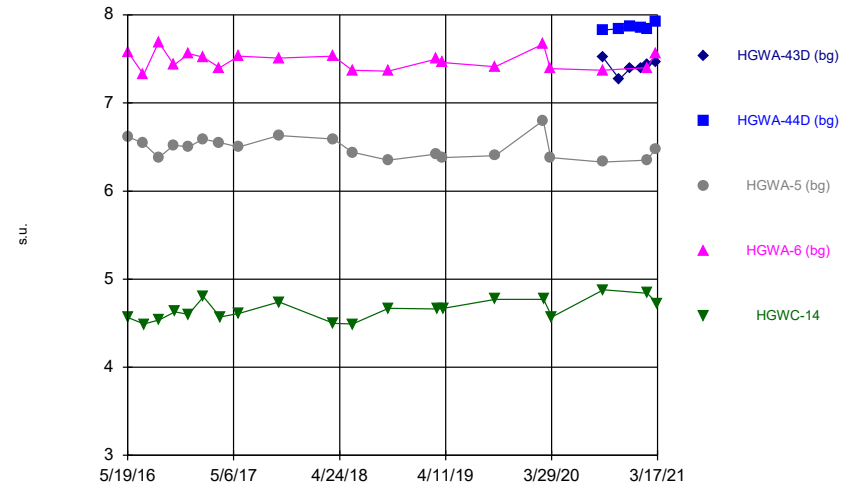
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Time Series



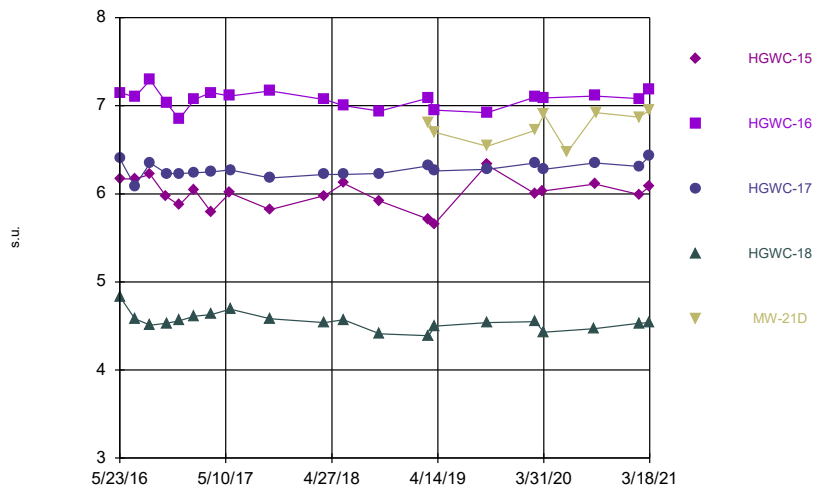
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Time Series



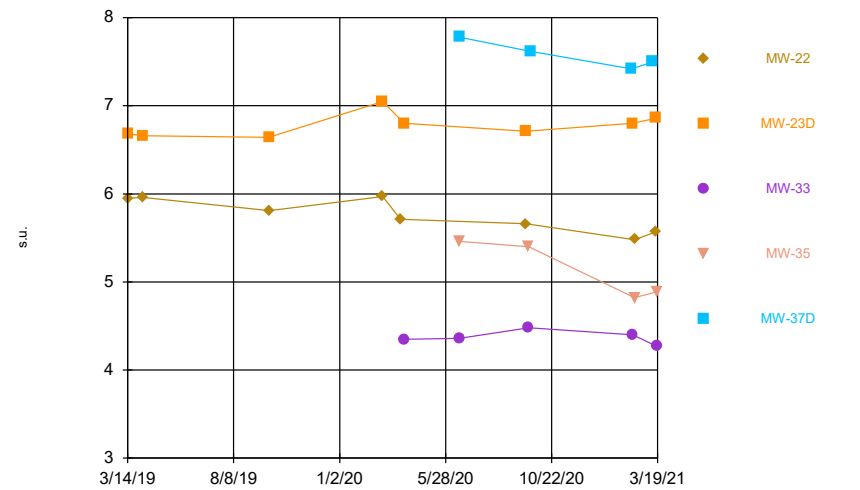
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Time Series



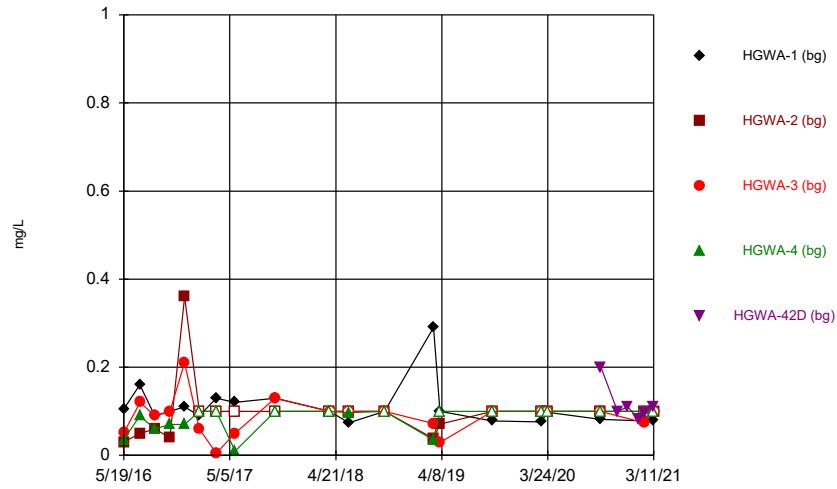
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Time Series



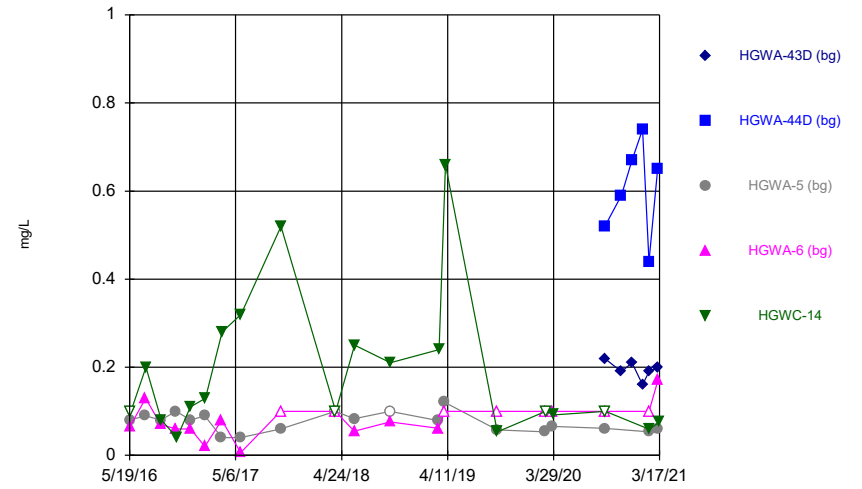
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Time Series



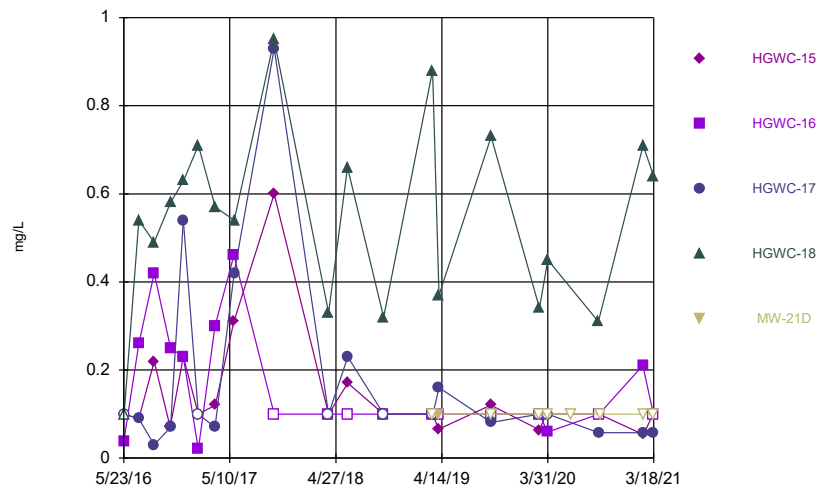
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Time Series



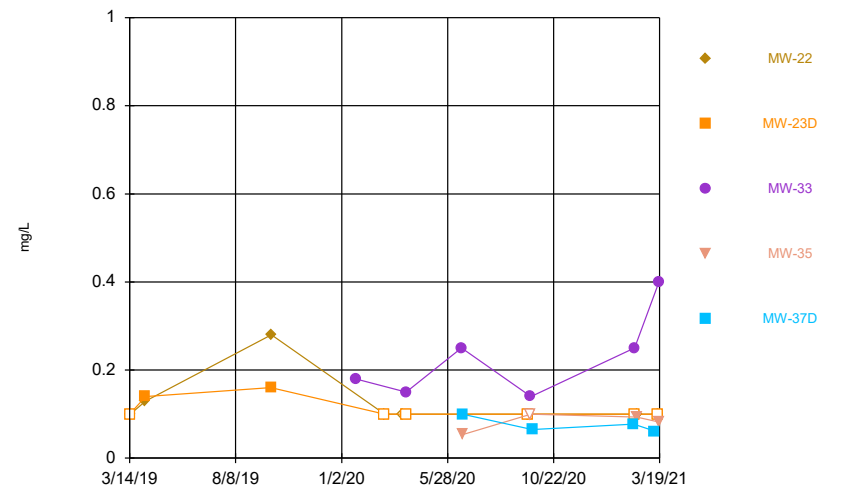
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Time Series



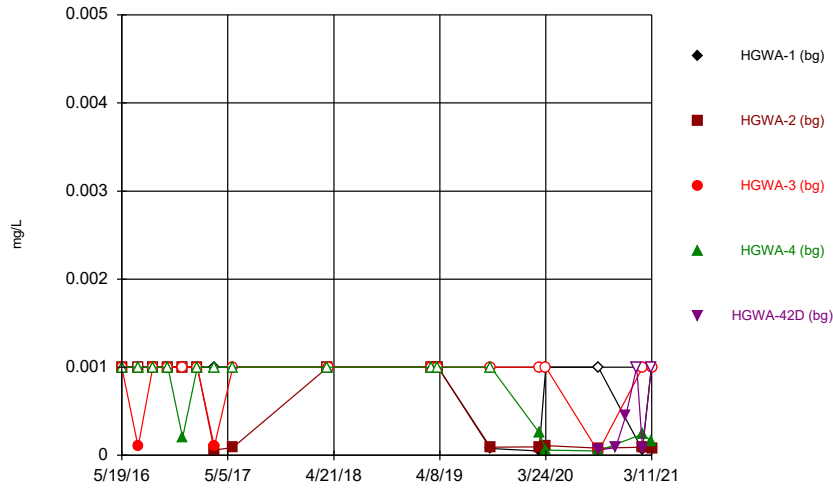
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Time Series



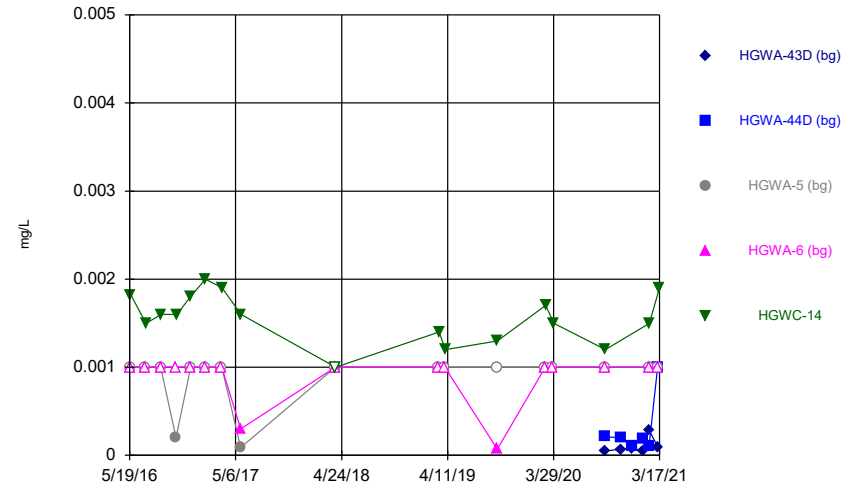
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Time Series



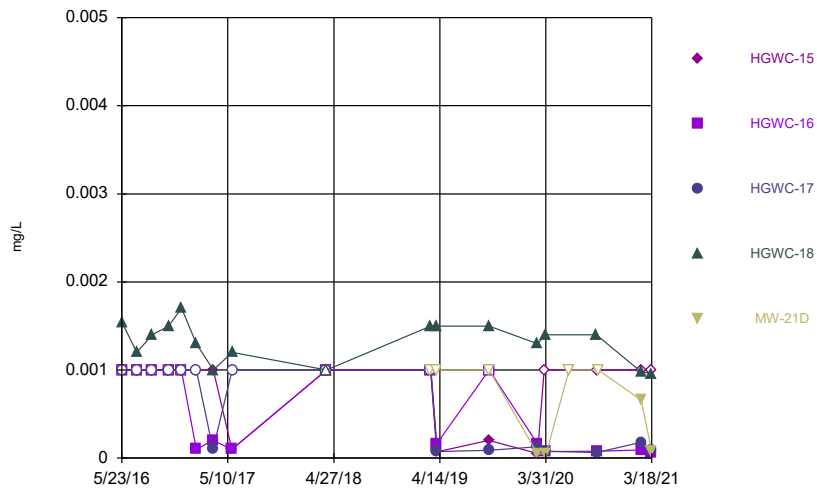
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Time Series



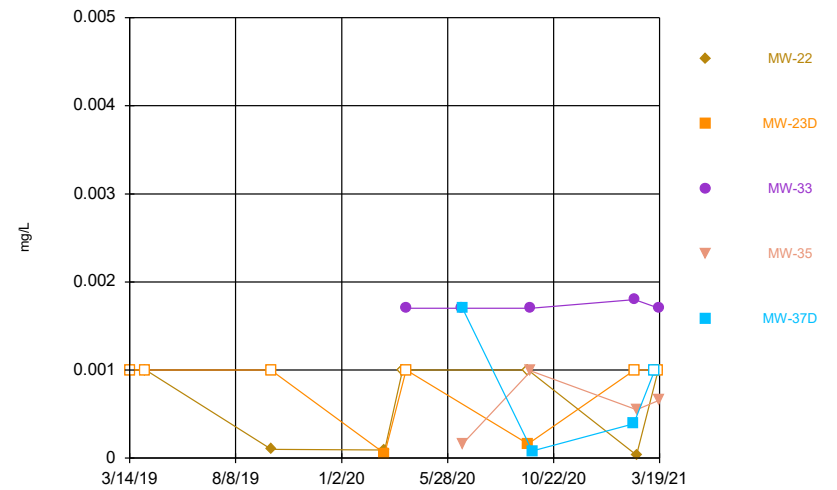
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Time Series



Constituent: Lead Analysis Run 5/4/2021 7:44 PM  
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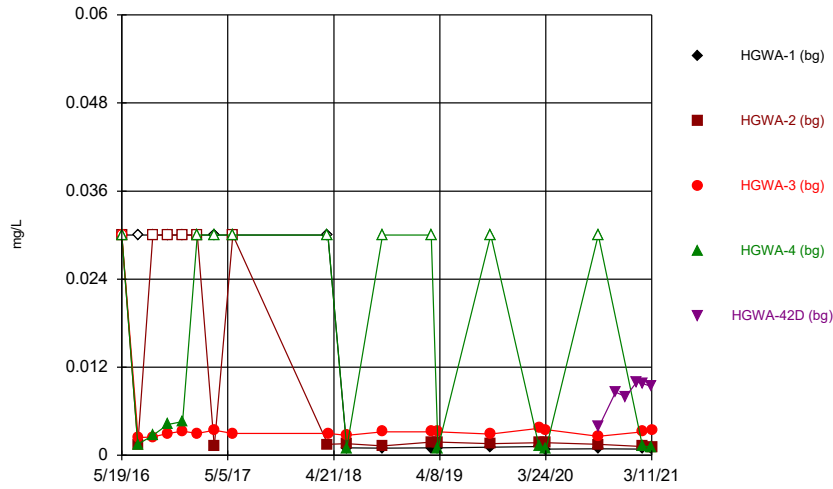
Time Series



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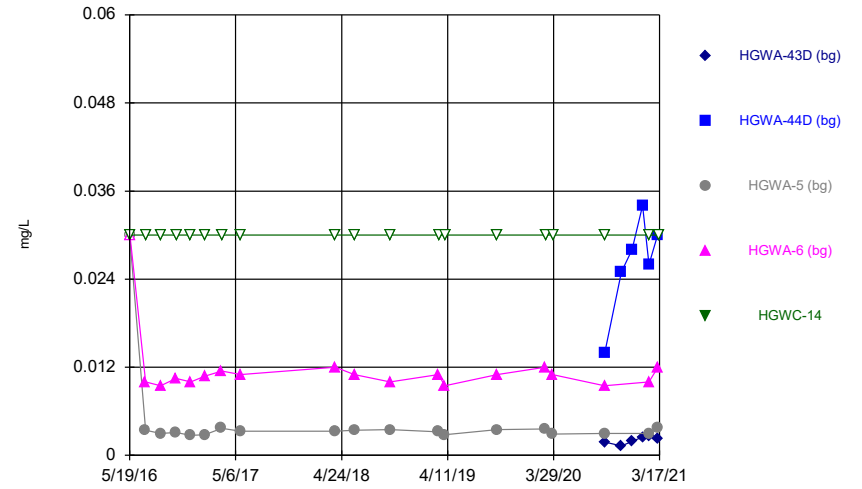


Time Series



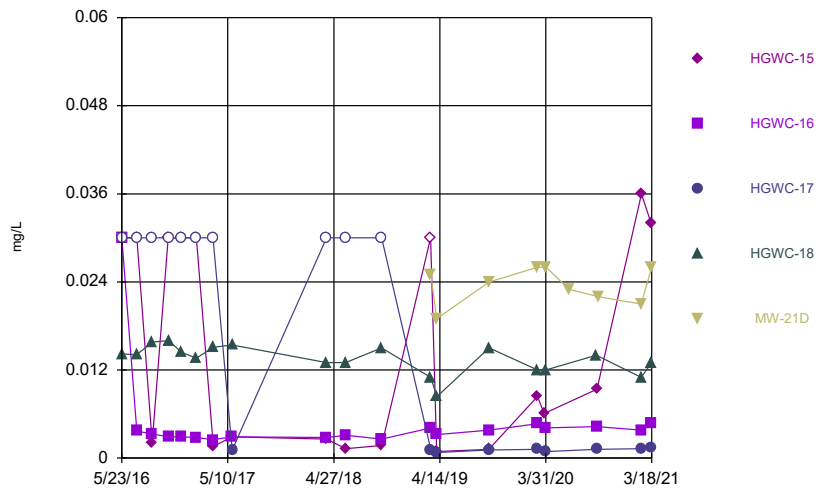
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Plant Hammond Client: Southern Company Data: Hammond AP-2

Time Series



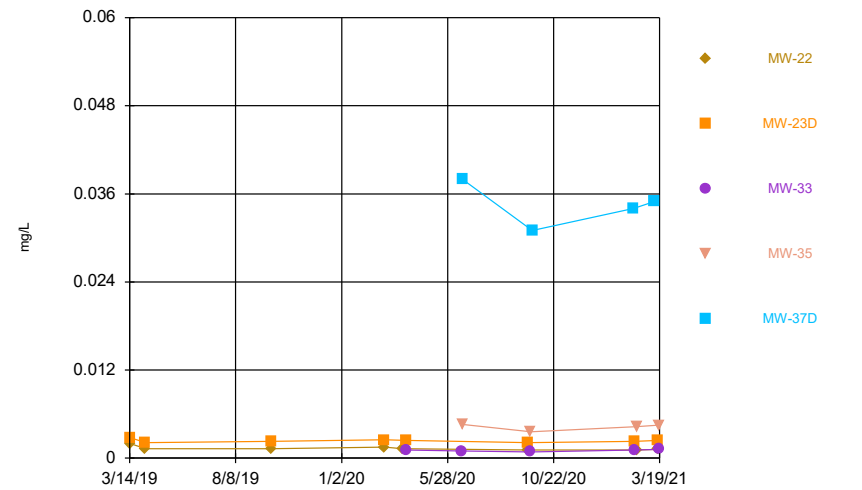
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Plant Hammond Client: Southern Company Data: Hammond AP-2

Time Series



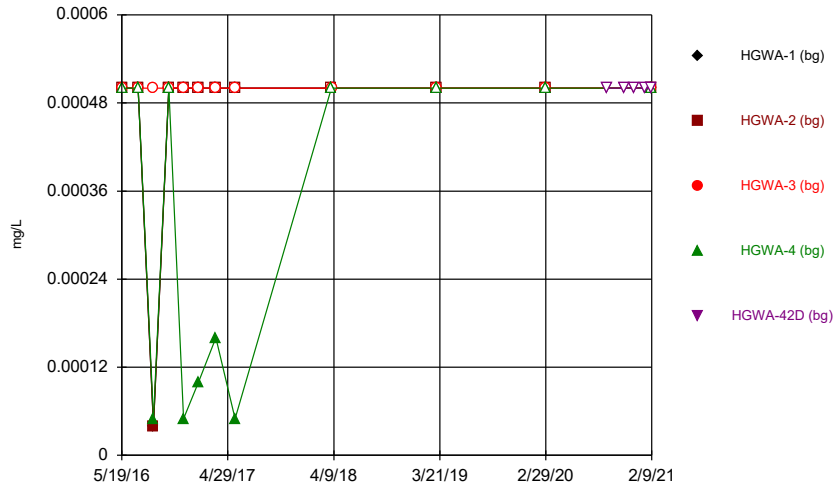
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Plant Hammond Client: Southern Company Data: Hammond AP-2

Time Series



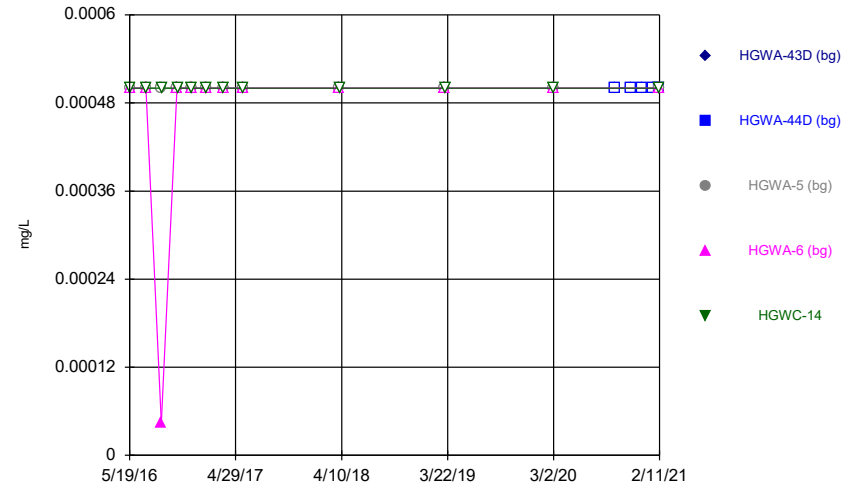
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Plant Hammond Client: Southern Company Data: Hammond AP-2

Time Series



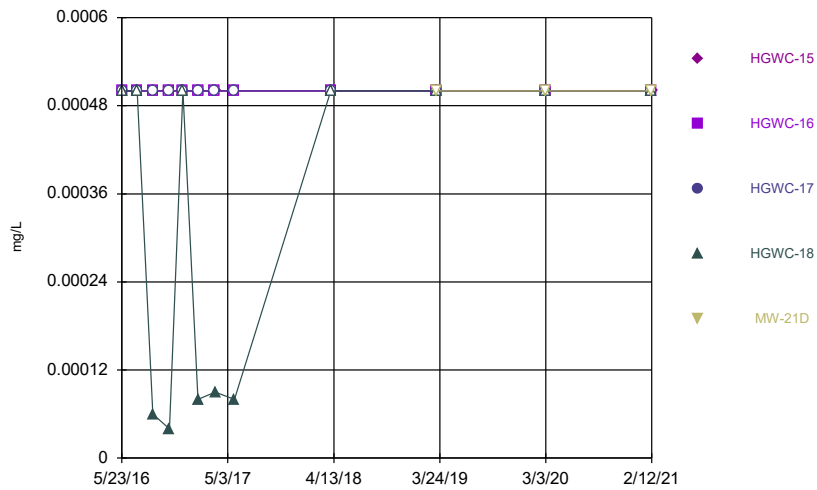
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Plant Hammond Client: Southern Company Data: Hammond AP-2

Time Series



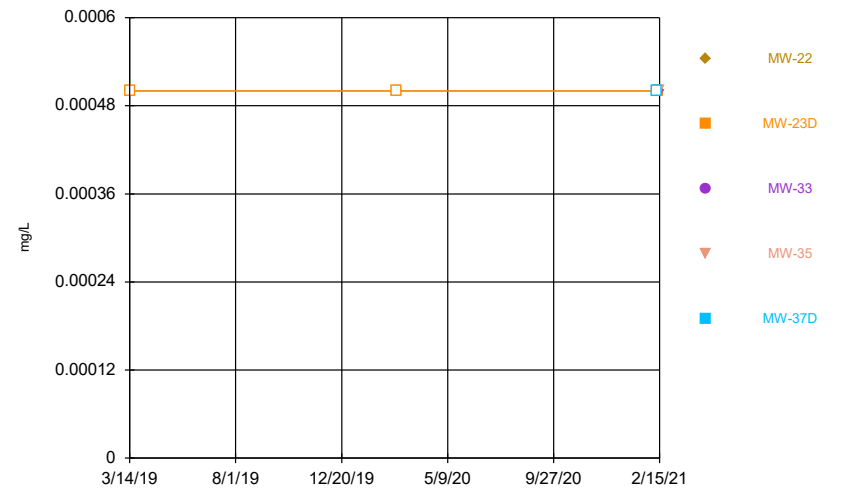
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Time Series



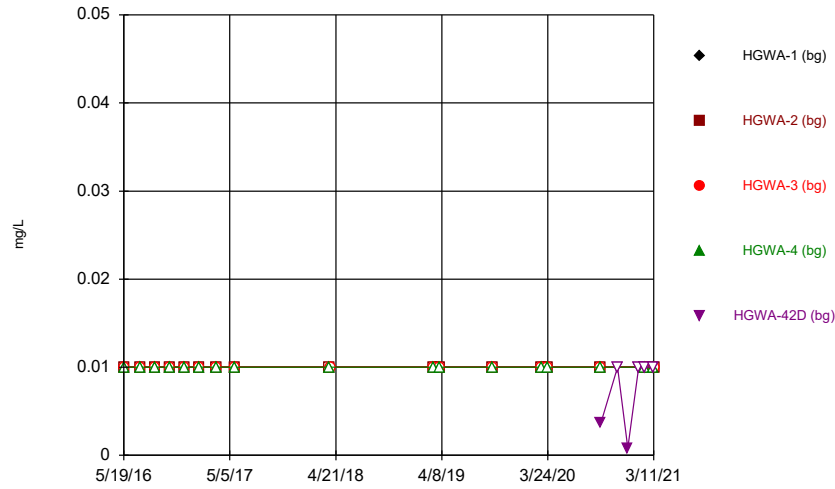
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Plant Hammond Client: Southern Company Data: Hammond AP-2

Time Series



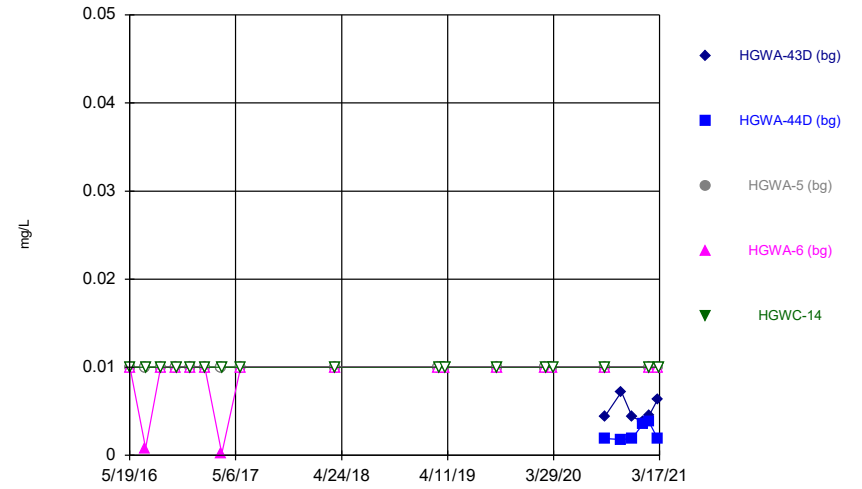
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Time Series



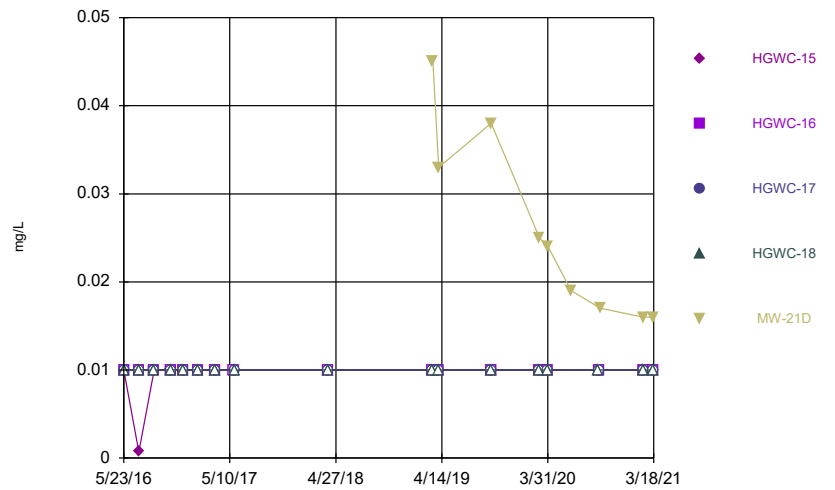
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Plant Hammond Client: Southern Company Data: Hammond AP-2

Time Series



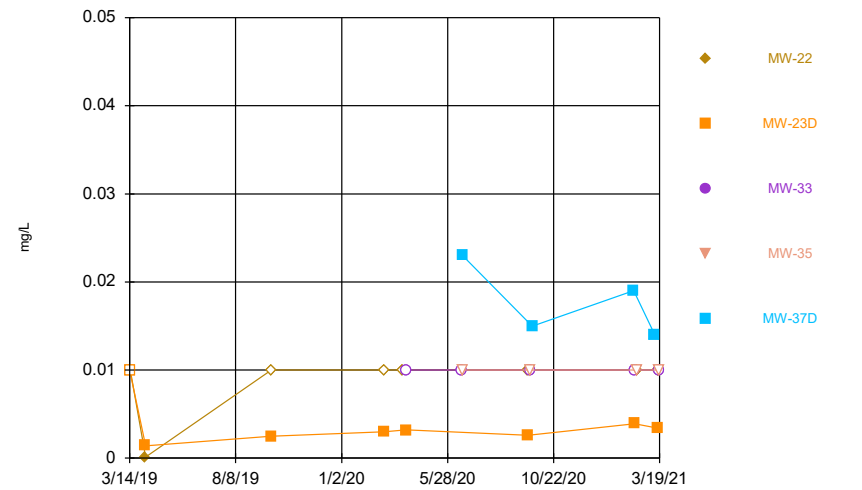
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Time Series



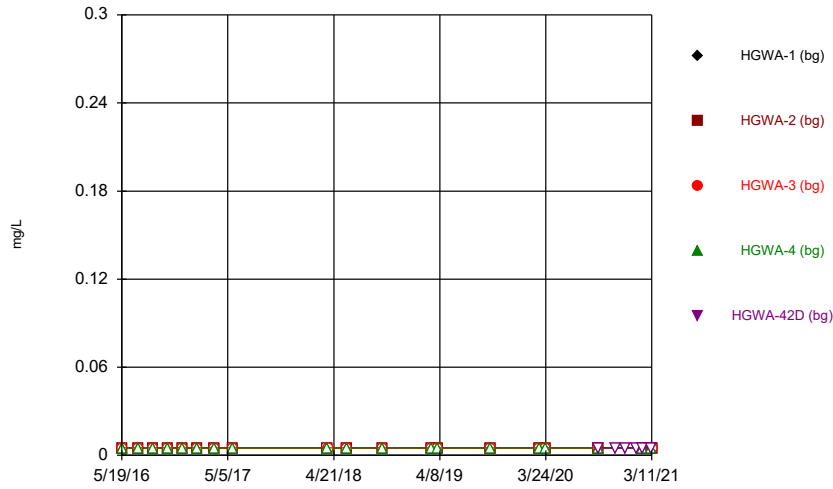
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Time Series



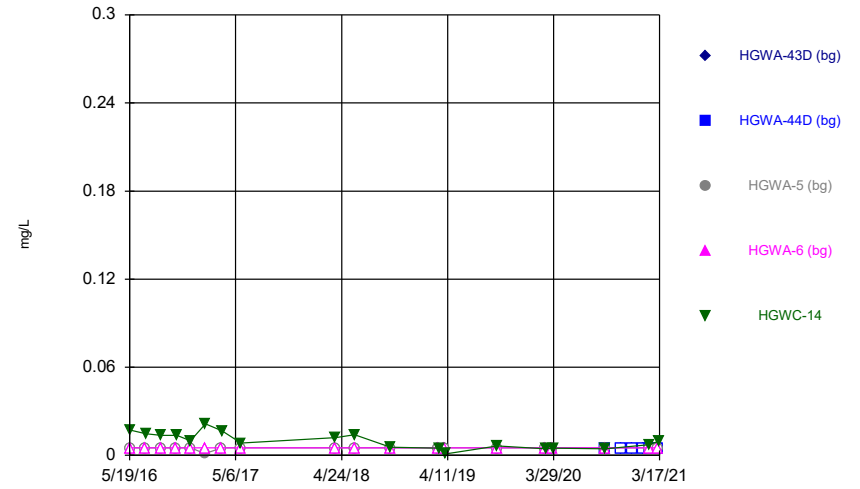
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Time Series



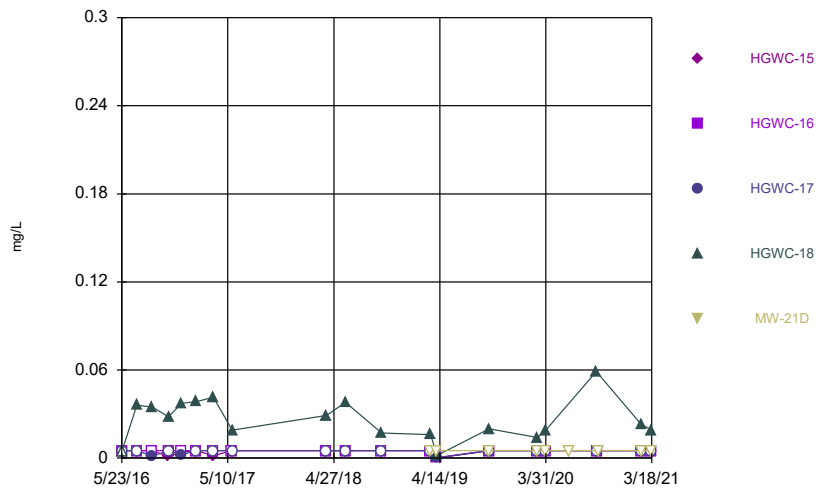
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Time Series



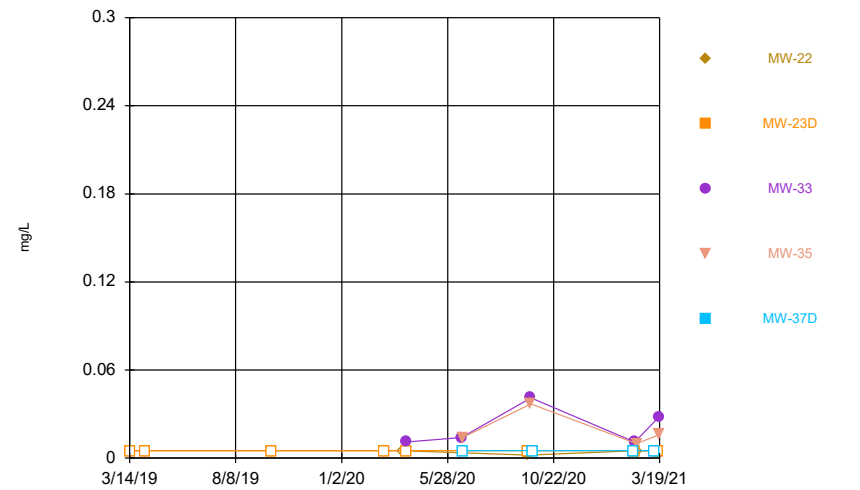
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Plant Hammond Client: Southern Company Data: Hammond AP-2

Time Series



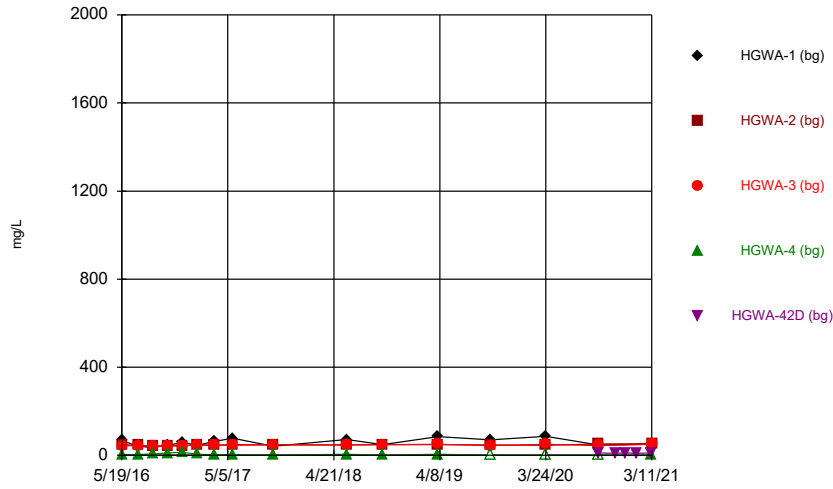
Constituent: Seleniun Analysis Run 5/4/2021 7:44 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

Time Series



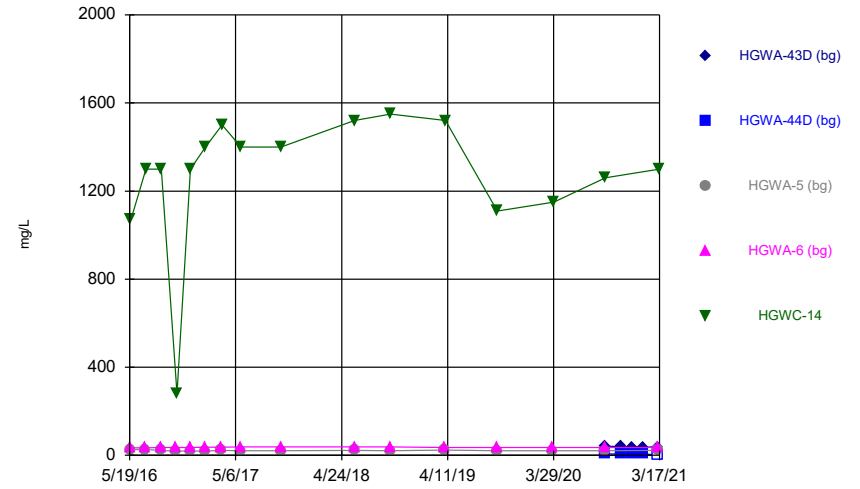
Constituent: Seleniun Analysis Run 5/4/2021 7:44 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

Time Series



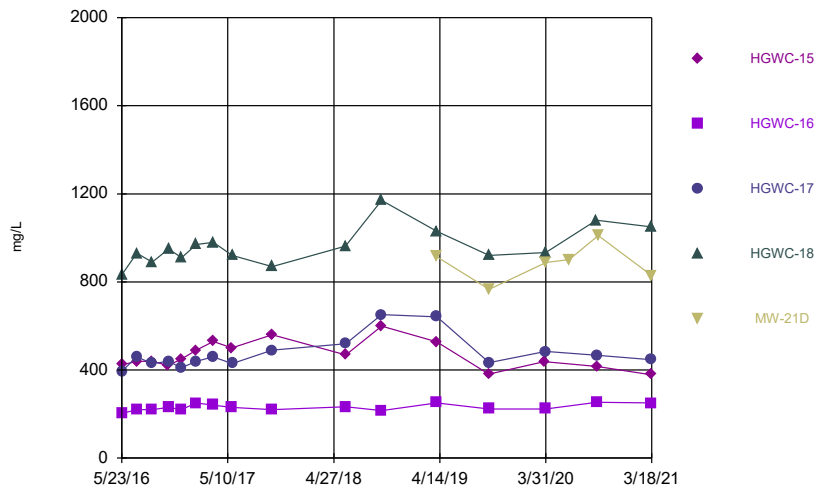
Constituent: Sulfate Analysis Run 5/4/2021 7:44 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

Time Series



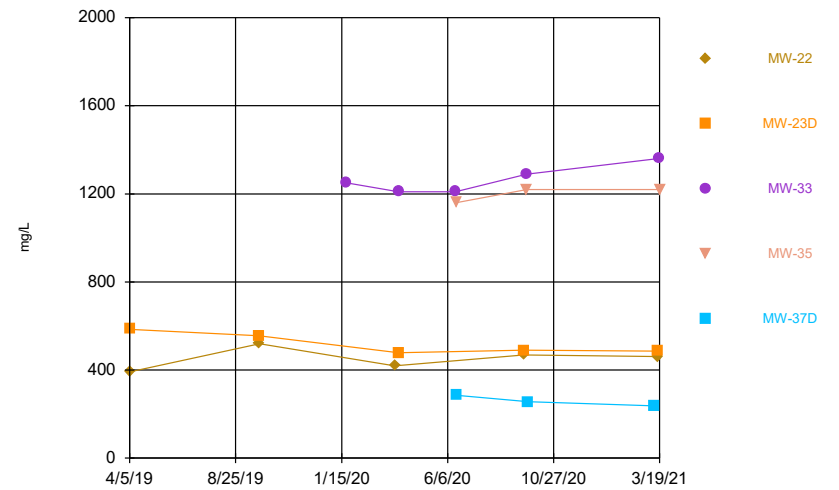
Constituent: Sulfate Analysis Run 5/4/2021 7:44 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

Time Series



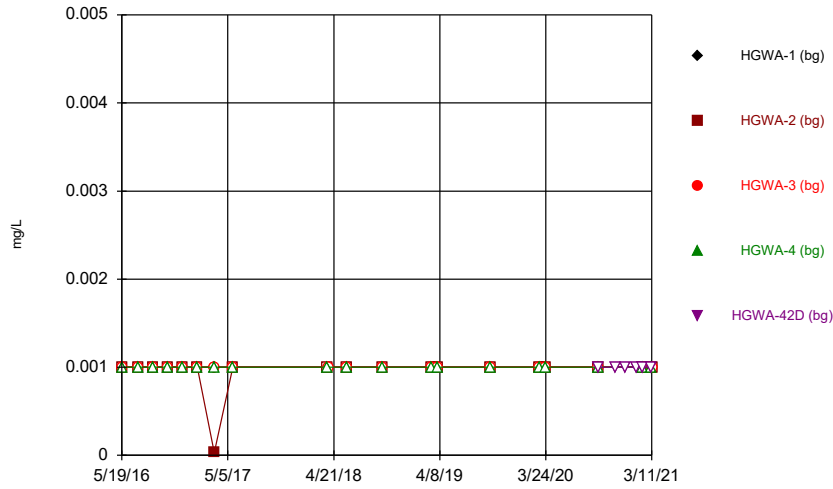
Constituent: Sulfate Analysis Run 5/4/2021 7:44 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

Time Series



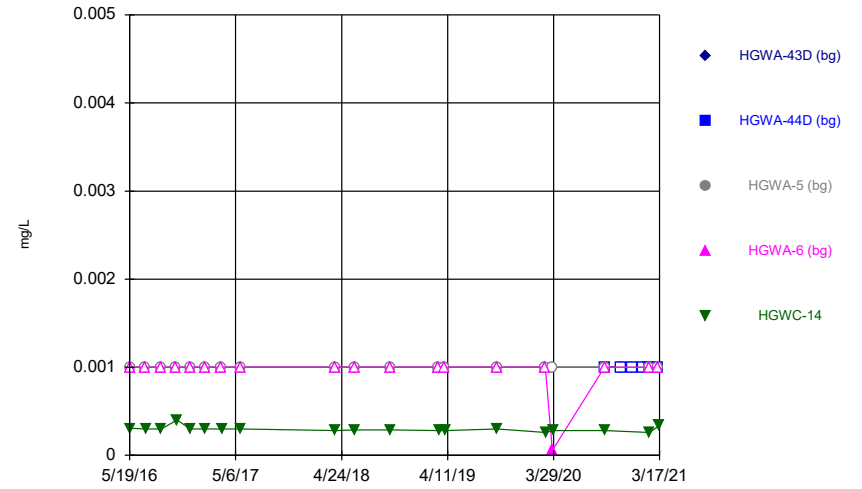
Constituent: Sulfate Analysis Run 5/4/2021 7:44 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

Time Series



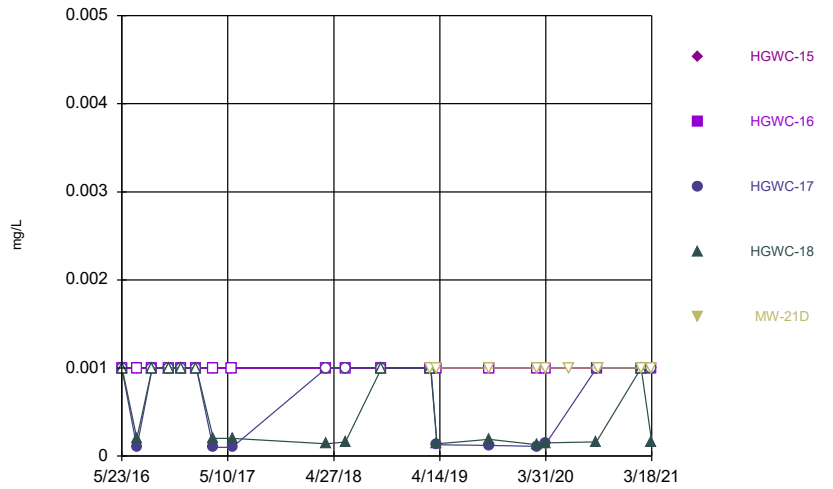
Constituent: Thallium Analysis Run 5/4/2021 7:44 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

Time Series



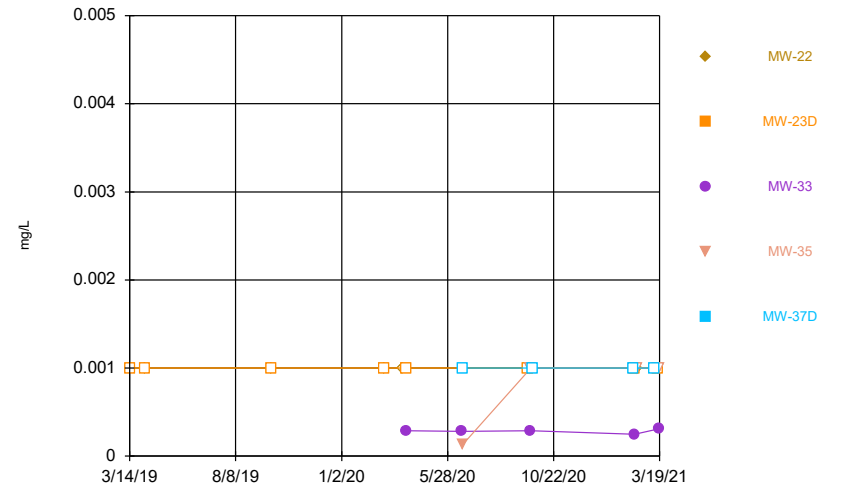
Constituent: Thallium Analysis Run 5/4/2021 7:44 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

Time Series



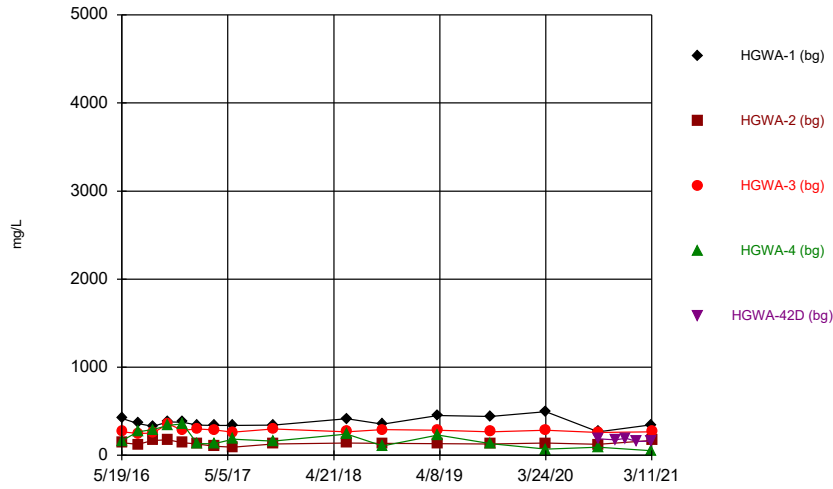
Constituent: Thallium Analysis Run 5/4/2021 7:44 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

Time Series



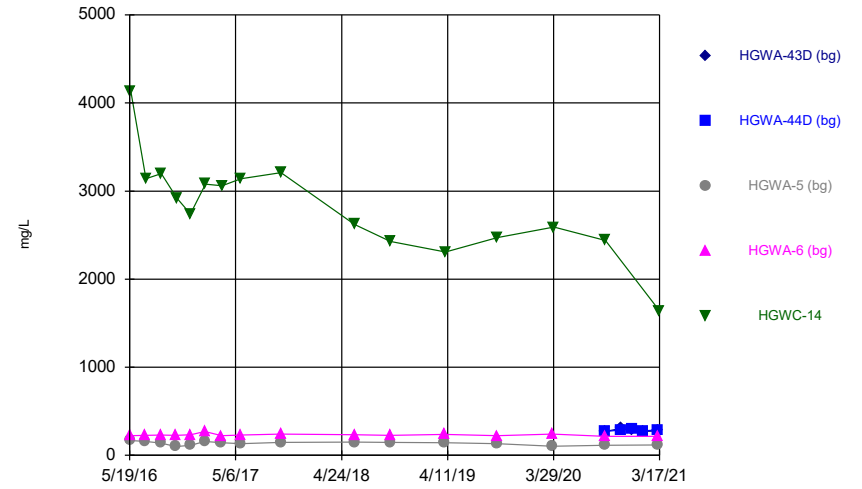
Constituent: Thallium Analysis Run 5/4/2021 7:44 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

Time Series



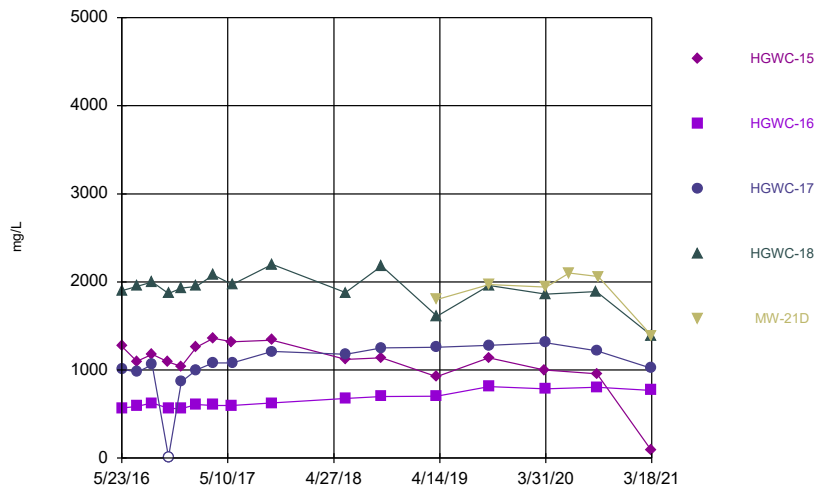
Constituent: Total Dissolved Solids Analysis Run 5/4/2021 7:44 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

Time Series



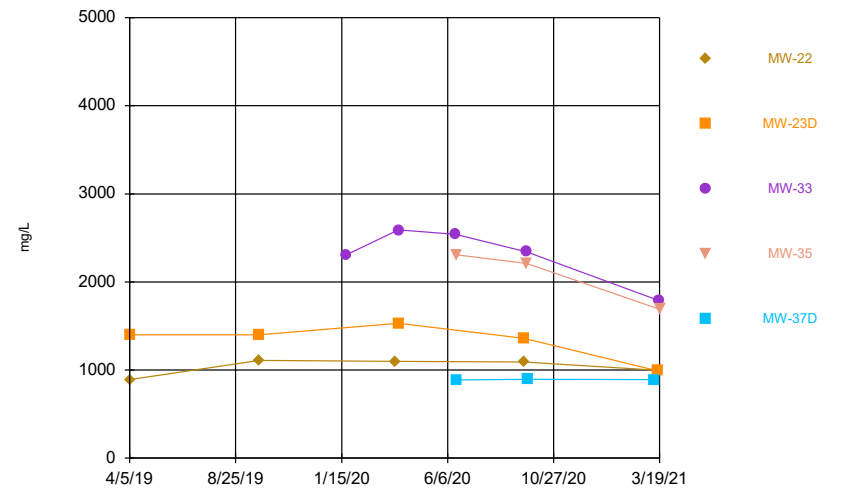
Constituent: Total Dissolved Solids Analysis Run 5/4/2021 7:44 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

Time Series



Constituent: Total Dissolved Solids Analysis Run 5/4/2021 7:44 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

Time Series



Constituent: Total Dissolved Solids Analysis Run 5/4/2021 7:44 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

# Time Series

Constituent: Antimony (mg/L) Analysis Run 5/4/2021 8:20 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-4 (bg)	HGWA-42D (bg)
5/19/2016	<0.003	<0.003	<0.003	<0.003	
7/11/2016	<0.003	<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	<0.003	
12/6/2016	<0.003	<0.003	<0.003	<0.003	
1/24/2017	<0.003	<0.003	<0.003	<0.003	
3/21/2017	<0.003	<0.003	<0.003	<0.003	
5/22/2017	<0.003	<0.003	<0.003		
5/23/2017				<0.003	
4/2/2018	<0.003	<0.003		<0.003	
4/3/2018			<0.003		
3/11/2019				<0.003	
3/12/2019	<0.003	<0.003	<0.003		
9/23/2019	<0.003	<0.003	<0.003		
3/2/2020	<0.003	<0.003	<0.003	<0.003	
9/17/2020					0.00055 (J)
11/11/2020					<0.003
12/15/2020					0.00035 (J)
1/20/2021					<0.003
2/8/2021	<0.003			<0.003	0.0019 (J)
2/9/2021		0.00062 (J)	0.00031 (J)		
3/10/2021	<0.003			<0.003	<0.003
3/11/2021		<0.003	<0.003		



# Time Series

Constituent: Antimony (mg/L) Analysis Run 5/4/2021 8:20 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-5 (bg)	HGWA-6 (bg)	HGWC-14
5/19/2016			<0.003		
5/20/2016				<0.003	
5/23/2016					<0.003
7/11/2016			<0.003	0.001 (J)	
7/12/2016					0.0003 (J)
8/30/2016			<0.003	<0.003	
9/1/2016					<0.003
10/20/2016			0.0023 (J)	<0.003	
10/24/2016					<0.003
12/7/2016					<0.003
12/8/2016			<0.003	<0.003	
1/24/2017			<0.003	<0.003	
1/26/2017					<0.003
3/21/2017			<0.003	<0.003	
3/23/2017					<0.003
5/23/2017			<0.003	<0.003	
5/24/2017					<0.003
4/3/2018			<0.003	<0.003	
4/4/2018					<0.003
3/12/2019			<0.003	<0.003	
3/14/2019					<0.003
3/2/2020			<0.003	<0.003	
3/3/2020					<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)	0.00067 (J)			
2/9/2021	0.00037 (J)	0.00042 (J)	<0.003	<0.003	
2/11/2021					0.00043 (J)
3/10/2021		0.00037 (J)			
3/11/2021	0.00057 (J)		<0.003	<0.003	
3/17/2021					<0.003

# Time Series

Constituent: Antimony (mg/L) Analysis Run 5/4/2021 8:20 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWC-15	HGWC-16	HGWC-17	HGWC-18	MW-21D
5/23/2016	<0.003	<0.003	<0.003		
5/24/2016				<0.003	
7/12/2016	<0.003	<0.003	<0.003	<0.003	
9/1/2016	<0.003	<0.003	<0.003	<0.003	
10/24/2016	<0.003				
10/25/2016		<0.003	<0.003	<0.003	
12/7/2016	<0.003	<0.003	<0.003		
12/8/2016				<0.003	
1/26/2017	<0.003	<0.003	<0.003	<0.003	
3/22/2017		<0.003	<0.003		
3/23/2017	<0.003			<0.003	
5/24/2017	<0.003	<0.003			
5/25/2017			<0.003	<0.003	
4/3/2018	<0.003	<0.003	<0.003	<0.003	
3/14/2019	<0.003			<0.003	
3/15/2019		<0.003	<0.003		<0.003
3/3/2020	<0.003	<0.003	<0.003	<0.003	<0.003
2/10/2021		<0.003			
2/11/2021			<0.003	<0.003	<0.003
2/12/2021	<0.003				
3/16/2021	<0.003				
3/17/2021		<0.003			
3/18/2021			<0.003	<0.003	<0.003

# Time Series

Constituent: Antimony (mg/L) Analysis Run 5/4/2021 8:20 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

	MW-22	MW-23D	MW-33	MW-35	MW-37D
3/14/2019		<0.003			
3/15/2019	<0.003				
3/2/2020	<0.003	<0.003			
2/11/2021					0.00079 (J)
2/12/2021		<0.003	0.00046 (J)		
2/15/2021	<0.003			0.00041 (J)	
3/12/2021					<0.003
3/17/2021	<0.003	<0.003			
3/18/2021			<0.003		
3/19/2021				<0.003	

# Time Series

Constituent: Arsenic (mg/L) Analysis Run 5/4/2021 8:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-4 (bg)	HGWA-42D (bg)
5/19/2016	<0.025	0.00127 (J)	<0.025	<0.025	
7/11/2016	<0.025	0.002 (J)		<0.025	
7/12/2016			0.0008 (J)		
8/30/2016	<0.025	0.0017 (J)	<0.025	<0.025	
10/19/2016	<0.025	<0.025	<0.025	<0.025	
12/6/2016	<0.025	<0.025	<0.025	<0.025	
1/24/2017	<0.025	<0.025	<0.025	<0.025	
3/21/2017	0.0005 (J)	<0.025	0.0007 (J)	<0.025	
5/22/2017	<0.025	0.0006 (J)	0.0006 (J)		
5/23/2017				<0.025	
4/2/2018	<0.025	<0.025		<0.025	
4/3/2018			<0.025		
6/4/2018	<0.025	0.00088 (J)	0.0008 (J)	<0.025	
10/1/2018	<0.025	<0.025	0.0011 (J)	<0.025	
3/11/2019				<0.025	
3/12/2019	<0.025	0.00069 (J)	0.00063 (J)		
4/1/2019			<0.025		
4/2/2019	<0.025	<0.025		<0.025	
9/23/2019	0.00046 (J)	0.00067 (J)	0.0011 (J)		
9/24/2019				<0.025	
3/2/2020	<0.025	0.00043 (J)	0.0004 (J)	<0.025	
3/25/2020	<0.025	<0.025	<0.025		
3/26/2020				<0.025	
9/15/2020	<0.025	<0.025	<0.025	<0.025	
9/17/2020					<0.025
11/11/2020					<0.025
12/15/2020					<0.025
1/20/2021					<0.025
2/8/2021	<0.025			<0.025	<0.025
2/9/2021		<0.025	<0.025		
3/10/2021	<0.025			<0.025	<0.025
3/11/2021		<0.025	<0.025		

# Time Series

Constituent: Arsenic (mg/L) Analysis Run 5/4/2021 8:20 PM  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-5 (bg)	HGWA-6 (bg)	HGWC-14
5/19/2016			<0.025		
5/20/2016				<0.025	
5/23/2016					0.00268 (J)
7/11/2016			<0.025	<0.025	
7/12/2016					0.0059
8/30/2016			<0.025	<0.025	
9/1/2016					0.0056
10/20/2016			<0.025	<0.025	
10/24/2016					0.0058
12/7/2016					<0.025
12/8/2016			<0.025	<0.025	
1/24/2017			<0.025	<0.025	
1/26/2017					0.0089
3/21/2017			<0.025	<0.025	
3/23/2017					0.0069
5/23/2017			<0.025	<0.025	
5/24/2017					0.0048 (J)
4/3/2018			<0.025	<0.025	
4/4/2018					0.0052
6/5/2018			<0.025	<0.025	
6/6/2018					0.0059
10/2/2018			0.00064 (J)	<0.025	
10/3/2018					0.0032 (J)
3/12/2019			<0.025	<0.025	
3/14/2019					0.0029 (J)
4/2/2019			<0.025	<0.025	
4/5/2019					<0.025
9/24/2019			0.00055 (J)	<0.025	0.0039 (J)
3/2/2020			<0.025	<0.025	
3/3/2020					0.0035 (J)
3/25/2020				<0.025	
3/26/2020			<0.025		
3/30/2020					0.0051
9/15/2020			<0.025	<0.025	
9/16/2020	<0.025	<0.025			
9/18/2020					0.0029 (J)
11/10/2020	0.0021 (J)	<0.025			
12/15/2020	<0.025	<0.025			
1/19/2021	0.0011 (J)	<0.025			
2/9/2021	0.0017 (J)	0.00083 (J)	<0.025	<0.025	
2/11/2021					0.0062
3/10/2021		<0.025			
3/11/2021	0.0013 (J)		<0.025	<0.025	
3/17/2021					<0.025

# Time Series

Constituent: Arsenic (mg/L)    Analysis Run 5/4/2021 8:20 PM  
 Plant Hammond    Client: Southern Company    Data: Hammond AP-2

	HGWC-15	HGWC-16	HGWC-17	HGWC-18	MW-21D
5/23/2016	<0.025	<0.025	<0.025		
5/24/2016				0.00294 (J)	
7/12/2016	<0.025	<0.025	<0.025	0.0074	
9/1/2016	<0.025	<0.025	<0.025	0.0073	
10/24/2016	<0.025				
10/25/2016		<0.025	<0.025	0.006	
12/7/2016	<0.025	<0.025	<0.025		
12/8/2016				0.007	
1/26/2017	<0.025	<0.025	<0.025	0.0068	
3/22/2017		0.0005 (J)	0.0007 (J)		
3/23/2017	0.0008 (J)			0.0082	
5/24/2017	<0.025	<0.025			
5/25/2017			0.0007 (J)	0.006	
4/3/2018	<0.025	<0.025	<0.025	0.0062	
6/5/2018				0.008	
6/6/2018	<0.025	<0.025	0.00097 (J)		
10/3/2018	<0.025	<0.025	<0.025	0.0039 (J)	
3/14/2019	<0.025			0.0036 (J)	
3/15/2019		<0.025	<0.025		<0.025
4/4/2019	0.00017 (J)	0.0001 (J)			0.00019 (J)
4/5/2019			<0.025	0.0015 (J)	
9/24/2019	0.00037 (J)				
9/25/2019		<0.025	<0.025	0.0044 (J)	<0.025
3/3/2020	<0.025	<0.025	<0.025	0.0057	<0.025
3/26/2020	<0.025				
3/30/2020		0.0011 (J)			
3/31/2020			0.0008 (J)	0.0056	
4/1/2020					0.0013 (J)
6/17/2020					<0.025
9/15/2020				0.0074	
9/16/2020			<0.025		
9/17/2020	<0.025	<0.025			
9/21/2020					<0.025
2/10/2021		0.0012 (J)			
2/11/2021			0.0012 (J)	0.0069 (B)	0.001 (J)
2/12/2021	<0.025				
3/16/2021	<0.025				
3/17/2021		<0.025			
3/18/2021			<0.025	0.0083 (J)	<0.025

# Time Series

Constituent: Arsenic (mg/L) Analysis Run 5/4/2021 8:20 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

	MW-22	MW-23D	MW-33	MW-35	MW-37D
3/14/2019		<0.025			
3/15/2019	<0.025				
4/5/2019	<0.025	<0.025			
9/26/2019		<0.025			
9/27/2019	0.00045 (J)				
3/2/2020	<0.025	<0.025			
3/27/2020	<0.025				
4/1/2020		0.00082 (J)	0.0061		
6/17/2020			0.0031 (J)		
6/18/2020				0.005 (J)	0.0021 (J)
9/17/2020	<0.025	<0.025			
9/21/2020			0.0083	0.0059	
9/23/2020					0.00095 (J)
2/11/2021					0.0023 (J)
2/12/2021		0.001 (J)	0.0059		
2/15/2021	<0.025			0.005	
3/12/2021					<0.025
3/17/2021	<0.025	<0.025			
3/18/2021			0.0054 (J)		
3/19/2021				<0.025	

# Time Series

Constituent: Barium (mg/L) Analysis Run 5/4/2021 8:20 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-4 (bg)	HGWA-42D (bg)
5/19/2016	0.0346	0.114	0.111	0.0266	
7/11/2016	0.0311	0.112		0.0309	
7/12/2016			0.115		
8/30/2016	0.0293	0.131	0.113	0.031	
10/19/2016	0.0293	0.111	0.123	0.0332	
12/6/2016	0.0304	0.108	0.127	0.0334	
1/24/2017	0.028	0.102	0.126	0.0192	
3/21/2017	0.0275	0.095	0.12	0.0175	
5/22/2017	0.0281	0.103	0.117		
5/23/2017				0.0227	
4/2/2018	0.026	0.099		0.022	
4/3/2018			0.11		
6/4/2018	0.035	0.11	0.12	0.027	
10/1/2018	0.029	0.11	0.14	0.018	
3/11/2019				0.029	
3/12/2019	0.042	0.12	0.13		
4/1/2019			0.13		
4/2/2019	0.04	0.13		0.03	
9/23/2019	0.042	0.13	0.13		
9/24/2019				0.03	
3/2/2020	0.034	0.11	0.14	0.023	
3/25/2020	0.043	0.12	0.13		
3/26/2020				0.026	
9/15/2020	0.035	0.12	0.12	0.024	
9/17/2020					0.13
11/11/2020					0.18
12/15/2020					0.19
1/20/2021					0.2
2/8/2021	0.032			0.04	0.19
2/9/2021		0.12	0.13		
3/10/2021	0.03			0.036	0.18
3/11/2021		0.07	0.13		



# Time Series

Constituent: Barium (mg/L) Analysis Run 5/4/2021 8:20 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-5 (bg)	HGWA-6 (bg)	HGWC-14
5/19/2016			0.0519		
5/20/2016				0.174	
5/23/2016					<0.2
7/11/2016			0.0565	0.134	
7/12/2016					0.0214
8/30/2016			0.0548	0.212	
9/1/2016					0.0208
10/20/2016			0.0539	0.157	
10/24/2016					0.0208
12/7/2016					0.022
12/8/2016			0.0496	0.162	
1/24/2017			0.0478	0.168	
1/26/2017					0.0238
3/21/2017			0.0453	0.186	
3/23/2017					0.0244
5/23/2017			0.0496	0.187	
5/24/2017					0.0228
4/3/2018			0.038	0.14	
4/4/2018					0.021
6/5/2018			0.046	0.21	
6/6/2018					0.022
10/2/2018			0.047	0.19	
10/3/2018					0.02
3/12/2019			0.05	0.2	
3/14/2019					0.019
4/2/2019			0.044	0.19	
4/5/2019					0.016
9/24/2019			0.053	0.22	0.021
3/2/2020			0.053	0.19	
3/3/2020					0.018
3/25/2020				0.19	
3/26/2020			0.045		
3/30/2020					0.02
9/15/2020			0.045	0.19	
9/16/2020	0.26	0.24			
9/18/2020					0.019
11/10/2020	0.25	0.38			
12/15/2020	0.29	0.39			
1/19/2021	0.32	0.41			
2/9/2021	0.34	0.46	0.046	0.21	
2/11/2021					0.02
3/10/2021		0.26			
3/11/2021	0.32		0.044	0.21	
3/17/2021					0.023

# Time Series

Constituent: Barium (mg/L) Analysis Run 5/4/2021 8:20 PM  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWC-15	HGWC-16	HGWC-17	HGWC-18	MW-21D
5/23/2016	0.0315 (J)	0.0841	0.0222 (J)		
5/24/2016				<0.2	
7/12/2016	0.0372	0.0886	0.0221	0.0346	
9/1/2016	0.0364	0.0934	0.0227	0.0336	
10/24/2016	0.0326				
10/25/2016		0.0991	0.0225	0.0349	
12/7/2016	0.0301	0.101	0.0227		
12/8/2016				0.0339	
1/26/2017	0.0287	0.105	0.0229	0.0293	
3/22/2017		0.11	0.0248		
3/23/2017	0.0329			0.0313	
5/24/2017	0.0283	0.106			
5/25/2017			0.0255	0.0336	
4/3/2018	0.019	0.099	0.025	0.028	
6/5/2018				0.03	
6/6/2018	0.022	0.11	0.028		
10/3/2018	0.025	0.11	0.028	0.032	
3/14/2019	0.021			0.029	
3/15/2019		0.13	0.029		0.09
4/4/2019	0.018	0.11			0.075
4/5/2019			0.022	0.021	
9/24/2019	0.019				
9/25/2019		0.11	0.025	0.03	0.066
3/3/2020	0.018	0.12	0.026	0.026	0.058
3/26/2020	0.016				
3/30/2020		0.11			
3/31/2020			0.029	0.029	
4/1/2020					0.066
6/17/2020					0.054
9/15/2020				0.03	
9/16/2020			0.025		
9/17/2020	0.017	0.11			
9/21/2020					0.049
2/10/2021		0.11			
2/11/2021			0.025	0.03	0.044
2/12/2021	0.014				
3/16/2021	0.012				
3/17/2021		0.12			
3/18/2021			0.027	0.031	0.047

# Time Series

Constituent: Barium (mg/L) Analysis Run 5/4/2021 8:20 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

	MW-22	MW-23D	MW-33	MW-35	MW-37D
3/14/2019		0.082			
3/15/2019	0.044				
4/5/2019	0.036	0.061			
9/26/2019		0.064			
9/27/2019	0.028				
3/2/2020	0.027	0.06			
3/27/2020	0.025				
4/1/2020		0.065	0.027		
6/17/2020			0.024		
6/18/2020				0.029	0.19
9/17/2020	0.02	0.057			
9/21/2020			0.024	0.028	
9/23/2020					0.14
2/11/2021					0.14
2/12/2021		0.056	0.025		
2/15/2021	0.017			0.026	
3/12/2021					0.12
3/17/2021	0.018	0.058			
3/18/2021			0.029		
3/19/2021				0.032	

# Time Series

Constituent: Beryllium (mg/L) Analysis Run 5/4/2021 8:20 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-4 (bg)	HGWA-42D (bg)
5/19/2016	<0.0005	<0.0005	<0.0005	<0.0005	
7/11/2016	<0.0005	0.0001 (J)		<0.0005	
7/12/2016			<0.0005		
8/30/2016	<0.0005	<0.0005	<0.0005	<0.0005	
10/19/2016	<0.0005	0.0001 (J)	<0.0005	<0.0005	
12/6/2016	<0.0005	0.0002 (J)	<0.0005	<0.0005	
1/24/2017	<0.0005	0.0001 (J)	<0.0005	<0.0005	
3/21/2017	<0.0005	0.0001 (J)	<0.0005	<0.0005	
5/22/2017	<0.0005	0.0001 (J)	<0.0005		
5/23/2017				<0.0005	
4/2/2018	<0.0005	<0.0005		<0.0005	
4/3/2018			<0.0005		
3/11/2019				5E-05 (J)	
3/12/2019	<0.0005	0.00017 (J)	<0.0005		
4/1/2019			<0.0005		
4/2/2019	<0.0005	0.00015 (J)		<0.0005	
9/23/2019	<0.0005	0.00011 (J)	<0.0005		
9/24/2019				<0.0005	
3/2/2020	<0.0005	0.00014 (J)	<0.0005	0.00019 (J)	
3/25/2020	<0.0005	0.00016 (J)	<0.0005		
3/26/2020				7.6E-05 (J)	
9/15/2020	<0.0005	0.00013 (J)	<0.0005	<0.0005	
9/17/2020					<0.0005
11/11/2020					<0.0005
12/15/2020					<0.0005
1/20/2021					<0.0005
2/8/2021	<0.0005			0.00023 (J)	<0.0005
2/9/2021		0.00014 (J)	<0.0005		
3/10/2021	<0.0005			0.00017 (J)	<0.0005
3/11/2021		8.6E-05 (J)	<0.0005		

# Time Series

Constituent: Beryllium (mg/L) Analysis Run 5/4/2021 8:20 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-5 (bg)	HGWA-6 (bg)	HGWC-14
5/19/2016			<0.0005		
5/20/2016				<0.0005	
5/23/2016					<0.0005
7/11/2016			<0.0005	<0.0005	
7/12/2016					0.0005 (J)
8/30/2016			<0.0005	<0.0005	
9/1/2016					0.0005 (J)
10/20/2016			<0.0005	<0.0005	
10/24/2016					0.0005 (J)
12/7/2016					0.0006 (J)
12/8/2016			<0.0005	<0.0005	
1/24/2017			<0.0005	<0.0005	
1/26/2017					0.0005 (J)
3/21/2017			<0.0005	<0.0005	
3/23/2017					0.0006 (J)
5/23/2017			<0.0005	<0.0005	
5/24/2017					0.0005 (J)
4/3/2018			<0.0005	<0.0005	
4/4/2018					<0.0005
3/12/2019			<0.0005	<0.0005	
3/14/2019					0.00043 (J)
4/2/2019			<0.0005	<0.0005	
4/5/2019					0.00027 (J)
9/24/2019			<0.0005	<0.0005	0.00044 (J)
3/2/2020			<0.0005	<0.0005	
3/3/2020					0.00043 (J)
3/25/2020				<0.0005	
3/26/2020			<0.0005		
3/30/2020					0.00043 (J)
9/15/2020			<0.0005	<0.0005	
9/16/2020	<0.0005	<0.0005			
9/18/2020					0.00043 (J)
11/10/2020	<0.0005	<0.0005			
12/15/2020	<0.0005	<0.0005			
1/19/2021	<0.0005	<0.0005			
2/9/2021	<0.0005	<0.0005	<0.0005	<0.0005	
2/11/2021					0.00044 (J)
3/10/2021		<0.0005			
3/11/2021	<0.0005		<0.0005	<0.0005	
3/17/2021					0.00058

# Time Series

Constituent: Beryllium (mg/L) Analysis Run 5/4/2021 8:20 PM  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWC-15	HGWC-16	HGWC-17	HGWC-18	MW-21D
5/23/2016	<0.0005	<0.0005	<0.0005		
5/24/2016				0.00278 (J)	
7/12/2016	<0.0005	<0.0005	<0.0005	0.0032	
9/1/2016	<0.0005	<0.0005	<0.0005	0.0034	
10/24/2016	<0.0005				
10/25/2016		<0.0005	<0.0005	0.0034	
12/7/2016	<0.0005	<0.0005	<0.0005		
12/8/2016				0.0033	
1/26/2017	<0.0005	<0.0005	<0.0005	0.0034	
3/22/2017		<0.0005	<0.0005		
3/23/2017	<0.0005			0.0036	
5/24/2017	<0.0005	<0.0005			
5/25/2017			<0.0005	0.0036	
4/3/2018	<0.0005	<0.0005	<0.0005	<0.0005	
3/14/2019	<0.0005			0.0026 (J)	
3/15/2019		<0.0005	<0.0005		<0.0005
4/4/2019	<0.0005	<0.0005			<0.0005
4/5/2019			<0.0005	0.0022 (J)	
9/24/2019	<0.0005				
9/25/2019		<0.0005	<0.0005	0.0031	<0.0005
3/3/2020	<0.0005	<0.0005	<0.0005	0.0029 (J)	<0.0005
3/26/2020	<0.0005				
3/30/2020		<0.0005			
3/31/2020			<0.0005	0.003	
4/1/2020					<0.0005
6/17/2020					<0.0005
9/15/2020				0.0033	
9/16/2020			<0.0005		
9/17/2020	<0.0005	<0.0005			
9/21/2020					<0.0005
2/10/2021		<0.0005			
2/11/2021			6.7E-05 (J)	0.0036	<0.0005
2/12/2021	<0.0005				
3/16/2021	<0.0005				
3/17/2021		<0.0005			
3/18/2021			4.8E-05 (J)	0.0038	<0.0005

# Time Series

Constituent: Beryllium (mg/L) Analysis Run 5/4/2021 8:20 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

	MW-22	MW-23D	MW-33	MW-35	MW-37D
3/14/2019		<0.0005			
3/15/2019	<0.0005				
4/5/2019	<0.0005	<0.0005			
9/26/2019		<0.0005			
9/27/2019	<0.0005				
3/2/2020	<0.0005	<0.0005			
3/27/2020	<0.0005				
4/1/2020		<0.0005	0.0011 (J)		
6/17/2020			0.00099 (J)		
6/18/2020				0.00032 (J)	0.00012 (J)
9/17/2020	4.7E-05 (J)	<0.0005			
9/21/2020			0.0009 (J)	0.0004 (J)	
9/23/2020					<0.0005
2/11/2021					<0.0005
2/12/2021		<0.0005	0.001 (J)		
2/15/2021	6.2E-05 (J)			0.0006 (J)	
3/12/2021					<0.0005
3/17/2021	8.2E-05 (J)	<0.0005			
3/18/2021			0.0011		
3/19/2021				0.00061	

# Time Series

Constituent: Boron (mg/L) Analysis Run 5/4/2021 8:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-4 (bg)	HGWA-42D (bg)
5/19/2016	0.0214 (J)	0.0321 (J)	<0.04	<0.04	
7/11/2016	0.0142 (J)	0.0337 (J)		0.0175 (J)	
7/12/2016			0.0074 (J)		
8/30/2016	0.0074 (J)	0.0173 (J)	<0.04	0.0072 (J)	
10/19/2016	0.0224 (J)	0.0341 (J)	0.0085 (J)	0.018 (J)	
12/6/2016	0.0211 (J)	0.0326 (J)	0.0085 (J)	0.0158 (J)	
1/24/2017	0.0165 (J)	0.0365 (J)	0.01 (J)	0.0145 (J)	
3/21/2017	0.0187 (J)	0.0349 (J)	0.0079 (J)	0.0101 (J)	
5/22/2017	0.0782	0.0475	0.0131 (J)		
5/23/2017				0.0159 (J)	
10/3/2017	0.0198 (J)	0.0386 (J)	0.0097 (J)	0.0162 (J)	
6/4/2018	0.02 (J)	0.036 (J)	0.017 (J)	0.014 (J)	
10/1/2018	0.013 (J)	0.035 (J)	0.0061 (J)	0.0093 (J)	
4/1/2019			0.0066 (J)		
4/2/2019	0.016 (J)	0.034 (J)		0.01 (J)	
9/23/2019	0.021 (J)	0.04 (J)	0.0081 (J)		
9/24/2019				0.013 (J)	
3/25/2020	0.025 (J)	0.039 (J)	0.0096 (J)		
3/26/2020				0.012 (J)	
9/15/2020	0.017 (J)	0.044 (J)	0.0071 (J)	0.013 (J)	
9/17/2020					0.098 (J)
11/11/2020					0.058 (J)
12/15/2020					0.043 (J)
1/20/2021					0.045 (J)
3/10/2021	0.015 (J)			0.012 (J)	0.048
3/11/2021		0.056	0.015 (J)		



# Time Series

Constituent: Boron (mg/L) Analysis Run 5/4/2021 8:20 PM  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-5 (bg)	HGWA-6 (bg)	HGWC-14
5/19/2016			<0.04		
5/20/2016				0.0363 (J)	
5/23/2016					15.4
7/11/2016			0.0052 (J)	0.0179 (J)	
7/12/2016					16
8/30/2016			0.0068 (J)	0.014 (J)	
9/1/2016					12.3
10/20/2016			0.0135 (J)	0.0197 (J)	
10/24/2016					13.7
12/7/2016					16.5
12/8/2016			0.0083 (J)	0.0159 (J)	
1/24/2017			0.0072 (J)	<0.04	
1/26/2017					19.2
3/21/2017			<0.04	0.0166 (J)	
3/23/2017					23.1
5/23/2017			0.0095 (J)	0.0167 (J)	
5/24/2017					25.8
10/3/2017			0.0071 (J)	0.017 (J)	
10/4/2017					20.5
6/5/2018			0.0066 (J)	0.016 (J)	
6/6/2018					16.7
10/2/2018			0.0081 (J)	0.014 (J)	
10/3/2018					16.4
4/2/2019			0.0052 (J)	0.013 (J)	
4/5/2019					12.5
9/24/2019			0.0088 (J)	0.016 (J)	
3/25/2020				0.021 (J)	
3/26/2020			0.0072 (J)		
3/30/2020					11.7
9/15/2020			0.012 (J)	0.016 (J)	
9/16/2020	0.061 (J)	0.23			
9/18/2020					11
11/10/2020	0.057 (J)	0.29			
12/15/2020	0.052 (J)	0.31			
1/19/2021	0.049 (J)	0.4			
3/10/2021		0.39			
3/11/2021	0.06		0.0075 (J)	0.018 (J)	
3/17/2021					11.8

# Time Series

Constituent: Boron (mg/L) Analysis Run 5/4/2021 8:20 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWC-15	HGWC-16	HGWC-17	HGWC-18	MW-21D
5/23/2016	2.02	1.36	5.7		
5/24/2016				9.33	
7/12/2016	1.65	1.62	9.58	11.9	
9/1/2016	1.93	1.31	5.76	8.8	
10/24/2016	1.93				
10/25/2016		1.27	5.38	8.5	
12/7/2016	2.23	1.42	5.74		
12/8/2016				7.15	
1/26/2017	2.31	1.19	5.78	9.17	
3/22/2017		1.32	5.52		
3/23/2017	2.72			10.6	
5/24/2017	2.26	1.67			
5/25/2017			8.58	13.2	
10/4/2017	2	1.43	6.8	10	
6/5/2018				8.4	
6/6/2018	2.4	1.9	6.3		
10/3/2018	2.4	1.7	6.9	9.3	
4/4/2019	2.3	2.1			5.2
4/5/2019			5.9	6.4	
9/24/2019	2.9				
9/25/2019		2.7	8.1	11.7	6.4
3/26/2020	2.1				
3/30/2020		2.4			
3/31/2020			6.9	9.4	
4/1/2020					6.3
6/17/2020					5.8
9/15/2020				9.4	
9/16/2020			6.7		
9/17/2020	2.2	2.4			
9/21/2020					5.6
3/16/2021	2.4				
3/17/2021		2.7			
3/18/2021			6.8	8.9	5.7

# Time Series

Constituent: Boron (mg/L) Analysis Run 5/4/2021 8:20 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

	MW-22	MW-23D	MW-33	MW-35	MW-37D
4/5/2019	2.1	3			
9/26/2019		3.8			
9/27/2019	2.9				
1/22/2020			11.2		
3/27/2020	2.4				
4/1/2020		3.5	11.6		
6/17/2020			10.3		
6/18/2020				11.9	0.14
9/17/2020	2.3	2.7			
9/21/2020			9	12.3	
9/23/2020					0.12
3/12/2021					0.15
3/17/2021	2.7	3.4			
3/18/2021			10.2		
3/19/2021				11.9	

# Time Series

Constituent: Cadmium (mg/L) Analysis Run 5/4/2021 8:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-4 (bg)	HGWA-42D (bg)
5/19/2016	<0.0005	<0.0005	<0.0005	<0.0005	
7/11/2016	<0.0005	<0.0005		<0.0005	
7/12/2016			<0.0005		
8/30/2016	<0.0005	<0.0005	<0.0005	<0.0005	
10/19/2016	<0.0005	<0.0005	<0.0005	<0.0005	
12/6/2016	<0.0005	<0.0005	<0.0005	<0.0005	
1/24/2017	<0.0005	0.0001 (J)	<0.0005	<0.0005	
3/21/2017	<0.0005	7E-05 (J)	<0.0005	<0.0005	
5/22/2017	<0.0005	0.0001 (J)	<0.0005		
5/23/2017				<0.0005	
4/2/2018	<0.0005	<0.0005		<0.0005	
4/3/2018			<0.0005		
6/4/2018	<0.0005	0.00014 (J)	<0.0005	<0.0005	
10/1/2018	<0.0005	<0.0005	<0.0005	<0.0005	
3/11/2019				<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)		<0.0005	
9/23/2019	<0.0005	<0.0005	<0.0005		
9/24/2019				<0.0005	
3/2/2020	<0.0005	<0.0005	<0.0005	<0.0005	
3/25/2020	<0.0005	0.00014 (J)	<0.0005		
3/26/2020				<0.0005	
9/15/2020	<0.0005	0.00012 (J)	<0.0005	<0.0005	
9/17/2020					<0.0005
11/11/2020					<0.0005
12/15/2020					<0.0005
1/20/2021					<0.0005
2/8/2021	<0.0005			<0.0005	<0.0005
2/9/2021		0.00016 (J)	<0.0005		
3/10/2021	<0.0005			<0.0005	<0.0005
3/11/2021		<0.0005	<0.0005		

# Time Series

Constituent: Cadmium (mg/L) Analysis Run 5/4/2021 8:20 PM  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-5 (bg)	HGWA-6 (bg)	HGWC-14
5/19/2016			<0.0005		
5/20/2016				<0.0005	
5/23/2016					0.000139 (J)
7/11/2016			<0.0005	<0.0005	
7/12/2016					<0.0005
8/30/2016			<0.0005	<0.0005	
9/1/2016					0.0001 (J)
10/20/2016			<0.0005	<0.0005	
10/24/2016					0.0002 (J)
12/7/2016					0.0001 (J)
12/8/2016			<0.0005	<0.0005	
1/24/2017			<0.0005	<0.0005	
1/26/2017					0.0001 (J)
3/21/2017			<0.0005	<0.0005	
3/23/2017					0.0002 (J)
5/23/2017			<0.0005	<0.0005	
5/24/2017					0.0001 (J)
4/3/2018			<0.0005	<0.0005	
4/4/2018					<0.0005
6/5/2018			<0.0005	<0.0005	
6/6/2018					0.00012 (J)
10/2/2018			<0.0005	<0.0005	
10/3/2018					0.0001 (J)
3/12/2019			<0.0005	<0.0005	
3/14/2019					<0.0005
4/2/2019			<0.0005	<0.0005	
4/5/2019					7.9E-05 (J)
9/24/2019			<0.0005	<0.0005	<0.0005
3/2/2020			<0.0005	<0.0005	
3/3/2020					<0.0005
3/25/2020				<0.0005	
3/26/2020			<0.0005		
3/30/2020					<0.0005
9/15/2020			<0.0005	<0.0005	
9/16/2020	<0.0005	<0.0005			
9/18/2020					<0.0005
11/10/2020	<0.0005	<0.0005			
12/15/2020	<0.0005	<0.0005			
1/19/2021	<0.0005	<0.0005			
2/9/2021	<0.0005	<0.0005	<0.0005	<0.0005	
2/11/2021					<0.0005
3/10/2021		<0.0005			
3/11/2021	<0.0005		<0.0005	<0.0005	
3/17/2021					<0.0005

# Time Series

Constituent: Cadmium (mg/L) Analysis Run 5/4/2021 8:20 PM  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWC-15	HGWC-16	HGWC-17	HGWC-18	MW-21D
5/23/2016	0.00271 (J)	<0.0005	<0.0005		
5/24/2016				<0.0005	
7/12/2016	0.0019	<0.0005	<0.0005	0.0022	
9/1/2016	0.0017	<0.0005	<0.0005	0.0024	
10/24/2016	0.0018				
10/25/2016		<0.0005	<0.0005	0.0022	
12/7/2016	0.0018	<0.0005	<0.0005		
12/8/2016				0.0024	
1/26/2017	0.0013	<0.0005	<0.0005	0.0025	
3/22/2017		<0.0005	7E-05 (J)		
3/23/2017	0.002			0.0025	
5/24/2017	0.0041	<0.0005			
5/25/2017			<0.0005	0.0027	
4/3/2018	0.0022	<0.0005	<0.0005	0.0022	
6/5/2018				0.0022	
6/6/2018	0.0021	<0.0005	<0.0005		
10/3/2018	0.0026	<0.0005	<0.0005	0.0027	
3/14/2019	0.0024			0.0019	
3/15/2019		<0.0005	<0.0005		<0.0005
4/4/2019	0.0018	<0.0005			<0.0005
4/5/2019			<0.0005	0.0017	
9/24/2019	0.0014 (J)				
9/25/2019		<0.0005	<0.0005	0.0023 (J)	<0.0005
3/3/2020	0.0015 (J)	<0.0005	<0.0005	0.0021 (J)	<0.0005
3/26/2020	0.0016 (J)				
3/30/2020		<0.0005			
3/31/2020			<0.0005	0.0017 (J)	
4/1/2020					<0.0005
6/17/2020					<0.0005
9/15/2020				0.0019 (J)	
9/16/2020			<0.0005		
9/17/2020	0.0016 (J)	<0.0005			
9/21/2020					<0.0005
2/10/2021		<0.0005			
2/11/2021			<0.0005	0.0016 (J)	<0.0005
2/12/2021	0.0014 (J)				
3/16/2021	0.0011				
3/17/2021		<0.0005			
3/18/2021			<0.0005	0.0015	<0.0005

# Time Series

Constituent: Cadmium (mg/L) Analysis Run 5/4/2021 8:20 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

	MW-22	MW-23D	MW-33	MW-35	MW-37D
3/14/2019		<0.0005			
3/15/2019	0.00082 (J)				
4/5/2019	0.00064 (J)	<0.0005			
9/26/2019		<0.0005			
9/27/2019	0.0014 (J)				
3/2/2020	0.0021 (J)	<0.0005			
3/27/2020	0.0019 (J)				
4/1/2020		<0.0005	0.00022 (J)		
6/17/2020			0.00021 (J)		
6/18/2020				0.00053 (J)	<0.0005
9/17/2020	0.0021 (J)	0.0006 (J)			
9/21/2020			0.00016 (J)	0.001 (J)	
9/23/2020					<0.0005
2/11/2021					<0.0005
2/12/2021		0.00045 (J)	0.00017 (J)		
2/15/2021	0.002 (J)			0.0017 (J)	
3/12/2021					<0.0005
3/17/2021	0.0022	0.00057			
3/18/2021			0.00019 (J)		
3/19/2021				0.0018	

# Time Series

Constituent: Calcium (mg/L) Analysis Run 5/4/2021 8:20 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-4 (bg)	HGWA-42D (bg)
5/19/2016	138	22.9	76.2	48.4	
7/11/2016	97.2	22.3		73	
7/12/2016			61.5		
8/30/2016	97.5	26.4	65.1	85.7	
10/19/2016	99.2	21.7	73.2	89.7	
12/6/2016	105	18.2	74.9	80	
1/24/2017	95.7	18.5	69.6	30.8	
3/21/2017	106	18.6	75.7	34	
5/22/2017	107	17.8	71.5		
5/23/2017				43	
10/3/2017	102	20.2	76.3	46.9	
6/4/2018	124	19.1	73.4	81.9	
10/1/2018	108	20.5 (J)	80.9	22 (J)	
4/1/2019			80.5		
4/2/2019	132	22.5 (J)		76	
9/23/2019	118	19.5	71		
9/24/2019				36.6	
3/25/2020	127	23	89.8		
3/26/2020				14.9	
9/15/2020	103	21.1	73.1	20.4	
9/17/2020					43.8
11/11/2020					44.4
12/15/2020					47.3
1/20/2021					41.8
3/10/2021	111			5.9	43.4
3/11/2021		43.8	83.8		



# Time Series

Constituent: Calcium (mg/L) Analysis Run 5/4/2021 8:20 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-5 (bg)	HGWA-6 (bg)	HGWC-14
5/19/2016			35.5		
5/20/2016				56.1	
5/23/2016					664
7/11/2016			35.4	49.3	
7/12/2016					528
8/30/2016			28	53.9	
9/1/2016					586
10/20/2016			26.7	50.7	
10/24/2016					564
12/7/2016					590
12/8/2016			23.5	49.2	
1/24/2017			24.5	48.3	
1/26/2017					558
3/21/2017			30.8	51.3	
3/23/2017					652
5/23/2017			24.2	49.1	
5/24/2017					617
10/3/2017			29	55.1	
10/4/2017					644
6/5/2018			27.8	54.5	
6/6/2018					606
10/2/2018			28.9	54.7	
10/3/2018					558
4/2/2019			26.3	49.7	
4/5/2019					606
9/24/2019			29.3	52.5	507
3/25/2020				58.1	
3/26/2020			27.8		
3/30/2020					600
9/15/2020			27.9	49.9	
9/16/2020	56	30			
9/18/2020					623
11/10/2020	63.3	33.6			
12/15/2020	62.6	28.7			
1/19/2021	60.1	33			
3/10/2021		18.3			
3/11/2021	59.6		28.3	53.1	
3/17/2021					572

# Time Series

Constituent: Calcium (mg/L) Analysis Run 5/4/2021 8:20 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWC-15	HGWC-16	HGWC-17	HGWC-18	MW-21D
5/23/2016	184	146	225		
5/24/2016				403	
7/12/2016	186	142	199	328	
9/1/2016	189	141	213	379	
10/24/2016	200				
10/25/2016		138	206	362	
12/7/2016	203	146	212		
12/8/2016				366	
1/26/2017	212	139	198	394	
3/22/2017		150	239		
3/23/2017	229			440	
5/24/2017	265	153			
5/25/2017			292	492	
10/4/2017	230	156	305	470	
6/5/2018				425	
6/6/2018	250	177	299		
10/3/2018	234	160	286	421	
4/4/2019	214	196			427
4/5/2019			340	400	
9/24/2019	202				
9/25/2019		185	305	437	420
3/26/2020	240				
3/30/2020		208			
3/31/2020			328	418	
4/1/2020					438
6/17/2020					434
9/15/2020				430	
9/16/2020			277		
9/17/2020	188	190			
9/21/2020					428
3/16/2021	196				
3/17/2021		198			
3/18/2021			266	407	382

# Time Series

Constituent: Calcium (mg/L) Analysis Run 5/4/2021 8:20 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

	MW-22	MW-23D	MW-33	MW-35	MW-37D
4/5/2019	178	352			
9/26/2019		306			
9/27/2019	202				
1/22/2020			638		
3/27/2020	212				
4/1/2020		342	567		
6/17/2020			561		
6/18/2020				517	165
9/17/2020	203	361			
9/21/2020			562	503	
9/23/2020					158
3/12/2021					170
3/17/2021	200	341			
3/18/2021			574		
3/19/2021				552	

# Time Series

Constituent: Chloride (mg/L) Analysis Run 5/4/2021 8:20 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-4 (bg)	HGWA-42D (bg)
5/19/2016	9.94	6.14	5.93	4.56	
7/11/2016	6.3	5.9		5	
7/12/2016			6.2		
8/30/2016	6	6.2	6.4	4.9	
10/19/2016	5.8	6.1	6.5	4.6	
12/6/2016	5.4	6	7.2	4.5	
1/24/2017	5.2	6.1	6.4	4.7	
3/21/2017	4.6	5.9	7.5	4.3	
5/22/2017	4.6	5.9	6.5		
5/23/2017				4.5	
10/3/2017	5.6	6.3	6.5	4.8	
6/4/2018	13.1	6.1	6.3	4.5	
10/1/2018	6.6	6.4	6.4	3.8	
4/1/2019			6.5		
4/2/2019	20.3	5.8		4.4	
9/23/2019	17.7	5.1	5.9		
9/24/2019				3.6	
3/25/2020	20.4	5.2	6.1		
3/26/2020				3.4	
9/15/2020	13.4	5	6	3.3	
9/17/2020					5.8
11/11/2020					3.1
12/15/2020					3.2
1/20/2021					2.8
3/10/2021	7.4			2.9	3
3/11/2021		5.1	5.9		

# Time Series

Constituent: Chloride (mg/L) Analysis Run 5/4/2021 8:20 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-5 (bg)	HGWA-6 (bg)	HGWC-14
5/19/2016			1.57		
5/20/2016				1.35	
5/23/2016					659
7/11/2016			2	1.7	
7/12/2016					620
8/30/2016			2	1.6	
9/1/2016					510
10/20/2016			2.2	1.6	
10/24/2016					110
12/7/2016					510
12/8/2016			2	1.6	
1/24/2017			1.6	1.9	
1/26/2017					640
3/21/2017			2	1.3	
3/23/2017					600
5/23/2017			1.7	1.2	
5/24/2017					510
10/3/2017			1.7	2.1	
10/4/2017					420
6/5/2018			1.6	1.2	
6/6/2018					357
10/2/2018			2.4	1.7	
10/3/2018					368
4/2/2019			1.7	1.6	
4/5/2019					227
9/24/2019			1.7	1.3	188
3/25/2020				1.2	
3/26/2020			1.4		
3/30/2020					236
9/15/2020			1.7	1.2	
9/16/2020	4.1	7.2			
9/18/2020					288
11/10/2020	4.4	7.8			
12/15/2020	4.7	9.4			
1/19/2021	4.1	9.5			
3/10/2021		12.3			
3/11/2021	4.5		1.4	1.2	
3/17/2021					233

# Time Series

Constituent: Chloride (mg/L) Analysis Run 5/4/2021 8:20 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWC-15	HGWC-16	HGWC-17	HGWC-18	MW-21D
5/23/2016	209	25.8	94		
5/24/2016				280	
7/12/2016	190	34	100	300	
9/1/2016	200	34	95	270	
10/24/2016	200				
10/25/2016		35	98	290	
12/7/2016	240	38	89		
12/8/2016				300	
1/26/2017	260	41	99	340	
3/22/2017		41	100		
3/23/2017	280			350	
5/24/2017	240	44			
5/25/2017			99	290	
10/4/2017	210	50	130	260	
6/5/2018				261	
6/6/2018	196	50.6	166		
10/3/2018	200	49.9	193	302	
4/4/2019	138	76.8			299
4/5/2019			195	217	
9/24/2019	120				
9/25/2019		84.4	139	181	245
3/26/2020	142				
3/30/2020		80.2			
3/31/2020			161	126	
4/1/2020					236
6/17/2020					223
9/15/2020				150	
9/16/2020			156		
9/17/2020	108	99.3			
9/21/2020					236
3/16/2021	103				
3/17/2021		93.8			
3/18/2021			138	90.2	208

# Time Series

Constituent: Chloride (mg/L) Analysis Run 5/4/2021 8:20 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

	MW-22	MW-23D	MW-33	MW-35	MW-37D
4/5/2019	131	195			
9/26/2019		204			
9/27/2019	176				
1/22/2020			231		
3/27/2020	141				
4/1/2020		166	242		
6/17/2020			250		
6/18/2020				229	151
9/17/2020	153	171			
9/21/2020			273	257	
9/23/2020					166
3/12/2021					124
3/17/2021	127	151			
3/18/2021			199		
3/19/2021				250	

# Time Series

Constituent: Chromium (mg/L) Analysis Run 5/4/2021 8:20 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-4 (bg)	HGWA-42D (bg)
5/19/2016	<0.025	<0.025	<0.025	<0.025	
7/11/2016	<0.025	<0.025		<0.025	
7/12/2016			<0.025		
8/30/2016	<0.025	<0.025	<0.025	<0.025	
10/19/2016	<0.025	<0.025	<0.025	<0.025	
12/6/2016	<0.025	<0.025	<0.025	<0.025	
1/24/2017	<0.025	<0.025	<0.025	<0.025	
3/21/2017	0.0005 (J)	<0.025	<0.025	0.0004 (J)	
5/22/2017	<0.025	<0.025	0.0007 (J)		
5/23/2017				<0.025	
4/2/2018	<0.025	<0.025		<0.025	
4/3/2018			<0.025		
3/11/2019				<0.025	
3/12/2019	<0.025	<0.025	<0.025		
4/1/2019			<0.025		
4/2/2019	<0.025	0.0079 (J)		0.019	
9/23/2019	<0.025	0.00058 (J)	<0.025		
9/24/2019				<0.025	
3/2/2020	<0.025	0.00041 (J)	<0.025	0.0004 (J)	
3/25/2020	0.00072 (J)	<0.025	<0.025		
3/26/2020				<0.025	
9/15/2020	<0.025	<0.025	<0.025	<0.025	
9/17/2020					<0.025
11/11/2020					0.00063 (J)
12/15/2020					0.0025 (J)
1/20/2021					<0.025
2/8/2021	<0.025			<0.025	0.00078 (J)
2/9/2021		<0.025	<0.025		
3/10/2021	<0.025			<0.025	<0.025
3/11/2021		<0.025	<0.025		



# Time Series

Constituent: Chromium (mg/L) Analysis Run 5/4/2021 8:20 PM  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-5 (bg)	HGWA-6 (bg)	HGWC-14
5/19/2016			<0.025		
5/20/2016				<0.025	
5/23/2016					<0.025
7/11/2016			<0.025	<0.025	
7/12/2016					<0.025
8/30/2016			<0.025	<0.025	
9/1/2016					<0.025
10/20/2016			<0.025	<0.025	
10/24/2016					<0.025
12/7/2016					<0.025
12/8/2016			<0.025	<0.025	
1/24/2017			<0.025	<0.025	
1/26/2017					<0.025
3/21/2017			<0.025	0.0007 (J)	
3/23/2017					<0.025
5/23/2017			<0.025	<0.025	
5/24/2017					<0.025
4/3/2018			<0.025	<0.025	
4/4/2018					<0.025
3/12/2019			<0.025	<0.025	
3/14/2019					<0.025
4/2/2019			<0.025	<0.025	
4/5/2019					<0.025
9/24/2019			<0.025	<0.025	<0.025
3/2/2020			0.0005 (J)	<0.025	
3/3/2020					0.00042 (J)
3/25/2020				<0.025	
3/26/2020			<0.025		
3/30/2020					0.00066 (J)
9/15/2020			<0.025	<0.025	
9/16/2020	<0.025	0.0012 (J)			
9/18/2020					<0.025
11/10/2020	<0.025	0.00089 (J)			
12/15/2020	<0.025	0.00072 (J)			
1/19/2021	<0.025	0.0011 (J)			
2/9/2021	0.00095 (J)	0.00066 (J)	<0.025	<0.025	
2/11/2021					<0.025
3/10/2021		<0.025			
3/11/2021	<0.025		0.0011 (J)	<0.025	
3/17/2021					<0.025

# Time Series

Constituent: Chromium (mg/L) Analysis Run 5/4/2021 8:20 PM  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWC-15	HGWC-16	HGWC-17	HGWC-18	MW-21D
5/23/2016	<0.025	<0.025	<0.025		
5/24/2016				<0.025	
7/12/2016	<0.025	<0.025	<0.025	<0.025	
9/1/2016	<0.025	<0.025	<0.025	<0.025	
10/24/2016	<0.025				
10/25/2016		<0.025	<0.025	<0.025	
12/7/2016	<0.025	<0.025	<0.025		
12/8/2016				<0.025	
1/26/2017	<0.025	<0.025	<0.025	<0.025	
3/22/2017		0.0021 (J)	<0.025		
3/23/2017	0.0005 (J)			0.0005 (J)	
5/24/2017	<0.025	<0.025			
5/25/2017			<0.025	<0.025	
4/3/2018	<0.025	<0.025	<0.025	<0.025	
3/14/2019	<0.025			<0.025	
3/15/2019		<0.025	<0.025		<0.025
4/4/2019	<0.025	<0.025			<0.025
4/5/2019			<0.025	<0.025	
9/24/2019	0.00041 (J)				
9/25/2019		<0.025	<0.025	<0.025	<0.025
3/3/2020	<0.025	0.00071 (J)	0.0018 (J)	0.0004 (J)	<0.025
3/26/2020	<0.025				
3/30/2020		0.0004 (J)			
3/31/2020			<0.025	<0.025	
4/1/2020					<0.025
6/17/2020					0.00057 (J)
9/15/2020				0.00063 (J)	
9/16/2020			<0.025		
9/17/2020	<0.025	<0.025			
9/21/2020					<0.025
2/10/2021		<0.025			
2/11/2021			0.00074 (J)	<0.025	<0.025
2/12/2021	<0.025				
3/16/2021	0.0012 (J)				
3/17/2021		<0.025			
3/18/2021			0.00069 (J)	<0.025	0.00074 (J)

# Time Series

Constituent: Chromium (mg/L) Analysis Run 5/4/2021 8:20 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

	MW-22	MW-23D	MW-33	MW-35	MW-37D
3/14/2019		<0.025			
3/15/2019	<0.025				
4/5/2019	<0.025	<0.025			
9/26/2019		<0.025			
9/27/2019	0.0004 (J)				
3/2/2020	<0.025	<0.025			
3/27/2020	<0.025				
4/1/2020		0.00086 (J)	0.00069 (J)		
6/17/2020			<0.025		
6/18/2020				<0.025	0.0048 (J)
9/17/2020	<0.025	<0.025			
9/21/2020			<0.025	0.00079 (J)	
9/23/2020					<0.025
2/11/2021					0.0014 (J)
2/12/2021		<0.025	<0.025		
2/15/2021	<0.025			<0.025	
3/12/2021					<0.025
3/17/2021	0.00075 (J)	0.00083 (J)			
3/18/2021			<0.025		
3/19/2021				0.00083 (J)	

# Time Series

Constituent: Cobalt (mg/L) Analysis Run 5/4/2021 8:20 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-4 (bg)	HGWA-42D (bg)
5/19/2016	<0.005	0.0293	<0.005	<0.005	
7/11/2016	0.0004 (J)	0.0267		<0.005	
7/12/2016			<0.005		
8/30/2016	<0.005	0.028	<0.005	<0.005	
10/19/2016	<0.005	0.0201	<0.005	<0.005	
12/6/2016	<0.005	0.0184	<0.005	<0.005	
1/24/2017	<0.005	0.0206	<0.005	<0.005	
3/21/2017	<0.005	0.0251	<0.005	<0.005	
5/22/2017	<0.005	0.0263	<0.005		
5/23/2017				<0.005	
4/2/2018	<0.005	0.019		<0.005	
4/3/2018			<0.005		
6/4/2018	<0.005	0.025	<0.005	<0.005	
10/1/2018	<0.005	0.026	<0.005	<0.005	
3/11/2019				<0.005	
3/12/2019	<0.005	0.017	<0.005		
4/1/2019			<0.005		
4/2/2019	<0.005	0.019		<0.005	
9/23/2019	<0.005	0.038	<0.005		
9/24/2019				<0.005	
3/2/2020	<0.005	0.019	<0.005	0.00063 (J)	
3/25/2020	<0.005	0.02	<0.005		
3/26/2020				0.00058 (J)	
9/15/2020	<0.005	0.021	<0.005	<0.005	
9/17/2020					<0.005
11/11/2020					<0.005
12/15/2020					0.00049 (J)
1/20/2021					<0.005
2/8/2021	<0.005			0.00074 (J)	<0.005
2/9/2021		0.02	<0.005		
3/10/2021	<0.005			0.00065 (J)	<0.005
3/11/2021		0.013	<0.005		

# Time Series

Constituent: Cobalt (mg/L) Analysis Run 5/4/2021 8:20 PM  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-5 (bg)	HGWA-6 (bg)	HGWC-14
5/19/2016			<0.005		
5/20/2016				<0.005	
5/23/2016					<0.005
7/11/2016			0.001 (J)	<0.005	
7/12/2016					0.0232
8/30/2016			0.001 (J)	<0.005	
9/1/2016					0.0248
10/20/2016			0.0008 (J)	<0.005	
10/24/2016					0.0253
12/7/2016					0.0269
12/8/2016			0.0006 (J)	<0.005	
1/24/2017			0.0006 (J)	<0.005	
1/26/2017					0.0294
3/21/2017			0.0008 (J)	<0.005	
3/23/2017					0.0311
5/23/2017			0.0006 (J)	<0.005	
5/24/2017					0.0279
4/3/2018			<0.005	<0.005	
4/4/2018					0.025
6/5/2018			<0.005	<0.005	
6/6/2018					0.027
10/2/2018			<0.005	<0.005	
10/3/2018					0.023
3/12/2019			0.00099 (J)	<0.005	
3/14/2019					0.025
4/2/2019			0.0012 (J)	<0.005	
4/5/2019					0.021
9/24/2019			0.00063 (J)	<0.005	0.026
3/2/2020			0.00093 (J)	<0.005	
3/3/2020					0.029
3/25/2020				<0.005	
3/26/2020			0.0013 (J)		
3/30/2020					0.028
9/15/2020			0.00047 (J)	<0.005	
9/16/2020	<0.005	<0.005			
9/18/2020					0.027
11/10/2020	<0.005	<0.005			
12/15/2020	<0.005	<0.005			
1/19/2021	<0.005	<0.005			
2/9/2021	<0.005	<0.005	0.00071 (J)	<0.005	
2/11/2021					0.033
3/10/2021		<0.005			
3/11/2021	<0.005		0.0013 (J)	<0.005	
3/17/2021					0.034

# Time Series

Constituent: Cobalt (mg/L) Analysis Run 5/4/2021 8:20 PM  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWC-15	HGWC-16	HGWC-17	HGWC-18	MW-21D
5/23/2016	0.0419 (J)	<0.005	0.0167		
5/24/2016				0.17 (J)	
7/12/2016	0.0393	<0.005	0.0148	0.168	
9/1/2016	0.045	<0.005	0.0151	0.18	
10/24/2016	0.0557				
10/25/2016		<0.005	0.0141	0.188	
12/7/2016	0.0536	<0.005	0.0141		
12/8/2016				0.206	
1/26/2017	0.055	<0.005	0.0154	0.195	
3/22/2017		<0.005	0.0169		
3/23/2017	0.0715			0.223	
5/24/2017	0.0446	<0.005			
5/25/2017			0.0154	0.209	
4/3/2018	0.032	<0.005	0.016	0.19	
6/5/2018				0.19	
6/6/2018	0.032	<0.005	0.018		
10/3/2018	0.051	<0.005	0.016	0.19	
3/14/2019	0.038			0.16	
3/15/2019		<0.005	0.017		<0.005
4/4/2019	0.035	0.00028 (J)			0.00034 (J)
4/5/2019			0.016	0.14	
9/24/2019	0.022				
9/25/2019		<0.005	0.015	0.18	<0.005
3/3/2020	0.03	0.00037 (J)	0.016	0.15	<0.005
3/26/2020	0.022				
3/30/2020		<0.005			
3/31/2020			0.016	0.16	
4/1/2020					<0.005
6/17/2020					<0.005
9/15/2020				0.16	
9/16/2020			0.013		
9/17/2020	0.026	<0.005			
9/21/2020					<0.005
2/10/2021		<0.005			
2/11/2021			0.012	0.14	<0.005
2/12/2021	0.019				
3/16/2021	0.018				
3/17/2021		<0.005			
3/18/2021			0.012	0.14	<0.005

# Time Series

Constituent: Cobalt (mg/L) Analysis Run 5/4/2021 8:20 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

	MW-22	MW-23D	MW-33	MW-35	MW-37D
3/14/2019		0.0013 (J)			
3/15/2019	0.028				
4/5/2019	0.022	0.0012 (J)			
9/26/2019		0.00098 (J)			
9/27/2019	0.035				
1/22/2020			0.052		
3/2/2020	0.043	0.0011 (J)			
3/27/2020	0.025				
4/1/2020		0.0011 (J)	0.058		
6/17/2020			0.053		
6/18/2020				0.091	0.0015 (J)
9/17/2020	0.029	0.00096 (J)			
9/21/2020			0.047	0.084	
9/23/2020					<0.005
2/11/2021					0.00048 (J)
2/12/2021		0.001 (J)	0.055		
2/15/2021	0.038			0.095	
3/12/2021					<0.005
3/17/2021	0.039	0.0011 (J)			
3/18/2021			0.057		
3/19/2021				0.1	

# Time Series

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 5/4/2021 8:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-4 (bg)	HGWA-42D (bg)
5/19/2016	0.397 (U)	0.627 (U)	0.342 (U)	0.662 (U)	
7/11/2016	0.738 (U)	1.38		1.19	
7/12/2016			0.499 (U)		
8/30/2016	0.581 (U)	1.05 (U)	0.976 (U)	0.847 (U)	
10/19/2016	0.213 (U)	1.11 (U)	0.626 (U)	2.34	
12/6/2016	0.444 (U)	0.741 (U)	0.805 (U)	0.925 (U)	
1/24/2017	0.373 (U)	0.908 (U)	0.336 (U)	0.607 (U)	
3/21/2017	0.816 (U)	0.567 (U)	0.358 (U)	0.074 (U)	
5/22/2017	0.554 (U)	0.638 (U)	0.744 (U)		
5/23/2017				0.55 (U)	
4/2/2018	0.405 (U)	0.761 (U)		0.371 (U)	
4/3/2018			0.684 (U)		
6/4/2018	1.13 (U)	0.975 (U)	0.0291 (U)	0.622 (U)	
10/1/2018	0.132 (U)	0.434 (U)	0.781 (U)	0.132 (U)	
3/11/2019				0.781 (U)	
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)		0.494 (U)	
9/24/2019				0.455 (U)	
9/30/2019	0.306 (U)	1.04 (U)	0.384 (U)		
3/2/2020	0.61 (U)	1.58	0.249 (U)	0.937 (U)	
3/25/2020	4.36	0.621 (U)	0.833 (U)		
3/26/2020				0.578 (U)	
9/15/2020	0.748 (U)	0.124 (U)	0.161 (U)	0.179 (U)	
9/17/2020					0.665 (U)
11/11/2020					1.28
12/15/2020					0.261 (U)
1/20/2021					0.845 (U)
2/8/2021	0.223 (U)			0.558 (U)	0.429 (U)
2/9/2021		0.721 (U)	0.447 (U)		
3/10/2021	0 (U)			0.281 (U)	1.21
3/11/2021		0.737 (U)	0.128 (U)		



# Time Series

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 5/4/2021 8:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-5 (bg)	HGWA-6 (bg)	HGWC-14
5/19/2016			0.685 (U)		
5/20/2016				0.843 (U)	
5/23/2016					0.568 (U)
7/11/2016			1.68	0.494 (U)	
7/12/2016					1.31
8/30/2016			2.42	0.946 (U)	
9/1/2016					1.64
10/20/2016			0.351 (U)	0.664 (U)	
10/24/2016					1.88
12/7/2016					1.35
12/8/2016			0.905 (U)	0.421 (U)	
1/24/2017			0.0774 (U)	0.965 (U)	
1/26/2017					2.1
3/21/2017			0.0599 (U)	0.139 (U)	
3/23/2017					1.17
5/23/2017			0.477 (U)	0.308 (U)	
5/24/2017					1 (U)
4/3/2018			0.858 (U)	0.828 (U)	
4/4/2018					1.72
6/5/2018			0.767 (U)	0.424 (U)	
6/6/2018					1.31 (U)
10/2/2018			0.489 (U)	0.643 (U)	
10/3/2018					1.48
3/12/2019			0.833 (U)	0.982 (U)	
3/14/2019					1.5
4/2/2019			1.07 (U)	0.621 (U)	
4/5/2019					1.43 (U)
9/24/2019			0.201 (U)	0.874 (U)	1.17
3/2/2020			0.547 (U)	0.676 (U)	
3/3/2020					1.84
3/25/2020				0.509 (U)	
3/26/2020			0.907 (U)		
3/30/2020					1.08 (U)
9/15/2020			0.601 (U)	1.36 (U)	
9/16/2020	0.531 (U)	0.422 (U)			
9/18/2020					1.8 (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)			
2/9/2021	0.138 (U)	0.486 (U)	0.37 (U)	0.324 (U)	
2/11/2021					0.73 (U)
3/10/2021		0.811 (U)			
3/11/2021	1.51 (U)		1.07 (U)	0.601 (U)	
3/17/2021					1.84

# Time Series

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 5/4/2021 8:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWC-15	HGWC-16	HGWC-17	HGWC-18	MW-21D
5/23/2016	0.171 (U)		0.618 (U)		
5/24/2016				1.82	
7/1/2016		0 (U)			
7/12/2016	0.611 (U)	0.182 (U)	0.867	1.76	
9/1/2016	0.766 (U)	1.23	0.857 (U)	1.51	
10/24/2016	0.969				
10/25/2016		1.05 (U)	1.11 (U)	2.69	
12/7/2016	0.302 (U)	1.11 (U)	0.964 (U)		
12/8/2016				2.21	
1/26/2017	0.626 (U)	1.29 (U)	0.612 (U)	2.26	
3/22/2017		0.453 (U)	0.437 (U)		
3/23/2017	0.662 (U)			1.81	
5/24/2017	0.202 (U)	1.05 (U)			
5/25/2017			1.21 (U)	1.63	
4/3/2018	0.384 (U)	0.783 (U)	0.409 (U)	2.53	
6/5/2018				1.91	
6/6/2018	1.32 (U)	0.595 (U)	0.772 (U)		
10/3/2018	0.858 (U)	1.03 (U)	1.08 (U)	2.22	
3/14/2019	0.462 (U)			1.37 (U)	
3/15/2019		0.591 (U)	0.917 (U)		0.972 (U)
4/4/2019	0.512 (U)	0.96 (U)			0.791 (U)
4/5/2019			1.07 (U)	2.22	
9/24/2019	0.582 (U)				
9/25/2019		0.643 (U)	1.54	2.77	0.751 (U)
3/3/2020	1.43	1.32 (U)	1.33	2.35	1.94
3/26/2020	0.855 (U)				
3/30/2020		0.288 (U)			
3/31/2020			0.591 (U)	2.7	
4/1/2020					0.758 (U)
6/17/2020					0.691 (U)
9/15/2020				1.65	
9/16/2020			0.295 (U)		
9/17/2020	0.395 (U)	1.1 (U)			
9/21/2020					0.436 (U)
2/10/2021		0.773 (U)			
2/11/2021			0.831 (U)	1.11	0.317 (U)
2/12/2021	1.65				
3/16/2021	0.801 (U)				
3/17/2021		0.228 (U)			
3/18/2021			0.856 (U)	1.63	0.5 (U)

# Time Series

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 5/4/2021 8:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

	MW-22	MW-23D	MW-33	MW-35	MW-37D
3/14/2019		0.872 (U)			
3/15/2019	0.977				
4/5/2019	1.06 (U)	0.932 (U)			
9/26/2019		1.25			
9/27/2019	1.44 (U)				
3/2/2020	0.872 (U)	0.964 (U)			
3/27/2020	0.96 (U)				
4/1/2020		0.914 (U)	2.57		
6/17/2020			1.43 (U)		
6/18/2020				2.02	1.79
9/17/2020	0.0879 (U)	0.32 (U)			
9/21/2020			2.53	3.85	
9/23/2020					0.98 (U)
2/11/2021					0.12 (U)
2/12/2021		1.21 (U)	2.26		
2/15/2021	0.215 (U)			1.52	
3/12/2021					0.578 (U)
3/17/2021	0.981 (U)	0.579 (U)			
3/18/2021			0.733 (U)		
3/19/2021				0.524 (U)	

# Time Series

Constituent: Field pH (s.u.) Analysis Run 5/4/2021 8:20 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-4 (bg)	HGWA-42D (bg)
5/19/2016	7.27	5.81	7.45	6.51	
7/11/2016	7.06	5.68		6.65	
7/12/2016			7.32		
8/30/2016	7.28	5.63	7.43	7.14	
10/19/2016	7.02	5.46	7.03	7.08	
12/6/2016	7.09	5.38	7.08	7	
1/24/2017	7.2	5.37	7.39	6.16	
3/21/2017	7.01	4.9	6.83	6.07	
5/22/2017	7.11	5.2	7.02		
5/23/2017				6.28	
10/3/2017	7.21	5.3	7.47	6.45	
4/2/2018	7.1	5.4		6.23	
4/3/2018			7.38		
6/4/2018	7.06	5.27	7.38	6.82	
10/1/2018	7.09	5.31	7.13	5.73	
3/11/2019				6.27	
3/12/2019	7.03	5.42	7.29		
4/1/2019			7.16		
4/2/2019	6.86	5.41		6.66	
9/23/2019	7.02	5.33	7.3		
9/24/2019				6.16	
3/2/2020	7.1	5.43	7.12	5.63	
3/25/2020	6.95	5.36	7.4		
3/26/2020				5.77	
9/15/2020	7.15	5.22	7.29	5.75	
9/17/2020					7.62
11/11/2020					7.68
12/15/2020					7.64
1/20/2021					7.68
2/8/2021	7.11			4.94	7.64
2/9/2021		5.42	7.23		
3/10/2021	6.95			5.28	7.7
3/11/2021		5.8	7.33		

# Time Series

Constituent: Field pH (s.u.) Analysis Run 5/4/2021 8:20 PM  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-5 (bg)	HGWA-6 (bg)	HGWC-14
5/19/2016			6.62		
5/20/2016				7.58	
5/23/2016					4.56
7/11/2016			6.54	7.32	
7/12/2016					4.49
8/30/2016			6.38	7.69	
9/1/2016					4.54
10/20/2016			6.52	7.43	
10/24/2016					4.63
12/7/2016					4.6
12/8/2016			6.5	7.56	
1/24/2017			6.59	7.52	
1/26/2017					4.8
3/21/2017			6.55	7.4	
3/23/2017					4.57
5/23/2017			6.5	7.53	
5/24/2017					4.61
10/3/2017			6.63	7.51	
10/4/2017					4.74
4/3/2018			6.59	7.53	
4/4/2018					4.5
6/5/2018			6.44	7.37	
6/6/2018					4.49
10/2/2018			6.35	7.36	
10/3/2018					4.67
3/12/2019			6.42	7.5	
3/14/2019					4.66
4/2/2019			6.38	7.46	
4/5/2019					4.67
9/24/2019			6.4	7.41	4.77
3/2/2020			6.8	7.67	
3/3/2020					4.77
3/25/2020				7.39	
3/26/2020			6.38		
3/30/2020					4.57
9/15/2020			6.33	7.37	
9/16/2020	7.52	7.83			
9/18/2020					4.88
11/10/2020	7.27	7.84			
12/15/2020	7.39	7.87			
1/19/2021	7.39	7.86			
2/9/2021	7.44	7.84	6.35	7.4	
2/11/2021					4.84
3/10/2021		7.92			
3/11/2021	7.46		6.48	7.56	
3/17/2021					4.72

# Time Series

Constituent: Field pH (s.u.) Analysis Run 5/4/2021 8:20 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWC-15	HGWC-16	HGWC-17	HGWC-18	MW-21D
5/23/2016	6.17	7.15	6.4		
5/24/2016				4.83	
7/12/2016	6.17	7.1	6.09	4.58	
9/1/2016	6.22	7.29	6.35	4.51	
10/24/2016	5.97				
10/25/2016		7.03	6.23	4.53	
12/7/2016	5.87	6.85	6.23		
12/8/2016				4.56	
1/26/2017	6.05	7.07	6.24	4.61	
3/22/2017		7.15	6.25		
3/23/2017	5.79			4.63	
5/24/2017	6.01	7.11			
5/25/2017			6.27	4.69	
10/4/2017	5.82	7.17	6.18	4.58	
4/3/2018	5.98	7.07	6.22	4.54	
6/5/2018				4.57	
6/6/2018	6.12	7	6.22		
10/3/2018	5.92	6.94	6.23	4.41	
3/14/2019	5.71			4.39	
3/15/2019		7.09	6.32		6.81
4/4/2019	5.66	6.95			6.7
4/5/2019			6.26	4.5	
9/24/2019	6.33				
9/25/2019		6.92	6.28	4.54	6.54
3/3/2020	6	7.1	6.35	4.55	6.72
3/26/2020	6.03				
3/30/2020		7.09			
3/31/2020			6.28	4.43	
4/1/2020					6.9
6/17/2020					6.47
9/15/2020				4.47	
9/16/2020			6.35		
9/17/2020	6.11	7.11			
9/21/2020					6.92
2/10/2021		7.08			
2/11/2021			6.31	4.53	6.87
2/12/2021	5.99				
3/16/2021	6.08				
3/17/2021		7.19			
3/18/2021			6.43	4.54	6.95

# Time Series

Constituent: Field pH (s.u.) Analysis Run 5/4/2021 8:20 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

	MW-22	MW-23D	MW-33	MW-35	MW-37D
3/14/2019		6.68			
3/15/2019	5.95				
4/5/2019	5.96	6.66			
9/26/2019		6.64			
9/27/2019	5.81				
3/2/2020	5.97	7.05			
3/27/2020	5.71				
4/1/2020		6.8	4.35		
6/17/2020			4.36	5.46	7.78
9/17/2020	5.66	6.71			
9/21/2020			4.48	5.4	
9/23/2020					7.62
2/11/2021					7.42
2/12/2021		6.8	4.4		
2/15/2021	5.48			4.82	
3/12/2021					7.5
3/17/2021	5.57	6.86			
3/18/2021			4.27		
3/19/2021				4.89	

# Time Series

Constituent: Fluoride (mg/L) Analysis Run 5/4/2021 8:20 PM  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-4 (bg)	HGWA-42D (bg)
5/19/2016	0.105 (J)	0.0303 (J)	0.0513 (J)	0.036 (J)	
7/11/2016	0.16 (J)	0.05 (J)		0.09 (J)	
7/12/2016			0.12 (J)		
8/30/2016	0.09 (J)	0.06 (J)	0.09 (J)	0.06 (J)	
10/19/2016	0.1 (J)	0.04 (J)	0.1 (J)	0.07 (J)	
12/6/2016	0.11 (J)	0.36	0.21 (J)	0.07 (J)	
1/24/2017	0.09 (J)	<0.1	0.06 (J)	<0.1	
3/21/2017	0.13 (J)	<0.1	0.005 (J)	<0.1	
5/22/2017	0.12 (J)	<0.1	0.05 (J)		
5/23/2017				0.01 (J)	
10/3/2017	0.13 (J)	<0.1	0.13 (J)	<0.1	
4/2/2018	<0.1	<0.1		<0.1	
4/3/2018			<0.1		
6/4/2018	0.074 (J)	<0.1	<0.1	0.097 (J)	
10/1/2018	<0.1	<0.1	<0.1	<0.1	
3/11/2019				0.035 (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)		<0.1	
9/23/2019	0.078 (J)	<0.1	<0.1		
9/24/2019				<0.1	
3/2/2020	0.076 (J)	<0.1	<0.1	<0.1	
3/25/2020	0.098 (J)	<0.1	<0.1		
3/26/2020				<0.1	
9/15/2020	0.082 (J)	<0.1	<0.1	<0.1	
9/17/2020					0.2
11/11/2020					0.1
12/15/2020					0.11
1/20/2021					0.082 (J)
2/8/2021	0.078 (J)			<0.1	0.096 (J)
2/9/2021		<0.1	0.074 (J)		
3/10/2021	0.079 (J)			<0.1	0.11
3/11/2021		0.1	<0.1		



# Time Series

Constituent: Fluoride (mg/L) Analysis Run 5/4/2021 8:20 PM  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-5 (bg)	HGWA-6 (bg)	HGWC-14
5/19/2016			0.08 (J)		
5/20/2016				0.065 (J)	
5/23/2016					<0.1
7/11/2016			0.09 (J)	0.13 (J)	
7/12/2016					0.2 (J)
8/30/2016			0.08 (J)	0.07 (J)	
9/1/2016					0.08 (J)
10/20/2016			0.1 (J)	0.06 (J)	
10/24/2016					0.04 (J)
12/7/2016					0.11 (J)
12/8/2016			0.08 (J)	0.06 (J)	
1/24/2017			0.09 (J)	0.02 (J)	
1/26/2017					0.13 (J)
3/21/2017			0.04 (J)	0.08 (J)	
3/23/2017					0.28 (J)
5/23/2017			0.04 (J)	0.006 (J)	
5/24/2017					0.32
10/3/2017			0.06 (J)	<0.1	
10/4/2017					0.52
4/3/2018			<0.1	<0.1	
4/4/2018					<0.1
6/5/2018			0.083 (J)	0.055 (J)	
6/6/2018					0.25 (J)
10/2/2018			<0.1	0.076 (J)	
10/3/2018					0.21 (J)
3/12/2019			0.079 (J)	0.061 (J)	
3/14/2019					0.24 (J)
4/2/2019			0.12 (J)	<0.1	
4/5/2019					0.66
9/24/2019			0.058 (J)	<0.1	0.053 (J)
3/2/2020			0.053 (J)	<0.1	
3/3/2020					<0.1
3/25/2020				<0.1	
3/26/2020			0.066 (J)		
3/30/2020					0.092 (J)
9/15/2020			0.061 (J)	<0.1	
9/16/2020	0.22	0.52			
9/18/2020					<0.1
11/10/2020	0.19	0.59			
12/15/2020	0.21	0.67			
1/19/2021	0.16	0.74			
2/9/2021	0.19	0.44	0.053 (J)	<0.1	
2/11/2021					0.059 (J)
3/10/2021		0.65			
3/11/2021	0.2		0.06 (J)	0.17	
3/17/2021					0.076 (J)

# Time Series

Constituent: Fluoride (mg/L) Analysis Run 5/4/2021 8:20 PM  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWC-15	HGWC-16	HGWC-17	HGWC-18	MW-21D
5/23/2016	<0.1	0.038 (J)	<0.1		
5/24/2016				<0.1	
7/12/2016	0.09 (J)	0.26 (J)	0.09 (J)	0.54	
9/1/2016	0.22 (J)	0.42	0.03 (J)	0.49	
10/24/2016	0.07 (J)				
10/25/2016		0.25 (J)	0.07 (J)	0.58	
12/7/2016	0.23 (J)	0.23 (J)	0.54		
12/8/2016				0.63	
1/26/2017	<0.1	0.02 (J)	<0.1	0.71	
3/22/2017		0.3	0.07 (J)		
3/23/2017	0.12 (J)			0.57	
5/24/2017	0.31	0.46			
5/25/2017			0.42	0.54	
10/4/2017	0.6	<0.1	0.93	0.95	
4/3/2018	<0.1	<0.1	<0.1	0.33	
6/5/2018				0.66	
6/6/2018	0.17 (J)	<0.1	0.23 (J)		
10/3/2018	<0.1	<0.1	<0.1	0.32	
3/14/2019	<0.1			0.88	
3/15/2019		<0.1	<0.1		<0.1
4/4/2019	0.066 (J)	<0.1			0.1 (J)
4/5/2019			0.16 (J)	0.37	
9/24/2019	0.12 (J)				
9/25/2019		<0.1	0.081 (J)	0.73	<0.1
3/3/2020	0.064 (J)	<0.1	<0.1	0.34	<0.1
3/26/2020	<0.1				
3/30/2020		0.059 (J)			
3/31/2020			<0.1	0.45	
4/1/2020					<0.1
6/17/2020					<0.1
9/15/2020				0.31	
9/16/2020			0.058 (J)		
9/17/2020	<0.1	<0.1			
9/21/2020					<0.1
2/10/2021		0.21			
2/11/2021			0.058 (J)	0.71	<0.1
2/12/2021	0.053 (J)				
3/16/2021	<0.1				
3/17/2021		<0.1			
3/18/2021			0.057 (J)	0.64	<0.1

# Time Series

Constituent: Fluoride (mg/L) Analysis Run 5/4/2021 8:20 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

	MW-22	MW-23D	MW-33	MW-35	MW-37D
3/14/2019		<0.1			
3/15/2019	<0.1				
4/5/2019	0.13 (J)	0.14 (J)			
9/26/2019		0.16 (J)			
9/27/2019	0.28 (J)				
1/22/2020			0.18 (J)		
3/2/2020	<0.1	<0.1			
3/27/2020	<0.1				
4/1/2020		<0.1	0.15 (J)		
6/17/2020			0.25		
6/18/2020				0.053 (J)	0.1
9/17/2020	<0.1	<0.1			
9/21/2020			0.14	<0.1	
9/23/2020					0.065 (J)
2/11/2021					0.077 (J)
2/12/2021		<0.1	0.25		
2/15/2021	<0.1			0.093 (J)	
3/12/2021					0.061 (J)
3/17/2021	<0.1	<0.1			
3/18/2021			0.4		
3/19/2021				0.082 (J)	

# Time Series

Constituent: Lead (mg/L) Analysis Run 5/4/2021 8:20 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-4 (bg)	HGWA-42D (bg)
5/19/2016	<0.001	<0.001	<0.001	<0.001	
7/11/2016	<0.001	<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	<0.001	
12/6/2016	<0.001	<0.001	<0.001	0.0002 (J)	
1/24/2017	<0.001	<0.001	<0.001	<0.001	
3/21/2017	<0.001	6E-05 (J)	0.0001 (J)	<0.001	
5/22/2017	<0.001	9E-05 (J)	<0.001		
5/23/2017				<0.001	
4/2/2018	<0.001	<0.001		<0.001	
4/3/2018			<0.001		
3/11/2019				<0.001	
3/12/2019	<0.001	<0.001	<0.001		
4/1/2019			<0.001		
4/2/2019	<0.001	<0.001		<0.001	
9/23/2019	7.8E-05 (J)	9.2E-05 (J)	<0.001		
9/24/2019				<0.001	
3/2/2020	4.8E-05 (J)	9.5E-05 (J)	<0.001	0.00026 (J)	
3/25/2020	<0.001	0.00011 (J)	<0.001		
3/26/2020				5.9E-05 (J)	
9/15/2020	<0.001	8E-05 (J)	4.2E-05 (J)	4.9E-05 (J)	
9/17/2020					6.2E-05 (J)
11/11/2020					8.4E-05 (J)
12/15/2020					0.00045 (J)
1/20/2021					<0.001
2/8/2021	5.8E-05 (J)			0.00024 (J)	8.1E-05 (J)
2/9/2021		9.4E-05 (J)	<0.001		
3/10/2021	<0.001			0.00016 (J)	<0.001
3/11/2021		7.6E-05 (J)	<0.001		

# Time Series

Constituent: Lead (mg/L) Analysis Run 5/4/2021 8:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-5 (bg)	HGWA-6 (bg)	HGWC-14
5/19/2016			<0.001		
5/20/2016				<0.001	
5/23/2016					0.00182 (J)
7/11/2016			<0.001	<0.001	
7/12/2016					0.0015 (J)
8/30/2016			<0.001	<0.001	
9/1/2016					0.0016 (J)
10/20/2016			0.0002 (J)	<0.001	
10/24/2016					0.0016 (J)
12/7/2016					0.0018 (J)
12/8/2016			<0.001	<0.001	
1/24/2017			<0.001	<0.001	
1/26/2017					0.002 (J)
3/21/2017			<0.001	<0.001	
3/23/2017					0.0019 (J)
5/23/2017			9E-05 (J)	0.0003 (J)	
5/24/2017					0.0016 (J)
4/3/2018			<0.001	<0.001	
4/4/2018					<0.001
3/12/2019			<0.001	<0.001	
3/14/2019					0.0014 (J)
4/2/2019			<0.001	<0.001	
4/5/2019					0.0012 (J)
9/24/2019			<0.001	7.1E-05 (J)	0.0013 (J)
3/2/2020			<0.001	<0.001	
3/3/2020					0.0017 (J)
3/25/2020				<0.001	
3/26/2020			<0.001		
3/30/2020					0.0015 (J)
9/15/2020			<0.001	<0.001	
9/16/2020	5E-05 (J)	0.00021 (J)			
9/18/2020					0.0012 (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)	0.00019 (J)			
2/9/2021	0.00029 (J)	0.0001 (J)	<0.001	<0.001	
2/11/2021					0.0015 (J)
3/10/2021		<0.001			
3/11/2021	9.4E-05 (J)		<0.001	<0.001	
3/17/2021					0.0019

# Time Series

Constituent: Lead (mg/L) Analysis Run 5/4/2021 8:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWC-15	HGWC-16	HGWC-17	HGWC-18	MW-21D
5/23/2016	<0.001	<0.001	<0.001		
5/24/2016				0.00154 (J)	
7/12/2016	<0.001	<0.001	<0.001	0.0012 (J)	
9/1/2016	<0.001	<0.001	<0.001	0.0014 (J)	
10/24/2016	<0.001				
10/25/2016		<0.001	<0.001	0.0015 (J)	
12/7/2016	<0.001	<0.001	<0.001		
12/8/2016				0.0017 (J)	
1/26/2017	<0.001	0.0001 (J)	<0.001	0.0013 (J)	
3/22/2017		0.0002 (J)	0.0001 (J)		
3/23/2017	0.001 (J)			0.001 (J)	
5/24/2017	0.0001 (J)	0.0001 (J)			
5/25/2017			<0.001	0.0012 (J)	
4/3/2018	<0.001	<0.001	<0.001	<0.001	
3/14/2019	<0.001			0.0015 (J)	
3/15/2019		<0.001	<0.001		<0.001
4/4/2019	7.2E-05 (J)	0.00016 (J)			<0.001
4/5/2019			7.6E-05 (J)	0.0015 (J)	
9/24/2019	0.0002 (J)				
9/25/2019		<0.001	8.9E-05 (J)	0.0015 (J)	<0.001
3/3/2020	5.3E-05 (J)	0.00016 (J)	0.00013 (J)	0.0013 (J)	4.7E-05 (J)
3/26/2020	<0.001				
3/30/2020		7.3E-05 (J)			
3/31/2020			7.7E-05 (J)	0.0014 (J)	
4/1/2020					4.8E-05 (J)
6/17/2020					<0.001
9/15/2020				0.0014 (J)	
9/16/2020			6.5E-05 (J)		
9/17/2020	<0.001	7.8E-05 (J)			
9/21/2020					<0.001
2/10/2021		9.4E-05 (J)			
2/11/2021			0.00018 (J)	0.00098 (J)	0.00066 (J)
2/12/2021	<0.001				
3/16/2021	<0.001				
3/17/2021		5.8E-05 (J)			
3/18/2021			8.8E-05 (J)	0.00096 (J)	7.3E-05 (J)

# Time Series

Constituent: Lead (mg/L) Analysis Run 5/4/2021 8:20 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

	MW-22	MW-23D	MW-33	MW-35	MW-37D
3/14/2019		<0.001			
3/15/2019	<0.001				
4/5/2019	<0.001	<0.001			
9/26/2019		<0.001			
9/27/2019	0.0001 (J)				
3/2/2020	9.4E-05 (J)	5.1E-05 (J)			
3/27/2020	<0.001				
4/1/2020		<0.001	0.0017 (J)		
6/17/2020			0.0017 (J)		
6/18/2020				0.00016 (J)	0.0017 (J)
9/17/2020	<0.001	0.00016 (J)			
9/21/2020			0.0017 (J)	0.00099 (J)	
9/23/2020					8.2E-05 (J)
2/11/2021					0.00039 (J)
2/12/2021		<0.001	0.0018 (J)		
2/15/2021	3.6E-05 (J)			0.00055 (J)	
3/12/2021					<0.001
3/17/2021	<0.001	<0.001			
3/18/2021			0.0017		
3/19/2021				0.00066 (J)	

# Time Series

Constituent: Lithium (mg/L) Analysis Run 5/4/2021 8:20 PM  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-4 (bg)	HGWA-42D (bg)
5/19/2016	<0.03	<0.03	<0.03	<0.03	
7/11/2016	<0.03	0.0014 (J)		0.0015 (J)	
7/12/2016			0.0024 (J)		
8/30/2016	<0.03	<0.03	0.0025 (J)	0.0027 (J)	
10/19/2016	<0.03	<0.03	0.003 (J)	0.0042 (J)	
12/6/2016	<0.03	<0.03	0.0033 (J)	0.0046 (J)	
1/24/2017	<0.03	<0.03	0.003 (J)	<0.03	
3/21/2017	<0.03	0.0012 (J)	0.0034 (J)	<0.03	
5/22/2017	<0.03	<0.03	0.003 (J)		
5/23/2017				<0.03	
4/2/2018	<0.03	0.0015 (J)		<0.03	
4/3/2018			0.003 (J)		
6/4/2018	0.001 (J)	0.0016 (J)	0.0027 (J)	0.00097 (J)	
10/1/2018	0.00099 (J)	0.0013 (J)	0.0032 (J)	<0.03	
3/11/2019				<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)		0.00098 (J)	
9/23/2019	0.0011 (J)	0.0016 (J)	0.0029 (J)		
9/24/2019				<0.03	
3/2/2020	0.0012 (J)	0.0017 (J)	0.0037 (J)	0.0012 (J)	
3/25/2020	0.00083 (J)	0.0017 (J)	0.0035 (J)		
3/26/2020				0.00095 (J)	
9/15/2020	0.00087 (J)	0.0015 (J)	0.0026 (J)	<0.03	
9/17/2020					0.0039 (J)
11/11/2020					0.0086 (J)
12/15/2020					0.008 (J)
1/20/2021					0.01 (J)
2/8/2021	0.00086 (J)			0.0013 (J)	0.0098 (J)
2/9/2021		0.0012 (J)	0.0032 (J)		
3/10/2021	0.0009 (J)			0.0011 (J)	0.0094 (J)
3/11/2021		0.0011 (J)	0.0035 (J)		



# Time Series

Constituent: Lithium (mg/L) Analysis Run 5/4/2021 8:20 PM  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-5 (bg)	HGWA-6 (bg)	HGWC-14
5/19/2016			<0.03		
5/20/2016				<0.03	
5/23/2016					<0.03
7/11/2016			0.0034 (J)	0.01 (J)	
7/12/2016					<0.03
8/30/2016			0.003 (J)	0.0095 (J)	
9/1/2016					<0.03
10/20/2016			0.0031 (J)	0.0105 (J)	
10/24/2016					<0.03
12/7/2016					<0.03
12/8/2016			0.0027 (J)	0.01 (J)	
1/24/2017			0.0028 (J)	0.0108 (J)	
1/26/2017					<0.03
3/21/2017			0.0037 (J)	0.0115 (J)	
3/23/2017					<0.03
5/23/2017			0.0033 (J)	0.011 (J)	
5/24/2017					<0.03
4/3/2018			0.0033 (J)	0.012 (J)	
4/4/2018					<0.03
6/5/2018			0.0034 (J)	0.011 (J)	
6/6/2018					<0.03
10/2/2018			0.0035 (J)	0.01 (J)	
10/3/2018					<0.03
3/12/2019			0.0032 (J)	0.011 (J)	
3/14/2019					<0.03
4/2/2019			0.0028 (J)	0.0095 (J)	
4/5/2019					<0.03
9/24/2019			0.0035 (J)	0.011 (J)	<0.03
3/2/2020			0.0036 (J)	0.012	
3/3/2020					<0.03
3/25/2020				0.011 (J)	
3/26/2020			0.0029 (J)		
3/30/2020					<0.03
9/15/2020			0.003 (J)	0.0095 (J)	
9/16/2020	0.0018 (J)	0.014 (J)			
9/18/2020					<0.03
11/10/2020	0.0013 (J)	0.025 (J)			
12/15/2020	0.0019 (J)	0.028 (J)			
1/19/2021	0.0025 (J)	0.034			
2/9/2021	0.0026 (J)	0.026 (J)	0.003 (J)	0.01 (J)	
2/11/2021					<0.03
3/10/2021		0.03			
3/11/2021	0.0022 (J)		0.0037 (J)	0.012 (J)	
3/17/2021					<0.03

# Time Series

Constituent: Lithium (mg/L) Analysis Run 5/4/2021 8:20 PM  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWC-15	HGWC-16	HGWC-17	HGWC-18	MW-21D
5/23/2016	<0.03	<0.03	<0.03		
5/24/2016				0.0142 (J)	
7/12/2016	<0.03	0.0037 (J)	<0.03	0.0141 (J)	
9/1/2016	0.0021 (J)	0.0033 (J)	<0.03	0.0158 (J)	
10/24/2016	<0.03				
10/25/2016		0.0029 (J)	<0.03	0.016 (J)	
12/7/2016	<0.03	0.0029 (J)	<0.03		
12/8/2016				0.0144 (J)	
1/26/2017	<0.03	0.0028 (J)	<0.03	0.0136 (J)	
3/22/2017		0.0025 (J)	<0.03		
3/23/2017	0.0016 (J)			0.0151 (J)	
5/24/2017	0.0029 (J)	0.0029 (J)			
5/25/2017			0.0011 (J)	0.0154 (J)	
4/3/2018	0.0026 (J)	0.0028 (J)	<0.03	0.013 (J)	
6/5/2018				0.013 (J)	
6/6/2018	0.0013 (J)	0.0031 (J)	<0.03		
10/3/2018	0.0017 (J)	0.0026 (J)	<0.03	0.015 (J)	
3/14/2019	<0.03			0.011 (J)	
3/15/2019		0.0041 (J)	0.0011 (J)		0.025 (J)
4/4/2019	0.0009 (J)	0.0032 (J)			0.019 (J)
4/5/2019			0.00074 (J)	0.0084 (J)	
9/24/2019	0.0012 (J)				
9/25/2019		0.0038 (J)	0.0011 (J)	0.015 (J)	0.024 (J)
3/3/2020	0.0084 (J)	0.0047 (J)	0.0012 (J)	0.012 (J)	0.026 (J)
3/26/2020	0.0061 (J)				
3/30/2020		0.0041 (J)			
3/31/2020			0.0009 (J)	0.012 (J)	
4/1/2020					0.026 (J)
6/17/2020					0.023 (J)
9/15/2020				0.014 (J)	
9/16/2020			0.0012 (J)		
9/17/2020	0.0094 (J)	0.0043 (J)			
9/21/2020					0.022 (J)
2/10/2021		0.0038 (J)			
2/11/2021			0.0013 (J)	0.011 (J)	0.021 (J)
2/12/2021	0.036				
3/16/2021	0.032				
3/17/2021		0.0048 (J)			
3/18/2021			0.0014 (J)	0.013 (J)	0.026 (J)

# Time Series

Constituent: Lithium (mg/L) Analysis Run 5/4/2021 8:20 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

	MW-22	MW-23D	MW-33	MW-35	MW-37D
3/14/2019		0.0028 (J)			
3/15/2019	0.002 (J)				
4/5/2019	0.0013 (J)	0.0021 (J)			
9/26/2019		0.0023 (J)			
9/27/2019	0.0013 (J)				
3/2/2020	0.0015 (J)	0.0025 (J)			
3/27/2020	0.0013 (J)				
4/1/2020		0.0024 (J)	0.0011 (J)		
6/17/2020			0.00097 (J)		
6/18/2020				0.0046 (J)	0.038 (J)
9/17/2020	0.0011 (J)	0.0021 (J)			
9/21/2020			0.00086 (J)	0.0036 (J)	
9/23/2020					0.031
2/11/2021					0.034
2/12/2021		0.0023 (J)	0.0011 (J)		
2/15/2021	0.0011 (J)			0.0043 (J)	
3/12/2021					0.035
3/17/2021	0.0012 (J)	0.0024 (J)			
3/18/2021			0.0012 (J)		
3/19/2021				0.0045 (J)	

# Time Series

Constituent: Mercury (mg/L) Analysis Run 5/4/2021 8:20 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-4 (bg)	HGWA-42D (bg)
5/19/2016	<0.0005	<0.0005	<0.0005	<0.0005	
7/11/2016	<0.0005	<0.0005		<0.0005	
7/12/2016			<0.0005		
8/30/2016	4E-05 (J)	4E-05 (J)	<0.0005	5E-05 (J)	
10/19/2016	<0.0005	<0.0005	<0.0005	<0.0005	
12/6/2016	<0.0005	<0.0005	<0.0005	5E-05 (J)	
1/24/2017	<0.0005	<0.0005	<0.0005	0.0001 (J)	
3/21/2017	<0.0005	<0.0005	<0.0005	0.00016 (J)	
5/22/2017	<0.0005	<0.0005	<0.0005		
5/23/2017				5E-05 (J)	
4/2/2018	<0.0005	<0.0005		<0.0005	
4/3/2018			<0.0005		
3/11/2019				<0.0005	
3/12/2019	<0.0005	<0.0005	<0.0005		
3/2/2020	<0.0005	<0.0005	<0.0005	<0.0005	
9/17/2020					<0.0005
11/11/2020					<0.0005
12/15/2020					<0.0005
1/20/2021					<0.0005
2/8/2021	<0.0005			<0.0005	<0.0005
2/9/2021		<0.0005	<0.0005		

# Time Series

Constituent: Mercury (mg/L) Analysis Run 5/4/2021 8:20 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-5 (bg)	HGWA-6 (bg)	HGWC-14
5/19/2016			<0.0005		
5/20/2016				<0.0005	
5/23/2016					<0.0005
7/11/2016			<0.0005	<0.0005	
7/12/2016					<0.0005
8/30/2016			<0.0005	4.4E-05 (J)	
9/1/2016					<0.0005
10/20/2016			<0.0005	<0.0005	
10/24/2016					<0.0005
12/7/2016					<0.0005
12/8/2016			<0.0005	<0.0005	
1/24/2017			<0.0005	<0.0005	
1/26/2017					<0.0005
3/21/2017			<0.0005	<0.0005	
3/23/2017					<0.0005
5/23/2017			<0.0005	<0.0005	
5/24/2017					<0.0005
4/3/2018			<0.0005	<0.0005	
4/4/2018					<0.0005
3/12/2019			<0.0005	<0.0005	
3/14/2019					<0.0005
3/2/2020			<0.0005	<0.0005	
3/3/2020					<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			
2/9/2021	<0.0005	<0.0005	<0.0005	<0.0005	
2/11/2021					<0.0005

# Time Series

Constituent: Mercury (mg/L) Analysis Run 5/4/2021 8:20 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWC-15	HGWC-16	HGWC-17	HGWC-18	MW-21D
5/23/2016	<0.0005	<0.0005	<0.0005		
5/24/2016				<0.0005	
7/12/2016	<0.0005	<0.0005	<0.0005	<0.0005	
9/1/2016	<0.0005	<0.0005	<0.0005	6E-05 (J)	
10/24/2016	<0.0005				
10/25/2016		<0.0005	<0.0005	4E-05 (J)	
12/7/2016	<0.0005	<0.0005	<0.0005		
12/8/2016				<0.0005	
1/26/2017	<0.0005	<0.0005	<0.0005	8E-05 (J)	
3/22/2017		<0.0005	<0.0005		
3/23/2017	<0.0005			9E-05 (J)	
5/24/2017	<0.0005	<0.0005			
5/25/2017			<0.0005	8E-05 (J)	
4/3/2018	<0.0005	<0.0005	<0.0005	<0.0005	
3/14/2019	<0.0005			<0.0005	
3/15/2019		<0.0005	<0.0005		<0.0005
3/3/2020	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
2/10/2021		<0.0005			
2/11/2021			<0.0005	<0.0005	<0.0005
2/12/2021	<0.0005				

# Time Series

Constituent: Mercury (mg/L) Analysis Run 5/4/2021 8:20 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

	MW-22	MW-23D	MW-33	MW-35	MW-37D
3/14/2019		<0.0005			
3/15/2019	<0.0005				
3/2/2020	<0.0005	<0.0005			
2/11/2021					<0.0005
2/12/2021		<0.0005	<0.0005		
2/15/2021	<0.0005			<0.0005	

# Time Series

Constituent: Molybdenum (mg/L) Analysis Run 5/4/2021 8:20 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-4 (bg)	HGWA-42D (bg)
5/19/2016	<0.01	<0.01	<0.01	<0.01	
7/11/2016	<0.01	<0.01		<0.01	
7/12/2016			<0.01		
8/30/2016	<0.01	<0.01	<0.01	<0.01	
10/19/2016	<0.01	<0.01	<0.01	<0.01	
12/6/2016	<0.01	<0.01	<0.01	<0.01	
1/24/2017	<0.01	<0.01	<0.01	<0.01	
3/21/2017	<0.01	<0.01	<0.01	<0.01	
5/22/2017	<0.01	<0.01	<0.01		
5/23/2017				<0.01	
4/2/2018	<0.01	<0.01		<0.01	
4/3/2018			<0.01		
3/11/2019				<0.01	
3/12/2019	<0.01	<0.01	<0.01		
4/1/2019			<0.01		
4/2/2019	<0.01	<0.01		<0.01	
9/23/2019	<0.01	<0.01	<0.01		
9/24/2019				<0.01	
3/2/2020	<0.01	<0.01	<0.01	<0.01	
3/25/2020	<0.01	<0.01	<0.01		
3/26/2020				<0.01	
9/15/2020	<0.01	<0.01	<0.01	<0.01	
9/17/2020					0.0037 (J)
11/11/2020					<0.01
12/15/2020					0.00082 (J)
1/20/2021					<0.01
2/8/2021	<0.01			<0.01	<0.01
2/9/2021		<0.01	<0.01		
3/10/2021	<0.01			<0.01	<0.01
3/11/2021		<0.01	<0.01		



# Time Series

Constituent: Molybdenum (mg/L) Analysis Run 5/4/2021 8:20 PM  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-5 (bg)	HGWA-6 (bg)	HGWC-14
5/19/2016			<0.01		
5/20/2016				<0.01	
5/23/2016					<0.01
7/11/2016			<0.01	0.0008 (J)	
7/12/2016					<0.01
8/30/2016			<0.01	<0.01	
9/1/2016					<0.01
10/20/2016			<0.01	<0.01	
10/24/2016					<0.01
12/7/2016					<0.01
12/8/2016			<0.01	<0.01	
1/24/2017			<0.01	<0.01	
1/26/2017					<0.01
3/21/2017			<0.01	0.0002 (J)	
3/23/2017					<0.01
5/23/2017			<0.01	<0.01	
5/24/2017					<0.01
4/3/2018			<0.01	<0.01	
4/4/2018					<0.01
3/12/2019			<0.01	<0.01	
3/14/2019					<0.01
4/2/2019			<0.01	<0.01	
4/5/2019					<0.01
9/24/2019			<0.01	<0.01	<0.01
3/2/2020			<0.01	<0.01	
3/3/2020					<0.01
3/25/2020				<0.01	
3/26/2020			<0.01		
3/30/2020					<0.01
9/15/2020			<0.01	<0.01	
9/16/2020	0.0044 (J)	0.0019 (J)			
9/18/2020					<0.01
11/10/2020	0.0072 (J)	0.0018 (J)			
12/15/2020	0.0044 (J)	0.0019 (J)			
1/19/2021	0.0038 (J)	0.0035 (J)			
2/9/2021	0.0045 (J)	0.0038 (J)	<0.01	<0.01	
2/11/2021					<0.01
3/10/2021		0.0019 (J)			
3/11/2021	0.0064 (J)		<0.01	<0.01	
3/17/2021					<0.01

# Time Series

Constituent: Molybdenum (mg/L) Analysis Run 5/4/2021 8:20 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWC-15	HGWC-16	HGWC-17	HGWC-18	MW-21D
5/23/2016	<0.01	<0.01	<0.01		
5/24/2016				<0.01	
7/12/2016	0.0007 (J)	<0.01	<0.01	<0.01	
9/1/2016	<0.01	<0.01	<0.01	<0.01	
10/24/2016	<0.01				
10/25/2016		<0.01	<0.01	<0.01	
12/7/2016	<0.01	<0.01	<0.01		
12/8/2016				<0.01	
1/26/2017	<0.01	<0.01	<0.01	<0.01	
3/22/2017		<0.01	<0.01		
3/23/2017	<0.01			<0.01	
5/24/2017	<0.01	<0.01			
5/25/2017			<0.01	<0.01	
4/3/2018	<0.01	<0.01	<0.01	<0.01	
3/14/2019	<0.01			<0.01	
3/15/2019		<0.01	<0.01		0.045
4/4/2019	<0.01	<0.01			0.033
4/5/2019			<0.01	<0.01	
9/24/2019	<0.01				
9/25/2019		<0.01	<0.01	<0.01	0.038
3/3/2020	<0.01	<0.01	<0.01	<0.01	0.025
3/26/2020	<0.01				
3/30/2020		<0.01			
3/31/2020			<0.01	<0.01	
4/1/2020					0.024
6/17/2020					0.019
9/15/2020				<0.01	
9/16/2020			<0.01		
9/17/2020	<0.01	<0.01			
9/21/2020					0.017
2/10/2021		<0.01			
2/11/2021			<0.01	<0.01	0.016
2/12/2021	<0.01				
3/16/2021	<0.01				
3/17/2021		<0.01			
3/18/2021			<0.01	<0.01	0.016

# Time Series

Constituent: Molybdenum (mg/L) Analysis Run 5/4/2021 8:20 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

	MW-22	MW-23D	MW-33	MW-35	MW-37D
3/14/2019		<0.01			
3/15/2019	<0.01				
4/5/2019	0.00013 (J)	0.0014 (J)			
9/26/2019		0.0025 (J)			
9/27/2019	<0.01				
3/2/2020	<0.01	0.003 (J)			
3/27/2020	<0.01				
4/1/2020		0.0032 (J)	<0.01		
6/17/2020			<0.01		
6/18/2020				<0.01	0.023
9/17/2020	<0.01	0.0026 (J)			
9/21/2020			<0.01	<0.01	
9/23/2020					0.015
2/11/2021					0.019
2/12/2021		0.0039 (J)	<0.01		
2/15/2021	<0.01			<0.01	
3/12/2021					0.014
3/17/2021	<0.01	0.0034 (J)			
3/18/2021			<0.01		
3/19/2021				<0.01	

# Time Series

Constituent: Selenium (mg/L) Analysis Run 5/4/2021 8:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-4 (bg)	HGWA-42D (bg)
5/19/2016	<0.005	<0.005	<0.005	<0.005	
7/11/2016	<0.005	<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	<0.005	
12/6/2016	<0.005	<0.005	<0.005	<0.005	
1/24/2017	<0.005	<0.005	<0.005	<0.005	
3/21/2017	<0.005	<0.005	<0.005	<0.005	
5/22/2017	<0.005	<0.005	<0.005		
5/23/2017				<0.005	
4/2/2018	<0.005	<0.005		<0.005	
4/3/2018			<0.005		
6/4/2018	<0.005	<0.005	<0.005	<0.005	
10/1/2018	<0.005	<0.005	<0.005	<0.005	
3/11/2019				<0.005	
3/12/2019	<0.005	<0.005	<0.005		
4/1/2019			<0.005		
4/2/2019	<0.005	<0.005		<0.005	
9/23/2019	<0.005	<0.005	<0.005		
9/24/2019				<0.005	
3/2/2020	<0.005	<0.005	<0.005	<0.005	
3/25/2020	<0.005	<0.005	<0.005		
3/26/2020				<0.005	
9/15/2020	<0.005	<0.005	<0.005	<0.005	
9/17/2020					<0.005
11/11/2020					<0.005
12/15/2020					<0.005
1/20/2021					<0.005
2/8/2021	<0.005			<0.005	<0.005
2/9/2021		<0.005	<0.005		
3/10/2021	0.0047 (J)			<0.005	<0.005
3/11/2021		<0.005	<0.005		

# Time Series

Constituent: Selenium (mg/L) Analysis Run 5/4/2021 8:20 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-5 (bg)	HGWA-6 (bg)	HGWC-14
5/19/2016			<0.005		
5/20/2016				<0.005	
5/23/2016					0.017
7/11/2016			<0.005	<0.005	
7/12/2016					0.0146
8/30/2016			<0.005	<0.005	
9/1/2016					0.0137
10/20/2016			<0.005	<0.005	
10/24/2016					0.0135
12/7/2016					0.01 (J)
12/8/2016			<0.005	<0.005	
1/24/2017			0.0011 (J)	<0.005	
1/26/2017					0.0214
3/21/2017			<0.005	<0.005	
3/23/2017					0.0167
5/23/2017			<0.005	<0.005	
5/24/2017					0.0083 (J)
4/3/2018			<0.005	<0.005	
4/4/2018					0.012
6/5/2018			<0.005	<0.005	
6/6/2018					0.014
10/2/2018			<0.005	<0.005	
10/3/2018					0.0056 (J)
3/12/2019			<0.005	<0.005	
3/14/2019					0.0048 (J)
4/2/2019			<0.005	<0.005	
4/5/2019					0.00091 (J)
9/24/2019			<0.005	<0.005	0.0064 (J)
3/2/2020			<0.005	<0.005	
3/3/2020					0.0045 (J)
3/25/2020				<0.005	
3/26/2020			<0.005		
3/30/2020					0.0049 (J)
9/15/2020			<0.005	<0.005	
9/16/2020	<0.005	<0.005			
9/18/2020					0.0045 (J)
11/10/2020	<0.005	<0.005			
12/15/2020	<0.005	<0.005			
1/19/2021	<0.005	<0.005			
2/9/2021	<0.005	<0.005	<0.005	<0.005	
2/11/2021					0.0072 (J)
3/10/2021		<0.005			
3/11/2021	<0.005		<0.005	<0.005	
3/17/2021					0.01 (J)

# Time Series

Constituent: Selenium (mg/L) Analysis Run 5/4/2021 8:20 PM  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWC-15	HGWC-16	HGWC-17	HGWC-18	MW-21D
5/23/2016	<0.005	<0.005	<0.005		
5/24/2016				<0.005	
7/12/2016	<0.005	<0.005	<0.005	0.036	
9/1/2016	<0.005	<0.005	0.0014 (J)	0.0347	
10/24/2016	0.0012 (J)				
10/25/2016		<0.005	<0.005	0.0282	
12/7/2016	0.0041 (J)	<0.005	0.0023 (J)		
12/8/2016				0.0373	
1/26/2017	<0.005	<0.005	<0.005	0.0385	
3/22/2017		<0.005	<0.005		
3/23/2017	0.0016 (J)			0.0414	
5/24/2017	<0.005	<0.005			
5/25/2017			<0.005	0.019	
4/3/2018	<0.005	<0.005	<0.005	0.029	
6/5/2018				0.038	
6/6/2018	<0.005	<0.005	<0.005		
10/3/2018	<0.005	<0.005	<0.005	0.017	
3/14/2019	<0.005			0.016	
3/15/2019		<0.005	<0.005		<0.005
4/4/2019	0.00021 (J)	8.9E-05 (J)			<0.005
4/5/2019			9.3E-05 (J)	0.0018 (J)	
9/24/2019	<0.005				
9/25/2019		<0.005	<0.005	0.02	<0.005
3/3/2020	<0.005	<0.005	<0.005	0.014	<0.005
3/26/2020	<0.005				
3/30/2020		<0.005			
3/31/2020			<0.005	0.019	
4/1/2020					<0.005
6/17/2020					<0.005
9/15/2020				0.059	
9/16/2020			<0.005		
9/17/2020	<0.005	<0.005			
9/21/2020					<0.005
2/10/2021		<0.005			
2/11/2021			<0.005	0.023	<0.005
2/12/2021	<0.005				
3/16/2021	<0.005				
3/17/2021		<0.005			
3/18/2021			<0.005	0.019 (J)	<0.005

# Time Series

Constituent: Selenium (mg/L) Analysis Run 5/4/2021 8:20 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

	MW-22	MW-23D	MW-33	MW-35	MW-37D
3/14/2019		<0.005			
3/15/2019	<0.005				
4/5/2019	<0.005	<0.005			
9/26/2019		<0.005			
9/27/2019	<0.005				
3/2/2020	<0.005	<0.005			
3/27/2020	<0.005				
4/1/2020		<0.005	0.011		
6/17/2020			0.014		
6/18/2020				0.014	<0.005
9/17/2020	0.002 (J)	<0.005			
9/21/2020			0.041	0.037	
9/23/2020					<0.005
2/11/2021					<0.005
2/12/2021		<0.005	0.011		
2/15/2021	<0.005			0.01	
3/12/2021					<0.005
3/17/2021	<0.005	<0.005			
3/18/2021			0.028		
3/19/2021				0.016 (J)	

# Time Series

Constituent: Sulfate (mg/L) Analysis Run 5/4/2021 8:20 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-4 (bg)	HGWA-42D (bg)
5/19/2016	66.9	48.6	42.3	1.22	
7/11/2016	41	45		3.7	
7/12/2016			44		
8/30/2016	36	42	40	6.8	
10/19/2016	46	44	43	11	
12/6/2016	59	44	43	13	
1/24/2017	46	46	48	5.7	
3/21/2017	63	46	45	1.7	
5/22/2017	77	48	46		
5/23/2017				1.5	
10/3/2017	42	47	48	1.3	
6/4/2018	71.8	47.8	46.6	4.9	
10/1/2018	49.1	48.1	48.6	0.59 (J)	
4/1/2019			50.4		
4/2/2019	84.3	48.7		4.9	
9/23/2019	70.2	47.2	43.9		
9/24/2019				<1	
3/25/2020	85.9	46.3	50.5		
3/26/2020				<1	
9/15/2020	47.3	51.5	44.7	<1	
9/17/2020					10.9
11/11/2020					9.4
12/15/2020					10.9
1/20/2021					9.8
3/10/2021	49.6			1.2	10.8
3/11/2021		52.9	50.4		



# Time Series

Constituent: Sulfate (mg/L) Analysis Run 5/4/2021 8:20 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-5 (bg)	HGWA-6 (bg)	HGWC-14
5/19/2016			25		
5/20/2016				34.4	
5/23/2016					1070
7/11/2016			27	34	
7/12/2016					1300
8/30/2016			23	36	
9/1/2016					1300
10/20/2016			19	36	
10/24/2016					280
12/7/2016					1300
12/8/2016			20	36	
1/24/2017			20	37	
1/26/2017					1400
3/21/2017			23	37	
3/23/2017					1500
5/23/2017			21	38	
5/24/2017					1400
10/3/2017			21	38	
10/4/2017					1400
6/5/2018			22.9	38	
6/6/2018					1520
10/2/2018			20.3	38.5	
10/3/2018					1550
4/2/2019			23.8	35.5	
4/5/2019					1520
9/24/2019			20.7	35.4	1110
3/25/2020				35.1	
3/26/2020			21.6		
3/30/2020					1150
9/15/2020			21.2	35.3	
9/16/2020	43	6.9			
9/18/2020					1260
11/10/2020	39	6.3			
12/15/2020	38.8	6.7			
1/19/2021	37.3	7.4			
3/10/2021		<1			
3/11/2021	38.6		22.7	35.5	
3/17/2021					1300

# Time Series

Constituent: Sulfate (mg/L) Analysis Run 5/4/2021 8:20 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWC-15	HGWC-16	HGWC-17	HGWC-18	MW-21D
5/23/2016	424	203	395		
5/24/2016				834	
7/12/2016	440	220	460	930	
9/1/2016	440	220	430	890	
10/24/2016	420				
10/25/2016		230	440	950	
12/7/2016	450	220	410		
12/8/2016				910	
1/26/2017	490	250	440	970	
3/22/2017		240	460		
3/23/2017	530			980	
5/24/2017	500	230			
5/25/2017			430	920	
10/4/2017	560	220	490	870	
6/5/2018				962	
6/6/2018	469	233	520		
10/3/2018	600	215	651	1170	
4/4/2019	528	251			915
4/5/2019			642	1030	
9/24/2019	382				
9/25/2019		223	434	920	767
3/26/2020	438				
3/30/2020		223			
3/31/2020			484	934	
4/1/2020					889
6/17/2020					901
9/15/2020				1080	
9/16/2020			467		
9/17/2020	416	254			
9/21/2020					1010
3/16/2021	379				
3/17/2021		250			
3/18/2021			447	1050	829

# Time Series

Constituent: Sulfate (mg/L) Analysis Run 5/4/2021 8:20 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

	MW-22	MW-23D	MW-33	MW-35	MW-37D
4/5/2019	392	585			
9/26/2019		556			
9/27/2019	520				
1/22/2020			1250		
3/27/2020	419				
4/1/2020		478	1210		
6/17/2020			1210		
6/18/2020				1160	286
9/17/2020	468	490			
9/21/2020			1290	1220	
9/23/2020					256
3/12/2021					237
3/17/2021	461	486			
3/18/2021			1360		
3/19/2021				1220	

# Time Series

Constituent: Thallium (mg/L) Analysis Run 5/4/2021 8:20 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-4 (bg)	HGWA-42D (bg)
5/19/2016	<0.001	<0.001	<0.001	<0.001	
7/11/2016	<0.001	<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	<0.001	
12/6/2016	<0.001	<0.001	<0.001	<0.001	
1/24/2017	<0.001	<0.001	<0.001	<0.001	
3/21/2017	<0.001	3E-05 (J)	<0.001	<0.001	
5/22/2017	<0.001	<0.001	<0.001		
5/23/2017				<0.001	
4/2/2018	<0.001	<0.001		<0.001	
4/3/2018			<0.001		
6/4/2018	<0.001	<0.001	<0.001	<0.001	
10/1/2018	<0.001	<0.001	<0.001	<0.001	
3/11/2019				<0.001	
3/12/2019	<0.001	<0.001	<0.001		
4/1/2019			<0.001		
4/2/2019	<0.001	<0.001		<0.001	
9/23/2019	<0.001	<0.001	<0.001		
9/24/2019				<0.001	
3/2/2020	<0.001	<0.001	<0.001	<0.001	
3/25/2020	<0.001	<0.001	<0.001		
3/26/2020				<0.001	
9/15/2020	<0.001	<0.001	<0.001	<0.001	
9/17/2020					<0.001
11/11/2020					<0.001
12/15/2020					<0.001
1/20/2021					<0.001
2/8/2021	<0.001			<0.001	<0.001
2/9/2021		<0.001	<0.001		
3/10/2021	<0.001			<0.001	<0.001
3/11/2021		<0.001	<0.001		

# Time Series

Constituent: Thallium (mg/L) Analysis Run 5/4/2021 8:20 PM  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-5 (bg)	HGWA-6 (bg)	HGWC-14
5/19/2016			<0.001		
5/20/2016				<0.001	
5/23/2016					0.000306 (J)
7/11/2016			<0.001	<0.001	
7/12/2016					0.0003 (J)
8/30/2016			<0.001	<0.001	
9/1/2016					0.0003 (J)
10/20/2016			<0.001	<0.001	
10/24/2016					0.0004
12/7/2016					0.0003 (J)
12/8/2016			<0.001	<0.001	
1/24/2017			<0.001	<0.001	
1/26/2017					0.0003 (J)
3/21/2017			<0.001	<0.001	
3/23/2017					0.0003 (J)
5/23/2017			<0.001	<0.001	
5/24/2017					0.0003 (J)
4/3/2018			<0.001	<0.001	
4/4/2018					0.00028 (J)
6/5/2018			<0.001	<0.001	
6/6/2018					0.00029 (J)
10/2/2018			<0.001	<0.001	
10/3/2018					0.00029 (J)
3/12/2019			<0.001	<0.001	
3/14/2019					0.00028 (J)
4/2/2019			<0.001	<0.001	
4/5/2019					0.00028 (J)
9/24/2019			<0.001	<0.001	0.0003 (J)
3/2/2020			<0.001	<0.001	
3/3/2020					0.00026 (J)
3/25/2020				5.7E-05 (J)	
3/26/2020			<0.001		
3/30/2020					0.00028 (J)
9/15/2020			<0.001	<0.001	
9/16/2020	<0.001	<0.001			
9/18/2020					0.00028 (J)
11/10/2020	<0.001	<0.001			
12/15/2020	<0.001	<0.001			
1/19/2021	<0.001	<0.001			
2/9/2021	<0.001	<0.001	<0.001	<0.001	
2/11/2021					0.00026 (J)
3/10/2021		<0.001			
3/11/2021	<0.001		<0.001	<0.001	
3/17/2021					0.00034 (J)

# Time Series

Constituent: Thallium (mg/L) Analysis Run 5/4/2021 8:20 PM  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWC-15	HGWC-16	HGWC-17	HGWC-18	MW-21D
5/23/2016	<0.001	<0.001	<0.001		
5/24/2016				<0.001	
7/12/2016	<0.001	<0.001	0.0001 (J)	0.0002 (J)	
9/1/2016	<0.001	<0.001	<0.001	<0.001	
10/24/2016	<0.001				
10/25/2016		<0.001	<0.001	<0.001	
12/7/2016	<0.001	<0.001	<0.001		
12/8/2016				<0.001	
1/26/2017	<0.001	<0.001	<0.001	<0.001	
3/22/2017		<0.001	0.0001 (J)		
3/23/2017	<0.001			0.0002 (J)	
5/24/2017	<0.001	<0.001			
5/25/2017			0.0001 (J)	0.0002 (J)	
4/3/2018	<0.001	<0.001	<0.001	0.00014 (J)	
6/5/2018				0.00016 (J)	
6/6/2018	<0.001	<0.001	<0.001		
10/3/2018	<0.001	<0.001	<0.001	<0.001	
3/14/2019	<0.001			<0.001	
3/15/2019		<0.001	<0.001		<0.001
4/4/2019	<0.001	<0.001			<0.001
4/5/2019			0.00013 (J)	0.00014 (J)	
9/24/2019	<0.001				
9/25/2019		<0.001	0.00012 (J)	0.00019 (J)	<0.001
3/3/2020	<0.001	<0.001	0.00011 (J)	0.00013 (J)	<0.001
3/26/2020	<0.001				
3/30/2020		<0.001			
3/31/2020			0.00014 (J)	0.00015 (J)	
4/1/2020					<0.001
6/17/2020					<0.001
9/15/2020				0.00016 (J)	
9/16/2020			<0.001		
9/17/2020	<0.001	<0.001			
9/21/2020					<0.001
2/10/2021		<0.001			
2/11/2021			<0.001	<0.001	<0.001
2/12/2021	<0.001				
3/16/2021	<0.001				
3/17/2021		<0.001			
3/18/2021			<0.001	0.00016 (J)	<0.001

# Time Series

Constituent: Thallium (mg/L) Analysis Run 5/4/2021 8:20 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

	MW-22	MW-23D	MW-33	MW-35	MW-37D
3/14/2019		<0.001			
3/15/2019	<0.001				
4/5/2019	<0.001	<0.001			
9/26/2019		<0.001			
9/27/2019	<0.001				
3/2/2020	<0.001	<0.001			
3/27/2020	<0.001				
4/1/2020		<0.001	0.00029 (J)		
6/17/2020			0.00028 (J)		
6/18/2020				0.00013 (J)	<0.001
9/17/2020	<0.001	<0.001			
9/21/2020			0.00029 (J)	<0.001	
9/23/2020					<0.001
2/11/2021					<0.001
2/12/2021		<0.001	0.00025 (J)		
2/15/2021	<0.001			<0.001	
3/12/2021					<0.001
3/17/2021	<0.001	<0.001			
3/18/2021			0.00031 (J)		
3/19/2021				<0.001	

# Time Series

Constituent: Total Dissolved Solids (mg/L) Analysis Run 5/4/2021 8:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-4 (bg)	HGWA-42D (bg)
5/19/2016	421	143	267	165	
7/11/2016	363	125		266	
7/12/2016			249		
8/30/2016	330	168	254	292	
10/19/2016	380	176	357	338	
12/6/2016	377	145	285	356	
1/24/2017	342	129	300	131	
3/21/2017	340	103	288	132	
5/22/2017	338	92	263		
5/23/2017				183	
10/3/2017	343	127	300	161	
6/4/2018	415	140	266	240	
10/1/2018	354	135	291	106	
4/1/2019			284		
4/2/2019	452	133		230	
9/23/2019	442	129	268		
9/24/2019				131	
3/25/2020	496	138	284		
3/26/2020				69	
9/15/2020	265	124	258	93	
9/17/2020					188
11/11/2020					175
12/15/2020					193
1/20/2021					158
3/10/2021	348			53	163
3/11/2021		169	267		



# Time Series

Constituent: Total Dissolved Solids (mg/L) Analysis Run 5/4/2021 8:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-5 (bg)	HGWA-6 (bg)	HGWC-14
5/19/2016			168		
5/20/2016				223	
5/23/2016					4130
7/11/2016			158	225	
7/12/2016					3140
8/30/2016			141	232	
9/1/2016					3200
10/20/2016			99	225	
10/24/2016					2920
12/7/2016					2740
12/8/2016			116	235	
1/24/2017			156	272	
1/26/2017					3080
3/21/2017			144	222	
3/23/2017					3060
5/23/2017			134	231	
5/24/2017					3140
10/3/2017			147	243	
10/4/2017					3210
6/5/2018			152	235	
6/6/2018					2620
10/2/2018			146	228	
10/3/2018					2430
4/2/2019			144	238	
4/5/2019					2310
9/24/2019			133	222	2470
3/25/2020				240	
3/26/2020			104		
3/30/2020					2590
9/15/2020			116	217	
9/16/2020	272	270			
9/18/2020					2440
11/10/2020	307	287			
12/15/2020	289	295			
1/19/2021	270	278			
3/10/2021		289			
3/11/2021	279		118	215	
3/17/2021					1640

# Time Series

Constituent: Total Dissolved Solids (mg/L) Analysis Run 5/4/2021 8:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWC-15	HGWC-16	HGWC-17	HGWC-18	MW-21D
5/23/2016	1270	570	1010		
5/24/2016				1900	
7/12/2016	1100	585	976	1950	
9/1/2016	1180	625	1060	2000	
10/24/2016	1090				
10/25/2016		563	<25	1870	
12/7/2016	1040	561	866		
12/8/2016				1930	
1/26/2017	1260	608	1000	1950	
3/22/2017		599	1080		
3/23/2017	1360			2080	
5/24/2017	1320	598			
5/25/2017			1080	1970	
10/4/2017	1340	626	1210	2200	
6/5/2018				1880	
6/6/2018	1120	678	1180		
10/3/2018	1140	700	1250	2180	
4/4/2019	926	704			1800
4/5/2019			1260	1610	
9/24/2019	1140				
9/25/2019		813	1280	1960	1970
3/26/2020	1000				
3/30/2020		787			
3/31/2020			1310	1860	
4/1/2020					1940
6/17/2020					2100
9/15/2020				1890	
9/16/2020			1220		
9/17/2020	956	804			
9/21/2020					2060
3/16/2021	92				
3/17/2021		768			
3/18/2021			1020	1390	1390

# Time Series

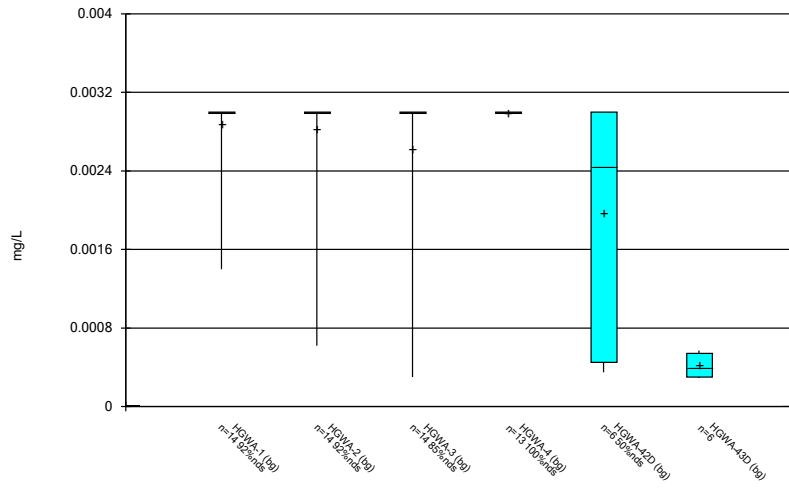
Constituent: Total Dissolved Solids (mg/L) Analysis Run 5/4/2021 8:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

	MW-22	MW-23D	MW-33	MW-35	MW-37D
4/5/2019	890	1400			
9/26/2019		1400			
9/27/2019	1110				
1/22/2020			2310		
3/27/2020	1100				
4/1/2020		1530	2590		
6/17/2020			2540		
6/18/2020				2310	888
9/17/2020	1090	1360			
9/21/2020			2340	2210	
9/23/2020					894
3/12/2021					890
3/17/2021	998	990			
3/18/2021			1790		
3/19/2021				1690	

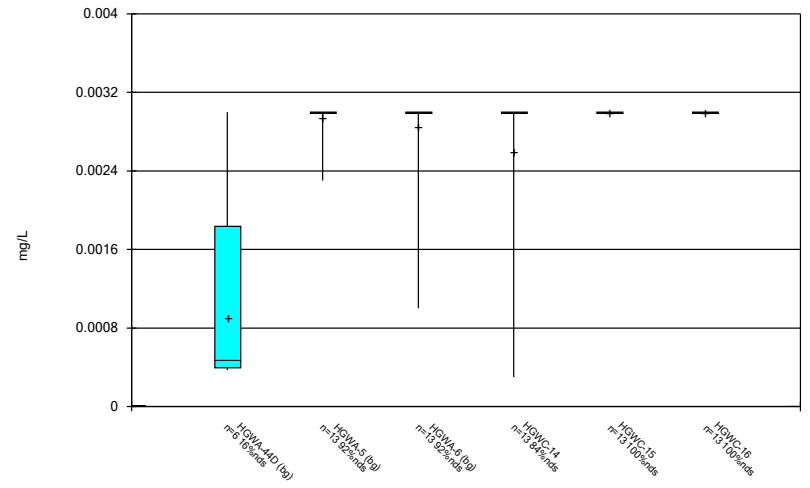
FIGURE B.

### Box & Whiskers Plot



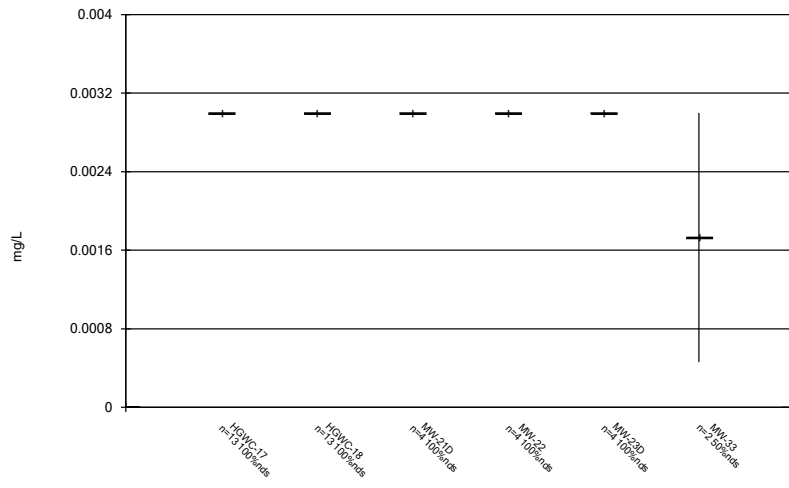
Constituent: Antimony Analysis Run 5/4/2021 8:21 PM  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Box & Whiskers Plot



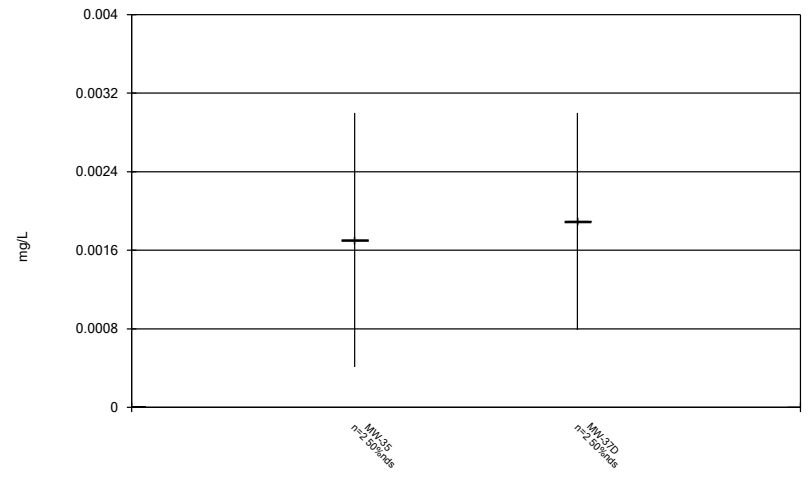
Constituent: Antimony Analysis Run 5/4/2021 8:21 PM  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Box & Whiskers Plot



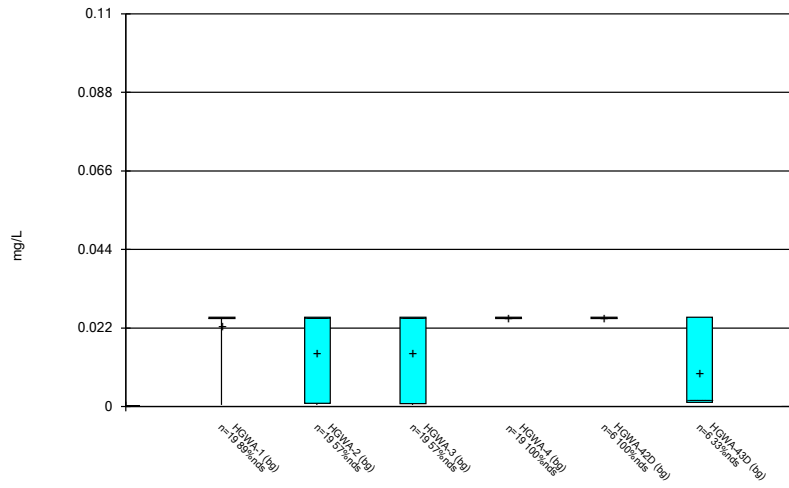
Constituent: Antimony Analysis Run 5/4/2021 8:21 PM  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Box & Whiskers Plot



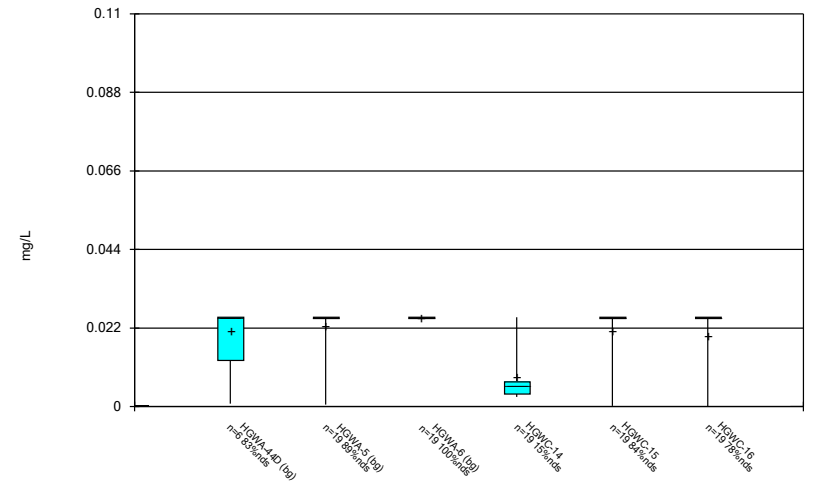
Constituent: Antimony Analysis Run 5/4/2021 8:21 PM  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

Box & Whiskers Plot



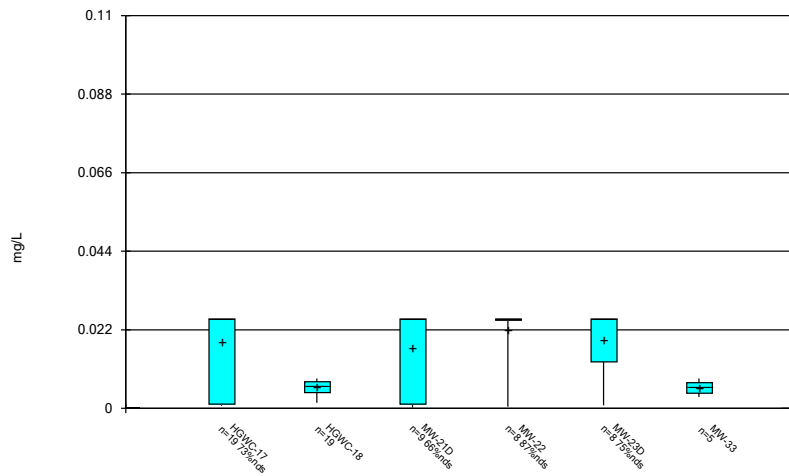
Constituent: Arsenic Analysis Run 5/4/2021 8:21 PM  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

Box & Whiskers Plot



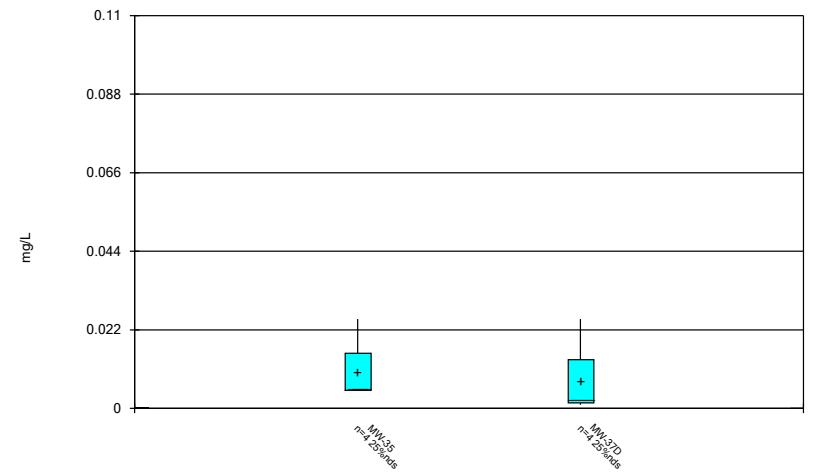
Constituent: Arsenic Analysis Run 5/4/2021 8:21 PM  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

Box & Whiskers Plot



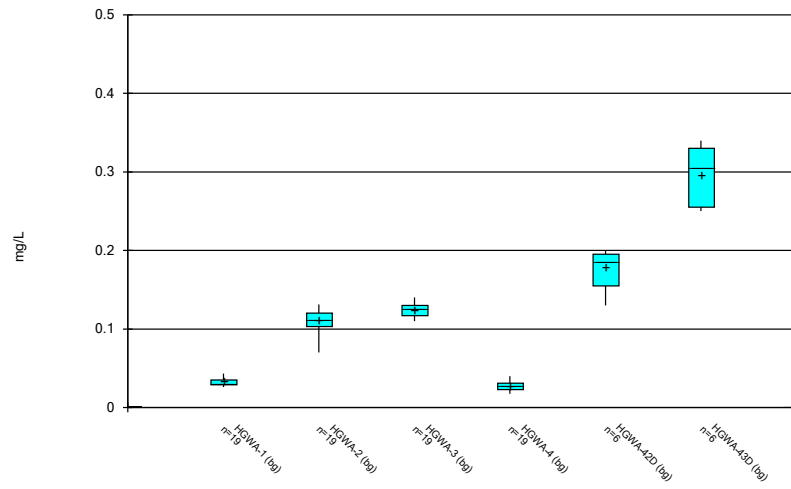
Constituent: Arsenic Analysis Run 5/4/2021 8:21 PM  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

Box & Whiskers Plot



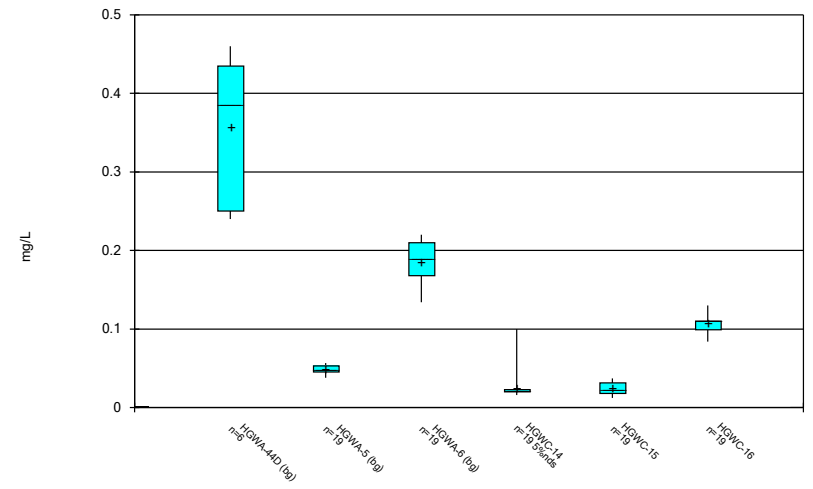
Constituent: Arsenic Analysis Run 5/4/2021 8:21 PM  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Box & Whiskers Plot



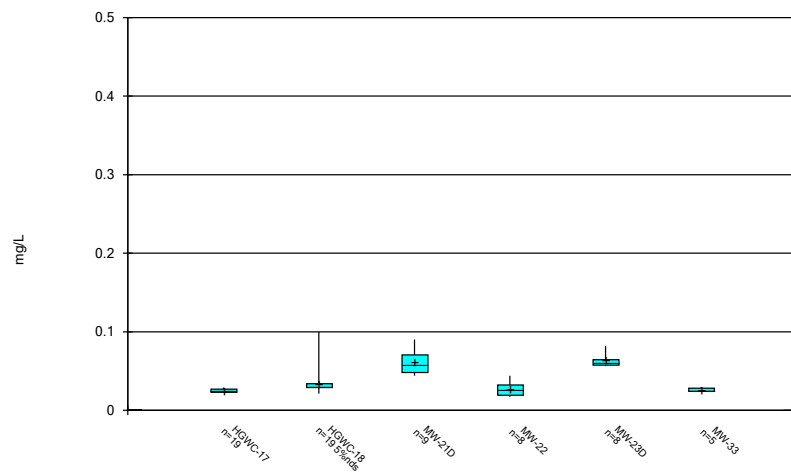
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Plant Hammond Client: Southern Company Data: Hammond AP-2

### Box & Whiskers Plot



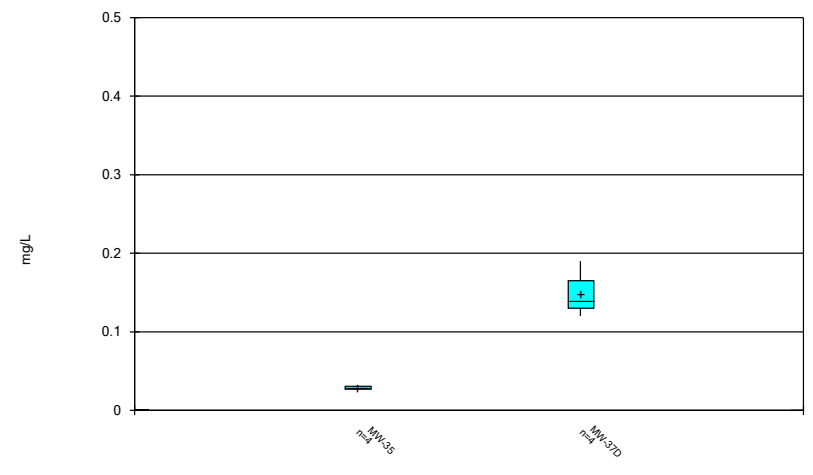
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Plant Hammond Client: Southern Company Data: Hammond AP-2

### Box & Whiskers Plot



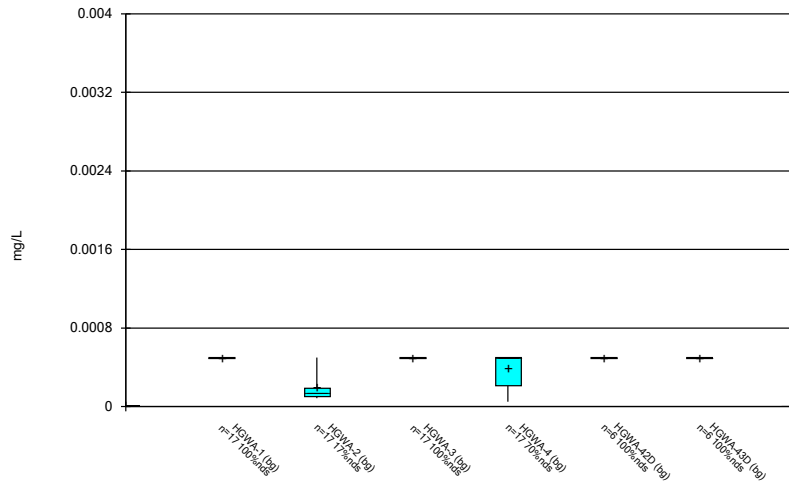
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Plant Hammond Client: Southern Company Data: Hammond AP-2

### Box & Whiskers Plot



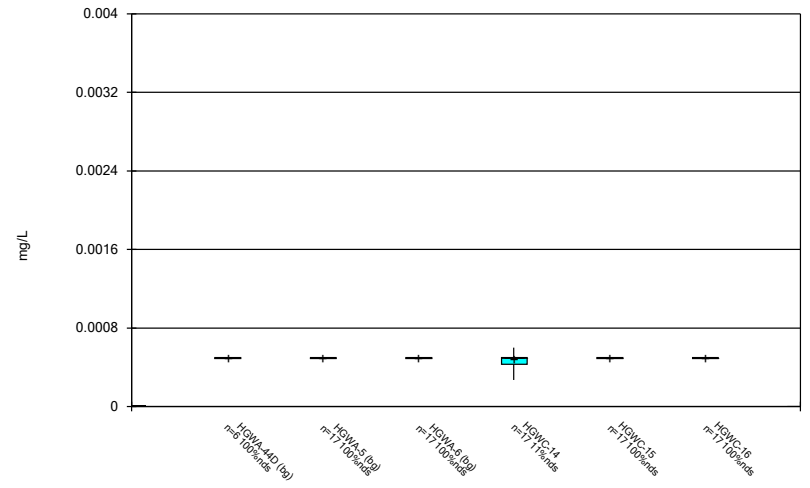
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Plant Hammond Client: Southern Company Data: Hammond AP-2

### Box & Whiskers Plot



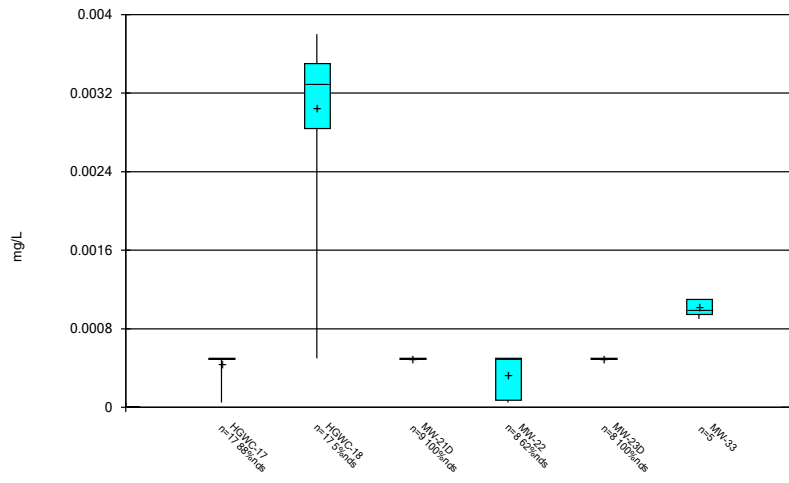
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### Box & Whiskers Plot



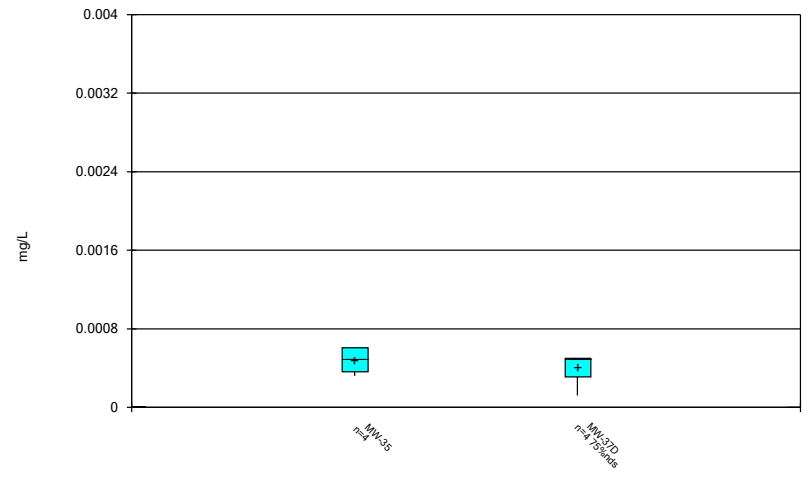
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 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Box & Whiskers Plot



Constituent: Beryllium Analysis Run 5/4/2021 8:21 PM  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

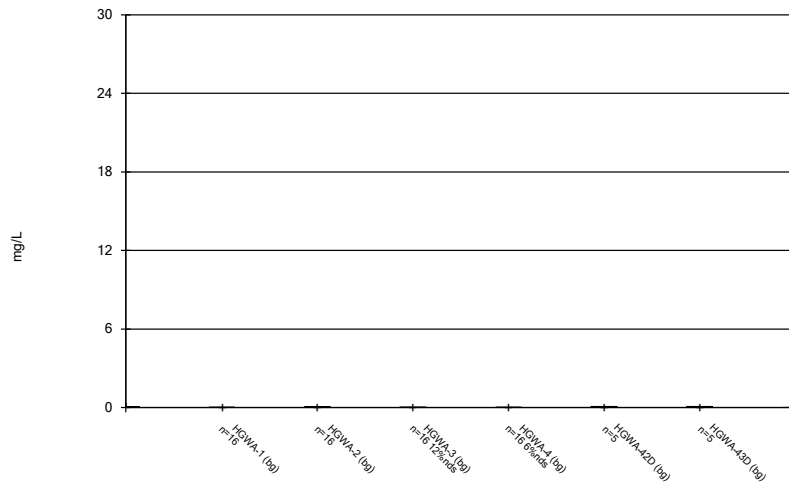
### Box & Whiskers Plot



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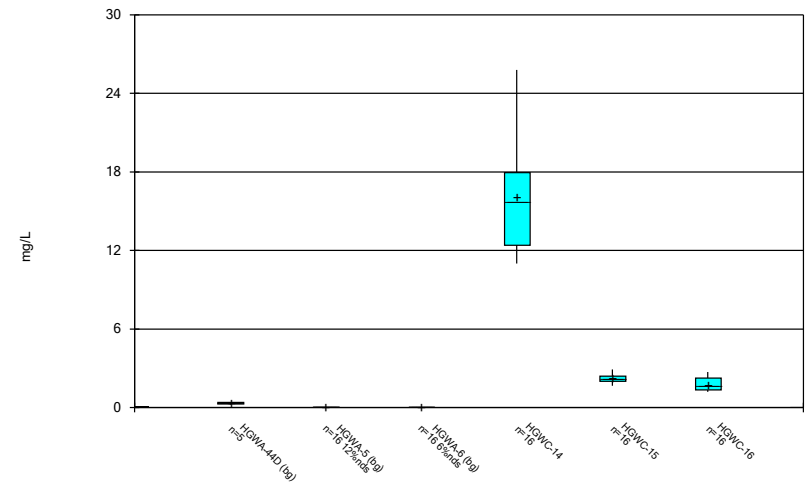


### Box & Whiskers Plot



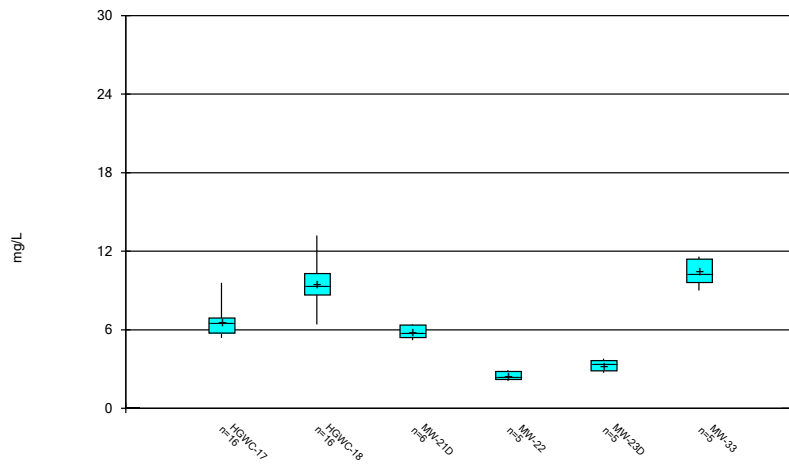
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Plant Hammond Client: Southern Company Data: Hammond AP-2

### Box & Whiskers Plot



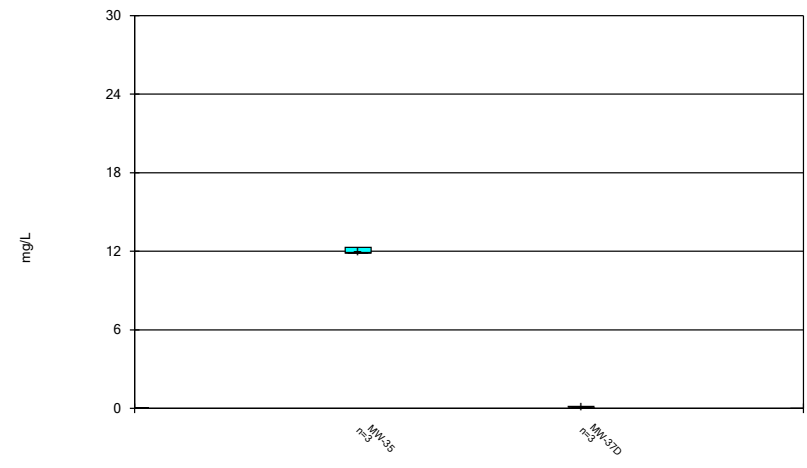
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Plant Hammond Client: Southern Company Data: Hammond AP-2

### Box & Whiskers Plot



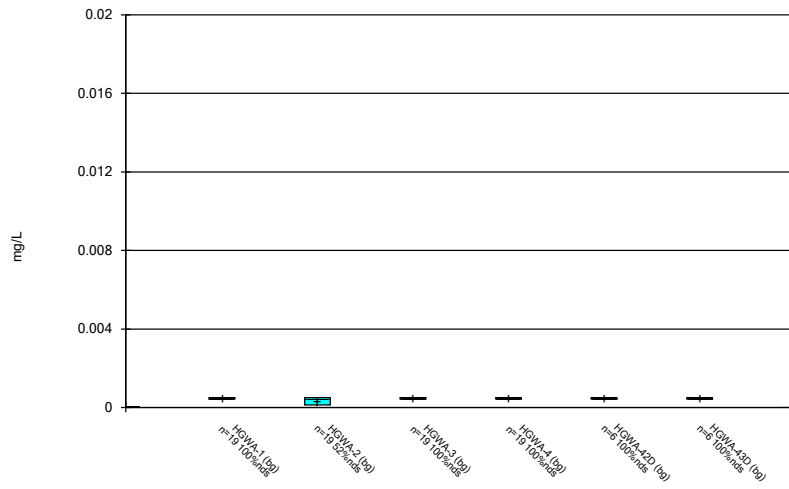
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Plant Hammond Client: Southern Company Data: Hammond AP-2

### Box & Whiskers Plot



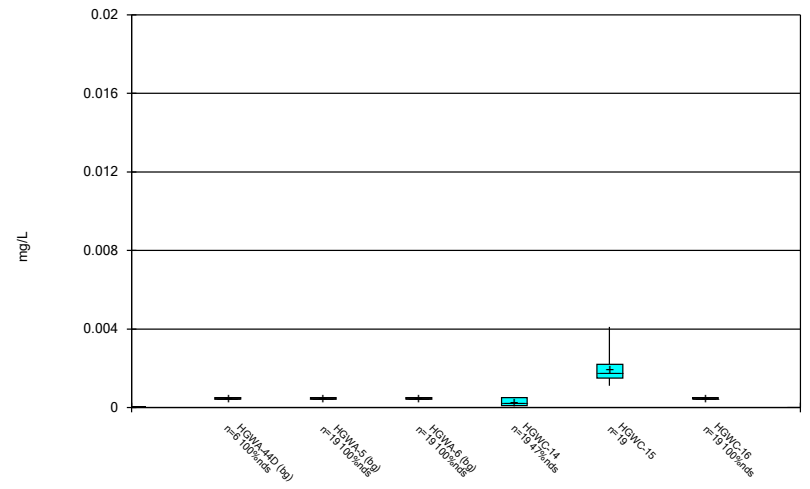
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Plant Hammond Client: Southern Company Data: Hammond AP-2

### Box & Whiskers Plot



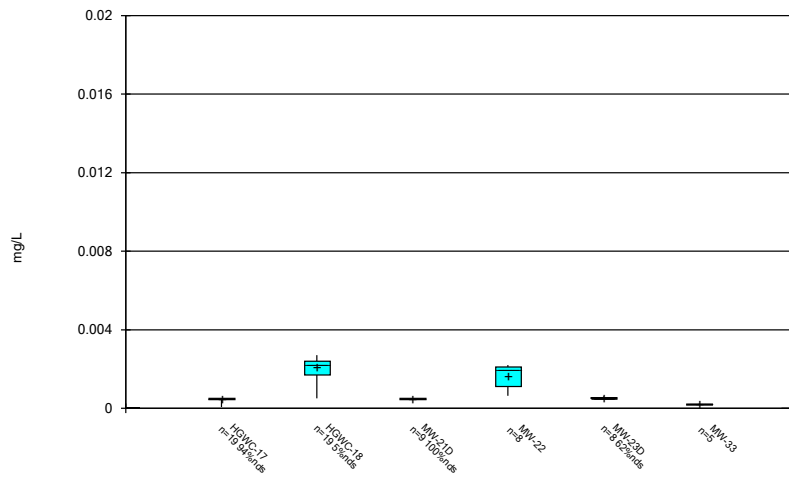
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 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Box & Whiskers Plot



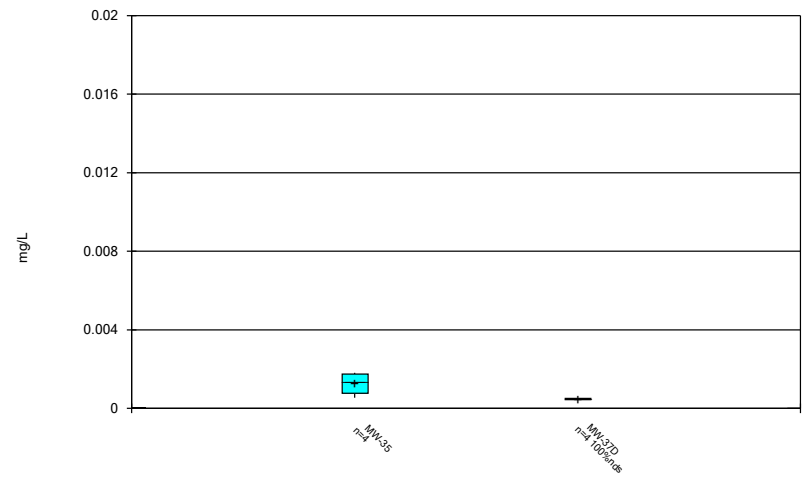
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 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Box & Whiskers Plot



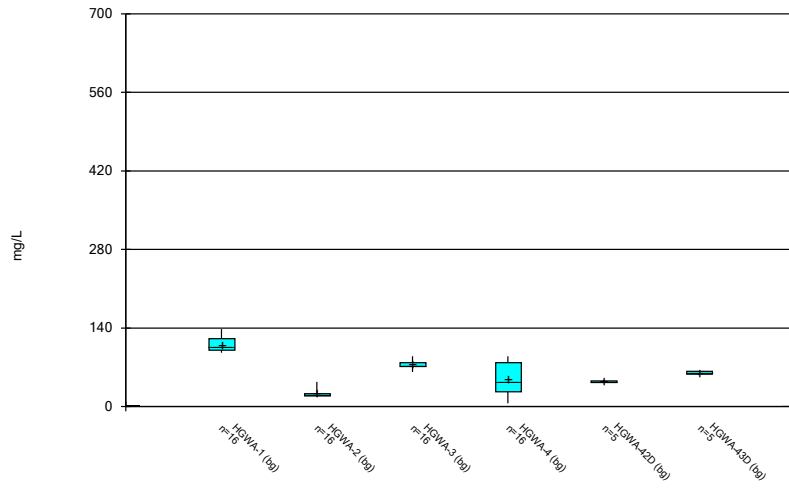
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 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Box & Whiskers Plot



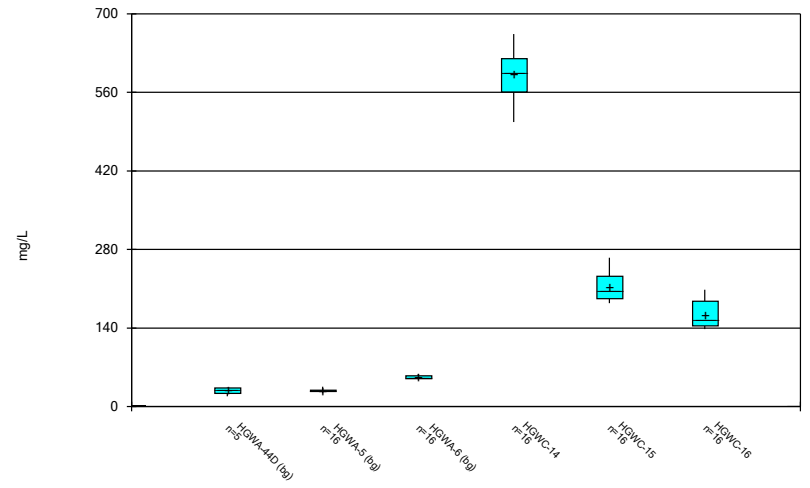
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 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Box & Whiskers Plot



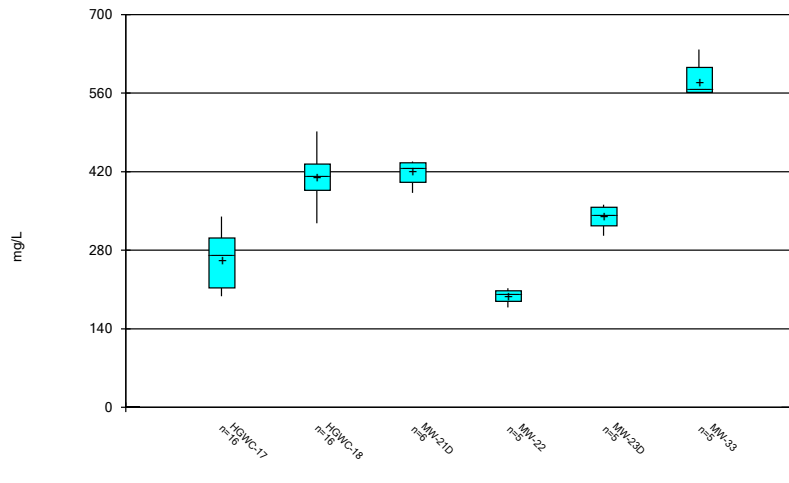
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 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Box & Whiskers Plot



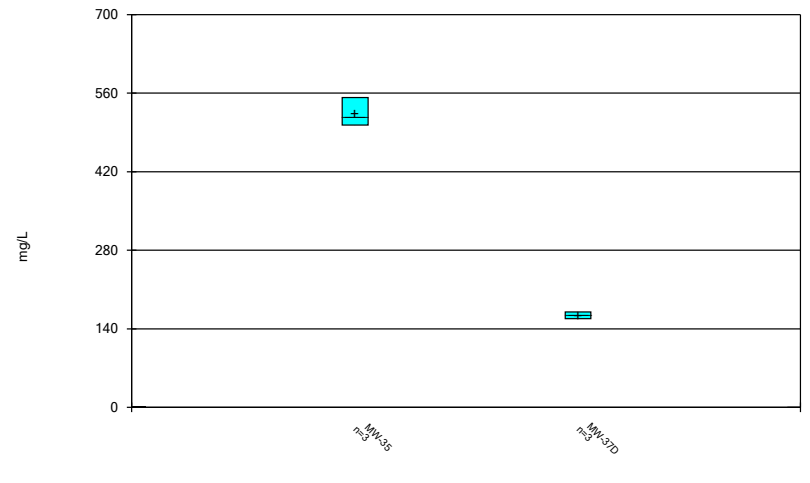
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 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Box & Whiskers Plot



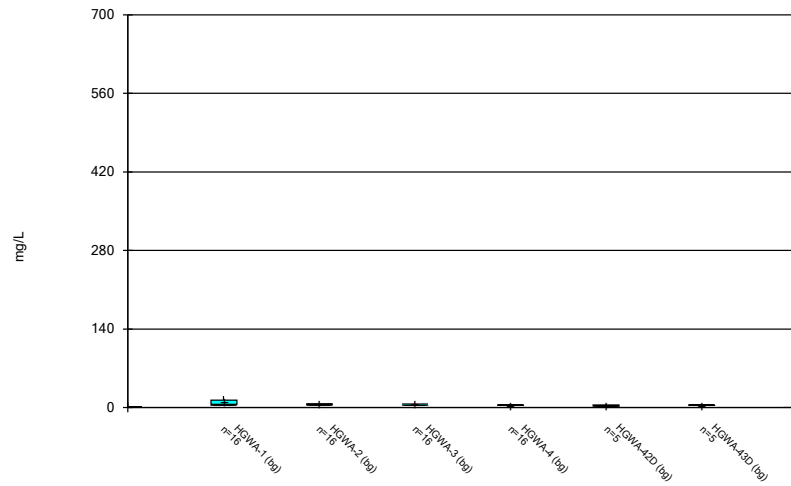
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 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Box & Whiskers Plot



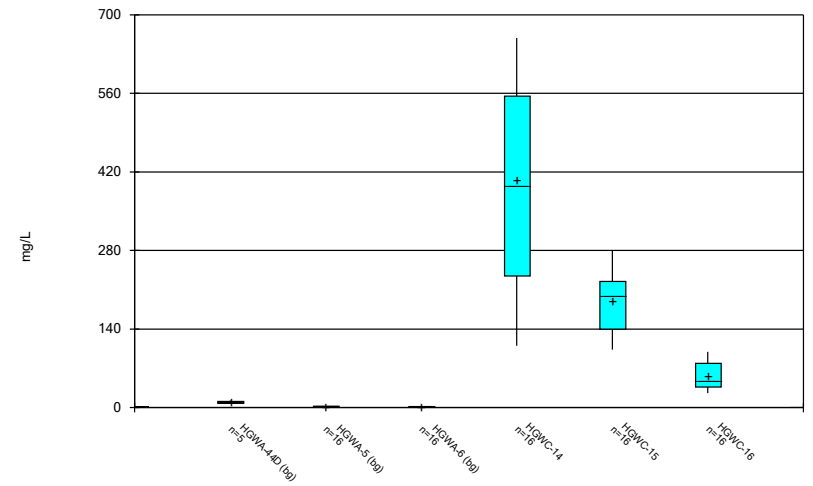
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 Plant Hammond Client: Southern Company Data: Hammond AP-2

Box & Whiskers Plot



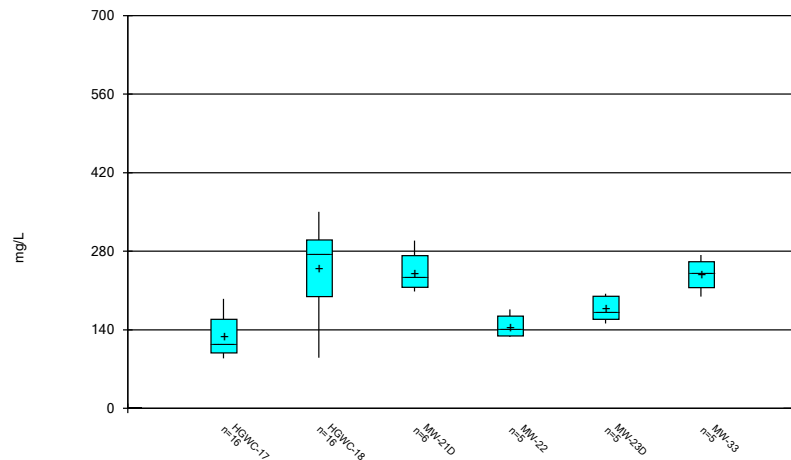
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 Plant Hammond Client: Southern Company Data: Hammond AP-2

Box & Whiskers Plot



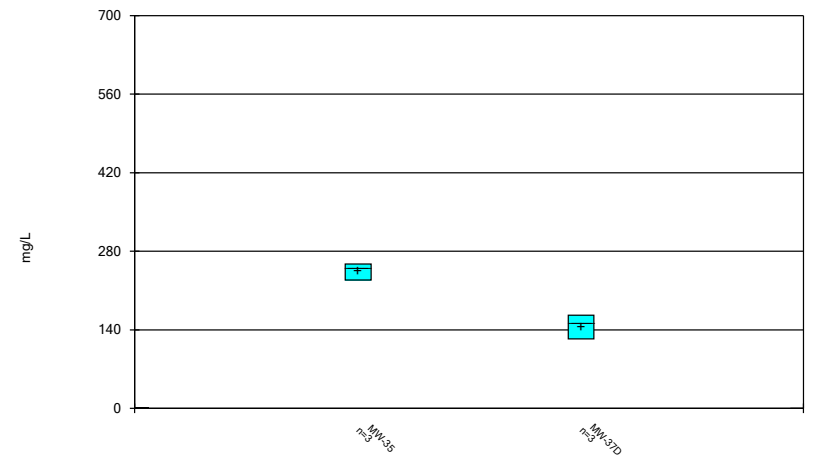
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Box & Whiskers Plot



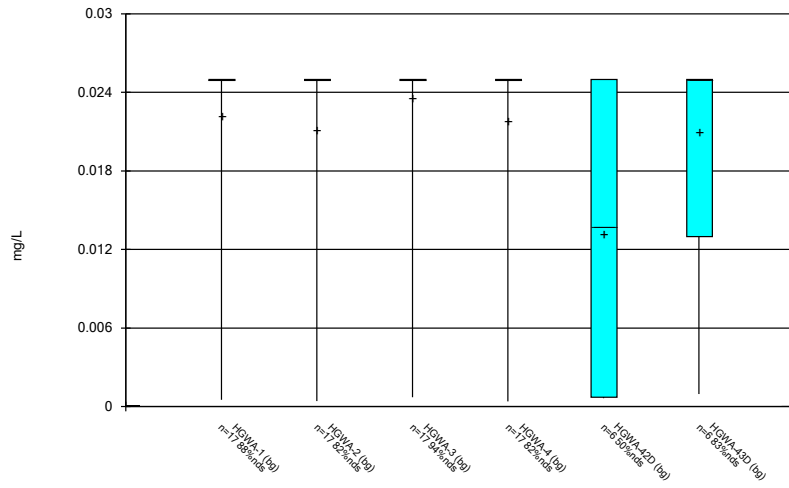
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Box & Whiskers Plot



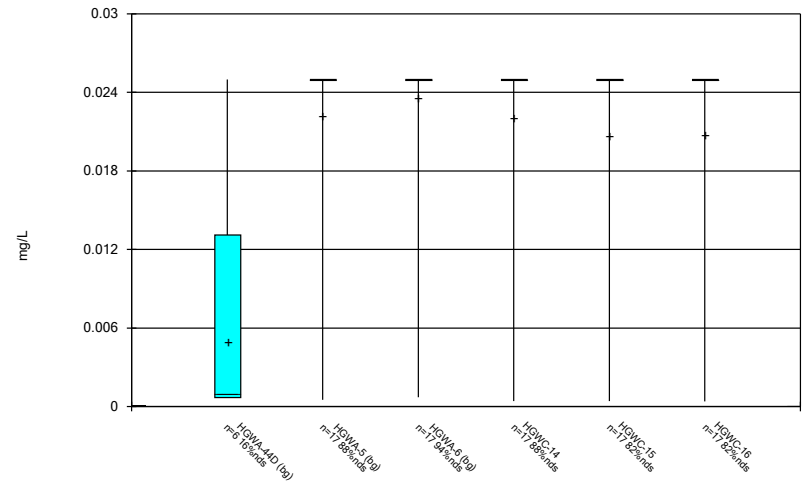
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Box & Whiskers Plot



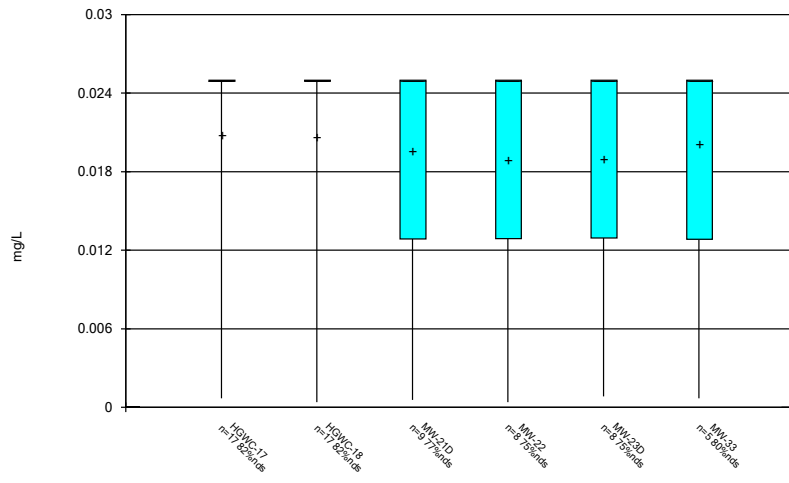
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Box & Whiskers Plot



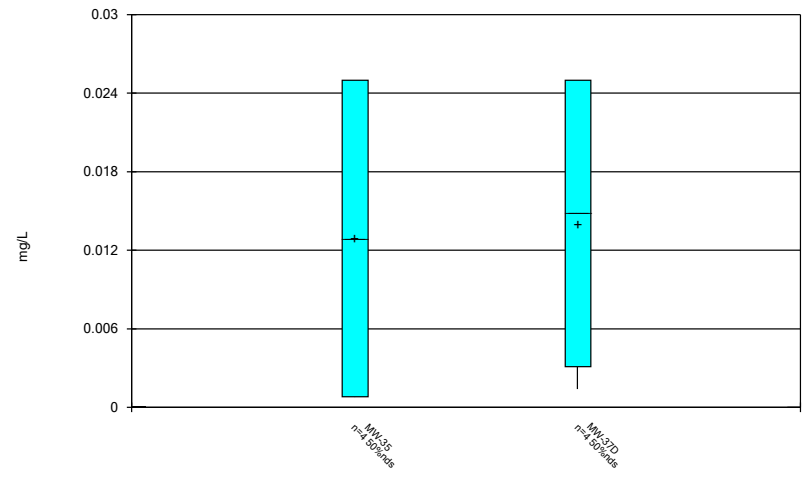
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Box & Whiskers Plot



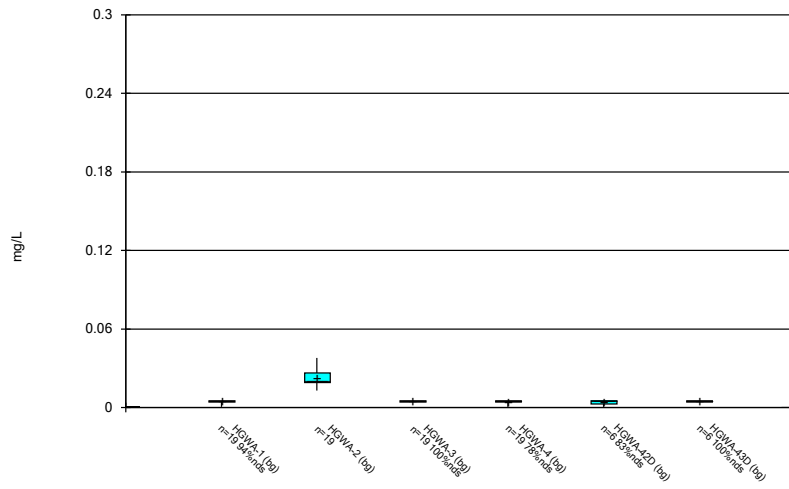
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Box & Whiskers Plot



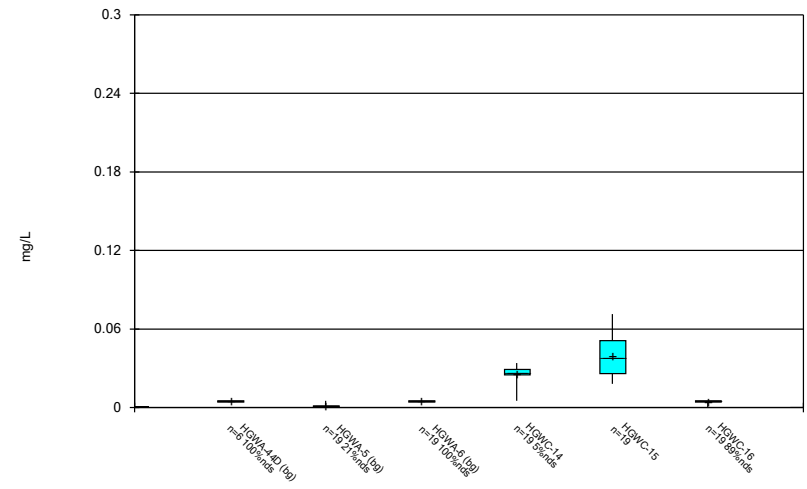
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### Box & Whiskers Plot



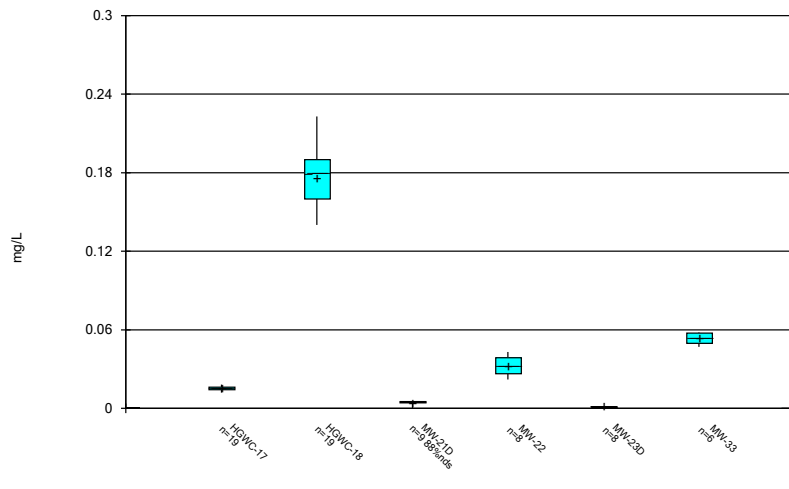
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 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Box & Whiskers Plot



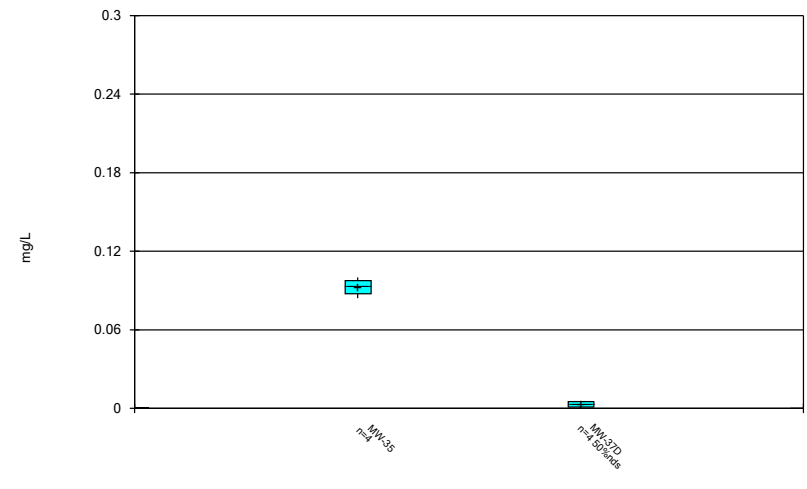
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### Box & Whiskers Plot



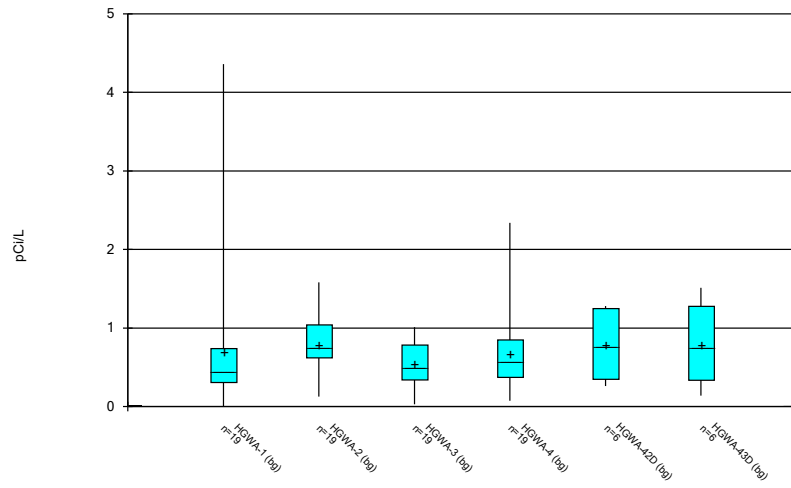
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### Box & Whiskers Plot



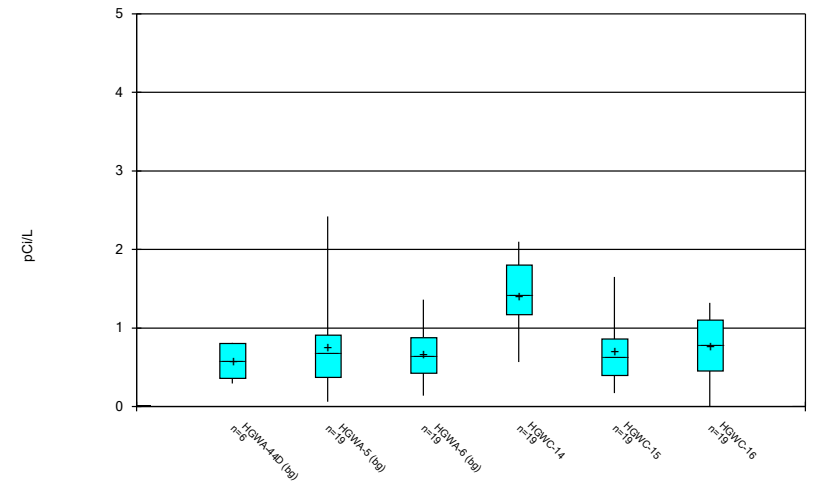
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Box & Whiskers Plot



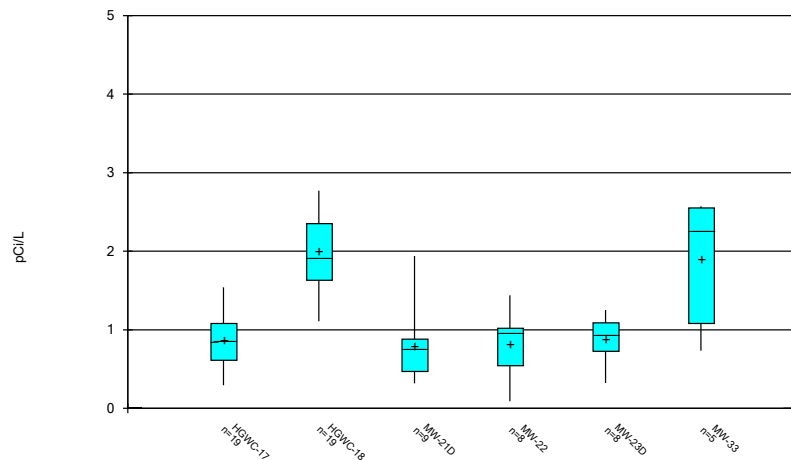
Constituent: Combined Radium 226 + 228 Analysis Run 5/4/2021 8:21 PM  
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Box & Whiskers Plot



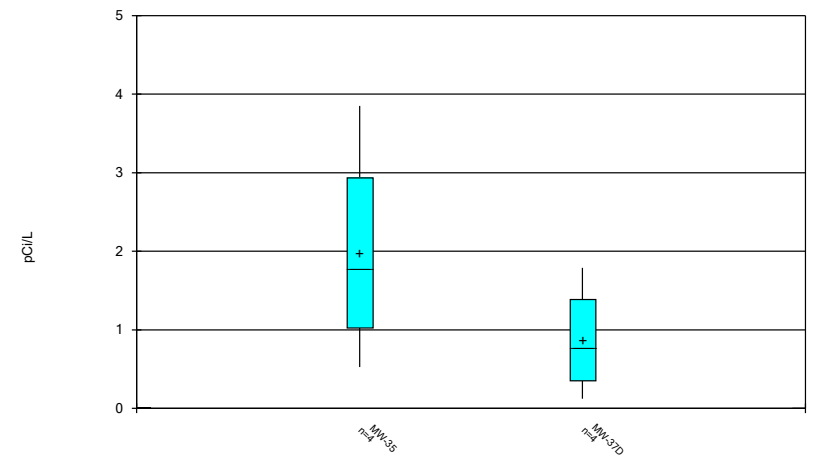
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Box & Whiskers Plot



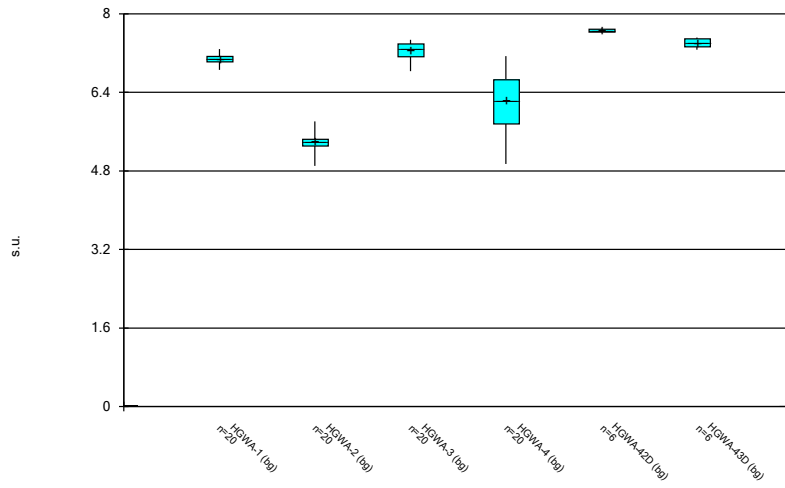
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Box & Whiskers Plot



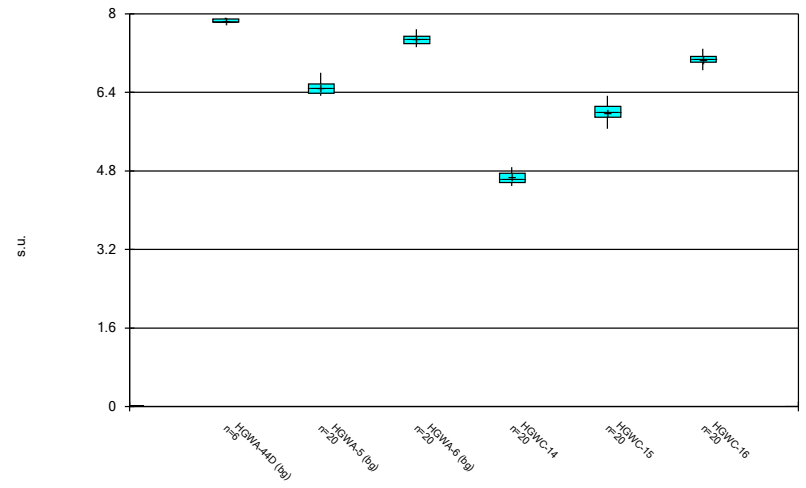
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Box & Whiskers Plot



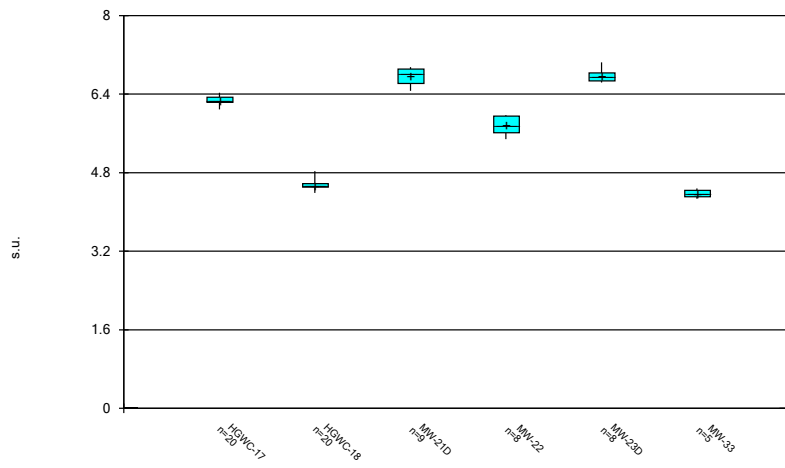
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Plant Hammond Client: Southern Company Data: Hammond AP-2

Box & Whiskers Plot



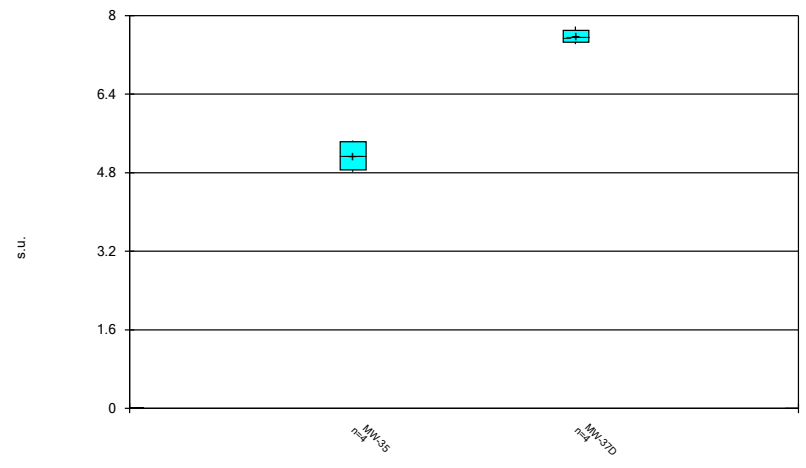
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Plant Hammond Client: Southern Company Data: Hammond AP-2

Box & Whiskers Plot



Constituent: Field pH Analysis Run 5/4/2021 8:21 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

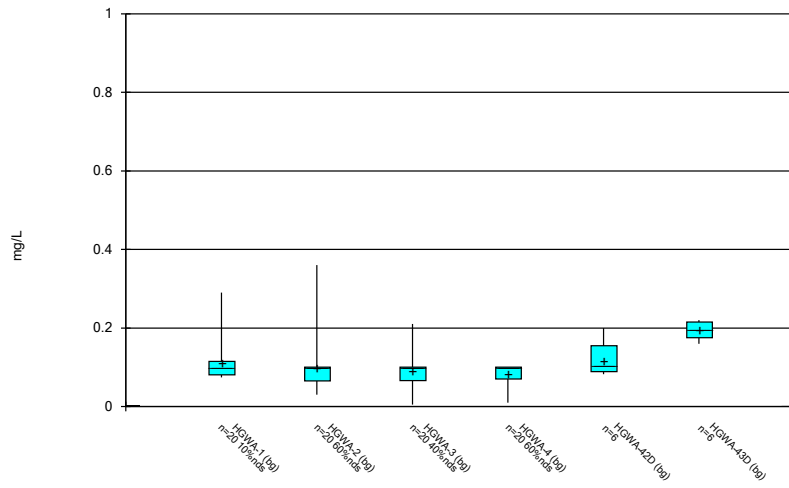
Box & Whiskers Plot



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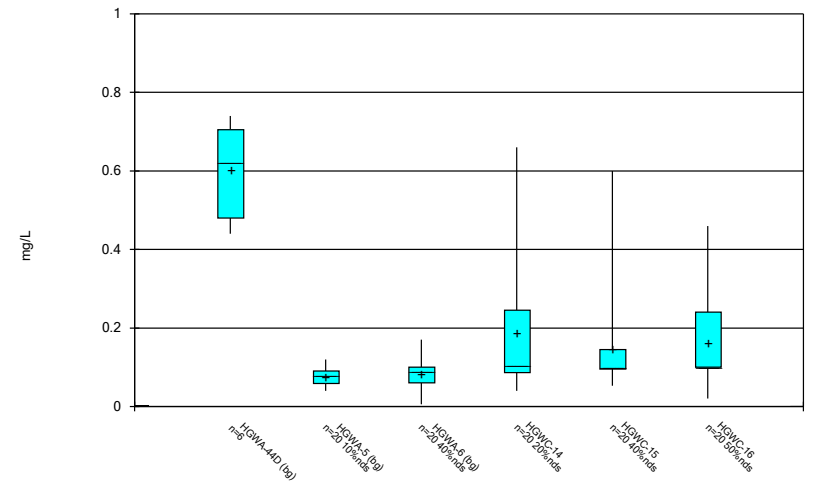


### Box & Whiskers Plot



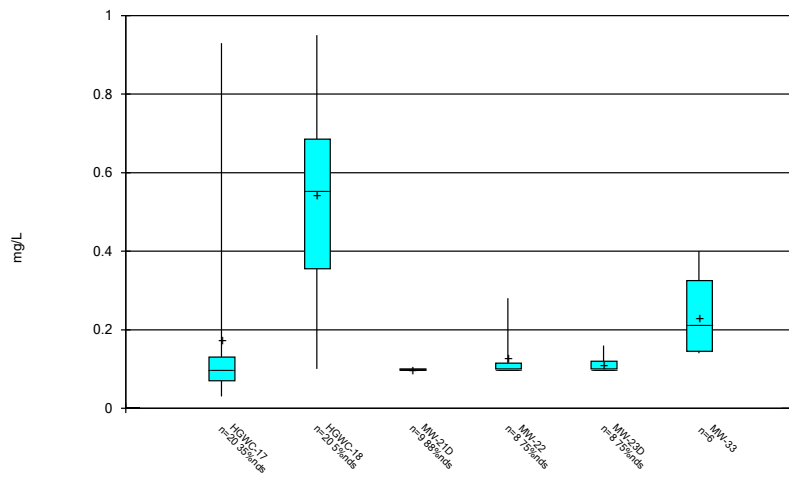
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Plant Hammond Client: Southern Company Data: Hammond AP-2

### Box & Whiskers Plot



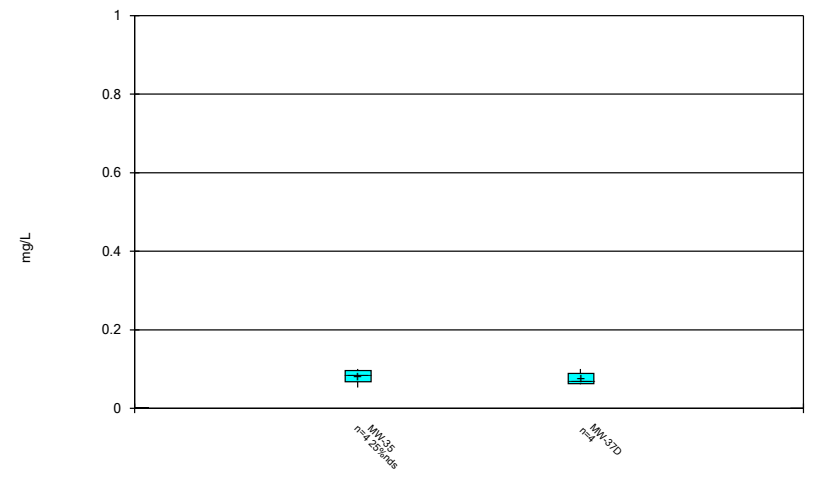
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### Box & Whiskers Plot



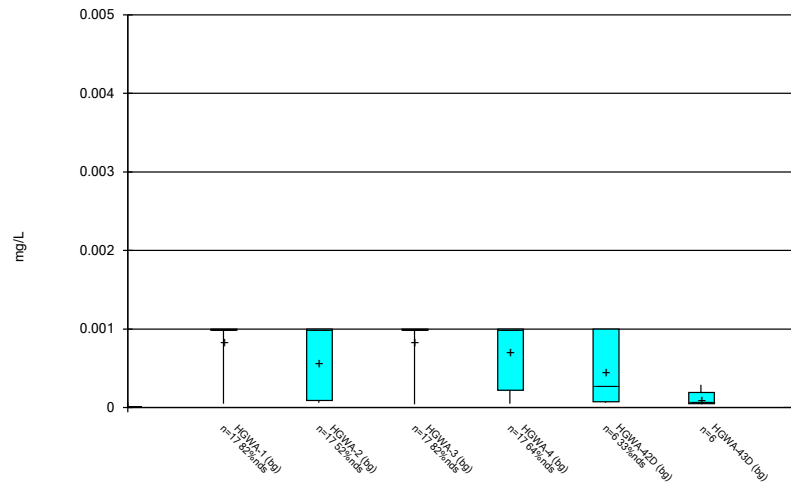
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### Box & Whiskers Plot



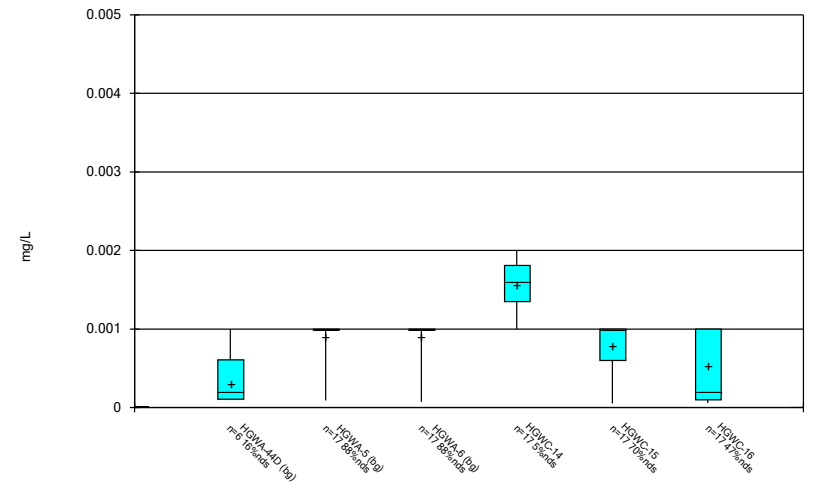
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Box & Whiskers Plot



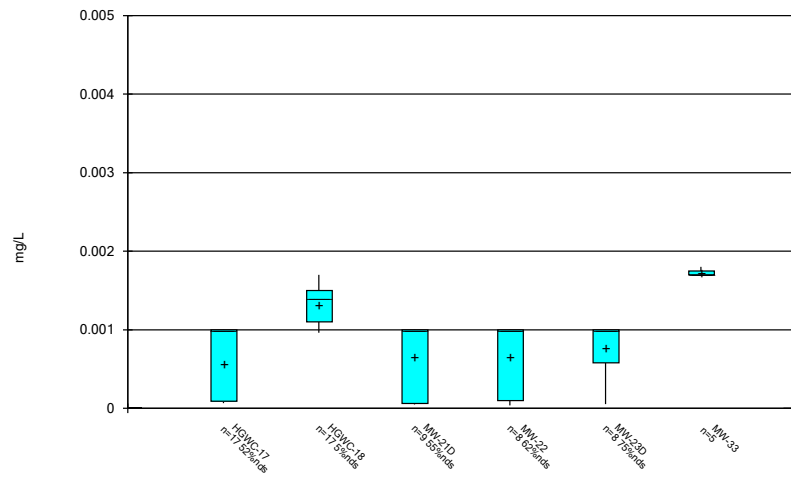
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Box & Whiskers Plot



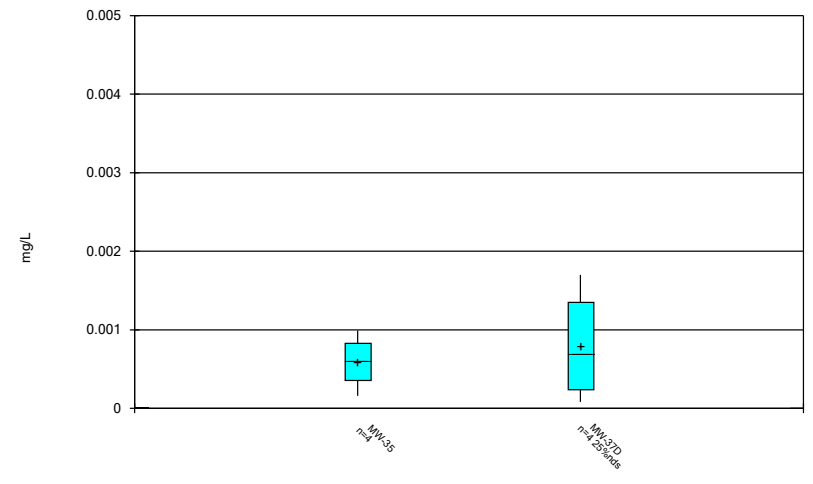
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Box & Whiskers Plot



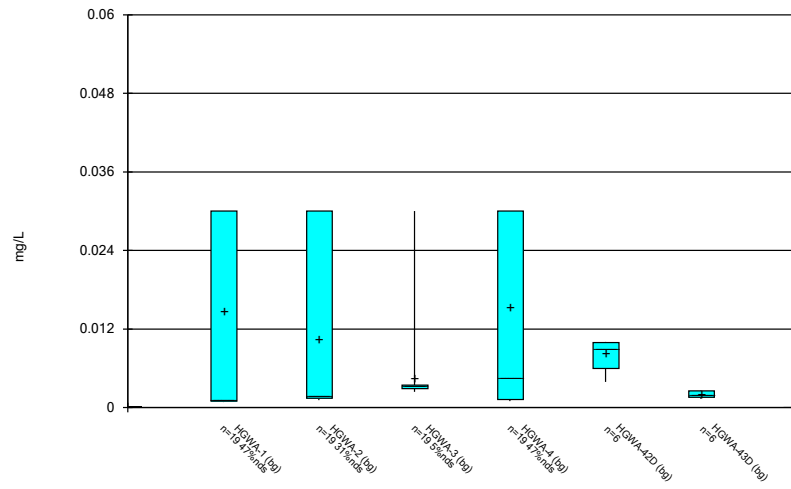
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Box & Whiskers Plot



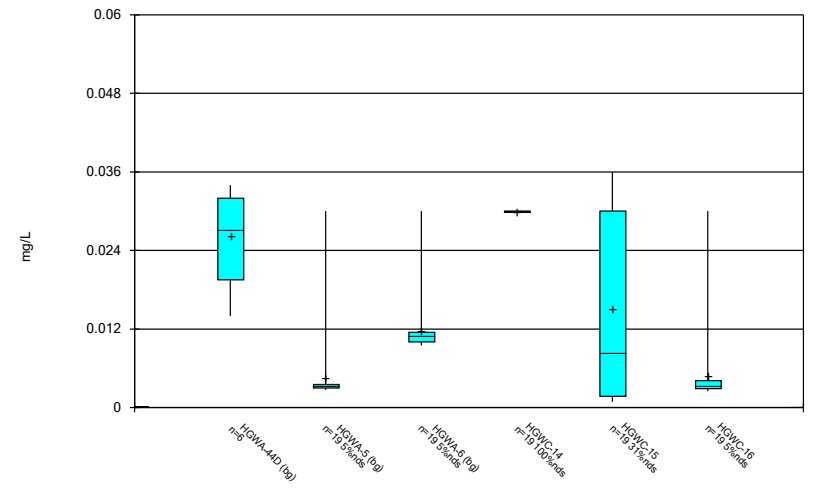
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Box & Whiskers Plot



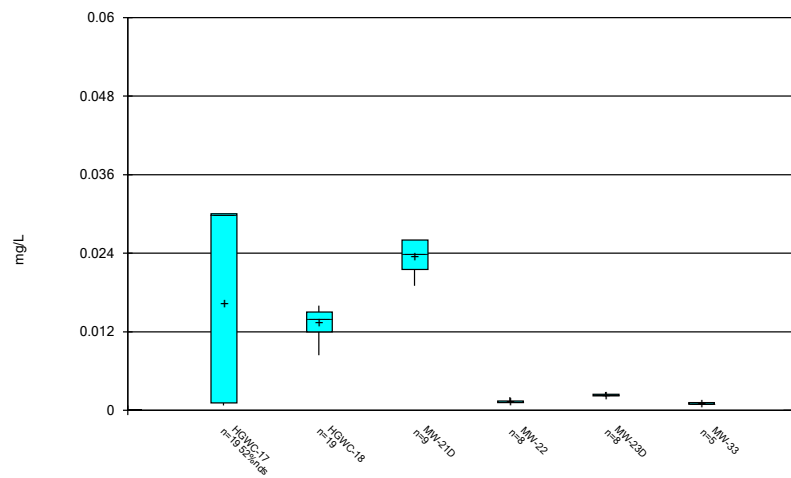
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Box & Whiskers Plot



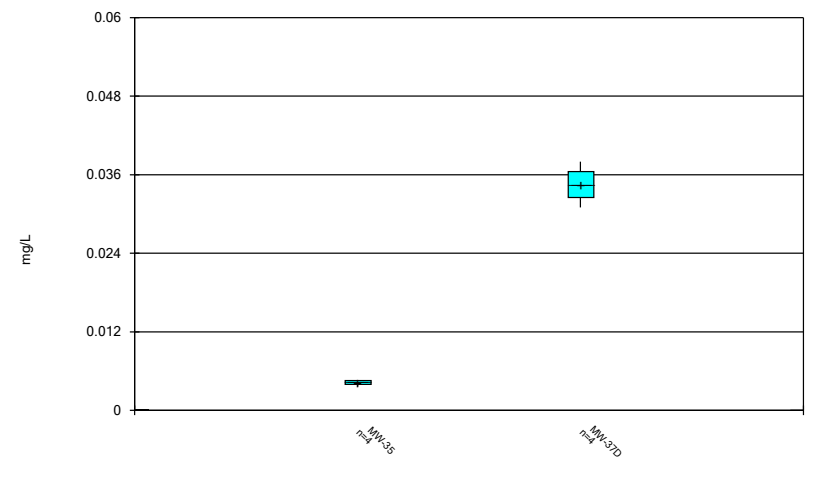
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Box & Whiskers Plot



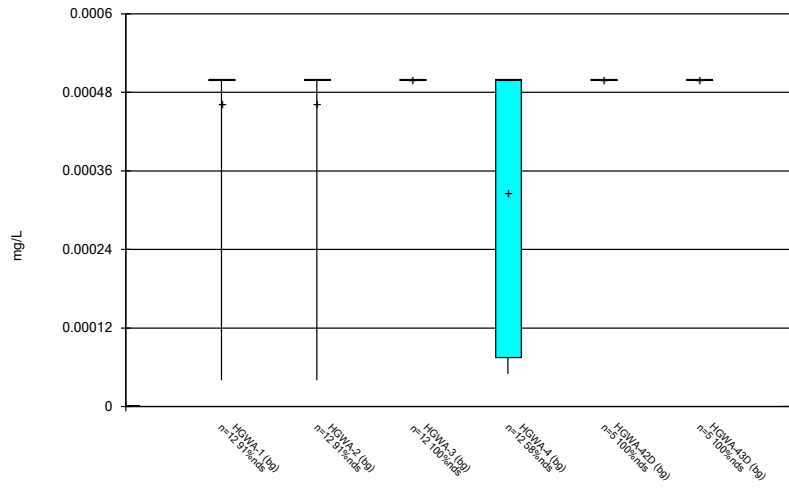
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Box & Whiskers Plot



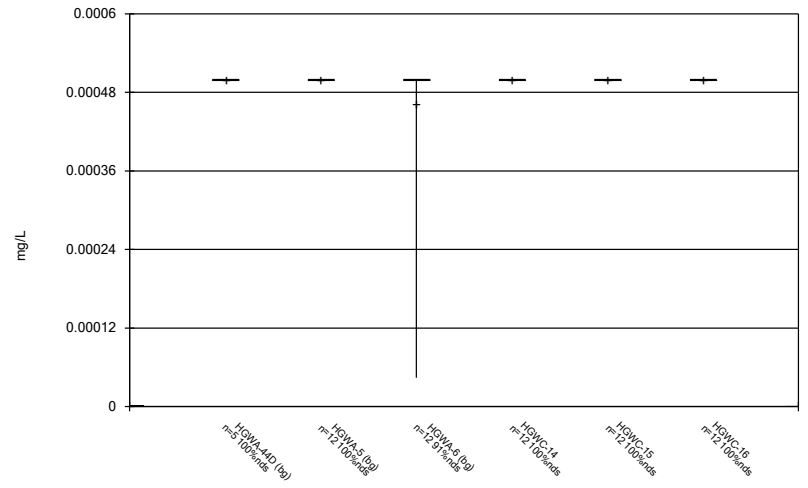
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### Box & Whiskers Plot



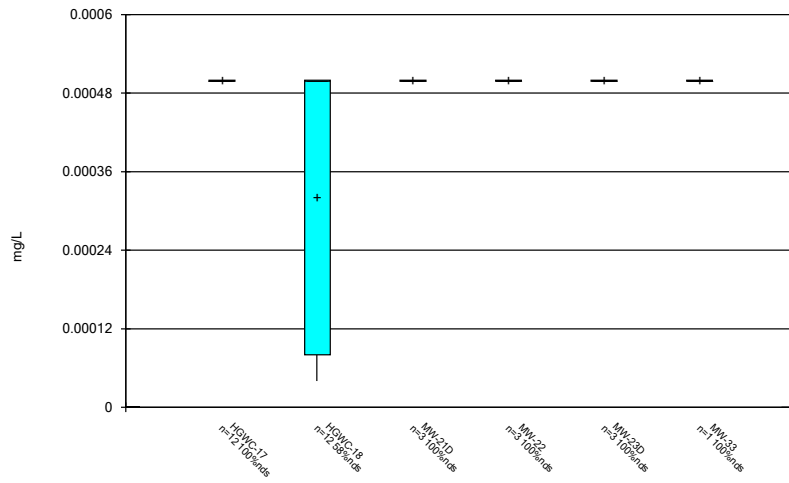
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 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Box & Whiskers Plot



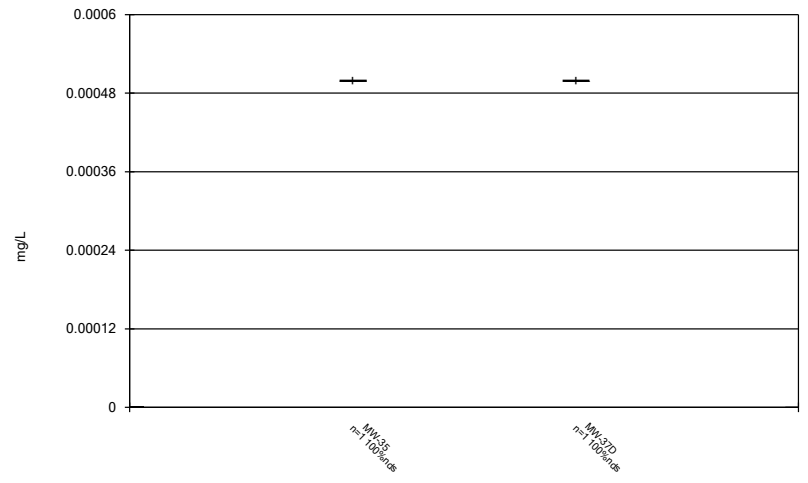
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 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Box & Whiskers Plot



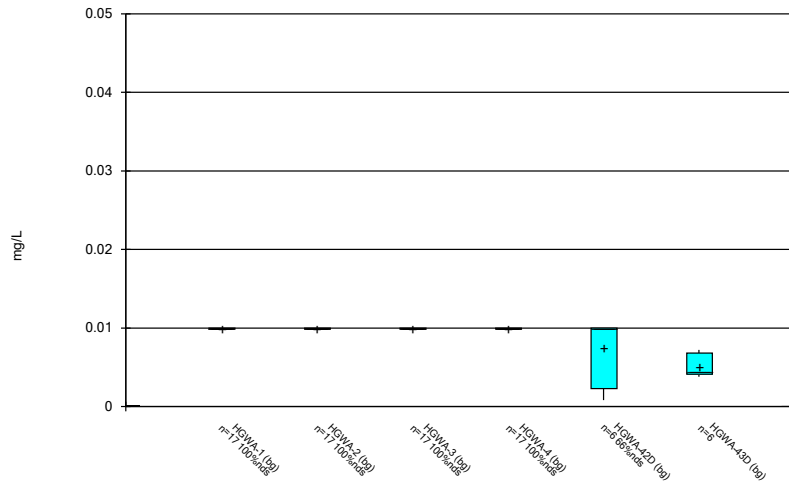
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 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Box & Whiskers Plot



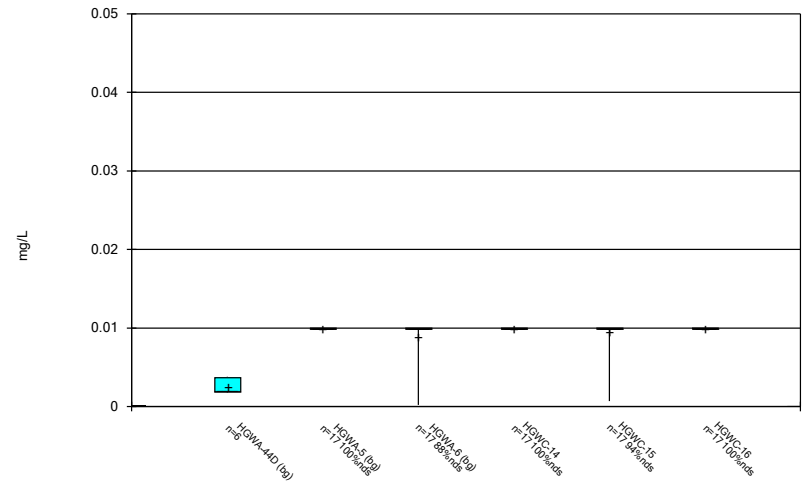
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 Plant Hammond Client: Southern Company Data: Hammond AP-2

Box & Whiskers Plot



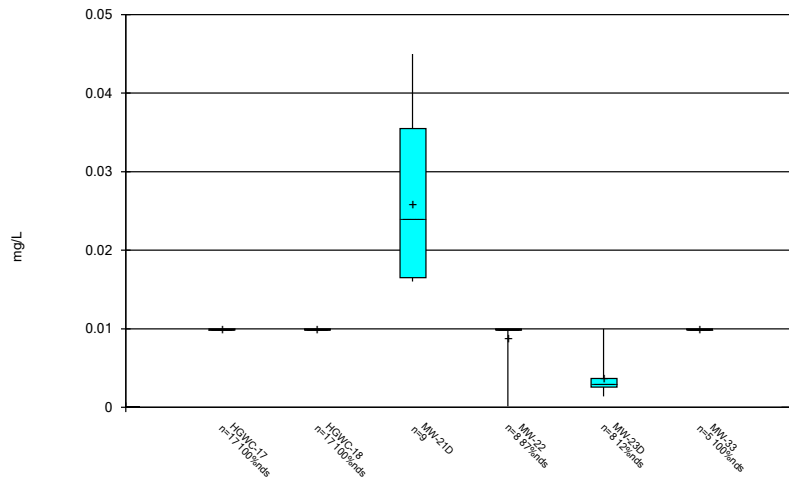
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Box & Whiskers Plot



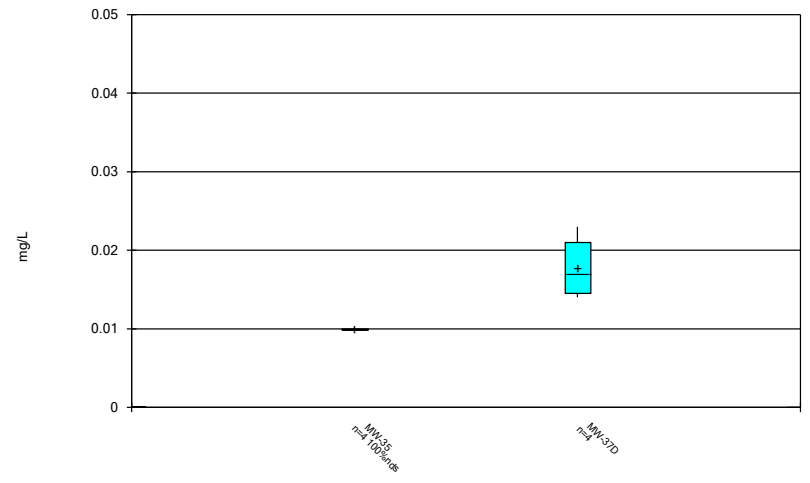
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Box & Whiskers Plot



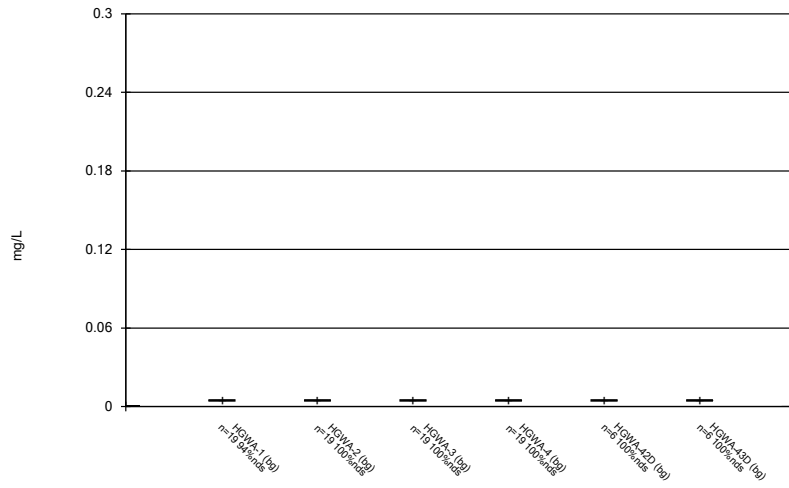
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Box & Whiskers Plot



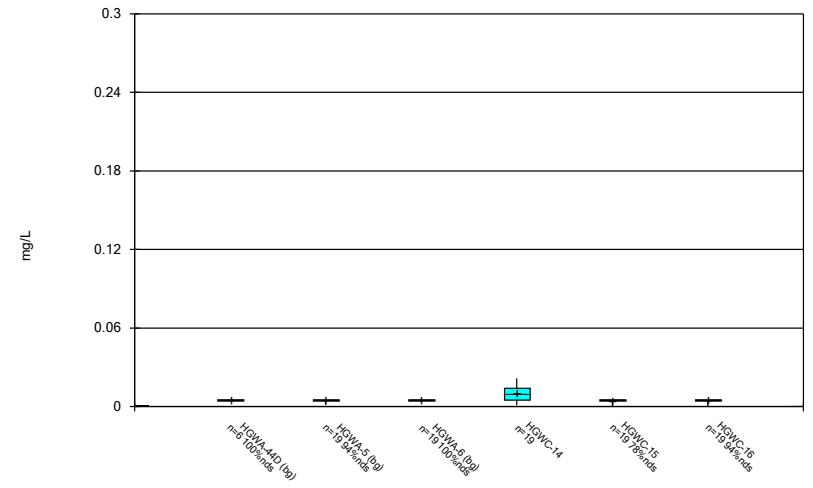
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Box & Whiskers Plot



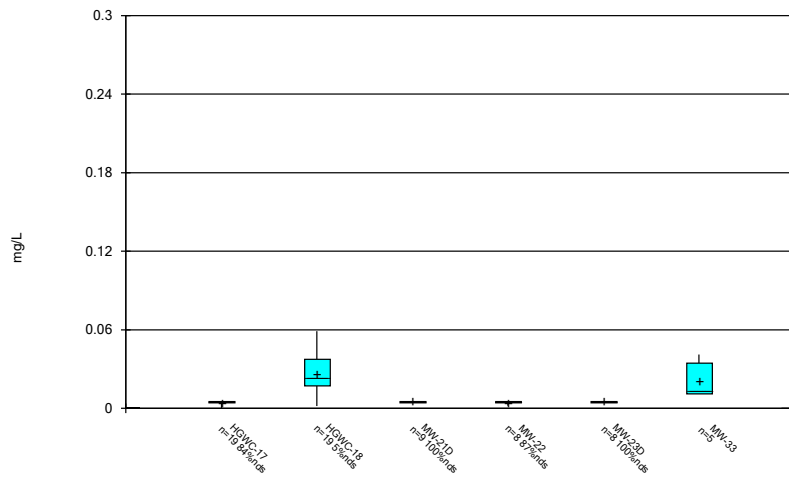
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Box & Whiskers Plot



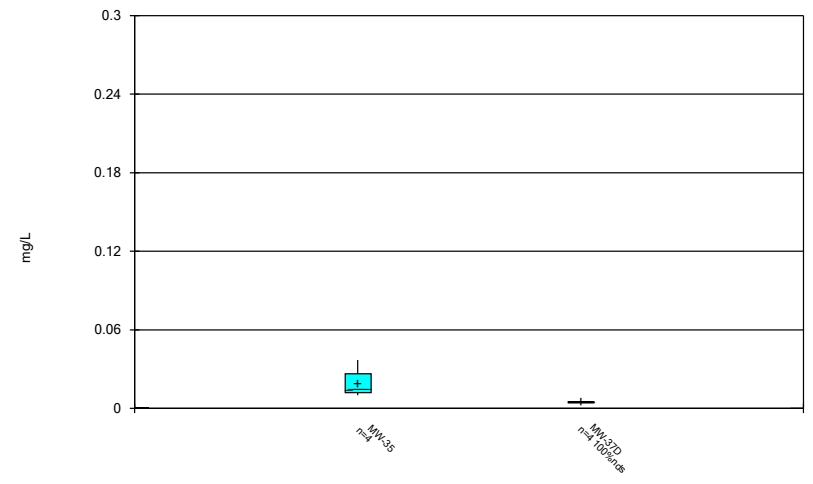
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Box & Whiskers Plot



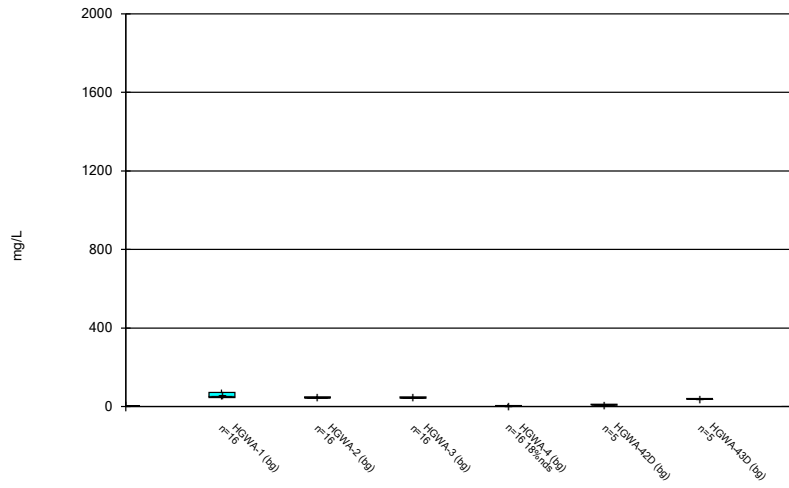
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Box & Whiskers Plot



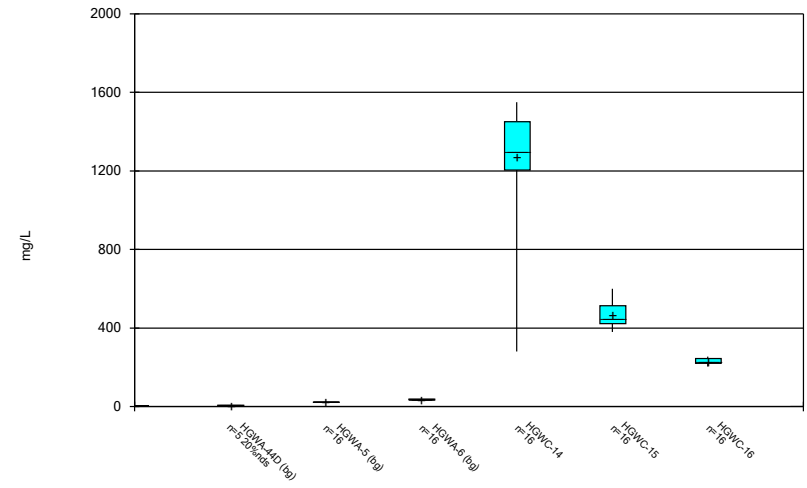
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 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Box & Whiskers Plot



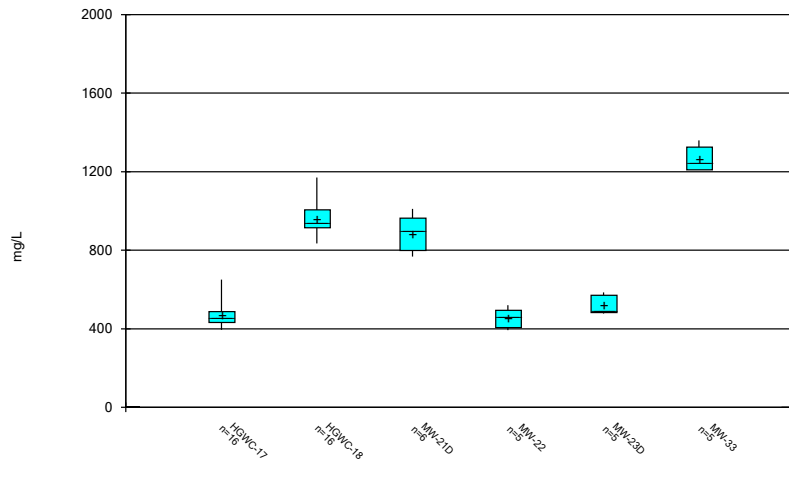
Constituent: Sulfate Analysis Run 5/4/2021 8:22 PM  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Box & Whiskers Plot



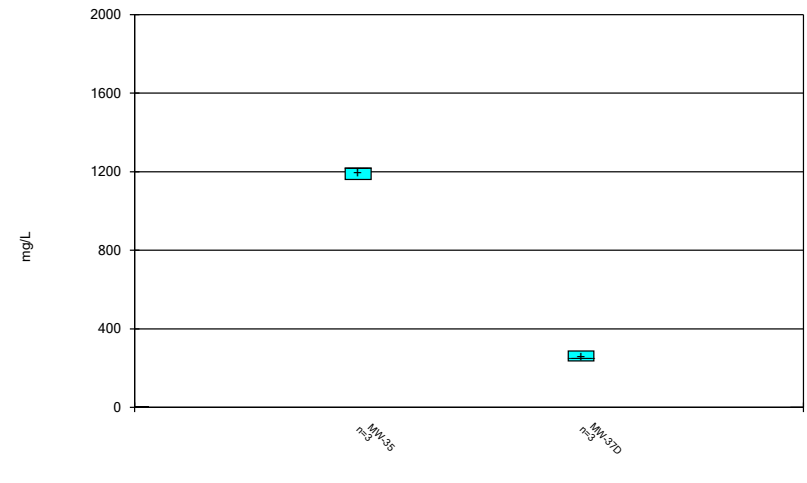
Constituent: Sulfate Analysis Run 5/4/2021 8:22 PM  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Box & Whiskers Plot



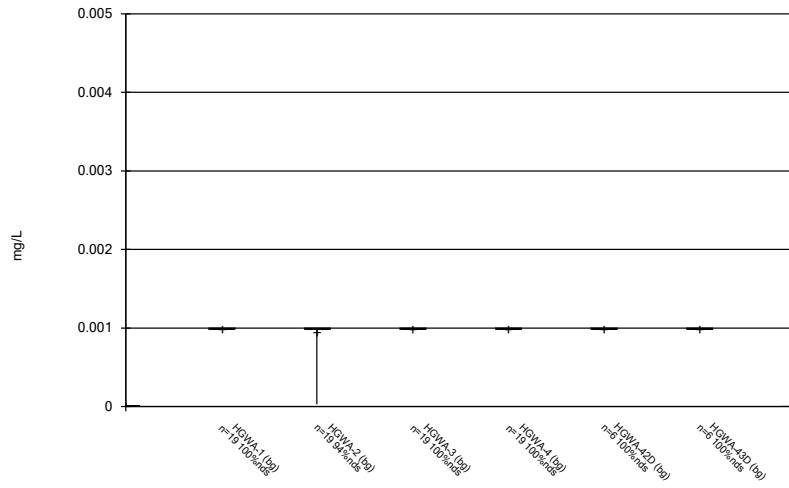
Constituent: Sulfate Analysis Run 5/4/2021 8:22 PM  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Box & Whiskers Plot



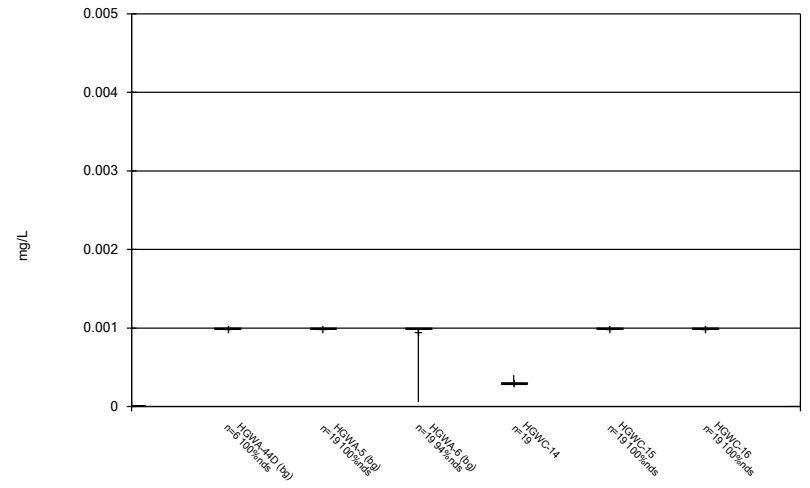
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 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Box & Whiskers Plot



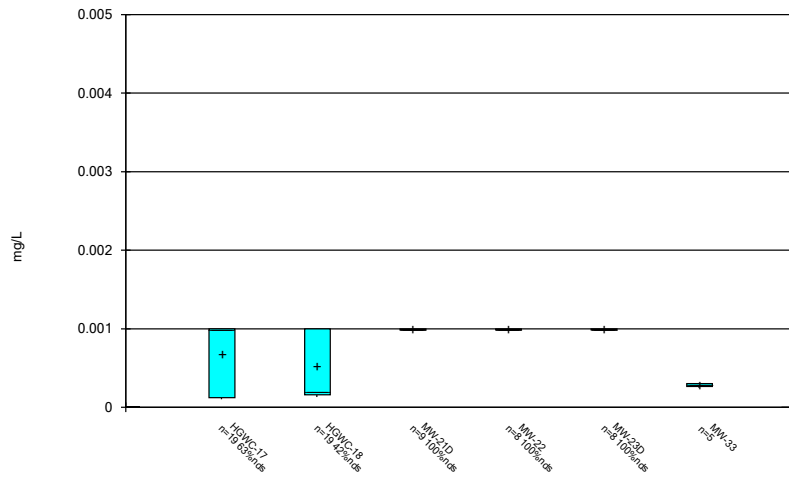
Constituent: Thallium Analysis Run 5/4/2021 8:22 PM  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Box & Whiskers Plot



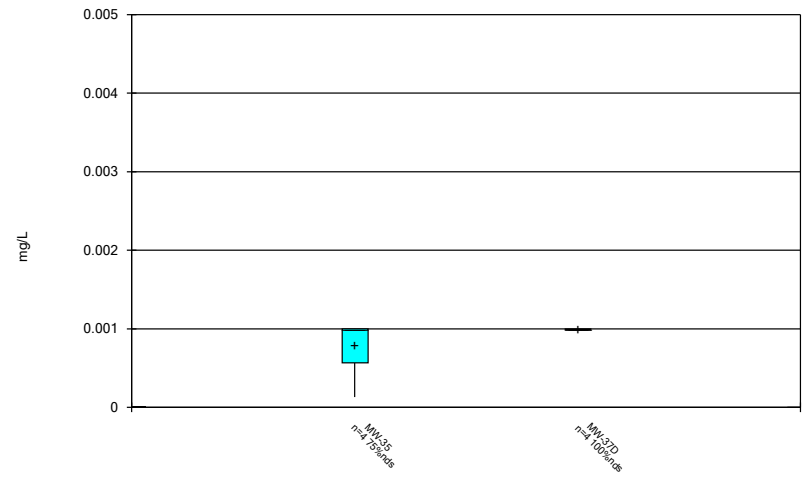
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 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Box & Whiskers Plot



Constituent: Thallium Analysis Run 5/4/2021 8:22 PM  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

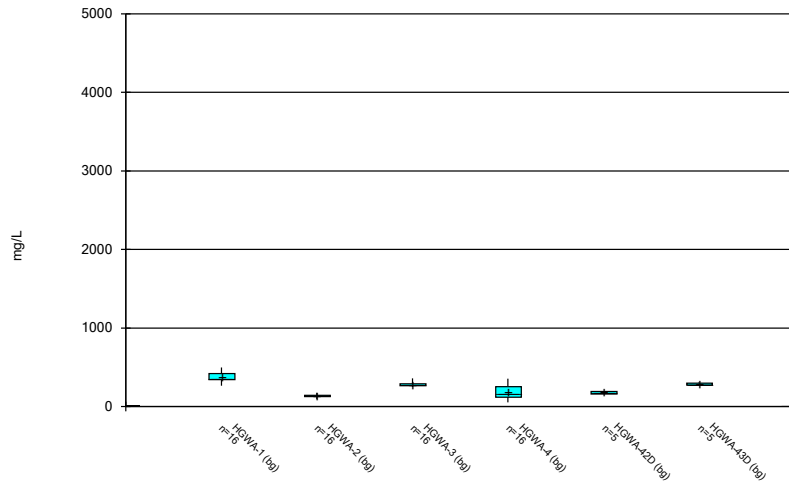
### Box & Whiskers Plot



Constituent: Thallium Analysis Run 5/4/2021 8:22 PM  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

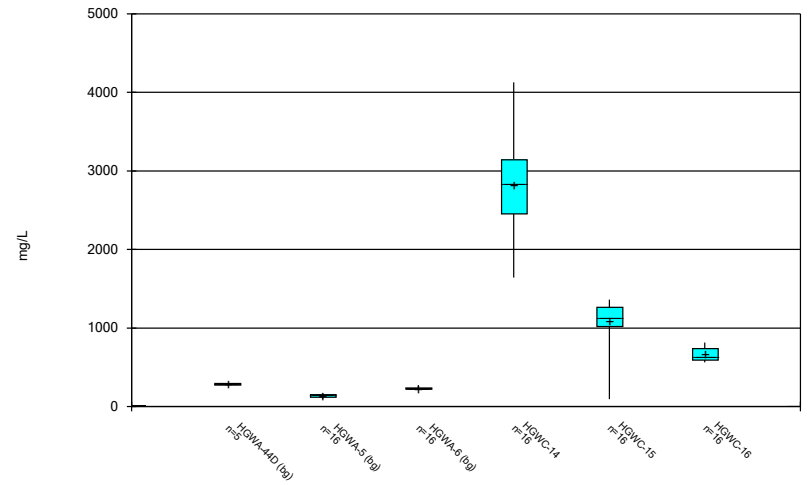


Box & Whiskers Plot



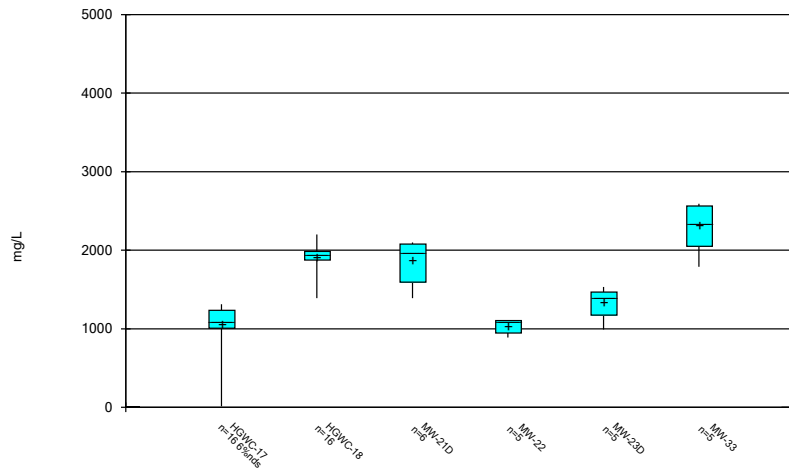
Constituent: Total Dissolved Solids Analysis Run 5/4/2021 8:22 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

Box & Whiskers Plot



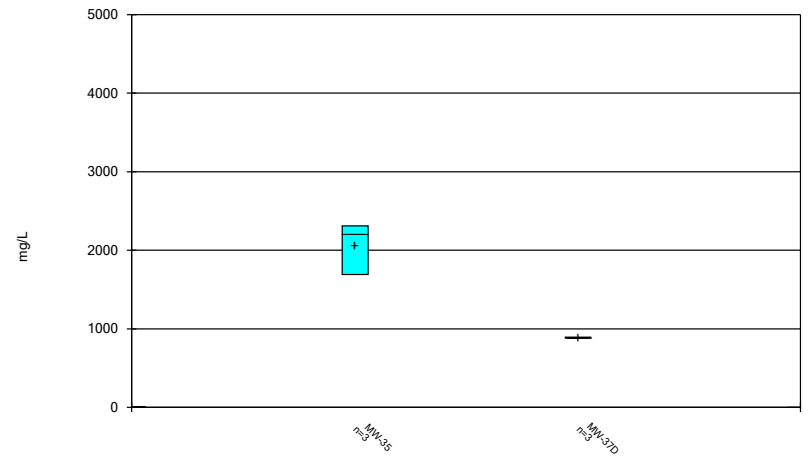
Constituent: Total Dissolved Solids Analysis Run 5/4/2021 8:22 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

Box & Whiskers Plot



Constituent: Total Dissolved Solids Analysis Run 5/4/2021 8:22 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

Box & Whiskers Plot



Constituent: Total Dissolved Solids Analysis Run 5/4/2021 8:22 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

FIGURE C.

# Outlier Summary

Plant Hammond Client: Southern Company Data: Hammond AP-2 Printed 5/5/2021, 1:53 PM

No outliers were flagged.

FIGURE D.

# Appendix III Interwell Prediction Limits - Significant Results

Plant Hammond Client: Southern Company Data: Hammond AP-2 Printed 5/5/2021, 9:44 AM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Boron (mg/L)	HGWC-14	0.4	n/a	3/17/2021	11.8	Yes	111	n/a	n/a	5.405	n/a	n/a	0.0001613	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-15	0.4	n/a	3/16/2021	2.4	Yes	111	n/a	n/a	5.405	n/a	n/a	0.0001613	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-16	0.4	n/a	3/17/2021	2.7	Yes	111	n/a	n/a	5.405	n/a	n/a	0.0001613	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-17	0.4	n/a	3/18/2021	6.8	Yes	111	n/a	n/a	5.405	n/a	n/a	0.0001613	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-18	0.4	n/a	3/18/2021	8.9	Yes	111	n/a	n/a	5.405	n/a	n/a	0.0001613	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-14	138.6	n/a	3/17/2021	572	Yes	111	3.83	0.611	0	None	ln(x)	0.001504	Param Inter 1 of 2
Calcium (mg/L)	HGWC-15	138.6	n/a	3/16/2021	196	Yes	111	3.83	0.611	0	None	ln(x)	0.001504	Param Inter 1 of 2
Calcium (mg/L)	HGWC-16	138.6	n/a	3/17/2021	198	Yes	111	3.83	0.611	0	None	ln(x)	0.001504	Param Inter 1 of 2
Calcium (mg/L)	HGWC-17	138.6	n/a	3/18/2021	266	Yes	111	3.83	0.611	0	None	ln(x)	0.001504	Param Inter 1 of 2
Calcium (mg/L)	HGWC-18	138.6	n/a	3/18/2021	407	Yes	111	3.83	0.611	0	None	ln(x)	0.001504	Param Inter 1 of 2
Chloride (mg/L)	HGWC-14	20.4	n/a	3/17/2021	233	Yes	111	n/a	n/a	0	n/a	n/a	0.0001613	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-15	20.4	n/a	3/16/2021	103	Yes	111	n/a	n/a	0	n/a	n/a	0.0001613	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-16	20.4	n/a	3/17/2021	93.8	Yes	111	n/a	n/a	0	n/a	n/a	0.0001613	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-17	20.4	n/a	3/18/2021	138	Yes	111	n/a	n/a	0	n/a	n/a	0.0001613	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-18	20.4	n/a	3/18/2021	90.2	Yes	111	n/a	n/a	0	n/a	n/a	0.0001613	NP Inter (normality) 1 of 2
Field pH (s.u.)	HGWC-14	7.92	4.9	3/17/2021	4.72	Yes	138	n/a	n/a	0	n/a	n/a	0.0002064	NP Inter (normality) 1 of 2
Field pH (s.u.)	HGWC-18	7.92	4.9	3/18/2021	4.54	Yes	138	n/a	n/a	0	n/a	n/a	0.0002064	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-14	85.9	n/a	3/17/2021	1300	Yes	111	n/a	n/a	3.604	n/a	n/a	0.0001613	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-15	85.9	n/a	3/16/2021	379	Yes	111	n/a	n/a	3.604	n/a	n/a	0.0001613	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-16	85.9	n/a	3/17/2021	250	Yes	111	n/a	n/a	3.604	n/a	n/a	0.0001613	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-17	85.9	n/a	3/18/2021	447	Yes	111	n/a	n/a	3.604	n/a	n/a	0.0001613	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-18	85.9	n/a	3/18/2021	1050	Yes	111	n/a	n/a	3.604	n/a	n/a	0.0001613	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-14	496	n/a	3/17/2021	1640	Yes	111	n/a	n/a	0	n/a	n/a	0.0001613	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-16	496	n/a	3/17/2021	768	Yes	111	n/a	n/a	0	n/a	n/a	0.0001613	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-17	496	n/a	3/18/2021	1020	Yes	111	n/a	n/a	0	n/a	n/a	0.0001613	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-18	496	n/a	3/18/2021	1390	Yes	111	n/a	n/a	0	n/a	n/a	0.0001613	NP Inter (normality) 1 of 2

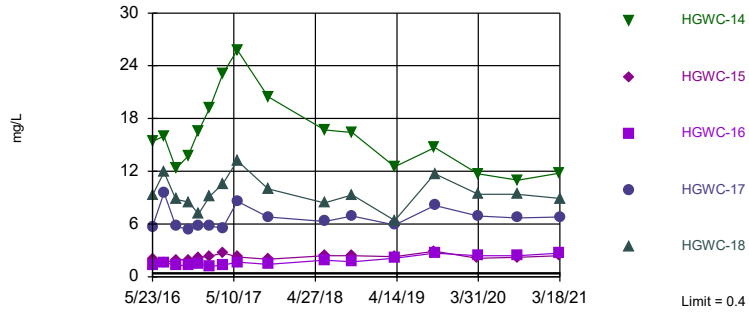
# Appendix III Interwell Prediction Limits - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-2 Printed 5/5/2021, 9:44 AM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Boron (mg/L)	HGWC-14	0.4	n/a	3/17/2021	11.8	Yes	111	n/a	n/a	5.405	n/a	n/a	0.0001613	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-15	0.4	n/a	3/16/2021	2.4	Yes	111	n/a	n/a	5.405	n/a	n/a	0.0001613	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-16	0.4	n/a	3/17/2021	2.7	Yes	111	n/a	n/a	5.405	n/a	n/a	0.0001613	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-17	0.4	n/a	3/18/2021	6.8	Yes	111	n/a	n/a	5.405	n/a	n/a	0.0001613	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-18	0.4	n/a	3/18/2021	8.9	Yes	111	n/a	n/a	5.405	n/a	n/a	0.0001613	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-14	138.6	n/a	3/17/2021	572	Yes	111	3.83	0.611	0	None	ln(x)	0.001504	Param Inter 1 of 2
Calcium (mg/L)	HGWC-15	138.6	n/a	3/16/2021	196	Yes	111	3.83	0.611	0	None	ln(x)	0.001504	Param Inter 1 of 2
Calcium (mg/L)	HGWC-16	138.6	n/a	3/17/2021	198	Yes	111	3.83	0.611	0	None	ln(x)	0.001504	Param Inter 1 of 2
Calcium (mg/L)	HGWC-17	138.6	n/a	3/18/2021	266	Yes	111	3.83	0.611	0	None	ln(x)	0.001504	Param Inter 1 of 2
Calcium (mg/L)	HGWC-18	138.6	n/a	3/18/2021	407	Yes	111	3.83	0.611	0	None	ln(x)	0.001504	Param Inter 1 of 2
Chloride (mg/L)	HGWC-14	20.4	n/a	3/17/2021	233	Yes	111	n/a	n/a	0	n/a	n/a	0.0001613	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-15	20.4	n/a	3/16/2021	103	Yes	111	n/a	n/a	0	n/a	n/a	0.0001613	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-16	20.4	n/a	3/17/2021	93.8	Yes	111	n/a	n/a	0	n/a	n/a	0.0001613	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-17	20.4	n/a	3/18/2021	138	Yes	111	n/a	n/a	0	n/a	n/a	0.0001613	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-18	20.4	n/a	3/18/2021	90.2	Yes	111	n/a	n/a	0	n/a	n/a	0.0001613	NP Inter (normality) 1 of 2
Field pH (s.u.)	HGWC-14	7.92	4.9	3/17/2021	4.72	Yes	138	n/a	n/a	0	n/a	n/a	0.0002064	NP Inter (normality) 1 of 2
Field pH (s.u.)	HGWC-15	7.92	4.9	3/16/2021	6.08	No	138	n/a	n/a	0	n/a	n/a	0.0002064	NP Inter (normality) 1 of 2
Field pH (s.u.)	HGWC-16	7.92	4.9	3/17/2021	7.19	No	138	n/a	n/a	0	n/a	n/a	0.0002064	NP Inter (normality) 1 of 2
Field pH (s.u.)	HGWC-17	7.92	4.9	3/18/2021	6.43	No	138	n/a	n/a	0	n/a	n/a	0.0002064	NP Inter (normality) 1 of 2
Field pH (s.u.)	HGWC-18	7.92	4.9	3/18/2021	4.54	Yes	138	n/a	n/a	0	n/a	n/a	0.0002064	NP Inter (normality) 1 of 2
Fluoride (mg/L)	HGWC-14	0.74	n/a	3/17/2021	0.076J	No	138	n/a	n/a	31.88	n/a	n/a	0.0001032	NP Inter (normality) 1 of 2
Fluoride (mg/L)	HGWC-15	0.74	n/a	3/16/2021	0.1ND	No	138	n/a	n/a	31.88	n/a	n/a	0.0001032	NP Inter (normality) 1 of 2
Fluoride (mg/L)	HGWC-16	0.74	n/a	3/17/2021	0.1ND	No	138	n/a	n/a	31.88	n/a	n/a	0.0001032	NP Inter (normality) 1 of 2
Fluoride (mg/L)	HGWC-17	0.74	n/a	3/18/2021	0.057J	No	138	n/a	n/a	31.88	n/a	n/a	0.0001032	NP Inter (normality) 1 of 2
Fluoride (mg/L)	HGWC-18	0.74	n/a	3/18/2021	0.64	No	138	n/a	n/a	31.88	n/a	n/a	0.0001032	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-14	85.9	n/a	3/17/2021	1300	Yes	111	n/a	n/a	3.604	n/a	n/a	0.0001613	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-15	85.9	n/a	3/16/2021	379	Yes	111	n/a	n/a	3.604	n/a	n/a	0.0001613	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-16	85.9	n/a	3/17/2021	250	Yes	111	n/a	n/a	3.604	n/a	n/a	0.0001613	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-17	85.9	n/a	3/18/2021	447	Yes	111	n/a	n/a	3.604	n/a	n/a	0.0001613	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-18	85.9	n/a	3/18/2021	1050	Yes	111	n/a	n/a	3.604	n/a	n/a	0.0001613	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-14	496	n/a	3/17/2021	1640	Yes	111	n/a	n/a	0	n/a	n/a	0.0001613	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-15	496	n/a	3/16/2021	92	No	111	n/a	n/a	0	n/a	n/a	0.0001613	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-16	496	n/a	3/17/2021	768	Yes	111	n/a	n/a	0	n/a	n/a	0.0001613	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-17	496	n/a	3/18/2021	1020	Yes	111	n/a	n/a	0	n/a	n/a	0.0001613	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-18	496	n/a	3/18/2021	1390	Yes	111	n/a	n/a	0	n/a	n/a	0.0001613	NP Inter (normality) 1 of 2

Exceeds Limit: HGWC-14, HGWC-15, HGWC-16, HGWC-17, HGWC-18

### Prediction Limit Interwell Non-parametric

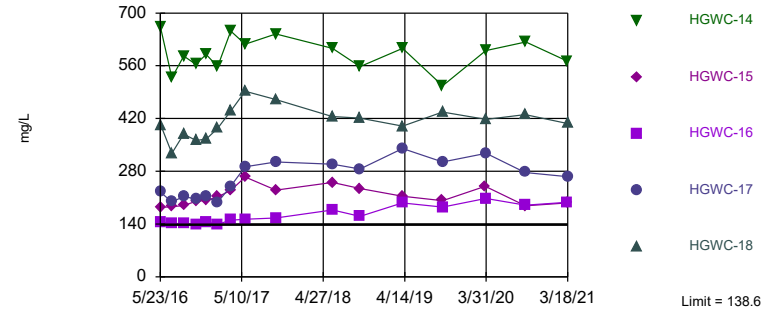


Non-parametric test used in lieu of parametric prediction limit because the Chi Squared normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 111 background values. 5.405% NDs. Annual per-constituent alpha = 0.001612. Individual comparison alpha = 0.0001613 (1 of 2). Comparing 5 points to limit.

Constituent: Boron Analysis Run 5/5/2021 9:43 AM View: Appendix III  
Plant Hammond Client: Southern Company Data: Hammond AP-2

Exceeds Limit: HGWC-14, HGWC-15, HGWC-16, HGWC-17, HGWC-18

### Prediction Limit Interwell Parametric

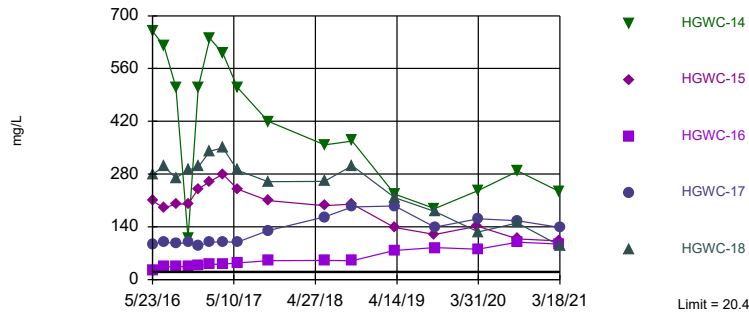


Background Data Summary (based on natural log transformation): Mean=3.83, Std. Dev.=0.611, n=111. Normality test: Chi Squared @alpha = 0.01, calculated = 7.288, critical = 14.07. Kappa = 1.802 (c=7, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.001504. Comparing 5 points to limit.

Constituent: Calcium Analysis Run 5/5/2021 9:43 AM View: Appendix III  
Plant Hammond Client: Southern Company Data: Hammond AP-2

Exceeds Limit: HGWC-14, HGWC-15, HGWC-16, HGWC-17, HGWC-18

### Prediction Limit Interwell Non-parametric

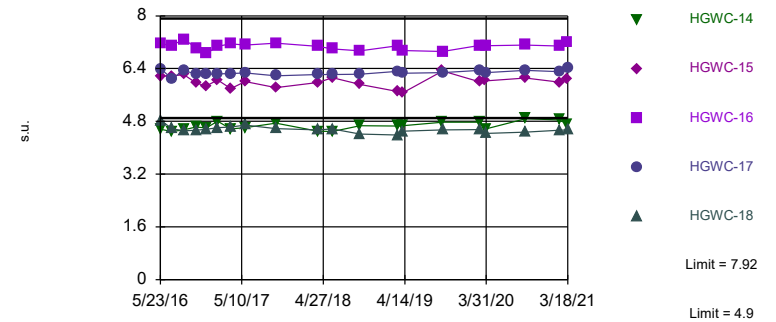


Non-parametric test used in lieu of parametric prediction limit because the Chi Squared normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 111 background values. Annual per-constituent alpha = 0.001612. Individual comparison alpha = 0.0001613 (1 of 2). Comparing 5 points to limit.

Constituent: Chloride Analysis Run 5/5/2021 9:43 AM View: Appendix III  
Plant Hammond Client: Southern Company Data: Hammond AP-2

Exceeds Limits: HGWC-14, HGWC-18

### 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 138 background values. Annual per-constituent alpha = 0.002063. Individual comparison alpha = 0.0002064 (1 of 2). Comparing 5 points to limit.

Constituent: Field pH Analysis Run 5/5/2021 9:43 AM View: Appendix III  
Plant Hammond Client: Southern Company Data: Hammond AP-2







# Prediction Limit

Constituent: Boron (mg/L) Analysis Run 5/5/2021 9:44 AM View: Appendix III  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWC-16	HGWC-18	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-42D (bg)
5/19/2016					
5/20/2016					
5/23/2016	1.36				
5/24/2016		9.33			
7/11/2016					
7/12/2016	1.62	11.9			
8/30/2016					
9/1/2016	1.31	8.8			
10/19/2016					
10/20/2016					
10/24/2016					
10/25/2016	1.27	8.5			
12/6/2016					
12/7/2016	1.42				
12/8/2016		7.15			
1/24/2017					
1/26/2017	1.19	9.17			
3/21/2017					
3/22/2017	1.32				
3/23/2017		10.6			
5/22/2017					
5/23/2017					
5/24/2017	1.67				
5/25/2017		13.2			
10/3/2017					
10/4/2017	1.43	10			
6/4/2018					
6/5/2018		8.4			
6/6/2018	1.9				
10/1/2018					
10/2/2018					
10/3/2018	1.7	9.3			
4/1/2019					
4/2/2019					
4/4/2019	2.1				
4/5/2019		6.4			
9/23/2019					
9/24/2019					
9/25/2019	2.7	11.7			
3/25/2020					
3/26/2020					
3/30/2020	2.4				
3/31/2020		9.4			
9/15/2020		9.4			
9/16/2020			0.061 (J)	0.23	
9/17/2020	2.4				0.098 (J)
9/18/2020					
11/10/2020			0.057 (J)	0.29	
11/11/2020					0.058 (J)
12/15/2020			0.052 (J)	0.31	0.043 (J)
1/19/2021			0.049 (J)	0.4	
1/20/2021					0.045 (J)

# Prediction Limit

Constituent: Boron (mg/L) Analysis Run 5/5/2021 9:44 AM View: Appendix III  
Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWC-16	HGWC-18	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-42D (bg)
3/10/2021				0.39	0.048
3/11/2021			0.06		
3/16/2021					
3/17/2021	2.7				
3/18/2021		8.9			





# Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 5/5/2021 9:44 AM View: Appendix III

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWC-16	HGWC-18	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-42D (bg)
5/19/2016					
5/20/2016					
5/23/2016	146				
5/24/2016		403			
7/11/2016					
7/12/2016	142	328			
8/30/2016					
9/1/2016	141	379			
10/19/2016					
10/20/2016					
10/24/2016					
10/25/2016	138	362			
12/6/2016					
12/7/2016	146				
12/8/2016		366			
1/24/2017					
1/26/2017	139	394			
3/21/2017					
3/22/2017	150				
3/23/2017		440			
5/22/2017					
5/23/2017					
5/24/2017	153				
5/25/2017		492			
10/3/2017					
10/4/2017	156	470			
6/4/2018					
6/5/2018		425			
6/6/2018	177				
10/1/2018					
10/2/2018					
10/3/2018	160	421			
4/1/2019					
4/2/2019					
4/4/2019	196				
4/5/2019		400			
9/23/2019					
9/24/2019					
9/25/2019	185	437			
3/25/2020					
3/26/2020					
3/30/2020	208				
3/31/2020		418			
9/15/2020		430			
9/16/2020			56	30	
9/17/2020	190				43.8
9/18/2020					
11/10/2020			63.3	33.6	
11/11/2020					44.4
12/15/2020			62.6	28.7	47.3
1/19/2021			60.1	33	
1/20/2021					41.8

# Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 5/5/2021 9:44 AM View: Appendix III  
Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWC-16	HGWC-18	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-42D (bg)
3/10/2021				18.3	43.4
3/11/2021			59.6		
3/16/2021					
3/17/2021	198				
3/18/2021		407			







# Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 5/5/2021 9:44 AM View: Appendix III

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWC-16	HGWC-18	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-42D (bg)
5/19/2016					
5/20/2016					
5/23/2016	25.8				
5/24/2016		280			
7/11/2016					
7/12/2016	34	300			
8/30/2016					
9/1/2016	34	270			
10/19/2016					
10/20/2016					
10/24/2016					
10/25/2016	35	290			
12/6/2016					
12/7/2016	38				
12/8/2016		300			
1/24/2017					
1/26/2017	41	340			
3/21/2017					
3/22/2017	41				
3/23/2017		350			
5/22/2017					
5/23/2017					
5/24/2017	44				
5/25/2017		290			
10/3/2017					
10/4/2017	50	260			
6/4/2018					
6/5/2018		261			
6/6/2018	50.6				
10/1/2018					
10/2/2018					
10/3/2018	49.9	302			
4/1/2019					
4/2/2019					
4/4/2019	76.8				
4/5/2019		217			
9/23/2019					
9/24/2019					
9/25/2019	84.4	181			
3/25/2020					
3/26/2020					
3/30/2020	80.2				
3/31/2020		126			
9/15/2020		150			
9/16/2020			4.1	7.2	
9/17/2020	99.3				5.8
9/18/2020					
11/10/2020			4.4	7.8	
11/11/2020					3.1
12/15/2020			4.7	9.4	3.2
1/19/2021			4.1	9.5	
1/20/2021					2.8

# Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 5/5/2021 9:44 AM View: Appendix III  
Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWC-16	HGWC-18	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-42D (bg)
3/10/2021				12.3	3
3/11/2021			4.5		
3/16/2021					
3/17/2021	93.8				
3/18/2021		90.2			





# Prediction Limit

Constituent: Field pH (s.u.) Analysis Run 5/5/2021 9:44 AM View: Appendix III

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWC-17	HGWC-18	HGWA-44D (bg)	HGWA-43D (bg)	HGWA-42D (bg)
5/19/2016					
5/20/2016					
5/23/2016	6.4				
5/24/2016		4.83			
7/11/2016					
7/12/2016	6.09	4.58			
8/30/2016					
9/1/2016	6.35	4.51			
10/19/2016					
10/20/2016					
10/24/2016					
10/25/2016	6.23	4.53			
12/6/2016					
12/7/2016	6.23				
12/8/2016		4.56			
1/24/2017					
1/26/2017	6.24	4.61			
3/21/2017					
3/22/2017	6.25				
3/23/2017		4.63			
5/22/2017					
5/23/2017					
5/24/2017					
5/25/2017	6.27	4.69			
10/3/2017					
10/4/2017	6.18	4.58			
4/2/2018					
4/3/2018	6.22	4.54			
4/4/2018					
6/4/2018					
6/5/2018		4.57			
6/6/2018	6.22				
10/1/2018					
10/2/2018					
10/3/2018	6.23	4.41			
3/11/2019					
3/12/2019					
3/14/2019		4.39			
3/15/2019	6.32				
4/1/2019					
4/2/2019					
4/4/2019					
4/5/2019	6.26	4.5			
9/23/2019					
9/24/2019					
9/25/2019	6.28	4.54			
3/2/2020					
3/3/2020	6.35	4.55			
3/25/2020					
3/26/2020					
3/30/2020					
3/31/2020	6.28	4.43			

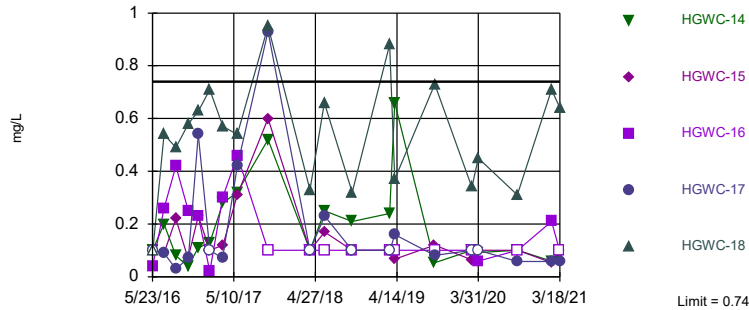
# Prediction Limit

Constituent: Field pH (s.u.) Analysis Run 5/5/2021 9:44 AM View: Appendix III  
Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWC-17	HGWC-18	HGWA-44D (bg)	HGWA-43D (bg)	HGWA-42D (bg)
9/15/2020		4.47			
9/16/2020	6.35		7.83	7.52	
9/17/2020					7.62
9/18/2020					
11/10/2020			7.84	7.27	
11/11/2020					7.68
12/15/2020			7.87	7.39	7.64
1/19/2021			7.86	7.39	
1/20/2021					7.68
2/8/2021					7.64
2/9/2021			7.84	7.44	
2/10/2021					
2/11/2021	6.31	4.53			
2/12/2021					
3/10/2021			7.92		7.7
3/11/2021				7.46	
3/16/2021					
3/17/2021					
3/18/2021	6.43	4.54			

Within Limit

Prediction Limit  
Interwell Non-parametric

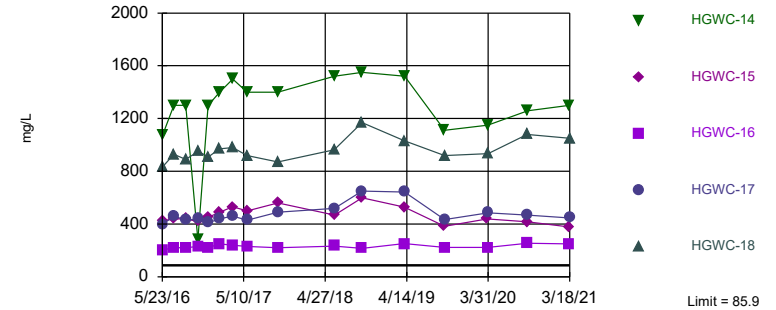


Non-parametric test used in lieu of parametric prediction limit because the Chi Squared normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 138 background values. 31.88% NDs. Annual per-constituent alpha = 0.001032. Individual comparison alpha = 0.0001032 (1 of 2). Comparing 5 points to limit.

Constituent: Fluoride Analysis Run 5/5/2021 9:43 AM View: Appendix III  
Plant Hammond Client: Southern Company Data: Hammond AP-2

Exceeds Limit: HGWC-14, HGWC-15,  
HGWC-16, HGWC-17, HGWC-18

Prediction Limit  
Interwell Non-parametric

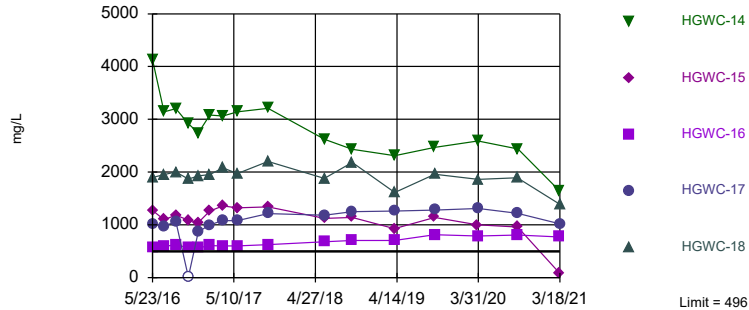


Non-parametric test used in lieu of parametric prediction limit because the Chi Squared normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 111 background values. 3.604% NDs. Annual per-constituent alpha = 0.001612. Individual comparison alpha = 0.0001613 (1 of 2). Comparing 5 points to limit.

Constituent: Sulfate Analysis Run 5/5/2021 9:43 AM View: Appendix III  
Plant Hammond Client: Southern Company Data: Hammond AP-2

Exceeds Limit: HGWC-14, HGWC-16,  
HGWC-17, HGWC-18

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 111 background values. Annual per-constituent alpha = 0.001612. Individual comparison alpha = 0.0001613 (1 of 2). Comparing 5 points to limit.

Constituent: Total Dissolved Solids Analysis Run 5/5/2021 9:43 AM View: Appendix III  
Plant Hammond Client: Southern Company Data: Hammond AP-2







# Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 5/5/2021 9:44 AM View: Appendix III  
Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWC-17	HGWC-18	HGWA-44D (bg)	HGWA-43D (bg)	HGWA-42D (bg)
5/19/2016					
5/20/2016					
5/23/2016	<0.1				
5/24/2016		<0.1			
7/11/2016					
7/12/2016	0.09 (J)	0.54			
8/30/2016					
9/1/2016	0.03 (J)	0.49			
10/19/2016					
10/20/2016					
10/24/2016					
10/25/2016	0.07 (J)	0.58			
12/6/2016					
12/7/2016	0.54				
12/8/2016		0.63			
1/24/2017					
1/26/2017	<0.1	0.71			
3/21/2017					
3/22/2017	0.07 (J)				
3/23/2017		0.57			
5/22/2017					
5/23/2017					
5/24/2017					
5/25/2017	0.42	0.54			
10/3/2017					
10/4/2017	0.93	0.95			
4/2/2018					
4/3/2018	<0.1	0.33			
4/4/2018					
6/4/2018					
6/5/2018		0.66			
6/6/2018	0.23 (J)				
10/1/2018					
10/2/2018					
10/3/2018	<0.1	0.32			
3/11/2019					
3/12/2019					
3/14/2019		0.88			
3/15/2019	<0.1				
4/1/2019					
4/2/2019					
4/4/2019					
4/5/2019	0.16 (J)	0.37			
9/23/2019					
9/24/2019					
9/25/2019	0.081 (J)	0.73			
3/2/2020					
3/3/2020	<0.1	0.34			
3/25/2020					
3/26/2020					
3/30/2020					
3/31/2020	<0.1	0.45			

# Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 5/5/2021 9:44 AM View: Appendix III  
Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWC-17	HGWC-18	HGWA-44D (bg)	HGWA-43D (bg)	HGWA-42D (bg)
9/15/2020		0.31			
9/16/2020	0.058 (J)		0.52	0.22	
9/17/2020					0.2
9/18/2020					
11/10/2020			0.59	0.19	
11/11/2020					0.1
12/15/2020			0.67	0.21	0.11
1/19/2021			0.74	0.16	
1/20/2021					0.082 (J)
2/8/2021					0.096 (J)
2/9/2021			0.44	0.19	
2/10/2021					
2/11/2021	0.058 (J)	0.71			
2/12/2021					
3/10/2021			0.65		0.11
3/11/2021				0.2	
3/16/2021					
3/17/2021					
3/18/2021	0.057 (J)	0.64			





# Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 5/5/2021 9:44 AM View: Appendix III

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWC-16	HGWC-18	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-42D (bg)
5/19/2016					
5/20/2016					
5/23/2016	203				
5/24/2016		834			
7/11/2016					
7/12/2016	220	930			
8/30/2016					
9/1/2016	220	890			
10/19/2016					
10/20/2016					
10/24/2016					
10/25/2016	230	950			
12/6/2016					
12/7/2016	220				
12/8/2016		910			
1/24/2017					
1/26/2017	250	970			
3/21/2017					
3/22/2017	240				
3/23/2017		980			
5/22/2017					
5/23/2017					
5/24/2017	230				
5/25/2017		920			
10/3/2017					
10/4/2017	220	870			
6/4/2018					
6/5/2018		962			
6/6/2018	233				
10/1/2018					
10/2/2018					
10/3/2018	215	1170			
4/1/2019					
4/2/2019					
4/4/2019	251				
4/5/2019		1030			
9/23/2019					
9/24/2019					
9/25/2019	223	920			
3/25/2020					
3/26/2020					
3/30/2020	223				
3/31/2020		934			
9/15/2020		1080			
9/16/2020			43	6.9	
9/17/2020	254				10.9
9/18/2020					
11/10/2020			39	6.3	
11/11/2020					9.4
12/15/2020			38.8	6.7	10.9
1/19/2021			37.3	7.4	
1/20/2021					9.8

# Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 5/5/2021 9:44 AM View: Appendix III  
Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWC-16	HGWC-18	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-42D (bg)
3/10/2021				<1	10.8
3/11/2021			38.6		
3/16/2021					
3/17/2021	250				
3/18/2021		1050			







# Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 5/5/2021 9:44 AM View: Appendix III  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWC-16	HGWC-18	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-42D (bg)
5/19/2016					
5/20/2016					
5/23/2016	570				
5/24/2016		1900			
7/11/2016					
7/12/2016	585	1950			
8/30/2016					
9/1/2016	625	2000			
10/19/2016					
10/20/2016					
10/24/2016					
10/25/2016	563	1870			
12/6/2016					
12/7/2016	561				
12/8/2016		1930			
1/24/2017					
1/26/2017	608	1950			
3/21/2017					
3/22/2017	599				
3/23/2017		2080			
5/22/2017					
5/23/2017					
5/24/2017	598				
5/25/2017		1970			
10/3/2017					
10/4/2017	626	2200			
6/4/2018					
6/5/2018		1880			
6/6/2018	678				
10/1/2018					
10/2/2018					
10/3/2018	700	2180			
4/1/2019					
4/2/2019					
4/4/2019	704				
4/5/2019		1610			
9/23/2019					
9/24/2019					
9/25/2019	813	1960			
3/25/2020					
3/26/2020					
3/30/2020	787				
3/31/2020		1860			
9/15/2020		1890			
9/16/2020			272	270	
9/17/2020	804				188
9/18/2020					
11/10/2020			307	287	
11/11/2020					175
12/15/2020			289	295	193
1/19/2021			270	278	
1/20/2021					158

# Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 5/5/2021 9:44 AM View: Appendix III  
Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWC-16	HGWC-18	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-42D (bg)
3/10/2021				289	163
3/11/2021			279		
3/16/2021					
3/17/2021	768				
3/18/2021		1390			

FIGURE E.

# Trend Tests - Prediction Limit Exceedances - Significant Results

Plant Hammond    Client: Southern Company    Data: Hammond AP-2    Printed 5/5/2021, 10:25 AM

<u>Constituent</u>	<u>Well</u>	<u>Slope</u>	<u>Calc.</u>	<u>Critical</u>	<u>Sig.</u>	<u>N</u>	<u>%NDs</u>	<u>Normality</u>	<u>Xform</u>	<u>Alpha</u>	<u>Method</u>
Boron (mg/L)	HGWA-2 (bg)	0.00257	72	58	Yes	16	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-16	0.2888	80	58	Yes	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWC-16	13.53	89	58	Yes	16	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWA-4 (bg)	-0.357	-85	-58	Yes	16	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWC-14	-90.69	-67	-58	Yes	16	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWC-16	14.74	110	58	Yes	16	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWC-17	15.05	68	58	Yes	16	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWC-18	-36.81	-60	-58	Yes	16	0	n/a	n/a	0.01	NP
Field pH (s.u.)	HGWA-4 (bg)	-0.2968	-107	-81	Yes	20	0	n/a	n/a	0.01	NP
Field pH (s.u.)	HGWC-14	0.04839	82	81	Yes	20	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-2 (bg)	1.382	64	58	Yes	16	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-3 (bg)	1.676	67	58	Yes	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-4 (bg)	-35.66	-61	-58	Yes	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWC-14	-252	-73	-58	Yes	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWC-16	53.96	84	58	Yes	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWC-17	80.13	71	58	Yes	16	6.25	n/a	n/a	0.01	NP

# Trend Tests - Prediction Limit Exceedances - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-2 Printed 5/5/2021, 10:25 AM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Boron (mg/L)	HGWA-1 (bg)	-0.0001741	-4	-58	No	16	0	n/a	n/a	0.01	NP
<b>Boron (mg/L)</b>	<b>HGWA-2 (bg)</b>	<b>0.00257</b>	<b>72</b>	<b>58</b>	<b>Yes</b>	<b>16</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Boron (mg/L)	HGWA-3 (bg)	-0.0004025	-20	-58	No	16	12.5	n/a	n/a	0.01	NP
Boron (mg/L)	HGWA-4 (bg)	-0.001192	-46	-58	No	16	6.25	n/a	n/a	0.01	NP
Boron (mg/L)	HGWA-42D (bg)	-0.08634	-4	-12	No	5	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWA-43D (bg)	-0.02892	-4	-12	No	5	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWA-44D (bg)	0.3386	8	12	No	5	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWA-5 (bg)	-0.0001291	-7	-58	No	16	12.5	n/a	n/a	0.01	NP
Boron (mg/L)	HGWA-6 (bg)	-0.0004206	-18	-58	No	16	6.25	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-14	-0.9086	-30	-58	No	16	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-15	0.09551	48	58	No	16	0	n/a	n/a	0.01	NP
<b>Boron (mg/L)</b>	<b>HGWC-16</b>	<b>0.2888</b>	<b>80</b>	<b>58</b>	<b>Yes</b>	<b>16</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Boron (mg/L)	HGWC-17	0.2301	36	58	No	16	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-18	-0.03739	-3	-58	No	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-1 (bg)	4.009	44	58	No	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-2 (bg)	0.3424	16	58	No	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-3 (bg)	2.789	48	58	No	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-4 (bg)	-9.588	-56	-58	No	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-42D (bg)	-1.953	-2	-12	No	5	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-43D (bg)	-5.439	-2	-12	No	5	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-44D (bg)	-14.84	-4	-12	No	5	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-5 (bg)	-0.1834	-11	-58	No	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-6 (bg)	0.3313	14	58	No	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWC-14	-3.085	-4	-58	No	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWC-15	7.289	36	58	No	16	0	n/a	n/a	0.01	NP
<b>Calcium (mg/L)</b>	<b>HGWC-16</b>	<b>13.53</b>	<b>89</b>	<b>58</b>	<b>Yes</b>	<b>16</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Calcium (mg/L)	HGWC-17	26.03	55	58	No	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWC-18	10.86	36	58	No	16	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWA-1 (bg)	0.7206	33	58	No	16	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWA-2 (bg)	-0.2299	-53	-58	No	16	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWA-3 (bg)	-0.07881	-28	-58	No	16	0	n/a	n/a	0.01	NP
<b>Chloride (mg/L)</b>	<b>HGWA-4 (bg)</b>	<b>-0.357</b>	<b>-85</b>	<b>-58</b>	<b>Yes</b>	<b>16</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Chloride (mg/L)	HGWA-42D (bg)	-2.81	-6	-12	No	5	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWA-43D (bg)	0.5656	3	12	No	5	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWA-44D (bg)	9.78	10	12	No	5	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWA-5 (bg)	-0.07921	-34	-58	No	16	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWA-6 (bg)	-0.08552	-42	-58	No	16	0	n/a	n/a	0.01	NP
<b>Chloride (mg/L)</b>	<b>HGWC-14</b>	<b>-90.69</b>	<b>-67</b>	<b>-58</b>	<b>Yes</b>	<b>16</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Chloride (mg/L)	HGWC-15	-23.47	-56	-58	No	16	0	n/a	n/a	0.01	NP
<b>Chloride (mg/L)</b>	<b>HGWC-16</b>	<b>14.74</b>	<b>110</b>	<b>58</b>	<b>Yes</b>	<b>16</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
<b>Chloride (mg/L)</b>	<b>HGWC-17</b>	<b>15.05</b>	<b>68</b>	<b>58</b>	<b>Yes</b>	<b>16</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
<b>Chloride (mg/L)</b>	<b>HGWC-18</b>	<b>-36.81</b>	<b>-60</b>	<b>-58</b>	<b>Yes</b>	<b>16</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Field pH (s.u.)	HGWA-1 (bg)	-0.03025	-50	-81	No	20	0	n/a	n/a	0.01	NP
Field pH (s.u.)	HGWA-2 (bg)	-0.02029	-21	-81	No	20	0	n/a	n/a	0.01	NP
Field pH (s.u.)	HGWA-3 (bg)	-0.008407	-12	-81	No	20	0	n/a	n/a	0.01	NP
<b>Field pH (s.u.)</b>	<b>HGWA-4 (bg)</b>	<b>-0.2968</b>	<b>-107</b>	<b>-81</b>	<b>Yes</b>	<b>20</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Field pH (s.u.)	HGWA-42D (bg)	0.08202	7	14	No	6	0	n/a	n/a	0.01	NP
Field pH (s.u.)	HGWA-43D (bg)	0.2971	4	14	No	6	0	n/a	n/a	0.01	NP
Field pH (s.u.)	HGWA-44D (bg)	0.1043	8	14	No	6	0	n/a	n/a	0.01	NP
Field pH (s.u.)	HGWA-5 (bg)	-0.03997	-68	-81	No	20	0	n/a	n/a	0.01	NP
Field pH (s.u.)	HGWA-6 (bg)	-0.02632	-36	-81	No	20	0	n/a	n/a	0.01	NP
<b>Field pH (s.u.)</b>	<b>HGWC-14</b>	<b>0.04839</b>	<b>82</b>	<b>81</b>	<b>Yes</b>	<b>20</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Field pH (s.u.)	HGWC-18	-0.02175	-65	-81	No	20	0	n/a	n/a	0.01	NP

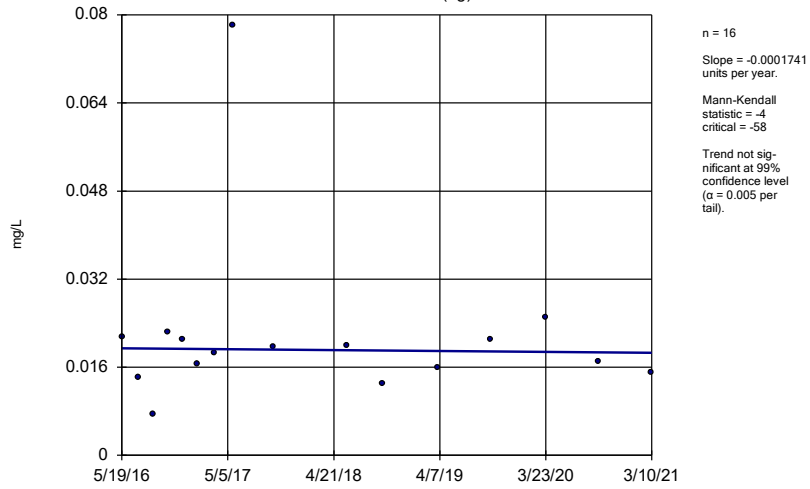
# Trend Tests - Prediction Limit Exceedances - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-2 Printed 5/5/2021, 10:25 AM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Sulfate (mg/L)	HGWA-1 (bg)	3.385	39	58	No	16	0	n/a	n/a	0.01	NP
<b>Sulfate (mg/L)</b>	<b>HGWA-2 (bg)</b>	<b>1.382</b>	<b>64</b>	<b>58</b>	<b>Yes</b>	<b>16</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
<b>Sulfate (mg/L)</b>	<b>HGWA-3 (bg)</b>	<b>1.676</b>	<b>67</b>	<b>58</b>	<b>Yes</b>	<b>16</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Sulfate (mg/L)	HGWA-4 (bg)	-0.7193	-56	-58	No	16	18.75	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-42D (bg)	-0.1049	-1	-12	No	5	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-43D (bg)	-8.995	-8	-12	No	5	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-44D (bg)	-2.396	-2	-12	No	5	20	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-5 (bg)	-0.06144	-5	-58	No	16	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-6 (bg)	0.1251	10	58	No	16	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-14	51.27	24	58	No	16	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-15	-0.5501	-3	-58	No	16	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-16	5.214	45	58	No	16	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-17	14.46	45	58	No	16	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-18	32.74	53	58	No	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-1 (bg)	3.302	10	58	No	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-2 (bg)	-1.42	-11	-58	No	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-3 (bg)	-0.3672	-5	-58	No	16	0	n/a	n/a	0.01	NP
<b>Total Dissolved Solids (mg/L)</b>	<b>HGWA-4 (bg)</b>	<b>-35.66</b>	<b>-61</b>	<b>-58</b>	<b>Yes</b>	<b>16</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Total Dissolved Solids (mg/L)	HGWA-42D (bg)	-69.36	-4	-12	No	5	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-43D (bg)	-24.14	-2	-12	No	5	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-44D (bg)	31.49	4	12	No	5	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-5 (bg)	-7.443	-42	-58	No	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-6 (bg)	-1.111	-9	-58	No	16	0	n/a	n/a	0.01	NP
<b>Total Dissolved Solids (mg/L)</b>	<b>HGWC-14</b>	<b>-252</b>	<b>-73</b>	<b>-58</b>	<b>Yes</b>	<b>16</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
<b>Total Dissolved Solids (mg/L)</b>	<b>HGWC-16</b>	<b>53.96</b>	<b>84</b>	<b>58</b>	<b>Yes</b>	<b>16</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
<b>Total Dissolved Solids (mg/L)</b>	<b>HGWC-17</b>	<b>80.13</b>	<b>71</b>	<b>58</b>	<b>Yes</b>	<b>16</b>	<b>6.25</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Total Dissolved Solids (mg/L)	HGWC-18	-18.27	-21	-58	No	16	0	n/a	n/a	0.01	NP

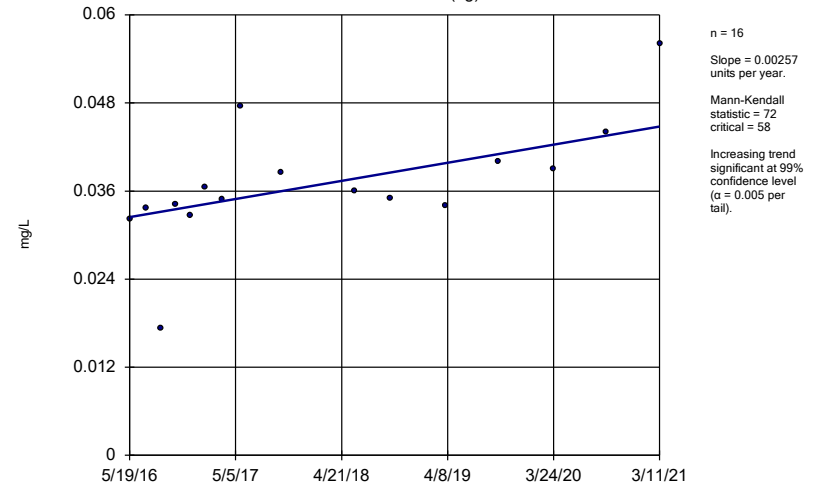


Sen's Slope Estimator  
HGWA-1 (bg)



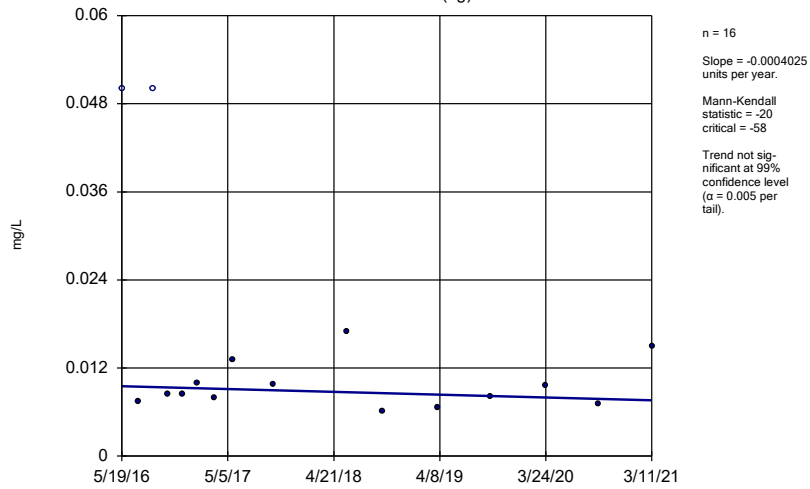
Constituent: Boron Analysis Run 5/5/2021 10:23 AM View: Appendix III - Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sen's Slope Estimator  
HGWA-2 (bg)



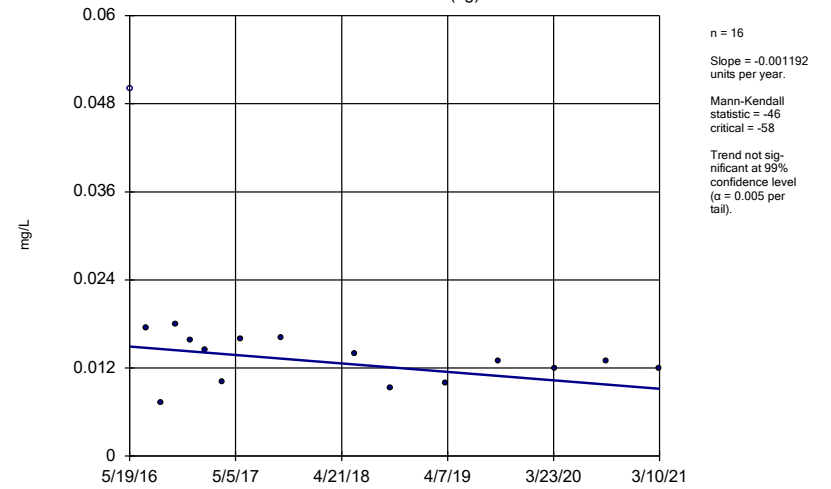
Constituent: Boron Analysis Run 5/5/2021 10:23 AM View: Appendix III - Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sen's Slope Estimator  
HGWA-3 (bg)



Constituent: Boron Analysis Run 5/5/2021 10:23 AM View: Appendix III - Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-2

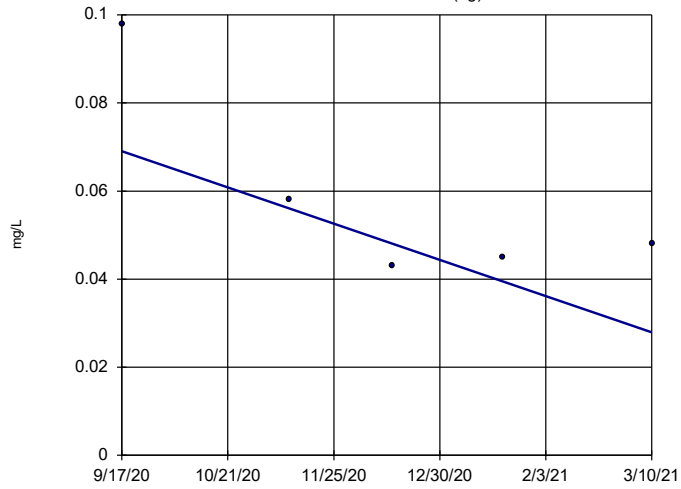
Sen's Slope Estimator  
HGWA-4 (bg)



Constituent: Boron Analysis Run 5/5/2021 10:23 AM View: Appendix III - Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator

HGWA-42D (bg)

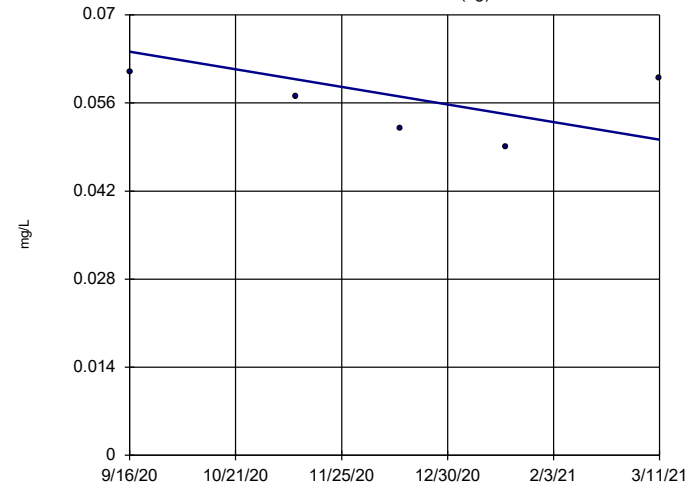


n = 5  
 Slope = -0.08634 units per year.  
 Mann-Kendall statistic = -4  
 critical = -12  
 Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Boron Analysis Run 5/5/2021 10:23 AM View: Appendix III - Trend Tests  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator

HGWA-43D (bg)

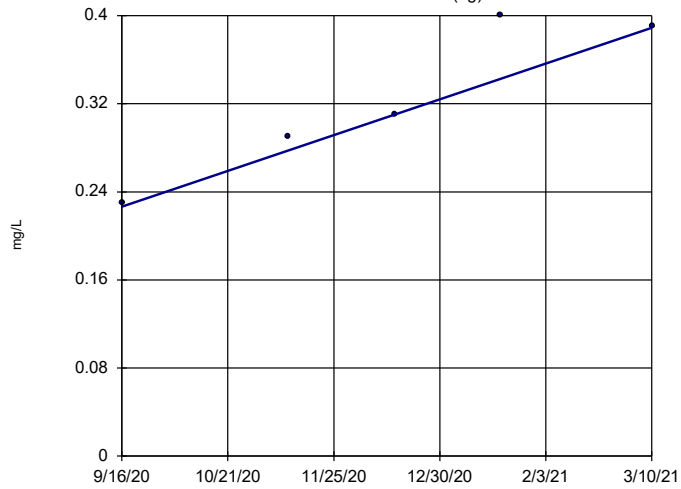


n = 5  
 Slope = -0.02892 units per year.  
 Mann-Kendall statistic = -4  
 critical = -12  
 Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Boron Analysis Run 5/5/2021 10:23 AM View: Appendix III - Trend Tests  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator

HGWA-44D (bg)

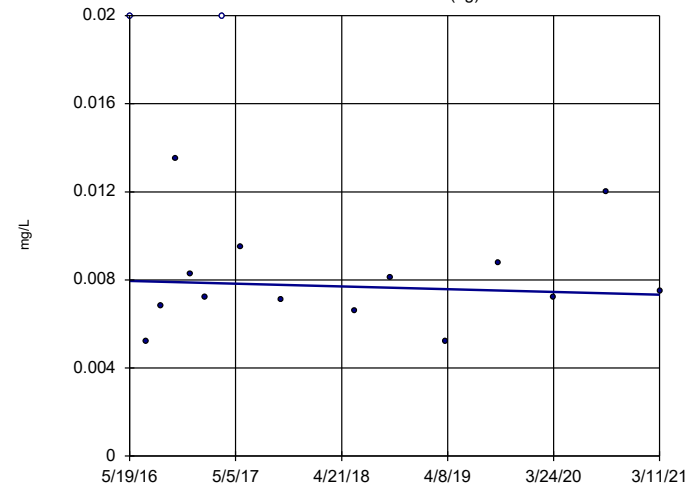


n = 5  
 Slope = 0.3386 units per year.  
 Mann-Kendall statistic = 8  
 critical = 12  
 Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Boron Analysis Run 5/5/2021 10:23 AM View: Appendix III - Trend Tests  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator

HGWA-5 (bg)

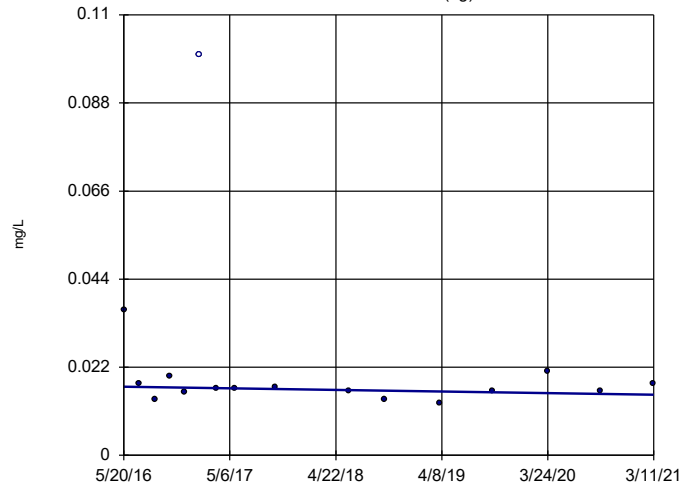


n = 16  
 Slope = -0.0001291 units per year.  
 Mann-Kendall statistic = -7  
 critical = -58  
 Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Boron Analysis Run 5/5/2021 10:23 AM View: Appendix III - Trend Tests  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator

HGWA-6 (bg)

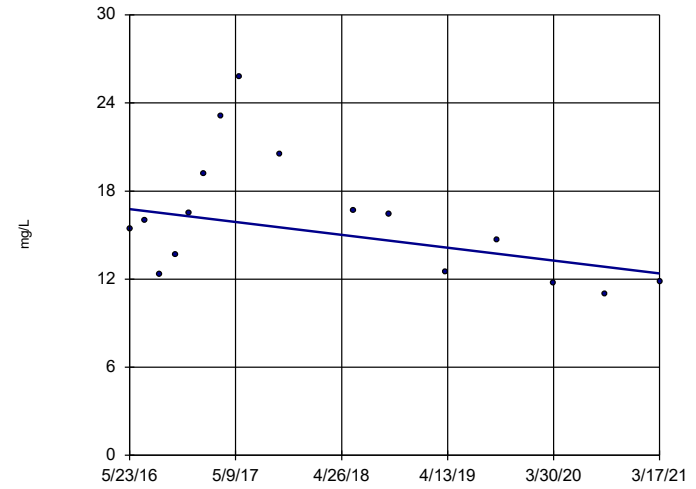


n = 16  
Slope = -0.0004206  
units per year.  
Mann-Kendall  
statistic = -18  
critical = -58  
Trend not sig-  
nificant at 99%  
confidence level  
( $\alpha = 0.005$  per  
tail).

Constituent: Boron Analysis Run 5/5/2021 10:23 AM View: Appendix III - Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator

HGWC-14

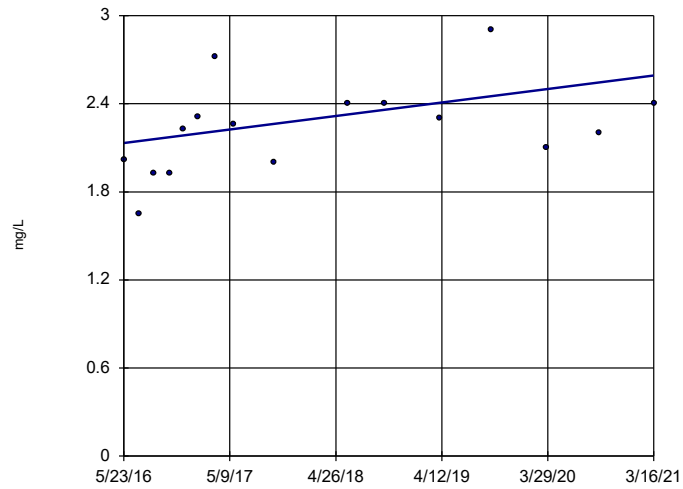


n = 16  
Slope = -0.9086  
units per year.  
Mann-Kendall  
statistic = -30  
critical = -58  
Trend not sig-  
nificant at 99%  
confidence level  
( $\alpha = 0.005$  per  
tail).

Constituent: Boron Analysis Run 5/5/2021 10:23 AM View: Appendix III - Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator

HGWC-15

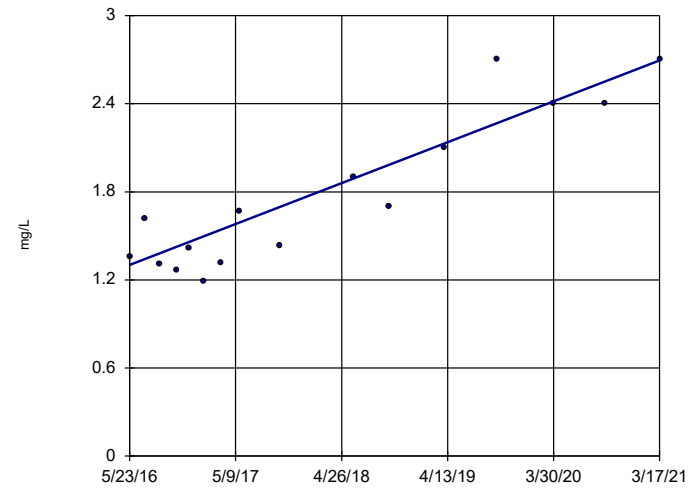


n = 16  
Slope = 0.09551  
units per year.  
Mann-Kendall  
statistic = 48  
critical = 58  
Trend not sig-  
nificant at 99%  
confidence level  
( $\alpha = 0.005$  per  
tail).

Constituent: Boron Analysis Run 5/5/2021 10:23 AM View: Appendix III - Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator

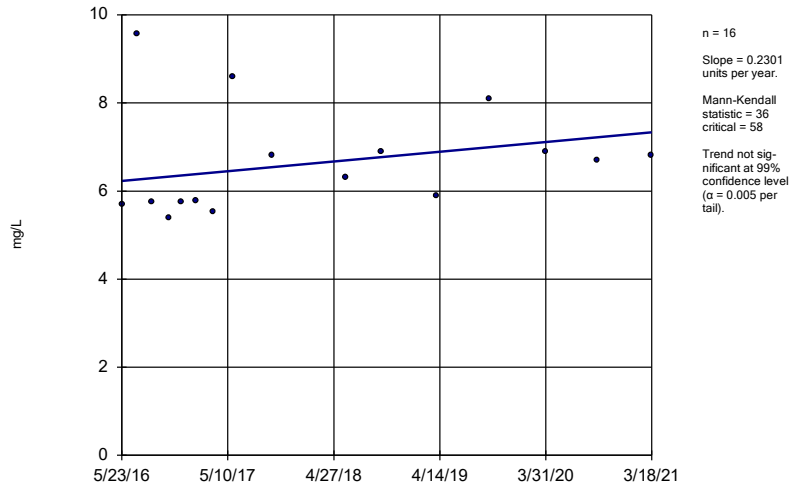
HGWC-16



n = 16  
Slope = 0.2888  
units per year.  
Mann-Kendall  
statistic = 80  
critical = 58  
Increasing trend  
significant at 99%  
confidence level  
( $\alpha = 0.005$  per  
tail).

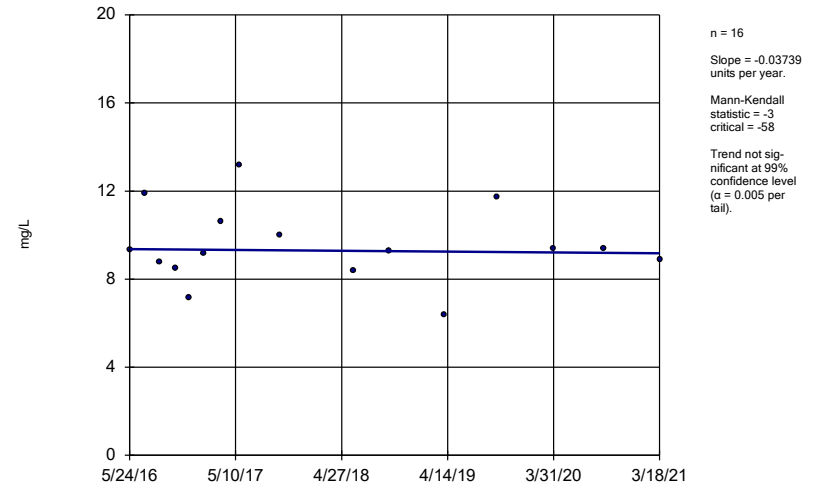
Constituent: Boron Analysis Run 5/5/2021 10:23 AM View: Appendix III - Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator HGWC-17



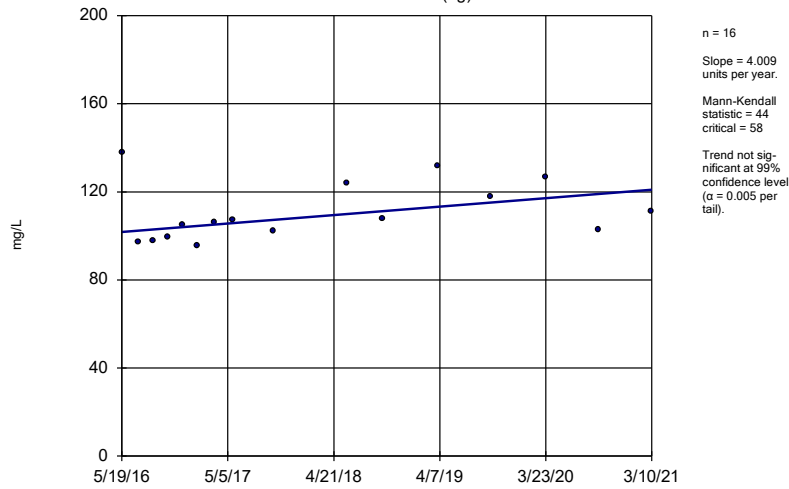
Constituent: Boron Analysis Run 5/5/2021 10:23 AM View: Appendix III - Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator HGWC-18



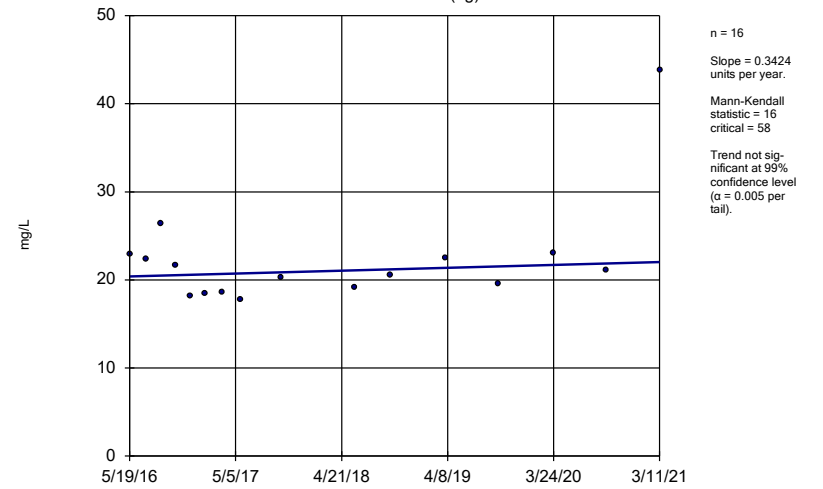
Constituent: Boron Analysis Run 5/5/2021 10:23 AM View: Appendix III - Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator HGWA-1 (bg)



Constituent: Calcium Analysis Run 5/5/2021 10:23 AM View: Appendix III - Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-2

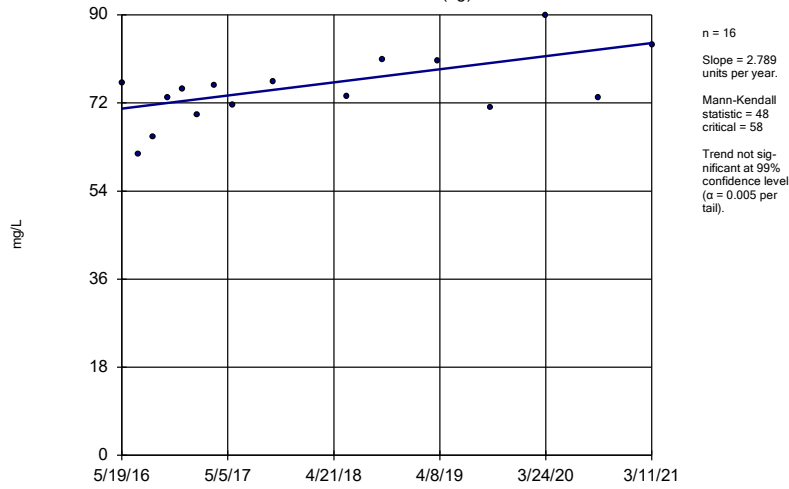
### Sen's Slope Estimator HGWA-2 (bg)



Constituent: Calcium Analysis Run 5/5/2021 10:23 AM View: Appendix III - Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator

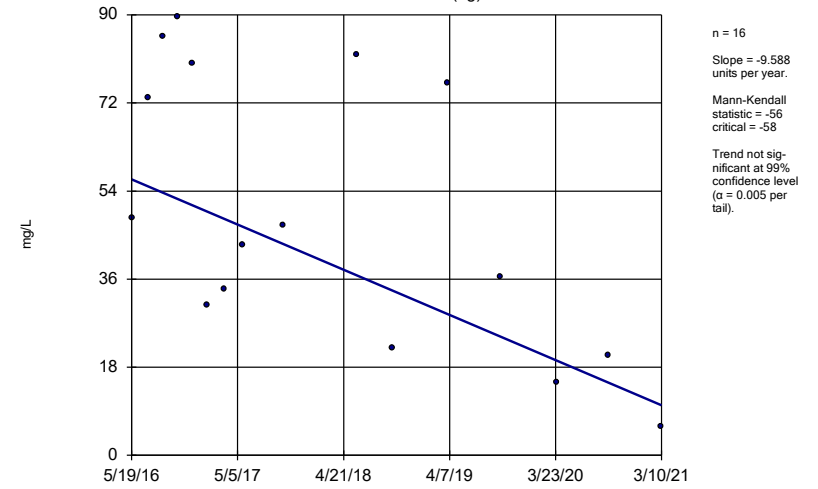
HGWA-3 (bg)



Constituent: Calcium Analysis Run 5/5/2021 10:23 AM View: Appendix III - Trend Tests  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator

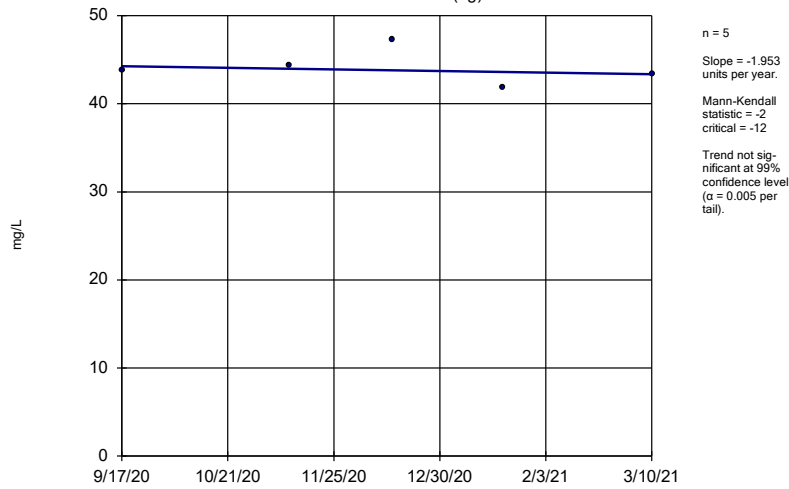
HGWA-4 (bg)



Constituent: Calcium Analysis Run 5/5/2021 10:23 AM View: Appendix III - Trend Tests  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator

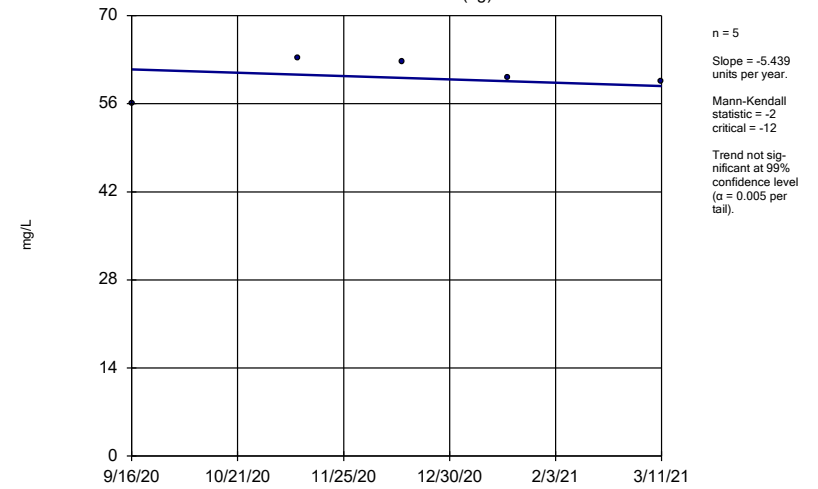
HGWA-42D (bg)



Constituent: Calcium Analysis Run 5/5/2021 10:23 AM View: Appendix III - Trend Tests  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator

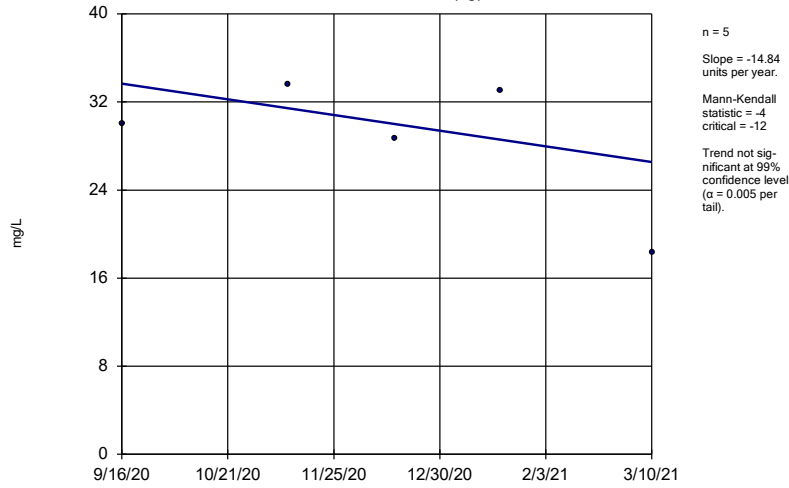
HGWA-43D (bg)



Constituent: Calcium Analysis Run 5/5/2021 10:23 AM View: Appendix III - Trend Tests  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator

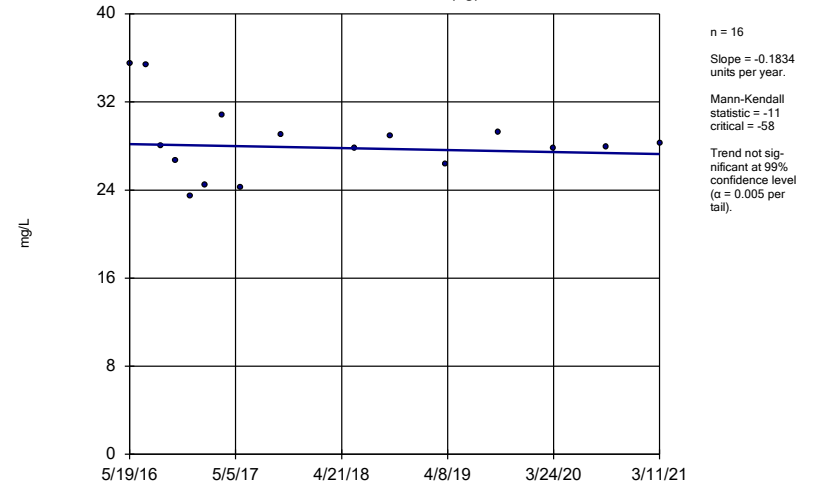
HGWA-44D (bg)



Constituent: Calcium Analysis Run 5/5/2021 10:23 AM View: Appendix III - Trend Tests  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator

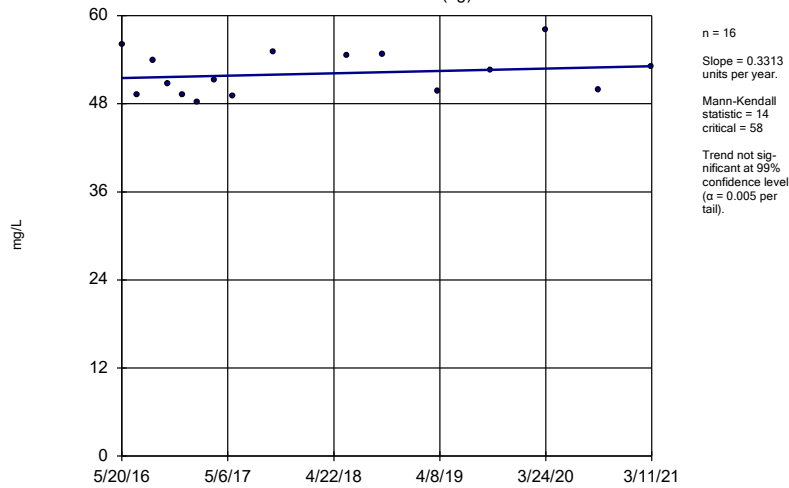
HGWA-5 (bg)



Constituent: Calcium Analysis Run 5/5/2021 10:23 AM View: Appendix III - Trend Tests  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator

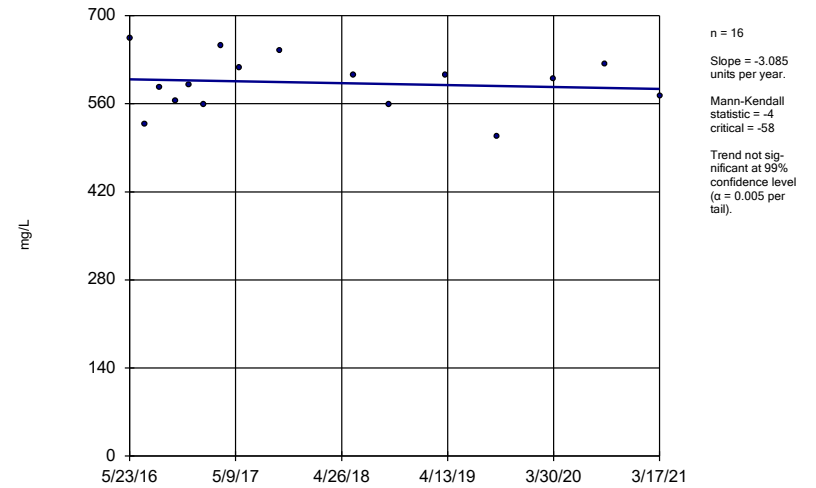
HGWA-6 (bg)



Constituent: Calcium Analysis Run 5/5/2021 10:23 AM View: Appendix III - Trend Tests  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

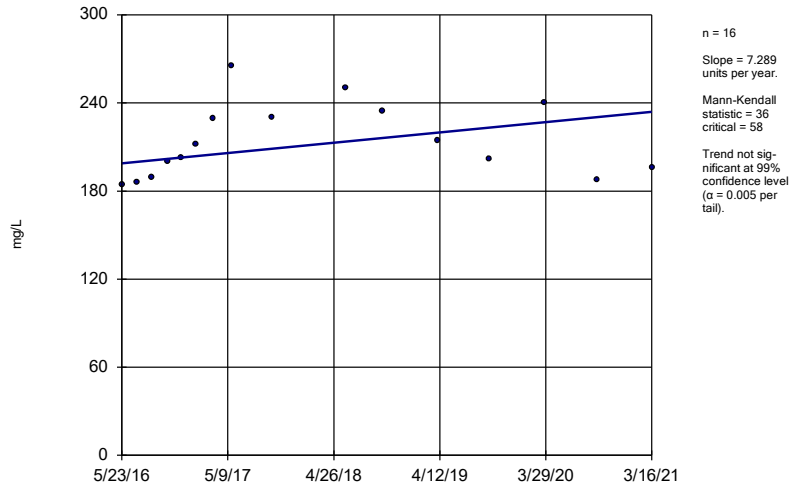
### Sen's Slope Estimator

HGWC-14



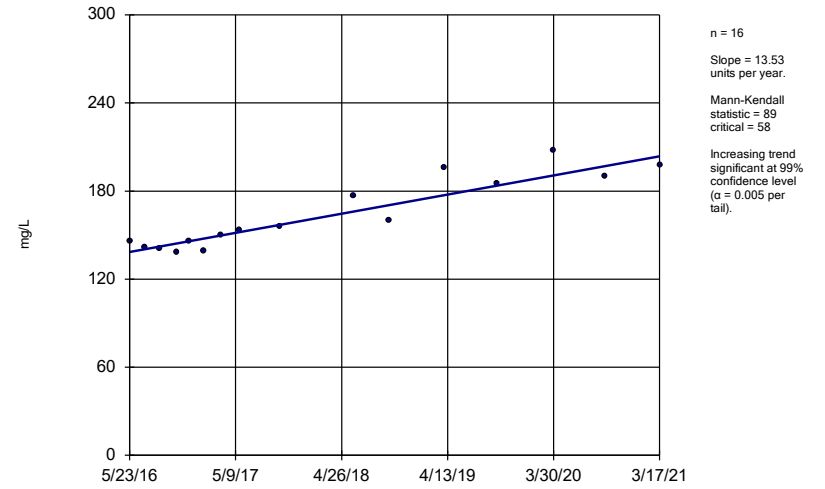
Constituent: Calcium Analysis Run 5/5/2021 10:23 AM View: Appendix III - Trend Tests  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator HGWC-15



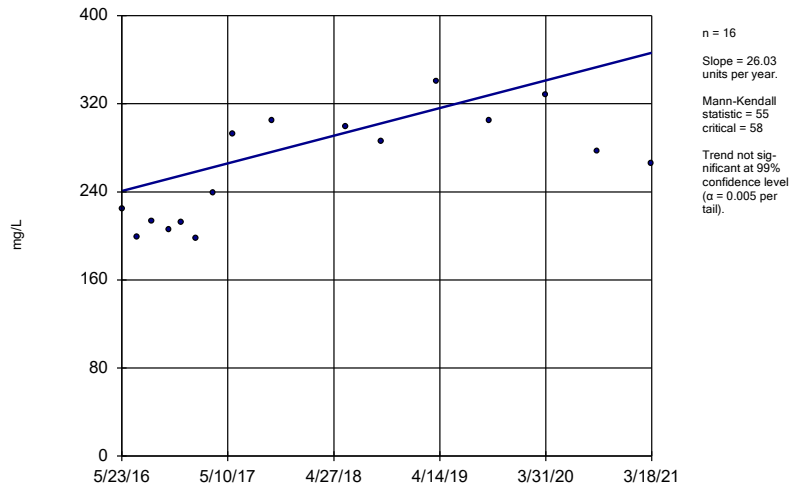
Constituent: Calcium Analysis Run 5/5/2021 10:23 AM View: Appendix III - Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator HGWC-16



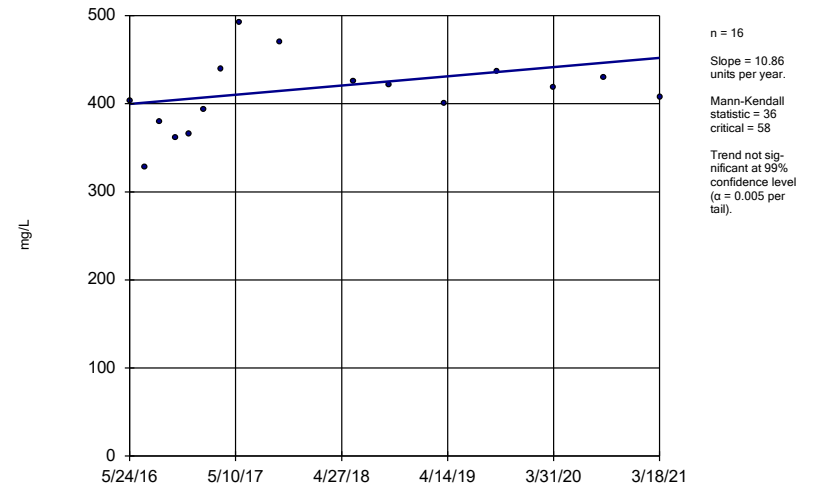
Constituent: Calcium Analysis Run 5/5/2021 10:23 AM View: Appendix III - Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator HGWC-17



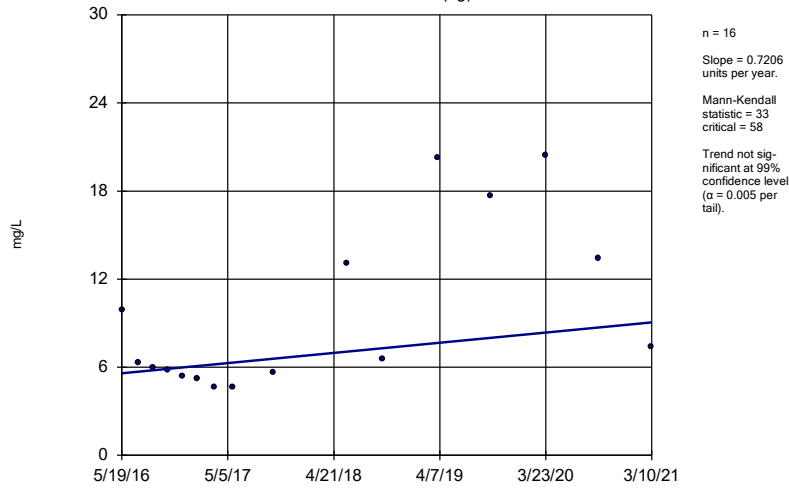
Constituent: Calcium Analysis Run 5/5/2021 10:23 AM View: Appendix III - Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator HGWC-18



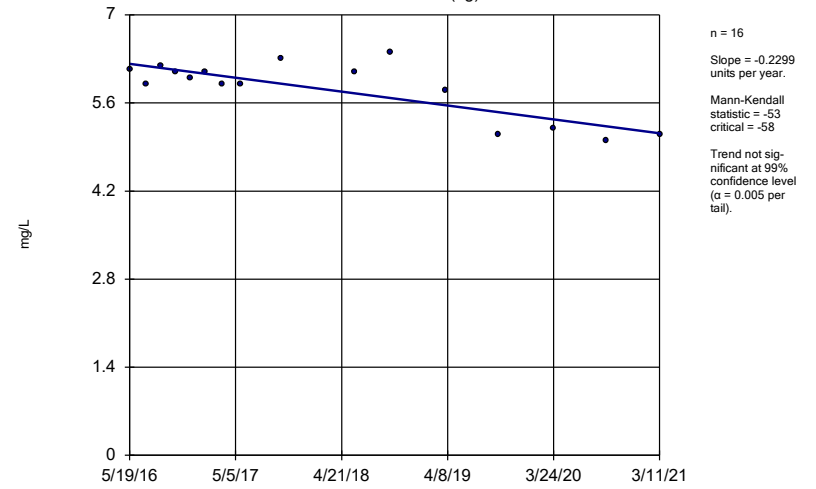
Constituent: Calcium Analysis Run 5/5/2021 10:23 AM View: Appendix III - Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator HGWA-1 (bg)



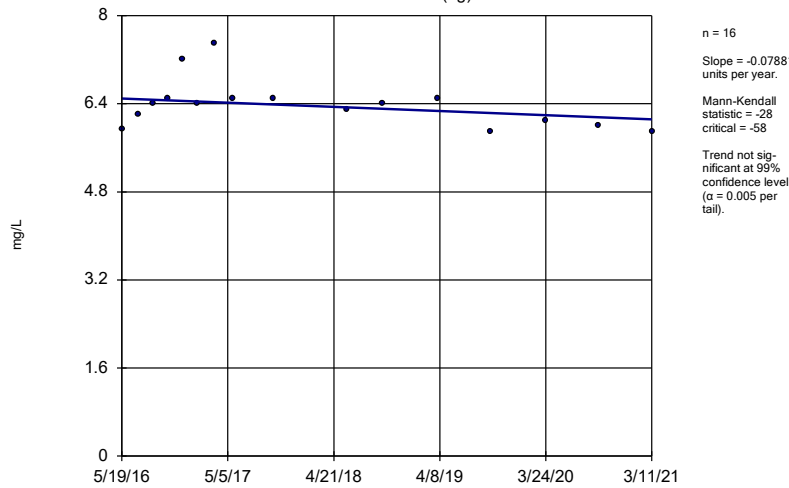
Constituent: Chloride Analysis Run 5/5/2021 10:23 AM View: Appendix III - Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator HGWA-2 (bg)



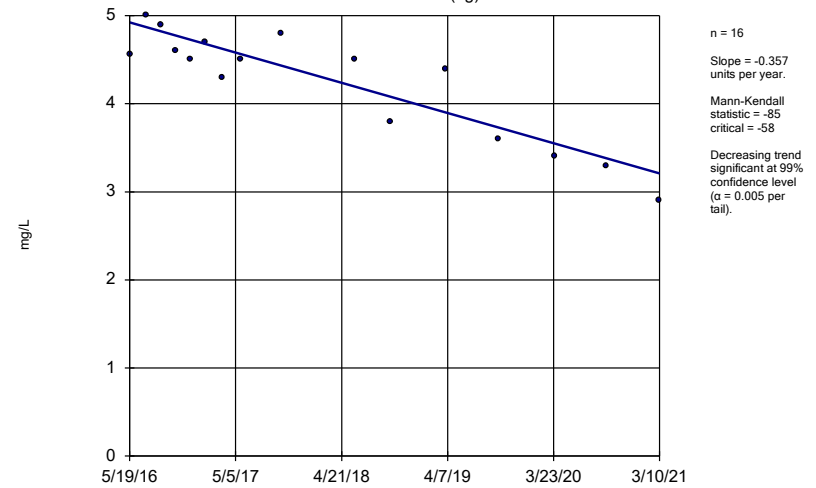
Constituent: Chloride Analysis Run 5/5/2021 10:23 AM View: Appendix III - Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator HGWA-3 (bg)



Constituent: Chloride Analysis Run 5/5/2021 10:23 AM View: Appendix III - Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator HGWA-4 (bg)

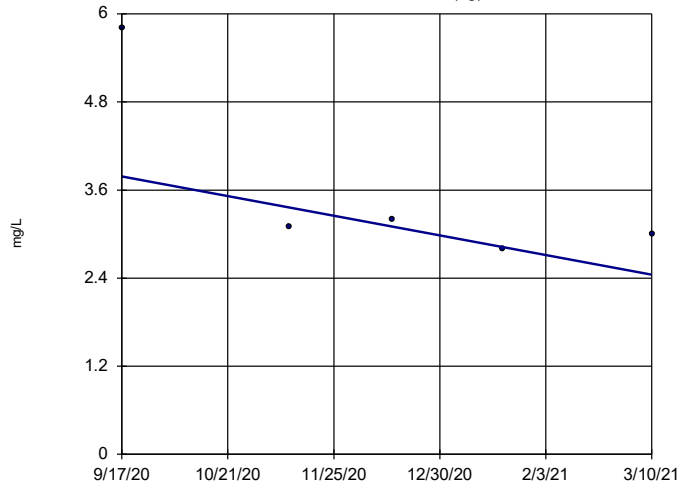


Constituent: Chloride Analysis Run 5/5/2021 10:23 AM View: Appendix III - Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-2



### Sen's Slope Estimator

HGWA-42D (bg)

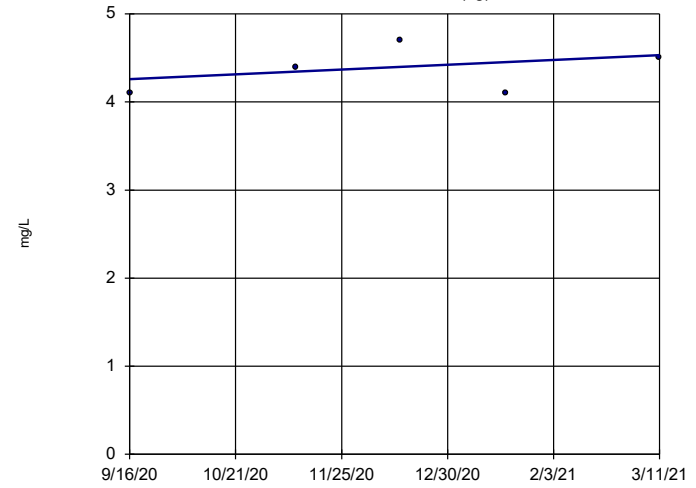


n = 5  
 Slope = -2.81 units per year.  
 Mann-Kendall statistic = -6  
 critical = -12  
 Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Chloride Analysis Run 5/5/2021 10:23 AM View: Appendix III - Trend Tests  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator

HGWA-43D (bg)

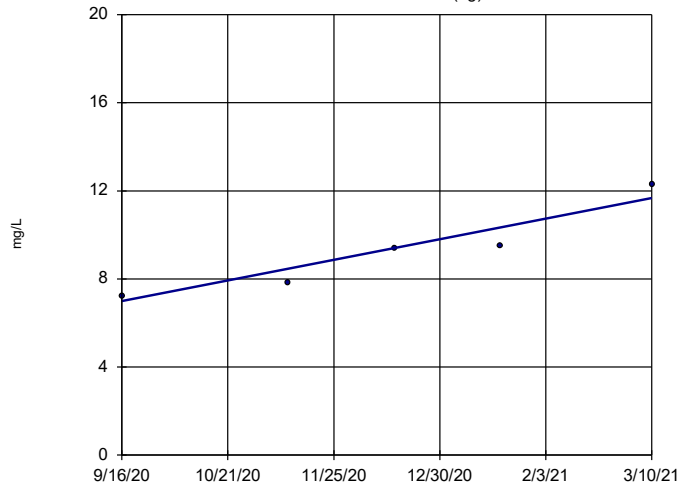


n = 5  
 Slope = 0.5656 units per year.  
 Mann-Kendall statistic = 3  
 critical = 12  
 Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Chloride Analysis Run 5/5/2021 10:23 AM View: Appendix III - Trend Tests  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator

HGWA-44D (bg)

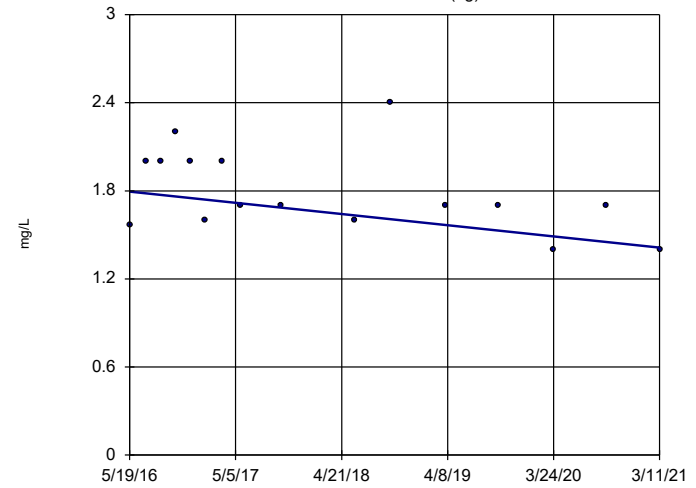


n = 5  
 Slope = 9.78 units per year.  
 Mann-Kendall statistic = 10  
 critical = 12  
 Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Chloride Analysis Run 5/5/2021 10:23 AM View: Appendix III - Trend Tests  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator

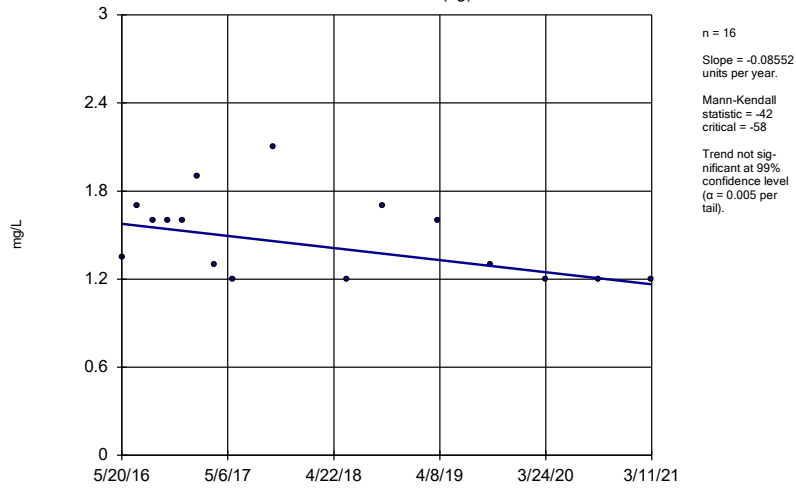
HGWA-5 (bg)



n = 16  
 Slope = -0.07921 units per year.  
 Mann-Kendall statistic = -34  
 critical = -58  
 Trend not significant at 99% confidence level (α = 0.005 per tail).

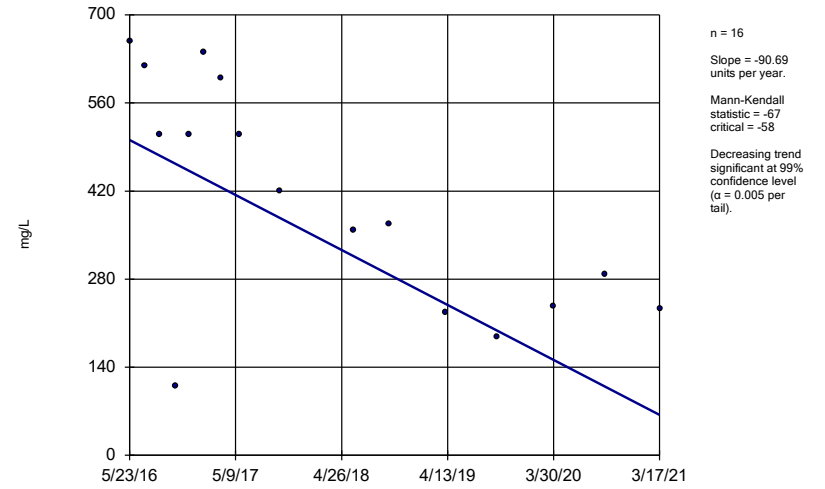
Constituent: Chloride Analysis Run 5/5/2021 10:23 AM View: Appendix III - Trend Tests  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

Sen's Slope Estimator  
HGWA-6 (bg)



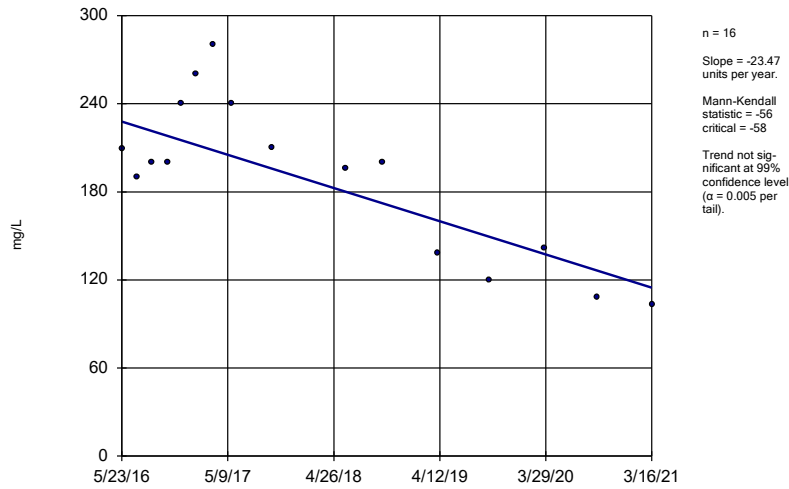
Constituent: Chloride Analysis Run 5/5/2021 10:23 AM View: Appendix III - Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sen's Slope Estimator  
HGWC-14



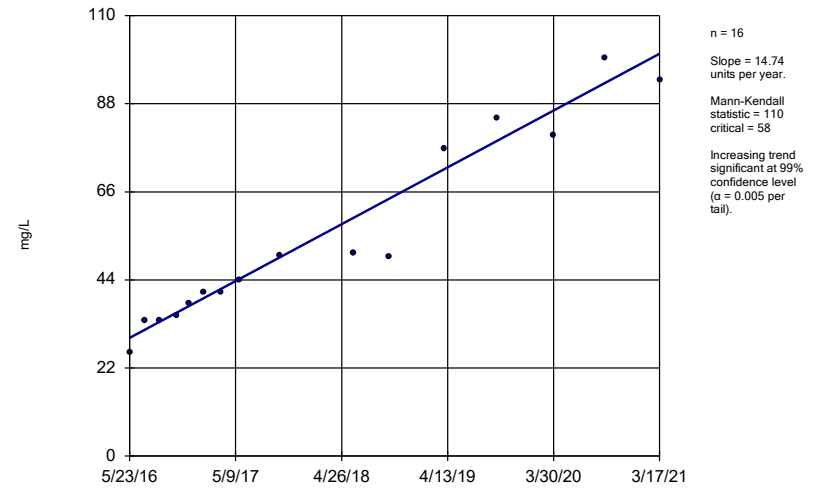
Constituent: Chloride Analysis Run 5/5/2021 10:24 AM View: Appendix III - Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sen's Slope Estimator  
HGWC-15



Constituent: Chloride Analysis Run 5/5/2021 10:24 AM View: Appendix III - Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-2

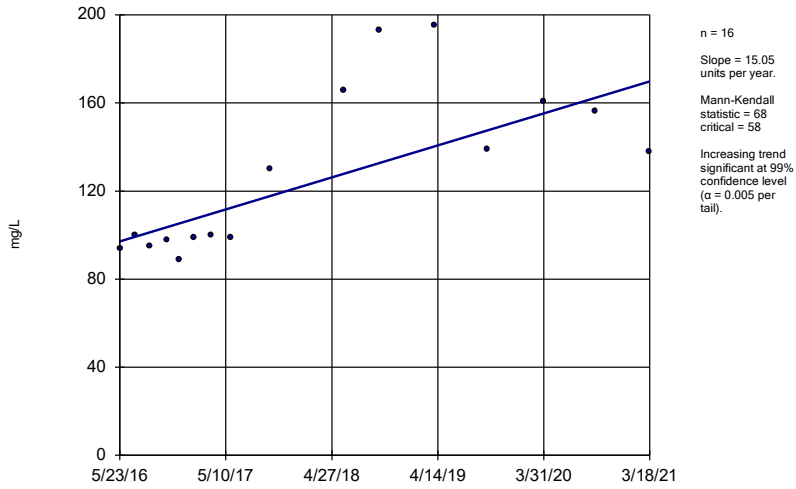
Sen's Slope Estimator  
HGWC-16



Constituent: Chloride Analysis Run 5/5/2021 10:24 AM View: Appendix III - Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator

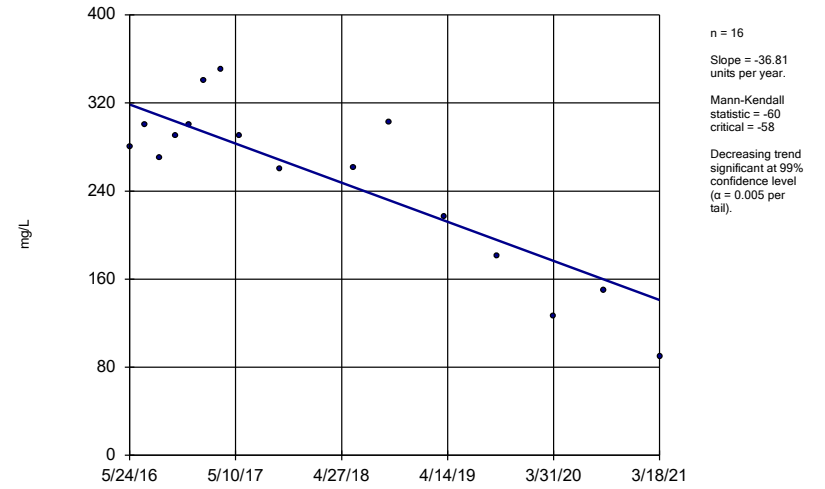
HGWC-17



Constituent: Chloride Analysis Run 5/5/2021 10:24 AM View: Appendix III - Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator

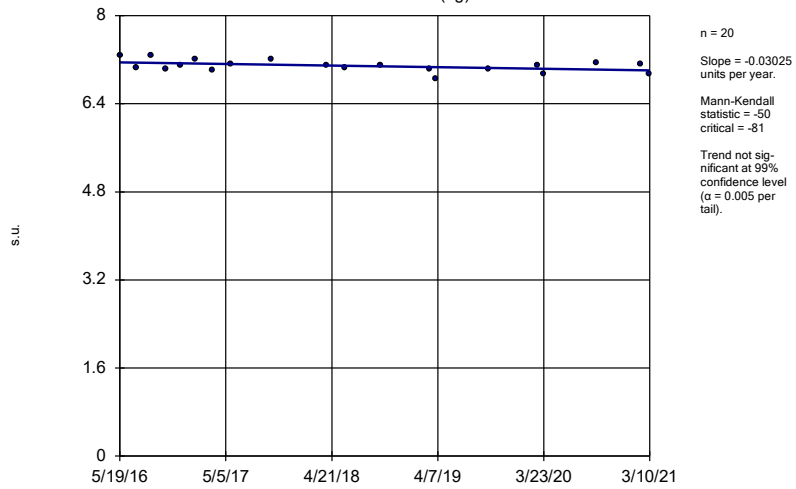
HGWC-18



Constituent: Chloride Analysis Run 5/5/2021 10:24 AM View: Appendix III - Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator

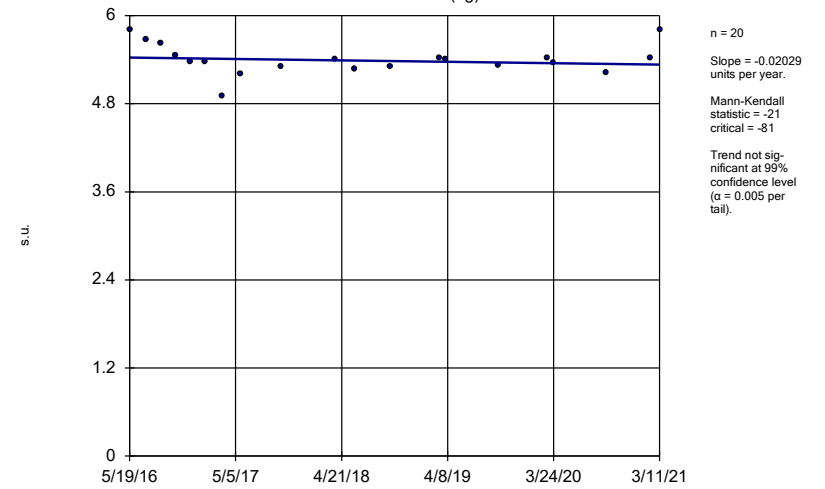
HGWA-1 (bg)



Constituent: Field pH Analysis Run 5/5/2021 10:24 AM View: Appendix III - Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator

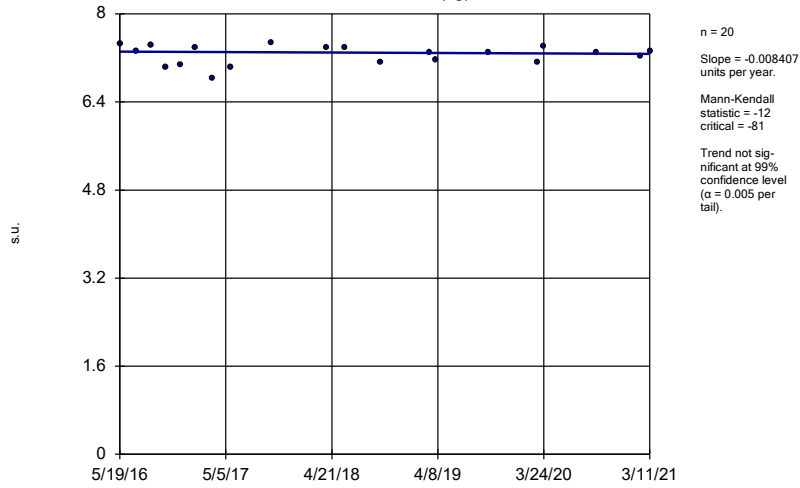
HGWA-2 (bg)



Constituent: Field pH Analysis Run 5/5/2021 10:24 AM View: Appendix III - Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator

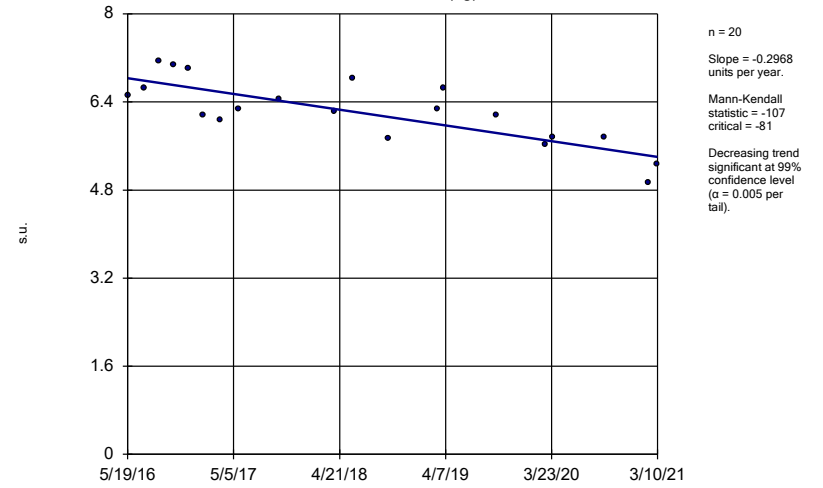
HGWA-3 (bg)



Constituent: Field pH Analysis Run 5/5/2021 10:24 AM View: Appendix III - Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator

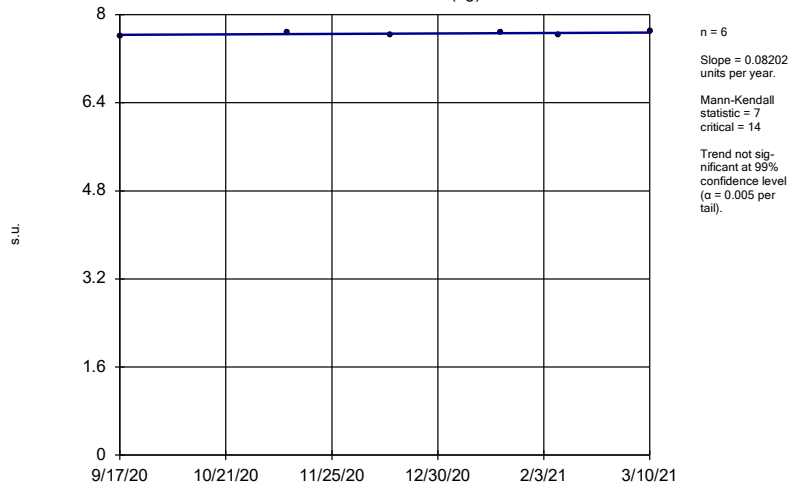
HGWA-4 (bg)



Constituent: Field pH Analysis Run 5/5/2021 10:24 AM View: Appendix III - Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator

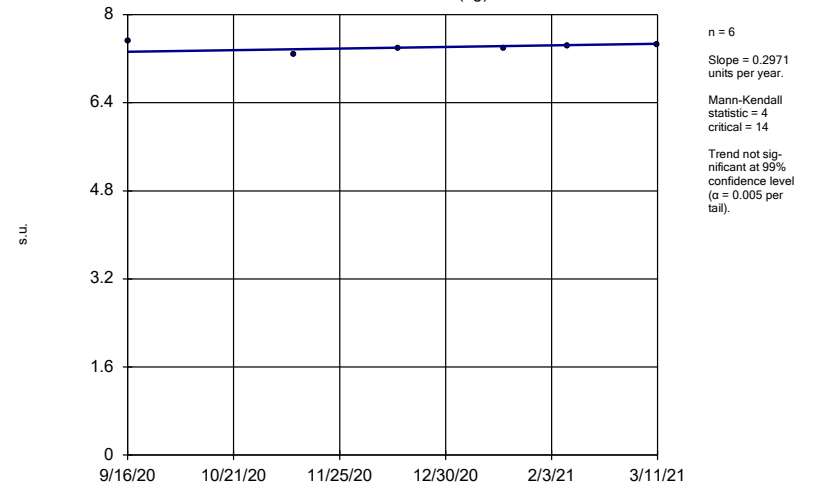
HGWA-42D (bg)



Constituent: Field pH Analysis Run 5/5/2021 10:24 AM View: Appendix III - Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator

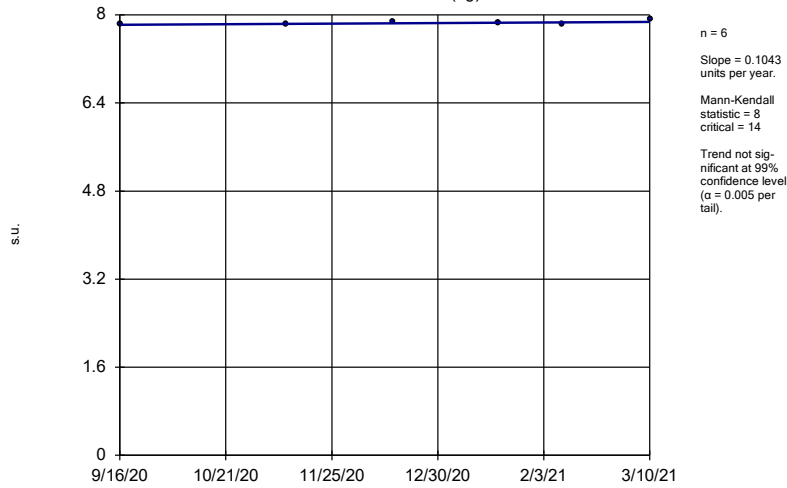
HGWA-43D (bg)



Constituent: Field pH Analysis Run 5/5/2021 10:24 AM View: Appendix III - Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator

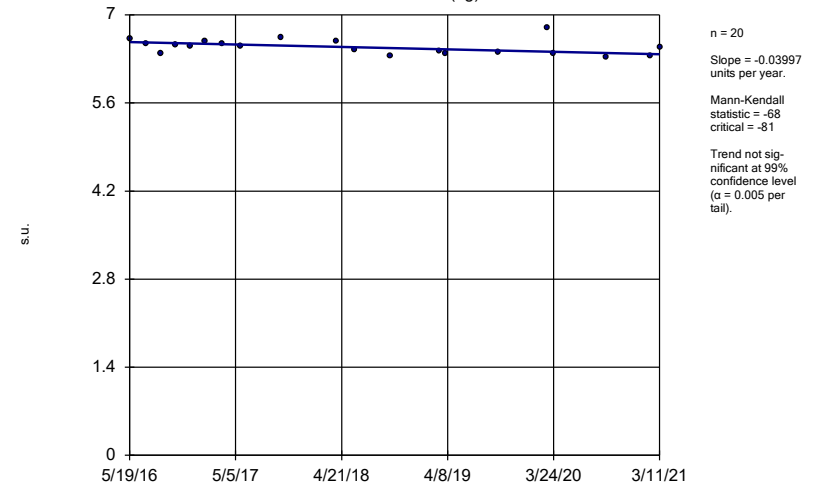
HGWA-44D (bg)



Constituent: Field pH Analysis Run 5/5/2021 10:24 AM View: Appendix III - Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator

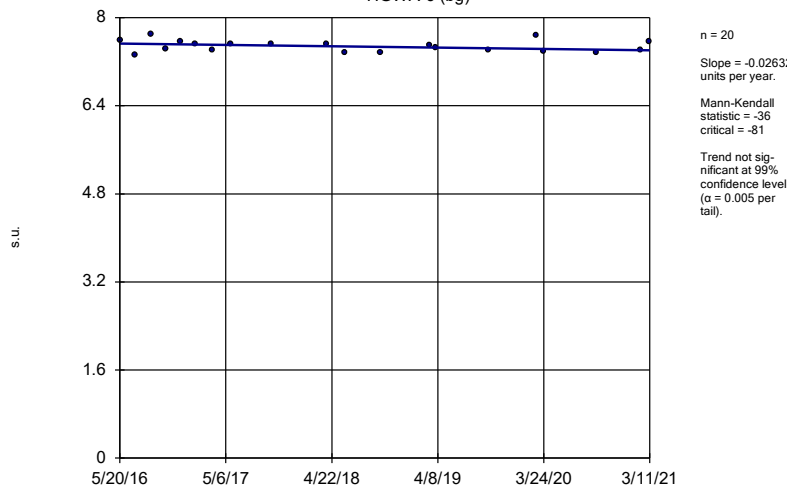
HGWA-5 (bg)



Constituent: Field pH Analysis Run 5/5/2021 10:24 AM View: Appendix III - Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator

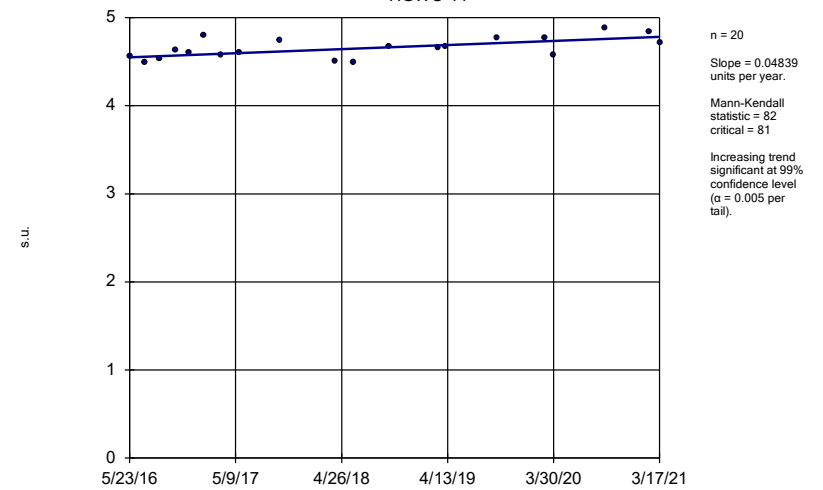
HGWA-6 (bg)



Constituent: Field pH Analysis Run 5/5/2021 10:24 AM View: Appendix III - Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-2

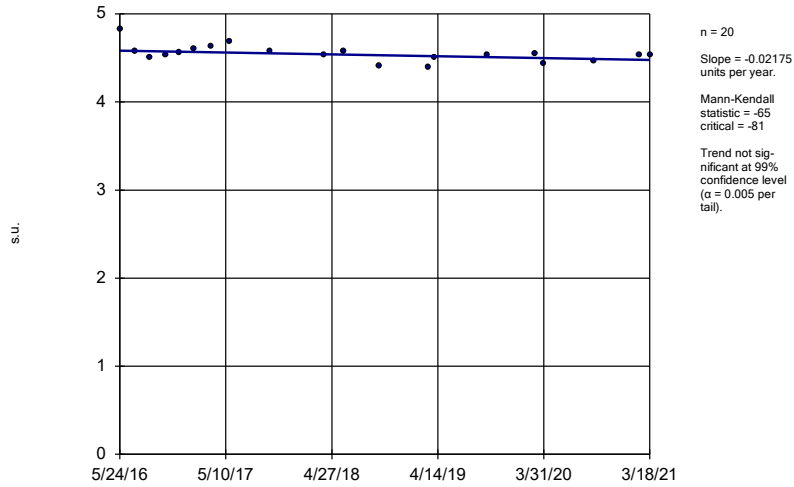
### Sen's Slope Estimator

HGWC-14



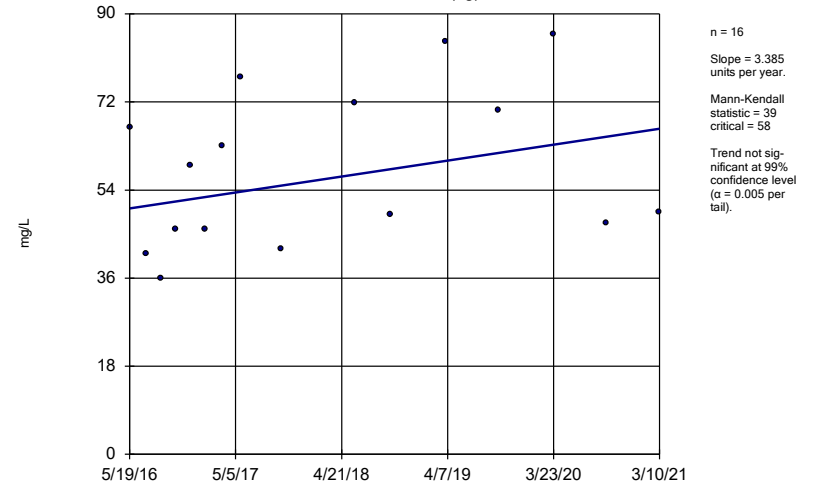
Constituent: Field pH Analysis Run 5/5/2021 10:24 AM View: Appendix III - Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sen's Slope Estimator  
HGWC-18



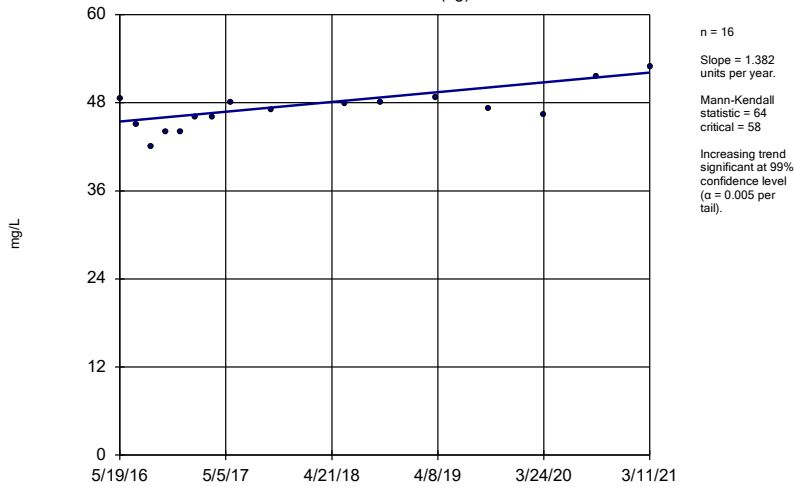
Constituent: Field pH Analysis Run 5/5/2021 10:24 AM View: Appendix III - Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sen's Slope Estimator  
HGWA-1 (bg)



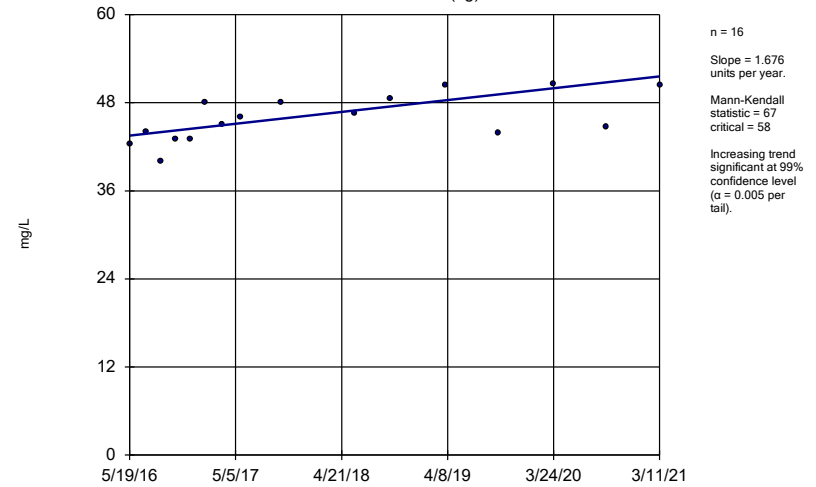
Constituent: Sulfate Analysis Run 5/5/2021 10:24 AM View: Appendix III - Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sen's Slope Estimator  
HGWA-2 (bg)



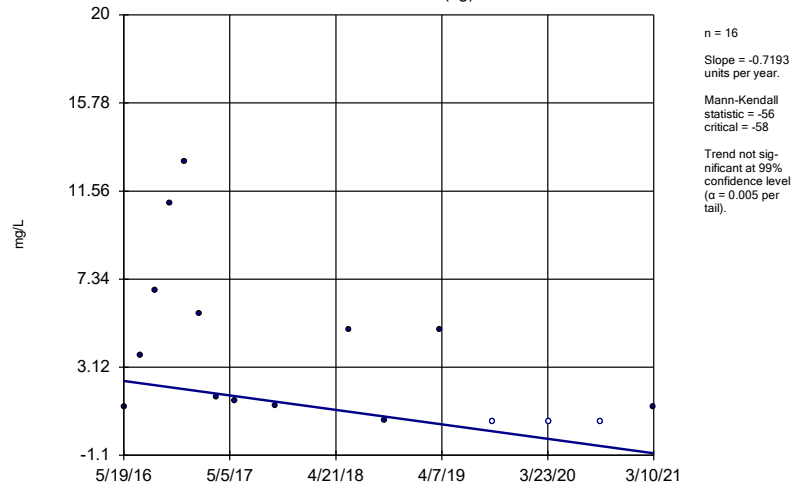
Constituent: Sulfate Analysis Run 5/5/2021 10:24 AM View: Appendix III - Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sen's Slope Estimator  
HGWA-3 (bg)



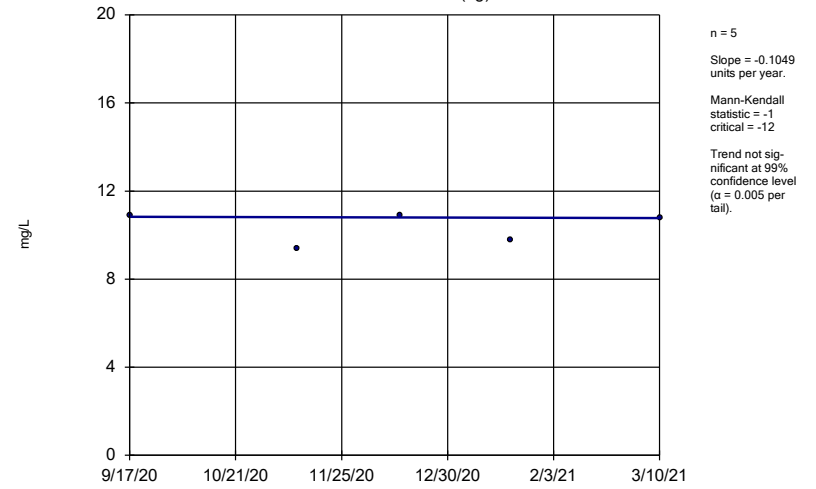
Constituent: Sulfate Analysis Run 5/5/2021 10:24 AM View: Appendix III - Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sen's Slope Estimator  
 HGWA-4 (bg)



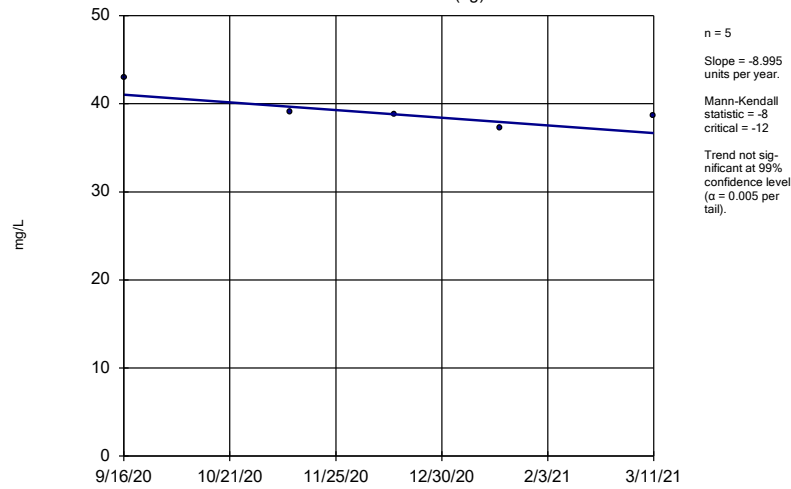
Constituent: Sulfate Analysis Run 5/5/2021 10:24 AM View: Appendix III - Trend Tests  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

Sen's Slope Estimator  
 HGWA-42D (bg)



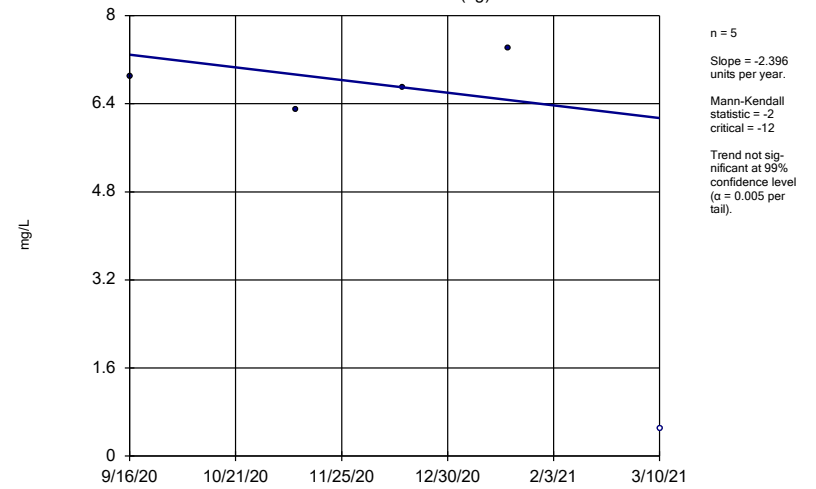
Constituent: Sulfate Analysis Run 5/5/2021 10:24 AM View: Appendix III - Trend Tests  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

Sen's Slope Estimator  
 HGWA-43D (bg)



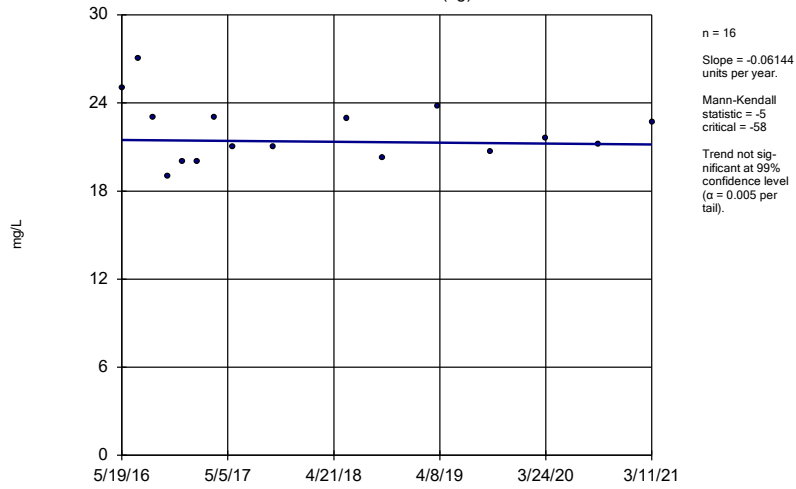
Constituent: Sulfate Analysis Run 5/5/2021 10:24 AM View: Appendix III - Trend Tests  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

Sen's Slope Estimator  
 HGWA-44D (bg)



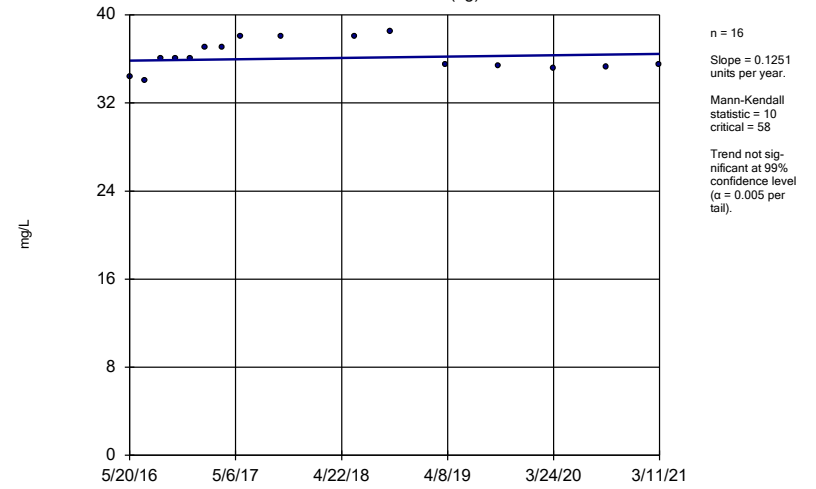
Constituent: Sulfate Analysis Run 5/5/2021 10:24 AM View: Appendix III - Trend Tests  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

Sen's Slope Estimator  
HGWA-5 (bg)



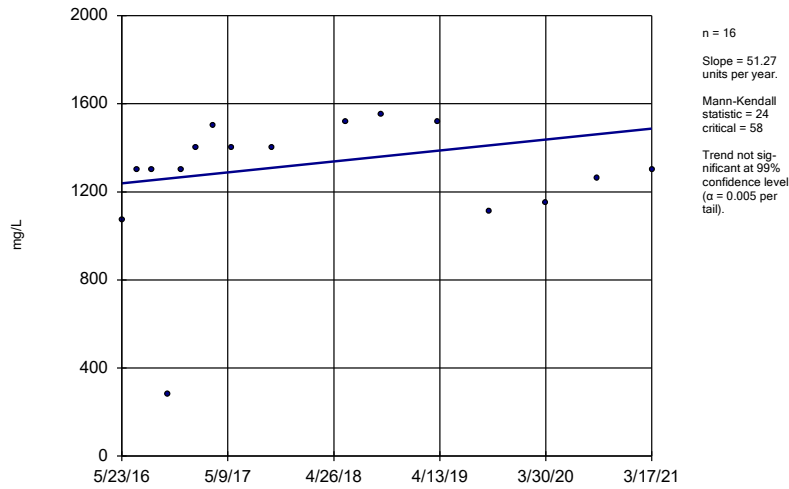
Constituent: Sulfate Analysis Run 5/5/2021 10:24 AM View: Appendix III - Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sen's Slope Estimator  
HGWA-6 (bg)



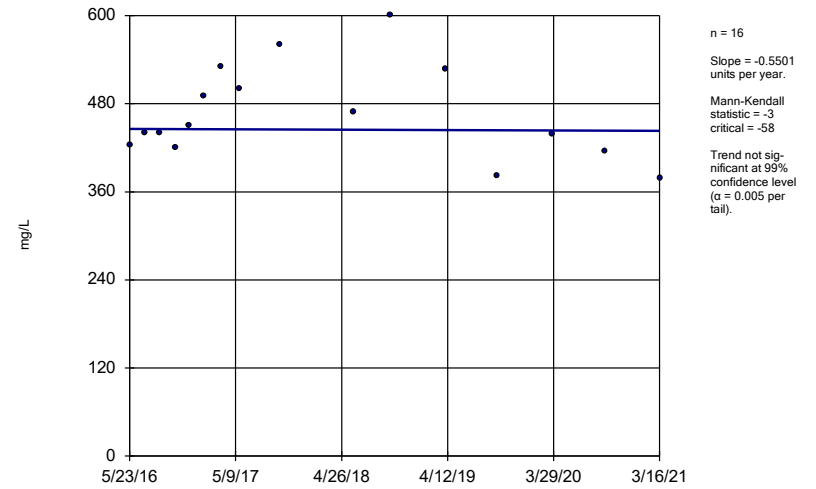
Constituent: Sulfate Analysis Run 5/5/2021 10:24 AM View: Appendix III - Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sen's Slope Estimator  
HGWC-14



Constituent: Sulfate Analysis Run 5/5/2021 10:24 AM View: Appendix III - Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-2

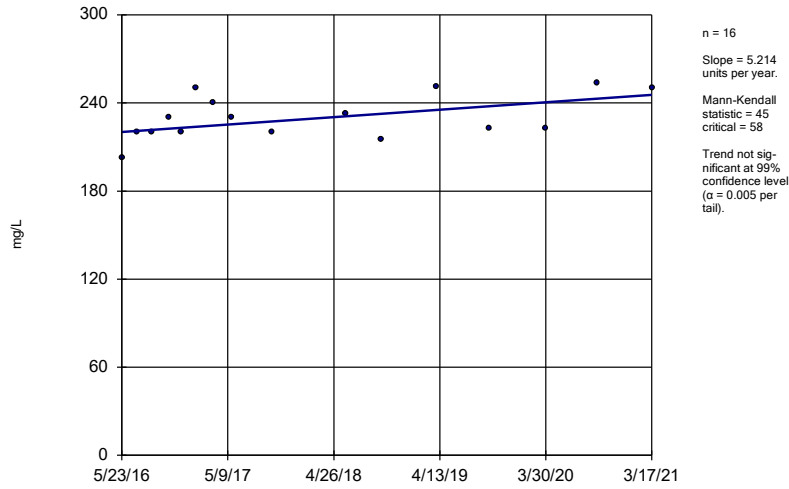
Sen's Slope Estimator  
HGWC-15



Constituent: Sulfate Analysis Run 5/5/2021 10:24 AM View: Appendix III - Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-2

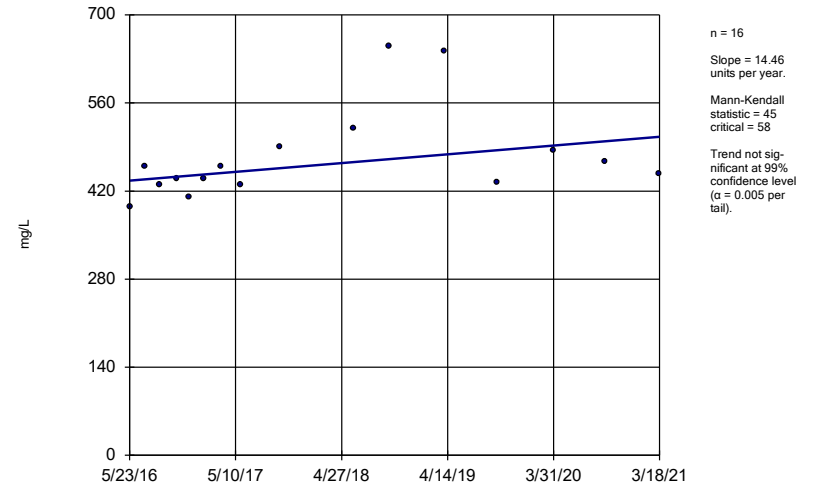


### Sen's Slope Estimator HGWC-16



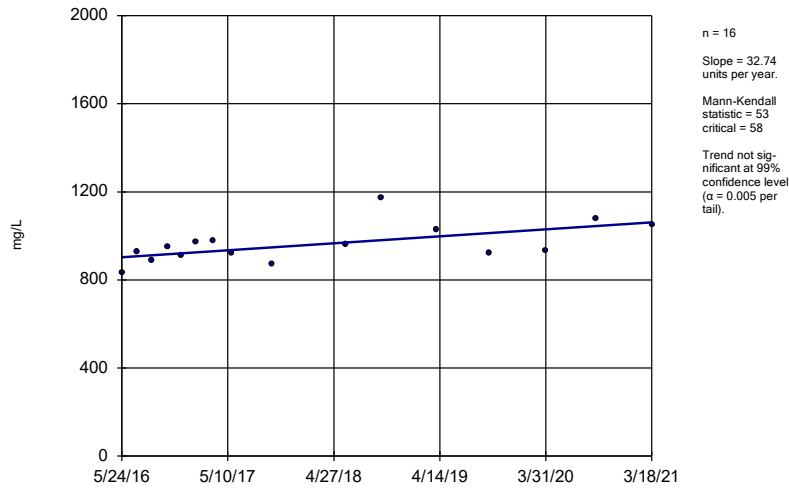
Constituent: Sulfate Analysis Run 5/5/2021 10:24 AM View: Appendix III - Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator HGWC-17



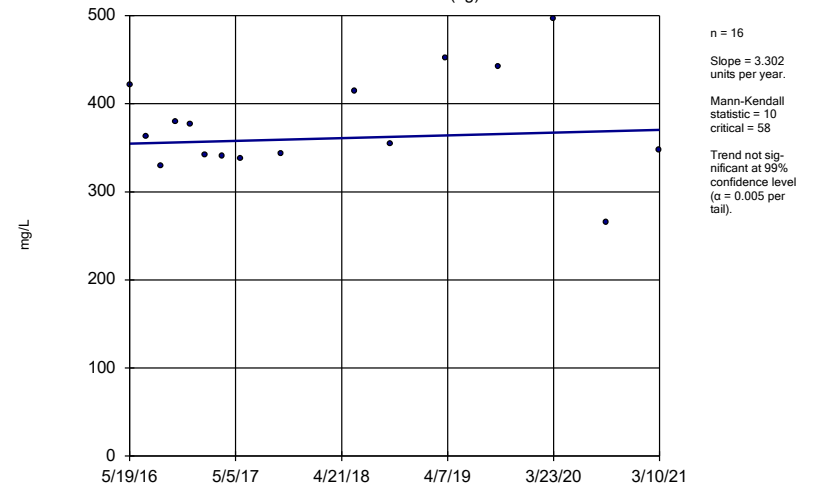
Constituent: Sulfate Analysis Run 5/5/2021 10:24 AM View: Appendix III - Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator HGWC-18



Constituent: Sulfate Analysis Run 5/5/2021 10:24 AM View: Appendix III - Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-2

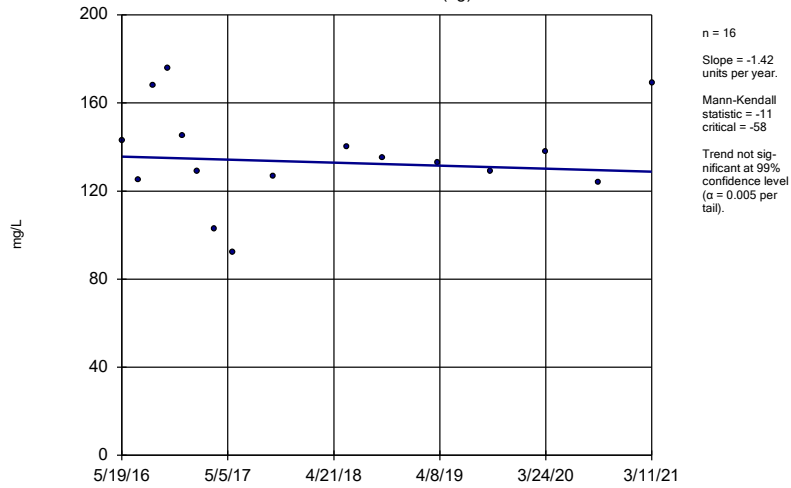
### Sen's Slope Estimator HGWA-1 (bg)



Constituent: Total Dissolved Solids Analysis Run 5/5/2021 10:24 AM View: Appendix III - Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator

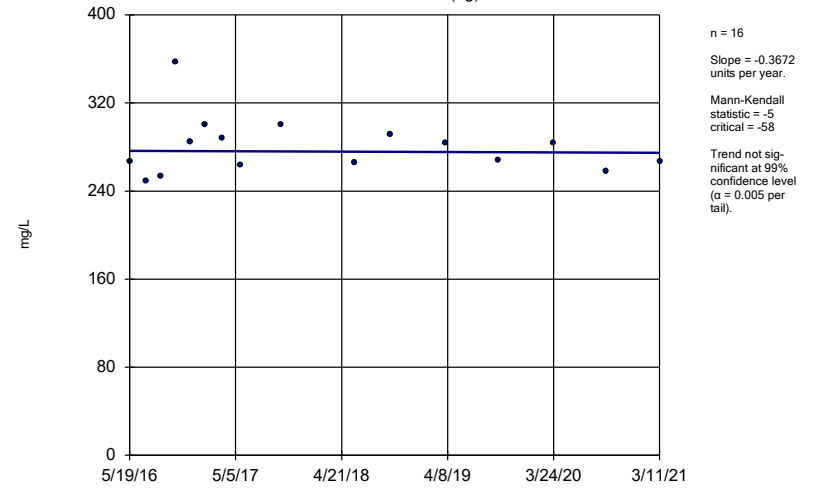
HGWA-2 (bg)



Constituent: Total Dissolved Solids Analysis Run 5/5/2021 10:24 AM View: Appendix III - Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator

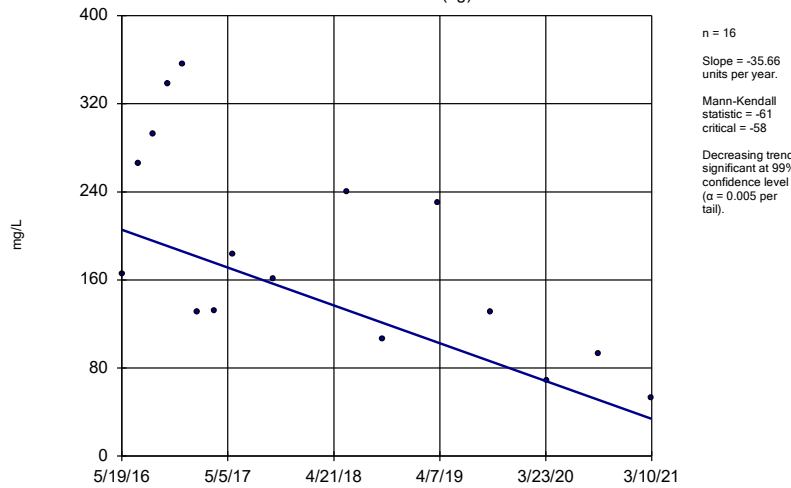
HGWA-3 (bg)



Constituent: Total Dissolved Solids Analysis Run 5/5/2021 10:24 AM View: Appendix III - Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator

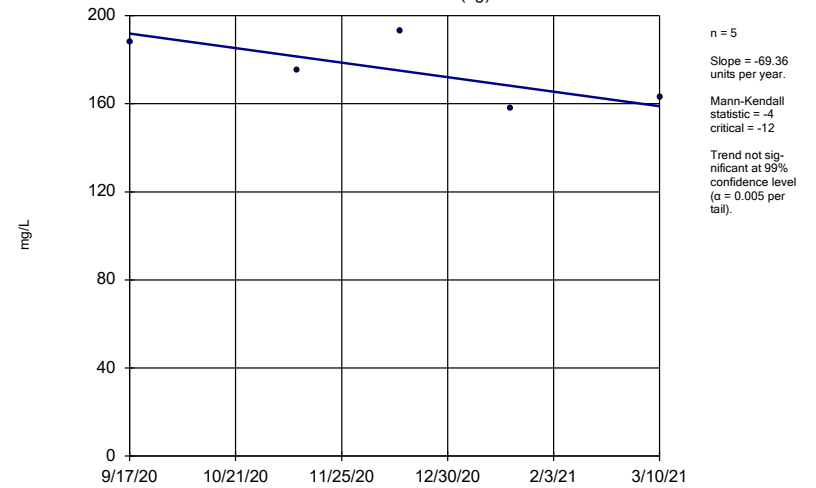
HGWA-4 (bg)



Constituent: Total Dissolved Solids Analysis Run 5/5/2021 10:24 AM View: Appendix III - Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator

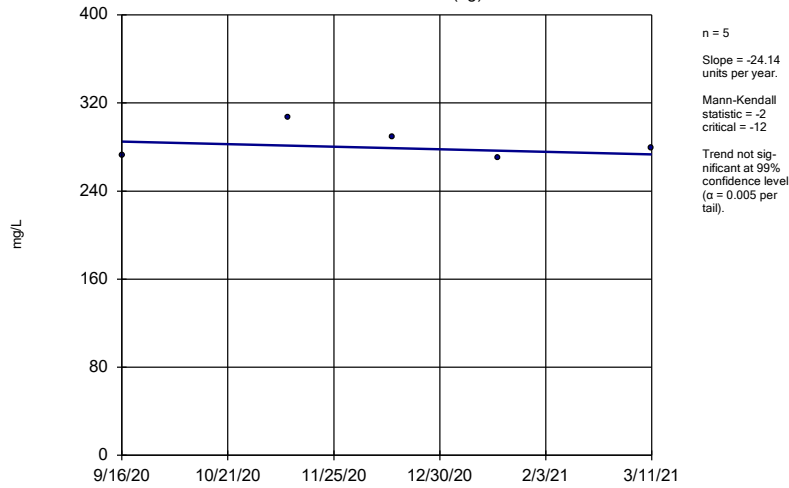
HGWA-42D (bg)



Constituent: Total Dissolved Solids Analysis Run 5/5/2021 10:24 AM View: Appendix III - Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator

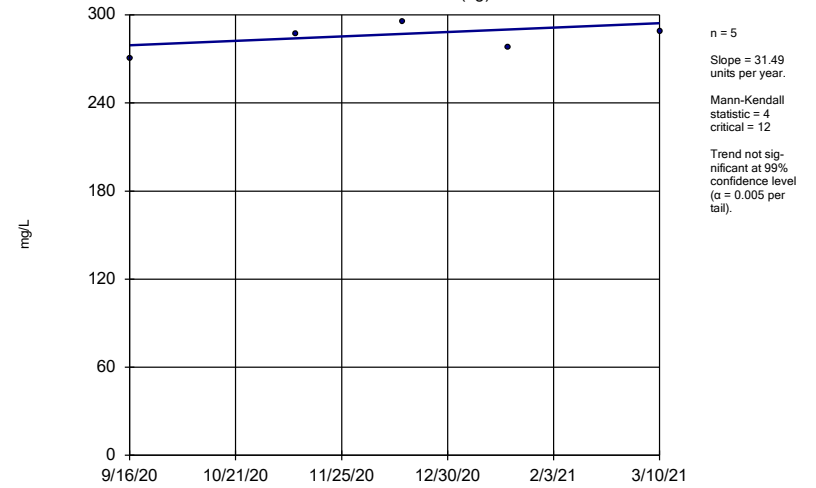
HGWA-43D (bg)



Constituent: Total Dissolved Solids Analysis Run 5/5/2021 10:24 AM View: Appendix III - Trend Tests  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator

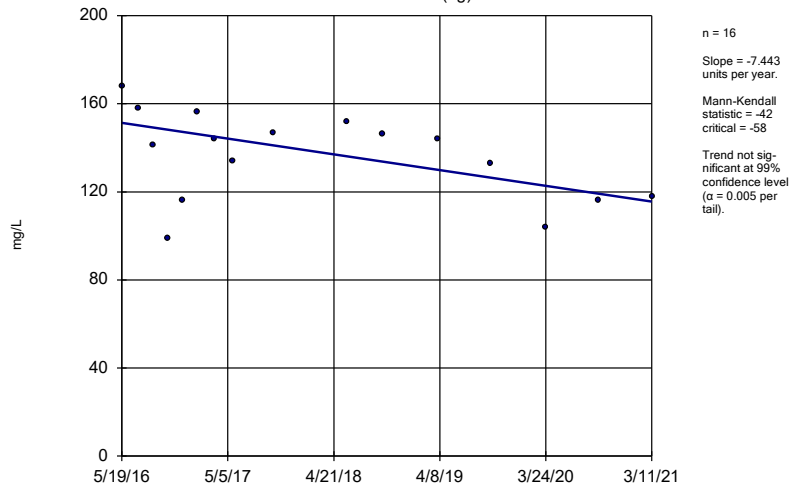
HGWA-44D (bg)



Constituent: Total Dissolved Solids Analysis Run 5/5/2021 10:24 AM View: Appendix III - Trend Tests  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator

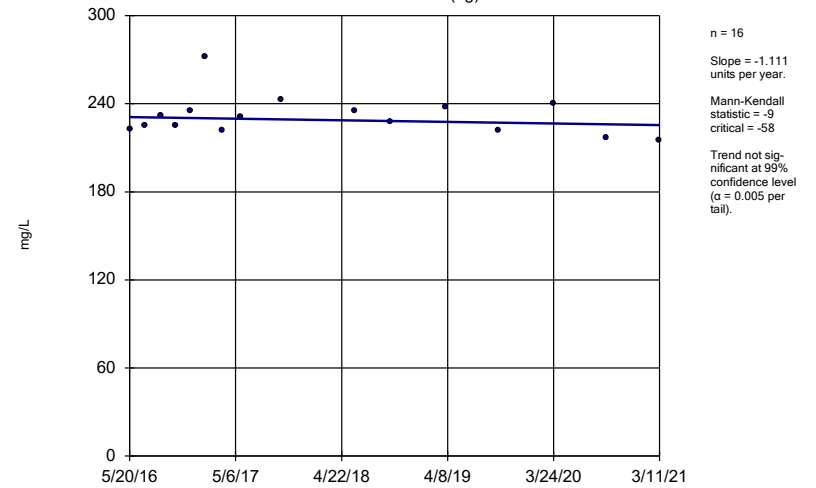
HGWA-5 (bg)



Constituent: Total Dissolved Solids Analysis Run 5/5/2021 10:24 AM View: Appendix III - Trend Tests  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

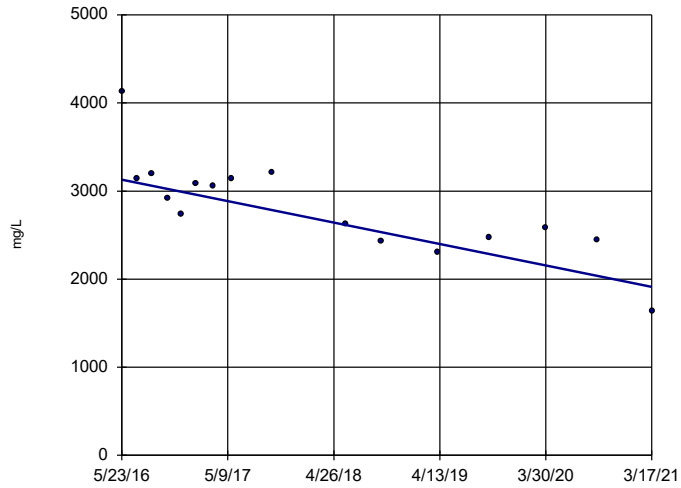
### Sen's Slope Estimator

HGWA-6 (bg)



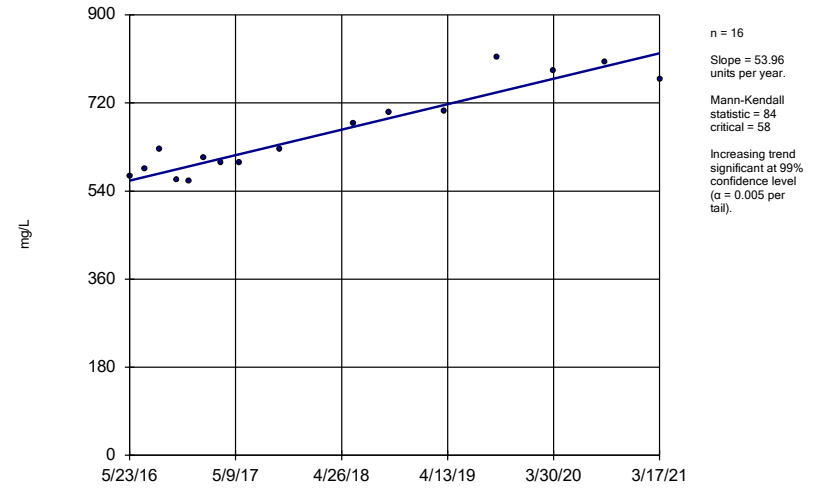
Constituent: Total Dissolved Solids Analysis Run 5/5/2021 10:24 AM View: Appendix III - Trend Tests  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

Sen's Slope Estimator  
HGWC-14



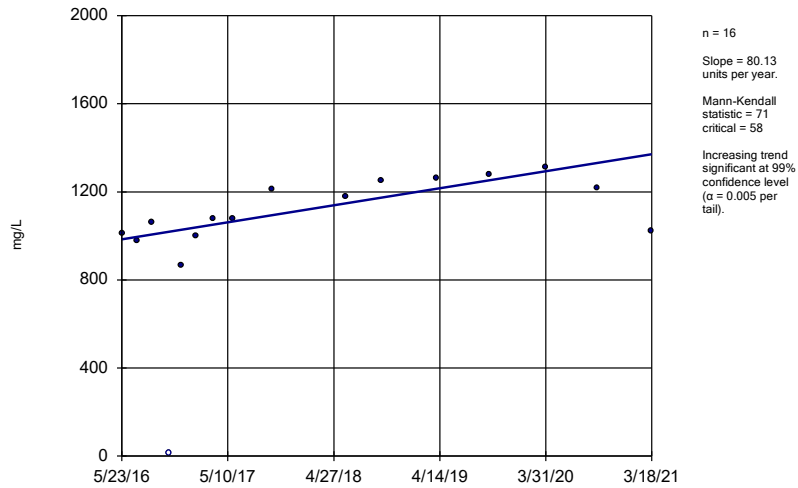
Constituent: Total Dissolved Solids Analysis Run 5/5/2021 10:24 AM View: Appendix III - Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sen's Slope Estimator  
HGWC-16



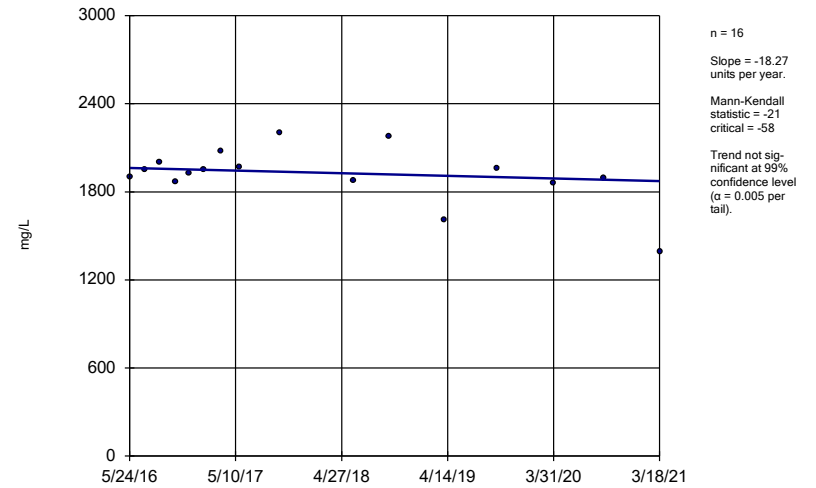
Constituent: Total Dissolved Solids Analysis Run 5/5/2021 10:24 AM View: Appendix III - Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sen's Slope Estimator  
HGWC-17



Constituent: Total Dissolved Solids Analysis Run 5/5/2021 10:24 AM View: Appendix III - Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sen's Slope Estimator  
HGWC-18



Constituent: Total Dissolved Solids Analysis Run 5/5/2021 10:24 AM View: Appendix III - Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-2

FIGURE F.

# Upper Tolerance Limits Summary Table

Plant Hammond Client: Southern Company Data: Hammond AP-2 Printed 5/5/2021, 10:00 AM

Constituent	Upper Lim.	Lower Lim.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Antimony (mg/L)	0.003	n/a	n/a	99	n/a	n/a	79.8	n/a	n/a	0.006232	NP Inter(NDs)
Arsenic (mg/L)	0.005	n/a	n/a	132	n/a	n/a	81.06	n/a	n/a	0.001147	NP Inter(NDs)
Barium (mg/L)	0.46	n/a	n/a	132	n/a	n/a	0	n/a	n/a	0.001147	NP Inter(normality)
Beryllium (mg/L)	0.0005	n/a	n/a	120	n/a	n/a	84.17	n/a	n/a	0.002122	NP Inter(NDs)
Cadmium (mg/L)	0.0005	n/a	n/a	132	n/a	n/a	93.18	n/a	n/a	0.001147	NP Inter(NDs)
Chromium (mg/L)	0.019	n/a	n/a	120	n/a	n/a	82.5	n/a	n/a	0.002122	NP Inter(NDs)
Cobalt (mg/L)	0.038	n/a	n/a	132	n/a	n/a	69.7	n/a	n/a	0.001147	NP Inter(NDs)
Combined Radium 226 + 228 (pCi/L)	1.684	n/a	n/a	132	0.7837	0.2727	0	None	sqrt(x)	0.05	Inter
Fluoride (mg/L)	0.74	n/a	n/a	138	n/a	n/a	31.88	n/a	n/a	0.0008431	NP Inter(normality)
Lead (mg/L)	0.001	n/a	n/a	120	n/a	n/a	67.5	n/a	n/a	0.002122	NP Inter(NDs)
Lithium (mg/L)	0.034	n/a	n/a	132	n/a	n/a	20.45	n/a	n/a	0.001147	NP Inter(normality)
Mercury (mg/L)	0.0005	n/a	n/a	87	n/a	n/a	90.8	n/a	n/a	0.01153	NP Inter(NDs)
Molybdenum (mg/L)	0.01	n/a	n/a	120	n/a	n/a	86.67	n/a	n/a	0.002122	NP Inter(NDs)
Selenium (mg/L)	0.005	n/a	n/a	132	n/a	n/a	98.48	n/a	n/a	0.001147	NP Inter(NDs)
Thallium (mg/L)	0.001	n/a	n/a	132	n/a	n/a	98.48	n/a	n/a	0.001147	NP Inter(NDs)

FIGURE G.

<b>PLANT HAMMOND AP-2 GWPS (State)</b>				
<b>Constituent Name</b>	<b>MCL</b>	<b>CCR-Rule Specified</b>	<b>Background Limit</b>	<b>State GWPS</b>
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		0.46	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		0.0019	0.1
Cobalt, Total (mg/L)	n/a	0.006	0.038	0.038
Combined Radium, Total (pCi/L)	5		1.68	5
Fluoride, Total (mg/L)	4		0.74	4
Lead, Total (mg/L)	n/a	0.015	0.001	0.001
Lithium, Total (mg/L)	n/a	0.04	0.034	0.034
Mercury, Total (mg/L)	0.002		0.0005	0.002
Molybdenum, Total (mg/L)	n/a	0.1	0.01	0.01
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.

<b>PLANT HAMMOND AP-2 GWPS (Federal)</b>				
<b>Constituent Name</b>	<b>MCL</b>	<b>CCR-Rule Specified</b>	<b>Background Limit</b>	<b>Federal GWPS</b>
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		0.46	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		0.0019	0.1
Cobalt, Total (mg/L)	n/a	0.006	0.038	0.038
Combined Radium, Total (pCi/L)	5		1.68	5
Fluoride, Total (mg/L)	4		0.74	4
Lead, Total (mg/L)	n/a	0.015	0.001	0.015
Lithium, Total (mg/L)	n/a	0.04	0.034	0.04
Mercury, Total (mg/L)	0.002		0.0005	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 I.

## State Confidence Intervals - Significant Results

Plant Hammond Client: Southern Company Data: Hammond AP-2 Printed 5/5/2021, 11:29 AM

<u>Constituent</u>	<u>Well</u>	<u>Upper Lim.</u>	<u>Lower Lim.</u>	<u>Compliance</u>	<u>Sig.</u>	<u>N</u>	<u>Mean</u>	<u>Std. Dev.</u>	<u>%NDs</u>	<u>ND Adj.</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Cobalt (mg/L)	HGWC-18	0.19	0.1614	0.038	Yes	19	0.1757	0.02444	0	None	No	0.01	Param.
Cobalt (mg/L)	MW-33	0.05914	0.04819	0.038	Yes	6	0.05367	0.003983	0	None	No	0.01	Param.
Cobalt (mg/L)	MW-35	0.1078	0.07716	0.038	Yes	4	0.0925	0.006758	0	None	No	0.01	Param.
Lead (mg/L)	HGWC-14	0.001735	0.001385	0.001	Yes	17	0.00156	0.0002796	5.882	None	No	0.01	Param.
Lead (mg/L)	HGWC-18	0.001458	0.001175	0.001	Yes	17	0.001316	0.0002265	5.882	None	No	0.01	Param.
Lead (mg/L)	MW-33	0.0018	0.0017	0.001	Yes	5	0.00172	0.00004472	0	None	No	0.031	NP (normality)
Molybdenum (mg/L)	MW-21D	0.03607	0.01571	0.01	Yes	9	0.02589	0.01054	0	None	No	0.01	Param.

# State Confidence Intervals - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-2 Printed 5/5/2021, 11:29 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Antimony (mg/L)	HGWC-14	0.003	0.00043	0.006	No	13	0.002595	0.0009899	84.62	None	No	0.01	NP (NDs)
Arsenic (mg/L)	HGWC-14	0.0089	0.0032	0.01	No	19	0.008125	0.007668	15.79	None	No	0.01	NP (normality)
Arsenic (mg/L)	HGWC-15	0.025	0.0008	0.01	No	19	0.02112	0.009199	84.21	None	No	0.01	NP (NDs)
Arsenic (mg/L)	HGWC-16	0.025	0.0012	0.01	No	19	0.01989	0.01017	78.95	None	No	0.01	NP (NDs)
Arsenic (mg/L)	HGWC-17	0.025	0.00097	0.01	No	19	0.01865	0.01092	73.68	None	No	0.01	NP (NDs)
Arsenic (mg/L)	HGWC-18	0.007066	0.004844	0.01	No	19	0.005955	0.001897	0	None	No	0.01	Param.
Arsenic (mg/L)	MW-21D	0.025	0.00019	0.01	No	9	0.01694	0.01209	66.67	None	No	0.002	NP (NDs)
Arsenic (mg/L)	MW-22	0.025	0.00045	0.01	No	8	0.02193	0.00868	87.5	None	No	0.004	NP (NDs)
Arsenic (mg/L)	MW-23D	0.025	0.00082	0.01	No	8	0.01898	0.01115	75	None	No	0.004	NP (NDs)
Arsenic (mg/L)	MW-33	0.008872	0.002648	0.01	No	5	0.00576	0.001857	0	None	No	0.01	Param.
Arsenic (mg/L)	MW-35	0.025	0.005	0.01	No	4	0.01023	0.009859	25	None	No	0.0625	NP (normality)
Arsenic (mg/L)	MW-37D	0.004094	0.0006745	0.01	No	4	0.007588	0.01162	25	Kaplan-Meier	ln(x)	0.01	Param.
Barium (mg/L)	HGWC-14	0.023	0.019	2	No	19	0.025	0.01827	5.263	None	No	0.01	NP (normality)
Barium (mg/L)	HGWC-15	0.02874	0.01955	2	No	19	0.02414	0.007845	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-16	0.113	0.1002	2	No	19	0.1066	0.01093	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-17	0.02636	0.02358	2	No	19	0.02497	0.002378	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-18	0.0339	0.029	2	No	19	0.03406	0.0163	5.263	None	No	0.01	NP (normality)
Barium (mg/L)	MW-21D	0.07538	0.04662	2	No	9	0.061	0.01489	0	None	No	0.01	Param.
Barium (mg/L)	MW-22	0.03673	0.01702	2	No	8	0.02688	0.009296	0	None	No	0.01	Param.
Barium (mg/L)	MW-23D	0.082	0.056	2	No	8	0.06288	0.008357	0	None	No	0.004	NP (normality)
Barium (mg/L)	MW-33	0.02943	0.02217	2	No	5	0.0258	0.002168	0	None	No	0.01	Param.
Barium (mg/L)	MW-35	0.03443	0.02307	2	No	4	0.02875	0.0025	0	None	No	0.01	Param.
Barium (mg/L)	MW-37D	0.2153	0.07971	2	No	4	0.1475	0.02986	0	None	No	0.01	Param.
Beryllium (mg/L)	HGWC-14	0.00058	0.00043	0.004	No	17	0.0004794	0.00007862	11.76	None	No	0.01	NP (normality)
Beryllium (mg/L)	HGWC-17	0.0005	0.000067	0.004	No	17	0.0004479	0.000147	88.24	None	No	0.01	NP (NDs)
Beryllium (mg/L)	HGWC-18	0.003463	0.002759	0.004	No	17	0.00304	0.000771	5.882	None	x^2	0.01	Param.
Beryllium (mg/L)	MW-22	0.0005	0.000047	0.004	No	8	0.0003364	0.000226	62.5	None	No	0.004	NP (NDs)
Beryllium (mg/L)	MW-33	0.001159	0.0008766	0.004	No	5	0.001018	0.00008438	0	None	No	0.01	Param.
Beryllium (mg/L)	MW-35	0.0008122	0.0001528	0.004	No	4	0.0004825	0.0001452	0	None	No	0.01	Param.
Beryllium (mg/L)	MW-37D	0.0005	0.00012	0.004	No	4	0.000405	0.00019	75	None	No	0.0625	NP (NDs)
Cadmium (mg/L)	HGWC-14	0.0005	0.0001	0.005	No	19	0.000302	0.0001954	47.37	None	No	0.01	NP (normality)
Cadmium (mg/L)	HGWC-15	0.002277	0.001559	0.005	No	19	0.001948	0.0006767	0	None	sqrt(x)	0.01	Param.
Cadmium (mg/L)	HGWC-17	0.0005	0.00007	0.005	No	19	0.0004774	0.00009865	94.74	None	No	0.01	NP (NDs)
Cadmium (mg/L)	HGWC-18	0.002362	0.001856	0.005	No	19	0.002063	0.0005188	5.263	None	x^2	0.01	Param.
Cadmium (mg/L)	MW-22	0.002179	0.001156	0.005	No	8	0.001645	0.0006169	0	None	x^3	0.01	Param.
Cadmium (mg/L)	MW-23D	0.0006	0.00045	0.005	No	8	0.000515	0.00004721	62.5	None	No	0.004	NP (NDs)
Cadmium (mg/L)	MW-33	0.0002327	0.0001473	0.005	No	5	0.00019	0.0000255	0	None	No	0.01	Param.
Cadmium (mg/L)	MW-35	0.002623	-0.0001083	0.005	No	4	0.001258	0.0006016	0	None	No	0.01	Param.
Chromium (mg/L)	HGWC-14	0.025	0.00066	0.1	No	17	0.02212	0.008123	88.24	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-15	0.025	0.0012	0.1	No	17	0.02071	0.009549	82.35	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-16	0.025	0.0021	0.1	No	17	0.02078	0.009409	82.35	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-17	0.025	0.0018	0.1	No	17	0.02078	0.009403	82.35	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-18	0.025	0.00063	0.1	No	17	0.02068	0.009623	82.35	None	No	0.01	NP (NDs)
Chromium (mg/L)	MW-21D	0.025	0.00057	0.1	No	9	0.01959	0.01074	77.78	None	No	0.002	NP (NDs)
Chromium (mg/L)	MW-22	0.025	0.0004	0.1	No	8	0.01889	0.01131	75	None	No	0.004	NP (NDs)
Chromium (mg/L)	MW-23D	0.025	0.00083	0.1	No	8	0.01896	0.01118	75	None	No	0.004	NP (NDs)
Chromium (mg/L)	MW-33	0.025	0.00069	0.1	No	5	0.02014	0.01087	80	None	No	0.031	NP (NDs)
Chromium (mg/L)	MW-35	0.025	0.00079	0.1	No	4	0.01291	0.01397	50	None	No	0.0625	NP (normality)
Chromium (mg/L)	MW-37D	0.008014	0.000295	0.1	No	4	0.01405	0.01272	50	Kaplan-Meier	sqrt(x)	0.01	Param.
Cobalt (mg/L)	HGWC-14	0.02913	0.02366	0.038	No	19	0.02587	0.006039	5.263	None	x^2	0.01	Param.
Cobalt (mg/L)	HGWC-15	0.04702	0.02999	0.038	No	19	0.03851	0.01454	0	None	No	0.01	Param.
Cobalt (mg/L)	HGWC-16	0.005	0.00037	0.038	No	19	0.004508	0.001474	89.47	None	No	0.01	NP (NDs)
Cobalt (mg/L)	HGWC-17	0.01619	0.01429	0.038	No	19	0.01524	0.001623	0	None	No	0.01	Param.
<b>Cobalt (mg/L)</b>	<b>HGWC-18</b>	<b>0.19</b>	<b>0.1614</b>	<b>0.038</b>	<b>Yes</b>	<b>19</b>	<b>0.1757</b>	<b>0.02444</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.01</b>	<b>Param.</b>
Cobalt (mg/L)	MW-21D	0.005	0.00034	0.038	No	9	0.004482	0.001553	88.89	None	No	0.002	NP (NDs)

# State Confidence Intervals - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-2 Printed 5/5/2021, 11:29 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Cobalt (mg/L)	MW-22	0.04027	0.02448	0.038	No	8	0.03238	0.007444	0	None	No	0.01	Param.
Cobalt (mg/L)	MW-23D	0.001215	0.00097	0.038	No	8	0.001093	0.0001156	0	None	No	0.01	Param.
<b>Cobalt (mg/L)</b>	<b>MW-33</b>	<b>0.05914</b>	<b>0.04819</b>	<b>0.038</b>	<b>Yes</b>	<b>6</b>	<b>0.05367</b>	<b>0.003983</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.01</b>	<b>Param.</b>
<b>Cobalt (mg/L)</b>	<b>MW-35</b>	<b>0.1078</b>	<b>0.07716</b>	<b>0.038</b>	<b>Yes</b>	<b>4</b>	<b>0.0925</b>	<b>0.006758</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.01</b>	<b>Param.</b>
Cobalt (mg/L)	MW-37D	0.002148	-0.0001679	0.038	No	4	0.002995	0.002352	50	Kaplan-Meier	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-14	1.654	1.179	5	No	19	1.417	0.406	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-15	0.9507	0.4764	5	No	19	0.7136	0.405	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-16	1.008	0.5368	5	No	19	0.7724	0.4023	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-17	1.05	0.6723	5	No	19	0.8614	0.323	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-18	2.288	1.727	5	No	19	2.008	0.479	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-21D	1.194	0.401	5	No	9	0.7951	0.4745	0	None	sqrt(x)	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-22	1.301	0.3473	5	No	8	0.8241	0.4499	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-23D	1.206	0.5544	5	No	8	0.8801	0.3073	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-33	3.245	0.5646	5	No	5	1.905	0.7997	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-35	5.143	-1.186	5	No	4	1.979	1.394	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-37D	2.476	-0.7417	5	No	4	0.867	0.7086	0	None	No	0.01	Param.
Fluoride (mg/L)	HGWC-14	0.2344	0.08602	4	No	20	0.186	0.1617	20	Kaplan-Meier	sqrt(x)	0.01	Param.
Fluoride (mg/L)	HGWC-15	0.17	0.09	4	No	20	0.1457	0.1246	40	None	No	0.01	NP (normality)
Fluoride (mg/L)	HGWC-16	0.1744	0.04649	4	No	20	0.1624	0.1221	50	Kaplan-Meier	sqrt(x)	0.01	Param.
Fluoride (mg/L)	HGWC-17	0.16	0.07	4	No	20	0.1747	0.2184	35	None	No	0.01	NP (normality)
Fluoride (mg/L)	HGWC-18	0.6613	0.4237	4	No	20	0.5425	0.2091	5	None	No	0.01	Param.
Fluoride (mg/L)	MW-21D	0.1	0.1	4	No	9	0.1	5.0e-10	88.89	None	No	0.002	NP (NDs)
Fluoride (mg/L)	MW-22	0.28	0.1	4	No	8	0.1263	0.06301	75	None	No	0.004	NP (NDs)
Fluoride (mg/L)	MW-23D	0.16	0.1	4	No	8	0.1125	0.02375	75	None	No	0.004	NP (NDs)
Fluoride (mg/L)	MW-33	0.3611	0.0956	4	No	6	0.2283	0.09663	0	None	No	0.01	Param.
Fluoride (mg/L)	MW-35	0.1143	0.03769	4	No	4	0.082	0.0207	25	Kaplan-Meier	No	0.01	Param.
Fluoride (mg/L)	MW-37D	0.1156	0.03593	4	No	4	0.07575	0.01754	0	None	No	0.01	Param.
<b>Lead (mg/L)</b>	<b>HGWC-14</b>	<b>0.001735</b>	<b>0.001385</b>	<b>0.001</b>	<b>Yes</b>	<b>17</b>	<b>0.00156</b>	<b>0.0002796</b>	<b>5.882</b>	<b>None</b>	<b>No</b>	<b>0.01</b>	<b>Param.</b>
Lead (mg/L)	HGWC-15	0.001	0.0002	0.001	No	17	0.0007897	0.0003918	70.59	None	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-16	0.001	0.000094	0.001	No	17	0.0005308	0.0004573	47.06	None	No	0.01	NP (normality)
Lead (mg/L)	HGWC-17	0.001	0.000088	0.001	No	17	0.0005768	0.0004634	52.94	None	No	0.01	NP (NDs)
<b>Lead (mg/L)</b>	<b>HGWC-18</b>	<b>0.001458</b>	<b>0.001175</b>	<b>0.001</b>	<b>Yes</b>	<b>17</b>	<b>0.001316</b>	<b>0.0002265</b>	<b>5.882</b>	<b>None</b>	<b>No</b>	<b>0.01</b>	<b>Param.</b>
Lead (mg/L)	MW-21D	0.001	0.000047	0.001	No	9	0.0006476	0.0004571	55.56	None	No	0.002	NP (NDs)
Lead (mg/L)	MW-22	0.001	0.000036	0.001	No	8	0.0006538	0.0004782	62.5	None	No	0.004	NP (NDs)
Lead (mg/L)	MW-23D	0.001	0.000051	0.001	No	8	0.0007764	0.0004151	75	None	No	0.004	NP (NDs)
<b>Lead (mg/L)</b>	<b>MW-33</b>	<b>0.0018</b>	<b>0.0017</b>	<b>0.001</b>	<b>Yes</b>	<b>5</b>	<b>0.00172</b>	<b>0.00004472</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.031</b>	<b>NP (normality)</b>
Lead (mg/L)	MW-35	0.001367	-0.000187	0.001	No	4	0.00059	0.0003422	0	None	No	0.01	Param.
Lead (mg/L)	MW-37D	0.002073	-0.0008688	0.001	No	4	0.000793	0.0007149	25	Kaplan-Meier	No	0.01	Param.
Lithium (mg/L)	HGWC-15	0.007937	0.00179	0.034	No	19	0.01033	0.01019	31.58	Kaplan-Meier	x^(1/3)	0.01	Param.
Lithium (mg/L)	HGWC-16	0.0043	0.0028	0.034	No	19	0.004068	0.002738	5.263	None	No	0.01	NP (normality)
Lithium (mg/L)	HGWC-17	0.015	0.0011	0.034	No	19	0.008423	0.007124	52.63	None	No	0.01	NP (NDs)
Lithium (mg/L)	HGWC-18	0.01461	0.01234	0.034	No	19	0.01347	0.001942	0	None	No	0.01	Param.
Lithium (mg/L)	MW-21D	0.02597	0.02114	0.034	No	9	0.02356	0.002506	0	None	No	0.01	Param.
Lithium (mg/L)	MW-22	0.002	0.0011	0.034	No	8	0.00135	0.0002928	0	None	No	0.004	NP (normality)
Lithium (mg/L)	MW-23D	0.002602	0.002123	0.034	No	8	0.002363	0.0002264	0	None	No	0.01	Param.
Lithium (mg/L)	MW-33	0.001268	0.0008245	0.034	No	5	0.001046	0.0001322	0	None	No	0.01	Param.
Lithium (mg/L)	MW-35	0.005274	0.003226	0.034	No	4	0.00425	0.0004509	0	None	No	0.01	Param.
Lithium (mg/L)	MW-37D	0.04105	0.02795	0.034	No	4	0.0345	0.002887	0	None	No	0.01	Param.
Molybdenum (mg/L)	HGWC-15	0.01	0.0007	0.01	No	17	0.009453	0.002256	94.12	None	No	0.01	NP (NDs)
<b>Molybdenum (mg/L)</b>	<b>MW-21D</b>	<b>0.03607</b>	<b>0.01571</b>	<b>0.01</b>	<b>Yes</b>	<b>9</b>	<b>0.02589</b>	<b>0.01054</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.01</b>	<b>Param.</b>
Molybdenum (mg/L)	MW-22	0.01	0.00013	0.01	No	8	0.008766	0.00349	87.5	None	No	0.004	NP (NDs)
Molybdenum (mg/L)	MW-23D	0.005782	0.001794	0.01	No	8	0.00375	0.002632	12.5	None	ln(x)	0.01	Param.
Molybdenum (mg/L)	MW-37D	0.02709	0.008412	0.01	No	4	0.01775	0.004113	0	None	No	0.01	Param.
Selenium (mg/L)	HGWC-14	0.01318	0.006823	0.05	No	19	0.01	0.005427	0	None	No	0.01	Param.
Selenium (mg/L)	HGWC-15	0.005	0.0041	0.05	No	19	0.004322	0.001509	78.95	None	No	0.01	NP (NDs)

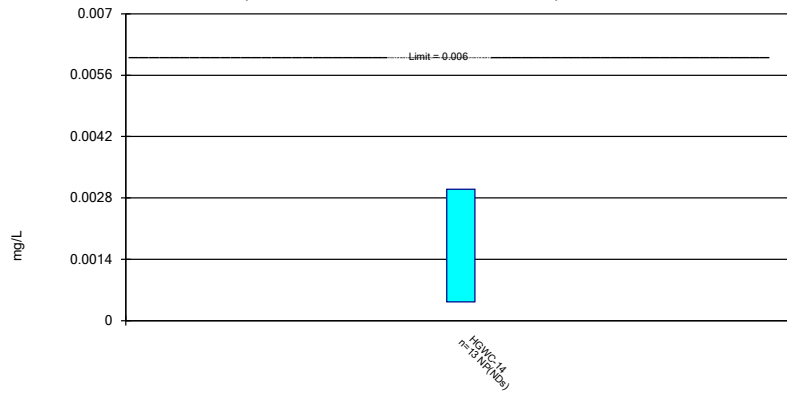
# State Confidence Intervals - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-2 Printed 5/5/2021, 11:29 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Selenium (mg/L)	HGWC-16	0.005	0.000089	0.05	No	19	0.004742	0.001127	94.74	None	No	0.01	NP (NDs)
Selenium (mg/L)	HGWC-17	0.005	0.0023	0.05	No	19	0.00441	0.001448	84.21	None	No	0.01	NP (NDs)
Selenium (mg/L)	HGWC-18	0.03425	0.01795	0.05	No	19	0.0261	0.01392	5.263	None	No	0.01	Param.
Selenium (mg/L)	MW-22	0.005	0.002	0.05	No	8	0.004625	0.001061	87.5	None	No	0.004	NP (NDs)
Selenium (mg/L)	MW-33	0.04314	-0.001136	0.05	No	5	0.021	0.01321	0	None	No	0.01	Param.
Selenium (mg/L)	MW-35	0.04671	-0.008206	0.05	No	4	0.01925	0.01209	0	None	No	0.01	Param.
Thallium (mg/L)	HGWC-14	0.000306	0.00028	0.002	No	19	0.0002972	0.00003063	0	None	No	0.01	NP (normality)
Thallium (mg/L)	HGWC-17	0.001	0.00011	0.002	No	19	0.0006737	0.0004391	63.16	None	No	0.01	NP (NDs)
Thallium (mg/L)	HGWC-18	0.001	0.00015	0.002	No	19	0.0005174	0.0004233	42.11	None	No	0.01	NP (normality)
Thallium (mg/L)	MW-33	0.0003207	0.0002473	0.002	No	5	0.000284	0.00002191	0	None	No	0.01	Param.
Thallium (mg/L)	MW-35	0.001	0.00013	0.002	No	4	0.0007825	0.000435	75	None	No	0.0625	NP (NDs)

### Non-Parametric Confidence Interval

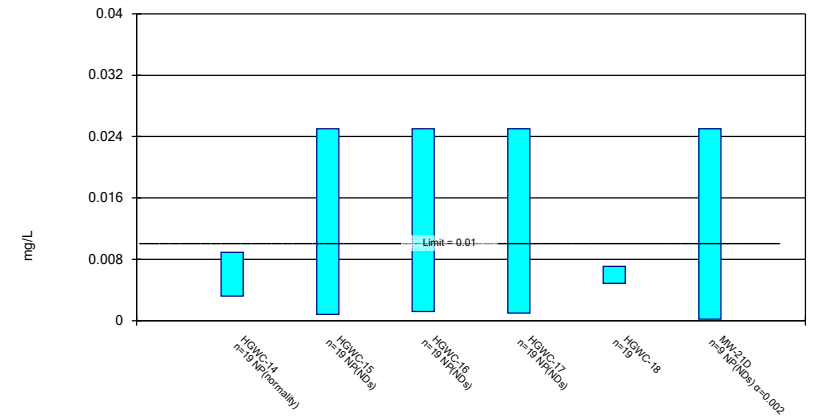
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Antimony Analysis Run 5/5/2021 11:26 AM View: Appendix IV - Confidence Intervals  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Parametric and Non-Parametric (NP) Confidence Interval

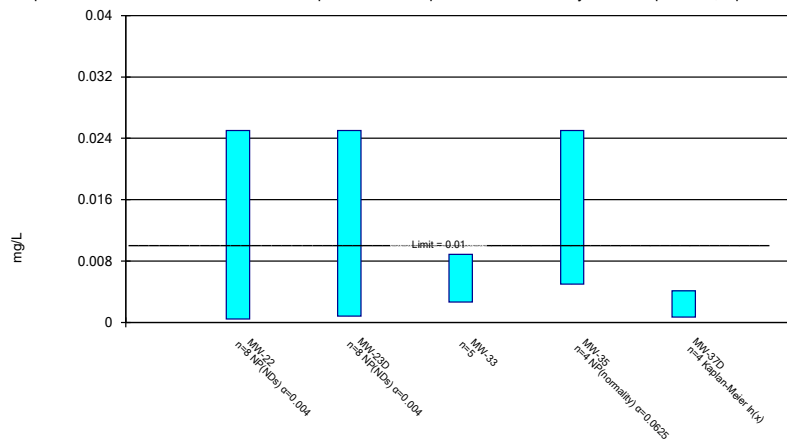
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Arsenic Analysis Run 5/5/2021 11:26 AM View: Appendix IV - Confidence Intervals  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Parametric and Non-Parametric (NP) Confidence Interval

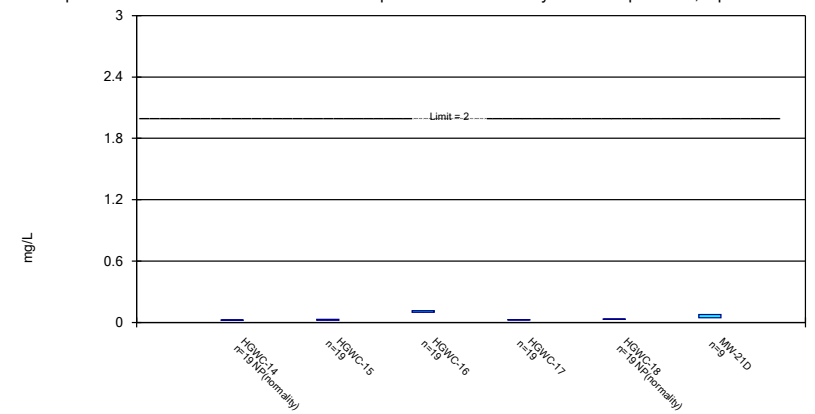
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Arsenic Analysis Run 5/5/2021 11:26 AM View: Appendix IV - Confidence Intervals  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.

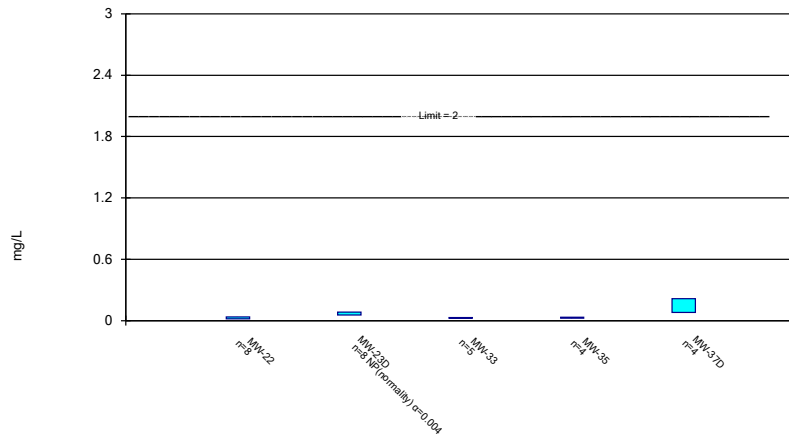


Constituent: Barium Analysis Run 5/5/2021 11:26 AM View: Appendix IV - Confidence Intervals  
Plant Hammond Client: Southern Company Data: Hammond AP-2



### Parametric and Non-Parametric (NP) Confidence Interval

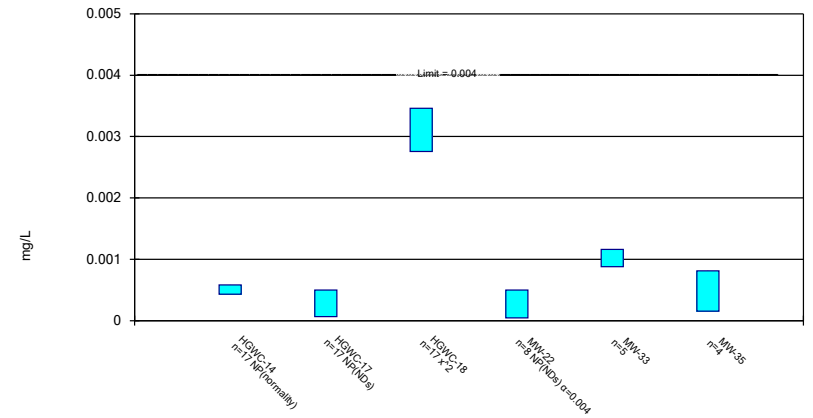
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Barium Analysis Run 5/5/2021 11:26 AM View: Appendix IV - Confidence Intervals  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Parametric and Non-Parametric (NP) Confidence Interval

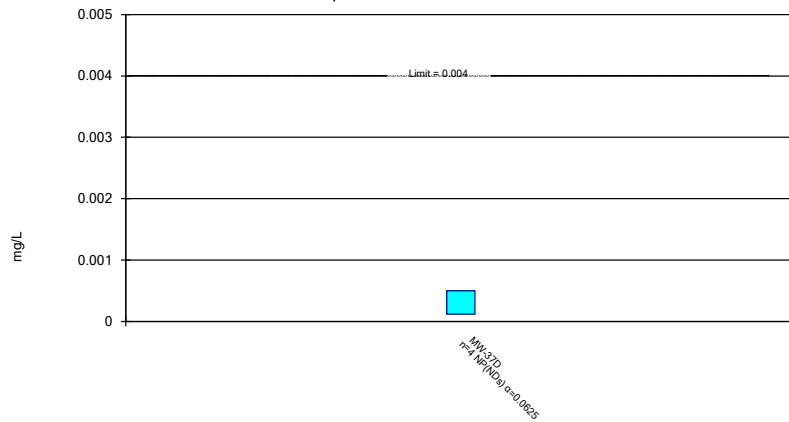
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Beryllium Analysis Run 5/5/2021 11:26 AM View: Appendix IV - Confidence Intervals  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Non-Parametric Confidence Interval

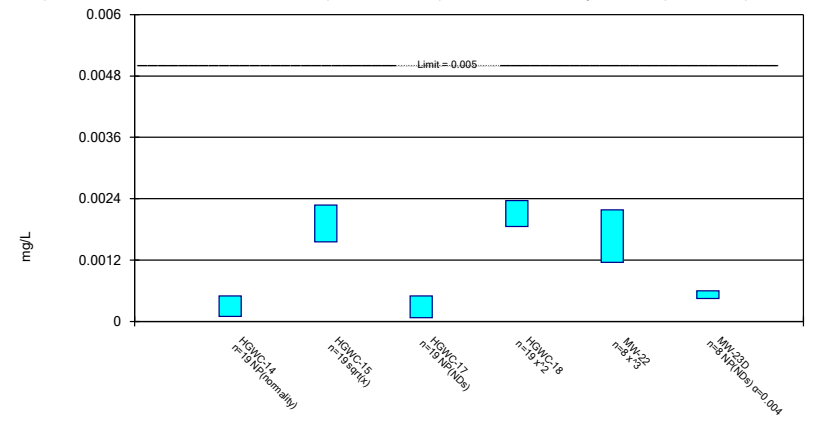
Compliance Limit is not exceeded.



Constituent: Beryllium Analysis Run 5/5/2021 11:26 AM View: Appendix IV - Confidence Intervals  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Parametric and Non-Parametric (NP) Confidence Interval

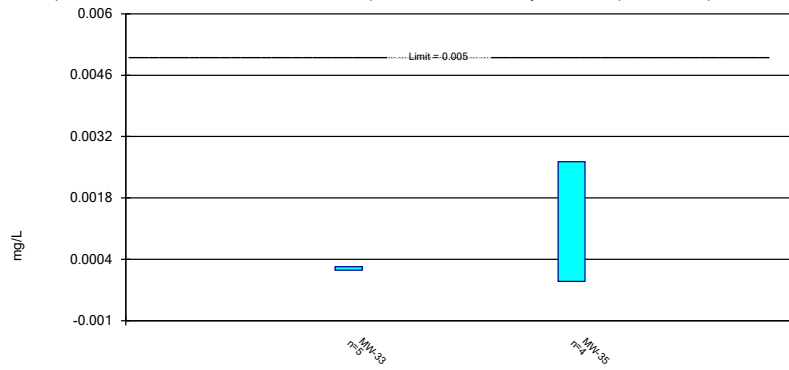
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cadmium Analysis Run 5/5/2021 11:26 AM View: Appendix IV - Confidence Intervals  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Parametric Confidence Interval

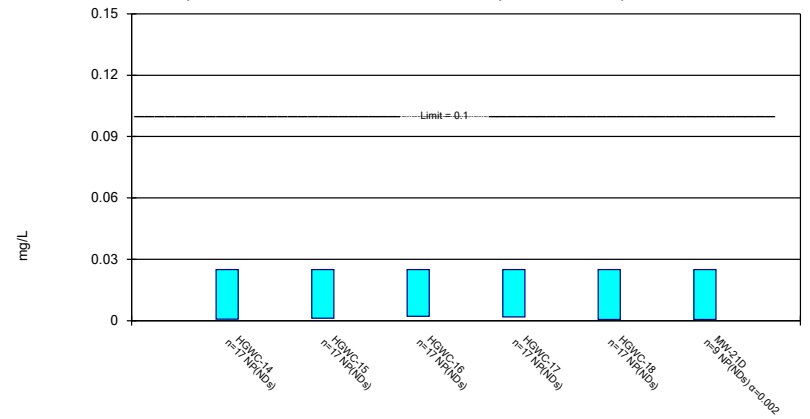
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cadmium Analysis Run 5/5/2021 11:26 AM View: Appendix IV - Confidence Intervals  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Non-Parametric Confidence Interval

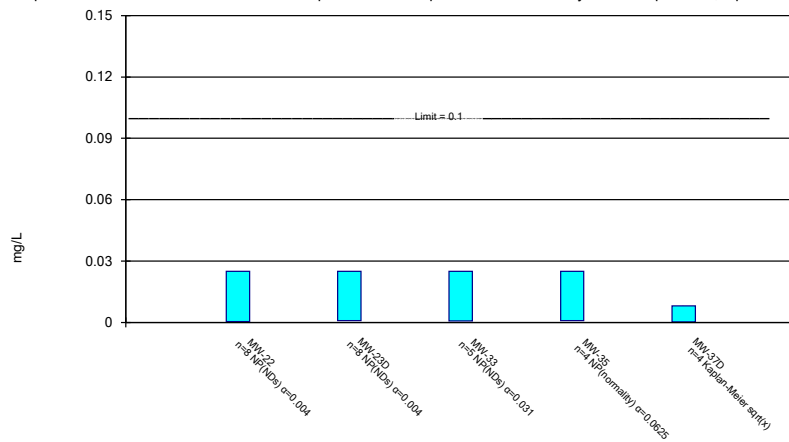
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted.



Constituent: Chromium Analysis Run 5/5/2021 11:26 AM View: Appendix IV - Confidence Intervals  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Parametric and Non-Parametric (NP) Confidence Interval

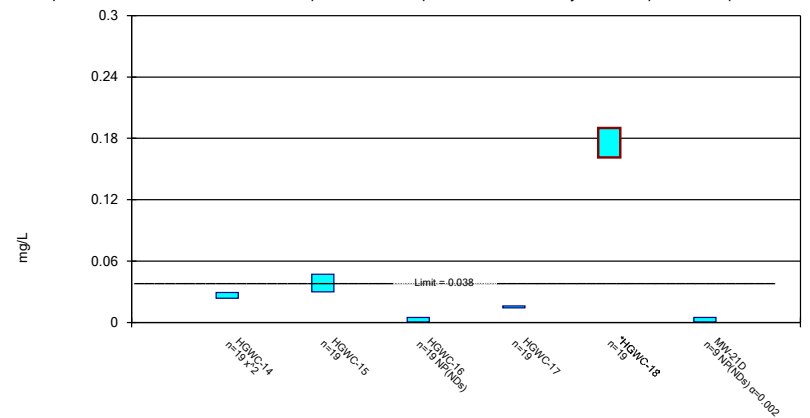
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Chromium Analysis Run 5/5/2021 11:26 AM View: Appendix IV - Confidence Intervals  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Parametric and Non-Parametric (NP) Confidence Interval

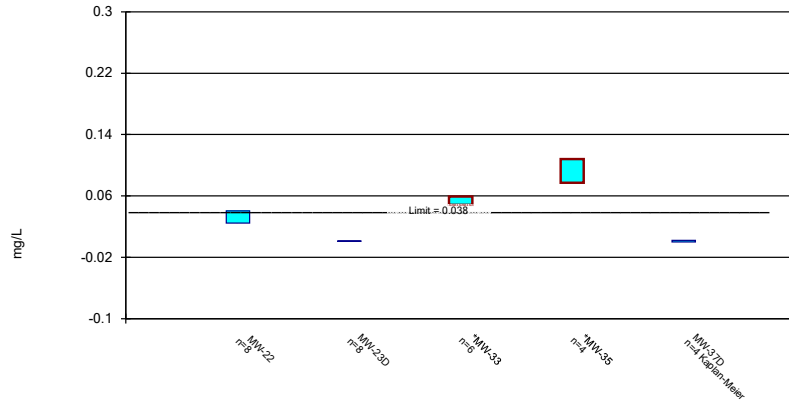
Compliance limit is exceeded.\* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cobalt Analysis Run 5/5/2021 11:26 AM View: Appendix IV - Confidence Intervals  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Parametric Confidence Interval

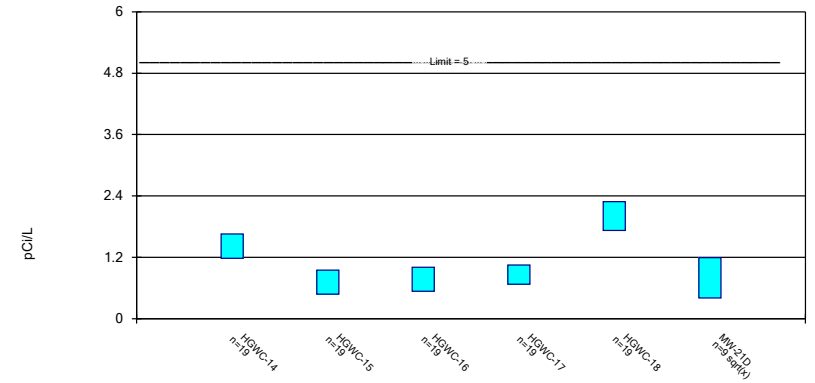
Compliance limit is exceeded.\* Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cobalt Analysis Run 5/5/2021 11:26 AM View: Appendix IV - Confidence Intervals  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Parametric Confidence Interval

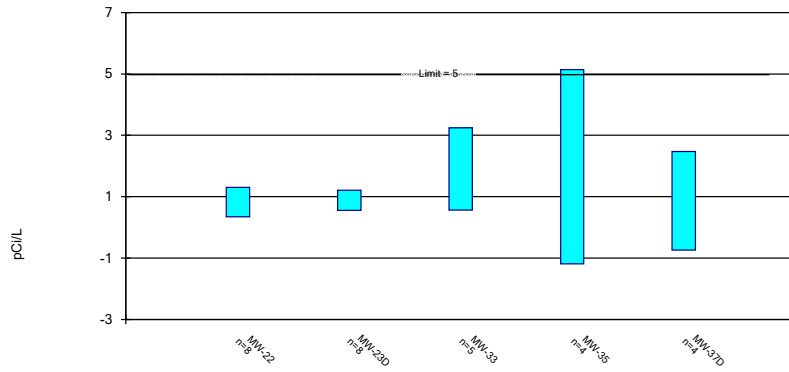
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Combined Radium 226 + 228 Analysis Run 5/5/2021 11:26 AM View: Appendix IV - Confiden  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Parametric Confidence Interval

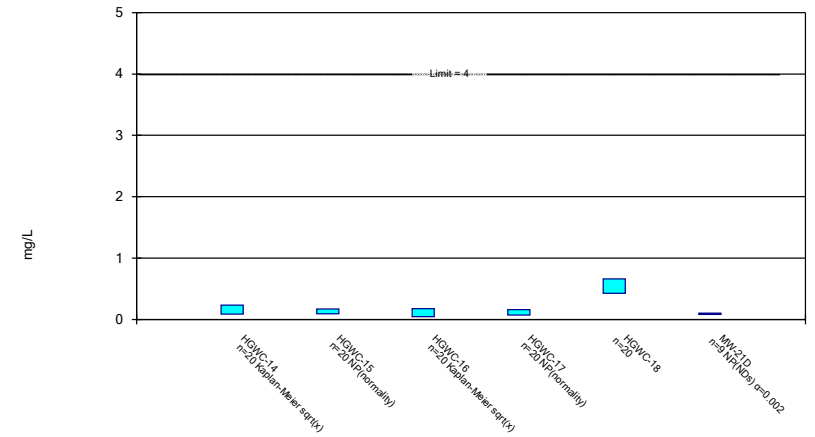
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Combined Radium 226 + 228 Analysis Run 5/5/2021 11:27 AM View: Appendix IV - Confiden  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Parametric and Non-Parametric (NP) Confidence Interval

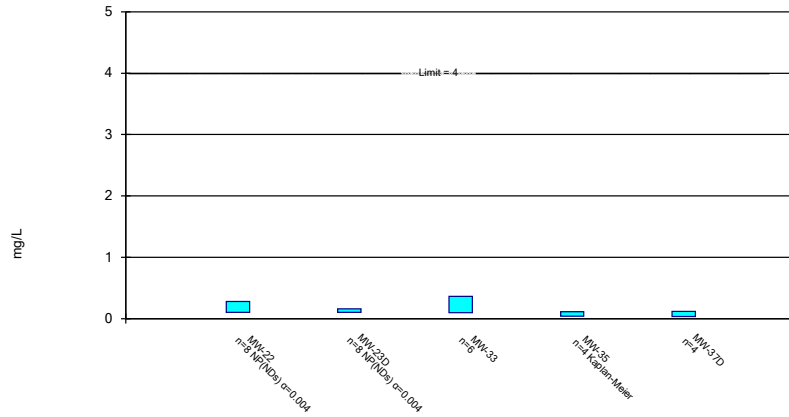
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Fluoride Analysis Run 5/5/2021 11:27 AM View: Appendix IV - Confidence Intervals  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Parametric and Non-Parametric (NP) Confidence Interval

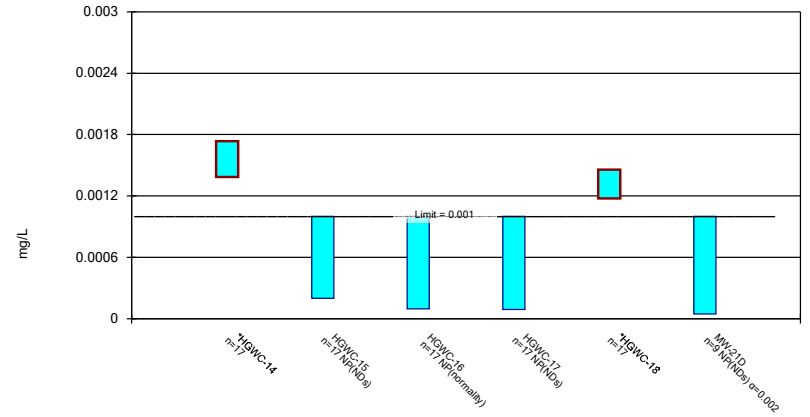
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Fluoride Analysis Run 5/5/2021 11:27 AM View: Appendix IV - Confidence Intervals  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Parametric and Non-Parametric (NP) Confidence Interval

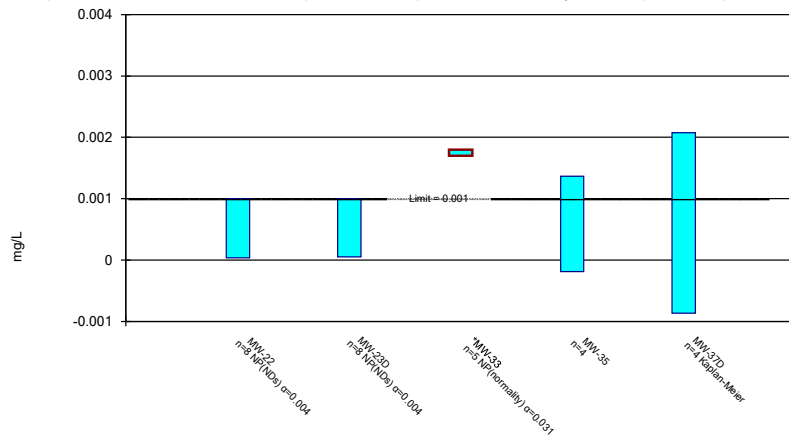
Compliance limit is exceeded.\* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Lead Analysis Run 5/5/2021 11:27 AM View: Appendix IV - Confidence Intervals  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Parametric and Non-Parametric (NP) Confidence Interval

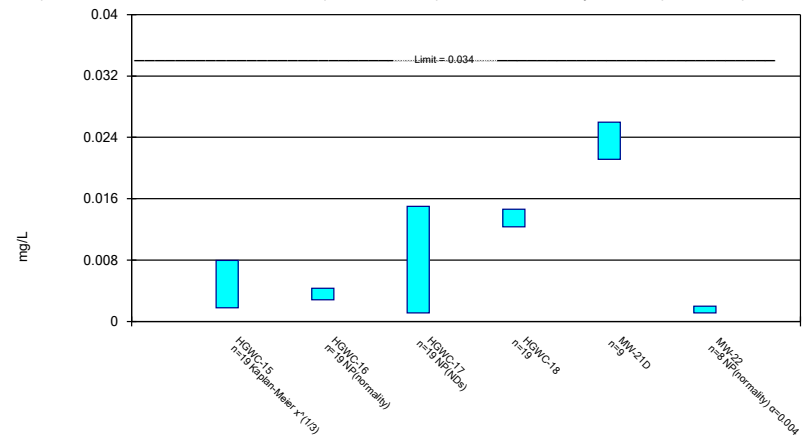
Compliance limit is exceeded.\* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Lead Analysis Run 5/5/2021 11:27 AM View: Appendix IV - Confidence Intervals  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Parametric and Non-Parametric (NP) Confidence Interval

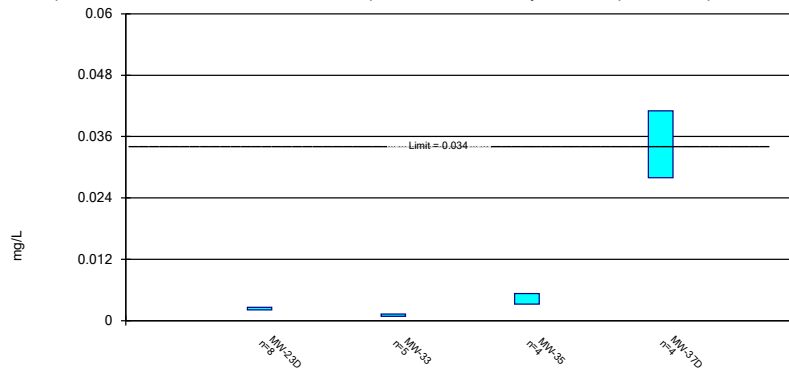
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Lithium Analysis Run 5/5/2021 11:27 AM View: Appendix IV - Confidence Intervals  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Parametric Confidence Interval

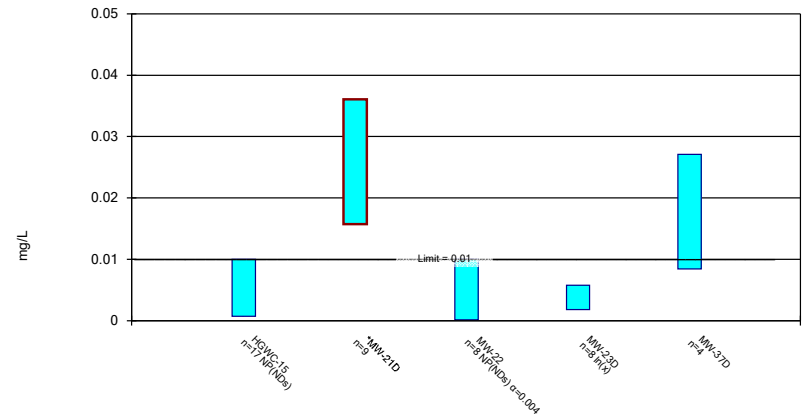
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Lithium Analysis Run 5/5/2021 11:27 AM View: Appendix IV - Confidence Intervals  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Parametric and Non-Parametric (NP) Confidence Interval

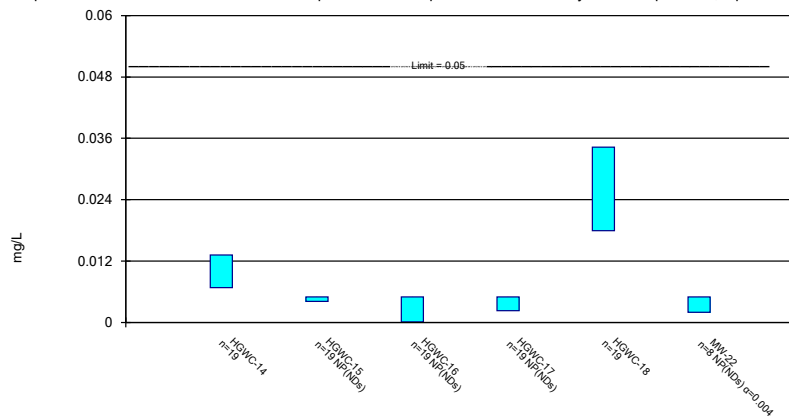
Compliance limit is exceeded.\* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Molybdenum Analysis Run 5/5/2021 11:27 AM View: Appendix IV - Confidence Intervals  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Parametric and Non-Parametric (NP) Confidence Interval

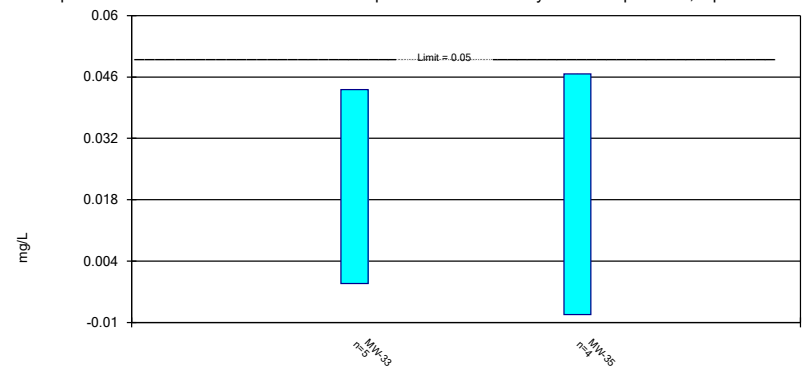
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Selenium Analysis Run 5/5/2021 11:27 AM View: Appendix IV - Confidence Intervals  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Parametric Confidence Interval

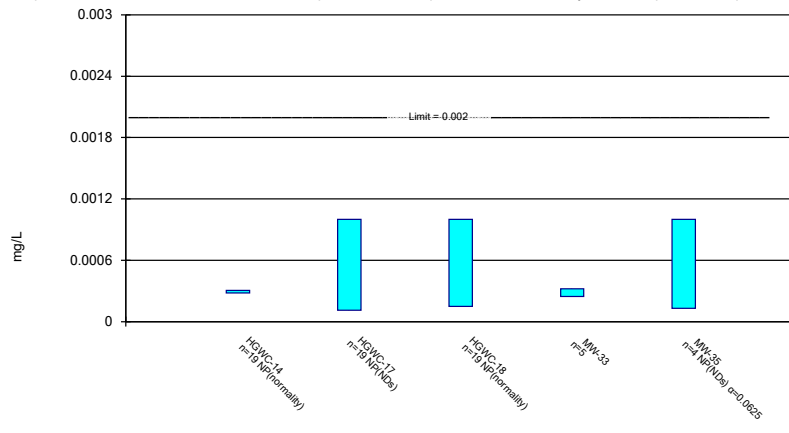
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Selenium Analysis Run 5/5/2021 11:27 AM View: Appendix IV - Confidence Intervals  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Thallium Analysis Run 5/5/2021 11:27 AM View: Appendix IV - Confidence Intervals  
Plant Hammond Client: Southern Company Data: Hammond AP-2

FIGURE J.

# Federal Confidence Intervals - Significant Results

Plant Hammond Client: Southern Company Data: Hammond AP-2 Printed 5/5/2021, 11:24 AM

<u>Constituent</u>	<u>Well</u>	<u>Upper Lim.</u>	<u>Lower Lim.</u>	<u>Compliance</u>	<u>Sig.</u>	<u>N</u>	<u>Mean</u>	<u>Std. Dev.</u>	<u>%NDs</u>	<u>ND Adj.</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Cobalt (mg/L)	HGWC-18	0.19	0.1614	0.038	Yes	19	0.1757	0.02444	0	None	No	0.01	Param.
Cobalt (mg/L)	MW-33	0.05914	0.04819	0.038	Yes	6	0.05367	0.003983	0	None	No	0.01	Param.
Cobalt (mg/L)	MW-35	0.1078	0.07716	0.038	Yes	4	0.0925	0.006758	0	None	No	0.01	Param.



# Federal Confidence Intervals - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-2 Printed 5/5/2021, 11:24 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Antimony (mg/L)	HGWC-14	0.003	0.00043	0.006	No	13	0.002595	0.0009899	84.62	None	No	0.01	NP (NDs)
Arsenic (mg/L)	HGWC-14	0.0089	0.0032	0.01	No	19	0.008125	0.007668	15.79	None	No	0.01	NP (normality)
Arsenic (mg/L)	HGWC-15	0.025	0.0008	0.01	No	19	0.02112	0.009199	84.21	None	No	0.01	NP (NDs)
Arsenic (mg/L)	HGWC-16	0.025	0.0012	0.01	No	19	0.01989	0.01017	78.95	None	No	0.01	NP (NDs)
Arsenic (mg/L)	HGWC-17	0.025	0.00097	0.01	No	19	0.01865	0.01092	73.68	None	No	0.01	NP (NDs)
Arsenic (mg/L)	HGWC-18	0.007066	0.004844	0.01	No	19	0.005955	0.001897	0	None	No	0.01	Param.
Arsenic (mg/L)	MW-21D	0.025	0.00019	0.01	No	9	0.01694	0.01209	66.67	None	No	0.002	NP (NDs)
Arsenic (mg/L)	MW-22	0.025	0.00045	0.01	No	8	0.02193	0.00868	87.5	None	No	0.004	NP (NDs)
Arsenic (mg/L)	MW-23D	0.025	0.00082	0.01	No	8	0.01898	0.01115	75	None	No	0.004	NP (NDs)
Arsenic (mg/L)	MW-33	0.008872	0.002648	0.01	No	5	0.00576	0.001857	0	None	No	0.01	Param.
Arsenic (mg/L)	MW-35	0.025	0.005	0.01	No	4	0.01023	0.009859	25	None	No	0.0625	NP (normality)
Arsenic (mg/L)	MW-37D	0.004094	0.0006745	0.01	No	4	0.007588	0.01162	25	Kaplan-Meier	ln(x)	0.01	Param.
Barium (mg/L)	HGWC-14	0.023	0.019	2	No	19	0.025	0.01827	5.263	None	No	0.01	NP (normality)
Barium (mg/L)	HGWC-15	0.02874	0.01955	2	No	19	0.02414	0.007845	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-16	0.113	0.1002	2	No	19	0.1066	0.01093	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-17	0.02636	0.02358	2	No	19	0.02497	0.002378	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-18	0.0339	0.029	2	No	19	0.03406	0.0163	5.263	None	No	0.01	NP (normality)
Barium (mg/L)	MW-21D	0.07538	0.04662	2	No	9	0.061	0.01489	0	None	No	0.01	Param.
Barium (mg/L)	MW-22	0.03673	0.01702	2	No	8	0.02688	0.009296	0	None	No	0.01	Param.
Barium (mg/L)	MW-23D	0.082	0.056	2	No	8	0.06288	0.008357	0	None	No	0.004	NP (normality)
Barium (mg/L)	MW-33	0.02943	0.02217	2	No	5	0.0258	0.002168	0	None	No	0.01	Param.
Barium (mg/L)	MW-35	0.03443	0.02307	2	No	4	0.02875	0.0025	0	None	No	0.01	Param.
Barium (mg/L)	MW-37D	0.2153	0.07971	2	No	4	0.1475	0.02986	0	None	No	0.01	Param.
Beryllium (mg/L)	HGWC-14	0.00058	0.00043	0.004	No	17	0.0004794	0.00007862	11.76	None	No	0.01	NP (normality)
Beryllium (mg/L)	HGWC-17	0.0005	0.000067	0.004	No	17	0.0004479	0.000147	88.24	None	No	0.01	NP (NDs)
Beryllium (mg/L)	HGWC-18	0.003463	0.002759	0.004	No	17	0.00304	0.000771	5.882	None	x^2	0.01	Param.
Beryllium (mg/L)	MW-22	0.0005	0.000047	0.004	No	8	0.0003364	0.000226	62.5	None	No	0.004	NP (NDs)
Beryllium (mg/L)	MW-33	0.001159	0.0008766	0.004	No	5	0.001018	0.00008438	0	None	No	0.01	Param.
Beryllium (mg/L)	MW-35	0.0008122	0.0001528	0.004	No	4	0.0004825	0.0001452	0	None	No	0.01	Param.
Beryllium (mg/L)	MW-37D	0.0005	0.00012	0.004	No	4	0.000405	0.00019	75	None	No	0.0625	NP (NDs)
Cadmium (mg/L)	HGWC-14	0.0005	0.0001	0.005	No	19	0.000302	0.0001954	47.37	None	No	0.01	NP (normality)
Cadmium (mg/L)	HGWC-15	0.002277	0.001559	0.005	No	19	0.001948	0.0006767	0	None	sqrt(x)	0.01	Param.
Cadmium (mg/L)	HGWC-17	0.0005	0.00007	0.005	No	19	0.0004774	0.00009865	94.74	None	No	0.01	NP (NDs)
Cadmium (mg/L)	HGWC-18	0.002362	0.001856	0.005	No	19	0.002063	0.0005188	5.263	None	x^2	0.01	Param.
Cadmium (mg/L)	MW-22	0.002179	0.001156	0.005	No	8	0.001645	0.0006169	0	None	x^3	0.01	Param.
Cadmium (mg/L)	MW-23D	0.0006	0.00045	0.005	No	8	0.000515	0.00004721	62.5	None	No	0.004	NP (NDs)
Cadmium (mg/L)	MW-33	0.0002327	0.0001473	0.005	No	5	0.00019	0.0000255	0	None	No	0.01	Param.
Cadmium (mg/L)	MW-35	0.002623	-0.0001083	0.005	No	4	0.001258	0.0006016	0	None	No	0.01	Param.
Chromium (mg/L)	HGWC-14	0.025	0.00066	0.1	No	17	0.02212	0.008123	88.24	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-15	0.025	0.0012	0.1	No	17	0.02071	0.009549	82.35	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-16	0.025	0.0021	0.1	No	17	0.02078	0.009409	82.35	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-17	0.025	0.0018	0.1	No	17	0.02078	0.009403	82.35	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-18	0.025	0.00063	0.1	No	17	0.02068	0.009623	82.35	None	No	0.01	NP (NDs)
Chromium (mg/L)	MW-21D	0.025	0.00057	0.1	No	9	0.01959	0.01074	77.78	None	No	0.002	NP (NDs)
Chromium (mg/L)	MW-22	0.025	0.0004	0.1	No	8	0.01889	0.01131	75	None	No	0.004	NP (NDs)
Chromium (mg/L)	MW-23D	0.025	0.00083	0.1	No	8	0.01896	0.01118	75	None	No	0.004	NP (NDs)
Chromium (mg/L)	MW-33	0.025	0.00069	0.1	No	5	0.02014	0.01087	80	None	No	0.031	NP (NDs)
Chromium (mg/L)	MW-35	0.025	0.00079	0.1	No	4	0.01291	0.01397	50	None	No	0.0625	NP (normality)
Chromium (mg/L)	MW-37D	0.008014	0.000295	0.1	No	4	0.01405	0.01272	50	Kaplan-Meier	sqrt(x)	0.01	Param.
Cobalt (mg/L)	HGWC-14	0.02913	0.02366	0.038	No	19	0.02587	0.006039	5.263	None	x^2	0.01	Param.
Cobalt (mg/L)	HGWC-15	0.04702	0.02999	0.038	No	19	0.03851	0.01454	0	None	No	0.01	Param.
Cobalt (mg/L)	HGWC-16	0.005	0.00037	0.038	No	19	0.004508	0.001474	89.47	None	No	0.01	NP (NDs)
Cobalt (mg/L)	HGWC-17	0.01619	0.01429	0.038	No	19	0.01524	0.001623	0	None	No	0.01	Param.
<b>Cobalt (mg/L)</b>	<b>HGWC-18</b>	<b>0.19</b>	<b>0.1614</b>	<b>0.038</b>	<b>Yes</b>	<b>19</b>	<b>0.1757</b>	<b>0.02444</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.01</b>	<b>Param.</b>
Cobalt (mg/L)	MW-21D	0.005	0.00034	0.038	No	9	0.004482	0.001553	88.89	None	No	0.002	NP (NDs)

# Federal Confidence Intervals - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-2 Printed 5/5/2021, 11:24 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Cobalt (mg/L)	MW-22	0.04027	0.02448	0.038	No	8	0.03238	0.007444	0	None	No	0.01	Param.
Cobalt (mg/L)	MW-23D	0.001215	0.00097	0.038	No	8	0.001093	0.0001156	0	None	No	0.01	Param.
<b>Cobalt (mg/L)</b>	<b>MW-33</b>	<b>0.05914</b>	<b>0.04819</b>	<b>0.038</b>	<b>Yes</b>	<b>6</b>	<b>0.05367</b>	<b>0.003983</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.01</b>	<b>Param.</b>
<b>Cobalt (mg/L)</b>	<b>MW-35</b>	<b>0.1078</b>	<b>0.07716</b>	<b>0.038</b>	<b>Yes</b>	<b>4</b>	<b>0.0925</b>	<b>0.006758</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.01</b>	<b>Param.</b>
Cobalt (mg/L)	MW-37D	0.002148	-0.0001679	0.038	No	4	0.002995	0.002352	50	Kaplan-Meier	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-14	1.654	1.179	5	No	19	1.417	0.406	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-15	0.9507	0.4764	5	No	19	0.7136	0.405	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-16	1.008	0.5368	5	No	19	0.7724	0.4023	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-17	1.05	0.6723	5	No	19	0.8614	0.323	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-18	2.288	1.727	5	No	19	2.008	0.479	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-21D	1.194	0.401	5	No	9	0.7951	0.4745	0	None	sqrt(x)	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-22	1.301	0.3473	5	No	8	0.8241	0.4499	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-23D	1.206	0.5544	5	No	8	0.8801	0.3073	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-33	3.245	0.5646	5	No	5	1.905	0.7997	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-35	5.143	-1.186	5	No	4	1.979	1.394	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-37D	2.476	-0.7417	5	No	4	0.867	0.7086	0	None	No	0.01	Param.
Fluoride (mg/L)	HGWC-14	0.2344	0.08602	4	No	20	0.186	0.1617	20	Kaplan-Meier	sqrt(x)	0.01	Param.
Fluoride (mg/L)	HGWC-15	0.17	0.09	4	No	20	0.1457	0.1246	40	None	No	0.01	NP (normality)
Fluoride (mg/L)	HGWC-16	0.1744	0.04649	4	No	20	0.1624	0.1221	50	Kaplan-Meier	sqrt(x)	0.01	Param.
Fluoride (mg/L)	HGWC-17	0.16	0.07	4	No	20	0.1747	0.2184	35	None	No	0.01	NP (normality)
Fluoride (mg/L)	HGWC-18	0.6613	0.4237	4	No	20	0.5425	0.2091	5	None	No	0.01	Param.
Fluoride (mg/L)	MW-21D	0.1	0.1	4	No	9	0.1	5.0e-10	88.89	None	No	0.002	NP (NDs)
Fluoride (mg/L)	MW-22	0.28	0.1	4	No	8	0.1263	0.06301	75	None	No	0.004	NP (NDs)
Fluoride (mg/L)	MW-23D	0.16	0.1	4	No	8	0.1125	0.02375	75	None	No	0.004	NP (NDs)
Fluoride (mg/L)	MW-33	0.3611	0.0956	4	No	6	0.2283	0.09663	0	None	No	0.01	Param.
Fluoride (mg/L)	MW-35	0.1143	0.03769	4	No	4	0.082	0.0207	25	Kaplan-Meier	No	0.01	Param.
Fluoride (mg/L)	MW-37D	0.1156	0.03593	4	No	4	0.07575	0.01754	0	None	No	0.01	Param.
Lead (mg/L)	HGWC-14	0.001735	0.001385	0.015	No	17	0.00156	0.0002796	5.882	None	No	0.01	Param.
Lead (mg/L)	HGWC-15	0.001	0.0002	0.015	No	17	0.0007897	0.0003918	70.59	None	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-16	0.001	0.000094	0.015	No	17	0.0005308	0.0004573	47.06	None	No	0.01	NP (normality)
Lead (mg/L)	HGWC-17	0.001	0.000088	0.015	No	17	0.0005768	0.0004634	52.94	None	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-18	0.001458	0.001175	0.015	No	17	0.001316	0.0002265	5.882	None	No	0.01	Param.
Lead (mg/L)	MW-21D	0.001	0.000047	0.015	No	9	0.0006476	0.0004571	55.56	None	No	0.002	NP (NDs)
Lead (mg/L)	MW-22	0.001	0.000036	0.015	No	8	0.0006538	0.0004782	62.5	None	No	0.004	NP (NDs)
Lead (mg/L)	MW-23D	0.001	0.000051	0.015	No	8	0.0007764	0.0004151	75	None	No	0.004	NP (NDs)
Lead (mg/L)	MW-33	0.0018	0.0017	0.015	No	5	0.00172	0.0004472	0	None	No	0.031	NP (normality)
Lead (mg/L)	MW-35	0.001367	-0.000187	0.015	No	4	0.00059	0.0003422	0	None	No	0.01	Param.
Lead (mg/L)	MW-37D	0.002073	-0.0008688	0.015	No	4	0.000793	0.0007149	25	Kaplan-Meier	No	0.01	Param.
Lithium (mg/L)	HGWC-15	0.007937	0.00179	0.04	No	19	0.01033	0.01019	31.58	Kaplan-Meier	x^(1/3)	0.01	Param.
Lithium (mg/L)	HGWC-16	0.0043	0.0028	0.04	No	19	0.004068	0.002738	5.263	None	No	0.01	NP (normality)
Lithium (mg/L)	HGWC-17	0.015	0.0011	0.04	No	19	0.008423	0.007124	52.63	None	No	0.01	NP (NDs)
Lithium (mg/L)	HGWC-18	0.01461	0.01234	0.04	No	19	0.01347	0.001942	0	None	No	0.01	Param.
Lithium (mg/L)	MW-21D	0.02597	0.02114	0.04	No	9	0.02356	0.002506	0	None	No	0.01	Param.
Lithium (mg/L)	MW-22	0.002	0.0011	0.04	No	8	0.00135	0.0002928	0	None	No	0.004	NP (normality)
Lithium (mg/L)	MW-23D	0.002602	0.002123	0.04	No	8	0.002363	0.0002264	0	None	No	0.01	Param.
Lithium (mg/L)	MW-33	0.001268	0.0008245	0.04	No	5	0.001046	0.0001322	0	None	No	0.01	Param.
Lithium (mg/L)	MW-35	0.005274	0.003226	0.04	No	4	0.00425	0.0004509	0	None	No	0.01	Param.
Lithium (mg/L)	MW-37D	0.04105	0.02795	0.04	No	4	0.0345	0.002887	0	None	No	0.01	Param.
Molybdenum (mg/L)	HGWC-15	0.01	0.0007	0.1	No	17	0.009453	0.002256	94.12	None	No	0.01	NP (NDs)
Molybdenum (mg/L)	MW-21D	0.03607	0.01571	0.1	No	9	0.02589	0.01054	0	None	No	0.01	Param.
Molybdenum (mg/L)	MW-22	0.01	0.00013	0.1	No	8	0.008766	0.00349	87.5	None	No	0.004	NP (NDs)
Molybdenum (mg/L)	MW-23D	0.005782	0.001794	0.1	No	8	0.00375	0.002632	12.5	None	ln(x)	0.01	Param.
Molybdenum (mg/L)	MW-37D	0.02709	0.008412	0.1	No	4	0.01775	0.004113	0	None	No	0.01	Param.
Selenium (mg/L)	HGWC-14	0.01318	0.006823	0.05	No	19	0.01	0.005427	0	None	No	0.01	Param.
Selenium (mg/L)	HGWC-15	0.005	0.0041	0.05	No	19	0.004322	0.001509	78.95	None	No	0.01	NP (NDs)

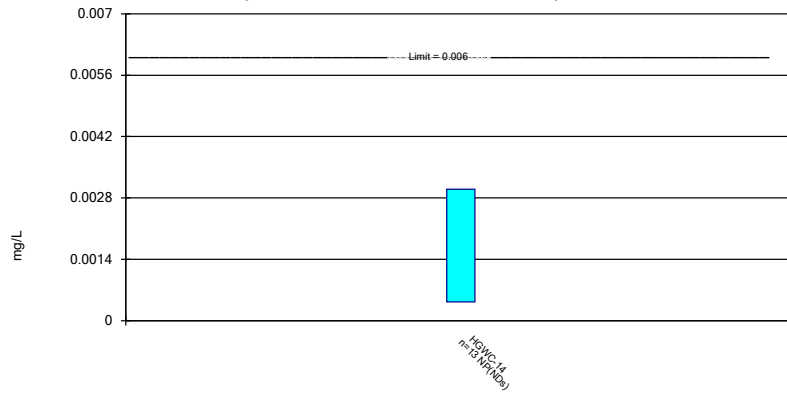
# Federal Confidence Intervals - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-2 Printed 5/5/2021, 11:24 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Selenium (mg/L)	HGWC-16	0.005	0.000089	0.05	No	19	0.004742	0.001127	94.74	None	No	0.01	NP (NDs)
Selenium (mg/L)	HGWC-17	0.005	0.0023	0.05	No	19	0.00441	0.001448	84.21	None	No	0.01	NP (NDs)
Selenium (mg/L)	HGWC-18	0.03425	0.01795	0.05	No	19	0.0261	0.01392	5.263	None	No	0.01	Param.
Selenium (mg/L)	MW-22	0.005	0.002	0.05	No	8	0.004625	0.001061	87.5	None	No	0.004	NP (NDs)
Selenium (mg/L)	MW-33	0.04314	-0.001136	0.05	No	5	0.021	0.01321	0	None	No	0.01	Param.
Selenium (mg/L)	MW-35	0.04671	-0.008206	0.05	No	4	0.01925	0.01209	0	None	No	0.01	Param.
Thallium (mg/L)	HGWC-14	0.000306	0.00028	0.002	No	19	0.0002972	0.00003063	0	None	No	0.01	NP (normality)
Thallium (mg/L)	HGWC-17	0.001	0.00011	0.002	No	19	0.0006737	0.0004391	63.16	None	No	0.01	NP (NDs)
Thallium (mg/L)	HGWC-18	0.001	0.00015	0.002	No	19	0.0005174	0.0004233	42.11	None	No	0.01	NP (normality)
Thallium (mg/L)	MW-33	0.0003207	0.0002473	0.002	No	5	0.000284	0.00002191	0	None	No	0.01	Param.
Thallium (mg/L)	MW-35	0.001	0.00013	0.002	No	4	0.0007825	0.000435	75	None	No	0.0625	NP (NDs)

### Non-Parametric Confidence Interval

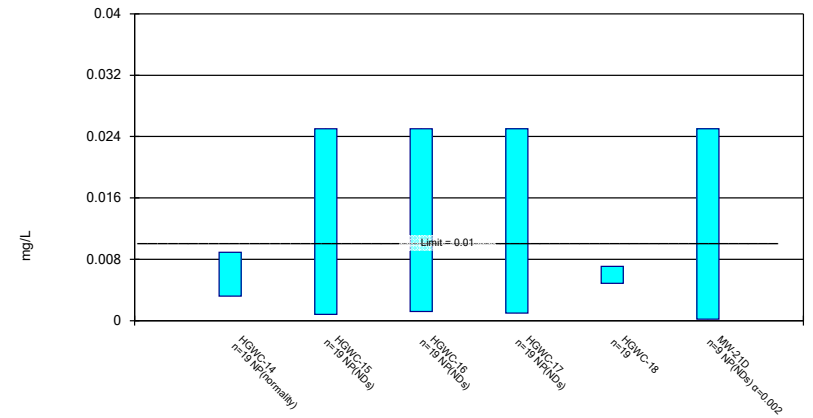
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Antimony Analysis Run 5/5/2021 11:22 AM View: Appendix IV - Confidence Intervals  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Parametric and Non-Parametric (NP) Confidence Interval

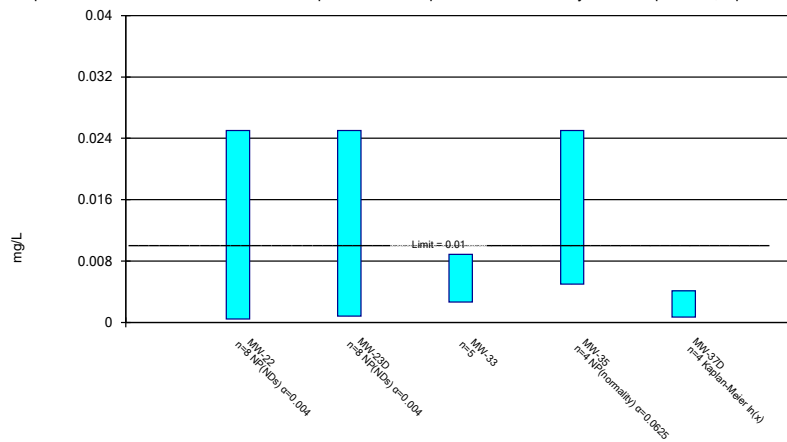
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Arsenic Analysis Run 5/5/2021 11:22 AM View: Appendix IV - Confidence Intervals  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Parametric and Non-Parametric (NP) Confidence Interval

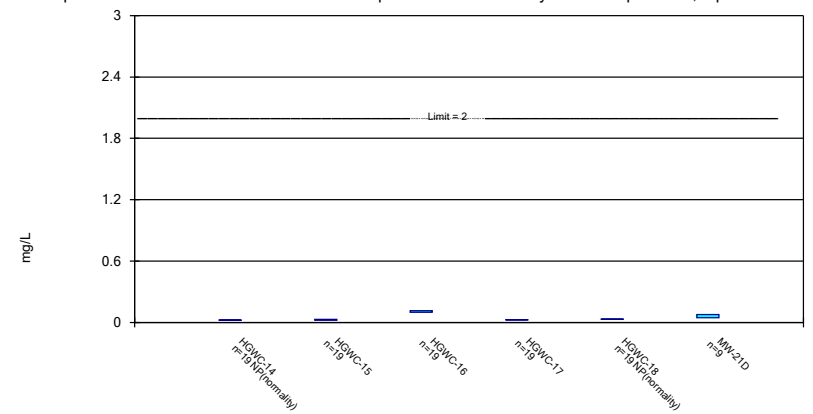
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Arsenic Analysis Run 5/5/2021 11:23 AM View: Appendix IV - Confidence Intervals  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Parametric and Non-Parametric (NP) Confidence Interval

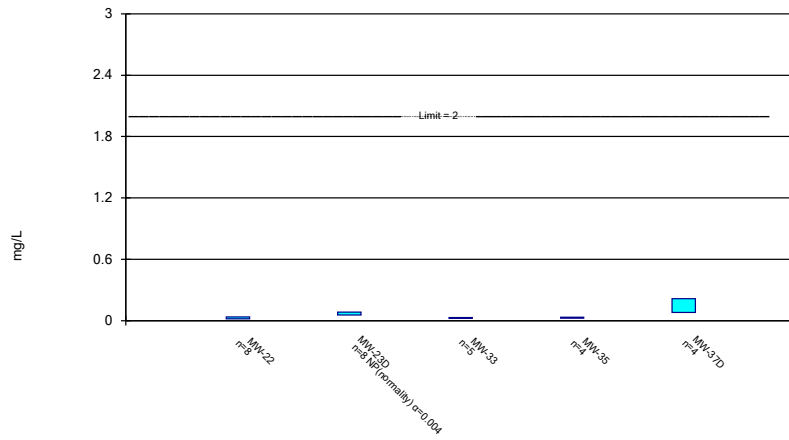
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Barium Analysis Run 5/5/2021 11:23 AM View: Appendix IV - Confidence Intervals  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Parametric and Non-Parametric (NP) Confidence Interval

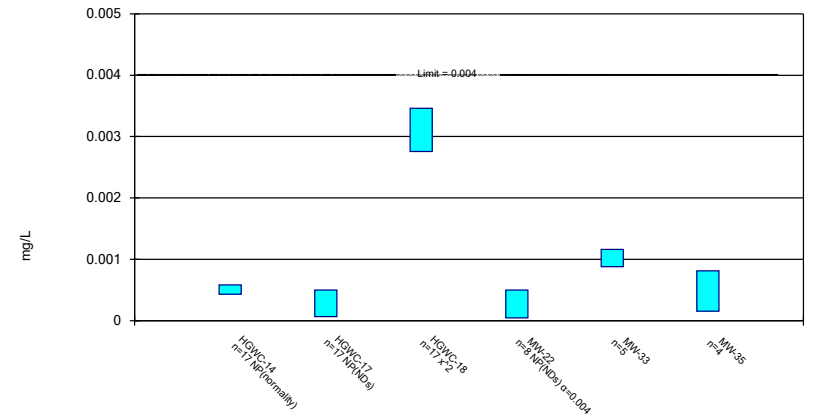
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Barium Analysis Run 5/5/2021 11:23 AM View: Appendix IV - Confidence Intervals  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Parametric and Non-Parametric (NP) Confidence Interval

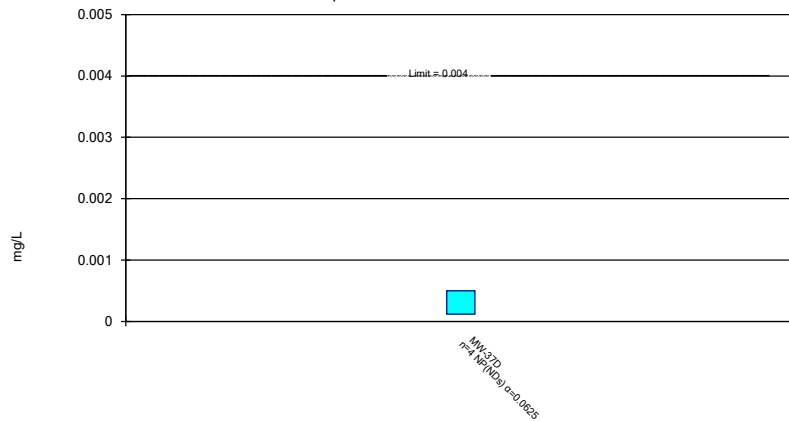
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Beryllium Analysis Run 5/5/2021 11:23 AM View: Appendix IV - Confidence Intervals  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Non-Parametric Confidence Interval

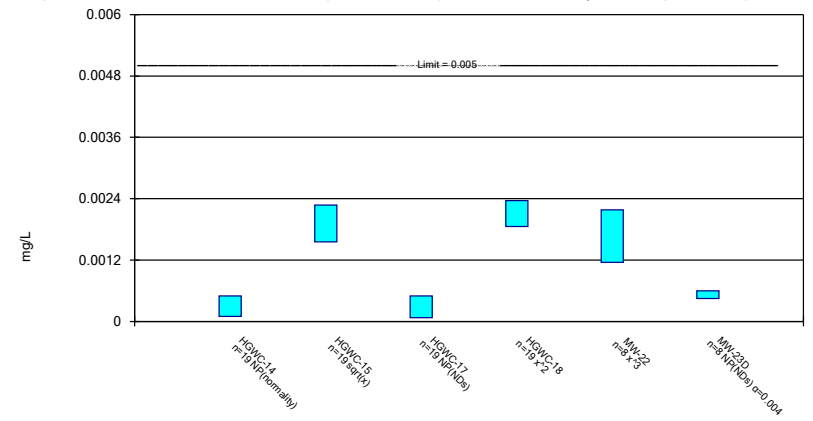
Compliance Limit is not exceeded.



Constituent: Beryllium Analysis Run 5/5/2021 11:23 AM View: Appendix IV - Confidence Intervals  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Parametric and Non-Parametric (NP) Confidence Interval

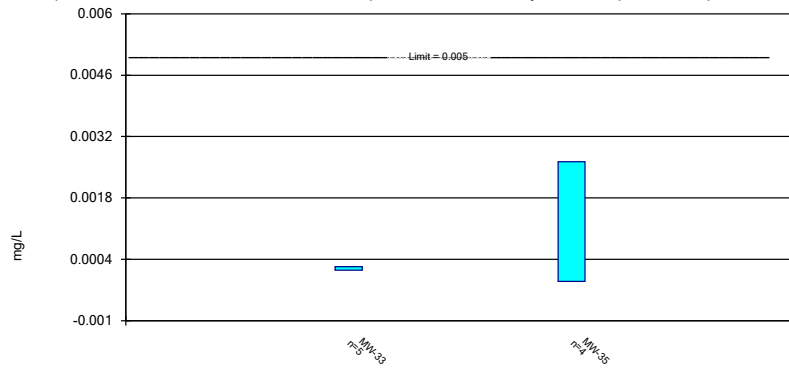
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cadmium Analysis Run 5/5/2021 11:23 AM View: Appendix IV - Confidence Intervals  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Parametric Confidence Interval

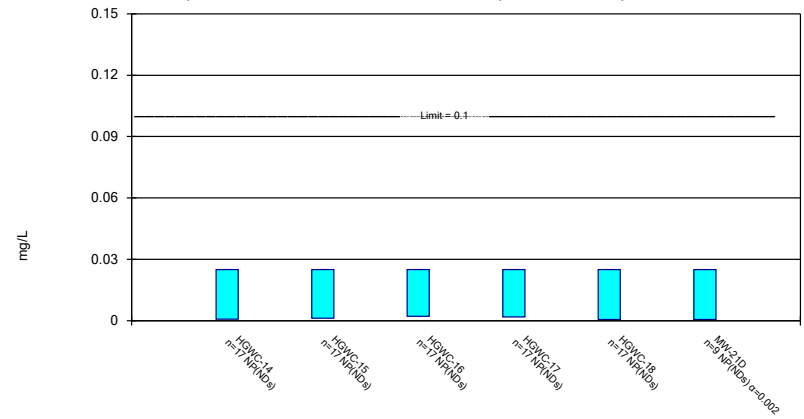
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cadmium Analysis Run 5/5/2021 11:23 AM View: Appendix IV - Confidence Intervals  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Non-Parametric Confidence Interval

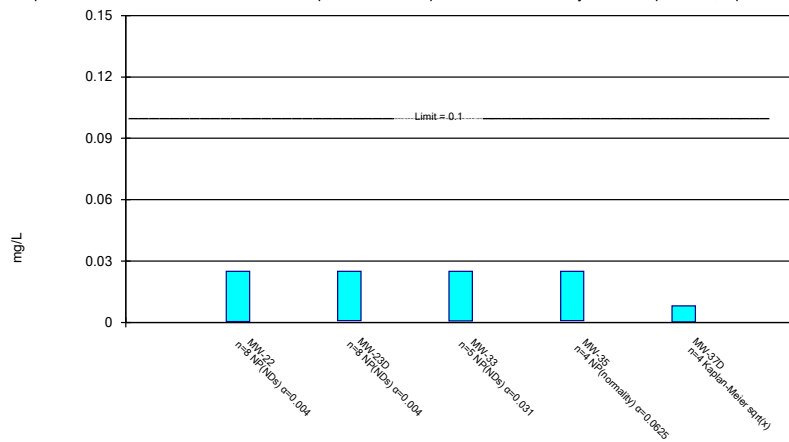
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted.



Constituent: Chromium Analysis Run 5/5/2021 11:23 AM View: Appendix IV - Confidence Intervals  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Parametric and Non-Parametric (NP) Confidence Interval

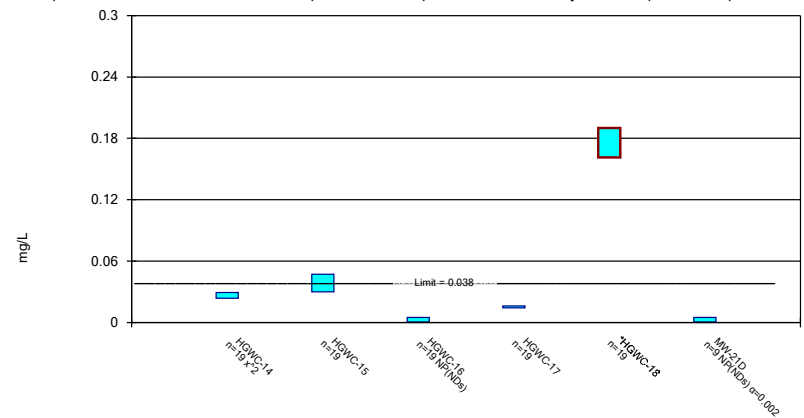
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Chromium Analysis Run 5/5/2021 11:23 AM View: Appendix IV - Confidence Intervals  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Parametric and Non-Parametric (NP) Confidence Interval

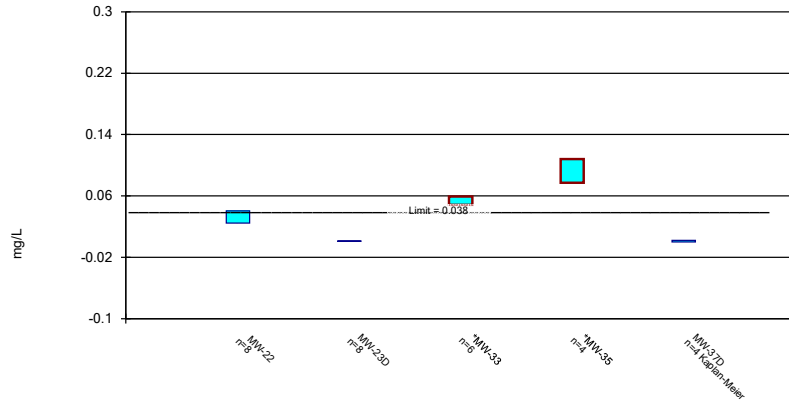
Compliance limit is exceeded.\* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cobalt Analysis Run 5/5/2021 11:23 AM View: Appendix IV - Confidence Intervals  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Parametric Confidence Interval

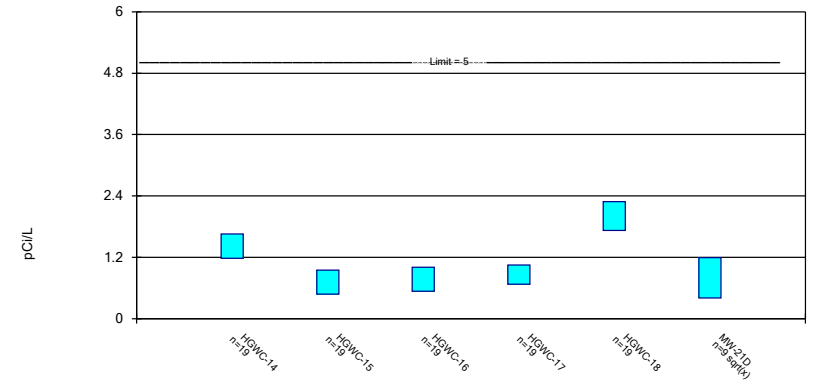
Compliance limit is exceeded.\* Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cobalt Analysis Run 5/5/2021 11:23 AM View: Appendix IV - Confidence Intervals  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Parametric Confidence Interval

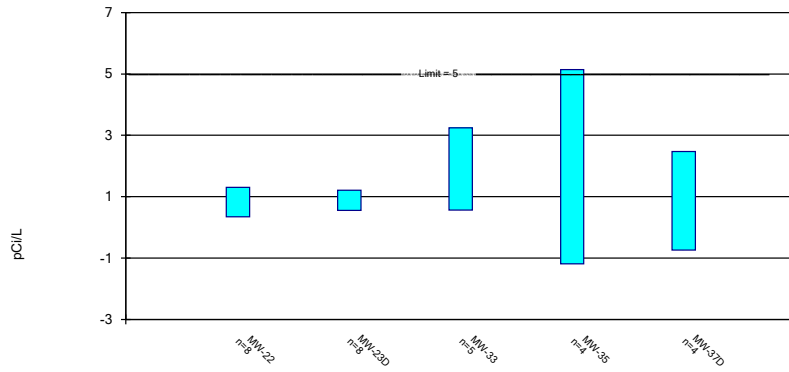
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Combined Radium 226 + 228 Analysis Run 5/5/2021 11:23 AM View: Appendix IV - Confiden  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Parametric Confidence Interval

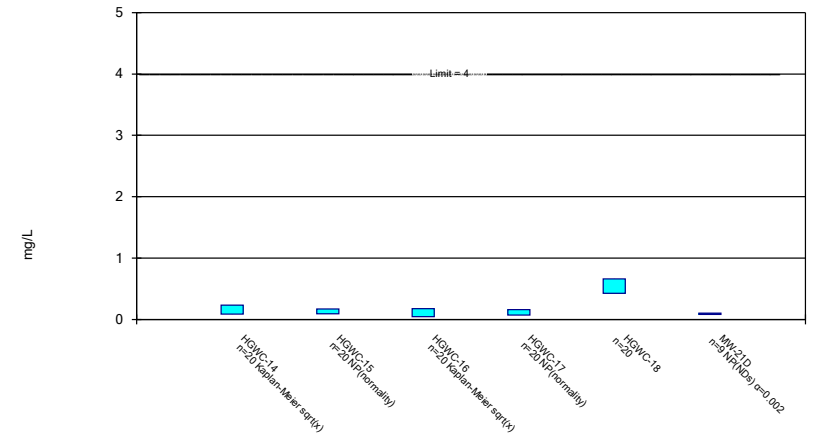
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Combined Radium 226 + 228 Analysis Run 5/5/2021 11:23 AM View: Appendix IV - Confiden  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Parametric and Non-Parametric (NP) Confidence Interval

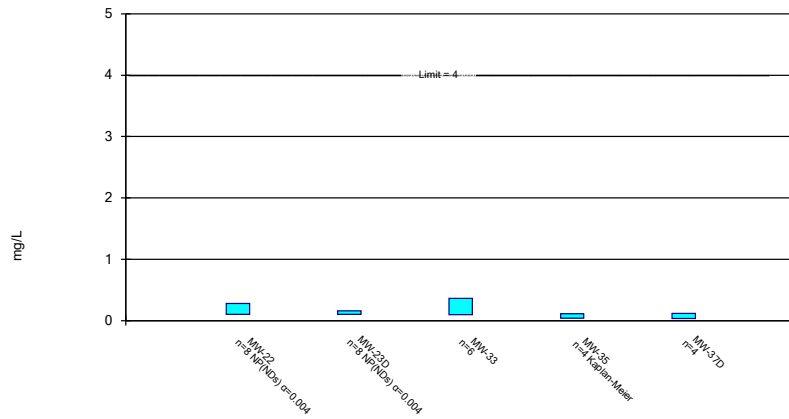
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Fluoride Analysis Run 5/5/2021 11:23 AM View: Appendix IV - Confidence Intervals  
Plant Hammond Client: Southern Company Data: Hammond AP-2

Parametric and Non-Parametric (NP) Confidence Interval

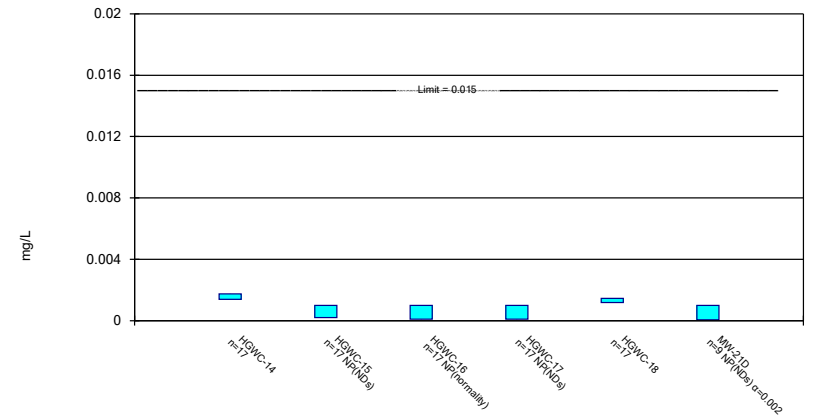
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Fluoride Analysis Run 5/5/2021 11:23 AM View: Appendix IV - Confidence Intervals  
Plant Hammond Client: Southern Company Data: Hammond AP-2

Parametric and Non-Parametric (NP) Confidence Interval

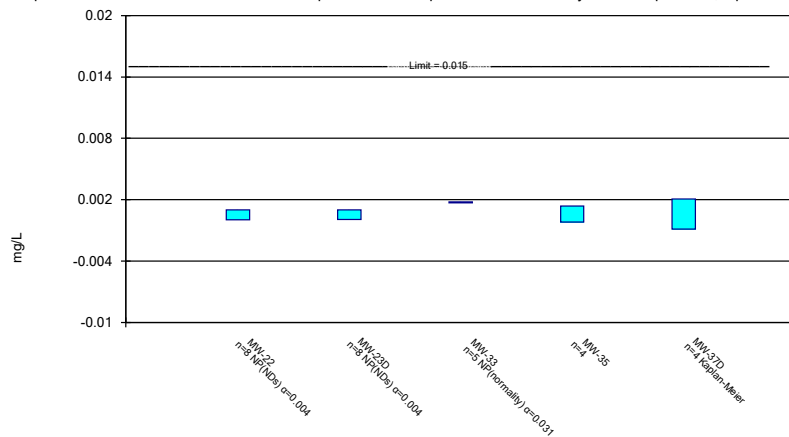
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Lead Analysis Run 5/5/2021 11:23 AM View: Appendix IV - Confidence Intervals  
Plant Hammond Client: Southern Company Data: Hammond AP-2

Parametric and Non-Parametric (NP) Confidence Interval

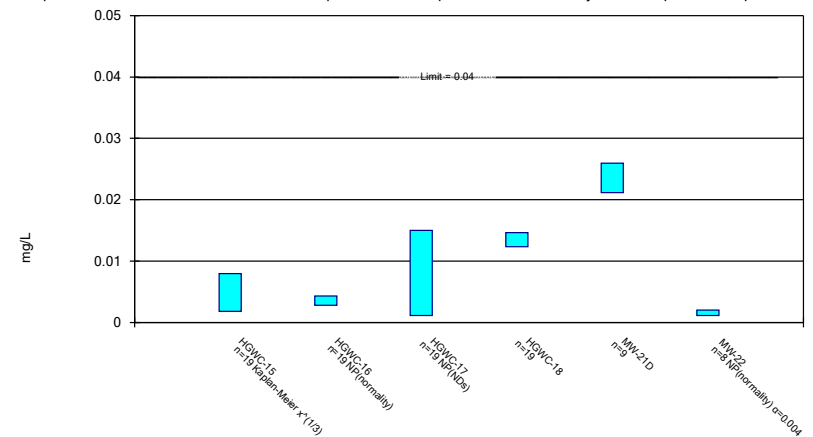
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Lead Analysis Run 5/5/2021 11:23 AM View: Appendix IV - Confidence Intervals  
Plant Hammond Client: Southern Company Data: Hammond AP-2

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.

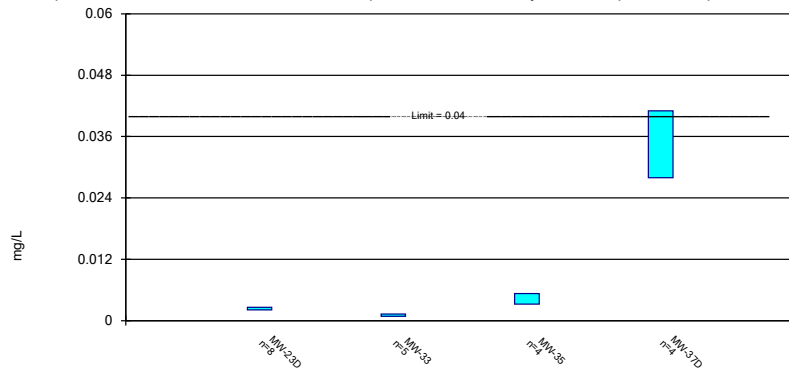


Constituent: Lithium Analysis Run 5/5/2021 11:23 AM View: Appendix IV - Confidence Intervals  
Plant Hammond Client: Southern Company Data: Hammond AP-2



### Parametric Confidence Interval

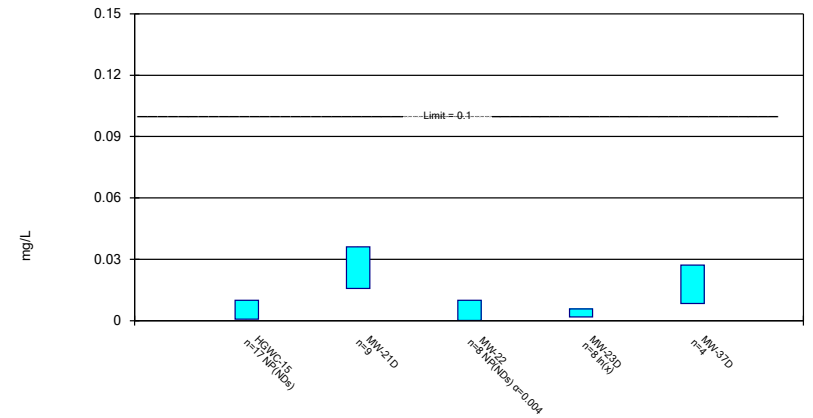
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Lithium Analysis Run 5/5/2021 11:23 AM View: Appendix IV - Confidence Intervals  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Parametric and Non-Parametric (NP) Confidence Interval

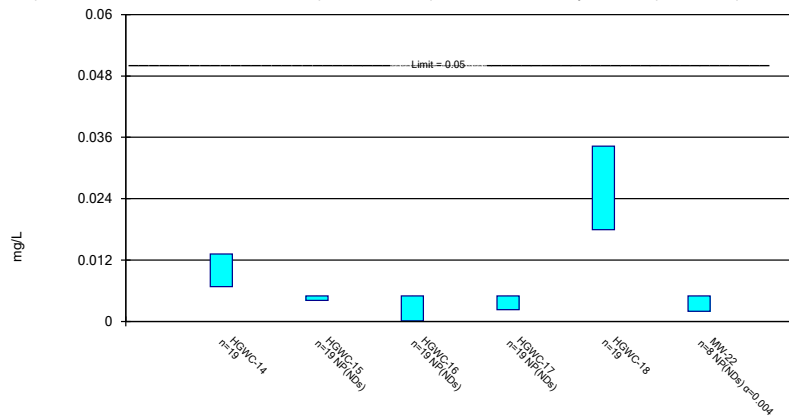
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Molybdenum Analysis Run 5/5/2021 11:23 AM View: Appendix IV - Confidence Intervals  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Parametric and Non-Parametric (NP) Confidence Interval

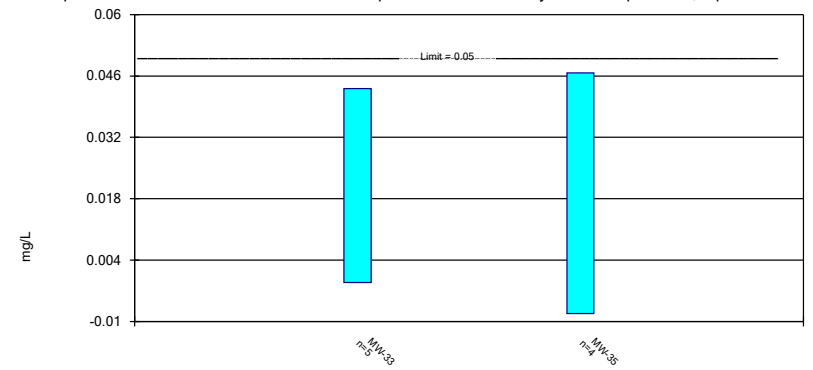
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Selenium Analysis Run 5/5/2021 11:23 AM View: Appendix IV - Confidence Intervals  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Parametric Confidence Interval

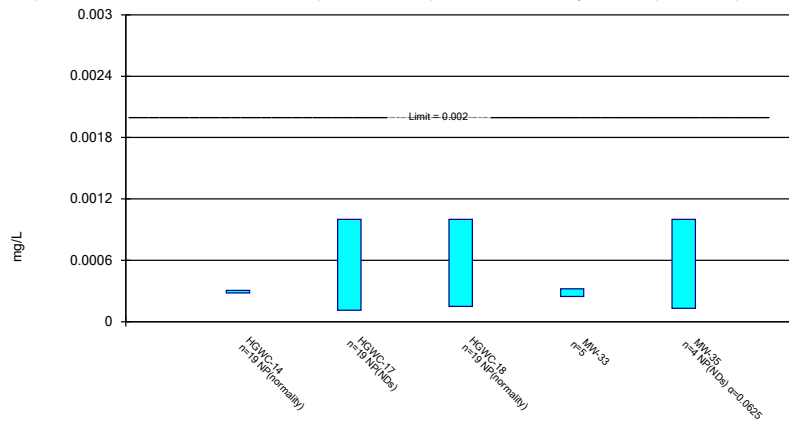
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Selenium Analysis Run 5/5/2021 11:23 AM View: Appendix IV - Confidence Intervals  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



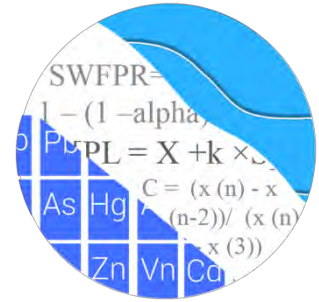
Constituent: Thallium Analysis Run 5/5/2021 11:23 AM View: Appendix IV - Confidence Intervals  
Plant Hammond Client: Southern Company Data: Hammond AP-2

August 2021

## GROUNDWATER STATS CONSULTING

January 31, 2022

Southern Company Services  
Attn: Ms. Kristen Jurinko  
241 Ralph McGill Blvd NE, Bin 10160  
Atlanta, Georgia 30308



Re: Plant Hammond Ash Pond 2 (AP-2)  
Statistical Analysis – August 2021 Sample Event

Dear Ms. Jurinko,

Groundwater Stats Consulting, formerly the statistical consulting division of Sanitas Technologies, is pleased to provide the August 2021 Semi-Annual Groundwater Detection and Assessment Monitoring Statistical summary of groundwater data for Georgia Power Company's Plant Hammond AP-2. 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 samples were collected for all wells except for newer upgradient wells HGWA-42D, HGWA-43D, and HGWA-44D and delineation wells. Sampling began in 2019 for delineation wells MW-21D, MW-22, and MW-23D; and in 2020 for upgradient wells HGWA-42D, HGWA-43D, HGWA-44D, delineation wells MW-34D and MW-37D, and piezometers MW-33 and MW-35.

The monitoring well network, as provided by Southern Company Services, consists of the following:

- **Upgradient well:** HGWA-1, HGWA-2, HGWA-3, HGWA-4, HGWA-5, HGWA-6, HGWA-42D, HGWA-43D, and HGWA-44D
- **Downgradient wells:** HGWC-14, HGWC-15, HGWC-16, HGWC-17, and HGWC-18

- **Delineation wells:** MW-21D, MW-22, MW-23D, and MW-37D
- **Piezometers:** MW-33, MW-34D, MW-35, and MW-51

Note that piezometer MW-51 was first sampled during the August 2021 sample event and only 1 sample has been collected. Furthermore, note that piezometer MW-34D was first sampled during the June 2020 sample event and 3 samples have been collected. Delineation wells and piezometers are included on time series and box plots for all parameters. When a minimum of 4 samples is available, these wells and piezometers are evaluated using confidence intervals for the Appendix IV constituents.

Data were sent electronically to Groundwater Stats Consulting, and the statistical analysis was reviewed by Kristina Rayner, Groundwater Statistician and Founder of Groundwater Stats Consulting. The statistical analysis was performed according to the groundwater data screening that was performed in April 2018 by GSC and approved by Dr. Cameron, PhD Statistician with MacStat Consulting and primary author of the USEPA Unified Guidance.

The CCR program consists of the constituents listed below. The terms “parameters” and “constituents” are used interchangeably.

- **Appendix III** (Detection Monitoring) - boron, calcium, chloride, fluoride, pH, sulfate, and TDS
- **Appendix IV** (Assessment Monitoring) – arsenic, barium, beryllium, cadmium, chromium, cobalt, combined radium 226 + 228, fluoride, lead, lithium, molybdenum, selenium, and thallium

Note that when there are no detections present in downgradient wells for a given constituent, statistical analyses are not required. A summary of well/constituent pairs containing 100% non-detects follows this letter. Additionally, annual Scan events are conducted to determine which Appendix IV constituents are detected in downgradient wells and, therefore, require statistical analysis. Any constituents that are not detected do not require statistical analysis. During the Scan event conducted in February 2021, mercury was not detected; therefore, this constituent was not required to be sampled in subsequent events. Data for mercury were plotted on time series graphs and box plots, but were not analyzed with confidence intervals.

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 0.03 mg/L was substituted across all wells, which is the most recent reporting limit provided by the laboratory.

Time series plots for Appendix III and IV parameters at all wells are provided for the purpose of screening data at these wells (Figure A). Additionally, a separate section of box plots is included for all constituents at upgradient and downgradient wells (Figure B). The time series plots are used to initially screen for suspected outliers and trends, while the box plots provide visual representation of variation within individual wells and between all wells. When values in background are flagged as outliers, they may be seen in a lighter font and as a disconnected symbol on the graphs. No values were flagged as outliers (Figure C).

In earlier analyses, data at all wells were evaluated 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 to demonstrate that the selected statistical methods for Appendix III parameters comply with the USEPA Unified Guidance. The EPA suggests that 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 1-of-2 resamples for all constituents: boron, calcium, chloride, fluoride, pH, sulfate, and TDS.

Parametric prediction limits are utilized when the screened historical data follow a normal or transformed-normal distribution. When data cannot be normalized or the majority of data are non-detects, a nonparametric test is utilized. While the false positive rate associated with the parametric limits is based on an annual 10% (5% per semi-annual event) as recommended by the EPA Unified Guidance (2009), the false positive rate associated with the nonparametric limits is dependent upon the available background sample size, number of future comparisons, and verification resample plan. The distribution of data is tested using the Shapiro-Wilk/Shapiro-Francia test for normality. After testing for normality and performing any adjustments as discussed below (US EPA, 2009), data are analyzed using either parametric or non-parametric prediction limits.

- No statistical analyses are required on wells and analytes containing 100% non-detects (USEPA Unified Guidance, 2009, Chapter 6).
- When data contain <15% non-detects in background, simple substitution of one-half the reporting limit is utilized in the statistical analysis. The reporting limit

utilized for non-detects is the most recent practical quantification limit (PQL) as reported by the laboratory.

- When data contain between 15-50% non-detects, the Kaplan-Meier non-detect adjustment is applied to the background data. This technique adjusts the mean and standard deviation of the historical concentrations to account for concentrations below the reporting limit.
- Nonparametric prediction limits are used on data containing greater than 50% non-detects.

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.

### **Statistical Evaluation of Appendix III Parameters – August 2021**

All Appendix III parameters were analyzed using interwell prediction limits. Background (upgradient) well data were re-assessed for potential outliers during this analysis. When values in background have been flagged as outliers, they may be seen in a lighter font and as a disconnected symbol on the graphs. No new values were flagged and no values have been flagged as outliers (Figure C).

#### Interwell Prediction Limits

Interwell prediction limits, combined with a 1-of-2 resample plan, were constructed for all Appendix III parameters using all historical upgradient well data through August 2021 (Figure D). Downgradient measurements were compared to these interwell background limits. Interwell prediction limits use all available upgradient well data to establish a background limit for an individual constituent. The August 2021 sample from each downgradient well is compared to the background limit to determine whether any 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 confirm 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; therefore, no further action is necessary. If no resample is collected, the initial exceedance is automatically confirmed.

When the August 2021 compliance data from downgradient wells were compared to interwell prediction limits, several exceedances were noted. A summary table of these findings is provided along with the prediction limits (Figure D).

### Trend Test Evaluation – Appendix III

When prediction limit exceedances are identified in downgradient wells, data are further evaluated using the Sen’s Slope/Mann Kendall trend test to determine whether concentrations are statistically increasing, decreasing, or stable (Figure E). Upgradient 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. Upgradient trends are an indication of natural variability in groundwater unrelated to practices at the site. A summary of the trend test results follows this letter. Statistically significant trends were noted for the following well/constituent pairs:

#### Increasing trends:

- Boron: HGWA-2 (upgradient) and HGWC-16
- Calcium: HGWC-16
- Chloride: HGWA-44D (upgradient) and HGWC-16
- Sulfate: HGWA-2 (upgradient)
- TDS: HGWC-16 and HGWC-17

#### Decreasing trends:

- Calcium: HGWA-4 (upgradient)
- Chloride: HGWA-4 (upgradient), HGWC-14, HGWC-15, and HGWC-18
- pH: HGWA-4 (upgradient)
- Sulfate: HGWA-3 (upgradient)
- TDS: HGWA-4 (upgradient) and HGWC-14

### **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 (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. Confidence intervals are provided for Appendix IV well/constituent pairs with detections and with current reported data. The methods are described below.

## **Statistical Evaluation of Appendix IV Parameters – August 2021**

For Appendix IV parameters, confidence intervals for each downgradient well/constituent pair were compared against corresponding Groundwater Protection Standards (GWPS). GWPS were developed as described below. Well/constituent pairs that contain 100% non-detects do not require analysis. Data from upgradient wells for Appendix IV parameters are reassessed for outliers during each analysis. No new values were flagged and a summary of previously flagged outliers follows this report (Figure C).

### Interwell Upper Tolerance Limits

Site specific background limits were calculated as upper one-sided tolerance limits (UTLs) on pooled upgradient interwell data for each of the Appendix IV constituents (Figure F). When varying detection limits were present in upgradient wells, all non-detects were substituted with the most recent reporting limit. As mentioned above, an alternate reporting limit of 0.03 mg/L was substituted across all wells for lithium. Parametric tolerance limits were used when data follow a normal or transformed-normal distribution. When data contained greater than 50% non-detects or did not follow a normal or transformed-normal distribution, non-parametric tolerance limits were used.

### Groundwater Protection Standards

The background limits were then used when determining the groundwater protection standard (GWPS) under 40 CFR §257.95(h) and Georgia EPD Rule 391-3-4-.10(6)(a) (Figure G).

As described in 40 CFR §257.95(h) (1-3), 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, CCR-rule specified levels have been specified 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

On July 30, 2018, USEPA revised the Federal CCR Rule updating GWPS for cobalt, lead, lithium, and molybdenum as described above in 40 CFR §257.95(h)(2). Georgia EPD has not incorporated the updated GWPS into the current Georgia EPD Rules for Solid Waste Management 391-3-4-.10(6)(a); therefore, for sites regulated under Georgia EPD Rules, the GWPS is:

- The MCL or
- The background concentration when an MCL is not established or when the background concentration is higher than the MCL.

Following the above Georgia EPD Rule requirements and the CCR Rule, State and Federal GWPS were established for statistical comparison of Appendix IV constituents for the August 2021 sample event (Figures G and H, respectively). As mentioned above, delineation wells and piezometers were included when a minimum of 4 samples were available. Note that a GWPS is established for mercury; however, since it was not sampled during the August 2021 sampling event, no statistical comparison with confidence intervals is required.

### Confidence Intervals

To complete the statistical comparison to GWPS, confidence intervals were constructed for each of the Appendix IV constituents in each downgradient well. The Sanitas software was used to calculate the tolerance limits and the confidence intervals—either parametric or nonparametric as appropriate. For the State requirements, confidence intervals were compared to the GWPS established using the Georgia EPD Rules 391-3-4-.10(6)(a). For the Federal requirements, confidence intervals were compared to the GWPS prepared according to the CCR Rule. 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.

Summaries of the confidence interval results, along with graphical comparison against GWPS for both State and Federal requirements, follow this letter (Figures I and J, respectively). The following confidence interval exceedances were identified:

State:

- Cobalt: HGWC-18, MW-33, and MW-35
- Lead: HGWC-14, HGWC-18, and MW-33
- Molybdenum: MW-21D

Federal:

- Cobalt: HGWC-18, MW-33, and MW-35

Trend Test Evaluation – Appendix IV

Data at wells with confidence interval exceedances are further evaluated using the Sen's Slope/Mann Kendall trend test to determine whether concentrations are statistically increasing, decreasing, or stable (Figure K). 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 trends, it is an indication of natural variability in groundwater quality unrelated to practices at the site. A summary of the Appendix IV trend test results follows this letter. Statistically significant trends were identified for the following well/constituent pairs:

Increasing trends:

- None

Decreasing trends:

- Molybdenum: MW-21

Thank you for the opportunity to assist you in the statistical analysis of groundwater quality for Hammond AP-2. If you have any questions or comments, please feel free to contact us.

For Groundwater Stats Consulting,



Andrew T. Collins  
Project Manager



Kristina L. Rayner  
Groundwater Statistician

# 100% Non-Detects: Appendix IV Downgradient & Delineation

Analysis Run 11/2/2021 10:01 AM View: Appendix IV  
Plant Hammond Client: Southern Company Data: Hammond AP-2

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Antimony (mg/L)

HGWC-15, HGWC-16, HGWC-17, MW-21D, MW-23D, MW-34D

Beryllium (mg/L)

HGWC-15, HGWC-16, MW-21D, MW-23D, MW-36D

Cadmium (mg/L)

HGWC-16, MW-21D, MW-36D, MW-37D

Cobalt (mg/L)

MW-36D

Lithium (mg/L)

HGWC-14

Mercury (mg/L)

HGWC-14, HGWC-15, HGWC-16, HGWC-17, MW-21D, MW-22, MW-23D, MW-33, MW-35, MW-37D

Molybdenum (mg/L)

HGWC-14, HGWC-16, HGWC-17, HGWC-18, MW-33, MW-34D, MW-35, MW-36D

Selenium (mg/L)

MW-21D, MW-23D, MW-36D, MW-37D

Thallium (mg/L)

HGWC-15, HGWC-16, MW-21D, MW-22, MW-23D, MW-36D, MW-37D

# Appendix III Interwell Prediction Limits - Significant Results

Plant Hammond Client: Southern Company Data: Hammond AP-2 Printed 10/25/2021, 4:06 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	%NDs	Transform	Alpha	Method
Boron (mg/L)	HGWC-14	0.4	n/a	8/18/2021	8.6	Yes	120	5.833	n/a	0.0001351	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-15	0.4	n/a	8/19/2021	2.1	Yes	120	5.833	n/a	0.0001351	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-16	0.4	n/a	8/19/2021	2.5	Yes	120	5.833	n/a	0.0001351	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-17	0.4	n/a	8/18/2021	5.3	Yes	120	5.833	n/a	0.0001351	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-18	0.4	n/a	8/19/2021	8.6	Yes	120	5.833	n/a	0.0001351	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-14	141.8	n/a	8/18/2021	583	Yes	120	0	ln(x)	0.001504	Param Inter 1 of 2
Calcium (mg/L)	HGWC-15	141.8	n/a	8/19/2021	203	Yes	120	0	ln(x)	0.001504	Param Inter 1 of 2
Calcium (mg/L)	HGWC-16	141.8	n/a	8/19/2021	207	Yes	120	0	ln(x)	0.001504	Param Inter 1 of 2
Calcium (mg/L)	HGWC-17	141.8	n/a	8/18/2021	281	Yes	120	0	ln(x)	0.001504	Param Inter 1 of 2
Calcium (mg/L)	HGWC-18	141.8	n/a	8/19/2021	416	Yes	120	0	ln(x)	0.001504	Param Inter 1 of 2
Chloride (mg/L)	HGWC-14	39.9	n/a	8/18/2021	141	Yes	120	0	n/a	0.0001351	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-15	39.9	n/a	8/19/2021	89.9	Yes	120	0	n/a	0.0001351	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-16	39.9	n/a	8/19/2021	90.1	Yes	120	0	n/a	0.0001351	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-17	39.9	n/a	8/18/2021	90.7	Yes	120	0	n/a	0.0001351	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-18	39.9	n/a	8/19/2021	95.8	Yes	120	0	n/a	0.0001351	NP Inter (normality) 1 of 2
Field pH (s.u.)	HGWC-18	7.92	4.9	8/19/2021	4.43	Yes	147	0	n/a	0.0001832	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-14	85.9	n/a	8/18/2021	768	Yes	120	3.333	n/a	0.0001351	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-15	85.9	n/a	8/19/2021	223	Yes	120	3.333	n/a	0.0001351	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-16	85.9	n/a	8/19/2021	228	Yes	120	3.333	n/a	0.0001351	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-17	85.9	n/a	8/18/2021	280	Yes	120	3.333	n/a	0.0001351	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-18	85.9	n/a	8/19/2021	934	Yes	120	3.333	n/a	0.0001351	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-14	496	n/a	8/18/2021	2350	Yes	120	0	n/a	0.0001351	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-15	496	n/a	8/19/2021	958	Yes	120	0	n/a	0.0001351	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-16	496	n/a	8/19/2021	816	Yes	120	0	n/a	0.0001351	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-17	496	n/a	8/18/2021	1290	Yes	120	0	n/a	0.0001351	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-18	496	n/a	8/19/2021	1750	Yes	120	0	n/a	0.0001351	NP Inter (normality) 1 of 2

# Appendix III Interwell Prediction Limits - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-2 Printed 10/25/2021, 4:06 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg	N	%NDs	Transform	Alpha	Method
Boron (mg/L)	HGWC-14	0.4	n/a	8/18/2021	8.6	Yes	120	5.833	n/a		0.0001351	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-15	0.4	n/a	8/19/2021	2.1	Yes	120	5.833	n/a		0.0001351	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-16	0.4	n/a	8/19/2021	2.5	Yes	120	5.833	n/a		0.0001351	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-17	0.4	n/a	8/18/2021	5.3	Yes	120	5.833	n/a		0.0001351	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-18	0.4	n/a	8/19/2021	8.6	Yes	120	5.833	n/a		0.0001351	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-14	141.8	n/a	8/18/2021	583	Yes	120	0	ln(x)		0.001504	Param Inter 1 of 2
Calcium (mg/L)	HGWC-15	141.8	n/a	8/19/2021	203	Yes	120	0	ln(x)		0.001504	Param Inter 1 of 2
Calcium (mg/L)	HGWC-16	141.8	n/a	8/19/2021	207	Yes	120	0	ln(x)		0.001504	Param Inter 1 of 2
Calcium (mg/L)	HGWC-17	141.8	n/a	8/18/2021	281	Yes	120	0	ln(x)		0.001504	Param Inter 1 of 2
Calcium (mg/L)	HGWC-18	141.8	n/a	8/19/2021	416	Yes	120	0	ln(x)		0.001504	Param Inter 1 of 2
Chloride (mg/L)	HGWC-14	39.9	n/a	8/18/2021	141	Yes	120	0	n/a		0.0001351	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-15	39.9	n/a	8/19/2021	89.9	Yes	120	0	n/a		0.0001351	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-16	39.9	n/a	8/19/2021	90.1	Yes	120	0	n/a		0.0001351	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-17	39.9	n/a	8/18/2021	90.7	Yes	120	0	n/a		0.0001351	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-18	39.9	n/a	8/19/2021	95.8	Yes	120	0	n/a		0.0001351	NP Inter (normality) 1 of 2
Field pH (s.u.)	HGWC-14	7.92	4.9	8/18/2021	4.9	No	147	0	n/a		0.0001832	NP Inter (normality) 1 of 2
Field pH (s.u.)	HGWC-15	7.92	4.9	8/19/2021	6.18	No	147	0	n/a		0.0001832	NP Inter (normality) 1 of 2
Field pH (s.u.)	HGWC-16	7.92	4.9	8/19/2021	7.04	No	147	0	n/a		0.0001832	NP Inter (normality) 1 of 2
Field pH (s.u.)	HGWC-17	7.92	4.9	8/18/2021	6.43	No	147	0	n/a		0.0001832	NP Inter (normality) 1 of 2
<b>Field pH (s.u.)</b>	<b>HGWC-18</b>	<b>7.92</b>	<b>4.9</b>	<b>8/19/2021</b>	<b>4.43</b>	<b>Yes</b>	<b>147</b>	<b>0</b>	<b>n/a</b>		<b>0.0001832</b>	<b>NP Inter (normality) 1 of 2</b>
Fluoride (mg/L)	HGWC-14	0.87	n/a	8/18/2021	0.1ND	No	147	33.33	n/a		0.00009158	NP Inter (normality) 1 of 2
Fluoride (mg/L)	HGWC-15	0.87	n/a	8/19/2021	0.1ND	No	147	33.33	n/a		0.00009158	NP Inter (normality) 1 of 2
Fluoride (mg/L)	HGWC-16	0.87	n/a	8/19/2021	0.1ND	No	147	33.33	n/a		0.00009158	NP Inter (normality) 1 of 2
Fluoride (mg/L)	HGWC-17	0.87	n/a	8/18/2021	0.062J	No	147	33.33	n/a		0.00009158	NP Inter (normality) 1 of 2
Fluoride (mg/L)	HGWC-18	0.87	n/a	8/19/2021	0.31	No	147	33.33	n/a		0.00009158	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-14	85.9	n/a	8/18/2021	768	Yes	120	3.333	n/a		0.0001351	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-15	85.9	n/a	8/19/2021	223	Yes	120	3.333	n/a		0.0001351	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-16	85.9	n/a	8/19/2021	228	Yes	120	3.333	n/a		0.0001351	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-17	85.9	n/a	8/18/2021	280	Yes	120	3.333	n/a		0.0001351	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-18	85.9	n/a	8/19/2021	934	Yes	120	3.333	n/a		0.0001351	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-14	496	n/a	8/18/2021	2350	Yes	120	0	n/a		0.0001351	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-15	496	n/a	8/19/2021	958	Yes	120	0	n/a		0.0001351	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-16	496	n/a	8/19/2021	816	Yes	120	0	n/a		0.0001351	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-17	496	n/a	8/18/2021	1290	Yes	120	0	n/a		0.0001351	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-18	496	n/a	8/19/2021	1750	Yes	120	0	n/a		0.0001351	NP Inter (normality) 1 of 2

# Appendix III Trend Test - Significant Results

Plant Hammond Client: Southern Company Data: Hammond AP-2 Printed 10/28/2021, 1:56 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Boron (mg/L)	HGWA-2 (bg)	0.002396	83	63	Yes	17	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-16	0.2698	92	63	Yes	17	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-4 (bg)	-9.822	-72	-63	Yes	17	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWC-16	13.22	103	63	Yes	17	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWA-4 (bg)	-0.3912	-101	-63	Yes	17	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWA-44D (bg)	13.69	15	14	Yes	6	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWC-14	-88.48	-81	-63	Yes	17	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWC-15	-23.76	-72	-63	Yes	17	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWC-16	13.31	122	63	Yes	17	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWC-18	-38.27	-74	-63	Yes	17	0	n/a	n/a	0.01	NP
Field pH (s.u.)	HGWA-4 (bg)	-0.2968	-125	-87	Yes	21	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-2 (bg)	1.201	66	63	Yes	17	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-4 (bg)	-0.6292	-64	-63	Yes	17	17.65	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-4 (bg)	-35.66	-75	-63	Yes	17	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWC-14	-225.6	-85	-63	Yes	17	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWC-16	51.84	100	63	Yes	17	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWC-17	76.01	85	63	Yes	17	5.882	n/a	n/a	0.01	NP

# Appendix III Trend Test - All Results

Plant Hammond    Client: Southern Company    Data: Hammond AP-2    Printed 10/28/2021, 1:56 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Boron (mg/L)	HGWA-1 (bg)	-0.00001787	-1	-63	No	17	0	n/a	n/a	0.01	NP
<b>Boron (mg/L)</b>	<b>HGWA-2 (bg)</b>	<b>0.002396</b>	<b>83</b>	<b>63</b>	<b>Yes</b>	<b>17</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Boron (mg/L)	HGWA-3 (bg)	-0.00005607	-6	-63	No	17	17.65	n/a	n/a	0.01	NP
Boron (mg/L)	HGWA-4 (bg)	-0.001013	-45	-63	No	17	5.882	n/a	n/a	0.01	NP
Boron (mg/L)	HGWA-42D (bg)	-0.03067	-7	-14	No	6	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWA-43D (bg)	-0.02108	-9	-14	No	6	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWA-44D (bg)	0.3042	8	14	No	6	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWA-5 (bg)	0	-1	-63	No	17	11.76	n/a	n/a	0.01	NP
Boron (mg/L)	HGWA-6 (bg)	-0.000592	-30	-63	No	17	5.882	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-14	-1.128	-46	-63	No	17	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-15	0.06648	43	63	No	17	0	n/a	n/a	0.01	NP
<b>Boron (mg/L)</b>	<b>HGWC-16</b>	<b>0.2698</b>	<b>92</b>	<b>63</b>	<b>Yes</b>	<b>17</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Boron (mg/L)	HGWC-17	0.1465	20	63	No	17	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-18	-0.0772	-11	-63	No	17	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-1 (bg)	3.043	50	63	No	17	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-2 (bg)	0.3671	20	63	No	17	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-3 (bg)	2.778	62	63	No	17	0	n/a	n/a	0.01	NP
<b>Calcium (mg/L)</b>	<b>HGWA-4 (bg)</b>	<b>-9.822</b>	<b>-72</b>	<b>-63</b>	<b>Yes</b>	<b>17</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Calcium (mg/L)	HGWA-42D (bg)	-0.8391	-3	-14	No	6	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-43D (bg)	-2.444	-1	-14	No	6	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-44D (bg)	-5.272	-5	-14	No	6	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-5 (bg)	0.02191	1	63	No	17	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-6 (bg)	0.3964	23	63	No	17	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWC-14	-3.085	-8	-63	No	17	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWC-15	4.047	35	63	No	17	0	n/a	n/a	0.01	NP
<b>Calcium (mg/L)</b>	<b>HGWC-16</b>	<b>13.22</b>	<b>103</b>	<b>63</b>	<b>Yes</b>	<b>17</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Calcium (mg/L)	HGWC-17	19.04	57	63	No	17	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWC-18	9.741	36	63	No	17	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWA-1 (bg)	0.7317	37	63	No	17	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWA-2 (bg)	-0.2131	-62	-63	No	17	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWA-3 (bg)	-0.1136	-44	-63	No	17	0	n/a	n/a	0.01	NP
<b>Chloride (mg/L)</b>	<b>HGWA-4 (bg)</b>	<b>-0.3912</b>	<b>-101</b>	<b>-63</b>	<b>Yes</b>	<b>17</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Chloride (mg/L)	HGWA-42D (bg)	-0.9419	-11	-14	No	6	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWA-43D (bg)	-0.6657	-2	-14	No	6	0	n/a	n/a	0.01	NP
<b>Chloride (mg/L)</b>	<b>HGWA-44D (bg)</b>	<b>13.69</b>	<b>15</b>	<b>14</b>	<b>Yes</b>	<b>6</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Chloride (mg/L)	HGWA-5 (bg)	-0.08274	-48	-63	No	17	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWA-6 (bg)	-0.09831	-58	-63	No	17	0	n/a	n/a	0.01	NP
<b>Chloride (mg/L)</b>	<b>HGWC-14</b>	<b>-88.48</b>	<b>-81</b>	<b>-63</b>	<b>Yes</b>	<b>17</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
<b>Chloride (mg/L)</b>	<b>HGWC-15</b>	<b>-23.76</b>	<b>-72</b>	<b>-63</b>	<b>Yes</b>	<b>17</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
<b>Chloride (mg/L)</b>	<b>HGWC-16</b>	<b>13.31</b>	<b>122</b>	<b>63</b>	<b>Yes</b>	<b>17</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Chloride (mg/L)	HGWC-17	12.31	54	63	No	17	0	n/a	n/a	0.01	NP
<b>Chloride (mg/L)</b>	<b>HGWC-18</b>	<b>-38.27</b>	<b>-74</b>	<b>-63</b>	<b>Yes</b>	<b>17</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Field pH (s.u.)	HGWA-1 (bg)	-0.03025	-64	-87	No	21	0	n/a	n/a	0.01	NP
Field pH (s.u.)	HGWA-2 (bg)	-0.04184	-39	-87	No	21	0	n/a	n/a	0.01	NP
Field pH (s.u.)	HGWA-3 (bg)	-0.007267	-10	-87	No	21	0	n/a	n/a	0.01	NP
<b>Field pH (s.u.)</b>	<b>HGWA-4 (bg)</b>	<b>-0.2968</b>	<b>-125</b>	<b>-87</b>	<b>Yes</b>	<b>21</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Field pH (s.u.)	HGWA-42D (bg)	0.08202	12	18	No	7	0	n/a	n/a	0.01	NP
Field pH (s.u.)	HGWA-43D (bg)	0.01789	4	18	No	7	0	n/a	n/a	0.01	NP
Field pH (s.u.)	HGWA-44D (bg)	0.025	2	18	No	7	0	n/a	n/a	0.01	NP
Field pH (s.u.)	HGWA-5 (bg)	-0.03644	-70	-87	No	21	0	n/a	n/a	0.01	NP
Field pH (s.u.)	HGWA-6 (bg)	-0.016	-36	-87	No	21	0	n/a	n/a	0.01	NP
Field pH (s.u.)	HGWC-18	-0.02477	-80	-87	No	21	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-1 (bg)	1.842	35	63	No	17	0	n/a	n/a	0.01	NP
<b>Sulfate (mg/L)</b>	<b>HGWA-2 (bg)</b>	<b>1.201</b>	<b>66</b>	<b>63</b>	<b>Yes</b>	<b>17</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Sulfate (mg/L)	HGWA-3 (bg)	1.343	51	63	No	17	0	n/a	n/a	0.01	NP
<b>Sulfate (mg/L)</b>	<b>HGWA-4 (bg)</b>	<b>-0.6292</b>	<b>-64</b>	<b>-63</b>	<b>Yes</b>	<b>17</b>	<b>17.65</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Sulfate (mg/L)	HGWA-42D (bg)	-2.131	-6	-14	No	6	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-43D (bg)	-12.17	-13	-14	No	6	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-44D (bg)	4.171	3	14	No	6	16.67	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-5 (bg)	-0.4049	-21	-63	No	17	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-6 (bg)	0	-6	-63	No	17	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-14	4.913	10	63	No	17	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-15	-7.462	-19	-63	No	17	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-16	2.763	45	63	No	17	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-17	8.609	29	63	No	17	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-18	25.85	52	63	No	17	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-1 (bg)	3.302	12	63	No	17	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-2 (bg)	-2.657	-23	-63	No	17	0	n/a	n/a	0.01	NP



# Appendix III Trend Test - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-2 Printed 10/28/2021, 1:56 PM

<u>Constituent</u>	<u>Well</u>	<u>Slope</u>	<u>Calc.</u>	<u>Critical</u>	<u>Sig.</u>	<u>N</u>	<u>%NDs</u>	<u>Normality</u>	<u>Xform</u>	<u>Alpha</u>	<u>Method</u>
Total Dissolved Solids (mg/L)	HGWA-3 (bg)	-0.5858	-13	-63	No	17	0	n/a	n/a	0.01	NP
<b>Total Dissolved Solids (mg/L)</b>	<b>HGWA-4 (bg)</b>	<b>-35.66</b>	<b>-75</b>	<b>-63</b>	<b>Yes</b>	<b>17</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Total Dissolved Solids (mg/L)	HGWA-42D (bg)	-21.29	-3	-14	No	6	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-43D (bg)	-5.84	-3	-14	No	6	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-44D (bg)	83.43	9	14	No	6	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-5 (bg)	-5.106	-29	-63	No	17	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-6 (bg)	-0.7708	-9	-63	No	17	0	n/a	n/a	0.01	NP
<b>Total Dissolved Solids (mg/L)</b>	<b>HGWC-14</b>	<b>-225.6</b>	<b>-85</b>	<b>-63</b>	<b>Yes</b>	<b>17</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Total Dissolved Solids (mg/L)	HGWC-15	-63.49	-53	-63	No	17	0	n/a	n/a	0.01	NP
<b>Total Dissolved Solids (mg/L)</b>	<b>HGWC-16</b>	<b>51.84</b>	<b>100</b>	<b>63</b>	<b>Yes</b>	<b>17</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
<b>Total Dissolved Solids (mg/L)</b>	<b>HGWC-17</b>	<b>76.01</b>	<b>85</b>	<b>63</b>	<b>Yes</b>	<b>17</b>	<b>5.882</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Total Dissolved Solids (mg/L)	HGWC-18	-27.77	-33	-63	No	17	0	n/a	n/a	0.01	NP

# Upper Tolerance Limit

Plant Hammond    Client: Southern Company    Data: Hammond AP-2    Printed 10/28/2021, 1:58 PM

<u>Constituent</u>	<u>Well</u>	<u>Upper Lim.</u>	<u>Date</u>	<u>Observ.</u>	<u>Sig.</u>	<u>Bq N</u>	<u>%NDs</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Antimony (mg/L)	n/a	0.003	n/a	n/a	n/a	108	80.56	n/a	0.003928	NP Inter(NDs)
Arsenic (mg/L)	n/a	0.005	n/a	n/a	n/a	141	81.56	n/a	0.0007228	NP Inter(NDs)
Barium (mg/L)	n/a	0.46	n/a	n/a	n/a	141	0	n/a	0.0007228	NP Inter(normality)
Beryllium (mg/L)	n/a	0.0005	n/a	n/a	n/a	129	83.72	n/a	0.001338	NP Inter(NDs)
Cadmium (mg/L)	n/a	0.0005	n/a	n/a	n/a	141	92.91	n/a	0.0007228	NP Inter(NDs)
Chromium (mg/L)	n/a	0.019	n/a	n/a	n/a	129	82.95	n/a	0.001338	NP Inter(NDs)
Cobalt (mg/L)	n/a	0.038	n/a	n/a	n/a	141	70.21	n/a	0.0007228	NP Inter(NDs)
Combined Radium 226 + 228 (pCi/L)	n/a	1.666	n/a	n/a	n/a	141	0	sqrt(x)	0.05	Inter
Fluoride (mg/L)	n/a	0.87	n/a	n/a	n/a	147	33.33	n/a	0.0005313	NP Inter(normality)
Lead (mg/L)	n/a	0.001	n/a	n/a	n/a	129	69.77	n/a	0.001338	NP Inter(NDs)
Lithium (mg/L)	n/a	0.034	n/a	n/a	n/a	141	19.15	n/a	0.0007228	NP Inter(normality)
Mercury (mg/L)	n/a	0.0005	n/a	n/a	n/a	87	90.8	n/a	0.01153	NP Inter(NDs)
Molybdenum (mg/L)	n/a	0.01	n/a	n/a	n/a	129	86.05	n/a	0.001338	NP Inter(NDs)
Selenium (mg/L)	n/a	0.005	n/a	n/a	n/a	141	98.58	n/a	0.0007228	NP Inter(NDs)
Thallium (mg/L)	n/a	0.001	n/a	n/a	n/a	141	98.58	n/a	0.0007228	NP Inter(NDs)

<b>PLANT HAMMOND AP-2 GWPS (State)</b>				
<b>Constituent Name</b>	<b>MCL</b>	<b>CCR-Rule Specified</b>	<b>Background Limit</b>	<b>Federal GWPS</b>
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		0.46	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		0.0019	0.1
Cobalt, Total (mg/L)	n/a	0.006	0.038	0.038
Combined Radium, Total (pCi/L)	5		1.67	5
Fluoride, Total (mg/L)	4		0.87	4
Lead, Total (mg/L)	n/a	0.015	0.001	0.001
Lithium, Total (mg/L)	n/a	0.04	0.034	0.034
Mercury	0.002		0.0005	0.002
Molybdenum, Total (mg/L)	n/a	0.1	0.01	0.01
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*

<b>PLANT HAMMOND AP-2 GWPS (Federal)</b>				
<b>Constituent Name</b>	<b>MCL</b>	<b>CCR-Rule Specified</b>	<b>Background Limit</b>	<b>Federal GWPS</b>
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		0.46	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		0.0019	0.1
Cobalt, Total (mg/L)	n/a	0.006	0.038	0.038
Combined Radium, Total (pCi/L)	5		1.67	5
Fluoride, Total (mg/L)	4		0.87	4
Lead, Total (mg/L)	n/a	0.015	0.001	0.015
Lithium, Total (mg/L)	n/a	0.04	0.034	0.04
Mercury	0.002		0.0005	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*

# State Confidence Intervals - Significant Results

Plant Hammond Client: Southern Company Data: Hammond AP-2 Printed 11/2/2021, 10:24 AM

<u>Constituent</u>	<u>Well</u>	<u>Upper Lim.</u>	<u>Lower Lim.</u>	<u>Compliance</u>	<u>Sig. N</u>	<u>Mean</u>	<u>Std. Dev.</u>	<u>%NDs</u>	<u>ND Adj.</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Cobalt (mg/L)	HGWC-18	0.1883	0.1606	0.038	Yes 20	0.1745	0.02448	0	None	No	0.01	Param.
Cobalt (mg/L)	MW-33	0.05804	0.04939	0.038	Yes 7	0.05371	0.003638	0	None	No	0.01	Param.
Cobalt (mg/L)	MW-35	0.1023	0.0797	0.038	Yes 5	0.091	0.006745	0	None	No	0.01	Param.
Lead (mg/L)	HGWC-14	0.001721	0.001392	0.001	Yes 18	0.001557	0.0002717	5.556	None	No	0.01	Param.
Lead (mg/L)	HGWC-18	0.001449	0.001183	0.001	Yes 18	0.001316	0.0002198	5.556	None	No	0.01	Param.
Lead (mg/L)	MW-33	0.001787	0.001613	0.001	Yes 6	0.0017	0.00006325	0	None	No	0.01	Param.
Molybdenum (mg/L)	MW-21D	0.03424	0.01596	0.01	Yes 10	0.0251	0.01025	0	None	No	0.01	Param.

# State Confidence Intervals - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-2 Printed 11/2/2021, 10:24 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Antimony (mg/L)	HGWC-14	0.003	0.00043	0.006	No	14	0.002624	0.0009572	85.71	None	No	0.01	NP (NDs)
Antimony (mg/L)	HGWC-18	0.003	0.0008	0.006	No	14	0.002843	0.000588	92.86	None	No	0.01	NP (NDs)
Antimony (mg/L)	MW-22	0.003	0.0016	0.006	No	5	0.00272	0.0006261	80	None	No	0.031	NP (NDs)
Arsenic (mg/L)	HGWC-14	0.005777	0.004011	0.01	No	20	0.004894	0.001554	15	None	No	0.01	Param.
Arsenic (mg/L)	HGWC-15	0.005	0.0008	0.01	No	20	0.004317	0.001671	85	None	No	0.01	NP (NDs)
Arsenic (mg/L)	HGWC-16	0.005	0.0012	0.01	No	20	0.004145	0.001766	80	None	No	0.01	NP (NDs)
Arsenic (mg/L)	HGWC-17	0.005	0.0012	0.01	No	20	0.003968	0.001836	75	None	No	0.01	NP (NDs)
Arsenic (mg/L)	HGWC-18	0.006947	0.004817	0.01	No	20	0.005882	0.001875	0	None	No	0.01	Param.
Arsenic (mg/L)	MW-21D	0.005	0.001	0.01	No	10	0.003749	0.002032	70	None	No	0.011	NP (NDs)
Arsenic (mg/L)	MW-22	0.005	0.00045	0.01	No	9	0.004494	0.001517	88.89	None	No	0.002	NP (NDs)
Arsenic (mg/L)	MW-23D	0.005	0.00082	0.01	No	9	0.004091	0.001804	77.78	None	No	0.002	NP (NDs)
Arsenic (mg/L)	MW-33	0.008048	0.003485	0.01	No	6	0.005767	0.001661	0	None	No	0.01	Param.
Arsenic (mg/L)	MW-35	0.005818	0.003702	0.01	No	5	0.00504	0.0005683	20	Kaplan-Meier	No	0.01	Param.
Arsenic (mg/L)	MW-37D	0.00278	0.0007865	0.01	No	5	0.00307	0.001836	40	Kaplan-Meier	No	0.01	Param.
Barium (mg/L)	HGWC-14	0.0228	0.019	2	No	20	0.02465	0.01786	5	None	No	0.01	NP (normality)
Barium (mg/L)	HGWC-15	0.02813	0.01874	2	No	20	0.02344	0.008265	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-16	0.1124	0.1002	2	No	20	0.1063	0.01075	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-17	0.02619	0.02345	2	No	20	0.02482	0.002408	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-18	0.0336	0.029	2	No	20	0.03391	0.01588	5	None	No	0.01	NP (normality)
Barium (mg/L)	MW-21D	0.07273	0.04547	2	No	10	0.0591	0.01527	0	None	No	0.01	Param.
Barium (mg/L)	MW-22	0.03476	0.01702	2	No	9	0.02589	0.009185	0	None	No	0.01	Param.
Barium (mg/L)	MW-23D	0.07005	0.05283	2	No	9	0.06144	0.008918	0	None	No	0.01	Param.
Barium (mg/L)	MW-33	0.02837	0.02297	2	No	6	0.02567	0.001966	0	None	No	0.01	Param.
Barium (mg/L)	MW-35	0.03259	0.02341	2	No	5	0.028	0.002739	0	None	No	0.01	Param.
Barium (mg/L)	MW-37D	0.1907	0.0987	2	No	5	0.142	0.02864	0	None	sqrt(x)	0.01	Param.
Beryllium (mg/L)	HGWC-14	0.0005223	0.0004266	0.004	No	18	0.0004744	0.00007913	11.11	None	No	0.01	Param.
Beryllium (mg/L)	HGWC-17	0.0005	0.000067	0.004	No	18	0.0004508	0.0001431	88.89	None	No	0.01	NP (NDs)
Beryllium (mg/L)	HGWC-18	0.00345	0.002894	0.004	No	18	0.00306	0.0007528	5.556	None	x^3	0.01	Param.
Beryllium (mg/L)	MW-22	0.0005	0.000047	0.004	No	9	0.0003068	0.0002293	55.56	None	No	0.002	NP (NDs)
Beryllium (mg/L)	MW-33	0.001117	0.0009029	0.004	No	6	0.00101	0.00007797	0	None	No	0.01	Param.
Beryllium (mg/L)	MW-35	0.00061	0.00032	0.004	No	5	0.000508	0.0001381	0	None	No	0.031	NP (normality)
Beryllium (mg/L)	MW-37D	0.0005	0.00012	0.004	No	5	0.000424	0.0001699	80	None	No	0.031	NP (NDs)
Cadmium (mg/L)	HGWC-14	0.0005	0.0001	0.005	No	20	0.0002934	0.000194	45	None	No	0.01	NP (normality)
Cadmium (mg/L)	HGWC-15	0.002228	0.001529	0.005	No	20	0.001911	0.0006795	0	None	sqrt(x)	0.01	Param.
Cadmium (mg/L)	HGWC-17	0.0005	0.00007	0.005	No	20	0.0004785	0.00009615	95	None	No	0.01	NP (NDs)
Cadmium (mg/L)	HGWC-18	0.002329	0.001731	0.005	No	20	0.00203	0.0005263	5	None	No	0.01	Param.
Cadmium (mg/L)	MW-22	0.002144	0.001488	0.005	No	9	0.001696	0.0005966	0	None	x^5	0.01	Param.
Cadmium (mg/L)	MW-23D	0.0006	0.00012	0.005	No	9	0.0004711	0.0001389	55.56	None	No	0.002	NP (NDs)
Cadmium (mg/L)	MW-33	0.0002199	0.0001534	0.005	No	6	0.0001867	0.00002422	0	None	No	0.01	Param.
Cadmium (mg/L)	MW-35	0.002198	0.0004143	0.005	No	5	0.001306	0.0005321	0	None	No	0.01	Param.
Chromium (mg/L)	HGWC-14	0.005	0.00066	0.1	No	18	0.004504	0.001443	88.89	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-15	0.005	0.0012	0.1	No	18	0.004284	0.001654	83.33	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-16	0.005	0.0021	0.1	No	18	0.004345	0.001539	83.33	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-17	0.005	0.0018	0.1	No	18	0.004346	0.00152	83.33	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-18	0.005	0.00063	0.1	No	18	0.004252	0.001722	83.33	None	No	0.01	NP (NDs)
Chromium (mg/L)	MW-21D	0.005	0.00074	0.1	No	10	0.004131	0.001832	80	None	No	0.011	NP (NDs)
Chromium (mg/L)	MW-22	0.005	0.0004	0.1	No	9	0.004017	0.001953	77.78	None	No	0.002	NP (NDs)
Chromium (mg/L)	MW-23D	0.005	0.00083	0.1	No	9	0.004077	0.001832	77.78	None	No	0.002	NP (NDs)
Chromium (mg/L)	MW-33	0.005	0.00069	0.1	No	6	0.004282	0.00176	83.33	None	No	0.0155	NP (NDs)
Chromium (mg/L)	MW-35	0.005	0.00079	0.1	No	5	0.003324	0.002295	60	None	No	0.031	NP (NDs)
Chromium (mg/L)	MW-37D	0.005	0.0014	0.1	No	5	0.00424	0.00159	60	None	No	0.031	NP (NDs)
Cobalt (mg/L)	HGWC-14	0.02946	0.02405	0.038	No	20	0.02623	0.00609	5	None	x^2	0.01	Param.
Cobalt (mg/L)	HGWC-15	0.04589	0.02837	0.038	No	20	0.03713	0.01543	0	None	No	0.01	Param.
Cobalt (mg/L)	HGWC-16	0.005	0.00037	0.038	No	20	0.004532	0.001439	90	None	No	0.01	NP (NDs)
Cobalt (mg/L)	HGWC-17	0.01612	0.01373	0.038	No	20	0.01493	0.002107	0	None	No	0.01	Param.
<b>Cobalt (mg/L)</b>	<b>HGWC-18</b>	<b>0.1883</b>	<b>0.1606</b>	<b>0.038</b>	<b>Yes</b>	<b>20</b>	<b>0.1745</b>	<b>0.02448</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.01</b>	<b>Param.</b>
Cobalt (mg/L)	MW-21D	0.005	0.005	0.038	No	10	0.004534	0.001474	90	None	No	0.011	NP (NDs)
Cobalt (mg/L)	MW-22	0.03873	0.02372	0.038	No	9	0.03122	0.007775	0	None	No	0.01	Param.
Cobalt (mg/L)	MW-23D	0.001193	0.0009469	0.038	No	9	0.00107	0.0001275	0	None	No	0.01	Param.
<b>Cobalt (mg/L)</b>	<b>MW-33</b>	<b>0.05804</b>	<b>0.04939</b>	<b>0.038</b>	<b>Yes</b>	<b>7</b>	<b>0.05371</b>	<b>0.003638</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.01</b>	<b>Param.</b>
<b>Cobalt (mg/L)</b>	<b>MW-35</b>	<b>0.1023</b>	<b>0.0797</b>	<b>0.038</b>	<b>Yes</b>	<b>5</b>	<b>0.091</b>	<b>0.006745</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.01</b>	<b>Param.</b>
Cobalt (mg/L)	MW-37D	0.005	0.00048	0.038	No	5	0.003396	0.002226	60	None	No	0.031	NP (NDs)

# State Confidence Intervals - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-2 Printed 11/2/2021, 10:24 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Combined Radium 226 + 228 (pCi/L)	HGWC-14	1.624	1.153	5	No	20	1.389	0.4145	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-15	0.9293	0.4792	5	No	20	0.7043	0.3964	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-16	0.99	0.5444	5	No	20	0.7672	0.3923	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-17	1.029	0.6628	5	No	20	0.8457	0.3221	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-18	2.254	1.706	5	No	20	1.98	0.4826	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-21D	1.245	0.4197	5	No	10	0.8326	0.4628	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-22	1.218	0.4005	5	No	9	0.8091	0.4232	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-23D	1.143	0.5748	5	No	9	0.859	0.2943	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-33	2.868	0.8967	5	No	6	1.882	0.7174	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-35	3.953	-0.1194	5	No	5	1.917	1.215	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-37D	2.036	-0.1249	5	No	5	0.9556	0.6448	0	None	No	0.01	Param.
Fluoride (mg/L)	HGWC-14	0.2249	0.08438	4	No	21	0.1819	0.1587	23.81	Kaplan-Meier	sqrt(x)	0.01	Param.
Fluoride (mg/L)	HGWC-15	0.17	0.09	4	No	21	0.1435	0.1219	42.86	None	No	0.01	NP (normality)
Fluoride (mg/L)	HGWC-16	0.25	0.059	4	No	21	0.1594	0.1198	52.38	None	No	0.01	NP (NDs)
Fluoride (mg/L)	HGWC-17	0.16	0.062	4	No	21	0.1693	0.2143	33.33	None	No	0.01	NP (normality)
Fluoride (mg/L)	HGWC-18	0.6473	0.4156	4	No	21	0.5314	0.2101	4.762	None	No	0.01	Param.
Fluoride (mg/L)	MW-21D	0.1	0.1	4	No	10	0.1	4.7e-10	90	None	No	0.011	NP (NDs)
Fluoride (mg/L)	MW-22	0.28	0.1	4	No	9	0.1233	0.05958	77.78	None	No	0.002	NP (NDs)
Fluoride (mg/L)	MW-23D	0.16	0.1	4	No	9	0.1111	0.02261	77.78	None	No	0.002	NP (NDs)
Fluoride (mg/L)	MW-33	0.3234	0.1231	4	No	7	0.2186	0.09191	0	None	sqrt(x)	0.01	Param.
Fluoride (mg/L)	MW-35	0.1	0.03995	4	No	5	0.076	0.02239	20	Kaplan-Meier	No	0.01	Param.
Fluoride (mg/L)	MW-37D	0.1025	0.03866	4	No	5	0.0706	0.01906	0	None	No	0.01	Param.
<b>Lead (mg/L)</b>	<b>HGWC-14</b>	<b>0.001721</b>	<b>0.001392</b>	<b>0.001</b>	<b>Yes</b>	<b>18</b>	<b>0.001557</b>	<b>0.0002717</b>	<b>5.556</b>	<b>None</b>	<b>No</b>	<b>0.01</b>	<b>Param.</b>
Lead (mg/L)	HGWC-15	0.001	0.0002	0.001	No	18	0.0008014	0.0003833	72.22	None	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-16	0.001	0.000094	0.001	No	18	0.0005568	0.0004572	50	None	No	0.01	NP (normality)
Lead (mg/L)	HGWC-17	0.001	0.000088	0.001	No	18	0.0006003	0.0004605	55.56	None	No	0.01	NP (NDs)
<b>Lead (mg/L)</b>	<b>HGWC-18</b>	<b>0.001449</b>	<b>0.001183</b>	<b>0.001</b>	<b>Yes</b>	<b>18</b>	<b>0.001316</b>	<b>0.0002198</b>	<b>5.556</b>	<b>None</b>	<b>No</b>	<b>0.01</b>	<b>Param.</b>
Lead (mg/L)	MW-21D	0.001	0.000048	0.001	No	10	0.0006828	0.0004451	60	None	No	0.011	NP (NDs)
Lead (mg/L)	MW-22	0.001	0.000036	0.001	No	9	0.0006922	0.000462	66.67	None	No	0.002	NP (NDs)
Lead (mg/L)	MW-23D	0.001	0.000051	0.001	No	9	0.0008012	0.0003954	77.78	None	No	0.002	NP (NDs)
<b>Lead (mg/L)</b>	<b>MW-33</b>	<b>0.001787</b>	<b>0.001613</b>	<b>0.001</b>	<b>Yes</b>	<b>6</b>	<b>0.0017</b>	<b>0.00006325</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.01</b>	<b>Param.</b>
Lead (mg/L)	MW-35	0.001087	0.00009334	0.001	No	5	0.000672	0.0003485	20	Kaplan-Meier	No	0.01	Param.
Lead (mg/L)	MW-37D	0.001537	-0.0004793	0.001	No	5	0.0008344	0.000626	40	Kaplan-Meier	No	0.01	Param.
Lithium (mg/L)	HGWC-15	0.007436	0.002055	0.034	No	20	0.0131	0.01235	30	Kaplan-Meier	ln(x)	0.01	Param.
Lithium (mg/L)	HGWC-16	0.0042	0.0029	0.034	No	20	0.004575	0.004859	5	None	No	0.01	NP (normality)
Lithium (mg/L)	HGWC-17	0.025	0.0011	0.034	No	20	0.01306	0.01225	50	None	No	0.01	NP (normality)
Lithium (mg/L)	HGWC-18	0.01452	0.01238	0.034	No	20	0.01345	0.001893	0	None	No	0.01	Param.
Lithium (mg/L)	MW-21D	0.02555	0.02125	0.034	No	10	0.0234	0.002413	0	None	No	0.01	Param.
Lithium (mg/L)	MW-22	0.002	0.0011	0.034	No	9	0.001333	0.0002784	0	None	No	0.002	NP (normality)
Lithium (mg/L)	MW-23D	0.002555	0.002133	0.034	No	9	0.002344	0.0002186	0	None	No	0.01	Param.
Lithium (mg/L)	MW-33	0.001201	0.0008654	0.034	No	6	0.001033	0.0001223	0	None	No	0.01	Param.
Lithium (mg/L)	MW-35	0.004936	0.003304	0.034	No	5	0.00412	0.0004868	0	None	No	0.01	Param.
Lithium (mg/L)	MW-37D	0.03898	0.02822	0.034	No	5	0.0336	0.003209	0	None	No	0.01	Param.
Molybdenum (mg/L)	HGWC-15	0.01	0.0007	0.01	No	18	0.009483	0.002192	94.44	None	No	0.01	NP (NDs)
<b>Molybdenum (mg/L)</b>	<b>MW-21D</b>	<b>0.03424</b>	<b>0.01596</b>	<b>0.01</b>	<b>Yes</b>	<b>10</b>	<b>0.0251</b>	<b>0.01025</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.01</b>	<b>Param.</b>
Molybdenum (mg/L)	MW-22	0.01	0.00013	0.01	No	9	0.008903	0.00329	88.89	None	No	0.002	NP (NDs)
Molybdenum (mg/L)	MW-23D	0.005336	0.001968	0.01	No	9	0.003711	0.002464	11.11	None	ln(x)	0.01	Param.
Molybdenum (mg/L)	MW-37D	0.02512	0.006598	0.01	No	5	0.01586	0.005527	0	None	No	0.01	Param.
Selenium (mg/L)	HGWC-14	0.0129	0.006872	0.05	No	20	0.009886	0.005307	0	None	No	0.01	Param.
Selenium (mg/L)	HGWC-15	0.005	0.0041	0.05	No	20	0.004355	0.001477	80	None	No	0.01	NP (NDs)
Selenium (mg/L)	HGWC-16	0.005	0.000089	0.05	No	20	0.004754	0.001098	95	None	No	0.01	NP (NDs)
Selenium (mg/L)	HGWC-17	0.005	0.0023	0.05	No	20	0.00444	0.001415	85	None	No	0.01	NP (NDs)
Selenium (mg/L)	HGWC-18	0.03325	0.01734	0.05	No	20	0.02529	0.01402	5	None	No	0.01	Param.
Selenium (mg/L)	MW-22	0.005	0.002	0.05	No	9	0.004667	0.001	88.89	None	No	0.002	NP (NDs)
Selenium (mg/L)	MW-33	0.03659	0.008223	0.05	No	6	0.01983	0.01216	0	None	ln(x)	0.01	Param.
Selenium (mg/L)	MW-35	0.03653	0.005955	0.05	No	5	0.0182	0.01073	0	None	x^(1/3)	0.01	Param.
Thallium (mg/L)	HGWC-14	0.000306	0.00028	0.002	No	20	0.0002958	0.00003042	0	None	No	0.01	NP (normality)
Thallium (mg/L)	HGWC-17	0.001	0.00012	0.002	No	20	0.00069	0.0004335	65	None	No	0.01	NP (NDs)
Thallium (mg/L)	HGWC-18	0.001	0.00015	0.002	No	20	0.0005015	0.0004181	40	None	No	0.01	NP (normality)
Thallium (mg/L)	MW-33	0.0003737	0.0002329	0.002	No	6	0.0003033	0.00005125	0	None	No	0.01	Param.
Thallium (mg/L)	MW-35	0.001	0.00013	0.002	No	5	0.000826	0.0003891	80	None	No	0.031	NP (NDs)

# Federal Confidence Intervals - Significant Results

Plant Hammond Client: Southern Company Data: Hammond AP-2 Printed 11/2/2021, 10:28 AM

<u>Constituent</u>	<u>Well</u>	<u>Upper Lim.</u>	<u>Lower Lim.</u>	<u>Compliance</u>	<u>Sig. N</u>	<u>Mean</u>	<u>Std. Dev.</u>	<u>%NDs</u>	<u>ND Adj.</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Cobalt (mg/L)	HGWC-18	0.1883	0.1606	0.038	Yes 20	0.1745	0.02448	0	None	No	0.01	Param.
Cobalt (mg/L)	MW-33	0.05804	0.04939	0.038	Yes 7	0.05371	0.003638	0	None	No	0.01	Param.
Cobalt (mg/L)	MW-35	0.1023	0.0797	0.038	Yes 5	0.091	0.006745	0	None	No	0.01	Param.



# Federal Confidence Intervals - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-2 Printed 11/2/2021, 10:28 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Antimony (mg/L)	HGWC-14	0.003	0.00043	0.006	No 14	0.002624	0.0009572	85.71	None	No	0.01	NP (NDs)
Antimony (mg/L)	HGWC-18	0.003	0.0008	0.006	No 14	0.002843	0.000588	92.86	None	No	0.01	NP (NDs)
Antimony (mg/L)	MW-22	0.003	0.0016	0.006	No 5	0.00272	0.0006261	80	None	No	0.031	NP (NDs)
Arsenic (mg/L)	HGWC-14	0.005777	0.004011	0.01	No 20	0.004894	0.001554	15	None	No	0.01	Param.
Arsenic (mg/L)	HGWC-15	0.005	0.0008	0.01	No 20	0.004317	0.001671	85	None	No	0.01	NP (NDs)
Arsenic (mg/L)	HGWC-16	0.005	0.0012	0.01	No 20	0.004145	0.001766	80	None	No	0.01	NP (NDs)
Arsenic (mg/L)	HGWC-17	0.005	0.0012	0.01	No 20	0.003968	0.001836	75	None	No	0.01	NP (NDs)
Arsenic (mg/L)	HGWC-18	0.006947	0.004817	0.01	No 20	0.005882	0.001875	0	None	No	0.01	Param.
Arsenic (mg/L)	MW-21D	0.005	0.001	0.01	No 10	0.003749	0.002032	70	None	No	0.011	NP (NDs)
Arsenic (mg/L)	MW-22	0.005	0.00045	0.01	No 9	0.004494	0.001517	88.89	None	No	0.002	NP (NDs)
Arsenic (mg/L)	MW-23D	0.005	0.00082	0.01	No 9	0.004091	0.001804	77.78	None	No	0.002	NP (NDs)
Arsenic (mg/L)	MW-33	0.008048	0.003485	0.01	No 6	0.005767	0.001661	0	None	No	0.01	Param.
Arsenic (mg/L)	MW-35	0.005818	0.003702	0.01	No 5	0.00504	0.0005683	20	Kaplan-Meier	No	0.01	Param.
Arsenic (mg/L)	MW-37D	0.00278	0.0007865	0.01	No 5	0.00307	0.001836	40	Kaplan-Meier	No	0.01	Param.
Barium (mg/L)	HGWC-14	0.0228	0.019	2	No 20	0.02465	0.01786	5	None	No	0.01	NP (normality)
Barium (mg/L)	HGWC-15	0.02813	0.01874	2	No 20	0.02344	0.008265	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-16	0.1124	0.1002	2	No 20	0.1063	0.01075	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-17	0.02619	0.02345	2	No 20	0.02482	0.002408	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-18	0.0336	0.029	2	No 20	0.03391	0.01588	5	None	No	0.01	NP (normality)
Barium (mg/L)	MW-21D	0.07273	0.04547	2	No 10	0.0591	0.01527	0	None	No	0.01	Param.
Barium (mg/L)	MW-22	0.03476	0.01702	2	No 9	0.02589	0.009185	0	None	No	0.01	Param.
Barium (mg/L)	MW-23D	0.07005	0.05283	2	No 9	0.06144	0.008918	0	None	No	0.01	Param.
Barium (mg/L)	MW-33	0.02837	0.02297	2	No 6	0.02567	0.001966	0	None	No	0.01	Param.
Barium (mg/L)	MW-35	0.03259	0.02341	2	No 5	0.028	0.002739	0	None	No	0.01	Param.
Barium (mg/L)	MW-37D	0.1907	0.0987	2	No 5	0.142	0.02864	0	None	sqrt(x)	0.01	Param.
Beryllium (mg/L)	HGWC-14	0.0005223	0.0004266	0.004	No 18	0.0004744	0.00007913	11.11	None	No	0.01	Param.
Beryllium (mg/L)	HGWC-17	0.0005	0.000067	0.004	No 18	0.0004508	0.0001431	88.89	None	No	0.01	NP (NDs)
Beryllium (mg/L)	HGWC-18	0.00345	0.002894	0.004	No 18	0.00306	0.0007528	5.556	None	x^3	0.01	Param.
Beryllium (mg/L)	MW-22	0.0005	0.000047	0.004	No 9	0.0003068	0.0002293	55.56	None	No	0.002	NP (NDs)
Beryllium (mg/L)	MW-33	0.001117	0.0009029	0.004	No 6	0.00101	0.00007797	0	None	No	0.01	Param.
Beryllium (mg/L)	MW-35	0.00061	0.00032	0.004	No 5	0.000508	0.0001381	0	None	No	0.031	NP (normality)
Beryllium (mg/L)	MW-37D	0.0005	0.00012	0.004	No 5	0.000424	0.0001699	80	None	No	0.031	NP (NDs)
Cadmium (mg/L)	HGWC-14	0.0005	0.0001	0.005	No 20	0.0002934	0.000194	45	None	No	0.01	NP (normality)
Cadmium (mg/L)	HGWC-15	0.002228	0.001529	0.005	No 20	0.001911	0.0006795	0	None	sqrt(x)	0.01	Param.
Cadmium (mg/L)	HGWC-17	0.0005	0.00007	0.005	No 20	0.0004785	0.00009615	95	None	No	0.01	NP (NDs)
Cadmium (mg/L)	HGWC-18	0.002329	0.001731	0.005	No 20	0.00203	0.0005263	5	None	No	0.01	Param.
Cadmium (mg/L)	MW-22	0.002144	0.001488	0.005	No 9	0.001696	0.0005966	0	None	x^5	0.01	Param.
Cadmium (mg/L)	MW-23D	0.0006	0.00012	0.005	No 9	0.0004711	0.0001389	55.56	None	No	0.002	NP (NDs)
Cadmium (mg/L)	MW-33	0.0002199	0.0001534	0.005	No 6	0.0001867	0.00002422	0	None	No	0.01	Param.
Cadmium (mg/L)	MW-35	0.002198	0.0004143	0.005	No 5	0.001306	0.0005321	0	None	No	0.01	Param.
Chromium (mg/L)	HGWC-14	0.005	0.00066	0.1	No 18	0.004504	0.001443	88.89	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-15	0.005	0.0012	0.1	No 18	0.004284	0.001654	83.33	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-16	0.005	0.0021	0.1	No 18	0.004345	0.001539	83.33	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-17	0.005	0.0018	0.1	No 18	0.004346	0.00152	83.33	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-18	0.005	0.00063	0.1	No 18	0.004252	0.001722	83.33	None	No	0.01	NP (NDs)
Chromium (mg/L)	MW-21D	0.005	0.00074	0.1	No 10	0.004131	0.001832	80	None	No	0.011	NP (NDs)
Chromium (mg/L)	MW-22	0.005	0.0004	0.1	No 9	0.004017	0.001953	77.78	None	No	0.002	NP (NDs)
Chromium (mg/L)	MW-23D	0.005	0.00083	0.1	No 9	0.004077	0.001832	77.78	None	No	0.002	NP (NDs)
Chromium (mg/L)	MW-33	0.005	0.00069	0.1	No 6	0.004282	0.00176	83.33	None	No	0.0155	NP (NDs)
Chromium (mg/L)	MW-35	0.005	0.00079	0.1	No 5	0.003324	0.002295	60	None	No	0.031	NP (NDs)
Chromium (mg/L)	MW-37D	0.005	0.0014	0.1	No 5	0.00424	0.00159	60	None	No	0.031	NP (NDs)
Cobalt (mg/L)	HGWC-14	0.02946	0.02405	0.038	No 20	0.02623	0.00609	5	None	x^2	0.01	Param.
Cobalt (mg/L)	HGWC-15	0.04589	0.02837	0.038	No 20	0.03713	0.01543	0	None	No	0.01	Param.
Cobalt (mg/L)	HGWC-16	0.005	0.00037	0.038	No 20	0.004532	0.001439	90	None	No	0.01	NP (NDs)
Cobalt (mg/L)	HGWC-17	0.01612	0.01373	0.038	No 20	0.01493	0.002107	0	None	No	0.01	Param.
<b>Cobalt (mg/L)</b>	<b>HGWC-18</b>	<b>0.1883</b>	<b>0.1606</b>	<b>0.038</b>	<b>Yes 20</b>	<b>0.1745</b>	<b>0.02448</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.01</b>	<b>Param.</b>
Cobalt (mg/L)	MW-21D	0.005	0.005	0.038	No 10	0.004534	0.001474	90	None	No	0.011	NP (NDs)
Cobalt (mg/L)	MW-22	0.03873	0.02372	0.038	No 9	0.03122	0.007775	0	None	No	0.01	Param.
Cobalt (mg/L)	MW-23D	0.001193	0.0009469	0.038	No 9	0.00107	0.0001275	0	None	No	0.01	Param.
<b>Cobalt (mg/L)</b>	<b>MW-33</b>	<b>0.05804</b>	<b>0.04939</b>	<b>0.038</b>	<b>Yes 7</b>	<b>0.05371</b>	<b>0.003638</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.01</b>	<b>Param.</b>
<b>Cobalt (mg/L)</b>	<b>MW-35</b>	<b>0.1023</b>	<b>0.0797</b>	<b>0.038</b>	<b>Yes 5</b>	<b>0.091</b>	<b>0.006745</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.01</b>	<b>Param.</b>
Cobalt (mg/L)	MW-37D	0.005	0.00048	0.038	No 5	0.003396	0.002226	60	None	No	0.031	NP (NDs)

# Federal Confidence Intervals - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-2 Printed 11/2/2021, 10:28 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Combined Radium 226 + 228 (pCi/L)	HGWC-14	1.624	1.153	5	No	20	1.389	0.4145	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-15	0.9293	0.4792	5	No	20	0.7043	0.3964	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-16	0.99	0.5444	5	No	20	0.7672	0.3923	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-17	1.029	0.6628	5	No	20	0.8457	0.3221	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-18	2.254	1.706	5	No	20	1.98	0.4826	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-21D	1.245	0.4197	5	No	10	0.8326	0.4628	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-22	1.218	0.4005	5	No	9	0.8091	0.4232	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-23D	1.143	0.5748	5	No	9	0.859	0.2943	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-33	2.868	0.8967	5	No	6	1.882	0.7174	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-35	3.953	-0.1194	5	No	5	1.917	1.215	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-37D	2.036	-0.1249	5	No	5	0.9556	0.6448	0	None	No	0.01	Param.
Fluoride (mg/L)	HGWC-14	0.2249	0.08438	4	No	21	0.1819	0.1587	23.81	Kaplan-Meier	sqrt(x)	0.01	Param.
Fluoride (mg/L)	HGWC-15	0.17	0.09	4	No	21	0.1435	0.1219	42.86	None	No	0.01	NP (normality)
Fluoride (mg/L)	HGWC-16	0.25	0.059	4	No	21	0.1594	0.1198	52.38	None	No	0.01	NP (NDs)
Fluoride (mg/L)	HGWC-17	0.16	0.062	4	No	21	0.1693	0.2143	33.33	None	No	0.01	NP (normality)
Fluoride (mg/L)	HGWC-18	0.6473	0.4156	4	No	21	0.5314	0.2101	4.762	None	No	0.01	Param.
Fluoride (mg/L)	MW-21D	0.1	0.1	4	No	10	0.1	4.7e-10	90	None	No	0.011	NP (NDs)
Fluoride (mg/L)	MW-22	0.28	0.1	4	No	9	0.1233	0.05958	77.78	None	No	0.002	NP (NDs)
Fluoride (mg/L)	MW-23D	0.16	0.1	4	No	9	0.1111	0.02261	77.78	None	No	0.002	NP (NDs)
Fluoride (mg/L)	MW-33	0.3234	0.1231	4	No	7	0.2186	0.09191	0	None	sqrt(x)	0.01	Param.
Fluoride (mg/L)	MW-35	0.1	0.03995	4	No	5	0.076	0.02239	20	Kaplan-Meier	No	0.01	Param.
Fluoride (mg/L)	MW-37D	0.1025	0.03866	4	No	5	0.0706	0.01906	0	None	No	0.01	Param.
Lead (mg/L)	HGWC-14	0.001721	0.001392	0.015	No	18	0.001557	0.0002717	5.556	None	No	0.01	Param.
Lead (mg/L)	HGWC-15	0.001	0.0002	0.015	No	18	0.0008014	0.0003833	72.22	None	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-16	0.001	0.000094	0.015	No	18	0.0005568	0.0004572	50	None	No	0.01	NP (normality)
Lead (mg/L)	HGWC-17	0.001	0.000088	0.015	No	18	0.0006003	0.0004605	55.56	None	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-18	0.001449	0.001183	0.015	No	18	0.001316	0.0002198	5.556	None	No	0.01	Param.
Lead (mg/L)	MW-21D	0.001	0.000048	0.015	No	10	0.0006828	0.0004451	60	None	No	0.011	NP (NDs)
Lead (mg/L)	MW-22	0.001	0.000036	0.015	No	9	0.0006922	0.000462	66.67	None	No	0.002	NP (NDs)
Lead (mg/L)	MW-23D	0.001	0.000051	0.015	No	9	0.0008012	0.0003954	77.78	None	No	0.002	NP (NDs)
Lead (mg/L)	MW-33	0.001787	0.001613	0.015	No	6	0.0017	0.0006325	0	None	No	0.01	Param.
Lead (mg/L)	MW-35	0.001087	0.0009334	0.015	No	5	0.000672	0.0003485	20	Kaplan-Meier	No	0.01	Param.
Lead (mg/L)	MW-37D	0.001537	-0.0004793	0.015	No	5	0.0008344	0.000626	40	Kaplan-Meier	No	0.01	Param.
Lithium (mg/L)	HGWC-15	0.007436	0.002055	0.04	No	20	0.0131	0.01235	30	Kaplan-Meier	ln(x)	0.01	Param.
Lithium (mg/L)	HGWC-16	0.0042	0.0029	0.04	No	20	0.004575	0.004859	5	None	No	0.01	NP (normality)
Lithium (mg/L)	HGWC-17	0.025	0.0011	0.04	No	20	0.01306	0.01225	50	None	No	0.01	NP (normality)
Lithium (mg/L)	HGWC-18	0.01452	0.01238	0.04	No	20	0.01345	0.001893	0	None	No	0.01	Param.
Lithium (mg/L)	MW-21D	0.02555	0.02125	0.04	No	10	0.0234	0.002413	0	None	No	0.01	Param.
Lithium (mg/L)	MW-22	0.002	0.0011	0.04	No	9	0.001333	0.0002784	0	None	No	0.002	NP (normality)
Lithium (mg/L)	MW-23D	0.002555	0.002133	0.04	No	9	0.002344	0.0002186	0	None	No	0.01	Param.
Lithium (mg/L)	MW-33	0.001201	0.0008654	0.04	No	6	0.001033	0.0001223	0	None	No	0.01	Param.
Lithium (mg/L)	MW-35	0.004936	0.003304	0.04	No	5	0.00412	0.0004868	0	None	No	0.01	Param.
Lithium (mg/L)	MW-37D	0.03898	0.02822	0.04	No	5	0.0336	0.003209	0	None	No	0.01	Param.
Molybdenum (mg/L)	HGWC-15	0.01	0.0007	0.1	No	18	0.009483	0.002192	94.44	None	No	0.01	NP (NDs)
Molybdenum (mg/L)	MW-21D	0.03424	0.01596	0.1	No	10	0.0251	0.01025	0	None	No	0.01	Param.
Molybdenum (mg/L)	MW-22	0.01	0.00013	0.1	No	9	0.008903	0.00329	88.89	None	No	0.002	NP (NDs)
Molybdenum (mg/L)	MW-23D	0.005336	0.001968	0.1	No	9	0.003711	0.002464	11.11	None	ln(x)	0.01	Param.
Molybdenum (mg/L)	MW-37D	0.02512	0.006598	0.1	No	5	0.01586	0.005527	0	None	No	0.01	Param.
Selenium (mg/L)	HGWC-14	0.0129	0.006872	0.05	No	20	0.009886	0.005307	0	None	No	0.01	Param.
Selenium (mg/L)	HGWC-15	0.005	0.0041	0.05	No	20	0.004355	0.001477	80	None	No	0.01	NP (NDs)
Selenium (mg/L)	HGWC-16	0.005	0.000089	0.05	No	20	0.004754	0.001098	95	None	No	0.01	NP (NDs)
Selenium (mg/L)	HGWC-17	0.005	0.0023	0.05	No	20	0.00444	0.001415	85	None	No	0.01	NP (NDs)
Selenium (mg/L)	HGWC-18	0.03325	0.01734	0.05	No	20	0.02529	0.01402	5	None	No	0.01	Param.
Selenium (mg/L)	MW-22	0.005	0.002	0.05	No	9	0.004667	0.001	88.89	None	No	0.002	NP (NDs)
Selenium (mg/L)	MW-33	0.03659	0.008223	0.05	No	6	0.01983	0.01216	0	None	ln(x)	0.01	Param.
Selenium (mg/L)	MW-35	0.03653	0.005955	0.05	No	5	0.0182	0.01073	0	None	x^(1/3)	0.01	Param.
Thallium (mg/L)	HGWC-14	0.000306	0.00028	0.002	No	20	0.0002958	0.00003042	0	None	No	0.01	NP (normality)
Thallium (mg/L)	HGWC-17	0.001	0.00012	0.002	No	20	0.00069	0.0004335	65	None	No	0.01	NP (NDs)
Thallium (mg/L)	HGWC-18	0.001	0.00015	0.002	No	20	0.0005015	0.0004181	40	None	No	0.01	NP (normality)
Thallium (mg/L)	MW-33	0.0003737	0.0002329	0.002	No	6	0.0003033	0.00005125	0	None	No	0.01	Param.
Thallium (mg/L)	MW-35	0.001	0.00013	0.002	No	5	0.000826	0.0003891	80	None	No	0.031	NP (NDs)

# Appendix IV Trend Tests - Significant Results

Plant Hammond Client: Southern Company Data: Hammond AP-2 Printed 11/2/2021, 10:40 AM

<u>Constituent</u>	<u>Well</u>	<u>Slope</u>	<u>Calc.</u>	<u>Critical</u>	<u>Sig.</u>	<u>N</u>	<u>%NDs</u>	<u>Normality</u>	<u>Xform</u>	<u>Alpha</u>	<u>Method</u>
<b>Molybdenum (mg/L)</b>	<b>MW-21D</b>	<b>-0.01052</b>	<b>-36</b>	<b>-30</b>	<b>Yes</b>	<b>10</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>

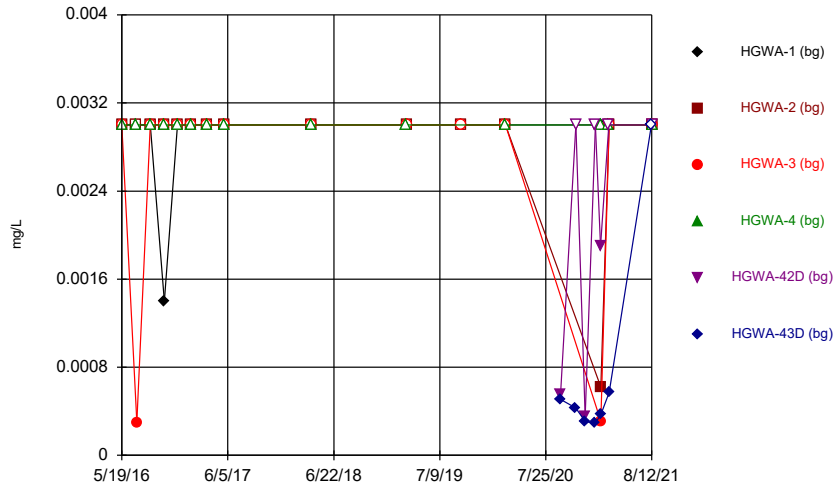
# Appendix IV Trend Tests - All Results

Plant Hammond    Client: Southern Company    Data: Hammond AP-2    Printed 11/2/2021, 10:40 AM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Cobalt (mg/L)	HGWA-1 (bg)	0	17	81	No	20	95	n/a	n/a	0.01	NP
Cobalt (mg/L)	HGWA-2 (bg)	-0.001281	-52	-81	No	20	0	n/a	n/a	0.01	NP
Cobalt (mg/L)	HGWA-3 (bg)	0	0	81	No	20	100	n/a	n/a	0.01	NP
Cobalt (mg/L)	HGWA-4 (bg)	0	-67	-81	No	20	75	n/a	n/a	0.01	NP
Cobalt (mg/L)	HGWA-42D (bg)	0	2	18	No	7	85.71	n/a	n/a	0.01	NP
Cobalt (mg/L)	HGWA-43D (bg)	0	0	18	No	7	100	n/a	n/a	0.01	NP
Cobalt (mg/L)	HGWA-44D (bg)	0	0	18	No	7	100	n/a	n/a	0.01	NP
Cobalt (mg/L)	HGWA-5 (bg)	0	4	81	No	20	25	n/a	n/a	0.01	NP
Cobalt (mg/L)	HGWA-6 (bg)	0	0	81	No	20	100	n/a	n/a	0.01	NP
Cobalt (mg/L)	HGWC-18	-0.00945	-81	-81	No	20	0	n/a	n/a	0.01	NP
Cobalt (mg/L)	MW-33	0.001272	3	18	No	7	0	n/a	n/a	0.01	NP
Cobalt (mg/L)	MW-35	0.003568	2	12	No	5	0	n/a	n/a	0.01	NP
Lead (mg/L)	HGWA-1 (bg)	0	-26	-68	No	18	83.33	n/a	n/a	0.01	NP
Lead (mg/L)	HGWA-2 (bg)	-0.000003012	-48	-68	No	18	55.56	n/a	n/a	0.01	NP
Lead (mg/L)	HGWA-3 (bg)	0	7	68	No	18	83.33	n/a	n/a	0.01	NP
Lead (mg/L)	HGWA-4 (bg)	0	-49	-68	No	18	66.67	n/a	n/a	0.01	NP
Lead (mg/L)	HGWA-42D (bg)	0.00122	12	18	No	7	42.86	n/a	n/a	0.01	NP
Lead (mg/L)	HGWA-43D (bg)	0.0003578	13	18	No	7	14.29	n/a	n/a	0.01	NP
Lead (mg/L)	HGWA-44D (bg)	0.0008343	2	18	No	7	28.57	n/a	n/a	0.01	NP
Lead (mg/L)	HGWA-5 (bg)	0	13	68	No	18	88.89	n/a	n/a	0.01	NP
Lead (mg/L)	HGWA-6 (bg)	0	-3	-68	No	18	88.89	n/a	n/a	0.01	NP
Lead (mg/L)	HGWC-14	-0.00003088	-30	-68	No	18	5.556	n/a	n/a	0.01	NP
Lead (mg/L)	HGWC-18	-0.00004794	-40	-68	No	18	5.556	n/a	n/a	0.01	NP
Lead (mg/L)	MW-33	0	-3	-14	No	6	0	n/a	n/a	0.01	NP
Molybdenum (mg/L)	HGWA-1 (bg)	0	0	68	No	18	100	n/a	n/a	0.01	NP
Molybdenum (mg/L)	HGWA-2 (bg)	0	0	68	No	18	100	n/a	n/a	0.01	NP
Molybdenum (mg/L)	HGWA-3 (bg)	0	0	68	No	18	100	n/a	n/a	0.01	NP
Molybdenum (mg/L)	HGWA-4 (bg)	0	0	68	No	18	100	n/a	n/a	0.01	NP
Molybdenum (mg/L)	HGWA-42D (bg)	0	7	18	No	7	71.43	n/a	n/a	0.01	NP
Molybdenum (mg/L)	HGWA-43D (bg)	-0.001109	-4	-18	No	7	0	n/a	n/a	0.01	NP
Molybdenum (mg/L)	HGWA-44D (bg)	0.003529	12	18	No	7	0	n/a	n/a	0.01	NP
Molybdenum (mg/L)	HGWA-5 (bg)	0	0	68	No	18	100	n/a	n/a	0.01	NP
Molybdenum (mg/L)	HGWA-6 (bg)	0	19	68	No	18	88.89	n/a	n/a	0.01	NP
<b>Molybdenum (mg/L)</b>	<b>MW-21D</b>	<b>-0.01052</b>	<b>-36</b>	<b>-30</b>	<b>Yes</b>	<b>10</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>

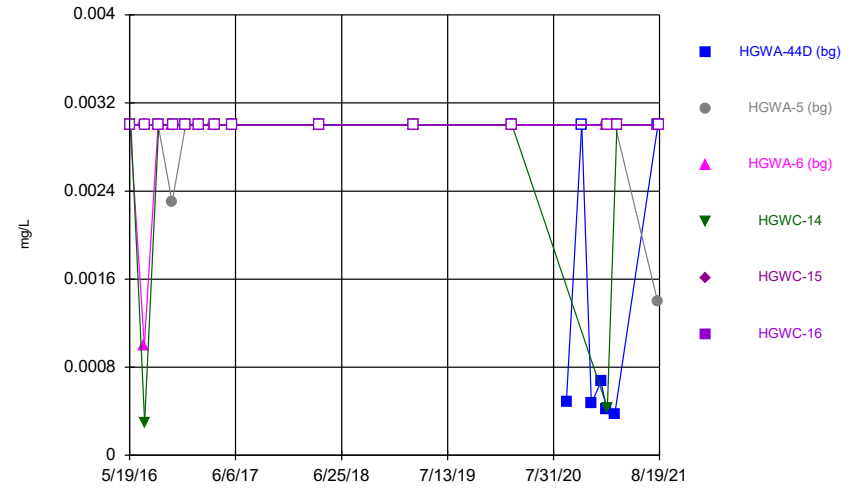
FIGURE A.

Time Series



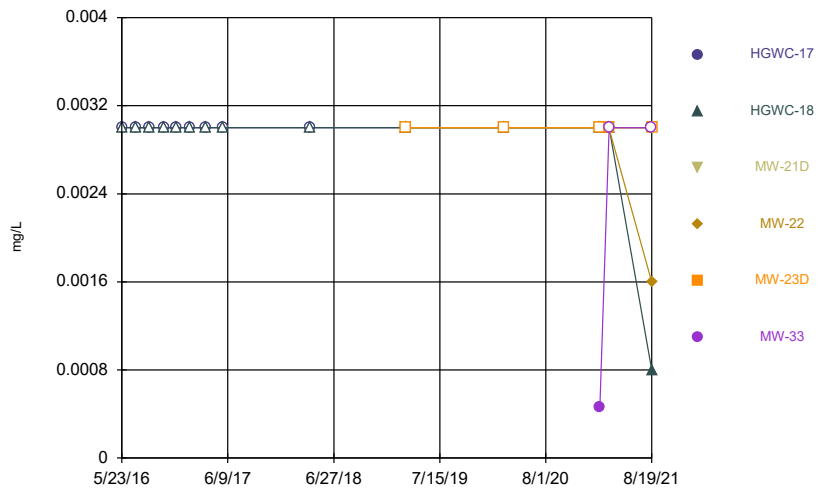
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Time Series



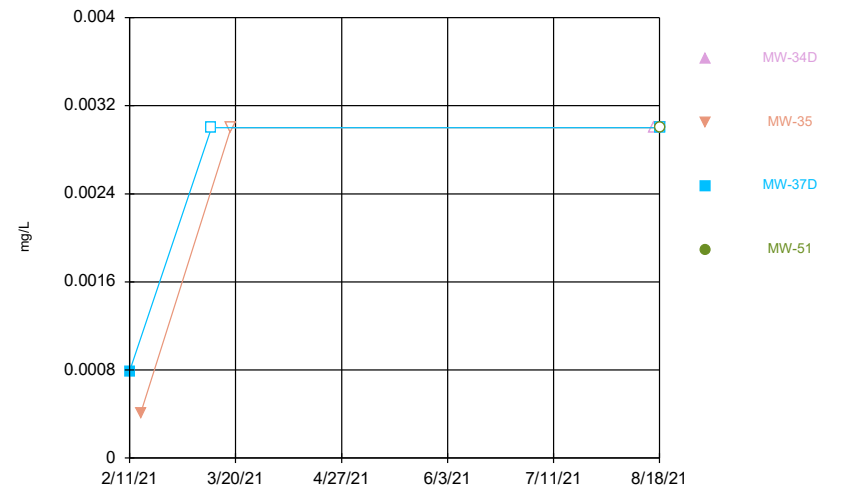
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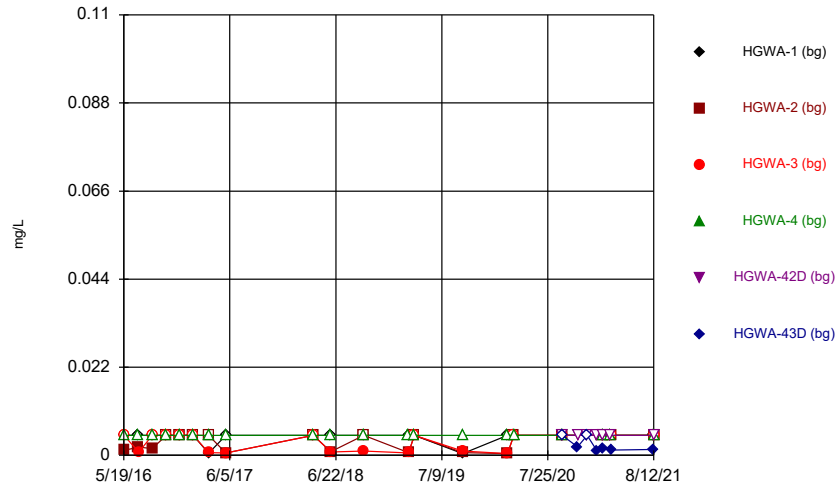
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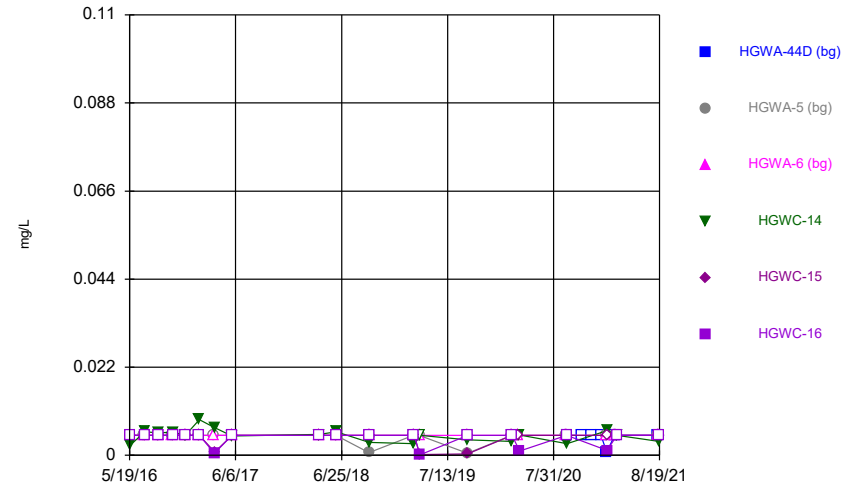
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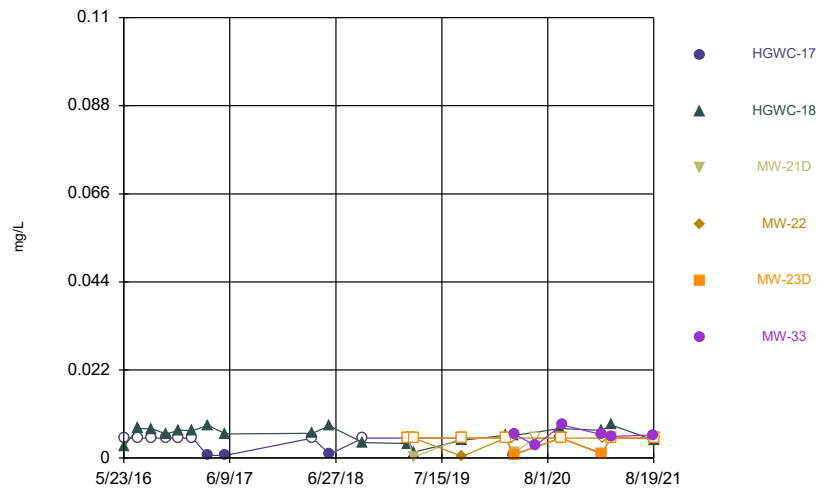
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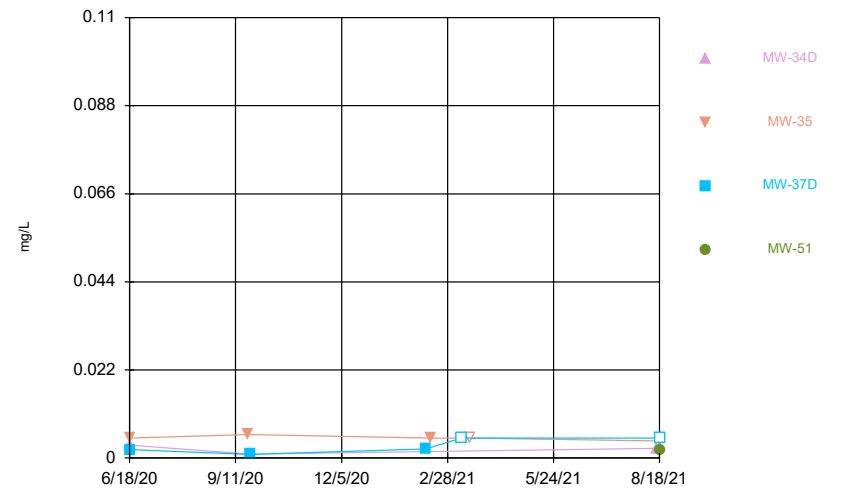
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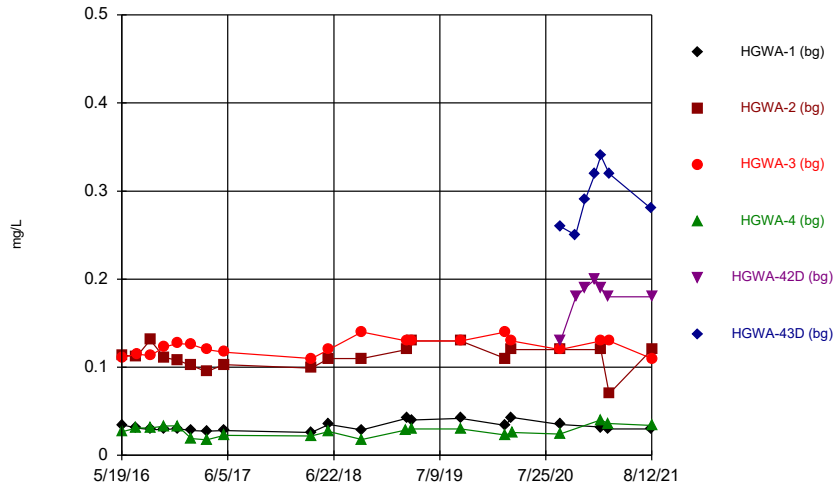
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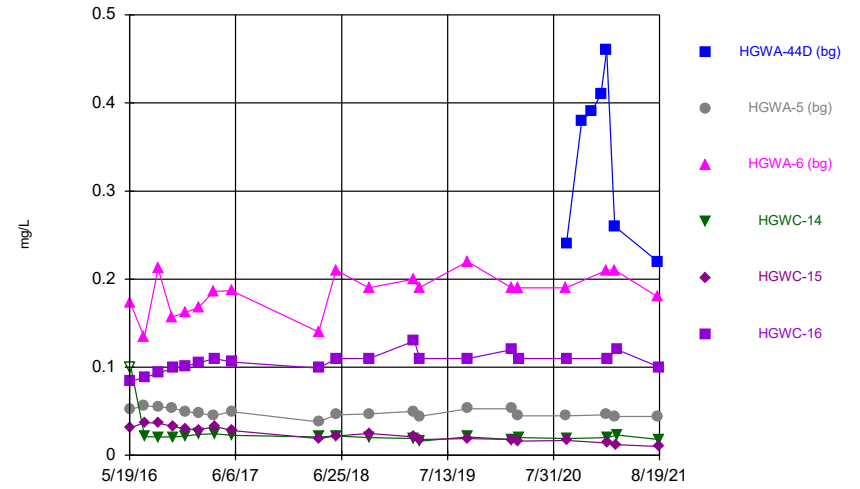
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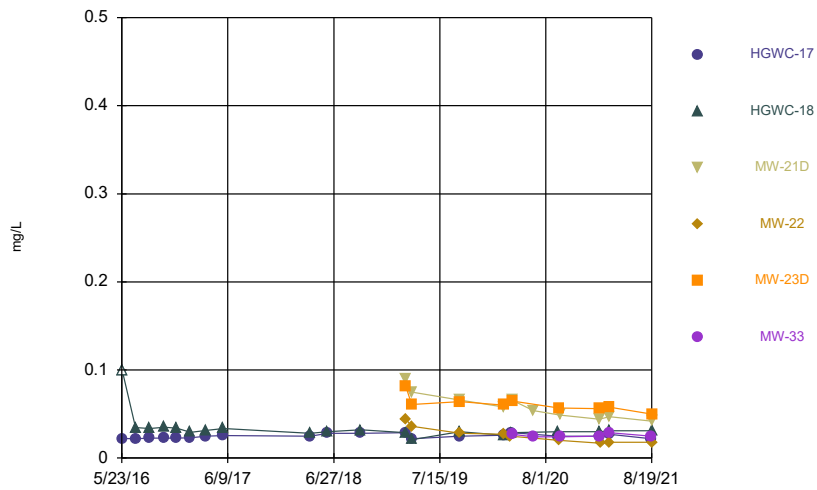
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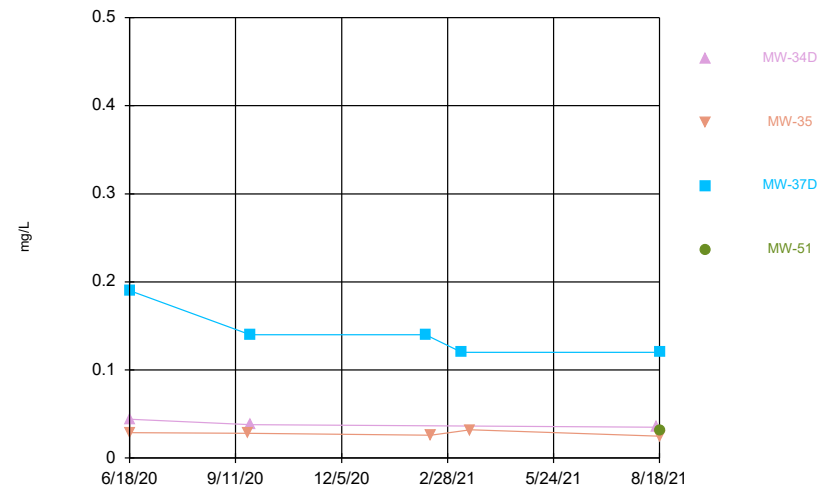
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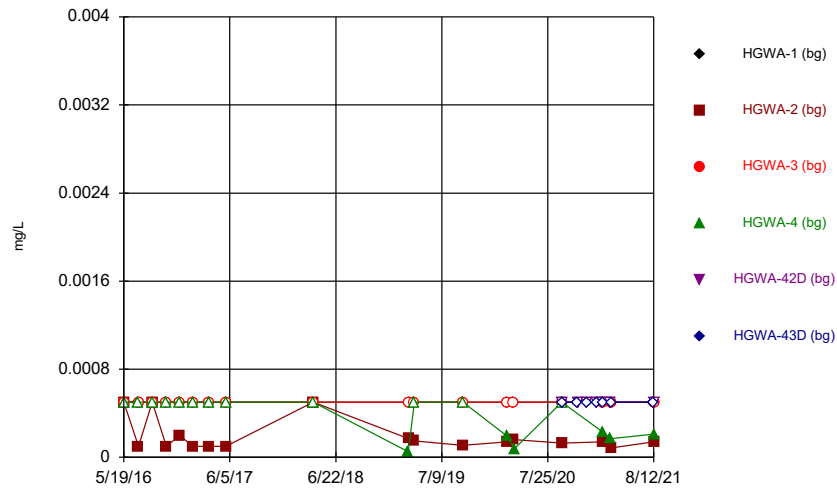
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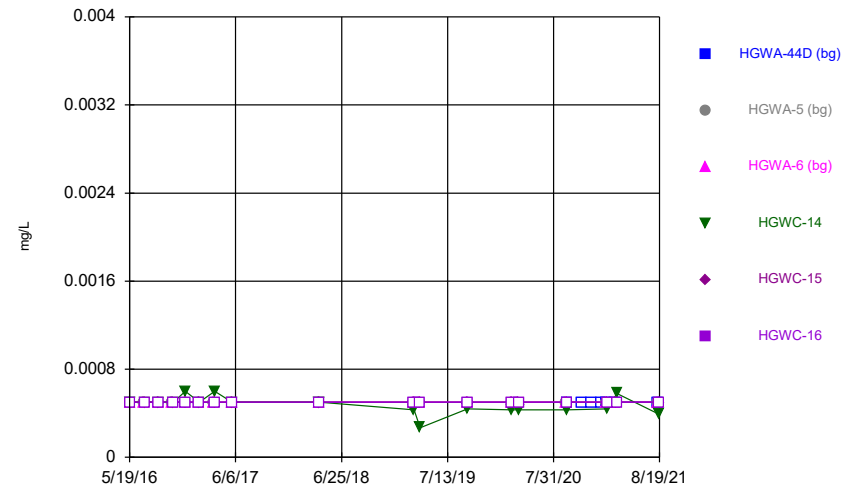


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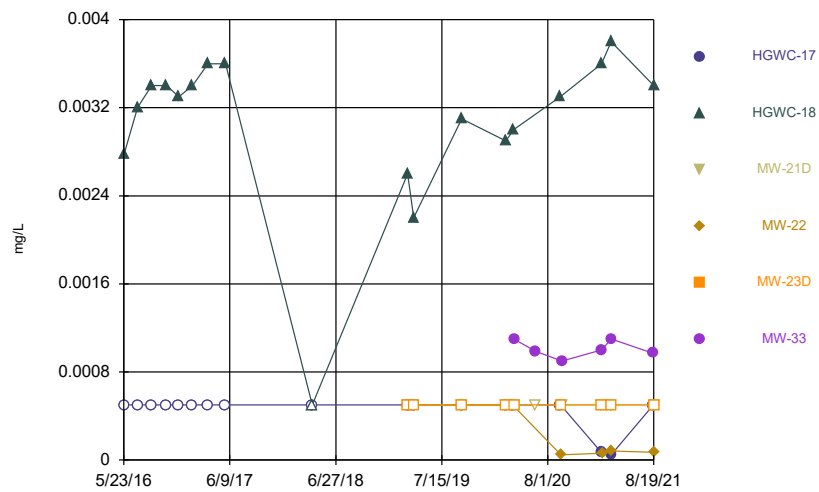
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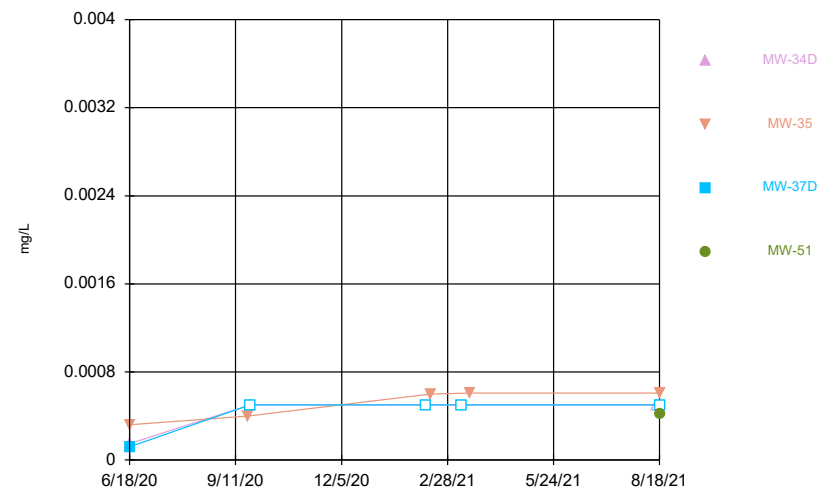
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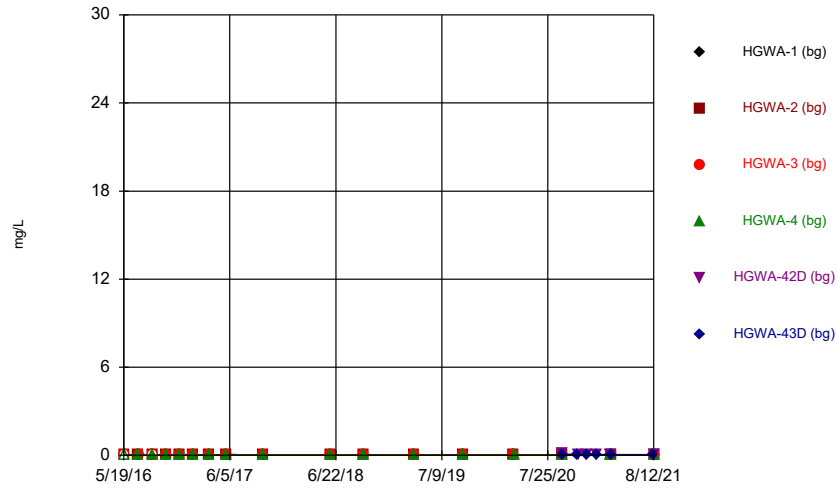
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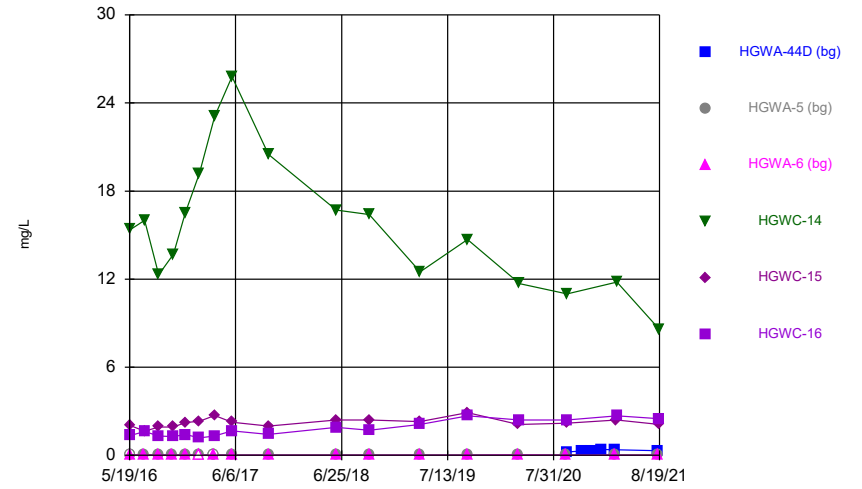
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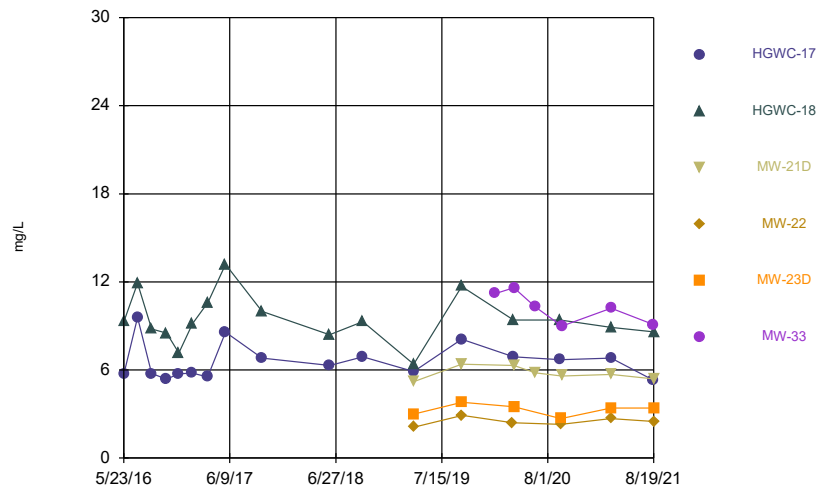
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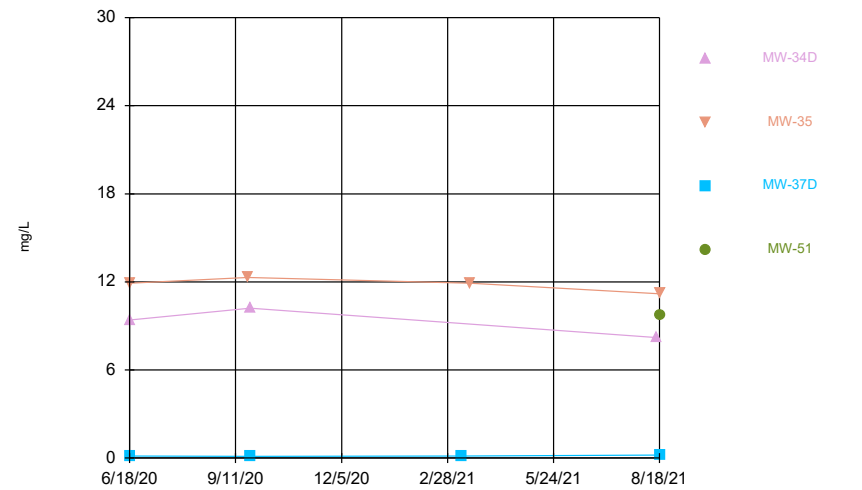
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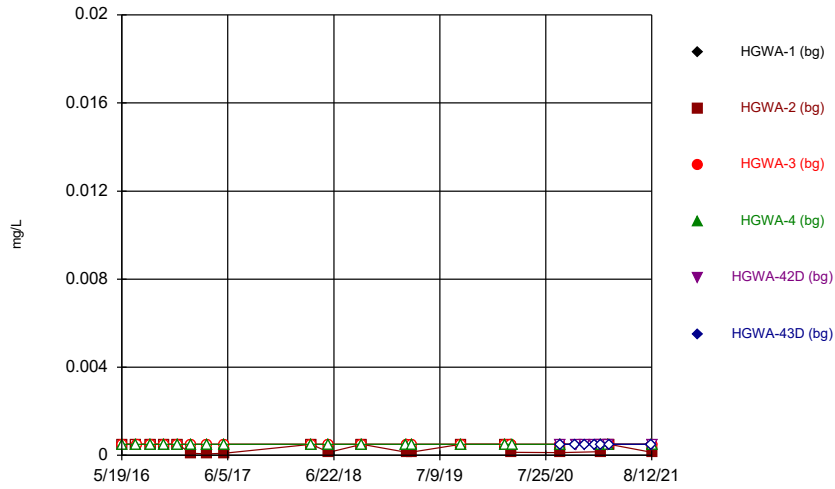
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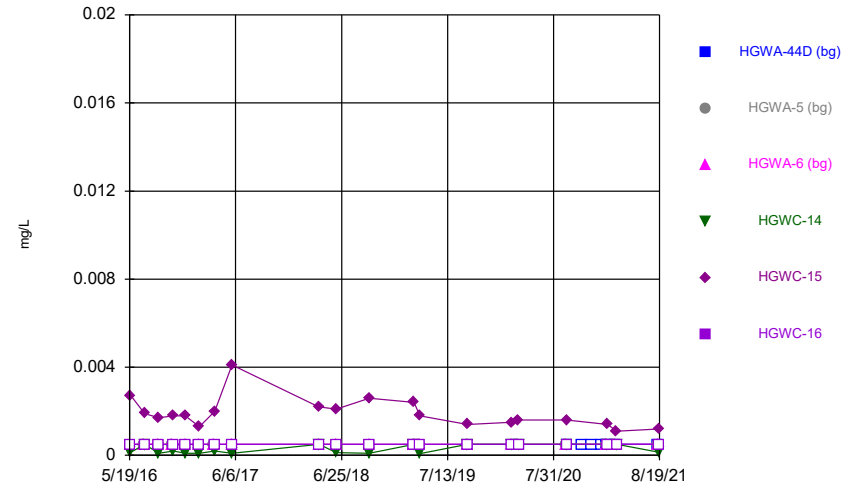
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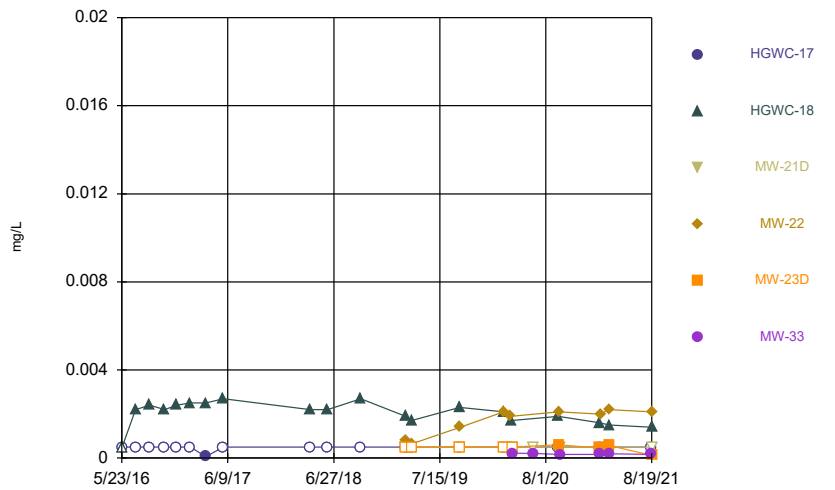
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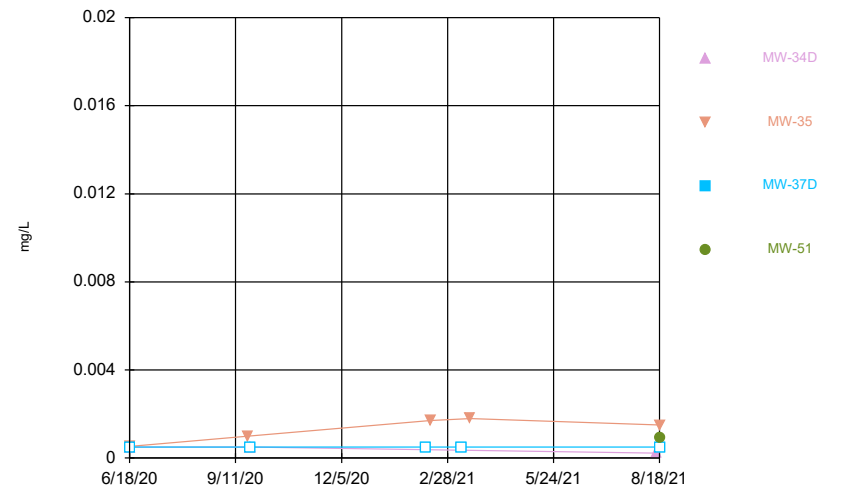
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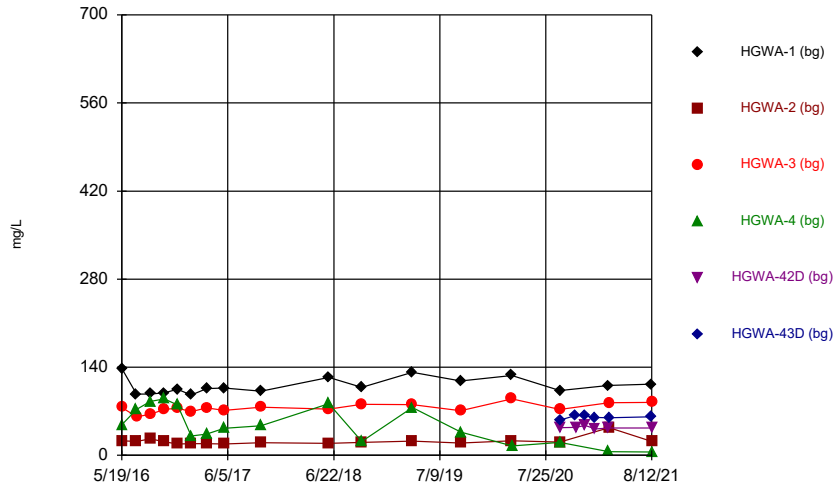
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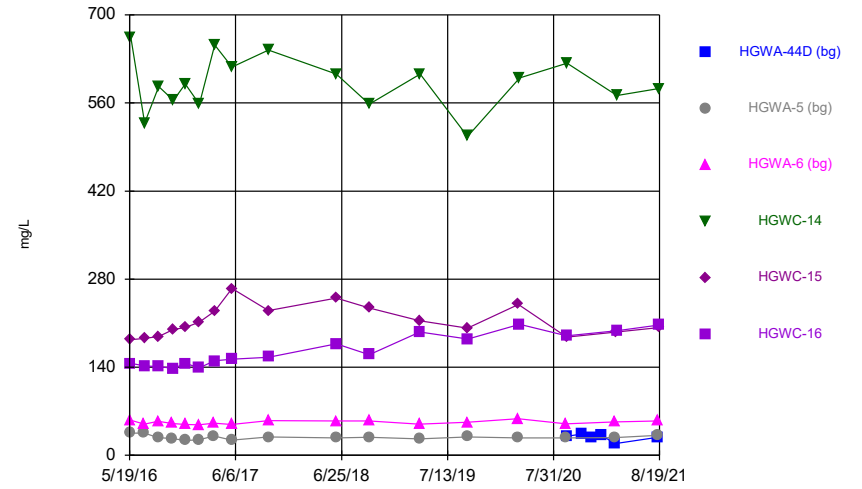
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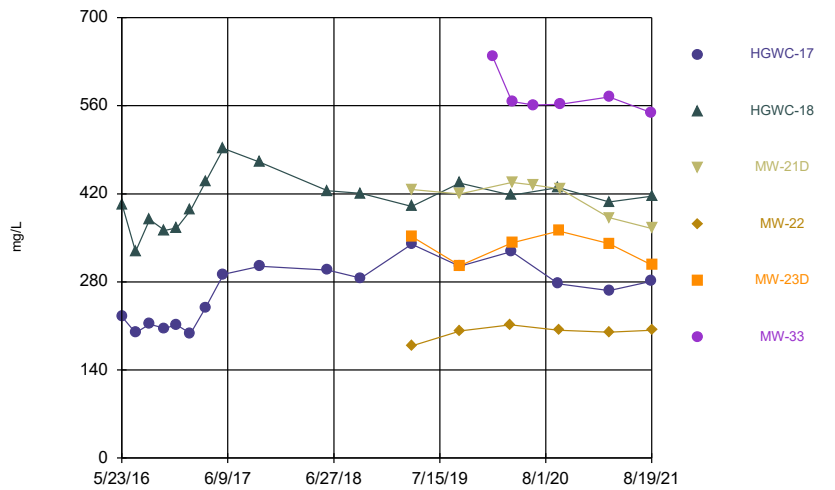
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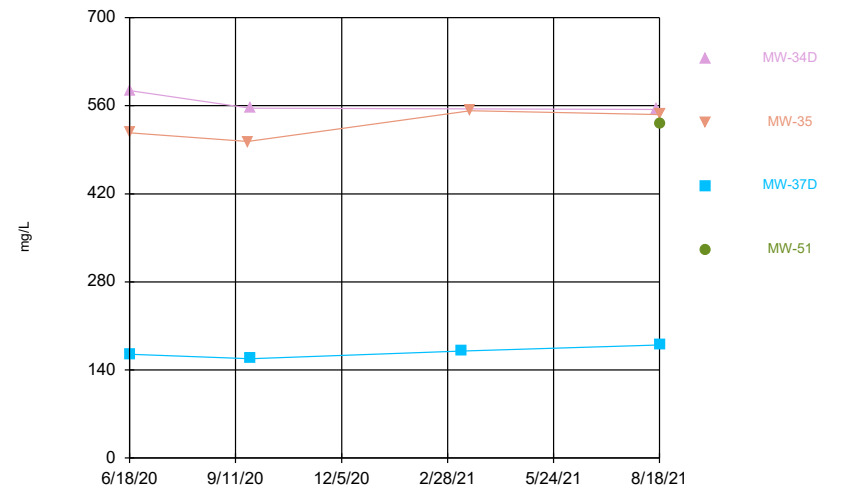
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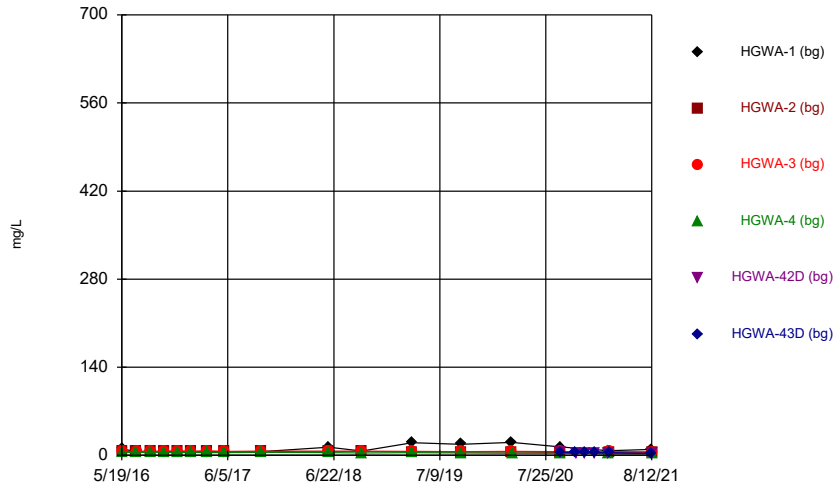
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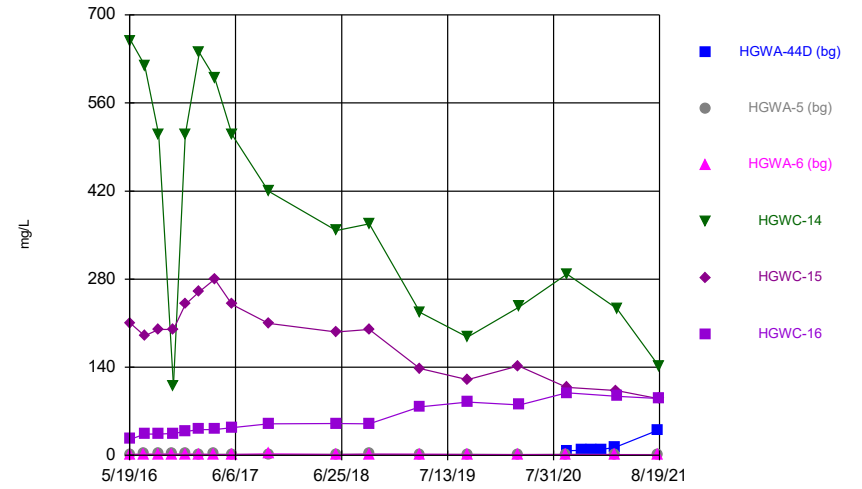
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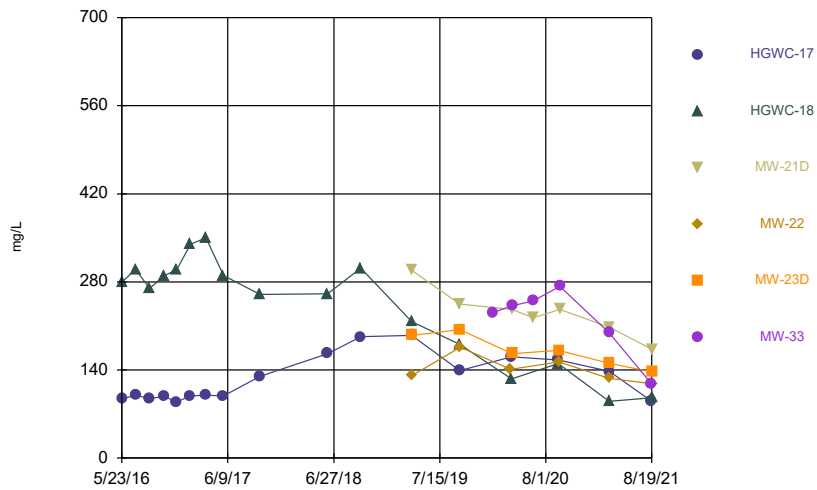
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Time Series



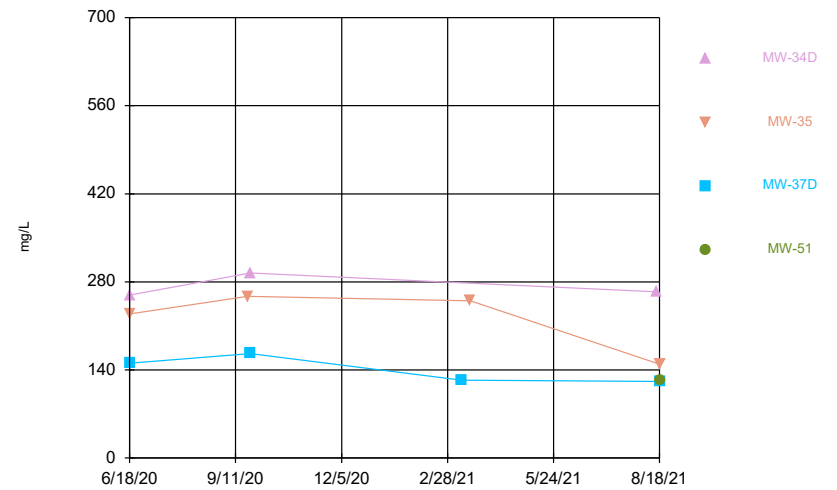
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 Plant Hammond Client: Southern Company Data: Hammond AP-2

Time Series



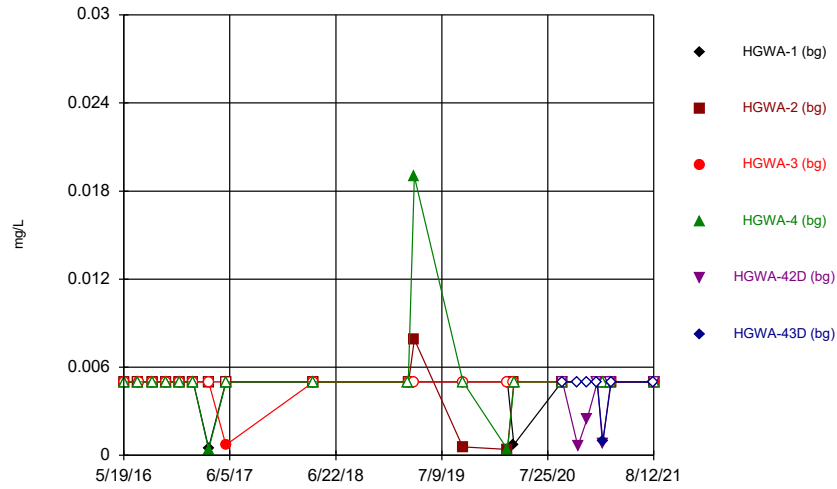
Constituent: Chloride Analysis Run 1/10/2022 12:58 PM  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

Time Series



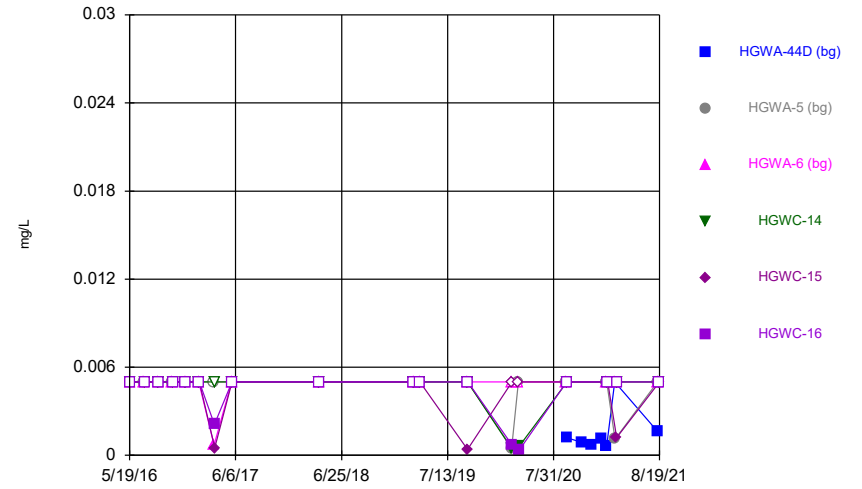
Constituent: Chloride Analysis Run 1/10/2022 12:58 PM  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

Time Series



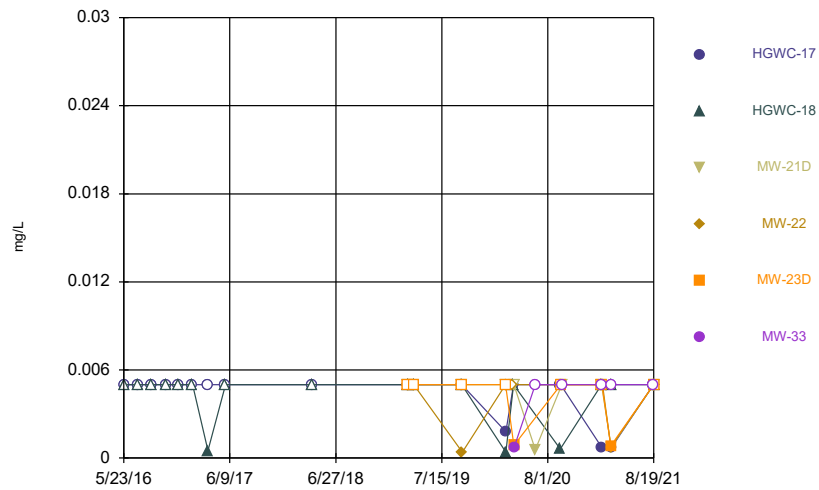
Constituent: Chromium Analysis Run 1/10/2022 12:58 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

Time Series



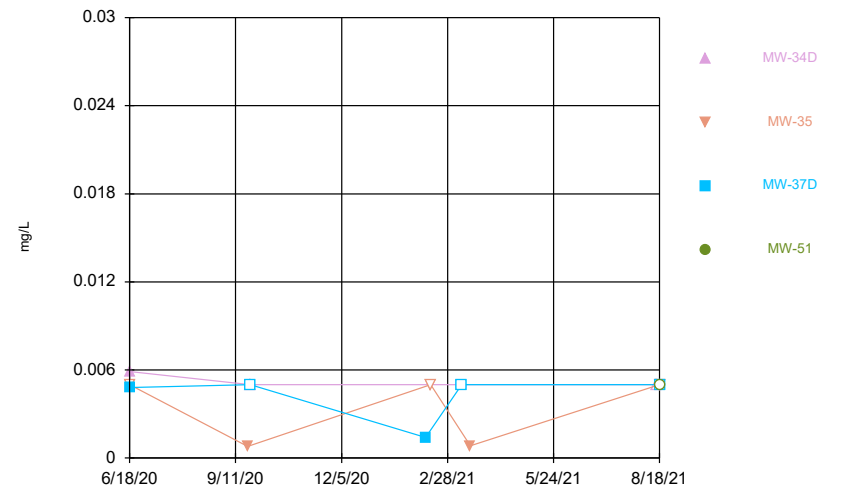
Constituent: Chromium Analysis Run 1/10/2022 12:58 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

Time Series



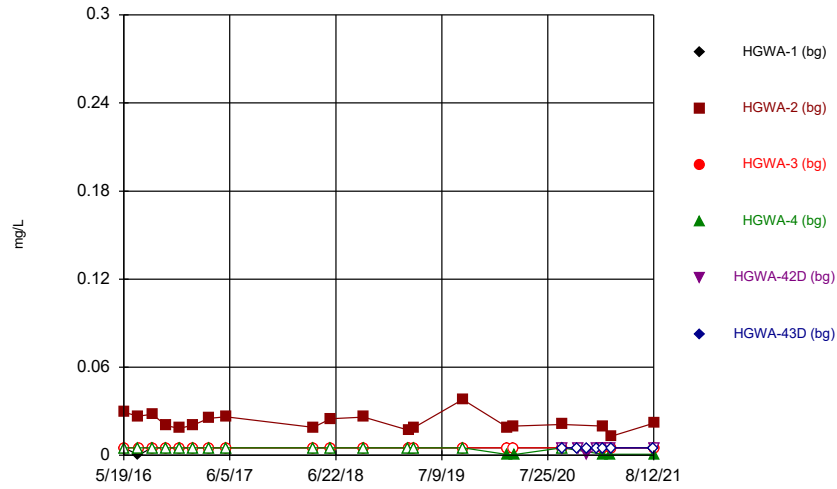
Constituent: Chromium Analysis Run 1/10/2022 12:58 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

Time Series



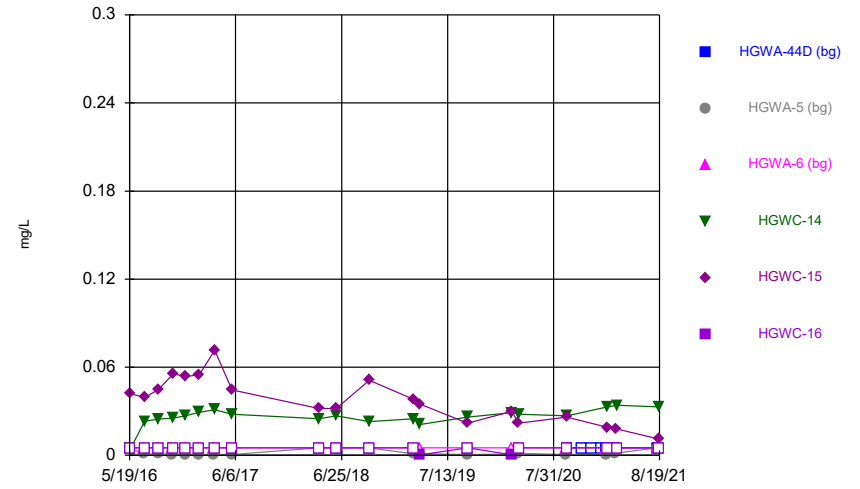
Constituent: Chromium Analysis Run 1/10/2022 12:58 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

Time Series



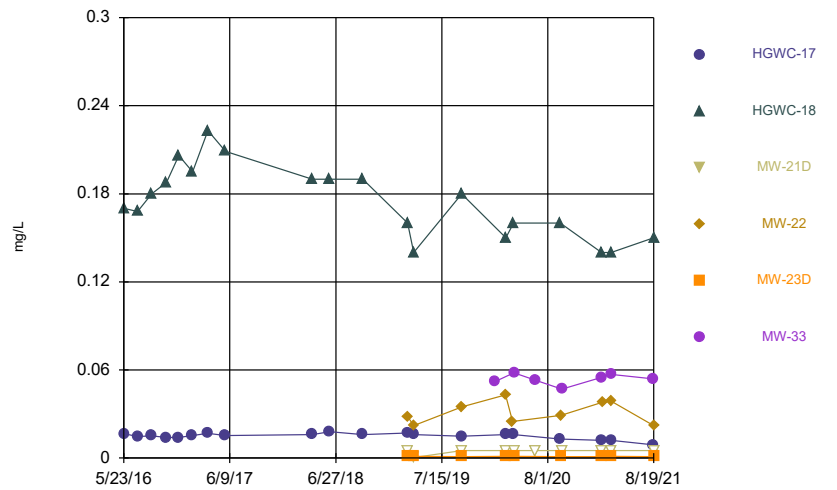
Constituent: Cobalt Analysis Run 1/10/2022 12:58 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

Time Series



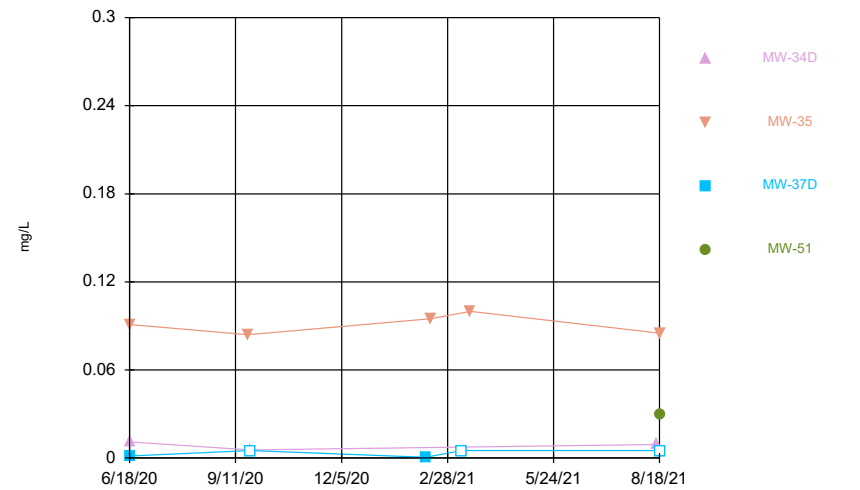
Constituent: Cobalt Analysis Run 1/10/2022 12:58 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

Time Series



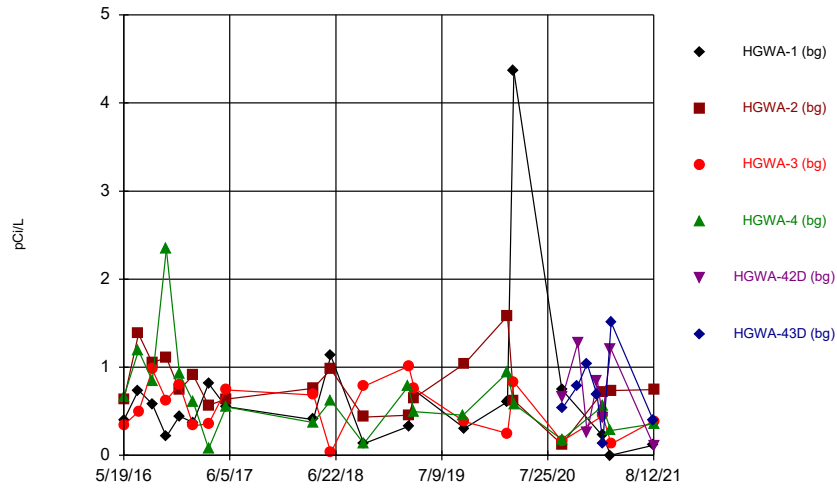
Constituent: Cobalt Analysis Run 1/10/2022 12:58 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

Time Series



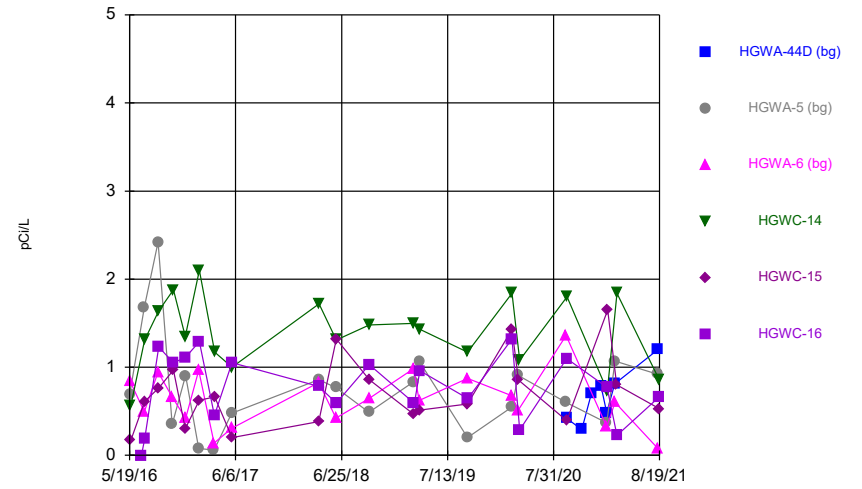
Constituent: Cobalt Analysis Run 1/10/2022 12:58 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Time Series



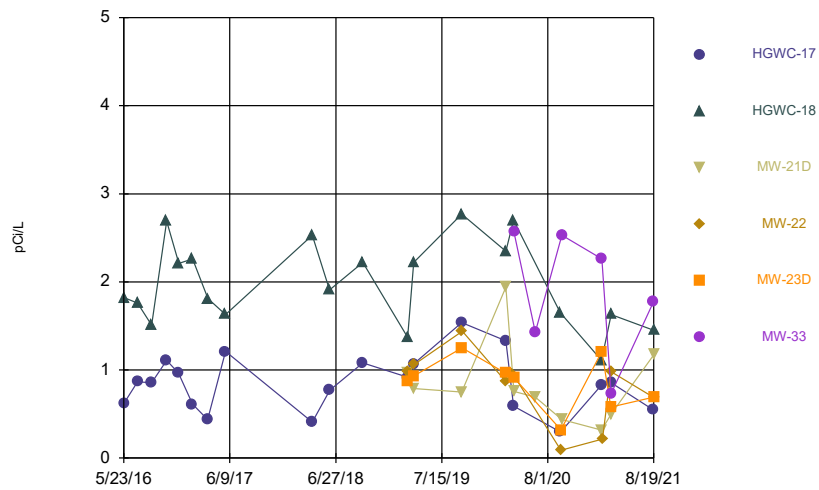
Constituent: Combined Radium 226 + 228 Analysis Run 1/10/2022 12:58 PM  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Time Series



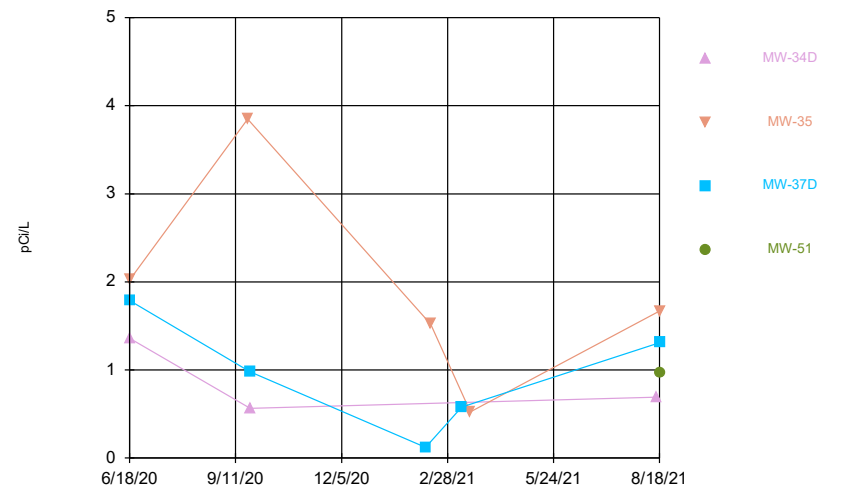
Constituent: Combined Radium 226 + 228 Analysis Run 1/10/2022 12:58 PM  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Time Series



Constituent: Combined Radium 226 + 228 Analysis Run 1/10/2022 12:58 PM  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

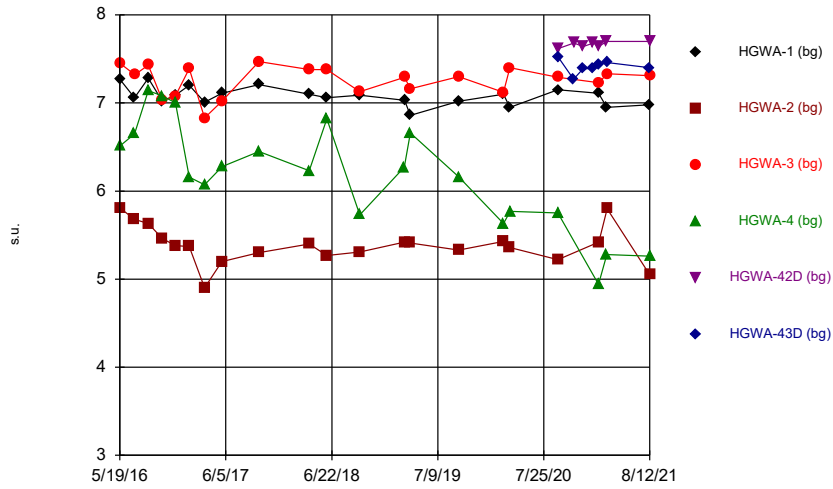
### Time Series



Constituent: Combined Radium 226 + 228 Analysis Run 1/10/2022 12:58 PM  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

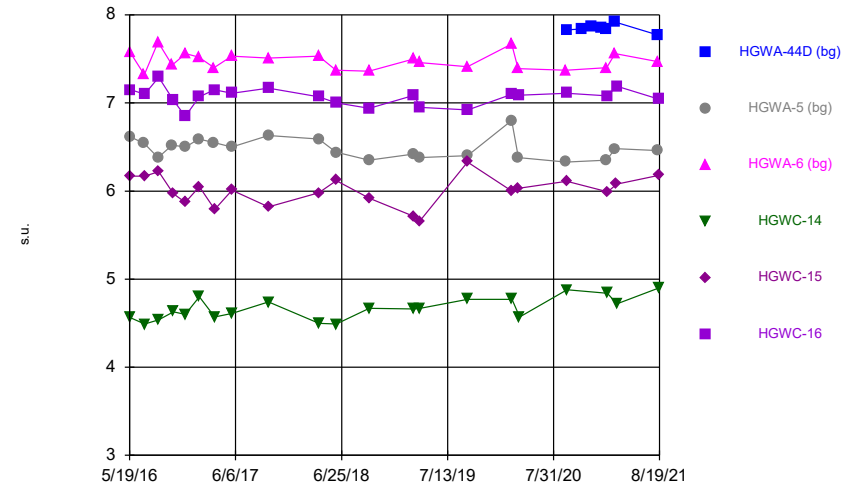


Time Series



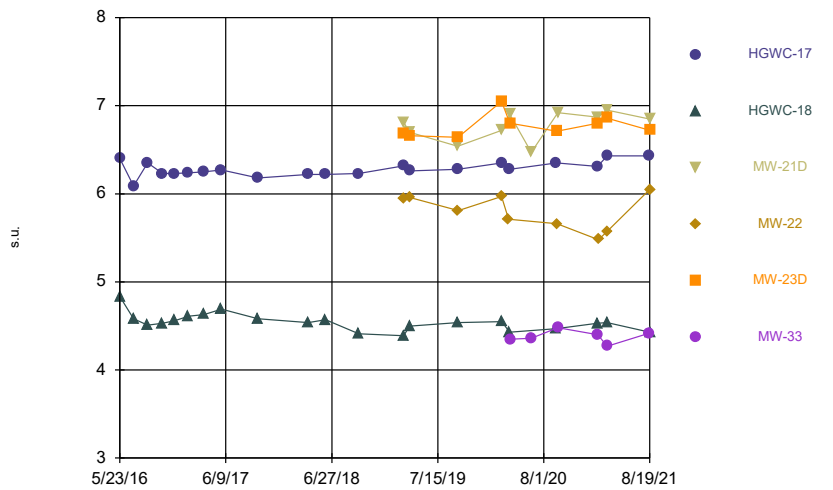
Constituent: Field pH Analysis Run 1/10/2022 12:58 PM  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

Time Series



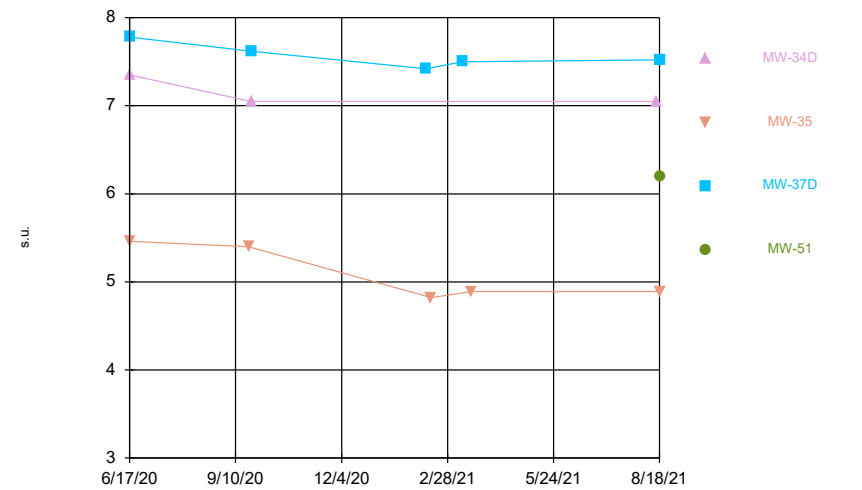
Constituent: Field pH Analysis Run 1/10/2022 12:58 PM  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

Time Series



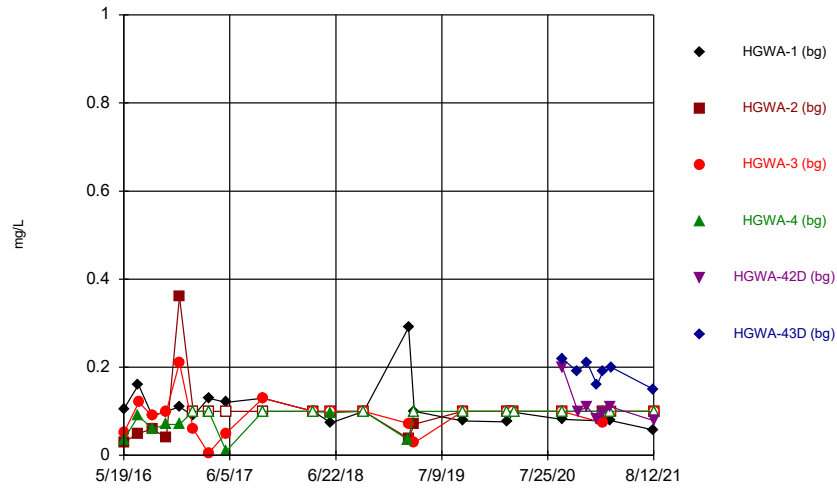
Constituent: Field pH Analysis Run 1/10/2022 12:58 PM  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

Time Series



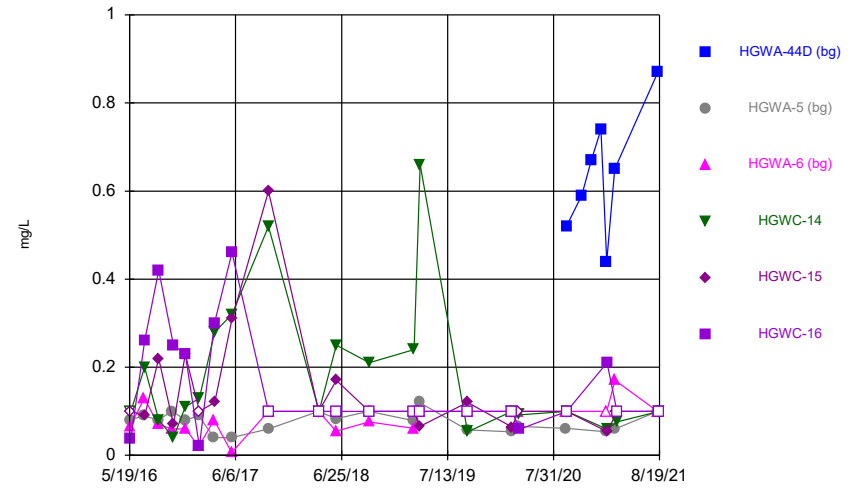
Constituent: Field pH Analysis Run 1/10/2022 12:58 PM  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

Time Series



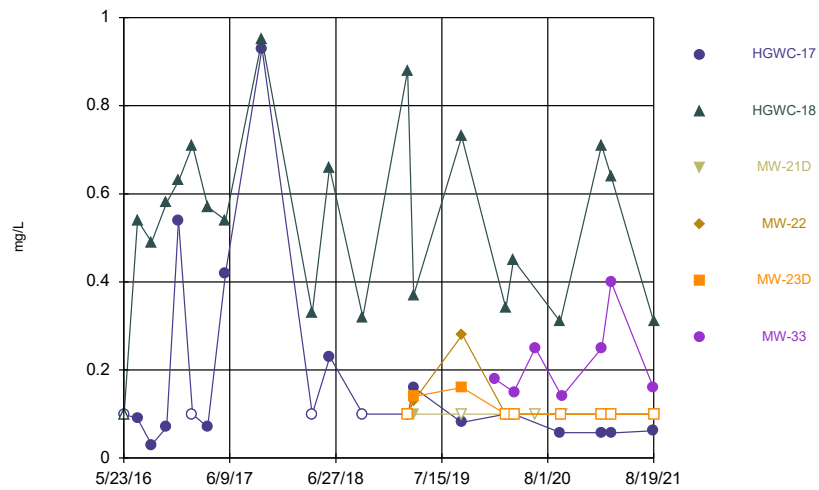
Constituent: Fluoride Analysis Run 1/10/2022 12:58 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

Time Series



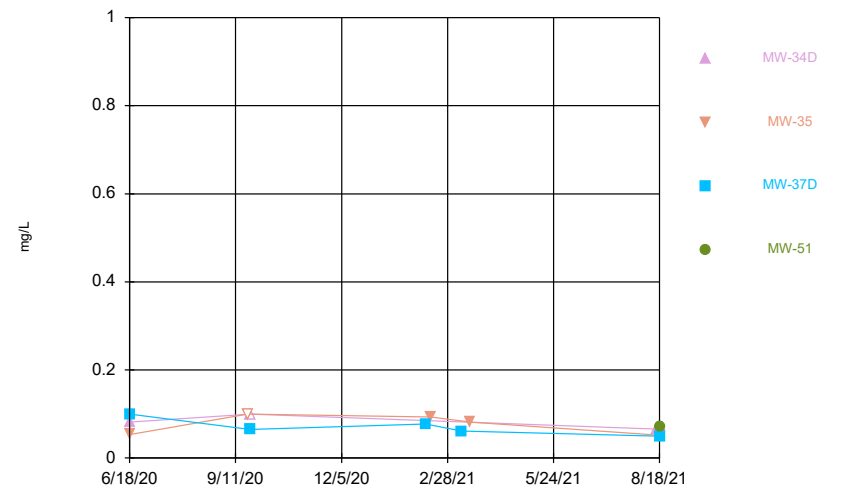
Constituent: Fluoride Analysis Run 1/10/2022 12:58 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

Time Series



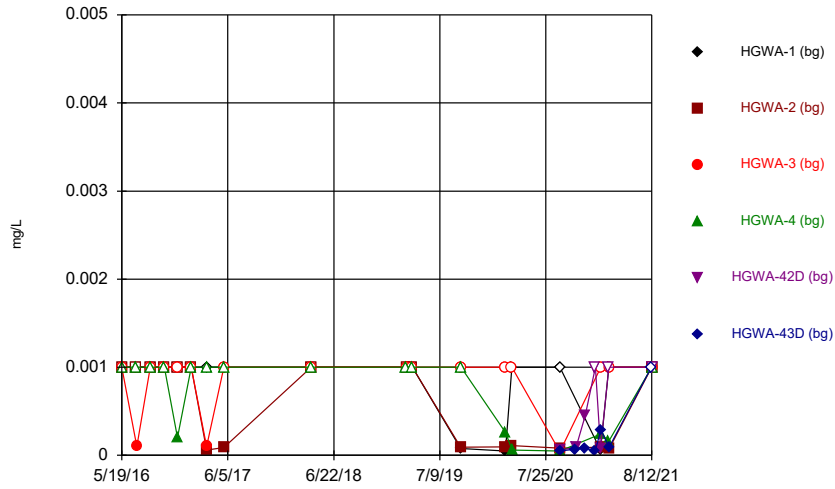
Constituent: Fluoride Analysis Run 1/10/2022 12:58 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

Time Series



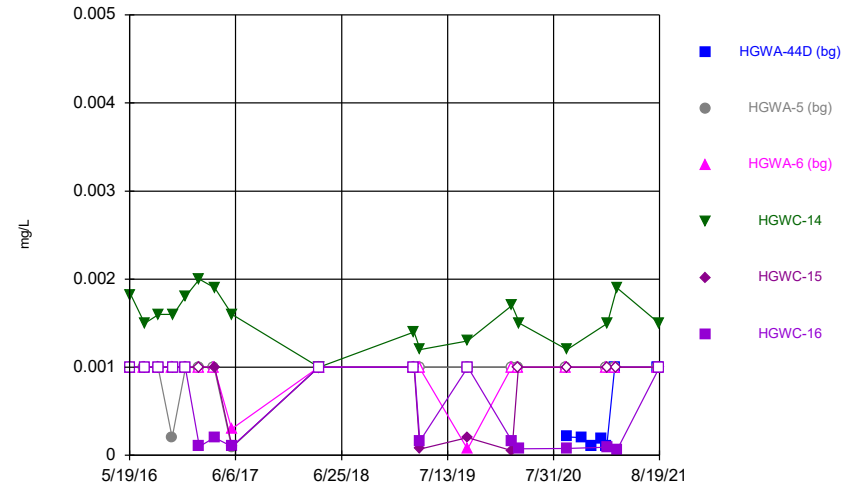
Constituent: Fluoride Analysis Run 1/10/2022 12:58 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

Time Series



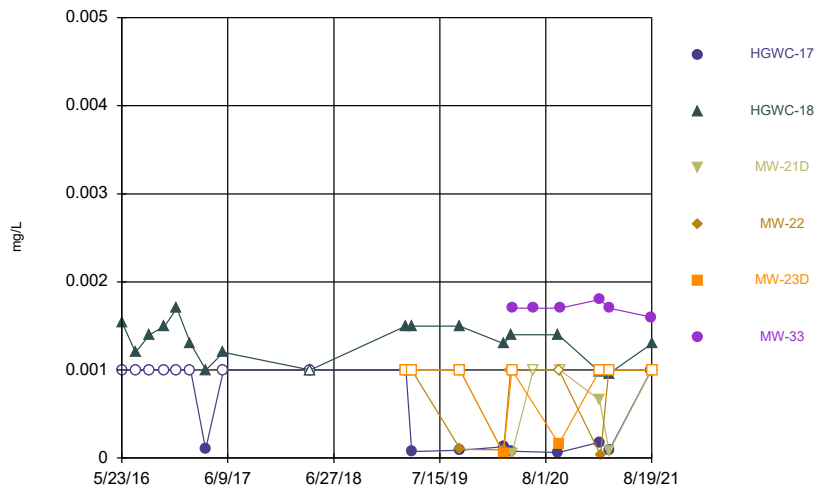
Constituent: Lead Analysis Run 1/10/2022 12:58 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

Time Series



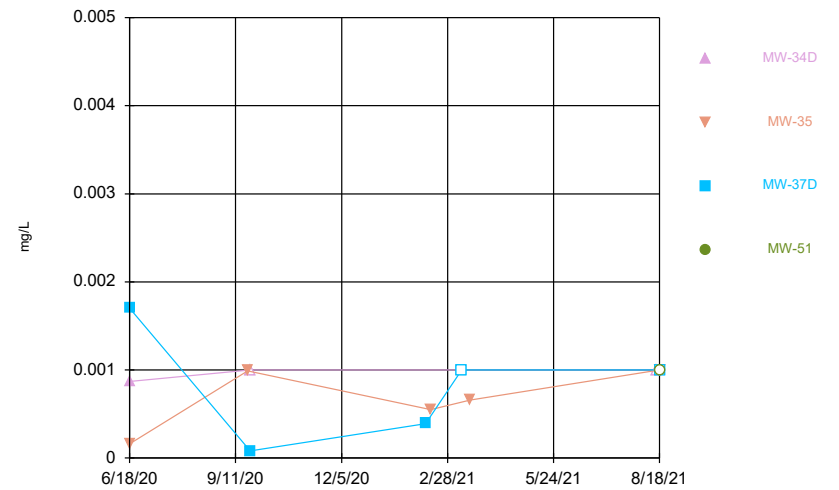
Constituent: Lead Analysis Run 1/10/2022 12:58 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

Time Series



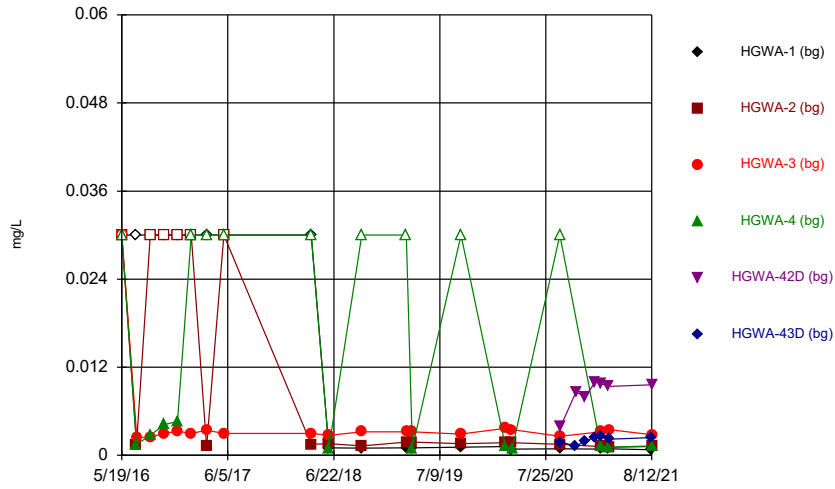
Constituent: Lead Analysis Run 1/10/2022 12:58 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

Time Series



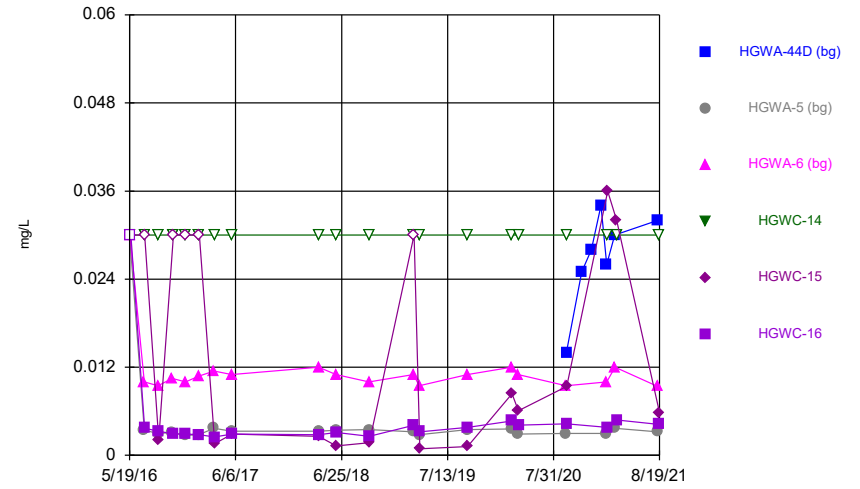
Constituent: Lead Analysis Run 1/10/2022 12:58 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

Time Series



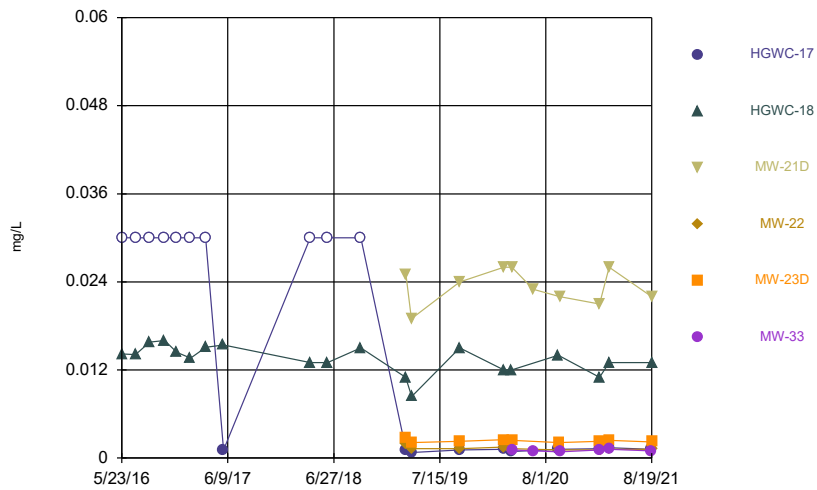
Constituent: Lithium Analysis Run 1/10/2022 12:58 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

Time Series



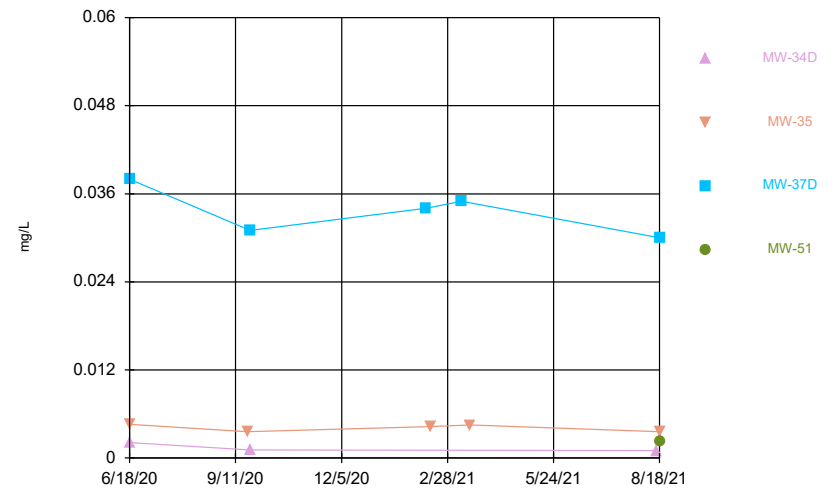
Constituent: Lithium Analysis Run 1/10/2022 12:58 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

Time Series



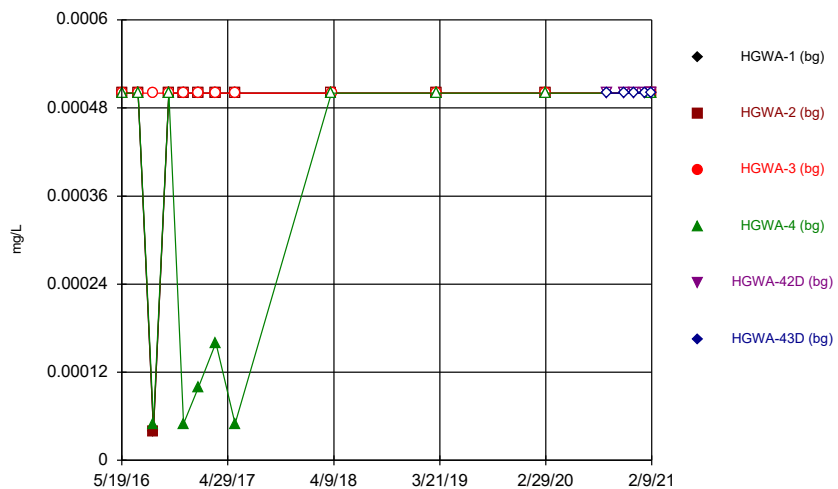
Constituent: Lithium Analysis Run 1/10/2022 12:58 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

Time Series



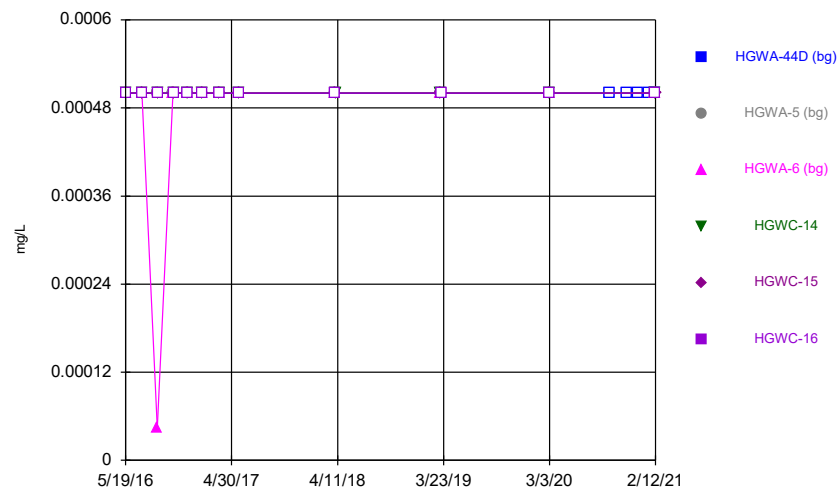
Constituent: Lithium Analysis Run 1/10/2022 12:58 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

Time Series



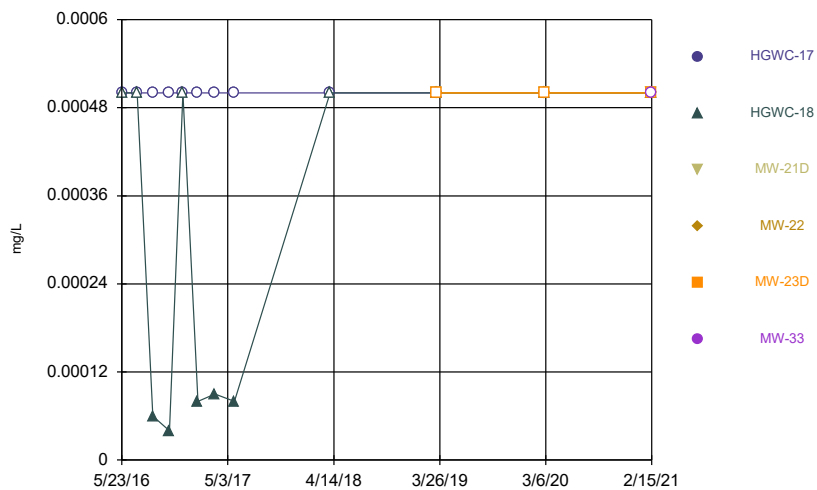
Constituent: Mercury Analysis Run 1/10/2022 12:58 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

Time Series



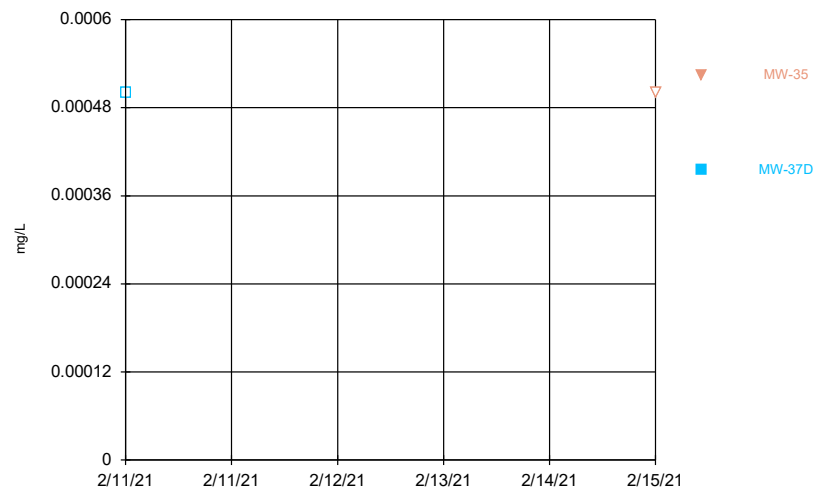
Constituent: Mercury Analysis Run 1/10/2022 12:58 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

Time Series



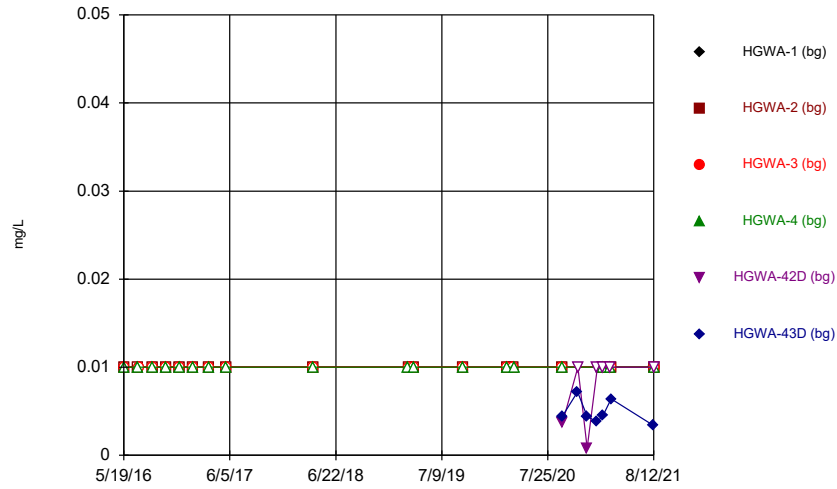
Constituent: Mercury Analysis Run 1/10/2022 12:58 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

Time Series



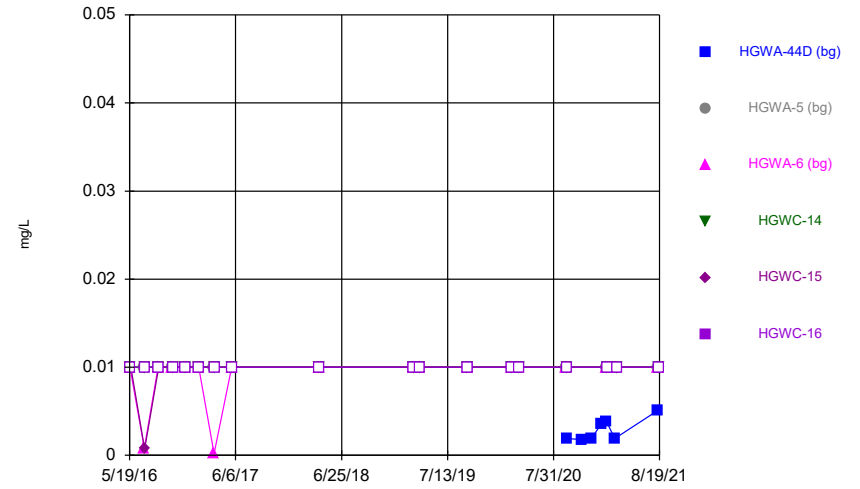
Constituent: Mercury Analysis Run 1/10/2022 12:58 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

Time Series



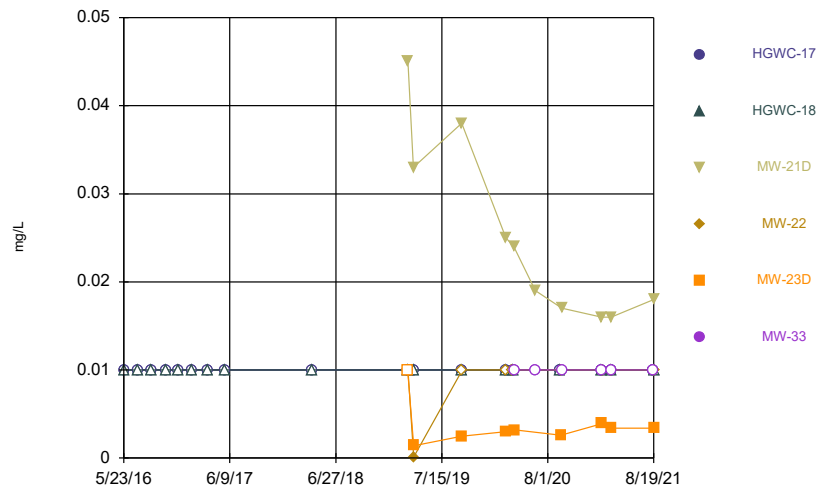
Constituent: Molybdenum Analysis Run 1/10/2022 12:58 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

Time Series



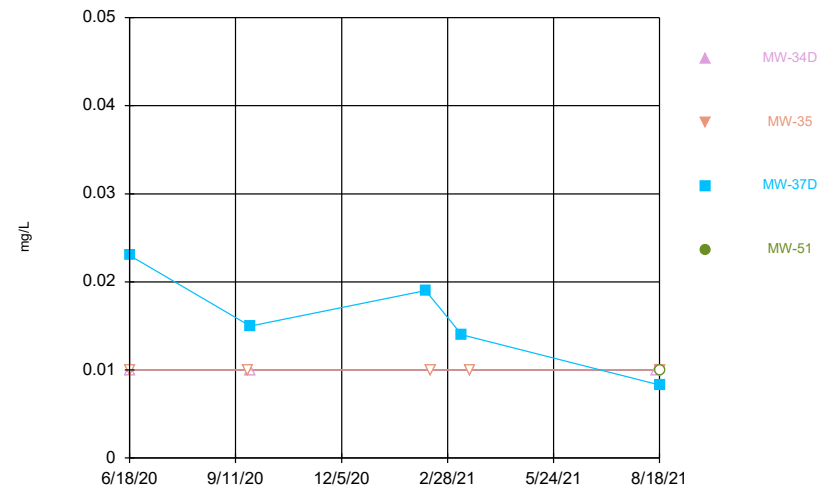
Constituent: Molybdenum Analysis Run 1/10/2022 12:58 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

Time Series



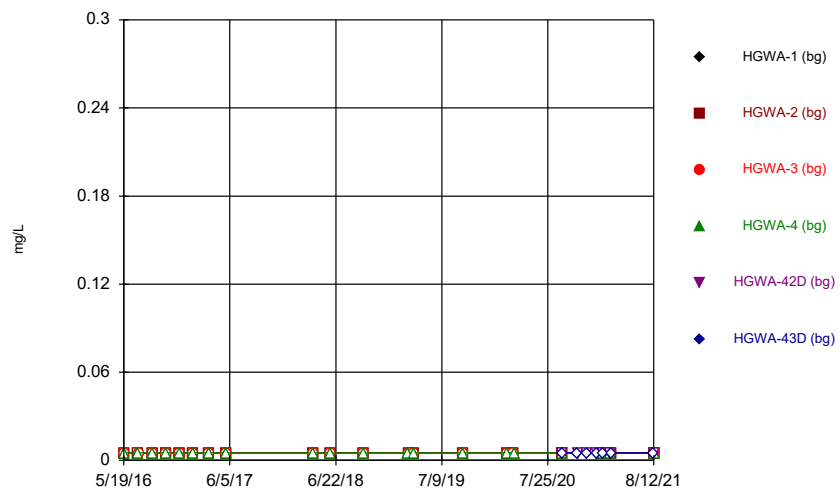
Constituent: Molybdenum Analysis Run 1/10/2022 12:58 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

Time Series



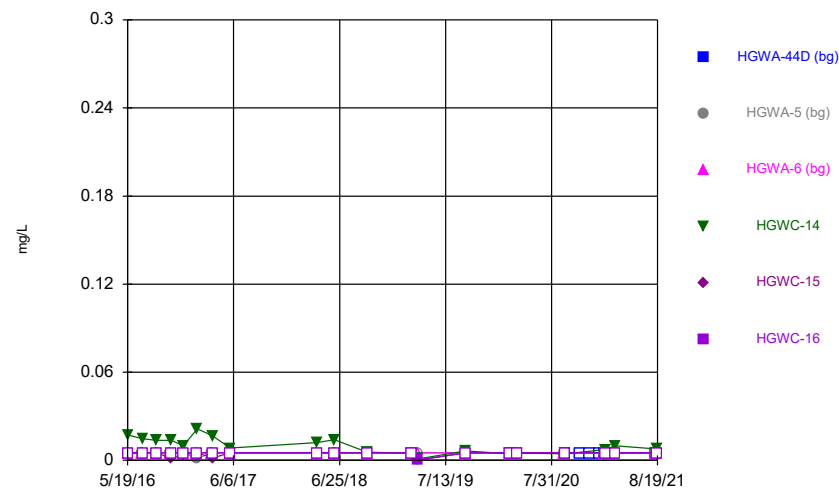
Constituent: Molybdenum Analysis Run 1/10/2022 12:58 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Time Series



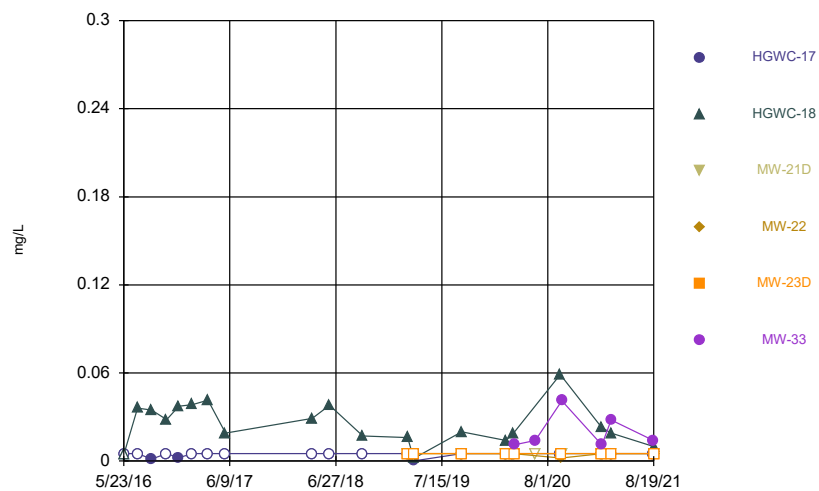
Constituent: Seleniun Analysis Run 1/10/2022 12:58 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Time Series



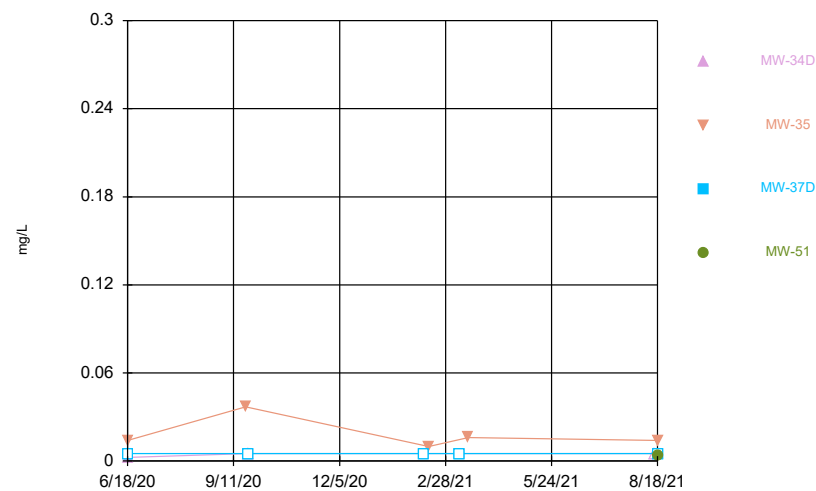
Constituent: Seleniun Analysis Run 1/10/2022 12:58 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Time Series



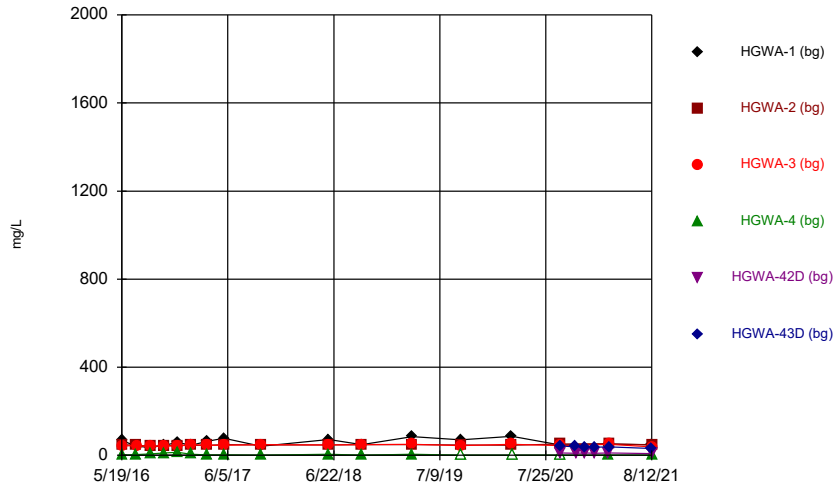
Constituent: Seleniun Analysis Run 1/10/2022 12:58 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Time Series



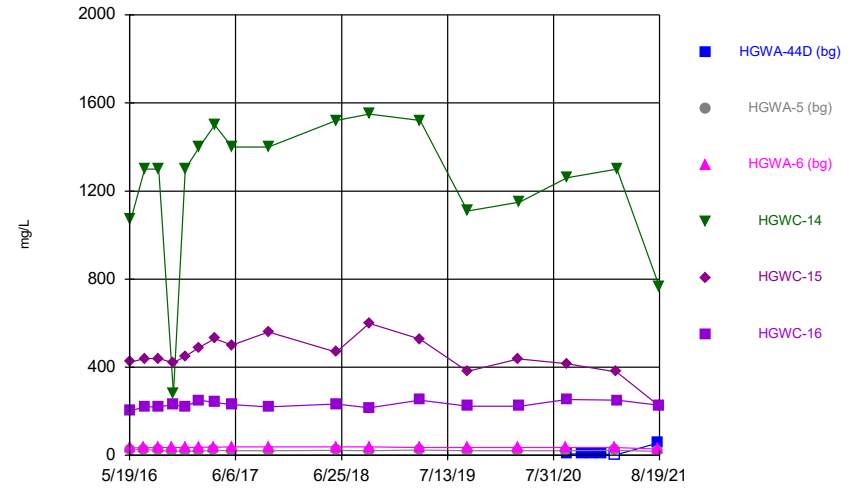
Constituent: Seleniun Analysis Run 1/10/2022 12:58 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

Time Series



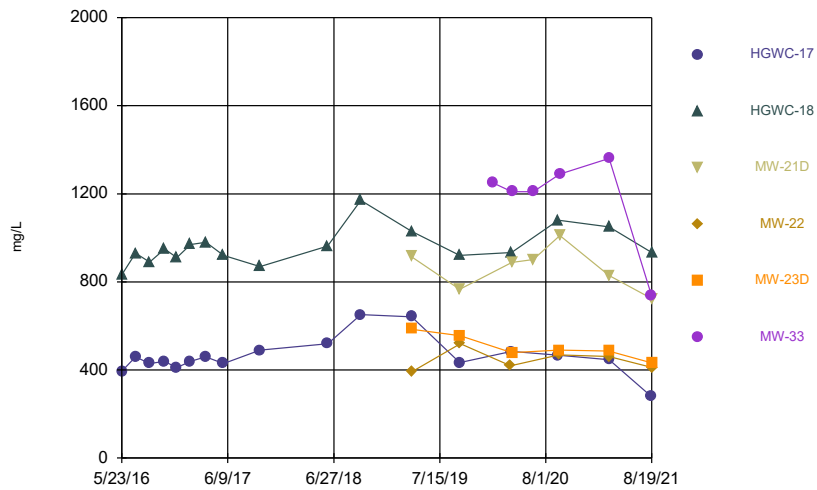
Constituent: Sulfate Analysis Run 1/10/2022 12:58 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

Time Series



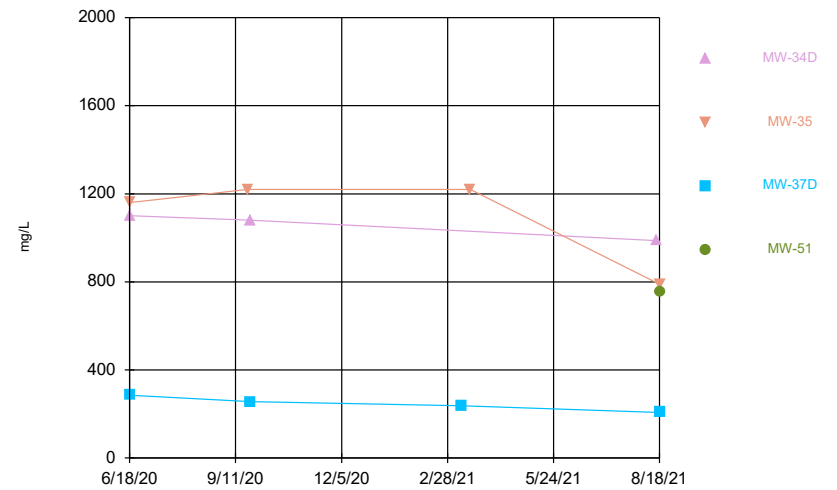
Constituent: Sulfate Analysis Run 1/10/2022 12:58 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

Time Series



Constituent: Sulfate Analysis Run 1/10/2022 12:58 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

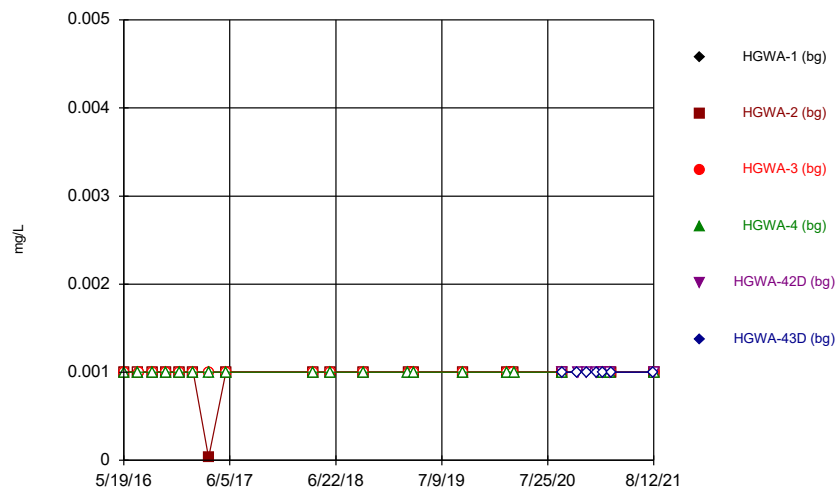
Time Series



Constituent: Sulfate Analysis Run 1/10/2022 12:58 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

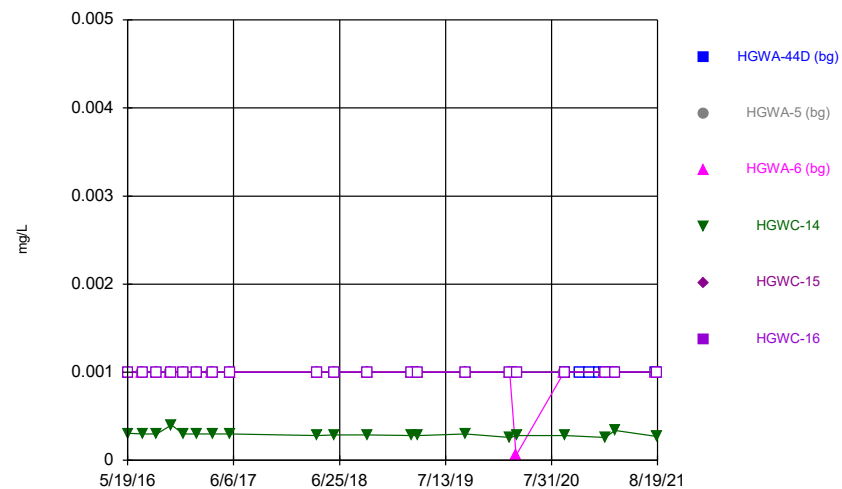


### Time Series



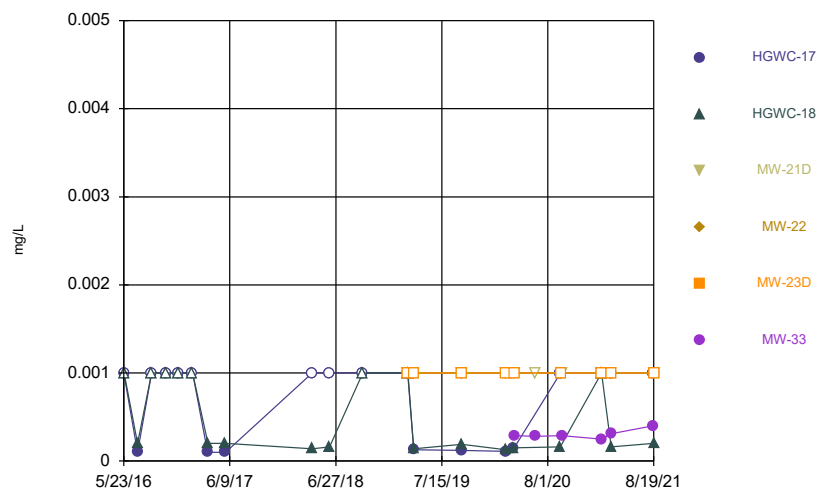
Constituent: Thallium Analysis Run 1/10/2022 12:59 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Time Series



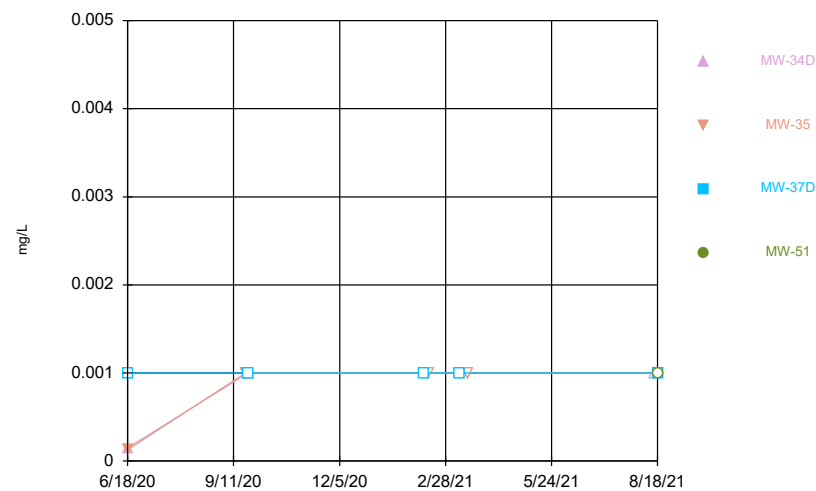
Constituent: Thallium Analysis Run 1/10/2022 12:59 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Time Series



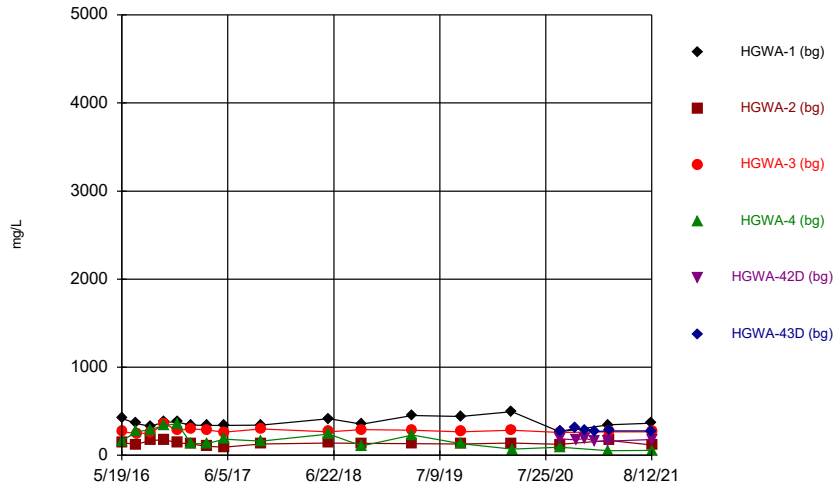
Constituent: Thallium Analysis Run 1/10/2022 12:59 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Time Series



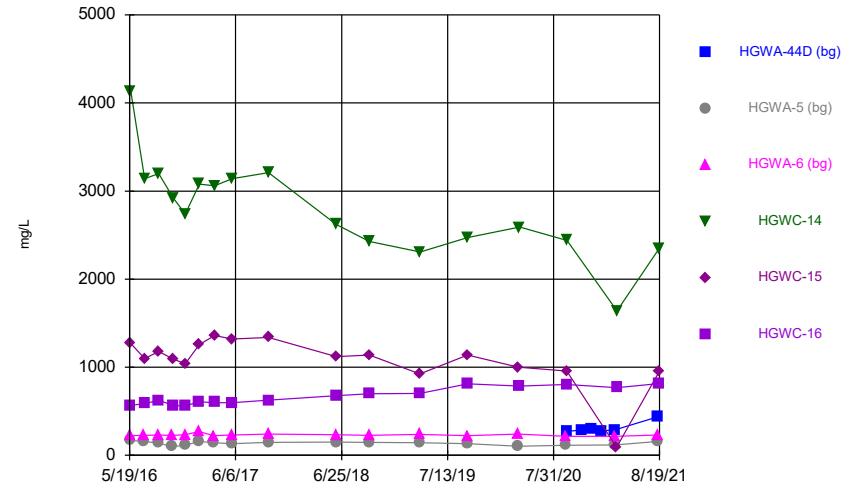
Constituent: Thallium Analysis Run 1/10/2022 12:59 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

Time Series



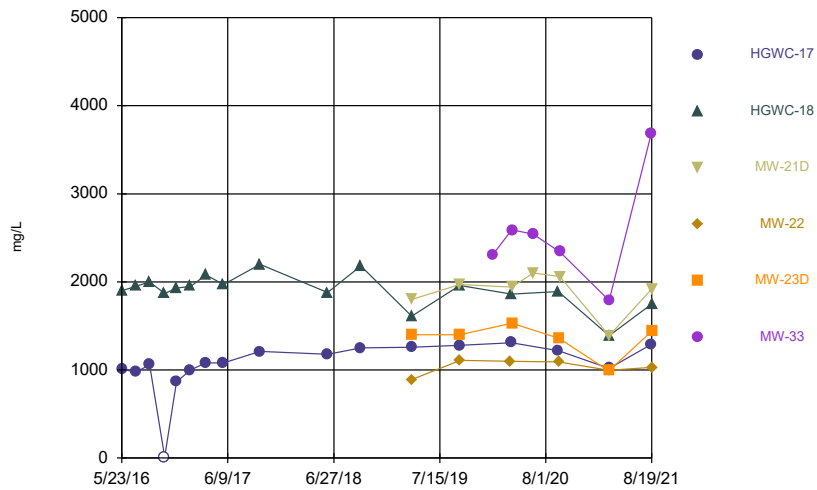
Constituent: Total Dissolved Solids Analysis Run 1/10/2022 12:59 PM  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

Time Series



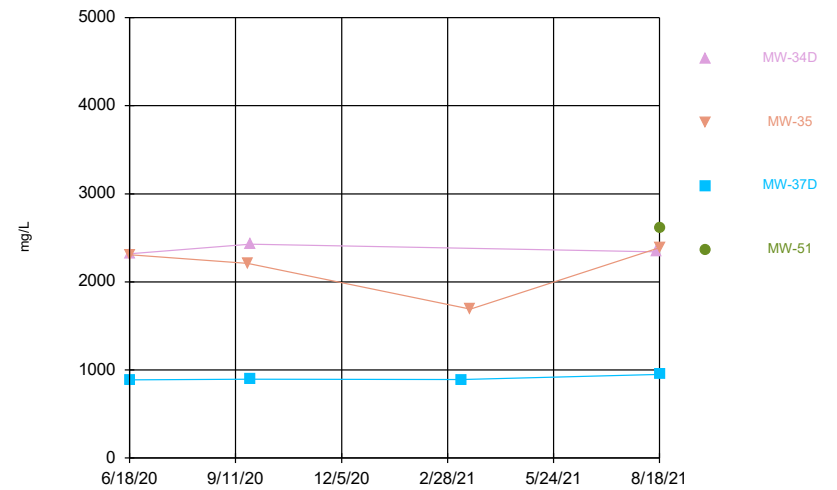
Constituent: Total Dissolved Solids Analysis Run 1/10/2022 12:59 PM  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

Time Series



Constituent: Total Dissolved Solids Analysis Run 1/10/2022 12:59 PM  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

Time Series



Constituent: Total Dissolved Solids Analysis Run 1/10/2022 12:59 PM  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

# Time Series

Constituent: Antimony (mg/L) Analysis Run 1/10/2022 1:00 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-4 (bg)	HGWA-42D (bg)	HGWA-43D (bg)
5/19/2016	<0.003	<0.003	<0.003	<0.003		
7/11/2016	<0.003	<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	<0.003		
12/6/2016	<0.003	<0.003	<0.003	<0.003		
1/24/2017	<0.003	<0.003	<0.003	<0.003		
3/21/2017	<0.003	<0.003	<0.003	<0.003		
5/22/2017	<0.003	<0.003	<0.003			
5/23/2017				<0.003		
4/2/2018	<0.003	<0.003		<0.003		
4/3/2018			<0.003			
3/11/2019				<0.003		
3/12/2019	<0.003	<0.003	<0.003			
9/23/2019	<0.003	<0.003	<0.003			
3/2/2020	<0.003	<0.003	<0.003	<0.003		
9/16/2020						0.00051 (J)
9/17/2020					0.00055 (J)	
11/10/2020						0.00043 (J)
11/11/2020				<0.003		
12/15/2020					0.00035 (J)	0.00031 (J)
1/19/2021						0.00029 (J)
1/20/2021					<0.003	
2/8/2021	<0.003			<0.003	0.0019 (J)	
2/9/2021		0.00062 (J)	0.00031 (J)			0.00037 (J)
3/10/2021	<0.003			<0.003	<0.003	
3/11/2021		<0.003	<0.003			0.00057 (J)
8/11/2021	<0.003					<0.003
8/12/2021		<0.003	<0.003	<0.003	<0.003	

# Time Series

Constituent: Antimony (mg/L) Analysis Run 1/10/2022 1:00 PM  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-44D (bg)	HGWA-5 (bg)	HGWA-6 (bg)	HGWC-14	HGWC-15	HGWC-16
5/19/2016		<0.003				
5/20/2016			<0.003			
5/23/2016				<0.003	<0.003	<0.003
7/11/2016		<0.003	0.001 (J)			
7/12/2016				0.0003 (J)	<0.003	<0.003
8/30/2016		<0.003	<0.003			
9/1/2016				<0.003	<0.003	<0.003
10/20/2016		0.0023 (J)	<0.003			
10/24/2016				<0.003	<0.003	
10/25/2016						<0.003
12/7/2016				<0.003	<0.003	<0.003
12/8/2016		<0.003	<0.003			
1/24/2017		<0.003	<0.003			
1/26/2017				<0.003	<0.003	<0.003
3/21/2017		<0.003	<0.003			
3/22/2017						<0.003
3/23/2017				<0.003	<0.003	
5/23/2017		<0.003	<0.003			
5/24/2017				<0.003	<0.003	<0.003
4/3/2018		<0.003	<0.003		<0.003	<0.003
4/4/2018				<0.003		
3/12/2019		<0.003	<0.003			
3/14/2019				<0.003	<0.003	
3/15/2019						<0.003
3/2/2020		<0.003	<0.003			
3/3/2020				<0.003	<0.003	<0.003
9/16/2020	0.00049 (J)					
11/10/2020	<0.003					
12/15/2020	0.00047 (J)					
1/19/2021	0.00067 (J)					
2/9/2021	0.00042 (J)	<0.003	<0.003			
2/10/2021						<0.003
2/11/2021				0.00043 (J)		
2/12/2021					<0.003	
3/10/2021	0.00037 (J)					
3/11/2021		<0.003	<0.003			
3/16/2021					<0.003	
3/17/2021				<0.003		<0.003
8/12/2021		0.0014 (J)	<0.003			
8/13/2021	<0.003					
8/18/2021				<0.003		
8/19/2021					<0.003	<0.003

# Time Series

Constituent: Antimony (mg/L) Analysis Run 1/10/2022 1:00 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWC-17	HGWC-18	MW-21D	MW-22	MW-23D	MW-33
5/23/2016	<0.003					
5/24/2016		<0.003				
7/12/2016	<0.003	<0.003				
9/1/2016	<0.003	<0.003				
10/25/2016	<0.003	<0.003				
12/7/2016	<0.003					
12/8/2016		<0.003				
1/26/2017	<0.003	<0.003				
3/22/2017	<0.003					
3/23/2017		<0.003				
5/25/2017	<0.003	<0.003				
4/3/2018	<0.003	<0.003				
3/14/2019		<0.003			<0.003	
3/15/2019	<0.003		<0.003	<0.003		
3/2/2020				<0.003	<0.003	
3/3/2020	<0.003	<0.003	<0.003			
2/11/2021	<0.003	<0.003	<0.003			
2/12/2021					<0.003	0.00046 (J)
2/15/2021				<0.003		
3/17/2021				<0.003	<0.003	
3/18/2021	<0.003	<0.003	<0.003			<0.003
8/18/2021	<0.003					<0.003
8/19/2021		0.0008 (J)	<0.003	0.0016 (J)	<0.003	

# Time Series

Constituent: Antimony (mg/L) Analysis Run 1/10/2022 1:00 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

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	MW-34D	MW-35	MW-37D	MW-51
2/11/2021			0.00079 (J)	
2/15/2021		0.00041 (J)		
3/12/2021			<0.003	
3/19/2021		<0.003		
8/16/2021	<0.003			
8/18/2021		<0.003	<0.003	<0.003

# Time Series

Constituent: Arsenic (mg/L) Analysis Run 1/10/2022 1:00 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-4 (bg)	HGWA-42D (bg)	HGWA-43D (bg)
5/19/2016	<0.005	0.00127 (J)	<0.005	<0.005		
7/11/2016	<0.005	0.002 (J)		<0.005		
7/12/2016			0.0008 (J)			
8/30/2016	<0.005	0.0017 (J)	<0.005	<0.005		
10/19/2016	<0.005	<0.005	<0.005	<0.005		
12/6/2016	<0.005	<0.005	<0.005	<0.005		
1/24/2017	<0.005	<0.005	<0.005	<0.005		
3/21/2017	0.0005 (J)	<0.005	0.0007 (J)	<0.005		
5/22/2017	<0.005	0.0006 (J)	0.0006 (J)			
5/23/2017				<0.005		
4/2/2018	<0.005	<0.005		<0.005		
4/3/2018			<0.005			
6/4/2018	<0.005	0.00088 (J)	0.0008 (J)	<0.005		
10/1/2018	<0.005	<0.005	0.0011 (J)	<0.005		
3/11/2019				<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		<0.005		
9/23/2019	0.00046 (J)	0.00067 (J)	0.0011 (J)			
9/24/2019				<0.005		
3/2/2020	<0.005	0.00043 (J)	0.0004 (J)	<0.005		
3/25/2020	<0.005	<0.005	<0.005			
3/26/2020				<0.005		
9/15/2020	<0.005	<0.005	<0.005	<0.005		
9/16/2020						<0.005
9/17/2020				<0.005		
11/10/2020						0.0021 (J)
11/11/2020				<0.005		
12/15/2020				<0.005		<0.005
1/19/2021						0.0011 (J)
1/20/2021				<0.005		
2/8/2021	<0.005			<0.005	<0.005	
2/9/2021		<0.005	<0.005			0.0017 (J)
3/10/2021	<0.005			<0.005	<0.005	
3/11/2021		<0.005	<0.005			0.0013 (J)
8/11/2021	<0.005					0.0015 (J)
8/12/2021		<0.005	<0.005	<0.005	<0.005	

# Time Series

Constituent: Arsenic (mg/L) Analysis Run 1/10/2022 1:00 PM  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-44D (bg)	HGWA-5 (bg)	HGWA-6 (bg)	HGWC-14	HGWC-15	HGWC-16
5/19/2016		<0.005				
5/20/2016			<0.005			
5/23/2016				0.00268 (J)	<0.005	<0.005
7/11/2016		<0.005	<0.005			
7/12/2016				0.0059	<0.005	<0.005
8/30/2016		<0.005	<0.005			
9/1/2016				0.0056	<0.005	<0.005
10/20/2016		<0.005	<0.005			
10/24/2016				0.0058	<0.005	
10/25/2016						<0.005
12/7/2016				<0.005	<0.005	<0.005
12/8/2016		<0.005	<0.005			
1/24/2017		<0.005	<0.005			
1/26/2017				0.0089	<0.005	<0.005
3/21/2017		<0.005	<0.005			
3/22/2017						0.0005 (J)
3/23/2017				0.0069	0.0008 (J)	
5/23/2017		<0.005	<0.005			
5/24/2017				0.0048 (J)	<0.005	<0.005
4/3/2018		<0.005	<0.005		<0.005	<0.005
4/4/2018				0.0052		
6/5/2018		<0.005	<0.005			
6/6/2018				0.0059	<0.005	<0.005
10/2/2018		0.00064 (J)	<0.005			
10/3/2018				0.0032 (J)	<0.005	<0.005
3/12/2019		<0.005	<0.005			
3/14/2019				0.0029 (J)	<0.005	
3/15/2019						<0.005
4/2/2019		<0.005	<0.005			
4/4/2019					0.00017 (J)	0.0001 (J)
4/5/2019				<0.005		
9/24/2019		0.00055 (J)	<0.005	0.0039 (J)	0.00037 (J)	
9/25/2019						<0.005
3/2/2020		<0.005	<0.005			
3/3/2020				0.0035 (J)	<0.005	<0.005
3/25/2020			<0.005			
3/26/2020		<0.005			<0.005	
3/30/2020				0.0051		0.0011 (J)
9/15/2020		<0.005	<0.005			
9/16/2020	<0.005					
9/17/2020					<0.005	<0.005
9/18/2020				0.0029 (J)		
11/10/2020	<0.005					
12/15/2020	<0.005					
1/19/2021	<0.005					
2/9/2021	0.00083 (J)	<0.005	<0.005			
2/10/2021						0.0012 (J)
2/11/2021				0.0062		
2/12/2021					<0.005	
3/10/2021	<0.005					
3/11/2021		<0.005	<0.005			
3/16/2021					<0.005	



# Time Series

Constituent: Arsenic (mg/L) Analysis Run 1/10/2022 1:00 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

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	HGWA-44D (bg)	HGWA-5 (bg)	HGWA-6 (bg)	HGWC-14	HGWC-15	HGWC-16
3/17/2021				<0.005		<0.005
8/12/2021		<0.005	<0.005			
8/13/2021	<0.005					
8/18/2021				0.0035 (J)		
8/19/2021					<0.005	<0.005

# Time Series

Constituent: Arsenic (mg/L) Analysis Run 1/10/2022 1:00 PM  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWC-17	HGWC-18	MW-21D	MW-22	MW-23D	MW-33
5/23/2016	<0.005					
5/24/2016		0.00294 (J)				
7/12/2016	<0.005	0.0074				
9/1/2016	<0.005	0.0073				
10/25/2016	<0.005	0.006				
12/7/2016	<0.005					
12/8/2016		0.007				
1/26/2017	<0.005	0.0068				
3/22/2017	0.0007 (J)					
3/23/2017		0.0082				
5/25/2017	0.0007 (J)	0.006				
4/3/2018	<0.005	0.0062				
6/5/2018		0.008				
6/6/2018	0.00097 (J)					
10/3/2018	<0.005	0.0039 (J)				
3/14/2019		0.0036 (J)			<0.005	
3/15/2019	<0.005		<0.005	<0.005		
4/4/2019			0.00019 (J)			
4/5/2019	<0.005	0.0015 (J)		<0.005	<0.005	
9/25/2019	<0.005	0.0044 (J)	<0.005			
9/26/2019					<0.005	
9/27/2019				0.00045 (J)		
3/2/2020				<0.005	<0.005	
3/3/2020	<0.005	0.0057	<0.005			
3/27/2020				<0.005		
3/31/2020	0.0008 (J)	0.0056				
4/1/2020			0.0013 (J)		0.00082 (J)	0.0061
6/17/2020			<0.005			0.0031 (J)
9/15/2020		0.0074				
9/16/2020	<0.005					
9/17/2020				<0.005	<0.005	
9/21/2020			<0.005			0.0083
2/11/2021	0.0012 (J)	0.0069 (B)	0.001 (J)			
2/12/2021					0.001 (J)	0.0059
2/15/2021				<0.005		
3/17/2021				<0.005	<0.005	
3/18/2021	<0.005	0.0083 (J)	<0.005			0.0054 (J)
8/18/2021	<0.005					0.0058
8/19/2021		0.0045 (J)	<0.005	<0.005	<0.005	

# Time Series

Constituent: Arsenic (mg/L) Analysis Run 1/10/2022 1:00 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

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	MW-34D	MW-35	MW-37D	MW-51
6/18/2020	0.0032 (J)	0.005 (J)	0.0021 (J)	
9/21/2020		0.0059		
9/23/2020	0.001 (J)		0.00095 (J)	
2/11/2021			0.0023 (J)	
2/15/2021		0.005		
3/12/2021			<0.005	
3/19/2021		<0.005		
8/16/2021	0.0024 (J)			
8/18/2021		0.0043 (J)	<0.005	0.002 (J)

# Time Series

Constituent: Barium (mg/L) Analysis Run 1/10/2022 1:00 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-4 (bg)	HGWA-42D (bg)	HGWA-43D (bg)
5/19/2016	0.0346	0.114	0.111	0.0266		
7/11/2016	0.0311	0.112		0.0309		
7/12/2016			0.115			
8/30/2016	0.0293	0.131	0.113	0.031		
10/19/2016	0.0293	0.111	0.123	0.0332		
12/6/2016	0.0304	0.108	0.127	0.0334		
1/24/2017	0.028	0.102	0.126	0.0192		
3/21/2017	0.0275	0.095	0.12	0.0175		
5/22/2017	0.0281	0.103	0.117			
5/23/2017				0.0227		
4/2/2018	0.026	0.099		0.022		
4/3/2018			0.11			
6/4/2018	0.035	0.11	0.12	0.027		
10/1/2018	0.029	0.11	0.14	0.018		
3/11/2019				0.029		
3/12/2019	0.042	0.12	0.13			
4/1/2019			0.13			
4/2/2019	0.04	0.13		0.03		
9/23/2019	0.042	0.13	0.13			
9/24/2019				0.03		
3/2/2020	0.034	0.11	0.14	0.023		
3/25/2020	0.043	0.12	0.13			
3/26/2020				0.026		
9/15/2020	0.035	0.12	0.12	0.024		
9/16/2020						0.26
9/17/2020				0.13		
11/10/2020						0.25
11/11/2020				0.18		
12/15/2020				0.19		0.29
1/19/2021						0.32
1/20/2021				0.2		
2/8/2021	0.032			0.04	0.19	
2/9/2021		0.12	0.13			0.34
3/10/2021	0.03			0.036	0.18	
3/11/2021		0.07	0.13			0.32
8/11/2021	0.03					0.28
8/12/2021		0.12	0.11	0.034	0.18	

# Time Series

Constituent: Barium (mg/L) Analysis Run 1/10/2022 1:00 PM  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-44D (bg)	HGWA-5 (bg)	HGWA-6 (bg)	HGWC-14	HGWC-15	HGWC-16
5/19/2016		0.0519				
5/20/2016			0.174			
5/23/2016				<0.2	0.0315 (J)	0.0841
7/11/2016		0.0565	0.134			
7/12/2016				0.0214	0.0372	0.0886
8/30/2016		0.0548	0.212			
9/1/2016				0.0208	0.0364	0.0934
10/20/2016		0.0539	0.157			
10/24/2016				0.0208	0.0326	
10/25/2016						0.0991
12/7/2016				0.022	0.0301	0.101
12/8/2016		0.0496	0.162			
1/24/2017		0.0478	0.168			
1/26/2017				0.0238	0.0287	0.105
3/21/2017		0.0453	0.186			
3/22/2017						0.11
3/23/2017				0.0244	0.0329	
5/23/2017		0.0496	0.187			
5/24/2017				0.0228	0.0283	0.106
4/3/2018		0.038	0.14		0.019	0.099
4/4/2018				0.021		
6/5/2018		0.046	0.21			
6/6/2018				0.022	0.022	0.11
10/2/2018		0.047	0.19			
10/3/2018				0.02	0.025	0.11
3/12/2019		0.05	0.2			
3/14/2019				0.019	0.021	
3/15/2019						0.13
4/2/2019		0.044	0.19			
4/4/2019					0.018	0.11
4/5/2019				0.016		
9/24/2019		0.053	0.22	0.021	0.019	
9/25/2019						0.11
3/2/2020		0.053	0.19			
3/3/2020				0.018	0.018	0.12
3/25/2020			0.19			
3/26/2020		0.045			0.016	
3/30/2020				0.02		0.11
9/15/2020		0.045	0.19			
9/16/2020	0.24					
9/17/2020					0.017	0.11
9/18/2020				0.019		
11/10/2020	0.38					
12/15/2020	0.39					
1/19/2021	0.41					
2/9/2021	0.46	0.046	0.21			
2/10/2021						0.11
2/11/2021				0.02		
2/12/2021					0.014	
3/10/2021	0.26					
3/11/2021		0.044	0.21			
3/16/2021					0.012	

# Time Series

Constituent: Barium (mg/L) Analysis Run 1/10/2022 1:00 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

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	HGWA-44D (bg)	HGWA-5 (bg)	HGWA-6 (bg)	HGWC-14	HGWC-15	HGWC-16
3/17/2021				0.023		0.12
8/12/2021		0.044	0.18			
8/13/2021	0.22					
8/18/2021				0.018		
8/19/2021					0.01	0.1

# Time Series

Constituent: Barium (mg/L) Analysis Run 1/10/2022 1:00 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWC-17	HGWC-18	MW-21D	MW-22	MW-23D	MW-33
5/23/2016	0.0222 (J)					
5/24/2016		<0.2				
7/12/2016	0.0221	0.0346				
9/1/2016	0.0227	0.0336				
10/25/2016	0.0225	0.0349				
12/7/2016	0.0227					
12/8/2016		0.0339				
1/26/2017	0.0229	0.0293				
3/22/2017	0.0248					
3/23/2017		0.0313				
5/25/2017	0.0255	0.0336				
4/3/2018	0.025	0.028				
6/5/2018		0.03				
6/6/2018	0.028					
10/3/2018	0.028	0.032				
3/14/2019		0.029			0.082	
3/15/2019	0.029		0.09	0.044		
4/4/2019			0.075			
4/5/2019	0.022	0.021		0.036	0.061	
9/25/2019	0.025	0.03	0.066			
9/26/2019					0.064	
9/27/2019				0.028		
3/2/2020				0.027	0.06	
3/3/2020	0.026	0.026	0.058			
3/27/2020				0.025		
3/31/2020	0.029	0.029				
4/1/2020			0.066		0.065	0.027
6/17/2020			0.054			0.024
9/15/2020		0.03				
9/16/2020	0.025					
9/17/2020				0.02	0.057	
9/21/2020			0.049			0.024
2/11/2021	0.025	0.03	0.044			
2/12/2021					0.056	0.025
2/15/2021				0.017		
3/17/2021				0.018	0.058	
3/18/2021	0.027	0.031	0.047			0.029
8/18/2021	0.022					0.025
8/19/2021		0.031	0.042	0.018	0.05	

# Time Series

Constituent: Barium (mg/L) Analysis Run 1/10/2022 1:00 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

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	MW-34D	MW-35	MW-37D	MW-51
6/18/2020	0.044	0.029	0.19	
9/21/2020		0.028		
9/23/2020	0.038		0.14	
2/11/2021			0.14	
2/15/2021		0.026		
3/12/2021			0.12	
3/19/2021		0.032		
8/16/2021	0.035			
8/18/2021		0.025	0.12	0.032



# Time Series

Constituent: Beryllium (mg/L) Analysis Run 1/10/2022 1:00 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-4 (bg)	HGWA-42D (bg)	HGWA-43D (bg)
5/19/2016	<0.0005	<0.0005	<0.0005	<0.0005		
7/11/2016	<0.0005	0.0001 (J)		<0.0005		
7/12/2016			<0.0005			
8/30/2016	<0.0005	<0.0005	<0.0005	<0.0005		
10/19/2016	<0.0005	0.0001 (J)	<0.0005	<0.0005		
12/6/2016	<0.0005	0.0002 (J)	<0.0005	<0.0005		
1/24/2017	<0.0005	0.0001 (J)	<0.0005	<0.0005		
3/21/2017	<0.0005	0.0001 (J)	<0.0005	<0.0005		
5/22/2017	<0.0005	0.0001 (J)	<0.0005			
5/23/2017				<0.0005		
4/2/2018	<0.0005	<0.0005		<0.0005		
4/3/2018			<0.0005			
3/11/2019				5E-05 (J)		
3/12/2019	<0.0005	0.00017 (J)	<0.0005			
4/1/2019			<0.0005			
4/2/2019	<0.0005	0.00015 (J)		<0.0005		
9/23/2019	<0.0005	0.00011 (J)	<0.0005			
9/24/2019				<0.0005		
3/2/2020	<0.0005	0.00014 (J)	<0.0005	0.00019 (J)		
3/25/2020	<0.0005	0.00016 (J)	<0.0005			
3/26/2020				7.6E-05 (J)		
9/15/2020	<0.0005	0.00013 (J)	<0.0005	<0.0005		
9/16/2020						<0.0005
9/17/2020				<0.0005		
11/10/2020						<0.0005
11/11/2020				<0.0005		
12/15/2020				<0.0005		<0.0005
1/19/2021						<0.0005
1/20/2021				<0.0005		
2/8/2021	<0.0005			0.00023 (J)	<0.0005	
2/9/2021		0.00014 (J)	<0.0005			<0.0005
3/10/2021	<0.0005			0.00017 (J)	<0.0005	
3/11/2021		8.6E-05 (J)	<0.0005			<0.0005
8/11/2021	<0.0005					<0.0005
8/12/2021		0.00014 (J)	<0.0005	0.00021 (J)	<0.0005	

# Time Series

Constituent: Beryllium (mg/L) Analysis Run 1/10/2022 1:00 PM  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-44D (bg)	HGWA-5 (bg)	HGWA-6 (bg)	HGWC-14	HGWC-15	HGWC-16
5/19/2016		<0.0005				
5/20/2016			<0.0005			
5/23/2016				<0.0005	<0.0005	<0.0005
7/11/2016		<0.0005	<0.0005			
7/12/2016				0.0005 (J)	<0.0005	<0.0005
8/30/2016		<0.0005	<0.0005			
9/1/2016				0.0005 (J)	<0.0005	<0.0005
10/20/2016		<0.0005	<0.0005			
10/24/2016				0.0005 (J)	<0.0005	
10/25/2016						<0.0005
12/7/2016				0.0006 (J)	<0.0005	<0.0005
12/8/2016		<0.0005	<0.0005			
1/24/2017		<0.0005	<0.0005			
1/26/2017				0.0005 (J)	<0.0005	<0.0005
3/21/2017		<0.0005	<0.0005			
3/22/2017						<0.0005
3/23/2017				0.0006 (J)	<0.0005	
5/23/2017		<0.0005	<0.0005			
5/24/2017				0.0005 (J)	<0.0005	<0.0005
4/3/2018		<0.0005	<0.0005		<0.0005	<0.0005
4/4/2018				<0.0005		
3/12/2019		<0.0005	<0.0005			
3/14/2019				0.00043 (J)	<0.0005	
3/15/2019						<0.0005
4/2/2019		<0.0005	<0.0005			
4/4/2019					<0.0005	<0.0005
4/5/2019				0.00027 (J)		
9/24/2019		<0.0005	<0.0005	0.00044 (J)	<0.0005	
9/25/2019						<0.0005
3/2/2020		<0.0005	<0.0005			
3/3/2020				0.00043 (J)	<0.0005	<0.0005
3/25/2020			<0.0005			
3/26/2020		<0.0005			<0.0005	
3/30/2020				0.00043 (J)		<0.0005
9/15/2020		<0.0005	<0.0005			
9/16/2020	<0.0005					
9/17/2020					<0.0005	<0.0005
9/18/2020				0.00043 (J)		
11/10/2020	<0.0005					
12/15/2020	<0.0005					
1/19/2021	<0.0005					
2/9/2021	<0.0005	<0.0005	<0.0005			
2/10/2021						<0.0005
2/11/2021				0.00044 (J)		
2/12/2021					<0.0005	
3/10/2021	<0.0005					
3/11/2021		<0.0005	<0.0005			
3/16/2021					<0.0005	
3/17/2021				0.00058		<0.0005
8/12/2021		<0.0005	<0.0005			
8/13/2021	<0.0005					
8/18/2021				0.00039 (J)		

# Time Series

Constituent: Beryllium (mg/L) Analysis Run 1/10/2022 1:00 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

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	HGWA-44D (bg)	HGWA-5 (bg)	HGWA-6 (bg)	HGWC-14	HGWC-15	HGWC-16
8/19/2021					<0.0005	<0.0005

# Time Series

Constituent: Beryllium (mg/L) Analysis Run 1/10/2022 1:00 PM  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWC-17	HGWC-18	MW-21D	MW-22	MW-23D	MW-33
5/23/2016	<0.0005					
5/24/2016		0.00278 (J)				
7/12/2016	<0.0005	0.0032				
9/1/2016	<0.0005	0.0034				
10/25/2016	<0.0005	0.0034				
12/7/2016	<0.0005					
12/8/2016		0.0033				
1/26/2017	<0.0005	0.0034				
3/22/2017	<0.0005					
3/23/2017		0.0036				
5/25/2017	<0.0005	0.0036				
4/3/2018	<0.0005	<0.0005				
3/14/2019		0.0026 (J)			<0.0005	
3/15/2019	<0.0005		<0.0005	<0.0005		
4/4/2019			<0.0005			
4/5/2019	<0.0005	0.0022 (J)		<0.0005	<0.0005	
9/25/2019	<0.0005	0.0031	<0.0005			
9/26/2019					<0.0005	
9/27/2019				<0.0005		
3/2/2020				<0.0005	<0.0005	
3/3/2020	<0.0005	0.0029 (J)	<0.0005			
3/27/2020				<0.0005		
3/31/2020	<0.0005	0.003				
4/1/2020			<0.0005		<0.0005	0.0011 (J)
6/17/2020			<0.0005			0.00099 (J)
9/15/2020		0.0033				
9/16/2020	<0.0005					
9/17/2020				4.7E-05 (J)	<0.0005	
9/21/2020			<0.0005			0.0009 (J)
2/11/2021	6.7E-05 (J)	0.0036	<0.0005			
2/12/2021					<0.0005	0.001 (J)
2/15/2021				6.2E-05 (J)		
3/17/2021				8.2E-05 (J)	<0.0005	
3/18/2021	4.8E-05 (J)	0.0038	<0.0005			0.0011
8/18/2021	<0.0005					0.00097
8/19/2021		0.0034	<0.0005	7E-05 (J)	<0.0005	

# Time Series

Constituent: Beryllium (mg/L) Analysis Run 1/10/2022 1:00 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

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	MW-34D	MW-35	MW-37D	MW-51
6/18/2020	0.00015 (J)	0.00032 (J)	0.00012 (J)	
9/21/2020		0.0004 (J)		
9/23/2020	<0.0005		<0.0005	
2/11/2021			<0.0005	
2/15/2021		0.0006 (J)		
3/12/2021			<0.0005	
3/19/2021		0.00061		
8/16/2021	<0.0005			
8/18/2021		0.00061	<0.0005	0.00042 (J)

# Time Series

Constituent: Boron (mg/L) Analysis Run 1/10/2022 1:00 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-4 (bg)	HGWA-42D (bg)	HGWA-43D (bg)
5/19/2016	0.0214 (J)	0.0321 (J)	<0.04	<0.04		
7/11/2016	0.0142 (J)	0.0337 (J)		0.0175 (J)		
7/12/2016			0.0074 (J)			
8/30/2016	0.0074 (J)	0.0173 (J)	<0.04	0.0072 (J)		
10/19/2016	0.0224 (J)	0.0341 (J)	0.0085 (J)	0.018 (J)		
12/6/2016	0.0211 (J)	0.0326 (J)	0.0085 (J)	0.0158 (J)		
1/24/2017	0.0165 (J)	0.0365 (J)	0.01 (J)	0.0145 (J)		
3/21/2017	0.0187 (J)	0.0349 (J)	0.0079 (J)	0.0101 (J)		
5/22/2017	0.0782	0.0475	0.0131 (J)			
5/23/2017				0.0159 (J)		
10/3/2017	0.0198 (J)	0.0386 (J)	0.0097 (J)	0.0162 (J)		
6/4/2018	0.02 (J)	0.036 (J)	0.017 (J)	0.014 (J)		
10/1/2018	0.013 (J)	0.035 (J)	0.0061 (J)	0.0093 (J)		
4/1/2019			0.0066 (J)			
4/2/2019	0.016 (J)	0.034 (J)		0.01 (J)		
9/23/2019	0.021 (J)	0.04 (J)	0.0081 (J)			
9/24/2019				0.013 (J)		
3/25/2020	0.025 (J)	0.039 (J)	0.0096 (J)			
3/26/2020				0.012 (J)		
9/15/2020	0.017 (J)	0.044 (J)	0.0071 (J)	0.013 (J)		
9/16/2020						0.061 (J)
9/17/2020				0.098 (J)		
11/10/2020						0.057 (J)
11/11/2020				0.058 (J)		
12/15/2020				0.043 (J)		0.052 (J)
1/19/2021						0.049 (J)
1/20/2021					0.045 (J)	
3/10/2021	0.015 (J)			0.012 (J)	0.048	
3/11/2021		0.056	0.015 (J)			0.06
8/11/2021	0.02 (J)					0.042
8/12/2021		0.044	<0.04	0.014 (J)	0.044	

# Time Series

Constituent: Boron (mg/L) Analysis Run 1/10/2022 1:00 PM  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-44D (bg)	HGWA-5 (bg)	HGWA-6 (bg)	HGWC-14	HGWC-15	HGWC-16
5/19/2016		<0.04				
5/20/2016			0.0363 (J)			
5/23/2016				15.4	2.02	1.36
7/11/2016		0.0052 (J)	0.0179 (J)			
7/12/2016				16	1.65	1.62
8/30/2016		0.0068 (J)	0.014 (J)			
9/1/2016				12.3	1.93	1.31
10/20/2016		0.0135 (J)	0.0197 (J)			
10/24/2016				13.7	1.93	
10/25/2016						1.27
12/7/2016				16.5	2.23	1.42
12/8/2016		0.0083 (J)	0.0159 (J)			
1/24/2017		0.0072 (J)	<0.04			
1/26/2017				19.2	2.31	1.19
3/21/2017		<0.04	0.0166 (J)			
3/22/2017						1.32
3/23/2017				23.1	2.72	
5/23/2017		0.0095 (J)	0.0167 (J)			
5/24/2017				25.8	2.26	1.67
10/3/2017		0.0071 (J)	0.017 (J)			
10/4/2017				20.5	2	1.43
6/5/2018		0.0066 (J)	0.016 (J)			
6/6/2018				16.7	2.4	1.9
10/2/2018		0.0081 (J)	0.014 (J)			
10/3/2018				16.4	2.4	1.7
4/2/2019		0.0052 (J)	0.013 (J)			
4/4/2019					2.3	2.1
4/5/2019				12.5		
9/24/2019		0.0088 (J)	0.016 (J)	14.7	2.9	
9/25/2019						2.7
3/25/2020			0.021 (J)			
3/26/2020		0.0072 (J)			2.1	
3/30/2020				11.7		2.4
9/15/2020		0.012 (J)	0.016 (J)			
9/16/2020	0.23					
9/17/2020					2.2	2.4
9/18/2020				11		
11/10/2020	0.29					
12/15/2020	0.31					
1/19/2021	0.4					
3/10/2021	0.39					
3/11/2021		0.0075 (J)	0.018 (J)			
3/16/2021					2.4	
3/17/2021				11.8		2.7
8/12/2021		0.0092 (J)	0.014 (J)			
8/13/2021	0.31					
8/18/2021				8.6		
8/19/2021					2.1	2.5

# Time Series

Constituent: Boron (mg/L) Analysis Run 1/10/2022 1:00 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWC-17	HGWC-18	MW-21D	MW-22	MW-23D	MW-33
5/23/2016	5.7					
5/24/2016		9.33				
7/12/2016	9.58	11.9				
9/1/2016	5.76	8.8				
10/25/2016	5.38	8.5				
12/7/2016	5.74					
12/8/2016		7.15				
1/26/2017	5.78	9.17				
3/22/2017	5.52					
3/23/2017		10.6				
5/25/2017	8.58	13.2				
10/4/2017	6.8	10				
6/5/2018		8.4				
6/6/2018	6.3					
10/3/2018	6.9	9.3				
4/4/2019			5.2			
4/5/2019	5.9	6.4		2.1	3	
9/25/2019	8.1	11.7	6.4			
9/26/2019					3.8	
9/27/2019				2.9		
1/22/2020						11.2
3/27/2020				2.4		
3/31/2020	6.9	9.4				
4/1/2020			6.3		3.5	11.6
6/17/2020			5.8			10.3
9/15/2020		9.4				
9/16/2020	6.7					
9/17/2020				2.3	2.7	
9/21/2020			5.6			9
3/17/2021				2.7	3.4	
3/18/2021	6.8	8.9	5.7			10.2
8/18/2021	5.3					9.1
8/19/2021		8.6	5.4	2.5	3.4	



# Time Series

Constituent: Boron (mg/L) Analysis Run 1/10/2022 1:00 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

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	MW-34D	MW-35	MW-37D	MW-51
6/18/2020	9.4	11.9	0.14	
9/21/2020		12.3		
9/23/2020	10.2		0.12	
3/12/2021			0.15	
3/19/2021		11.9		
8/16/2021	8.2			
8/18/2021		11.2	0.2	9.7

# Time Series

Constituent: Cadmium (mg/L) Analysis Run 1/10/2022 1:00 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-4 (bg)	HGWA-42D (bg)	HGWA-43D (bg)
5/19/2016	<0.0005	<0.0005	<0.0005	<0.0005		
7/11/2016	<0.0005	<0.0005		<0.0005		
7/12/2016			<0.0005			
8/30/2016	<0.0005	<0.0005	<0.0005	<0.0005		
10/19/2016	<0.0005	<0.0005	<0.0005	<0.0005		
12/6/2016	<0.0005	<0.0005	<0.0005	<0.0005		
1/24/2017	<0.0005	0.0001 (J)	<0.0005	<0.0005		
3/21/2017	<0.0005	7E-05 (J)	<0.0005	<0.0005		
5/22/2017	<0.0005	0.0001 (J)	<0.0005			
5/23/2017				<0.0005		
4/2/2018	<0.0005	<0.0005		<0.0005		
4/3/2018			<0.0005			
6/4/2018	<0.0005	0.00014 (J)	<0.0005	<0.0005		
10/1/2018	<0.0005	<0.0005	<0.0005	<0.0005		
3/11/2019				<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)		<0.0005		
9/23/2019	<0.0005	<0.0005	<0.0005			
9/24/2019				<0.0005		
3/2/2020	<0.0005	<0.0005	<0.0005	<0.0005		
3/25/2020	<0.0005	0.00014 (J)	<0.0005			
3/26/2020				<0.0005		
9/15/2020	<0.0005	0.00012 (J)	<0.0005	<0.0005		
9/16/2020						<0.0005
9/17/2020				<0.0005		
11/10/2020						<0.0005
11/11/2020				<0.0005		
12/15/2020				<0.0005		<0.0005
1/19/2021						<0.0005
1/20/2021				<0.0005		
2/8/2021	<0.0005			<0.0005	<0.0005	
2/9/2021		0.00016 (J)	<0.0005			<0.0005
3/10/2021	<0.0005			<0.0005	<0.0005	
3/11/2021		<0.0005	<0.0005			<0.0005
8/11/2021	<0.0005					<0.0005
8/12/2021		0.00014 (J)	<0.0005	<0.0005	<0.0005	

# Time Series

Constituent: Cadmium (mg/L) Analysis Run 1/10/2022 1:00 PM  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-44D (bg)	HGWA-5 (bg)	HGWA-6 (bg)	HGWC-14	HGWC-15	HGWC-16
5/19/2016		<0.0005				
5/20/2016			<0.0005			
5/23/2016				0.000139 (J)	0.00271 (J)	<0.0005
7/11/2016		<0.0005	<0.0005			
7/12/2016				<0.0005	0.0019	<0.0005
8/30/2016		<0.0005	<0.0005			
9/1/2016				0.0001 (J)	0.0017	<0.0005
10/20/2016		<0.0005	<0.0005			
10/24/2016				0.0002 (J)	0.0018	
10/25/2016						<0.0005
12/7/2016				0.0001 (J)	0.0018	<0.0005
12/8/2016		<0.0005	<0.0005			
1/24/2017		<0.0005	<0.0005			
1/26/2017				0.0001 (J)	0.0013	<0.0005
3/21/2017		<0.0005	<0.0005			
3/22/2017						<0.0005
3/23/2017				0.0002 (J)	0.002	
5/23/2017		<0.0005	<0.0005			
5/24/2017				0.0001 (J)	0.0041	<0.0005
4/3/2018		<0.0005	<0.0005		0.0022	<0.0005
4/4/2018				<0.0005		
6/5/2018		<0.0005	<0.0005			
6/6/2018				0.00012 (J)	0.0021	<0.0005
10/2/2018		<0.0005	<0.0005			
10/3/2018				0.0001 (J)	0.0026	<0.0005
3/12/2019		<0.0005	<0.0005			
3/14/2019				<0.0005	0.0024	
3/15/2019						<0.0005
4/2/2019		<0.0005	<0.0005			
4/4/2019					0.0018	<0.0005
4/5/2019				7.9E-05 (J)		
9/24/2019		<0.0005	<0.0005	<0.0005	0.0014 (J)	
9/25/2019						<0.0005
3/2/2020		<0.0005	<0.0005			
3/3/2020				<0.0005	0.0015 (J)	<0.0005
3/25/2020			<0.0005			
3/26/2020		<0.0005			0.0016 (J)	
3/30/2020				<0.0005		<0.0005
9/15/2020		<0.0005	<0.0005			
9/16/2020	<0.0005					
9/17/2020					0.0016 (J)	<0.0005
9/18/2020				<0.0005		
11/10/2020	<0.0005					
12/15/2020	<0.0005					
1/19/2021	<0.0005					
2/9/2021	<0.0005	<0.0005	<0.0005			
2/10/2021						<0.0005
2/11/2021				<0.0005		
2/12/2021					0.0014 (J)	
3/10/2021	<0.0005					
3/11/2021		<0.0005	<0.0005			
3/16/2021					0.0011	

# Time Series

Constituent: Cadmium (mg/L) Analysis Run 1/10/2022 1:00 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

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	HGWA-44D (bg)	HGWA-5 (bg)	HGWA-6 (bg)	HGWC-14	HGWC-15	HGWC-16
3/17/2021				<0.0005		<0.0005
8/12/2021		<0.0005	<0.0005			
8/13/2021	<0.0005					
8/18/2021				0.00013 (J)		
8/19/2021					0.0012	<0.0005

# Time Series

Constituent: Cadmium (mg/L) Analysis Run 1/10/2022 1:00 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWC-17	HGWC-18	MW-21D	MW-22	MW-23D	MW-33
5/23/2016	<0.0005					
5/24/2016		<0.0005				
7/12/2016	<0.0005	0.0022				
9/1/2016	<0.0005	0.0024				
10/25/2016	<0.0005	0.0022				
12/7/2016	<0.0005					
12/8/2016		0.0024				
1/26/2017	<0.0005	0.0025				
3/22/2017	7E-05 (J)					
3/23/2017		0.0025				
5/25/2017	<0.0005	0.0027				
4/3/2018	<0.0005	0.0022				
6/5/2018		0.0022				
6/6/2018	<0.0005					
10/3/2018	<0.0005	0.0027				
3/14/2019		0.0019			<0.0005	
3/15/2019	<0.0005		<0.0005	0.00082 (J)		
4/4/2019			<0.0005			
4/5/2019	<0.0005	0.0017		0.00064 (J)	<0.0005	
9/25/2019	<0.0005	0.0023 (J)	<0.0005			
9/26/2019					<0.0005	
9/27/2019				0.0014 (J)		
3/2/2020				0.0021 (J)	<0.0005	
3/3/2020	<0.0005	0.0021 (J)	<0.0005			
3/27/2020				0.0019 (J)		
3/31/2020	<0.0005	0.0017 (J)				
4/1/2020			<0.0005		<0.0005	0.00022 (J)
6/17/2020			<0.0005			0.00021 (J)
9/15/2020		0.0019 (J)				
9/16/2020	<0.0005					
9/17/2020				0.0021 (J)	0.0006 (J)	
9/21/2020			<0.0005			0.00016 (J)
2/11/2021	<0.0005	0.0016 (J)	<0.0005			
2/12/2021					0.00045 (J)	0.00017 (J)
2/15/2021				0.002 (J)		
3/17/2021				0.0022	0.00057	
3/18/2021	<0.0005	0.0015	<0.0005			0.00019 (J)
8/18/2021	<0.0005					0.00017 (J)
8/19/2021		0.0014	<0.0005	0.0021	0.00012 (J)	

# Time Series

Constituent: Cadmium (mg/L) Analysis Run 1/10/2022 1:00 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

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	MW-34D	MW-35	MW-37D	MW-51
6/18/2020	<0.0005	0.00053 (J)	<0.0005	
9/21/2020		0.001 (J)		
9/23/2020	<0.0005		<0.0005	
2/11/2021			<0.0005	
2/15/2021		0.0017 (J)		
3/12/2021			<0.0005	
3/19/2021		0.0018		
8/16/2021	0.00023 (J)			
8/18/2021		0.0015	<0.0005	0.00094

# Time Series

Constituent: Calcium (mg/L) Analysis Run 1/10/2022 1:00 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-4 (bg)	HGWA-42D (bg)	HGWA-43D (bg)
5/19/2016	138	22.9	76.2	48.4		
7/11/2016	97.2	22.3		73		
7/12/2016			61.5			
8/30/2016	97.5	26.4	65.1	85.7		
10/19/2016	99.2	21.7	73.2	89.7		
12/6/2016	105	18.2	74.9	80		
1/24/2017	95.7	18.5	69.6	30.8		
3/21/2017	106	18.6	75.7	34		
5/22/2017	107	17.8	71.5			
5/23/2017				43		
10/3/2017	102	20.2	76.3	46.9		
6/4/2018	124	19.1	73.4	81.9		
10/1/2018	108	20.5 (J)	80.9	22 (J)		
4/1/2019			80.5			
4/2/2019	132	22.5 (J)		76		
9/23/2019	118	19.5	71			
9/24/2019				36.6		
3/25/2020	127	23	89.8			
3/26/2020				14.9		
9/15/2020	103	21.1	73.1	20.4		
9/16/2020						56
9/17/2020				43.8		
11/10/2020						63.3
11/11/2020				44.4		
12/15/2020				47.3		62.6
1/19/2021						60.1
1/20/2021				41.8		
3/10/2021	111			5.9	43.4	
3/11/2021		43.8	83.8			59.6
8/11/2021	113					61
8/12/2021		21.9	84	5.4	43.6	

# Time Series

Constituent: Calcium (mg/L) Analysis Run 1/10/2022 1:00 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-44D (bg)	HGWA-5 (bg)	HGWA-6 (bg)	HGWC-14	HGWC-15	HGWC-16
5/19/2016		35.5				
5/20/2016			56.1			
5/23/2016				664	184	146
7/11/2016		35.4	49.3			
7/12/2016				528	186	142
8/30/2016		28	53.9			
9/1/2016				586	189	141
10/20/2016		26.7	50.7			
10/24/2016				564	200	
10/25/2016						138
12/7/2016				590	203	146
12/8/2016		23.5	49.2			
1/24/2017		24.5	48.3			
1/26/2017				558	212	139
3/21/2017		30.8	51.3			
3/22/2017						150
3/23/2017				652	229	
5/23/2017		24.2	49.1			
5/24/2017				617	265	153
10/3/2017		29	55.1			
10/4/2017				644	230	156
6/5/2018		27.8	54.5			
6/6/2018				606	250	177
10/2/2018		28.9	54.7			
10/3/2018				558	234	160
4/2/2019		26.3	49.7			
4/4/2019					214	196
4/5/2019				606		
9/24/2019		29.3	52.5	507	202	
9/25/2019						185
3/25/2020			58.1			
3/26/2020		27.8			240	
3/30/2020				600		208
9/15/2020		27.9	49.9			
9/16/2020	30					
9/17/2020					188	190
9/18/2020				623		
11/10/2020	33.6					
12/15/2020	28.7					
1/19/2021	33					
3/10/2021	18.3					
3/11/2021		28.3	53.1			
3/16/2021					196	
3/17/2021				572		198
8/12/2021		32	54.7			
8/13/2021	28.9					
8/18/2021				583		
8/19/2021					203	207



# Time Series

Constituent: Calcium (mg/L) Analysis Run 1/10/2022 1:00 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWC-17	HGWC-18	MW-21D	MW-22	MW-23D	MW-33
5/23/2016	225					
5/24/2016		403				
7/12/2016	199	328				
9/1/2016	213	379				
10/25/2016	206	362				
12/7/2016	212					
12/8/2016		366				
1/26/2017	198	394				
3/22/2017	239					
3/23/2017		440				
5/25/2017	292	492				
10/4/2017	305	470				
6/5/2018		425				
6/6/2018	299					
10/3/2018	286	421				
4/4/2019			427			
4/5/2019	340	400		178	352	
9/25/2019	305	437	420			
9/26/2019					306	
9/27/2019				202		
1/22/2020						638
3/27/2020				212		
3/31/2020	328	418				
4/1/2020			438		342	567
6/17/2020			434			561
9/15/2020		430				
9/16/2020	277					
9/17/2020				203	361	
9/21/2020			428			562
3/17/2021				200	341	
3/18/2021	266	407	382			574
8/18/2021	281					549
8/19/2021		416	365	203	307	

# Time Series

Constituent: Calcium (mg/L) Analysis Run 1/10/2022 1:00 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

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	MW-34D	MW-35	MW-37D	MW-51
6/18/2020	584	517	165	
9/21/2020		503		
9/23/2020	556		158	
3/12/2021			170	
3/19/2021		552		
8/16/2021	554			
8/18/2021		546	180	532

# Time Series

Constituent: Chloride (mg/L) Analysis Run 1/10/2022 1:00 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-4 (bg)	HGWA-42D (bg)	HGWA-43D (bg)
5/19/2016	9.94	6.14	5.93	4.56		
7/11/2016	6.3	5.9		5		
7/12/2016			6.2			
8/30/2016	6	6.2	6.4	4.9		
10/19/2016	5.8	6.1	6.5	4.6		
12/6/2016	5.4	6	7.2	4.5		
1/24/2017	5.2	6.1	6.4	4.7		
3/21/2017	4.6	5.9	7.5	4.3		
5/22/2017	4.6	5.9	6.5			
5/23/2017				4.5		
10/3/2017	5.6	6.3	6.5	4.8		
6/4/2018	13.1	6.1	6.3	4.5		
10/1/2018	6.6	6.4	6.4	3.8		
4/1/2019			6.5			
4/2/2019	20.3	5.8		4.4		
9/23/2019	17.7	5.1	5.9			
9/24/2019				3.6		
3/25/2020	20.4	5.2	6.1			
3/26/2020				3.4		
9/15/2020	13.4	5	6	3.3		
9/16/2020						4.1
9/17/2020				5.8		
11/10/2020						4.4
11/11/2020				3.1		
12/15/2020				3.2		4.7
1/19/2021						4.1
1/20/2021				2.8		
3/10/2021	7.4			2.9	3	
3/11/2021		5.1	5.9			4.5
8/11/2021	9.6					3.5
8/12/2021		5.2	4.8	2.4	2.6	

# Time Series

Constituent: Chloride (mg/L) Analysis Run 1/10/2022 1:00 PM  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-44D (bg)	HGWA-5 (bg)	HGWA-6 (bg)	HGWC-14	HGWC-15	HGWC-16
5/19/2016		1.57				
5/20/2016			1.35			
5/23/2016				659	209	25.8
7/11/2016		2	1.7			
7/12/2016				620	190	34
8/30/2016		2	1.6			
9/1/2016				510	200	34
10/20/2016		2.2	1.6			
10/24/2016				110	200	
10/25/2016						35
12/7/2016				510	240	38
12/8/2016		2	1.6			
1/24/2017		1.6	1.9			
1/26/2017				640	260	41
3/21/2017		2	1.3			
3/22/2017						41
3/23/2017				600	280	
5/23/2017		1.7	1.2			
5/24/2017				510	240	44
10/3/2017		1.7	2.1			
10/4/2017				420	210	50
6/5/2018		1.6	1.2			
6/6/2018				357	196	50.6
10/2/2018		2.4	1.7			
10/3/2018				368	200	49.9
4/2/2019		1.7	1.6			
4/4/2019					138	76.8
4/5/2019				227		
9/24/2019		1.7	1.3	188	120	
9/25/2019						84.4
3/25/2020			1.2			
3/26/2020		1.4			142	
3/30/2020				236		80.2
9/15/2020		1.7	1.2			
9/16/2020	7.2					
9/17/2020					108	99.3
9/18/2020				288		
11/10/2020	7.8					
12/15/2020	9.4					
1/19/2021	9.5					
3/10/2021	12.3					
3/11/2021		1.4	1.2			
3/16/2021					103	
3/17/2021				233		93.8
8/12/2021		1.4	0.94 (J)			
8/13/2021	39.9					
8/18/2021				141		
8/19/2021					89.9	90.1

# Time Series

Constituent: Chloride (mg/L) Analysis Run 1/10/2022 1:00 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWC-17	HGWC-18	MW-21D	MW-22	MW-23D	MW-33
5/23/2016	94					
5/24/2016		280				
7/12/2016	100	300				
9/1/2016	95	270				
10/25/2016	98	290				
12/7/2016	89					
12/8/2016		300				
1/26/2017	99	340				
3/22/2017	100					
3/23/2017		350				
5/25/2017	99	290				
10/4/2017	130	260				
6/5/2018		261				
6/6/2018	166					
10/3/2018	193	302				
4/4/2019			299			
4/5/2019	195	217		131	195	
9/25/2019	139	181	245			
9/26/2019					204	
9/27/2019				176		
1/22/2020						231
3/27/2020				141		
3/31/2020	161	126				
4/1/2020			236		166	242
6/17/2020			223			250
9/15/2020		150				
9/16/2020	156					
9/17/2020				153	171	
9/21/2020			236			273
3/17/2021				127	151	
3/18/2021	138	90.2	208			199
8/18/2021	90.7					118
8/19/2021		95.8	173	118	137	

# Time Series

Constituent: Chloride (mg/L) Analysis Run 1/10/2022 1:00 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

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	MW-34D	MW-35	MW-37D	MW-51
6/18/2020	259	229	151	
9/21/2020		257		
9/23/2020	294		166	
3/12/2021			124	
3/19/2021		250		
8/16/2021	264			
8/18/2021		149	122	123

# Time Series

Constituent: Chromium (mg/L) Analysis Run 1/10/2022 1:00 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-4 (bg)	HGWA-42D (bg)	HGWA-43D (bg)
5/19/2016	<0.005	<0.005	<0.005	<0.005		
7/11/2016	<0.005	<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	<0.005		
12/6/2016	<0.005	<0.005	<0.005	<0.005		
1/24/2017	<0.005	<0.005	<0.005	<0.005		
3/21/2017	0.0005 (J)	<0.005	<0.005	0.0004 (J)		
5/22/2017	<0.005	<0.005	0.0007 (J)			
5/23/2017				<0.005		
4/2/2018	<0.005	<0.005		<0.005		
4/3/2018			<0.005			
3/11/2019				<0.005		
3/12/2019	<0.005	<0.005	<0.005			
4/1/2019			<0.005			
4/2/2019	<0.005	0.0079 (J)		0.019		
9/23/2019	<0.005	0.00058 (J)	<0.005			
9/24/2019				<0.005		
3/2/2020	<0.005	0.00041 (J)	<0.005	0.0004 (J)		
3/25/2020	0.00072 (J)	<0.005	<0.005			
3/26/2020				<0.005		
9/15/2020	<0.005	<0.005	<0.005	<0.005		
9/16/2020						<0.005
9/17/2020				<0.005		
11/10/2020						<0.005
11/11/2020					0.00063 (J)	
12/15/2020					0.0025 (J)	<0.005
1/19/2021						<0.005
1/20/2021					<0.005	
2/8/2021	<0.005			<0.005	0.00078 (J)	
2/9/2021		<0.005	<0.005			0.00095 (J)
3/10/2021	<0.005			<0.005	<0.005	
3/11/2021		<0.005	<0.005			<0.005
8/11/2021	<0.005					<0.005
8/12/2021		<0.005	<0.005	<0.005	<0.005	

# Time Series

Constituent: Chromium (mg/L) Analysis Run 1/10/2022 1:00 PM  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-44D (bg)	HGWA-5 (bg)	HGWA-6 (bg)	HGWC-14	HGWC-15	HGWC-16
5/19/2016		<0.005				
5/20/2016			<0.005			
5/23/2016				<0.005	<0.005	<0.005
7/11/2016		<0.005	<0.005			
7/12/2016				<0.005	<0.005	<0.005
8/30/2016		<0.005	<0.005			
9/1/2016				<0.005	<0.005	<0.005
10/20/2016		<0.005	<0.005			
10/24/2016				<0.005	<0.005	
10/25/2016						<0.005
12/7/2016				<0.005	<0.005	<0.005
12/8/2016		<0.005	<0.005			
1/24/2017		<0.005	<0.005			
1/26/2017				<0.005	<0.005	<0.005
3/21/2017		<0.005	0.0007 (J)			
3/22/2017						0.0021 (J)
3/23/2017				<0.005	0.0005 (J)	
5/23/2017		<0.005	<0.005			
5/24/2017				<0.005	<0.005	<0.005
4/3/2018		<0.005	<0.005		<0.005	<0.005
4/4/2018				<0.005		
3/12/2019		<0.005	<0.005			
3/14/2019				<0.005	<0.005	
3/15/2019						<0.005
4/2/2019		<0.005	<0.005			
4/4/2019					<0.005	<0.005
4/5/2019				<0.005		
9/24/2019		<0.005	<0.005	<0.005	0.00041 (J)	
9/25/2019						<0.005
3/2/2020		0.0005 (J)	<0.005			
3/3/2020				0.00042 (J)	<0.005	0.00071 (J)
3/25/2020			<0.005			
3/26/2020		<0.005			<0.005	
3/30/2020				0.00066 (J)		0.0004 (J)
9/15/2020		<0.005	<0.005			
9/16/2020	0.0012 (J)					
9/17/2020					<0.005	<0.005
9/18/2020				<0.005		
11/10/2020	0.00089 (J)					
12/15/2020	0.00072 (J)					
1/19/2021	0.0011 (J)					
2/9/2021	0.00066 (J)	<0.005	<0.005			
2/10/2021						<0.005
2/11/2021				<0.005		
2/12/2021					<0.005	
3/10/2021	<0.005					
3/11/2021		0.0011 (J)	<0.005			
3/16/2021					0.0012 (J)	
3/17/2021				<0.005		<0.005
8/12/2021		<0.005	<0.005			
8/13/2021	0.0016 (J)					
8/18/2021				<0.005		



# Time Series

Constituent: Chromium (mg/L) Analysis Run 1/10/2022 1:00 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

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	HGWA-44D (bg)	HGWA-5 (bg)	HGWA-6 (bg)	HGWC-14	HGWC-15	HGWC-16
8/19/2021					<0.005	<0.005

# Time Series

Constituent: Chromium (mg/L) Analysis Run 1/10/2022 1:00 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWC-17	HGWC-18	MW-21D	MW-22	MW-23D	MW-33
5/23/2016	<0.005					
5/24/2016		<0.005				
7/12/2016	<0.005	<0.005				
9/1/2016	<0.005	<0.005				
10/25/2016	<0.005	<0.005				
12/7/2016	<0.005					
12/8/2016		<0.005				
1/26/2017	<0.005	<0.005				
3/22/2017	<0.005					
3/23/2017		0.0005 (J)				
5/25/2017	<0.005	<0.005				
4/3/2018	<0.005	<0.005				
3/14/2019		<0.005			<0.005	
3/15/2019	<0.005		<0.005	<0.005		
4/4/2019			<0.005			
4/5/2019	<0.005	<0.005		<0.005	<0.005	
9/25/2019	<0.005	<0.005	<0.005			
9/26/2019					<0.005	
9/27/2019				0.0004 (J)		
3/2/2020				<0.005	<0.005	
3/3/2020	0.0018 (J)	0.0004 (J)	<0.005			
3/27/2020				<0.005		
3/31/2020	<0.005	<0.005				
4/1/2020			<0.005		0.00086 (J)	0.00069 (J)
6/17/2020			0.00057 (J)			<0.005
9/15/2020		0.00063 (J)				
9/16/2020	<0.005					
9/17/2020				<0.005	<0.005	
9/21/2020			<0.005			<0.005
2/11/2021	0.00074 (J)	<0.005	<0.005			
2/12/2021					<0.005	<0.005
2/15/2021				<0.005		
3/17/2021				0.00075 (J)	0.00083 (J)	
3/18/2021	0.00069 (J)	<0.005	0.00074 (J)			<0.005
8/18/2021	<0.005					<0.005
8/19/2021		<0.005	<0.005	<0.005	<0.005	

# Time Series

Constituent: Chromium (mg/L) Analysis Run 1/10/2022 1:00 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

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	MW-34D	MW-35	MW-37D	MW-51
6/18/2020	0.0059 (J)	<0.005	0.0048 (J)	
9/21/2020		0.00079 (J)		
9/23/2020	<0.005		<0.005	
2/11/2021			0.0014 (J)	
2/15/2021		<0.005		
3/12/2021			<0.005	
3/19/2021		0.00083 (J)		
8/16/2021	<0.005			
8/18/2021		<0.005	<0.005	<0.005

# Time Series

Constituent: Cobalt (mg/L) Analysis Run 1/10/2022 1:00 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-4 (bg)	HGWA-42D (bg)	HGWA-43D (bg)
5/19/2016	<0.005	0.0293	<0.005	<0.005		
7/11/2016	0.0004 (J)	0.0267		<0.005		
7/12/2016			<0.005			
8/30/2016	<0.005	0.028	<0.005	<0.005		
10/19/2016	<0.005	0.0201	<0.005	<0.005		
12/6/2016	<0.005	0.0184	<0.005	<0.005		
1/24/2017	<0.005	0.0206	<0.005	<0.005		
3/21/2017	<0.005	0.0251	<0.005	<0.005		
5/22/2017	<0.005	0.0263	<0.005			
5/23/2017				<0.005		
4/2/2018	<0.005	0.019		<0.005		
4/3/2018			<0.005			
6/4/2018	<0.005	0.025	<0.005	<0.005		
10/1/2018	<0.005	0.026	<0.005	<0.005		
3/11/2019				<0.005		
3/12/2019	<0.005	0.017	<0.005			
4/1/2019			<0.005			
4/2/2019	<0.005	0.019		<0.005		
9/23/2019	<0.005	0.038	<0.005			
9/24/2019				<0.005		
3/2/2020	<0.005	0.019	<0.005	0.00063 (J)		
3/25/2020	<0.005	0.02	<0.005			
3/26/2020				0.00058 (J)		
9/15/2020	<0.005	0.021	<0.005	<0.005		
9/16/2020						<0.005
9/17/2020				<0.005		
11/10/2020						<0.005
11/11/2020				<0.005		
12/15/2020				0.00049 (J)		<0.005
1/19/2021						<0.005
1/20/2021				<0.005		
2/8/2021	<0.005			0.00074 (J)	<0.005	
2/9/2021		0.02	<0.005			<0.005
3/10/2021	<0.005			0.00065 (J)	<0.005	
3/11/2021		0.013	<0.005			<0.005
8/11/2021	<0.005					<0.005
8/12/2021		0.022	<0.005	0.0007 (J)	<0.005	

# Time Series

Constituent: Cobalt (mg/L) Analysis Run 1/10/2022 1:00 PM  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-44D (bg)	HGWA-5 (bg)	HGWA-6 (bg)	HGWC-14	HGWC-15	HGWC-16
5/19/2016		<0.005				
5/20/2016			<0.005			
5/23/2016				<0.005	0.0419 (J)	<0.005
7/11/2016		0.001 (J)	<0.005			
7/12/2016				0.0232	0.0393	<0.005
8/30/2016		0.001 (J)	<0.005			
9/1/2016				0.0248	0.045	<0.005
10/20/2016		0.0008 (J)	<0.005			
10/24/2016				0.0253	0.0557	
10/25/2016						<0.005
12/7/2016				0.0269	0.0536	<0.005
12/8/2016		0.0006 (J)	<0.005			
1/24/2017		0.0006 (J)	<0.005			
1/26/2017				0.0294	0.055	<0.005
3/21/2017		0.0008 (J)	<0.005			
3/22/2017						<0.005
3/23/2017				0.0311	0.0715	
5/23/2017		0.0006 (J)	<0.005			
5/24/2017				0.0279	0.0446	<0.005
4/3/2018		<0.005	<0.005		0.032	<0.005
4/4/2018				0.025		
6/5/2018		<0.005	<0.005			
6/6/2018				0.027	0.032	<0.005
10/2/2018		<0.005	<0.005			
10/3/2018				0.023	0.051	<0.005
3/12/2019		0.00099 (J)	<0.005			
3/14/2019				0.025	0.038	
3/15/2019						<0.005
4/2/2019		0.0012 (J)	<0.005			
4/4/2019					0.035	0.00028 (J)
4/5/2019				0.021		
9/24/2019		0.00063 (J)	<0.005	0.026	0.022	
9/25/2019						<0.005
3/2/2020		0.00093 (J)	<0.005			
3/3/2020				0.029	0.03	0.00037 (J)
3/25/2020			<0.005			
3/26/2020		0.0013 (J)			0.022	
3/30/2020				0.028		<0.005
9/15/2020		0.00047 (J)	<0.005			
9/16/2020	<0.005					
9/17/2020					0.026	<0.005
9/18/2020				0.027		
11/10/2020	<0.005					
12/15/2020	<0.005					
1/19/2021	<0.005					
2/9/2021	<0.005	0.00071 (J)	<0.005			
2/10/2021						<0.005
2/11/2021				0.033		
2/12/2021					0.019	
3/10/2021	<0.005					
3/11/2021		0.0013 (J)	<0.005			
3/16/2021					0.018	

# Time Series

Constituent: Cobalt (mg/L) Analysis Run 1/10/2022 1:00 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

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	HGWA-44D (bg)	HGWA-5 (bg)	HGWA-6 (bg)	HGWC-14	HGWC-15	HGWC-16
3/17/2021				0.034		<0.005
8/12/2021		<0.005	<0.005			
8/13/2021	<0.005					
8/18/2021				0.033		
8/19/2021					0.011	<0.005

# Time Series

Constituent: Cobalt (mg/L) Analysis Run 1/10/2022 1:00 PM  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWC-17	HGWC-18	MW-21D	MW-22	MW-23D	MW-33
5/23/2016	0.0167					
5/24/2016		0.17 (J)				
7/12/2016	0.0148	0.168				
9/1/2016	0.0151	0.18				
10/25/2016	0.0141	0.188				
12/7/2016	0.0141					
12/8/2016		0.206				
1/26/2017	0.0154	0.195				
3/22/2017	0.0169					
3/23/2017		0.223				
5/25/2017	0.0154	0.209				
4/3/2018	0.016	0.19				
6/5/2018		0.19				
6/6/2018	0.018					
10/3/2018	0.016	0.19				
3/14/2019		0.16			0.0013 (J)	
3/15/2019	0.017		<0.005	0.028		
4/4/2019			0.00034 (J)			
4/5/2019	0.016	0.14		0.022	0.0012 (J)	
9/25/2019	0.015	0.18	<0.005			
9/26/2019					0.00098 (J)	
9/27/2019				0.035		
1/22/2020						0.052
3/2/2020				0.043	0.0011 (J)	
3/3/2020	0.016	0.15	<0.005			
3/27/2020				0.025		
3/31/2020	0.016	0.16				
4/1/2020			<0.005		0.0011 (J)	0.058
6/17/2020			<0.005			0.053
9/15/2020		0.16				
9/16/2020	0.013					
9/17/2020				0.029	0.00096 (J)	
9/21/2020			<0.005			0.047
2/11/2021	0.012	0.14	<0.005			
2/12/2021					0.001 (J)	0.055
2/15/2021				0.038		
3/17/2021				0.039	0.0011 (J)	
3/18/2021	0.012	0.14	<0.005			0.057
8/18/2021	0.009					0.054
8/19/2021		0.15	<0.005	0.022	0.00089 (J)	

# Time Series

Constituent: Cobalt (mg/L) Analysis Run 1/10/2022 1:00 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

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	MW-34D	MW-35	MW-37D	MW-51
6/18/2020	0.011	0.091	0.0015 (J)	
9/21/2020		0.084		
9/23/2020	0.0056		<0.005	
2/11/2021			0.00048 (J)	
2/15/2021		0.095		
3/12/2021			<0.005	
3/19/2021		0.1		
8/16/2021	0.0093			
8/18/2021		0.085	<0.005	0.03



# Time Series

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 1/10/2022 1:00 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-4 (bg)	HGWA-42D (bg)	HGWA-43D (bg)
5/19/2016	0.397 (U)	0.627 (U)	0.342 (U)	0.662 (U)		
7/11/2016	0.738 (U)	1.38		1.19		
7/12/2016			0.499 (U)			
8/30/2016	0.581 (U)	1.05 (U)	0.976 (U)	0.847 (U)		
10/19/2016	0.213 (U)	1.11 (U)	0.626 (U)	2.34		
12/6/2016	0.444 (U)	0.741 (U)	0.805 (U)	0.925 (U)		
1/24/2017	0.373 (U)	0.908 (U)	0.336 (U)	0.607 (U)		
3/21/2017	0.816 (U)	0.567 (U)	0.358 (U)	0.074 (U)		
5/22/2017	0.554 (U)	0.638 (U)	0.744 (U)			
5/23/2017				0.55 (U)		
4/2/2018	0.405 (U)	0.761 (U)		0.371 (U)		
4/3/2018			0.684 (U)			
6/4/2018	1.13 (U)	0.975 (U)	0.0291 (U)	0.622 (U)		
10/1/2018	0.132 (U)	0.434 (U)	0.781 (U)	0.132 (U)		
3/11/2019				0.781 (U)		
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)		0.494 (U)		
9/24/2019				0.455 (U)		
9/30/2019	0.306 (U)	1.04 (U)	0.384 (U)			
3/2/2020	0.61 (U)	1.58	0.249 (U)	0.937 (U)		
3/25/2020	4.36	0.621 (U)	0.833 (U)			
3/26/2020				0.578 (U)		
9/15/2020	0.748 (U)	0.124 (U)	0.161 (U)	0.179 (U)		
9/16/2020						0.531 (U)
9/17/2020				0.665 (U)		
11/10/2020						0.788 (U)
11/11/2020				1.28		
12/15/2020				0.261 (U)		1.04 (U)
1/19/2021						0.685 (U)
1/20/2021				0.845 (U)		
2/8/2021	0.223 (U)			0.558 (U)	0.429 (U)	
2/9/2021		0.721 (U)	0.447 (U)			0.138 (U)
3/10/2021	0 (U)			0.281 (U)	1.21	
3/11/2021		0.737 (U)	0.128 (U)			1.51 (U)
8/11/2021	0.115 (U)					0.394 (U)
8/12/2021		0.746 (U)	0.389 (U)	0.359 (U)	0.11 (U)	

# Time Series

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 1/10/2022 1:00 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-44D (bg)	HGWA-5 (bg)	HGWA-6 (bg)	HGWC-14	HGWC-15	HGWC-16
5/19/2016		0.685 (U)				
5/20/2016			0.843 (U)			
5/23/2016				0.568 (U)	0.171 (U)	
7/1/2016						0 (U)
7/11/2016		1.68	0.494 (U)			
7/12/2016				1.31	0.611 (U)	0.182 (U)
8/30/2016		2.42	0.946 (U)			
9/1/2016				1.64	0.766 (U)	1.23
10/20/2016		0.351 (U)	0.664 (U)			
10/24/2016				1.88	0.969	
10/25/2016						1.05 (U)
12/7/2016				1.35	0.302 (U)	1.11 (U)
12/8/2016		0.905 (U)	0.421 (U)			
1/24/2017		0.0774 (U)	0.965 (U)			
1/26/2017				2.1	0.626 (U)	1.29 (U)
3/21/2017		0.0599 (U)	0.139 (U)			
3/22/2017						0.453 (U)
3/23/2017				1.17	0.662 (U)	
5/23/2017		0.477 (U)	0.308 (U)			
5/24/2017				1 (U)	0.202 (U)	1.05 (U)
4/3/2018		0.858 (U)	0.828 (U)		0.384 (U)	0.783 (U)
4/4/2018				1.72		
6/5/2018		0.767 (U)	0.424 (U)			
6/6/2018				1.31 (U)	1.32 (U)	0.595 (U)
10/2/2018		0.489 (U)	0.643 (U)			
10/3/2018				1.48	0.858 (U)	1.03 (U)
3/12/2019		0.833 (U)	0.982 (U)			
3/14/2019				1.5	0.462 (U)	
3/15/2019						0.591 (U)
4/2/2019		1.07 (U)	0.621 (U)			
4/4/2019					0.512 (U)	0.96 (U)
4/5/2019				1.43 (U)		
9/24/2019		0.201 (U)	0.874 (U)	1.17	0.582 (U)	
9/25/2019						0.643 (U)
3/2/2020		0.547 (U)	0.676 (U)			
3/3/2020				1.84	1.43	1.32 (U)
3/25/2020			0.509 (U)			
3/26/2020		0.907 (U)			0.855 (U)	
3/30/2020				1.08 (U)		0.288 (U)
9/15/2020		0.601 (U)	1.36 (U)			
9/16/2020	0.422 (U)					
9/17/2020					0.395 (U)	1.1 (U)
9/18/2020				1.8 (U)		
11/10/2020	0.293 (U)					
12/15/2020	0.7 (U)					
1/19/2021	0.79 (U)					
2/9/2021	0.486 (U)	0.37 (U)	0.324 (U)			
2/10/2021						0.773 (U)
2/11/2021				0.73 (U)		
2/12/2021					1.65	
3/10/2021	0.811 (U)					
3/11/2021		1.07 (U)	0.601 (U)			

# Time Series

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 1/10/2022 1:00 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

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	HGWA-44D (bg)	HGWA-5 (bg)	HGWA-6 (bg)	HGWC-14	HGWC-15	HGWC-16
3/16/2021					0.801 (U)	
3/17/2021				1.84		0.228 (U)
8/12/2021		0.922 (U)	0.0804 (U)			
8/13/2021	1.2					
8/18/2021				0.858 (U)		
8/19/2021					0.527 (U)	0.668 (U)

# Time Series

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 1/10/2022 1:00 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWC-17	HGWC-18	MW-21D	MW-22	MW-23D	MW-33
5/23/2016	0.618 (U)					
5/24/2016		1.82				
7/12/2016	0.867	1.76				
9/1/2016	0.857 (U)	1.51				
10/25/2016	1.11 (U)	2.69				
12/7/2016	0.964 (U)					
12/8/2016		2.21				
1/26/2017	0.612 (U)	2.26				
3/22/2017	0.437 (U)					
3/23/2017		1.81				
5/25/2017	1.21 (U)	1.63				
4/3/2018	0.409 (U)	2.53				
6/5/2018		1.91				
6/6/2018	0.772 (U)					
10/3/2018	1.08 (U)	2.22				
3/14/2019		1.37 (U)			0.872 (U)	
3/15/2019	0.917 (U)		0.972 (U)	0.977		
4/4/2019			0.791 (U)			
4/5/2019	1.07 (U)	2.22		1.06 (U)	0.932 (U)	
9/25/2019	1.54	2.77	0.751 (U)			
9/26/2019					1.25	
9/27/2019				1.44 (U)		
3/2/2020				0.872 (U)	0.964 (U)	
3/3/2020	1.33	2.35	1.94			
3/27/2020				0.96 (U)		
3/31/2020	0.591 (U)	2.7				
4/1/2020			0.758 (U)		0.914 (U)	2.57
6/17/2020			0.691 (U)			1.43 (U)
9/15/2020		1.65				
9/16/2020	0.295 (U)					
9/17/2020				0.0879 (U)	0.32 (U)	
9/21/2020			0.436 (U)			2.53
2/11/2021	0.831 (U)	1.11	0.317 (U)			
2/12/2021					1.21 (U)	2.26
2/15/2021				0.215 (U)		
3/17/2021				0.981 (U)	0.579 (U)	
3/18/2021	0.856 (U)	1.63	0.5 (U)			0.733 (U)
8/18/2021	0.548 (U)					1.77
8/19/2021		1.45	1.17	0.689 (U)	0.69 (U)	

# Time Series

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 1/10/2022 1:00 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

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	MW-34D	MW-35	MW-37D	MW-51
6/18/2020	1.36	2.02	1.79	
9/21/2020		3.85		
9/23/2020	0.563 (U)		0.98 (U)	
2/11/2021			0.12 (U)	
2/15/2021		1.52		
3/12/2021			0.578 (U)	
3/19/2021		0.524 (U)		
8/16/2021	0.693 (U)			
8/18/2021		1.67	1.31	0.973 (U)

# Time Series

Constituent: Field pH (s.u.) Analysis Run 1/10/2022 1:00 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-4 (bg)	HGWA-42D (bg)	HGWA-43D (bg)
5/19/2016	7.27	5.81	7.45	6.51		
7/11/2016	7.06	5.68		6.65		
7/12/2016			7.32			
8/30/2016	7.28	5.63	7.43	7.14		
10/19/2016	7.02	5.46	7.03	7.08		
12/6/2016	7.09	5.38	7.08	7		
1/24/2017	7.2	5.37	7.39	6.16		
3/21/2017	7.01	4.9	6.83	6.07		
5/22/2017	7.11	5.2	7.02			
5/23/2017				6.28		
10/3/2017	7.21	5.3	7.47	6.45		
4/2/2018	7.1	5.4		6.23		
4/3/2018			7.38			
6/4/2018	7.06	5.27	7.38	6.82		
10/1/2018	7.09	5.31	7.13	5.73		
3/11/2019				6.27		
3/12/2019	7.03	5.42	7.29			
4/1/2019			7.16			
4/2/2019	6.86	5.41		6.66		
9/23/2019	7.02	5.33	7.3			
9/24/2019				6.16		
3/2/2020	7.1	5.43	7.12	5.63		
3/25/2020	6.95	5.36	7.4			
3/26/2020				5.77		
9/15/2020	7.15	5.22	7.29	5.75		
9/16/2020						7.52
9/17/2020				7.62		
11/10/2020						7.27
11/11/2020				7.68		
12/15/2020				7.64		7.39
1/19/2021						7.39
1/20/2021					7.68	
2/8/2021	7.11			4.94	7.64	
2/9/2021		5.42	7.23			7.44
3/10/2021	6.95			5.28	7.7	
3/11/2021		5.8	7.33			7.46
8/11/2021	6.98					7.4
8/12/2021		5.05	7.31	5.26	7.7	

# Time Series

Constituent: Field pH (s.u.) Analysis Run 1/10/2022 1:00 PM  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-44D (bg)	HGWA-5 (bg)	HGWA-6 (bg)	HGWC-14	HGWC-15	HGWC-16
5/19/2016		6.62				
5/20/2016			7.58			
5/23/2016				4.56	6.17	7.15
7/11/2016		6.54	7.32			
7/12/2016				4.49	6.17	7.1
8/30/2016		6.38	7.69			
9/1/2016				4.54	6.22	7.29
10/20/2016		6.52	7.43			
10/24/2016				4.63	5.97	
10/25/2016						7.03
12/7/2016				4.6	5.87	6.85
12/8/2016		6.5	7.56			
1/24/2017		6.59	7.52			
1/26/2017				4.8	6.05	7.07
3/21/2017		6.55	7.4			
3/22/2017						7.15
3/23/2017				4.57	5.79	
5/23/2017		6.5	7.53			
5/24/2017				4.61	6.01	7.11
10/3/2017		6.63	7.51			
10/4/2017				4.74	5.82	7.17
4/3/2018		6.59	7.53		5.98	7.07
4/4/2018				4.5		
6/5/2018		6.44	7.37			
6/6/2018				4.49	6.12	7
10/2/2018		6.35	7.36			
10/3/2018				4.67	5.92	6.94
3/12/2019		6.42	7.5			
3/14/2019				4.66	5.71	
3/15/2019						7.09
4/2/2019		6.38	7.46			
4/4/2019					5.66	6.95
4/5/2019				4.67		
9/24/2019		6.4	7.41	4.77	6.33	
9/25/2019						6.92
3/2/2020		6.8	7.67			
3/3/2020				4.77	6	7.1
3/25/2020			7.39			
3/26/2020		6.38			6.03	
3/30/2020				4.57		7.09
9/15/2020		6.33	7.37			
9/16/2020	7.83					
9/17/2020					6.11	7.11
9/18/2020				4.88		
11/10/2020	7.84					
12/15/2020	7.87					
1/19/2021	7.86					
2/9/2021	7.84	6.35	7.4			
2/10/2021						7.08
2/11/2021				4.84		
2/12/2021					5.99	
3/10/2021	7.92					

# Time Series

Constituent: Field pH (s.u.) Analysis Run 1/10/2022 1:00 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

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	HGWA-44D (bg)	HGWA-5 (bg)	HGWA-6 (bg)	HGWC-14	HGWC-15	HGWC-16
3/11/2021		6.48	7.56			
3/16/2021					6.08	
3/17/2021				4.72		7.19
8/12/2021		6.46	7.47			
8/13/2021	7.77					
8/18/2021				4.9		
8/19/2021					6.18	7.04



# Time Series

Constituent: Field pH (s.u.) Analysis Run 1/10/2022 1:00 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWC-17	HGWC-18	MW-21D	MW-22	MW-23D	MW-33
5/23/2016	6.4					
5/24/2016		4.83				
7/12/2016	6.09	4.58				
9/1/2016	6.35	4.51				
10/25/2016	6.23	4.53				
12/7/2016	6.23					
12/8/2016		4.56				
1/26/2017	6.24	4.61				
3/22/2017	6.25					
3/23/2017		4.63				
5/25/2017	6.27	4.69				
10/4/2017	6.18	4.58				
4/3/2018	6.22	4.54				
6/5/2018		4.57				
6/6/2018	6.22					
10/3/2018	6.23	4.41				
3/14/2019		4.39			6.68	
3/15/2019	6.32		6.81	5.95		
4/4/2019			6.7			
4/5/2019	6.26	4.5		5.96	6.66	
9/25/2019	6.28	4.54	6.54			
9/26/2019					6.64	
9/27/2019				5.81		
3/2/2020				5.97	7.05	
3/3/2020	6.35	4.55	6.72			
3/27/2020				5.71		
3/31/2020	6.28	4.43				
4/1/2020			6.9		6.8	4.35
6/17/2020			6.47			4.36
9/15/2020		4.47				
9/16/2020	6.35					
9/17/2020				5.66	6.71	
9/21/2020			6.92			4.48
2/11/2021	6.31	4.53	6.87			
2/12/2021					6.8	4.4
2/15/2021				5.48		
3/17/2021				5.57	6.86	
3/18/2021	6.43	4.54	6.95			4.27
8/18/2021	6.43					4.42
8/19/2021		4.43	6.85	6.05	6.72	

# Time Series

Constituent: Field pH (s.u.) Analysis Run 1/10/2022 1:00 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

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	MW-34D	MW-35	MW-37D	MW-51
6/17/2020	7.35	5.46	7.78	
9/21/2020		5.4		
9/23/2020	7.05		7.62	
2/11/2021			7.42	
2/15/2021		4.82		
3/12/2021			7.5	
3/19/2021		4.89		
8/16/2021	7.05			
8/18/2021		4.89	7.52	6.19

# Time Series

Constituent: Fluoride (mg/L) Analysis Run 1/10/2022 1:00 PM  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-4 (bg)	HGWA-42D (bg)	HGWA-43D (bg)
5/19/2016	0.105 (J)	0.0303 (J)	0.0513 (J)	0.036 (J)		
7/11/2016	0.16 (J)	0.05 (J)		0.09 (J)		
7/12/2016			0.12 (J)			
8/30/2016	0.09 (J)	0.06 (J)	0.09 (J)	0.06 (J)		
10/19/2016	0.1 (J)	0.04 (J)	0.1 (J)	0.07 (J)		
12/6/2016	0.11 (J)	0.36	0.21 (J)	0.07 (J)		
1/24/2017	0.09 (J)	<0.1	0.06 (J)	<0.1		
3/21/2017	0.13 (J)	<0.1	0.005 (J)	<0.1		
5/22/2017	0.12 (J)	<0.1	0.05 (J)			
5/23/2017				0.01 (J)		
10/3/2017	0.13 (J)	<0.1	0.13 (J)	<0.1		
4/2/2018	<0.1	<0.1		<0.1		
4/3/2018			<0.1			
6/4/2018	0.074 (J)	<0.1	<0.1	0.097 (J)		
10/1/2018	<0.1	<0.1	<0.1	<0.1		
3/11/2019				0.035 (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)		<0.1		
9/23/2019	0.078 (J)	<0.1	<0.1			
9/24/2019				<0.1		
3/2/2020	0.076 (J)	<0.1	<0.1	<0.1		
3/25/2020	0.098 (J)	<0.1	<0.1			
3/26/2020				<0.1		
9/15/2020	0.082 (J)	<0.1	<0.1	<0.1		
9/16/2020						0.22
9/17/2020					0.2	
11/10/2020						0.19
11/11/2020					0.1	
12/15/2020					0.11	0.21
1/19/2021						0.16
1/20/2021					0.082 (J)	
2/8/2021	0.078 (J)			<0.1	0.096 (J)	
2/9/2021		<0.1	0.074 (J)			0.19
3/10/2021	0.079 (J)			<0.1	0.11	
3/11/2021		0.1	<0.1			0.2
8/11/2021	0.058 (J)					0.15
8/12/2021		<0.1	<0.1	<0.1	0.079 (J)	

# Time Series

Constituent: Fluoride (mg/L) Analysis Run 1/10/2022 1:00 PM  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-44D (bg)	HGWA-5 (bg)	HGWA-6 (bg)	HGWC-14	HGWC-15	HGWC-16
5/19/2016		0.08 (J)				
5/20/2016			0.065 (J)			
5/23/2016				<0.1	<0.1	0.038 (J)
7/11/2016		0.09 (J)	0.13 (J)			
7/12/2016				0.2 (J)	0.09 (J)	0.26 (J)
8/30/2016		0.08 (J)	0.07 (J)			
9/1/2016				0.08 (J)	0.22 (J)	0.42
10/20/2016		0.1 (J)	0.06 (J)			
10/24/2016				0.04 (J)	0.07 (J)	
10/25/2016						0.25 (J)
12/7/2016				0.11 (J)	0.23 (J)	0.23 (J)
12/8/2016		0.08 (J)	0.06 (J)			
1/24/2017		0.09 (J)	0.02 (J)			
1/26/2017				0.13 (J)	<0.1	0.02 (J)
3/21/2017		0.04 (J)	0.08 (J)			
3/22/2017						0.3
3/23/2017				0.28 (J)	0.12 (J)	
5/23/2017		0.04 (J)	0.006 (J)			
5/24/2017				0.32	0.31	0.46
10/3/2017		0.06 (J)	<0.1			
10/4/2017				0.52	0.6	<0.1
4/3/2018		<0.1	<0.1		<0.1	<0.1
4/4/2018				<0.1		
6/5/2018		0.083 (J)	0.055 (J)			
6/6/2018				0.25 (J)	0.17 (J)	<0.1
10/2/2018		<0.1	0.076 (J)			
10/3/2018				0.21 (J)	<0.1	<0.1
3/12/2019		0.079 (J)	0.061 (J)			
3/14/2019				0.24 (J)	<0.1	
3/15/2019						<0.1
4/2/2019		0.12 (J)	<0.1			
4/4/2019					0.066 (J)	<0.1
4/5/2019				0.66		
9/24/2019		0.058 (J)	<0.1	0.053 (J)	0.12 (J)	
9/25/2019						<0.1
3/2/2020		0.053 (J)	<0.1			
3/3/2020				<0.1	0.064 (J)	<0.1
3/25/2020			<0.1			
3/26/2020		0.066 (J)			<0.1	
3/30/2020				0.092 (J)		0.059 (J)
9/15/2020		0.061 (J)	<0.1			
9/16/2020	0.52					
9/17/2020					<0.1	<0.1
9/18/2020				<0.1		
11/10/2020	0.59					
12/15/2020	0.67					
1/19/2021	0.74					
2/9/2021	0.44	0.053 (J)	<0.1			
2/10/2021						0.21
2/11/2021				0.059 (J)		
2/12/2021					0.053 (J)	
3/10/2021	0.65					

# Time Series

Constituent: Fluoride (mg/L) Analysis Run 1/10/2022 1:00 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

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	HGWA-44D (bg)	HGWA-5 (bg)	HGWA-6 (bg)	HGWC-14	HGWC-15	HGWC-16
3/11/2021		0.06 (J)	0.17			
3/16/2021					<0.1	
3/17/2021				0.076 (J)		<0.1
8/12/2021		<0.1	<0.1			
8/13/2021	0.87					
8/18/2021				<0.1		
8/19/2021					<0.1	<0.1

# Time Series

Constituent: Fluoride (mg/L) Analysis Run 1/10/2022 1:00 PM  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWC-17	HGWC-18	MW-21D	MW-22	MW-23D	MW-33
5/23/2016	<0.1					
5/24/2016		<0.1				
7/12/2016	0.09 (J)	0.54				
9/1/2016	0.03 (J)	0.49				
10/25/2016	0.07 (J)	0.58				
12/7/2016	0.54					
12/8/2016		0.63				
1/26/2017	<0.1	0.71				
3/22/2017	0.07 (J)					
3/23/2017		0.57				
5/25/2017	0.42	0.54				
10/4/2017	0.93	0.95				
4/3/2018	<0.1	0.33				
6/5/2018		0.66				
6/6/2018	0.23 (J)					
10/3/2018	<0.1	0.32				
3/14/2019		0.88			<0.1	
3/15/2019	<0.1		<0.1	<0.1		
4/4/2019			0.1 (J)			
4/5/2019	0.16 (J)	0.37		0.13 (J)	0.14 (J)	
9/25/2019	0.081 (J)	0.73	<0.1			
9/26/2019					0.16 (J)	
9/27/2019				0.28 (J)		
1/22/2020						0.18 (J)
3/2/2020				<0.1	<0.1	
3/3/2020	<0.1	0.34	<0.1			
3/27/2020				<0.1		
3/31/2020	<0.1	0.45				
4/1/2020			<0.1		<0.1	0.15 (J)
6/17/2020			<0.1			0.25
9/15/2020		0.31				
9/16/2020	0.058 (J)					
9/17/2020				<0.1	<0.1	
9/21/2020			<0.1			0.14
2/11/2021	0.058 (J)	0.71	<0.1			
2/12/2021					<0.1	0.25
2/15/2021				<0.1		
3/17/2021				<0.1	<0.1	
3/18/2021	0.057 (J)	0.64	<0.1			0.4
8/18/2021	0.062 (J)					0.16
8/19/2021		0.31	<0.1	<0.1	<0.1	

# Time Series

Constituent: Fluoride (mg/L) Analysis Run 1/10/2022 1:00 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

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	MW-34D	MW-35	MW-37D	MW-51
6/18/2020	0.082 (J)	0.053 (J)	0.1	
9/21/2020		<0.1		
9/23/2020	<0.1		0.065 (J)	
2/11/2021			0.077 (J)	
2/15/2021		0.093 (J)		
3/12/2021			0.061 (J)	
3/19/2021		0.082 (J)		
8/16/2021	0.066 (J)			
8/18/2021		0.052 (J)	0.05 (J)	0.072 (J)

# Time Series

Constituent: Lead (mg/L) Analysis Run 1/10/2022 1:00 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-4 (bg)	HGWA-42D (bg)	HGWA-43D (bg)
5/19/2016	<0.001	<0.001	<0.001	<0.001		
7/11/2016	<0.001	<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	<0.001		
12/6/2016	<0.001	<0.001	<0.001	0.0002 (J)		
1/24/2017	<0.001	<0.001	<0.001	<0.001		
3/21/2017	<0.001	6E-05 (J)	0.0001 (J)	<0.001		
5/22/2017	<0.001	9E-05 (J)	<0.001			
5/23/2017				<0.001		
4/2/2018	<0.001	<0.001		<0.001		
4/3/2018			<0.001			
3/11/2019				<0.001		
3/12/2019	<0.001	<0.001	<0.001			
4/1/2019			<0.001			
4/2/2019	<0.001	<0.001		<0.001		
9/23/2019	7.8E-05 (J)	9.2E-05 (J)	<0.001			
9/24/2019				<0.001		
3/2/2020	4.8E-05 (J)	9.5E-05 (J)	<0.001	0.00026 (J)		
3/25/2020	<0.001	0.00011 (J)	<0.001			
3/26/2020				5.9E-05 (J)		
9/15/2020	<0.001	8E-05 (J)	4.2E-05 (J)	4.9E-05 (J)		
9/16/2020						5E-05 (J)
9/17/2020					6.2E-05 (J)	
11/10/2020						6.9E-05 (J)
11/11/2020					8.4E-05 (J)	
12/15/2020					0.00045 (J)	8.2E-05 (J)
1/19/2021						4.4E-05 (J)
1/20/2021					<0.001	
2/8/2021	5.8E-05 (J)			0.00024 (J)	8.1E-05 (J)	
2/9/2021		9.4E-05 (J)	<0.001			0.00029 (J)
3/10/2021	<0.001			0.00016 (J)	<0.001	
3/11/2021		7.6E-05 (J)	<0.001			9.4E-05 (J)
8/11/2021	<0.001					<0.001
8/12/2021		<0.001	<0.001	<0.001	<0.001	



# Time Series

Constituent: Lead (mg/L) Analysis Run 1/10/2022 1:00 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-44D (bg)	HGWA-5 (bg)	HGWA-6 (bg)	HGWC-14	HGWC-15	HGWC-16
5/19/2016		<0.001				
5/20/2016			<0.001			
5/23/2016				0.00182 (J)	<0.001	<0.001
7/11/2016		<0.001	<0.001			
7/12/2016				0.0015 (J)	<0.001	<0.001
8/30/2016		<0.001	<0.001			
9/1/2016				0.0016 (J)	<0.001	<0.001
10/20/2016		0.0002 (J)	<0.001			
10/24/2016				0.0016 (J)	<0.001	
10/25/2016						<0.001
12/7/2016				0.0018 (J)	<0.001	<0.001
12/8/2016		<0.001	<0.001			
1/24/2017		<0.001	<0.001			
1/26/2017				0.002 (J)	<0.001	0.0001 (J)
3/21/2017		<0.001	<0.001			
3/22/2017						0.0002 (J)
3/23/2017				0.0019 (J)	0.001 (J)	
5/23/2017		9E-05 (J)	0.0003 (J)			
5/24/2017				0.0016 (J)	0.0001 (J)	0.0001 (J)
4/3/2018		<0.001	<0.001		<0.001	<0.001
4/4/2018				<0.001		
3/12/2019		<0.001	<0.001			
3/14/2019				0.0014 (J)	<0.001	
3/15/2019						<0.001
4/2/2019		<0.001	<0.001			
4/4/2019					7.2E-05 (J)	0.00016 (J)
4/5/2019				0.0012 (J)		
9/24/2019		<0.001	7.1E-05 (J)	0.0013 (J)	0.0002 (J)	
9/25/2019						<0.001
3/2/2020		<0.001	<0.001			
3/3/2020				0.0017 (J)	5.3E-05 (J)	0.00016 (J)
3/25/2020			<0.001			
3/26/2020		<0.001			<0.001	
3/30/2020				0.0015 (J)		7.3E-05 (J)
9/15/2020		<0.001	<0.001			
9/16/2020	0.00021 (J)					
9/17/2020					<0.001	7.8E-05 (J)
9/18/2020				0.0012 (J)		
11/10/2020	0.0002 (J)					
12/15/2020	0.00011 (J)					
1/19/2021	0.00019 (J)					
2/9/2021	0.0001 (J)	<0.001	<0.001			
2/10/2021						9.4E-05 (J)
2/11/2021				0.0015 (J)		
2/12/2021					<0.001	
3/10/2021	<0.001					
3/11/2021		<0.001	<0.001			
3/16/2021					<0.001	
3/17/2021				0.0019		5.8E-05 (J)
8/12/2021		<0.001	<0.001			
8/13/2021	<0.001					
8/18/2021				0.0015		

# Time Series

Constituent: Lead (mg/L) Analysis Run 1/10/2022 1:00 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

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	HGWA-44D (bg)	HGWA-5 (bg)	HGWA-6 (bg)	HGWC-14	HGWC-15	HGWC-16
8/19/2021					<0.001	<0.001

# Time Series

Constituent: Lead (mg/L) Analysis Run 1/10/2022 1:00 PM  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWC-17	HGWC-18	MW-21D	MW-22	MW-23D	MW-33
5/23/2016	<0.001					
5/24/2016		0.00154 (J)				
7/12/2016	<0.001	0.0012 (J)				
9/1/2016	<0.001	0.0014 (J)				
10/25/2016	<0.001	0.0015 (J)				
12/7/2016	<0.001					
12/8/2016		0.0017 (J)				
1/26/2017	<0.001	0.0013 (J)				
3/22/2017	0.0001 (J)					
3/23/2017		0.001 (J)				
5/25/2017	<0.001	0.0012 (J)				
4/3/2018	<0.001	<0.001				
3/14/2019		0.0015 (J)			<0.001	
3/15/2019	<0.001		<0.001	<0.001		
4/4/2019			<0.001			
4/5/2019	7.6E-05 (J)	0.0015 (J)		<0.001	<0.001	
9/25/2019	8.9E-05 (J)	0.0015 (J)	<0.001			
9/26/2019					<0.001	
9/27/2019				0.0001 (J)		
3/2/2020				9.4E-05 (J)	5.1E-05 (J)	
3/3/2020	0.00013 (J)	0.0013 (J)	4.7E-05 (J)			
3/27/2020				<0.001		
3/31/2020	7.7E-05 (J)	0.0014 (J)				
4/1/2020			4.8E-05 (J)		<0.001	0.0017 (J)
6/17/2020			<0.001			0.0017 (J)
9/15/2020		0.0014 (J)				
9/16/2020	6.5E-05 (J)					
9/17/2020				<0.001	0.00016 (J)	
9/21/2020			<0.001			0.0017 (J)
2/11/2021	0.00018 (J)	0.00098 (J)	0.00066 (J)			
2/12/2021					<0.001	0.0018 (J)
2/15/2021				3.6E-05 (J)		
3/17/2021				<0.001	<0.001	
3/18/2021	8.8E-05 (J)	0.00096 (J)	7.3E-05 (J)			0.0017
8/18/2021	<0.001					0.0016
8/19/2021		0.0013	<0.001	<0.001	<0.001	

# Time Series

Constituent: Lead (mg/L) Analysis Run 1/10/2022 1:00 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

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	MW-34D	MW-35	MW-37D	MW-51
6/18/2020	0.00087 (J)	0.00016 (J)	0.0017 (J)	
9/21/2020		0.00099 (J)		
9/23/2020	<0.001		8.2E-05 (J)	
2/11/2021			0.00039 (J)	
2/15/2021		0.00055 (J)		
3/12/2021			<0.001	
3/19/2021		0.00066 (J)		
8/16/2021	<0.001			
8/18/2021		<0.001	<0.001	<0.001

# Time Series

Constituent: Lithium (mg/L) Analysis Run 1/10/2022 1:00 PM  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-4 (bg)	HGWA-42D (bg)	HGWA-43D (bg)
5/19/2016	<0.03	<0.03	<0.03	<0.03		
7/11/2016	<0.03	0.0014 (J)		0.0015 (J)		
7/12/2016			0.0024 (J)			
8/30/2016	<0.03	<0.03	0.0025 (J)	0.0027 (J)		
10/19/2016	<0.03	<0.03	0.003 (J)	0.0042 (J)		
12/6/2016	<0.03	<0.03	0.0033 (J)	0.0046 (J)		
1/24/2017	<0.03	<0.03	0.003 (J)	<0.03		
3/21/2017	<0.03	0.0012 (J)	0.0034 (J)	<0.03		
5/22/2017	<0.03	<0.03	0.003 (J)			
5/23/2017				<0.03		
4/2/2018	<0.03	0.0015 (J)		<0.03		
4/3/2018			0.003 (J)			
6/4/2018	0.001 (J)	0.0016 (J)	0.0027 (J)	0.00097 (J)		
10/1/2018	0.00099 (J)	0.0013 (J)	0.0032 (J)	<0.03		
3/11/2019				<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)		0.00098 (J)		
9/23/2019	0.0011 (J)	0.0016 (J)	0.0029 (J)			
9/24/2019				<0.03		
3/2/2020	0.0012 (J)	0.0017 (J)	0.0037 (J)	0.0012 (J)		
3/25/2020	0.00083 (J)	0.0017 (J)	0.0035 (J)			
3/26/2020				0.00095 (J)		
9/15/2020	0.00087 (J)	0.0015 (J)	0.0026 (J)	<0.03		
9/16/2020						0.0018 (J)
9/17/2020				0.0039 (J)		
11/10/2020						0.0013 (J)
11/11/2020				0.0086 (J)		
12/15/2020				0.008 (J)		0.0019 (J)
1/19/2021						0.0025 (J)
1/20/2021					0.01 (J)	
2/8/2021	0.00086 (J)			0.0013 (J)	0.0098 (J)	
2/9/2021		0.0012 (J)	0.0032 (J)			0.0026 (J)
3/10/2021	0.0009 (J)			0.0011 (J)	0.0094 (J)	
3/11/2021		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)	0.0013 (J)	0.0096 (J)	

# Time Series

Constituent: Lithium (mg/L) Analysis Run 1/10/2022 1:00 PM  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-44D (bg)	HGWA-5 (bg)	HGWA-6 (bg)	HGWC-14	HGWC-15	HGWC-16
5/19/2016		<0.03				
5/20/2016			<0.03			
5/23/2016				<0.03	<0.03	<0.03
7/11/2016		0.0034 (J)	0.01 (J)			
7/12/2016				<0.03	<0.03	0.0037 (J)
8/30/2016		0.003 (J)	0.0095 (J)			
9/1/2016				<0.03	0.0021 (J)	0.0033 (J)
10/20/2016		0.0031 (J)	0.0105 (J)			
10/24/2016				<0.03	<0.03	
10/25/2016						0.0029 (J)
12/7/2016				<0.03	<0.03	0.0029 (J)
12/8/2016		0.0027 (J)	0.01 (J)			
1/24/2017		0.0028 (J)	0.0108 (J)			
1/26/2017				<0.03	<0.03	0.0028 (J)
3/21/2017		0.0037 (J)	0.0115 (J)			
3/22/2017						0.0025 (J)
3/23/2017				<0.03	0.0016 (J)	
5/23/2017		0.0033 (J)	0.011 (J)			
5/24/2017				<0.03	0.0029 (J)	0.0029 (J)
4/3/2018		0.0033 (J)	0.012 (J)		0.0026 (J)	0.0028 (J)
4/4/2018				<0.03		
6/5/2018		0.0034 (J)	0.011 (J)			
6/6/2018				<0.03	0.0013 (J)	0.0031 (J)
10/2/2018		0.0035 (J)	0.01 (J)			
10/3/2018				<0.03	0.0017 (J)	0.0026 (J)
3/12/2019		0.0032 (J)	0.011 (J)			
3/14/2019				<0.03	<0.03	
3/15/2019						0.0041 (J)
4/2/2019		0.0028 (J)	0.0095 (J)			
4/4/2019					0.0009 (J)	0.0032 (J)
4/5/2019				<0.03		
9/24/2019		0.0035 (J)	0.011 (J)	<0.03	0.0012 (J)	
9/25/2019						0.0038 (J)
3/2/2020		0.0036 (J)	0.012			
3/3/2020				<0.03	0.0084 (J)	0.0047 (J)
3/25/2020			0.011 (J)			
3/26/2020		0.0029 (J)			0.0061 (J)	
3/30/2020				<0.03		0.0041 (J)
9/15/2020		0.003 (J)	0.0095 (J)			
9/16/2020	0.014 (J)					
9/17/2020					0.0094 (J)	0.0043 (J)
9/18/2020				<0.03		
11/10/2020	0.025 (J)					
12/15/2020	0.028 (J)					
1/19/2021	0.034					
2/9/2021	0.026 (J)	0.003 (J)	0.01 (J)			
2/10/2021						0.0038 (J)
2/11/2021				<0.03		
2/12/2021					0.036	
3/10/2021	0.03					
3/11/2021		0.0037 (J)	0.012 (J)			
3/16/2021					0.032	

# Time Series

Constituent: Lithium (mg/L) Analysis Run 1/10/2022 1:00 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

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	HGWA-44D (bg)	HGWA-5 (bg)	HGWA-6 (bg)	HGWC-14	HGWC-15	HGWC-16
3/17/2021				<0.03		0.0048 (J)
8/12/2021		0.0032 (J)	0.0094 (J)			
8/13/2021	0.032					
8/18/2021				<0.03		
8/19/2021					0.0058 (J)	0.0042 (J)

# Time Series

Constituent: Lithium (mg/L) Analysis Run 1/10/2022 1:00 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWC-17	HGWC-18	MW-21D	MW-22	MW-23D	MW-33
5/23/2016	<0.03					
5/24/2016		0.0142 (J)				
7/12/2016	<0.03	0.0141 (J)				
9/1/2016	<0.03	0.0158 (J)				
10/25/2016	<0.03	0.016 (J)				
12/7/2016	<0.03					
12/8/2016		0.0144 (J)				
1/26/2017	<0.03	0.0136 (J)				
3/22/2017	<0.03					
3/23/2017		0.0151 (J)				
5/25/2017	0.0011 (J)	0.0154 (J)				
4/3/2018	<0.03	0.013 (J)				
6/5/2018		0.013 (J)				
6/6/2018	<0.03					
10/3/2018	<0.03	0.015 (J)				
3/14/2019		0.011 (J)			0.0028 (J)	
3/15/2019	0.0011 (J)		0.025 (J)	0.002 (J)		
4/4/2019			0.019 (J)			
4/5/2019	0.00074 (J)	0.0084 (J)		0.0013 (J)	0.0021 (J)	
9/25/2019	0.0011 (J)	0.015 (J)	0.024 (J)			
9/26/2019					0.0023 (J)	
9/27/2019				0.0013 (J)		
3/2/2020				0.0015 (J)	0.0025 (J)	
3/3/2020	0.0012 (J)	0.012 (J)	0.026 (J)			
3/27/2020				0.0013 (J)		
3/31/2020	0.0009 (J)	0.012 (J)				
4/1/2020			0.026 (J)		0.0024 (J)	0.0011 (J)
6/17/2020			0.023 (J)			0.00097 (J)
9/15/2020		0.014 (J)				
9/16/2020	0.0012 (J)					
9/17/2020				0.0011 (J)	0.0021 (J)	
9/21/2020			0.022 (J)			0.00086 (J)
2/11/2021	0.0013 (J)	0.011 (J)	0.021 (J)			
2/12/2021					0.0023 (J)	0.0011 (J)
2/15/2021				0.0011 (J)		
3/17/2021				0.0012 (J)	0.0024 (J)	
3/18/2021	0.0014 (J)	0.013 (J)	0.026 (J)			0.0012 (J)
8/18/2021	0.0012 (J)					0.00097 (J)
8/19/2021		0.013 (J)	0.022 (J)	0.0012 (J)	0.0022 (J)	



# Time Series

Constituent: Lithium (mg/L) Analysis Run 1/10/2022 1:00 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

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	MW-34D	MW-35	MW-37D	MW-51
6/18/2020	0.0021 (J)	0.0046 (J)	0.038 (J)	
9/21/2020		0.0036 (J)		
9/23/2020	0.0011 (J)		0.031	
2/11/2021			0.034	
2/15/2021		0.0043 (J)		
3/12/2021			0.035	
3/19/2021		0.0045 (J)		
8/16/2021	0.001 (J)			
8/18/2021		0.0036 (J)	0.03	0.0022 (J)

# Time Series

Constituent: Mercury (mg/L) Analysis Run 1/10/2022 1:00 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-4 (bg)	HGWA-42D (bg)	HGWA-43D (bg)
5/19/2016	<0.0005	<0.0005	<0.0005	<0.0005		
7/11/2016	<0.0005	<0.0005		<0.0005		
7/12/2016			<0.0005			
8/30/2016	4E-05 (J)	4E-05 (J)	<0.0005	5E-05 (J)		
10/19/2016	<0.0005	<0.0005	<0.0005	<0.0005		
12/6/2016	<0.0005	<0.0005	<0.0005	5E-05 (J)		
1/24/2017	<0.0005	<0.0005	<0.0005	0.0001 (J)		
3/21/2017	<0.0005	<0.0005	<0.0005	0.00016 (J)		
5/22/2017	<0.0005	<0.0005	<0.0005			
5/23/2017				5E-05 (J)		
4/2/2018	<0.0005	<0.0005		<0.0005		
4/3/2018			<0.0005			
3/11/2019				<0.0005		
3/12/2019	<0.0005	<0.0005	<0.0005			
3/2/2020	<0.0005	<0.0005	<0.0005	<0.0005		
9/16/2020						<0.0005
9/17/2020					<0.0005	
11/10/2020						<0.0005
11/11/2020					<0.0005	
12/15/2020					<0.0005	<0.0005
1/19/2021						<0.0005
1/20/2021					<0.0005	
2/8/2021	<0.0005			<0.0005	<0.0005	
2/9/2021		<0.0005	<0.0005			<0.0005

# Time Series

Constituent: Mercury (mg/L) Analysis Run 1/10/2022 1:00 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-44D (bg)	HGWA-5 (bg)	HGWA-6 (bg)	HGWC-14	HGWC-15	HGWC-16
5/19/2016		<0.0005				
5/20/2016			<0.0005			
5/23/2016				<0.0005	<0.0005	<0.0005
7/11/2016		<0.0005	<0.0005			
7/12/2016				<0.0005	<0.0005	<0.0005
8/30/2016		<0.0005	4.4E-05 (J)			
9/1/2016				<0.0005	<0.0005	<0.0005
10/20/2016		<0.0005	<0.0005			
10/24/2016				<0.0005	<0.0005	
10/25/2016						<0.0005
12/7/2016				<0.0005	<0.0005	<0.0005
12/8/2016		<0.0005	<0.0005			
1/24/2017		<0.0005	<0.0005			
1/26/2017				<0.0005	<0.0005	<0.0005
3/21/2017		<0.0005	<0.0005			
3/22/2017						<0.0005
3/23/2017				<0.0005	<0.0005	
5/23/2017		<0.0005	<0.0005			
5/24/2017				<0.0005	<0.0005	<0.0005
4/3/2018		<0.0005	<0.0005		<0.0005	<0.0005
4/4/2018				<0.0005		
3/12/2019		<0.0005	<0.0005			
3/14/2019				<0.0005	<0.0005	
3/15/2019						<0.0005
3/2/2020		<0.0005	<0.0005			
3/3/2020				<0.0005	<0.0005	<0.0005
9/16/2020	<0.0005					
11/10/2020	<0.0005					
12/15/2020	<0.0005					
1/19/2021	<0.0005					
2/9/2021	<0.0005	<0.0005	<0.0005			
2/10/2021						<0.0005
2/11/2021				<0.0005		
2/12/2021					<0.0005	

# Time Series

Constituent: Mercury (mg/L) Analysis Run 1/10/2022 1:00 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWC-17	HGWC-18	MW-21D	MW-22	MW-23D	MW-33
5/23/2016	<0.0005					
5/24/2016		<0.0005				
7/12/2016	<0.0005	<0.0005				
9/1/2016	<0.0005	6E-05 (J)				
10/25/2016	<0.0005	4E-05 (J)				
12/7/2016	<0.0005					
12/8/2016		<0.0005				
1/26/2017	<0.0005	8E-05 (J)				
3/22/2017	<0.0005					
3/23/2017		9E-05 (J)				
5/25/2017	<0.0005	8E-05 (J)				
4/3/2018	<0.0005	<0.0005				
3/14/2019		<0.0005			<0.0005	
3/15/2019	<0.0005		<0.0005	<0.0005		
3/2/2020				<0.0005	<0.0005	
3/3/2020	<0.0005	<0.0005	<0.0005			
2/11/2021	<0.0005	<0.0005	<0.0005			
2/12/2021					<0.0005	<0.0005
2/15/2021				<0.0005		

# Time Series

Constituent: Mercury (mg/L) Analysis Run 1/10/2022 1:00 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

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2/11/2021	MW-35	MW-37D
2/15/2021	<0.0005	<0.0005

# Time Series

Constituent: Molybdenum (mg/L) Analysis Run 1/10/2022 1:00 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-4 (bg)	HGWA-42D (bg)	HGWA-43D (bg)
5/19/2016	<0.01	<0.01	<0.01	<0.01		
7/11/2016	<0.01	<0.01		<0.01		
7/12/2016			<0.01			
8/30/2016	<0.01	<0.01	<0.01	<0.01		
10/19/2016	<0.01	<0.01	<0.01	<0.01		
12/6/2016	<0.01	<0.01	<0.01	<0.01		
1/24/2017	<0.01	<0.01	<0.01	<0.01		
3/21/2017	<0.01	<0.01	<0.01	<0.01		
5/22/2017	<0.01	<0.01	<0.01			
5/23/2017				<0.01		
4/2/2018	<0.01	<0.01		<0.01		
4/3/2018			<0.01			
3/11/2019				<0.01		
3/12/2019	<0.01	<0.01	<0.01			
4/1/2019			<0.01			
4/2/2019	<0.01	<0.01		<0.01		
9/23/2019	<0.01	<0.01	<0.01			
9/24/2019				<0.01		
3/2/2020	<0.01	<0.01	<0.01	<0.01		
3/25/2020	<0.01	<0.01	<0.01			
3/26/2020				<0.01		
9/15/2020	<0.01	<0.01	<0.01	<0.01		
9/16/2020						0.0044 (J)
9/17/2020					0.0037 (J)	
11/10/2020						0.0072 (J)
11/11/2020				<0.01		
12/15/2020				0.00082 (J)		0.0044 (J)
1/19/2021						0.0038 (J)
1/20/2021				<0.01		
2/8/2021	<0.01			<0.01	<0.01	
2/9/2021		<0.01	<0.01			0.0045 (J)
3/10/2021	<0.01			<0.01	<0.01	
3/11/2021		<0.01	<0.01			0.0064 (J)
8/11/2021	<0.01					0.0034 (J)
8/12/2021		<0.01	<0.01	<0.01	<0.01	

# Time Series

Constituent: Molybdenum (mg/L) Analysis Run 1/10/2022 1:00 PM  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-44D (bg)	HGWA-5 (bg)	HGWA-6 (bg)	HGWC-14	HGWC-15	HGWC-16
5/19/2016		<0.01				
5/20/2016			<0.01			
5/23/2016				<0.01	<0.01	<0.01
7/11/2016		<0.01	0.0008 (J)			
7/12/2016				<0.01	0.0007 (J)	<0.01
8/30/2016		<0.01	<0.01			
9/1/2016				<0.01	<0.01	<0.01
10/20/2016		<0.01	<0.01			
10/24/2016				<0.01	<0.01	
10/25/2016						<0.01
12/7/2016				<0.01	<0.01	<0.01
12/8/2016		<0.01	<0.01			
1/24/2017		<0.01	<0.01			
1/26/2017				<0.01	<0.01	<0.01
3/21/2017		<0.01	0.0002 (J)			
3/22/2017						<0.01
3/23/2017				<0.01	<0.01	
5/23/2017		<0.01	<0.01			
5/24/2017				<0.01	<0.01	<0.01
4/3/2018		<0.01	<0.01		<0.01	<0.01
4/4/2018				<0.01		
3/12/2019		<0.01	<0.01			
3/14/2019				<0.01	<0.01	
3/15/2019						<0.01
4/2/2019		<0.01	<0.01			
4/4/2019					<0.01	<0.01
4/5/2019				<0.01		
9/24/2019		<0.01	<0.01	<0.01	<0.01	
9/25/2019						<0.01
3/2/2020		<0.01	<0.01			
3/3/2020				<0.01	<0.01	<0.01
3/25/2020			<0.01			
3/26/2020		<0.01			<0.01	
3/30/2020				<0.01		<0.01
9/15/2020		<0.01	<0.01			
9/16/2020	0.0019 (J)					
9/17/2020					<0.01	<0.01
9/18/2020				<0.01		
11/10/2020	0.0018 (J)					
12/15/2020	0.0019 (J)					
1/19/2021	0.0035 (J)					
2/9/2021	0.0038 (J)	<0.01	<0.01			
2/10/2021						<0.01
2/11/2021				<0.01		
2/12/2021					<0.01	
3/10/2021	0.0019 (J)					
3/11/2021		<0.01	<0.01			
3/16/2021					<0.01	
3/17/2021				<0.01		<0.01
8/12/2021		<0.01	<0.01			
8/13/2021	0.0051 (J)					
8/18/2021				<0.01		

# Time Series

Constituent: Molybdenum (mg/L) Analysis Run 1/10/2022 1:00 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

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	HGWA-44D (bg)	HGWA-5 (bg)	HGWA-6 (bg)	HGWC-14	HGWC-15	HGWC-16
8/19/2021					<0.01	<0.01



# Time Series

Constituent: Molybdenum (mg/L) Analysis Run 1/10/2022 1:00 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWC-17	HGWC-18	MW-21D	MW-22	MW-23D	MW-33
5/23/2016	<0.01					
5/24/2016		<0.01				
7/12/2016	<0.01	<0.01				
9/1/2016	<0.01	<0.01				
10/25/2016	<0.01	<0.01				
12/7/2016	<0.01					
12/8/2016		<0.01				
1/26/2017	<0.01	<0.01				
3/22/2017	<0.01					
3/23/2017		<0.01				
5/25/2017	<0.01	<0.01				
4/3/2018	<0.01	<0.01				
3/14/2019		<0.01			<0.01	
3/15/2019	<0.01		0.045	<0.01		
4/4/2019			0.033			
4/5/2019	<0.01	<0.01		0.00013 (J)	0.0014 (J)	
9/25/2019	<0.01	<0.01	0.038			
9/26/2019					0.0025 (J)	
9/27/2019				<0.01		
3/2/2020				<0.01	0.003 (J)	
3/3/2020	<0.01	<0.01	0.025			
3/27/2020				<0.01		
3/31/2020	<0.01	<0.01				
4/1/2020			0.024		0.0032 (J)	<0.01
6/17/2020			0.019			<0.01
9/15/2020		<0.01				
9/16/2020	<0.01					
9/17/2020				<0.01	0.0026 (J)	
9/21/2020			0.017			<0.01
2/11/2021	<0.01	<0.01	0.016			
2/12/2021					0.0039 (J)	<0.01
2/15/2021				<0.01		
3/17/2021				<0.01	0.0034 (J)	
3/18/2021	<0.01	<0.01	0.016			<0.01
8/18/2021	<0.01					<0.01
8/19/2021		<0.01	0.018	<0.01	0.0034 (J)	

# Time Series

Constituent: Molybdenum (mg/L) Analysis Run 1/10/2022 1:00 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

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	MW-34D	MW-35	MW-37D	MW-51
6/18/2020	<0.01	<0.01	0.023	
9/21/2020		<0.01		
9/23/2020	<0.01		0.015	
2/11/2021			0.019	
2/15/2021		<0.01		
3/12/2021			0.014	
3/19/2021		<0.01		
8/16/2021	<0.01			
8/18/2021		<0.01	0.0083 (J)	<0.01

# Time Series

Constituent: Selenium (mg/L) Analysis Run 1/10/2022 1:00 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-4 (bg)	HGWA-42D (bg)	HGWA-43D (bg)
5/19/2016	<0.005	<0.005	<0.005	<0.005		
7/11/2016	<0.005	<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	<0.005		
12/6/2016	<0.005	<0.005	<0.005	<0.005		
1/24/2017	<0.005	<0.005	<0.005	<0.005		
3/21/2017	<0.005	<0.005	<0.005	<0.005		
5/22/2017	<0.005	<0.005	<0.005			
5/23/2017				<0.005		
4/2/2018	<0.005	<0.005		<0.005		
4/3/2018			<0.005			
6/4/2018	<0.005	<0.005	<0.005	<0.005		
10/1/2018	<0.005	<0.005	<0.005	<0.005		
3/11/2019				<0.005		
3/12/2019	<0.005	<0.005	<0.005			
4/1/2019			<0.005			
4/2/2019	<0.005	<0.005		<0.005		
9/23/2019	<0.005	<0.005	<0.005			
9/24/2019				<0.005		
3/2/2020	<0.005	<0.005	<0.005	<0.005		
3/25/2020	<0.005	<0.005	<0.005			
3/26/2020				<0.005		
9/15/2020	<0.005	<0.005	<0.005	<0.005		
9/16/2020						<0.005
9/17/2020					<0.005	
11/10/2020						<0.005
11/11/2020					<0.005	
12/15/2020					<0.005	<0.005
1/19/2021						<0.005
1/20/2021					<0.005	
2/8/2021	<0.005			<0.005	<0.005	
2/9/2021		<0.005	<0.005			<0.005
3/10/2021	0.0047 (J)			<0.005	<0.005	
3/11/2021		<0.005	<0.005			<0.005
8/11/2021	<0.005					<0.005
8/12/2021		<0.005	<0.005	<0.005	<0.005	

# Time Series

Constituent: Selenium (mg/L) Analysis Run 1/10/2022 1:00 PM  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-44D (bg)	HGWA-5 (bg)	HGWA-6 (bg)	HGWC-14	HGWC-15	HGWC-16
5/19/2016		<0.005				
5/20/2016			<0.005			
5/23/2016				0.017	<0.005	<0.005
7/11/2016		<0.005	<0.005			
7/12/2016				0.0146	<0.005	<0.005
8/30/2016		<0.005	<0.005			
9/1/2016				0.0137	<0.005	<0.005
10/20/2016		<0.005	<0.005			
10/24/2016				0.0135	0.0012 (J)	
10/25/2016						<0.005
12/7/2016				0.01 (J)	0.0041 (J)	<0.005
12/8/2016		<0.005	<0.005			
1/24/2017		0.0011 (J)	<0.005			
1/26/2017				0.0214	<0.005	<0.005
3/21/2017		<0.005	<0.005			
3/22/2017						<0.005
3/23/2017				0.0167	0.0016 (J)	
5/23/2017		<0.005	<0.005			
5/24/2017				0.0083 (J)	<0.005	<0.005
4/3/2018		<0.005	<0.005		<0.005	<0.005
4/4/2018				0.012		
6/5/2018		<0.005	<0.005			
6/6/2018				0.014	<0.005	<0.005
10/2/2018		<0.005	<0.005			
10/3/2018				0.0056 (J)	<0.005	<0.005
3/12/2019		<0.005	<0.005			
3/14/2019				0.0048 (J)	<0.005	
3/15/2019						<0.005
4/2/2019		<0.005	<0.005			
4/4/2019					0.00021 (J)	8.9E-05 (J)
4/5/2019				0.00091 (J)		
9/24/2019		<0.005	<0.005	0.0064 (J)	<0.005	
9/25/2019						<0.005
3/2/2020		<0.005	<0.005			
3/3/2020				0.0045 (J)	<0.005	<0.005
3/25/2020			<0.005			
3/26/2020		<0.005			<0.005	
3/30/2020				0.0049 (J)		<0.005
9/15/2020		<0.005	<0.005			
9/16/2020	<0.005					
9/17/2020					<0.005	<0.005
9/18/2020				0.0045 (J)		
11/10/2020	<0.005					
12/15/2020	<0.005					
1/19/2021	<0.005					
2/9/2021	<0.005	<0.005	<0.005			
2/10/2021						<0.005
2/11/2021				0.0072 (J)		
2/12/2021					<0.005	
3/10/2021	<0.005					
3/11/2021		<0.005	<0.005			
3/16/2021					<0.005	

# Time Series

Constituent: Selenium (mg/L) Analysis Run 1/10/2022 1:00 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

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	HGWA-44D (bg)	HGWA-5 (bg)	HGWA-6 (bg)	HGWC-14	HGWC-15	HGWC-16
3/17/2021				0.01 (J)		<0.005
8/12/2021		<0.005	<0.005			
8/13/2021	<0.005					
8/18/2021				0.0077		
8/19/2021					<0.005	<0.005

# Time Series

Constituent: Selenium (mg/L) Analysis Run 1/10/2022 1:00 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWC-17	HGWC-18	MW-21D	MW-22	MW-23D	MW-33
5/23/2016	<0.005					
5/24/2016		<0.005				
7/12/2016	<0.005	0.036				
9/1/2016	0.0014 (J)	0.0347				
10/25/2016	<0.005	0.0282				
12/7/2016	0.0023 (J)					
12/8/2016		0.0373				
1/26/2017	<0.005	0.0385				
3/22/2017	<0.005					
3/23/2017		0.0414				
5/25/2017	<0.005	0.019				
4/3/2018	<0.005	0.029				
6/5/2018		0.038				
6/6/2018	<0.005					
10/3/2018	<0.005	0.017				
3/14/2019		0.016			<0.005	
3/15/2019	<0.005		<0.005	<0.005		
4/4/2019			<0.005			
4/5/2019	9.3E-05 (J)	0.0018 (J)		<0.005	<0.005	
9/25/2019	<0.005	0.02	<0.005			
9/26/2019					<0.005	
9/27/2019				<0.005		
3/2/2020				<0.005	<0.005	
3/3/2020	<0.005	0.014	<0.005			
3/27/2020				<0.005		
3/31/2020	<0.005	0.019				
4/1/2020			<0.005		<0.005	0.011
6/17/2020			<0.005			0.014
9/15/2020		0.059				
9/16/2020	<0.005					
9/17/2020				0.002 (J)	<0.005	
9/21/2020			<0.005			0.041
2/11/2021	<0.005	0.023	<0.005			
2/12/2021					<0.005	0.011
2/15/2021				<0.005		
3/17/2021				<0.005	<0.005	
3/18/2021	<0.005	0.019 (J)	<0.005			0.028
8/18/2021	<0.005					0.014
8/19/2021		0.01	<0.005	<0.005	<0.005	

# Time Series

Constituent: Selenium (mg/L) Analysis Run 1/10/2022 1:00 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

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	MW-34D	MW-35	MW-37D	MW-51
6/18/2020	0.0025 (J)	0.014	<0.005	
9/21/2020		0.037		
9/23/2020	<0.005		<0.005	
2/11/2021			<0.005	
2/15/2021		0.01		
3/12/2021			<0.005	
3/19/2021		0.016 (J)		
8/16/2021	<0.005			
8/18/2021		0.014	<0.005	0.004 (J)

# Time Series

Constituent: Sulfate (mg/L) Analysis Run 1/10/2022 1:00 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-4 (bg)	HGWA-42D (bg)	HGWA-43D (bg)
5/19/2016	66.9	48.6	42.3	1.22		
7/11/2016	41	45		3.7		
7/12/2016			44			
8/30/2016	36	42	40	6.8		
10/19/2016	46	44	43	11		
12/6/2016	59	44	43	13		
1/24/2017	46	46	48	5.7		
3/21/2017	63	46	45	1.7		
5/22/2017	77	48	46			
5/23/2017				1.5		
10/3/2017	42	47	48	1.3		
6/4/2018	71.8	47.8	46.6	4.9		
10/1/2018	49.1	48.1	48.6	0.59 (J)		
4/1/2019			50.4			
4/2/2019	84.3	48.7		4.9		
9/23/2019	70.2	47.2	43.9			
9/24/2019				<1		
3/25/2020	85.9	46.3	50.5			
3/26/2020				<1		
9/15/2020	47.3	51.5	44.7	<1		
9/16/2020						43
9/17/2020				10.9		
11/10/2020						39
11/11/2020				9.4		
12/15/2020				10.9		38.8
1/19/2021						37.3
1/20/2021				9.8		
3/10/2021	49.6			1.2	10.8	
3/11/2021		52.9	50.4			38.6
8/11/2021	48.9					30.5
8/12/2021		47.4	38.6	1.1	7.8	



# Time Series

Constituent: Sulfate (mg/L) Analysis Run 1/10/2022 1:00 PM  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-44D (bg)	HGWA-5 (bg)	HGWA-6 (bg)	HGWC-14	HGWC-15	HGWC-16
5/19/2016		25				
5/20/2016			34.4			
5/23/2016				1070	424	203
7/11/2016		27	34			
7/12/2016				1300	440	220
8/30/2016		23	36			
9/1/2016				1300	440	220
10/20/2016		19	36			
10/24/2016				280	420	
10/25/2016						230
12/7/2016				1300	450	220
12/8/2016		20	36			
1/24/2017		20	37			
1/26/2017				1400	490	250
3/21/2017		23	37			
3/22/2017						240
3/23/2017				1500	530	
5/23/2017		21	38			
5/24/2017				1400	500	230
10/3/2017		21	38			
10/4/2017				1400	560	220
6/5/2018		22.9	38			
6/6/2018				1520	469	233
10/2/2018		20.3	38.5			
10/3/2018				1550	600	215
4/2/2019		23.8	35.5			
4/4/2019					528	251
4/5/2019				1520		
9/24/2019		20.7	35.4	1110	382	
9/25/2019						223
3/25/2020			35.1			
3/26/2020		21.6			438	
3/30/2020				1150		223
9/15/2020		21.2	35.3			
9/16/2020	6.9					
9/17/2020					416	254
9/18/2020				1260		
11/10/2020	6.3					
12/15/2020	6.7					
1/19/2021	7.4					
3/10/2021	<1					
3/11/2021		22.7	35.5			
3/16/2021					379	
3/17/2021				1300		250
8/12/2021		17.4	28.6			
8/13/2021	56.1					
8/18/2021				768		
8/19/2021					223	228

# Time Series

Constituent: Sulfate (mg/L) Analysis Run 1/10/2022 1:00 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWC-17	HGWC-18	MW-21D	MW-22	MW-23D	MW-33
5/23/2016	395					
5/24/2016		834				
7/12/2016	460	930				
9/1/2016	430	890				
10/25/2016	440	950				
12/7/2016	410					
12/8/2016		910				
1/26/2017	440	970				
3/22/2017	460					
3/23/2017		980				
5/25/2017	430	920				
10/4/2017	490	870				
6/5/2018		962				
6/6/2018	520					
10/3/2018	651	1170				
4/4/2019			915			
4/5/2019	642	1030		392	585	
9/25/2019	434	920	767			
9/26/2019					556	
9/27/2019				520		
1/22/2020						1250
3/27/2020				419		
3/31/2020	484	934				
4/1/2020			889		478	1210
6/17/2020			901			1210
9/15/2020		1080				
9/16/2020	467					
9/17/2020				468	490	
9/21/2020			1010			1290
3/17/2021				461	486	
3/18/2021	447	1050	829			1360
8/18/2021	280					740
8/19/2021		934	724	412 (M1)	432	

# Time Series

Constituent: Sulfate (mg/L) Analysis Run 1/10/2022 1:00 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

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	MW-34D	MW-35	MW-37D	MW-51
6/18/2020	1100	1160	286	
9/21/2020		1220		
9/23/2020	1080		256	
3/12/2021			237	
3/19/2021		1220		
8/16/2021	987			
8/18/2021		789	207	757

# Time Series

Constituent: Thallium (mg/L) Analysis Run 1/10/2022 1:00 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-4 (bg)	HGWA-42D (bg)	HGWA-43D (bg)
5/19/2016	<0.001	<0.001	<0.001	<0.001		
7/11/2016	<0.001	<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	<0.001		
12/6/2016	<0.001	<0.001	<0.001	<0.001		
1/24/2017	<0.001	<0.001	<0.001	<0.001		
3/21/2017	<0.001	3E-05 (J)	<0.001	<0.001		
5/22/2017	<0.001	<0.001	<0.001			
5/23/2017				<0.001		
4/2/2018	<0.001	<0.001		<0.001		
4/3/2018			<0.001			
6/4/2018	<0.001	<0.001	<0.001	<0.001		
10/1/2018	<0.001	<0.001	<0.001	<0.001		
3/11/2019				<0.001		
3/12/2019	<0.001	<0.001	<0.001			
4/1/2019			<0.001			
4/2/2019	<0.001	<0.001		<0.001		
9/23/2019	<0.001	<0.001	<0.001			
9/24/2019				<0.001		
3/2/2020	<0.001	<0.001	<0.001	<0.001		
3/25/2020	<0.001	<0.001	<0.001			
3/26/2020				<0.001		
9/15/2020	<0.001	<0.001	<0.001	<0.001		
9/16/2020						<0.001
9/17/2020				<0.001		
11/10/2020						<0.001
11/11/2020				<0.001		
12/15/2020				<0.001		<0.001
1/19/2021						<0.001
1/20/2021					<0.001	
2/8/2021	<0.001			<0.001	<0.001	
2/9/2021		<0.001	<0.001			<0.001
3/10/2021	<0.001			<0.001	<0.001	
3/11/2021		<0.001	<0.001			<0.001
8/11/2021	<0.001					<0.001
8/12/2021		<0.001	<0.001	<0.001	<0.001	

# Time Series

Constituent: Thallium (mg/L) Analysis Run 1/10/2022 1:00 PM  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-44D (bg)	HGWA-5 (bg)	HGWA-6 (bg)	HGWC-14	HGWC-15	HGWC-16
5/19/2016		<0.001				
5/20/2016			<0.001			
5/23/2016				0.000306 (J)	<0.001	<0.001
7/11/2016		<0.001	<0.001			
7/12/2016				0.0003 (J)	<0.001	<0.001
8/30/2016		<0.001	<0.001			
9/1/2016				0.0003 (J)	<0.001	<0.001
10/20/2016		<0.001	<0.001			
10/24/2016				0.0004	<0.001	
10/25/2016						<0.001
12/7/2016				0.0003 (J)	<0.001	<0.001
12/8/2016		<0.001	<0.001			
1/24/2017		<0.001	<0.001			
1/26/2017				0.0003 (J)	<0.001	<0.001
3/21/2017		<0.001	<0.001			
3/22/2017						<0.001
3/23/2017				0.0003 (J)	<0.001	
5/23/2017		<0.001	<0.001			
5/24/2017				0.0003 (J)	<0.001	<0.001
4/3/2018		<0.001	<0.001		<0.001	<0.001
4/4/2018				0.00028 (J)		
6/5/2018		<0.001	<0.001			
6/6/2018				0.00029 (J)	<0.001	<0.001
10/2/2018		<0.001	<0.001			
10/3/2018				0.00029 (J)	<0.001	<0.001
3/12/2019		<0.001	<0.001			
3/14/2019				0.00028 (J)	<0.001	
3/15/2019						<0.001
4/2/2019		<0.001	<0.001			
4/4/2019					<0.001	<0.001
4/5/2019				0.00028 (J)		
9/24/2019		<0.001	<0.001	0.0003 (J)	<0.001	
9/25/2019						<0.001
3/2/2020		<0.001	<0.001			
3/3/2020				0.00026 (J)	<0.001	<0.001
3/25/2020			5.7E-05 (J)			
3/26/2020		<0.001			<0.001	
3/30/2020				0.00028 (J)		<0.001
9/15/2020		<0.001	<0.001			
9/16/2020	<0.001					
9/17/2020					<0.001	<0.001
9/18/2020				0.00028 (J)		
11/10/2020	<0.001					
12/15/2020	<0.001					
1/19/2021	<0.001					
2/9/2021	<0.001	<0.001	<0.001			
2/10/2021						<0.001
2/11/2021				0.00026 (J)		
2/12/2021					<0.001	
3/10/2021	<0.001					
3/11/2021		<0.001	<0.001			
3/16/2021					<0.001	

# Time Series

Constituent: Thallium (mg/L) Analysis Run 1/10/2022 1:00 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

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	HGWA-44D (bg)	HGWA-5 (bg)	HGWA-6 (bg)	HGWC-14	HGWC-15	HGWC-16
3/17/2021				0.00034 (J)		<0.001
8/12/2021		<0.001	<0.001			
8/13/2021	<0.001					
8/18/2021				0.00027 (J)		
8/19/2021					<0.001	<0.001

# Time Series

Constituent: Thallium (mg/L) Analysis Run 1/10/2022 1:00 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWC-17	HGWC-18	MW-21D	MW-22	MW-23D	MW-33
5/23/2016	<0.001					
5/24/2016		<0.001				
7/12/2016	0.0001 (J)	0.0002 (J)				
9/1/2016	<0.001	<0.001				
10/25/2016	<0.001	<0.001				
12/7/2016	<0.001					
12/8/2016		<0.001				
1/26/2017	<0.001	<0.001				
3/22/2017	0.0001 (J)					
3/23/2017		0.0002 (J)				
5/25/2017	0.0001 (J)	0.0002 (J)				
4/3/2018	<0.001	0.00014 (J)				
6/5/2018		0.00016 (J)				
6/6/2018	<0.001					
10/3/2018	<0.001	<0.001				
3/14/2019		<0.001			<0.001	
3/15/2019	<0.001		<0.001	<0.001		
4/4/2019			<0.001			
4/5/2019	0.00013 (J)	0.00014 (J)		<0.001	<0.001	
9/25/2019	0.00012 (J)	0.00019 (J)	<0.001			
9/26/2019					<0.001	
9/27/2019				<0.001		
3/2/2020				<0.001	<0.001	
3/3/2020	0.00011 (J)	0.00013 (J)	<0.001			
3/27/2020				<0.001		
3/31/2020	0.00014 (J)	0.00015 (J)				
4/1/2020			<0.001		<0.001	0.00029 (J)
6/17/2020			<0.001			0.00028 (J)
9/15/2020		0.00016 (J)				
9/16/2020	<0.001					
9/17/2020				<0.001	<0.001	
9/21/2020			<0.001			0.00029 (J)
2/11/2021	<0.001	<0.001	<0.001			
2/12/2021					<0.001	0.00025 (J)
2/15/2021				<0.001		
3/17/2021				<0.001	<0.001	
3/18/2021	<0.001	0.00016 (J)	<0.001			0.00031 (J)
8/18/2021	<0.001					0.0004 (J)
8/19/2021		0.0002 (J)	<0.001	<0.001	<0.001	

# Time Series

Constituent: Thallium (mg/L) Analysis Run 1/10/2022 1:00 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

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	MW-34D	MW-35	MW-37D	MW-51
6/18/2020	0.00015 (J)	0.00013 (J)	<0.001	
9/21/2020		<0.001		
9/23/2020	<0.001		<0.001	
2/11/2021			<0.001	
2/15/2021		<0.001		
3/12/2021			<0.001	
3/19/2021		<0.001		
8/16/2021	<0.001			
8/18/2021		<0.001	<0.001	<0.001



# Time Series

Constituent: Total Dissolved Solids (mg/L) Analysis Run 1/10/2022 1:00 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-4 (bg)	HGWA-42D (bg)	HGWA-43D (bg)
5/19/2016	421	143	267	165		
7/11/2016	363	125		266		
7/12/2016			249			
8/30/2016	330	168	254	292		
10/19/2016	380	176	357	338		
12/6/2016	377	145	285	356		
1/24/2017	342	129	300	131		
3/21/2017	340	103	288	132		
5/22/2017	338	92	263			
5/23/2017				183		
10/3/2017	343	127	300	161		
6/4/2018	415	140	266	240		
10/1/2018	354	135	291	106		
4/1/2019			284			
4/2/2019	452	133		230		
9/23/2019	442	129	268			
9/24/2019				131		
3/25/2020	496	138	284			
3/26/2020				69		
9/15/2020	265	124	258	93		
9/16/2020						272
9/17/2020				188		
11/10/2020						307
11/11/2020				175		
12/15/2020				193		289
1/19/2021						270
1/20/2021					158	
3/10/2021	348			53	163	
3/11/2021		169	267			279
8/11/2021	366					277
8/12/2021		118	265	55	179	

# Time Series

Constituent: Total Dissolved Solids (mg/L) Analysis Run 1/10/2022 1:00 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-44D (bg)	HGWA-5 (bg)	HGWA-6 (bg)	HGWC-14	HGWC-15	HGWC-16
5/19/2016		168				
5/20/2016			223			
5/23/2016				4130	1270	570
7/11/2016		158	225			
7/12/2016				3140	1100	585
8/30/2016		141	232			
9/1/2016				3200	1180	625
10/20/2016		99	225			
10/24/2016				2920	1090	
10/25/2016						563
12/7/2016				2740	1040	561
12/8/2016		116	235			
1/24/2017		156	272			
1/26/2017				3080	1260	608
3/21/2017		144	222			
3/22/2017						599
3/23/2017				3060	1360	
5/23/2017		134	231			
5/24/2017				3140	1320	598
10/3/2017		147	243			
10/4/2017				3210	1340	626
6/5/2018		152	235			
6/6/2018				2620	1120	678
10/2/2018		146	228			
10/3/2018				2430	1140	700
4/2/2019		144	238			
4/4/2019					926	704
4/5/2019				2310		
9/24/2019		133	222	2470	1140	
9/25/2019						813
3/25/2020			240			
3/26/2020		104			1000	
3/30/2020				2590		787
9/15/2020		116	217			
9/16/2020	270					
9/17/2020					956	804
9/18/2020				2440		
11/10/2020	287					
12/15/2020	295					
1/19/2021	278					
3/10/2021	289					
3/11/2021		118	215			
3/16/2021					92	
3/17/2021				1640		768
8/12/2021		158	229			
8/13/2021	436					
8/18/2021				2350		
8/19/2021					958	816

# Time Series

Constituent: Total Dissolved Solids (mg/L) Analysis Run 1/10/2022 1:00 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWC-17	HGWC-18	MW-21D	MW-22	MW-23D	MW-33
5/23/2016	1010					
5/24/2016		1900				
7/12/2016	976	1950				
9/1/2016	1060	2000				
10/25/2016	<25	1870				
12/7/2016	866					
12/8/2016		1930				
1/26/2017	1000	1950				
3/22/2017	1080					
3/23/2017		2080				
5/25/2017	1080	1970				
10/4/2017	1210	2200				
6/5/2018		1880				
6/6/2018	1180					
10/3/2018	1250	2180				
4/4/2019			1800			
4/5/2019	1260	1610		890	1400	
9/25/2019	1280	1960	1970			
9/26/2019					1400	
9/27/2019				1110		
1/22/2020						2310
3/27/2020				1100		
3/31/2020	1310	1860				
4/1/2020			1940		1530	2590
6/17/2020			2100			2540
9/15/2020		1890				
9/16/2020	1220					
9/17/2020				1090	1360	
9/21/2020			2060			2340
3/17/2021				998	990	
3/18/2021	1020	1390	1390			1790
8/18/2021	1290					3690
8/19/2021		1750	1920	1030	1440	

# Time Series

Constituent: Total Dissolved Solids (mg/L) Analysis Run 1/10/2022 1:00 PM

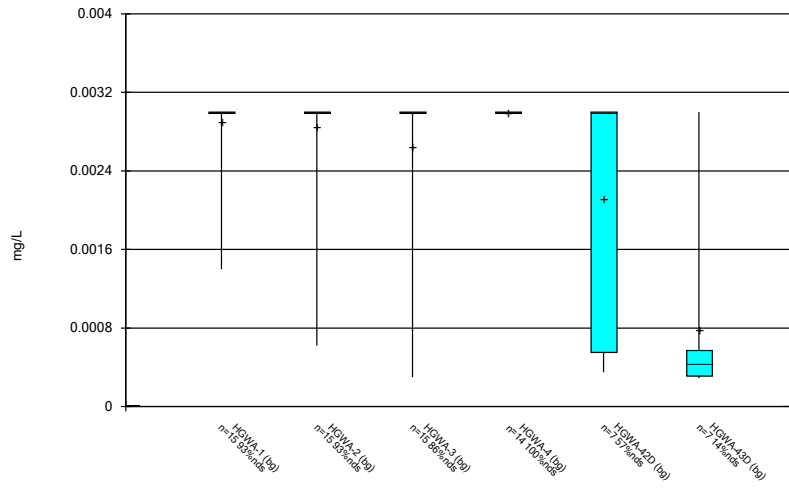
Plant Hammond Client: Southern Company Data: Hammond AP-2

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	MW-34D	MW-35	MW-37D	MW-51
6/18/2020	2320	2310	888	
9/21/2020		2210		
9/23/2020	2430		894	
3/12/2021			890	
3/19/2021		1690		
8/16/2021	2340			
8/18/2021		2390	950	2610

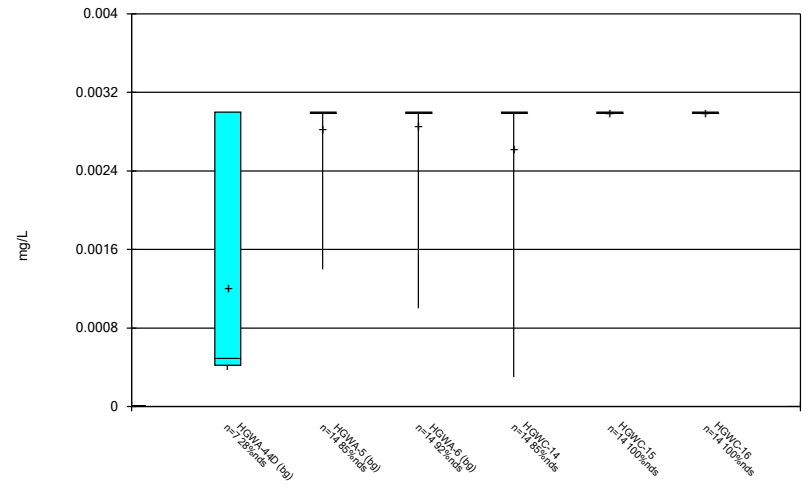
FIGURE B.

Box & Whiskers Plot



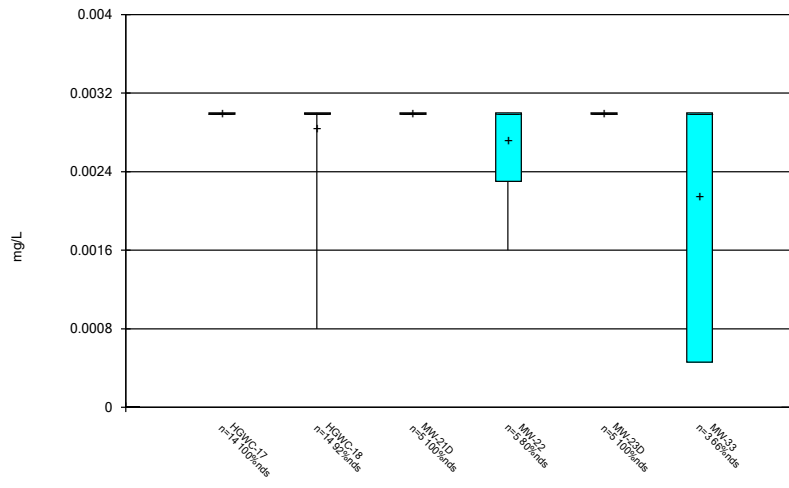
Constituent: Antimony Analysis Run 1/10/2022 1:00 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

Box & Whiskers Plot



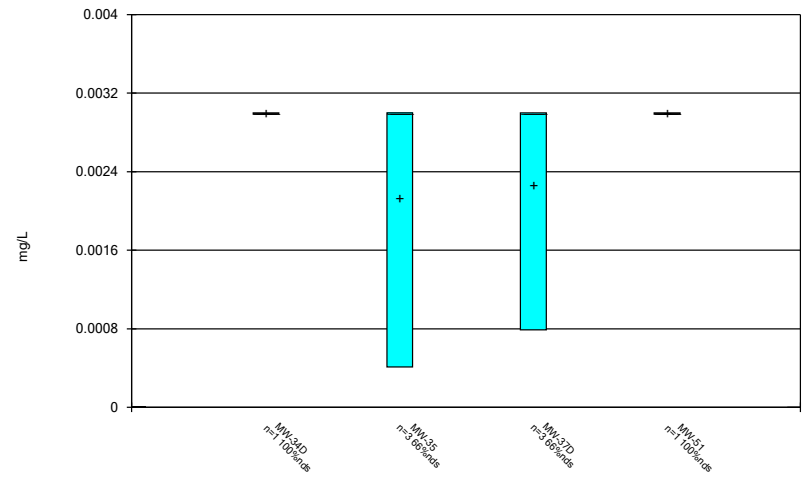
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Plant Hammond Client: Southern Company Data: Hammond AP-2

Box & Whiskers Plot



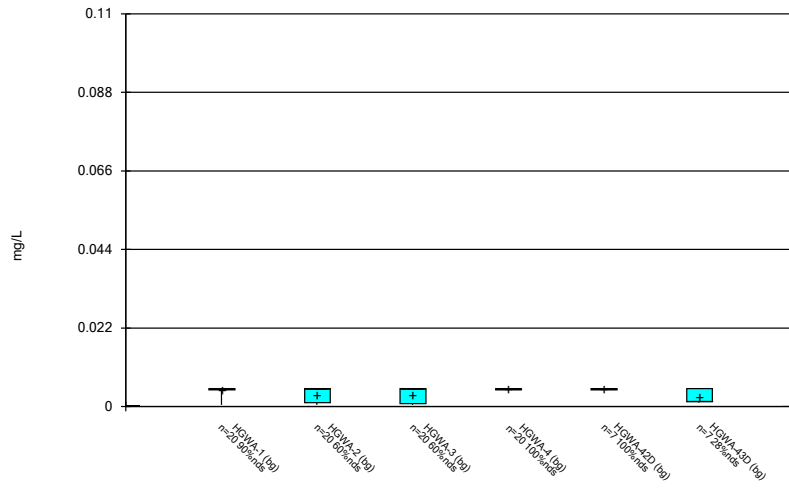
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Plant Hammond Client: Southern Company Data: Hammond AP-2

Box & Whiskers Plot



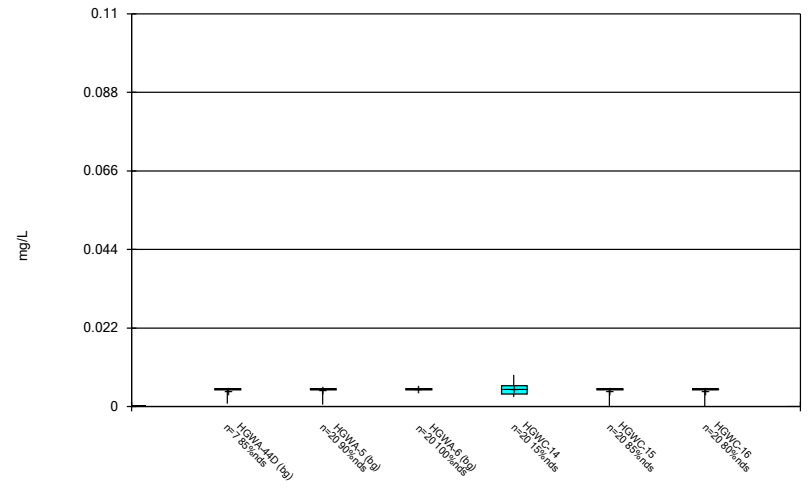
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Plant Hammond Client: Southern Company Data: Hammond AP-2

Box & Whiskers Plot



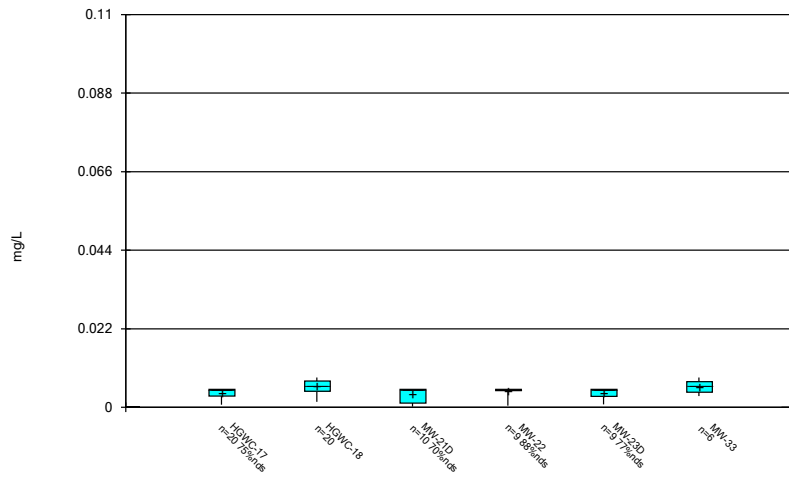
Constituent: Arsenic Analysis Run 1/10/2022 1:00 PM  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

Box & Whiskers Plot



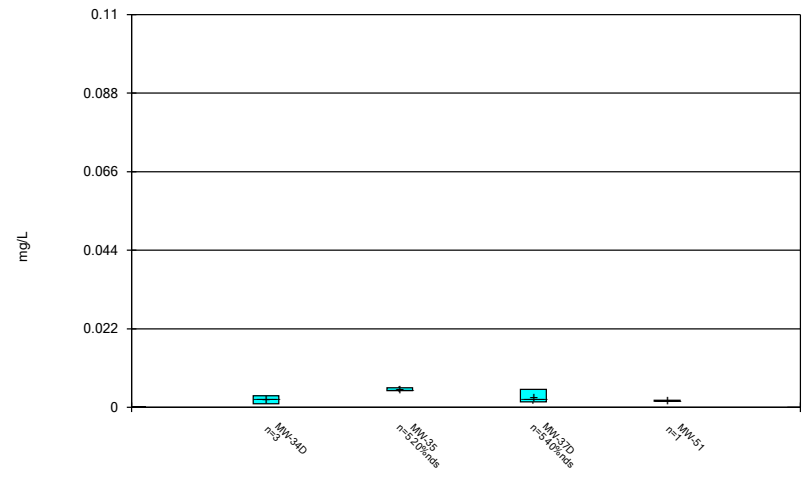
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 Plant Hammond Client: Southern Company Data: Hammond AP-2

Box & Whiskers Plot



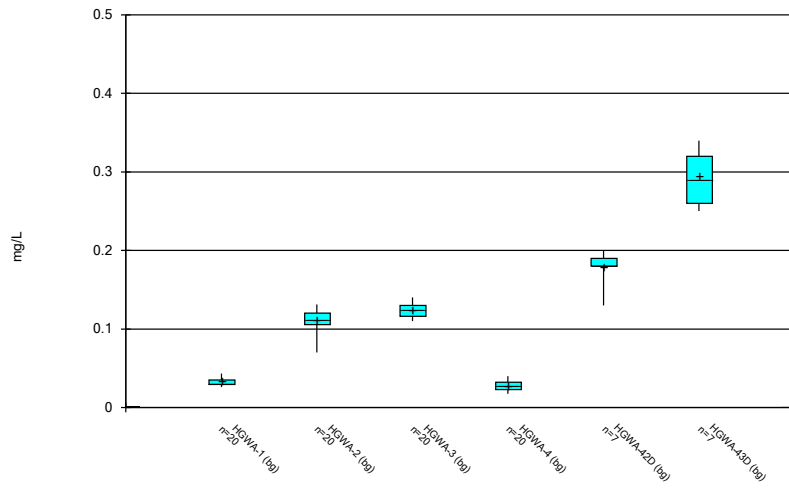
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 Plant Hammond Client: Southern Company Data: Hammond AP-2

Box & Whiskers Plot



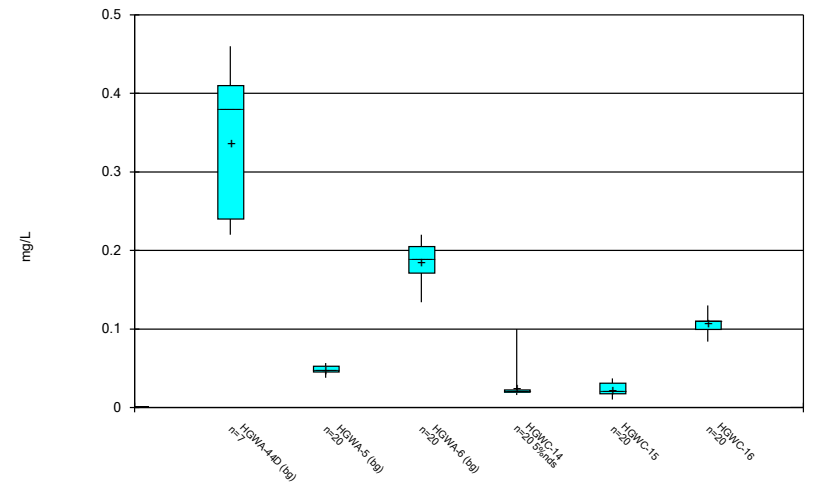
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 Plant Hammond Client: Southern Company Data: Hammond AP-2

Box & Whiskers Plot



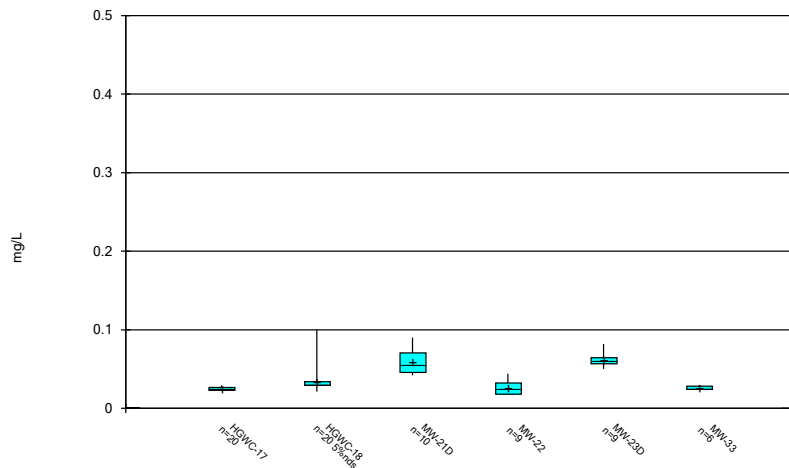
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 Plant Hammond Client: Southern Company Data: Hammond AP-2

Box & Whiskers Plot



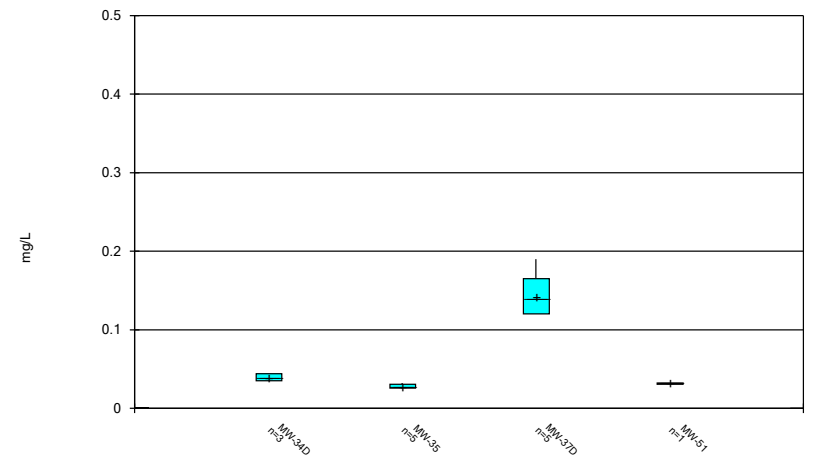
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 Plant Hammond Client: Southern Company Data: Hammond AP-2

Box & Whiskers Plot



Constituent: Barium Analysis Run 1/10/2022 1:00 PM  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

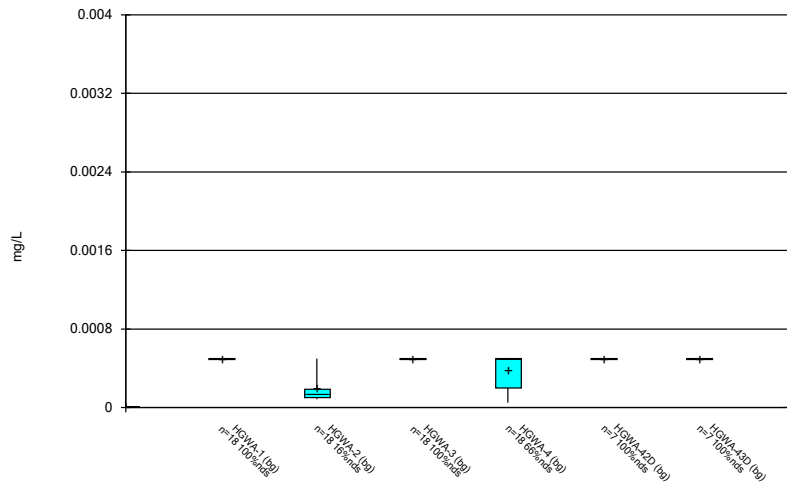
Box & Whiskers Plot



Constituent: Barium Analysis Run 1/10/2022 1:00 PM  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

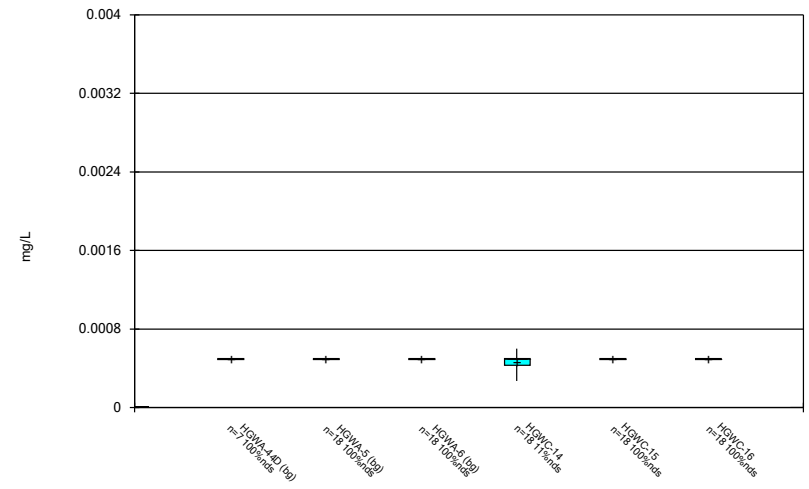


Box & Whiskers Plot



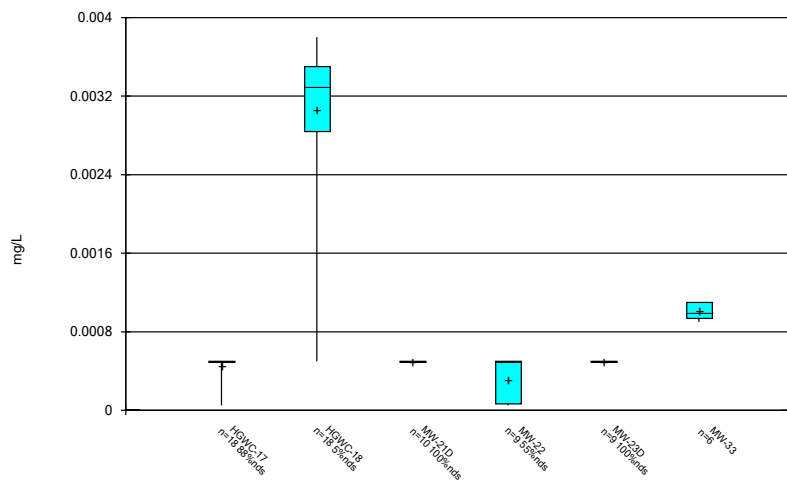
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 Plant Hammond Client: Southern Company Data: Hammond AP-2

Box & Whiskers Plot



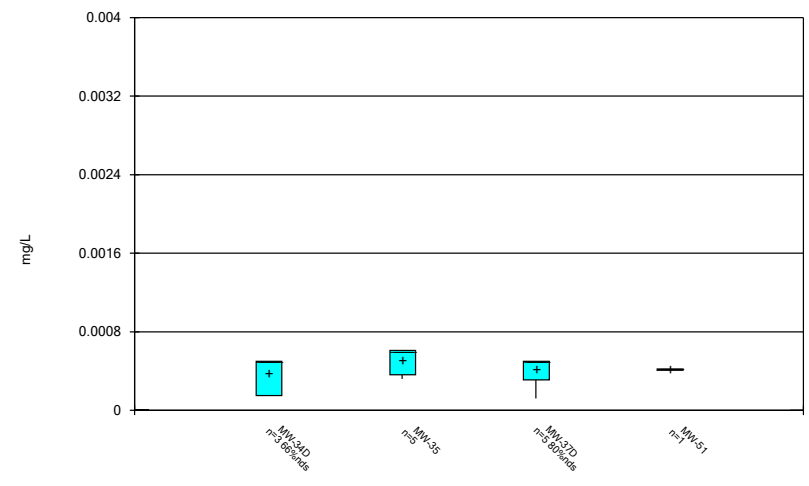
Constituent: Beryllium Analysis Run 1/10/2022 1:00 PM  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

Box & Whiskers Plot



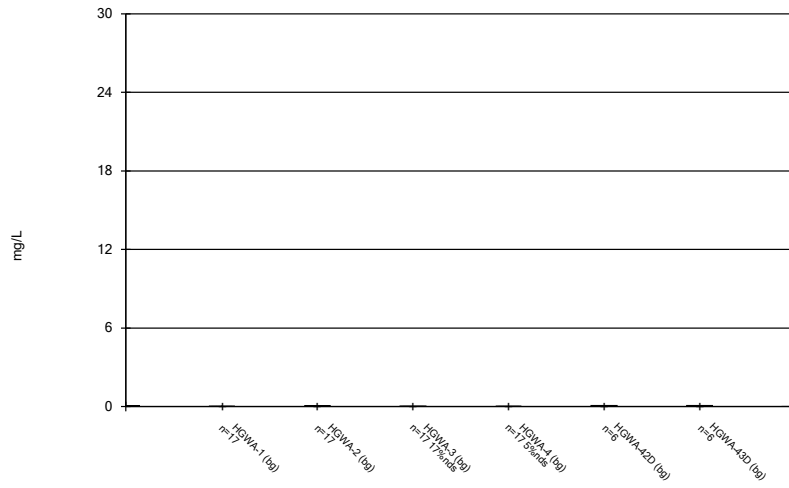
Constituent: Beryllium Analysis Run 1/10/2022 1:00 PM  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

Box & Whiskers Plot



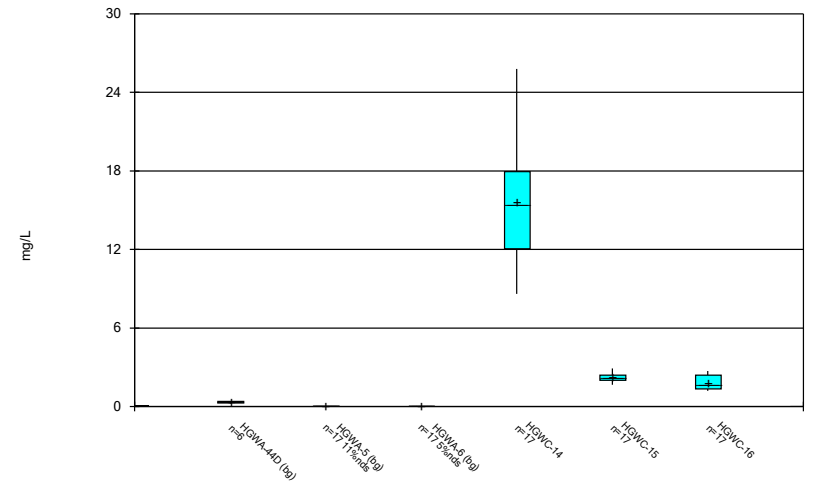
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 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Box & Whiskers Plot



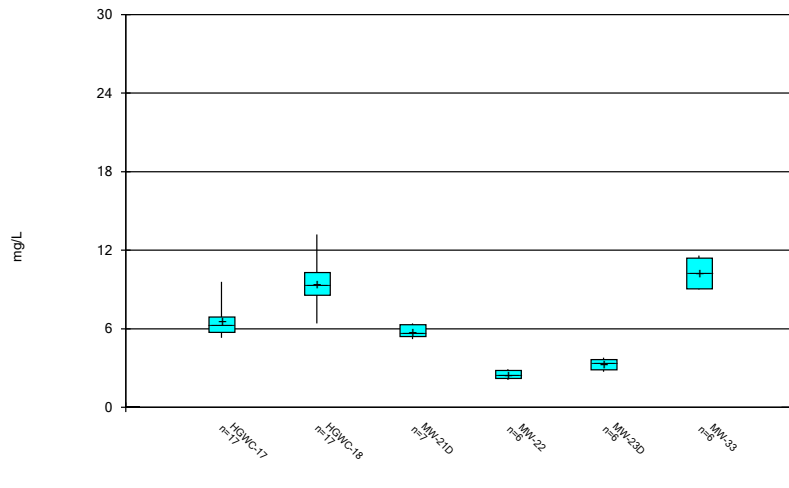
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 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Box & Whiskers Plot



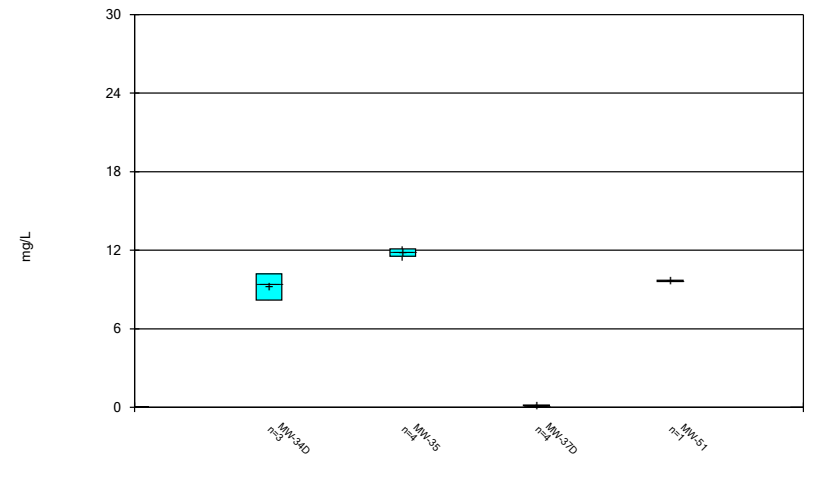
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 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Box & Whiskers Plot



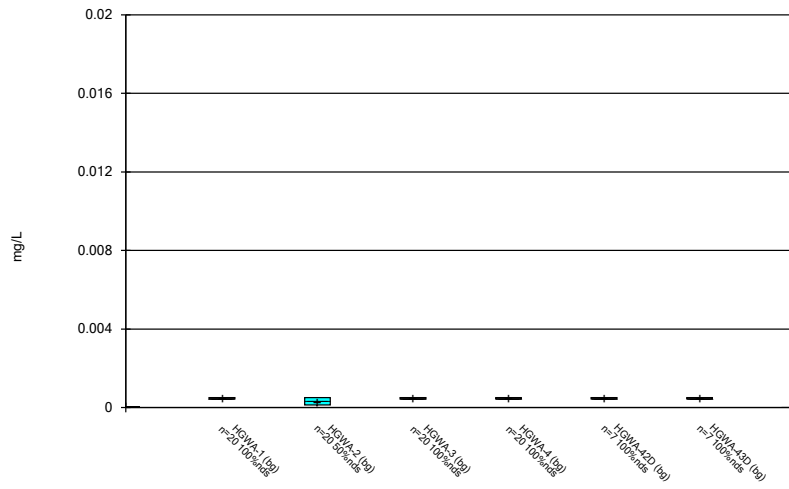
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 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Box & Whiskers Plot



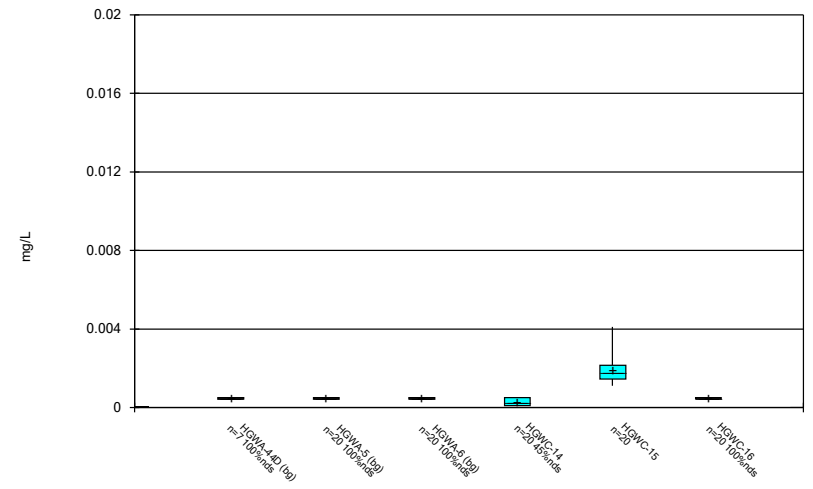
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 Plant Hammond Client: Southern Company Data: Hammond AP-2

Box & Whiskers Plot



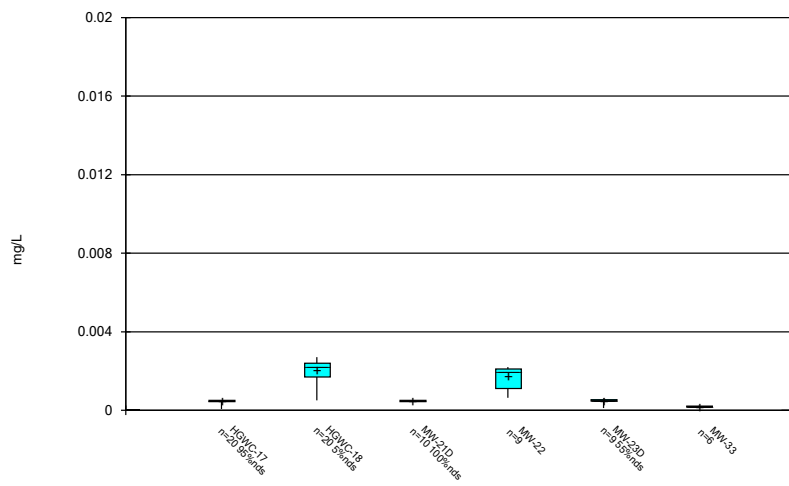
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 Plant Hammond Client: Southern Company Data: Hammond AP-2

Box & Whiskers Plot



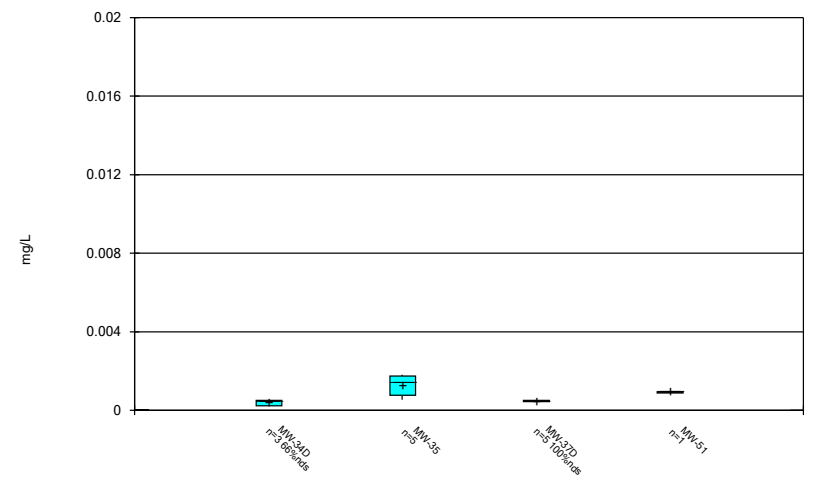
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 Plant Hammond Client: Southern Company Data: Hammond AP-2

Box & Whiskers Plot



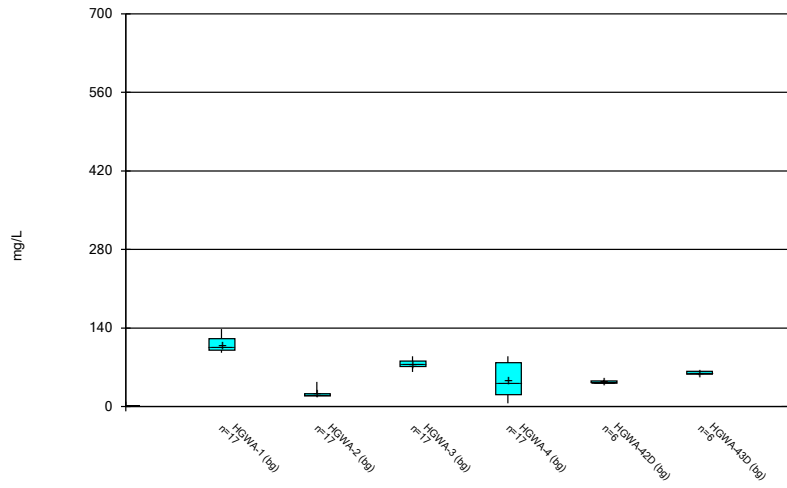
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 Plant Hammond Client: Southern Company Data: Hammond AP-2

Box & Whiskers Plot



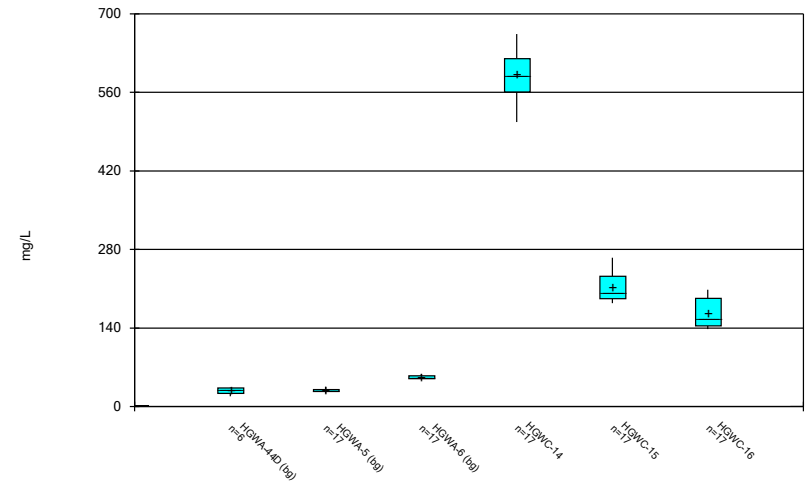
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 Plant Hammond Client: Southern Company Data: Hammond AP-2

Box & Whiskers Plot



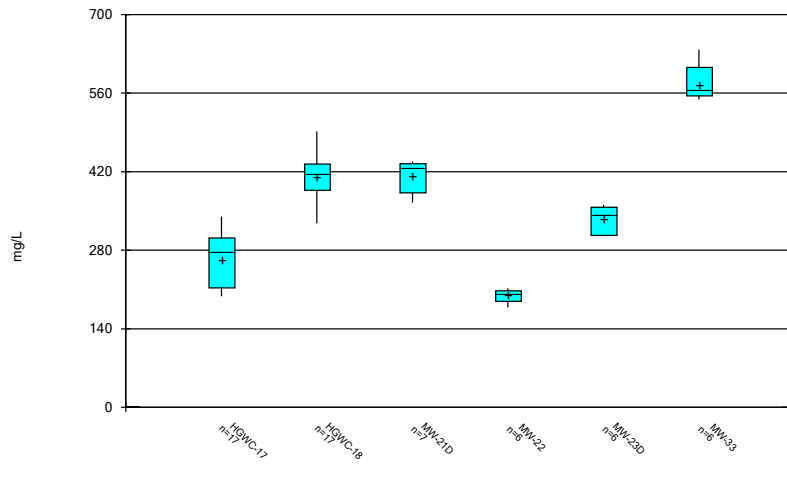
Constituent: Calcium Analysis Run 1/10/2022 1:00 PM  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

Box & Whiskers Plot



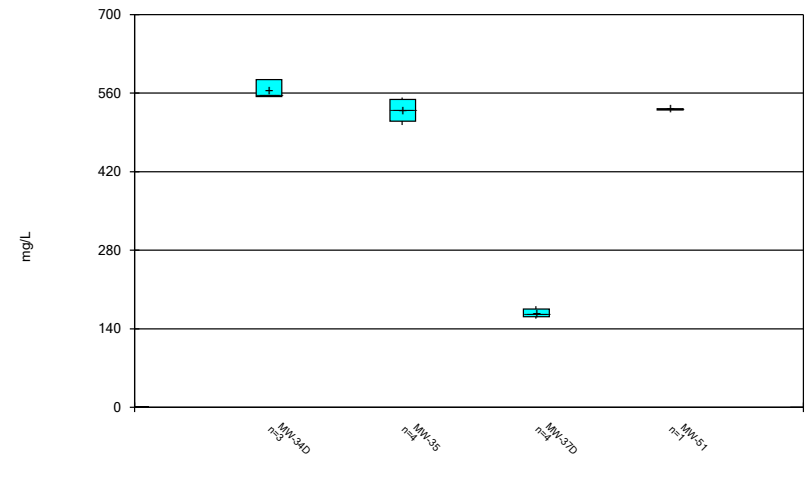
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Box & Whiskers Plot



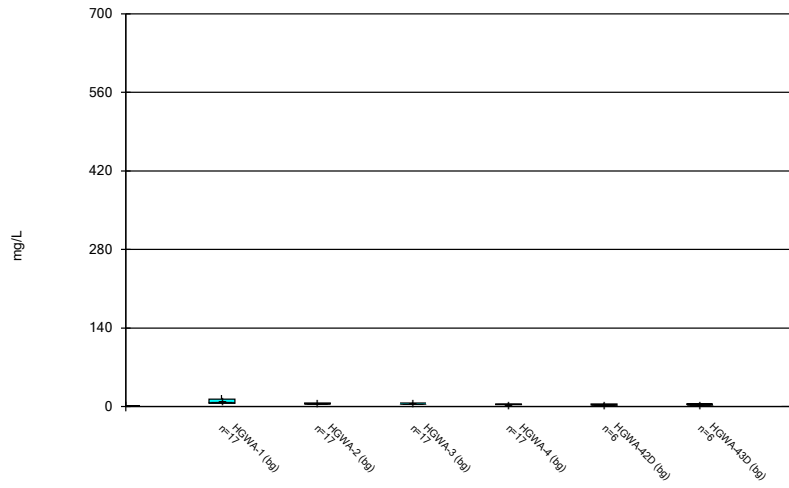
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Box & Whiskers Plot



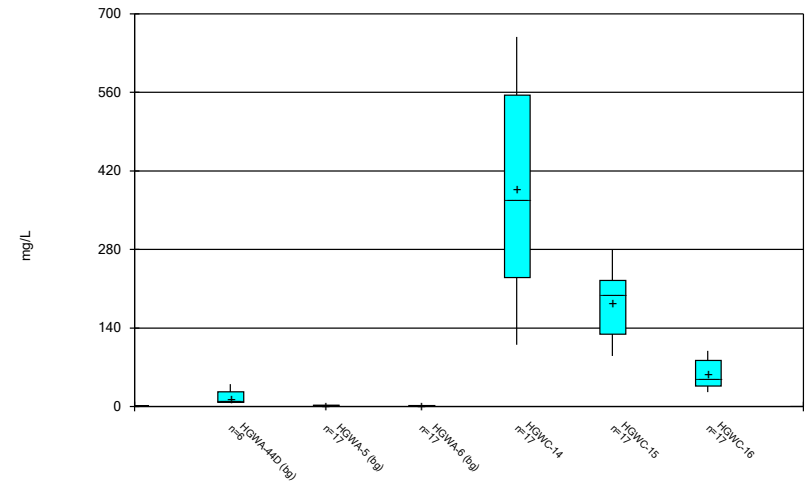
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 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Box & Whiskers Plot



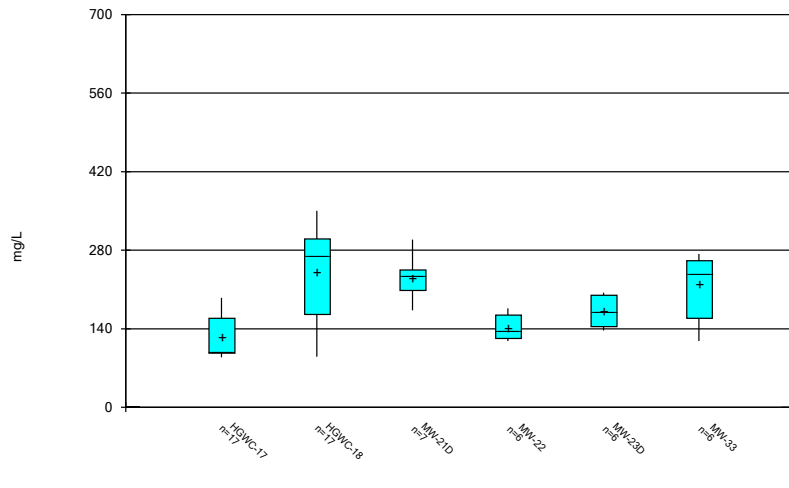
Constituent: Chloride Analysis Run 1/10/2022 1:00 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Box & Whiskers Plot



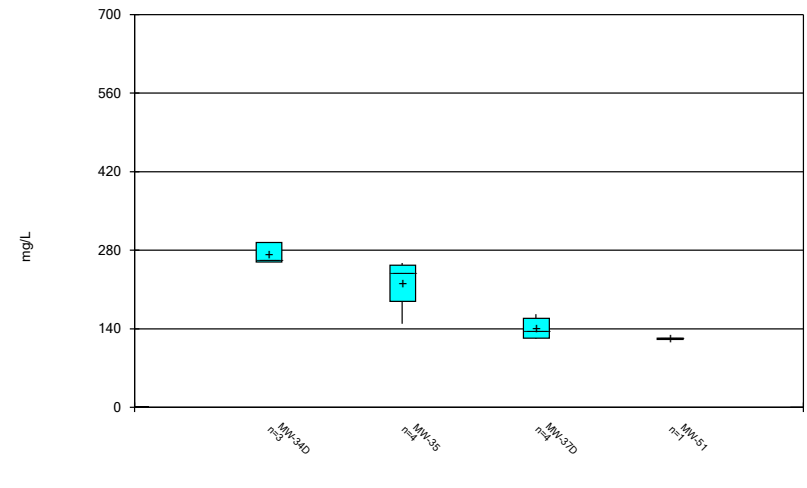
Constituent: Chloride Analysis Run 1/10/2022 1:00 PM  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Box & Whiskers Plot



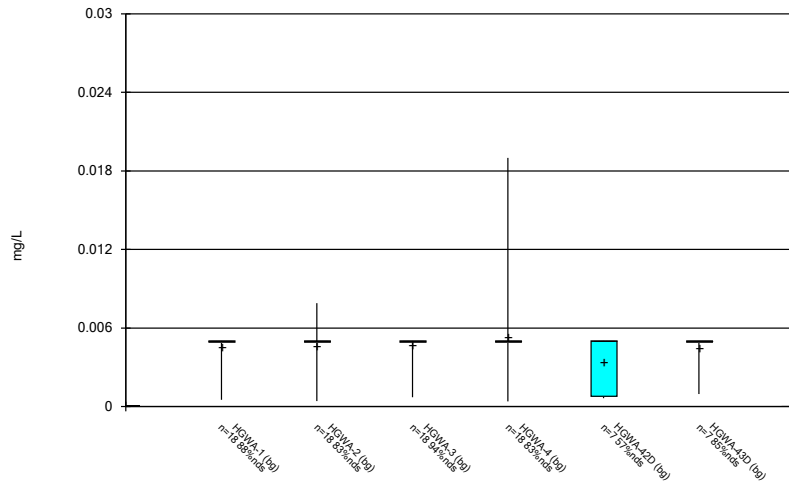
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Plant Hammond Client: Southern Company Data: Hammond AP-2

### Box & Whiskers Plot



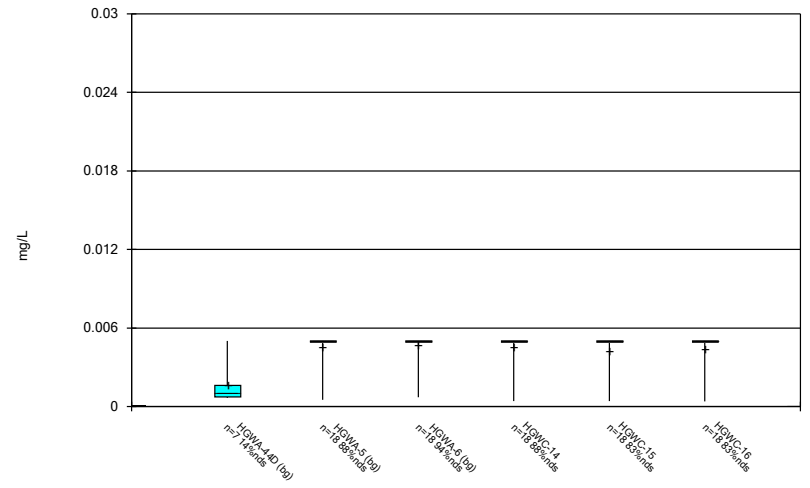
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Plant Hammond Client: Southern Company Data: Hammond AP-2

### Box & Whiskers Plot



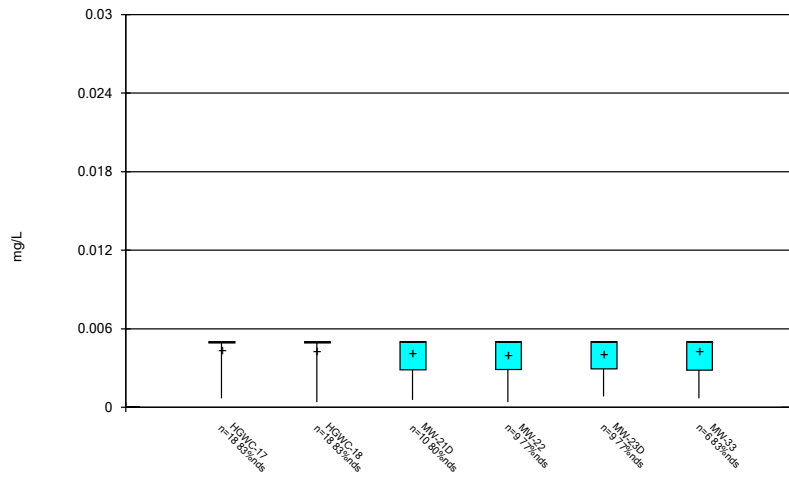
Constituent: Chromium Analysis Run 1/10/2022 1:01 PM  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Box & Whiskers Plot



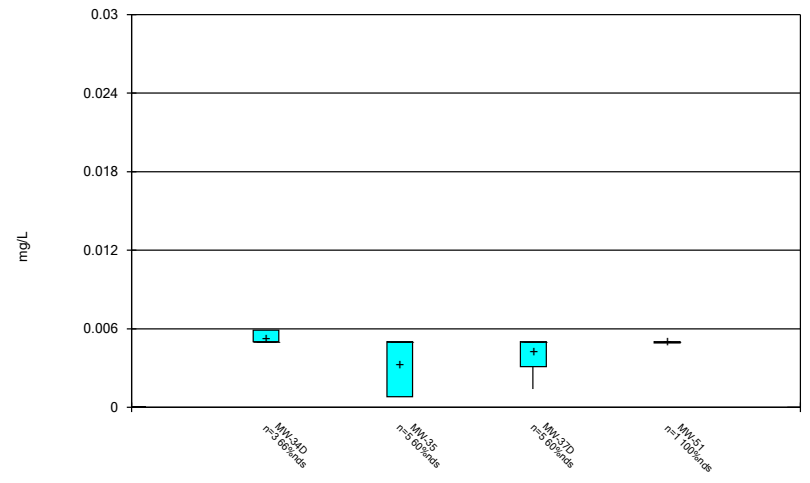
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 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Box & Whiskers Plot



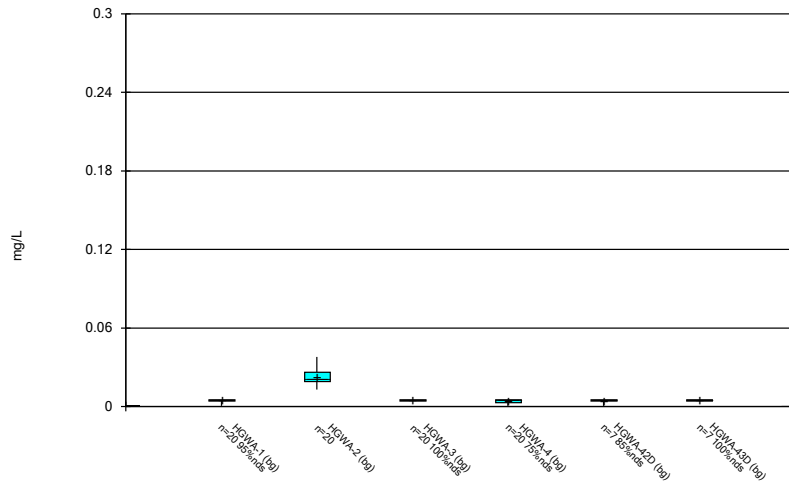
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 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Box & Whiskers Plot



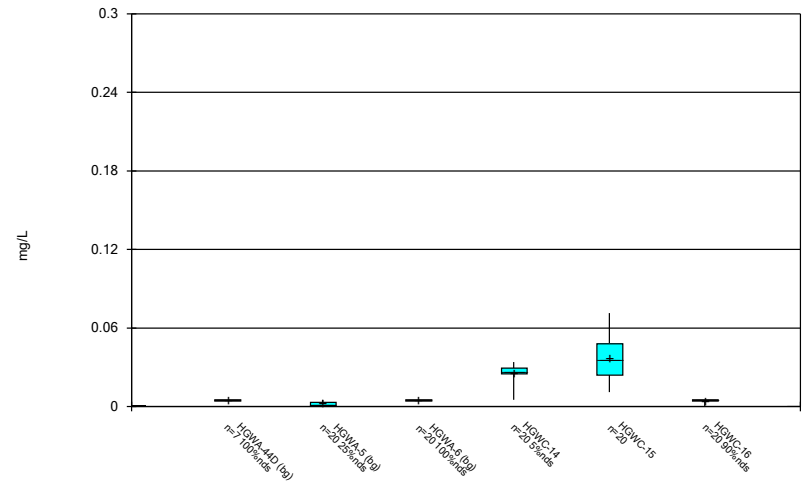
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 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Box & Whiskers Plot



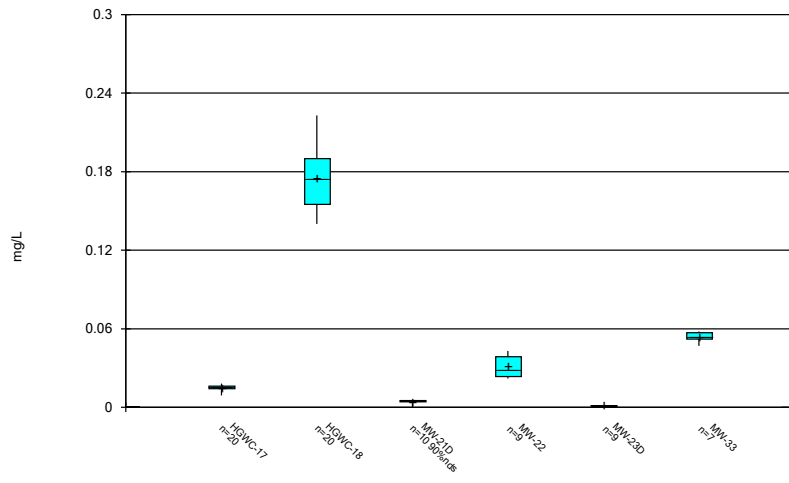
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 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Box & Whiskers Plot



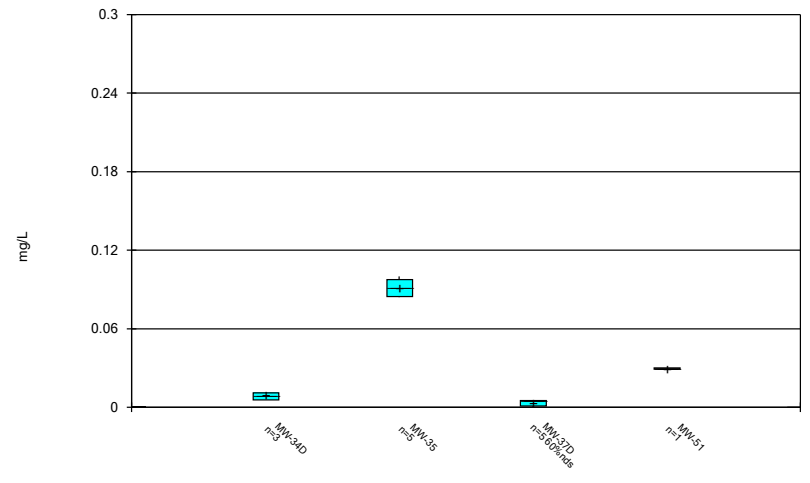
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 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Box & Whiskers Plot



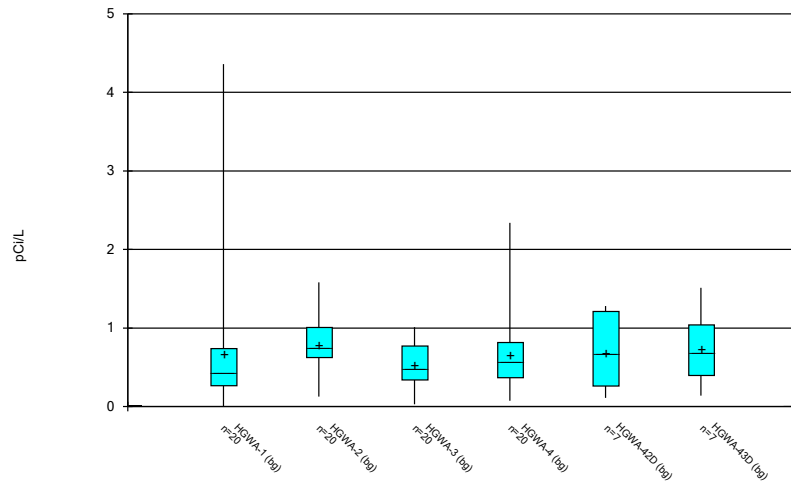
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### Box & Whiskers Plot



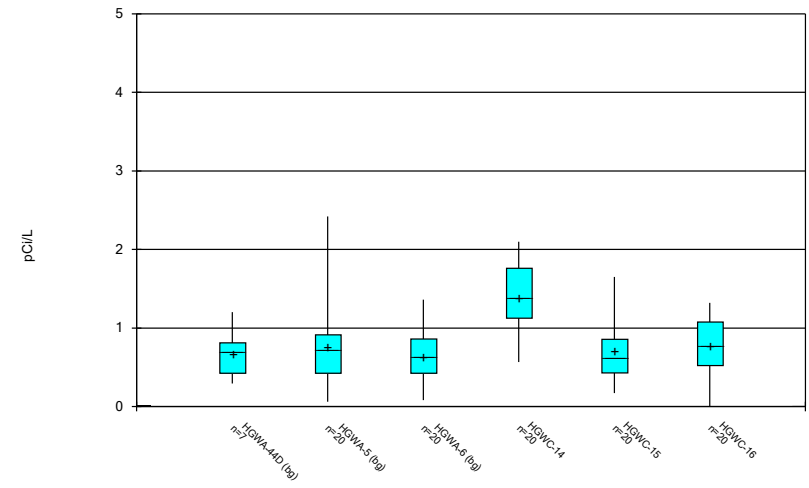
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Box & Whiskers Plot



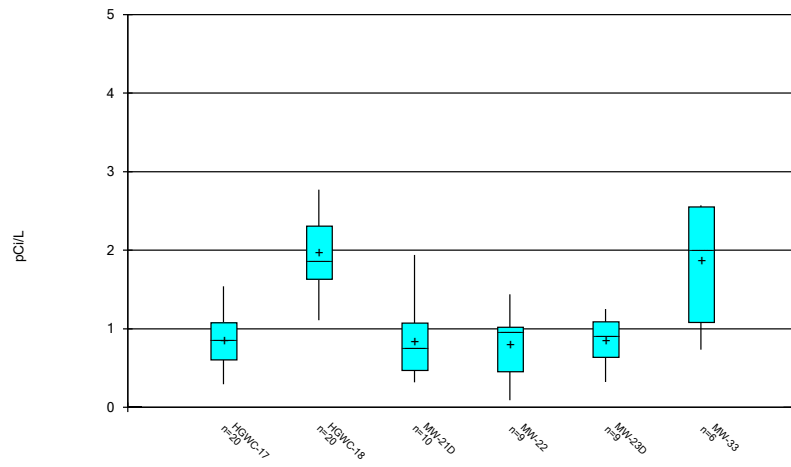
Constituent: Combined Radium 226 + 228 Analysis Run 1/10/2022 1:01 PM  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

Box & Whiskers Plot



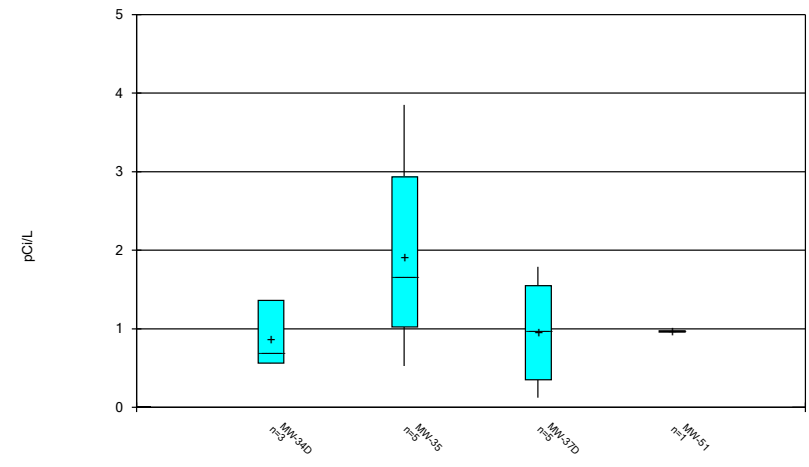
Constituent: Combined Radium 226 + 228 Analysis Run 1/10/2022 1:01 PM  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

Box & Whiskers Plot



Constituent: Combined Radium 226 + 228 Analysis Run 1/10/2022 1:01 PM  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

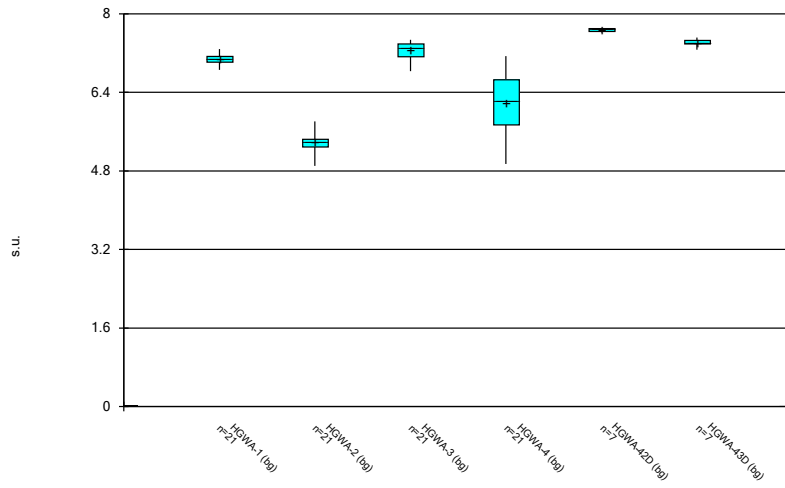
Box & Whiskers Plot



Constituent: Combined Radium 226 + 228 Analysis Run 1/10/2022 1:01 PM  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

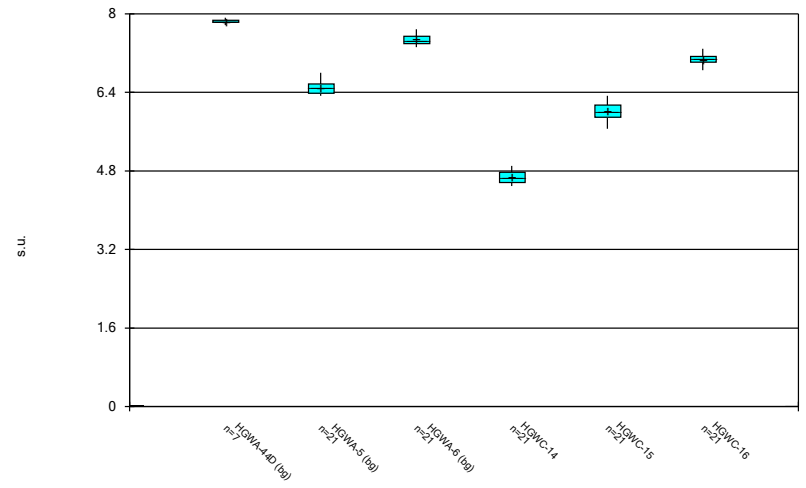


### Box & Whiskers Plot



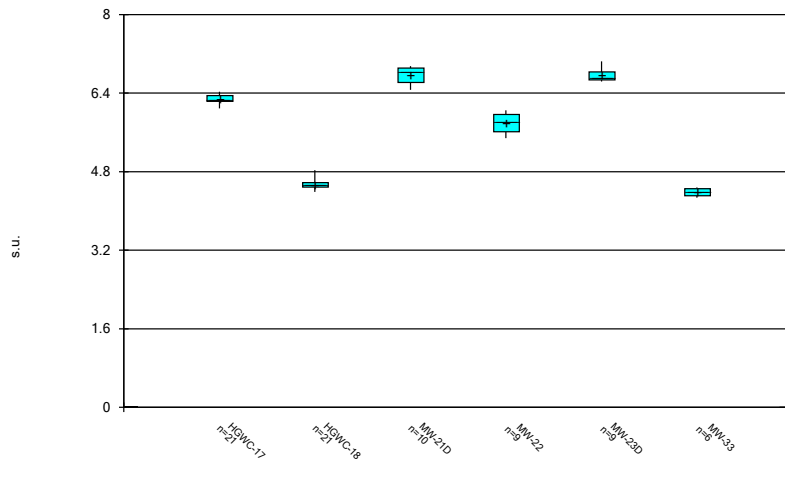
Constituent: Field pH Analysis Run 1/10/2022 1:01 PM  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Box & Whiskers Plot



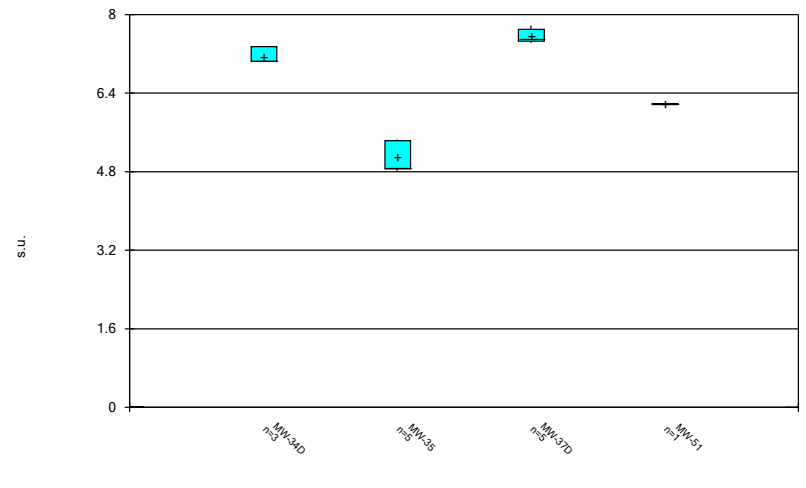
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 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Box & Whiskers Plot



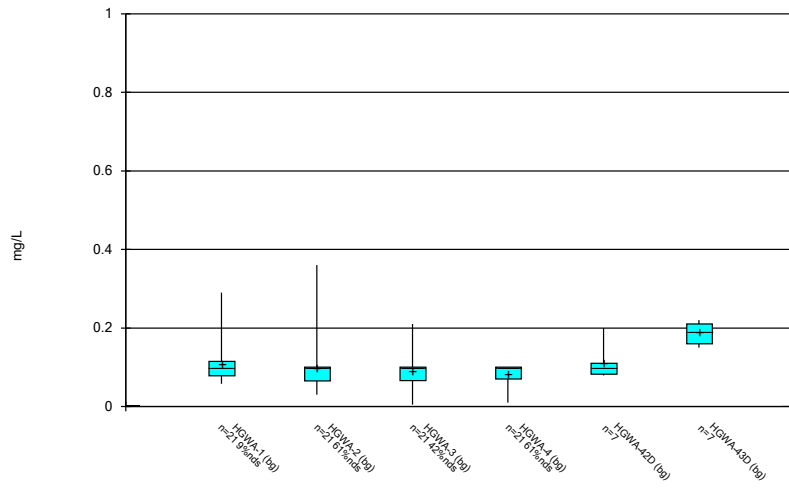
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 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Box & Whiskers Plot



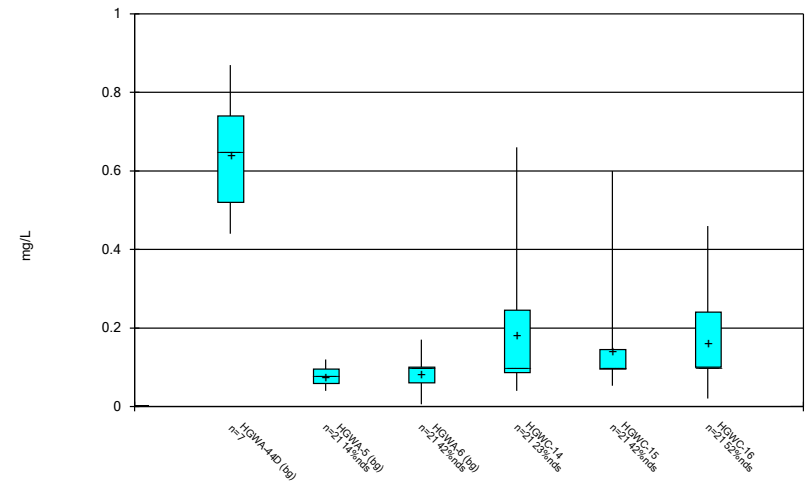
Constituent: Field pH Analysis Run 1/10/2022 1:01 PM  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

Box & Whiskers Plot



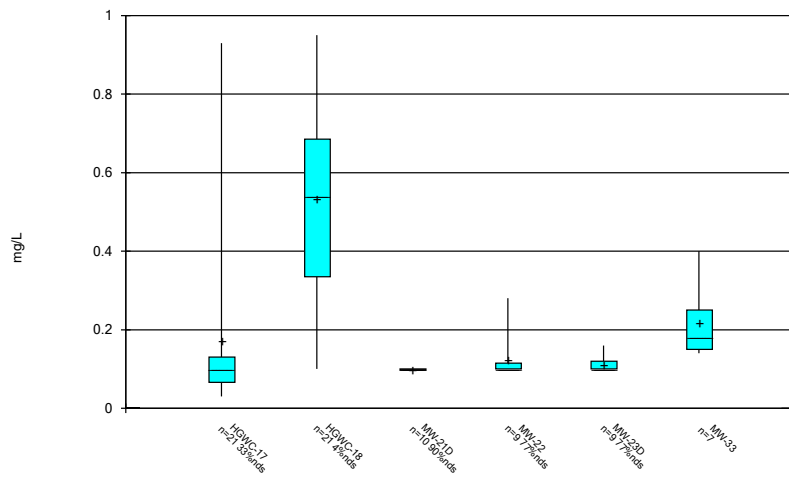
Constituent: Fluoride Analysis Run 1/10/2022 1:01 PM  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

Box & Whiskers Plot



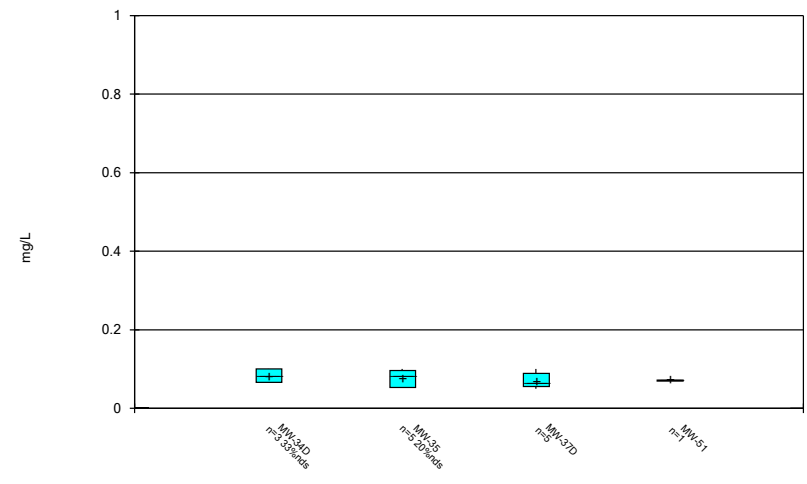
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 Plant Hammond Client: Southern Company Data: Hammond AP-2

Box & Whiskers Plot



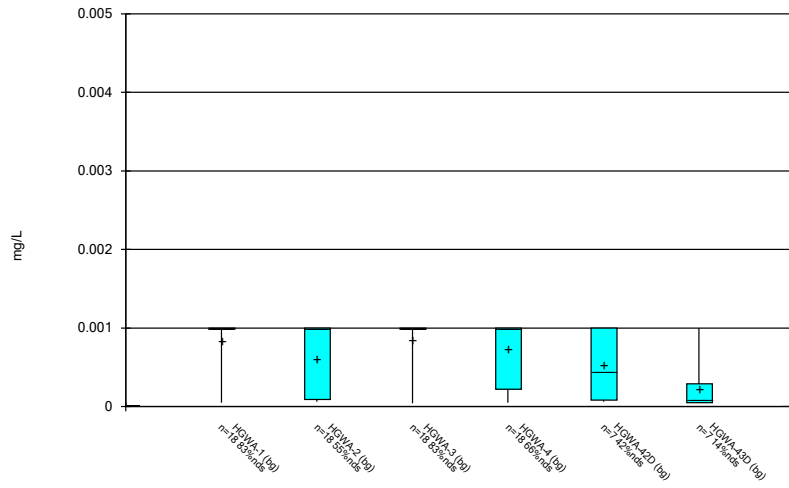
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 Plant Hammond Client: Southern Company Data: Hammond AP-2

Box & Whiskers Plot



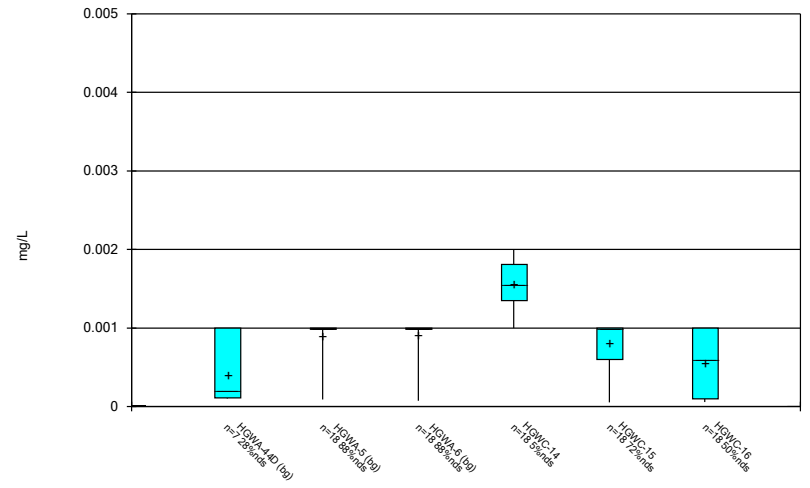
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 Plant Hammond Client: Southern Company Data: Hammond AP-2

Box & Whiskers Plot



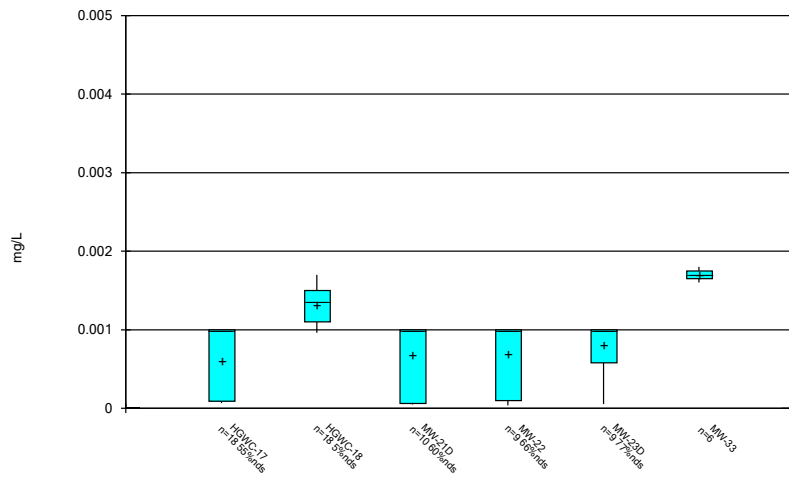
Constituent: Lead Analysis Run 1/10/2022 1:01 PM  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

Box & Whiskers Plot



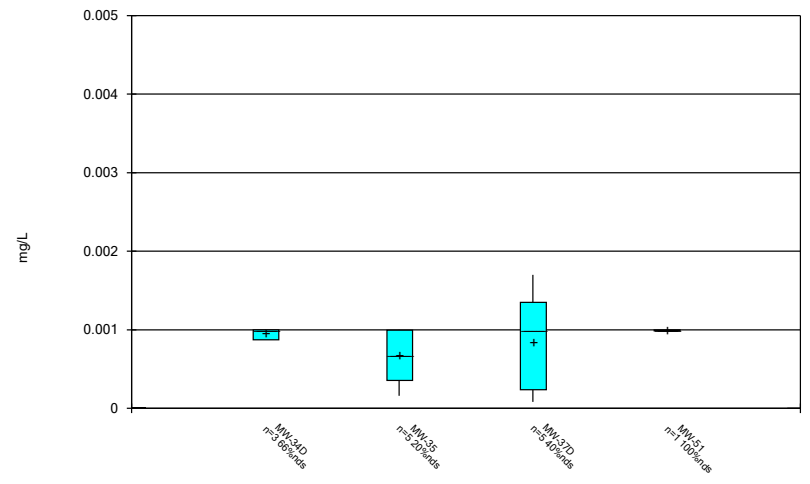
Constituent: Lead Analysis Run 1/10/2022 1:01 PM  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

Box & Whiskers Plot



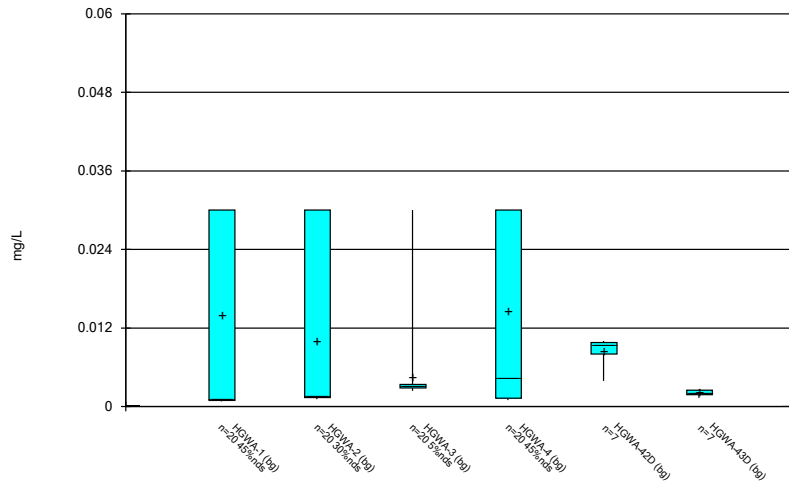
Constituent: Lead Analysis Run 1/10/2022 1:01 PM  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

Box & Whiskers Plot



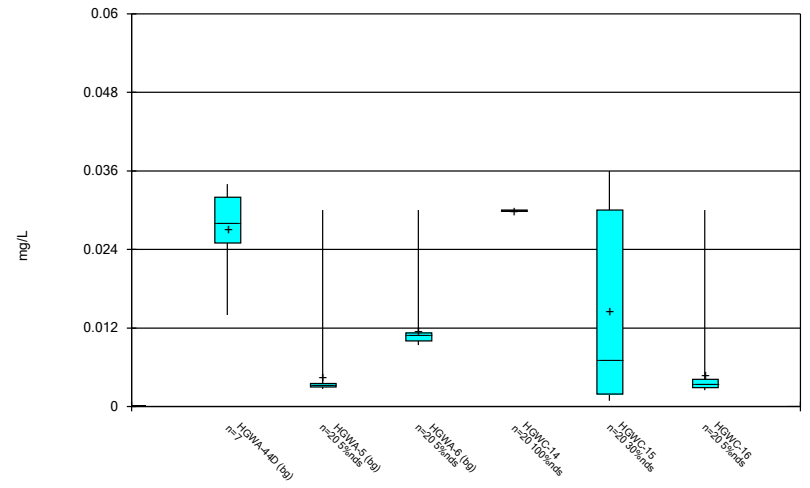
Constituent: Lead Analysis Run 1/10/2022 1:01 PM  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Box & Whiskers Plot



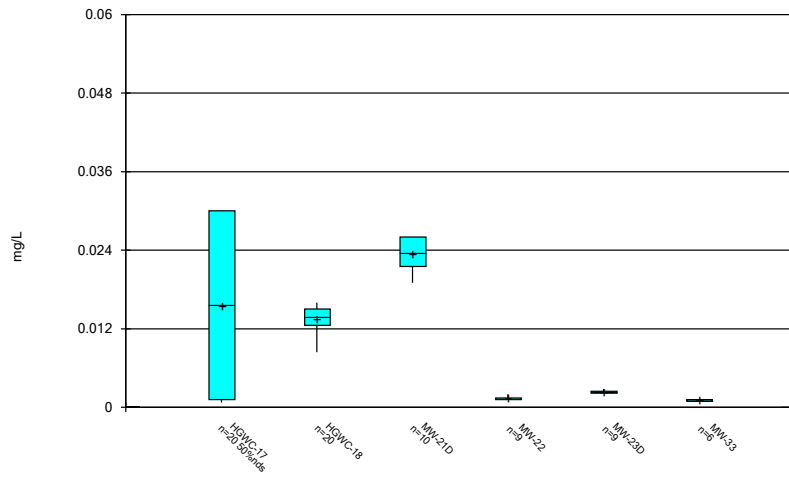
Constituent: Lithium Analysis Run 1/10/2022 1:01 PM  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Box & Whiskers Plot



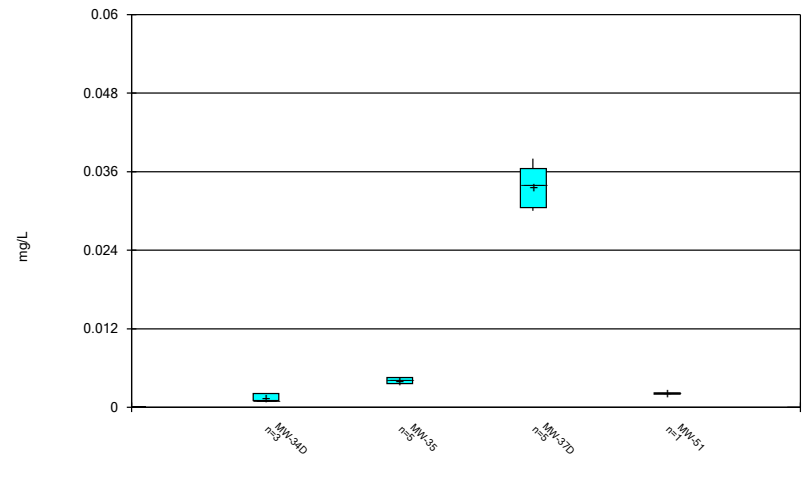
Constituent: Lithium Analysis Run 1/10/2022 1:01 PM  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Box & Whiskers Plot



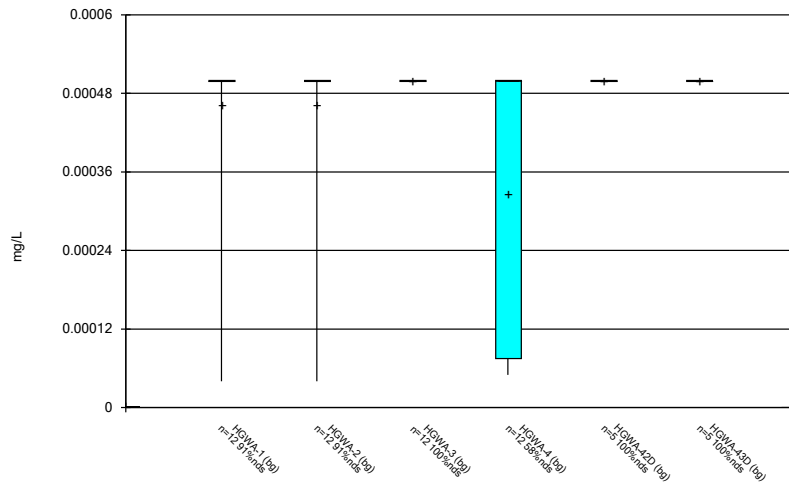
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 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Box & Whiskers Plot



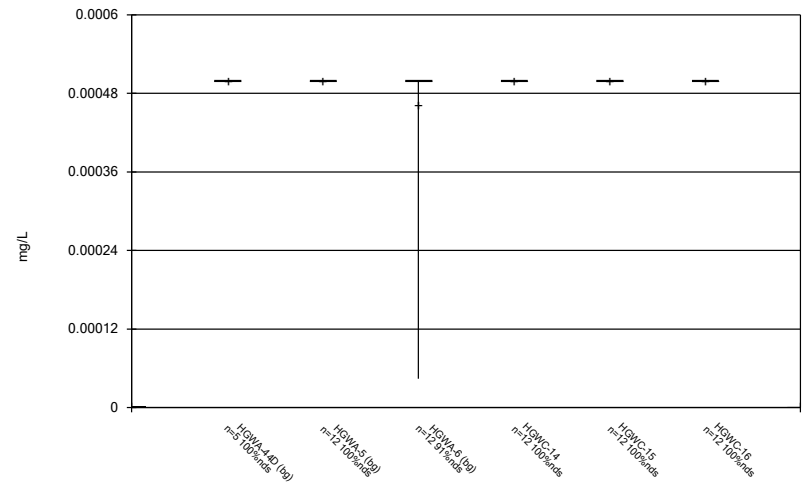
Constituent: Lithium Analysis Run 1/10/2022 1:01 PM  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Box & Whiskers Plot



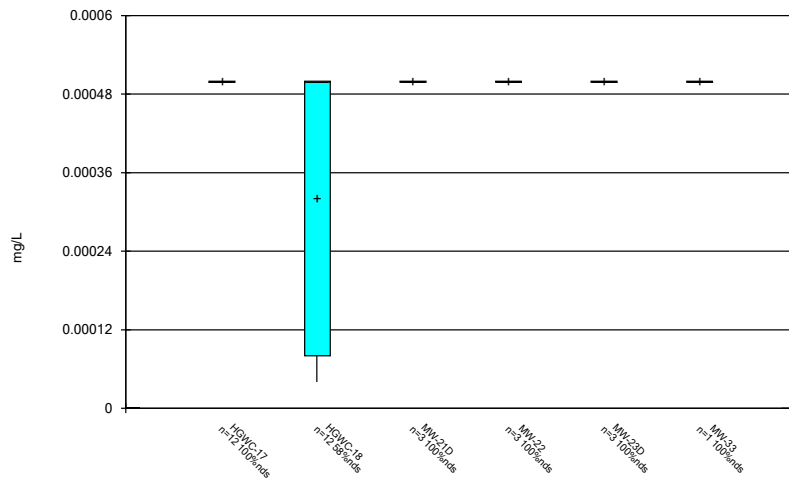
Constituent: Mercury Analysis Run 1/10/2022 1:01 PM  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Box & Whiskers Plot



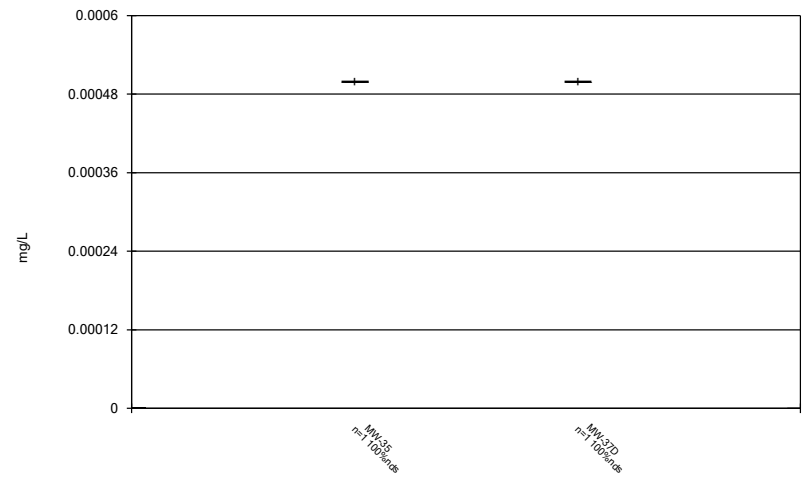
Constituent: Mercury Analysis Run 1/10/2022 1:01 PM  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Box & Whiskers Plot



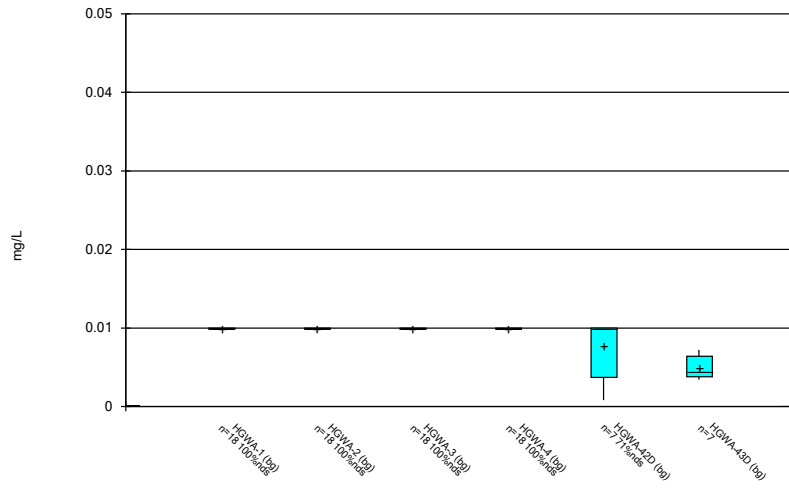
Constituent: Mercury Analysis Run 1/10/2022 1:01 PM  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Box & Whiskers Plot



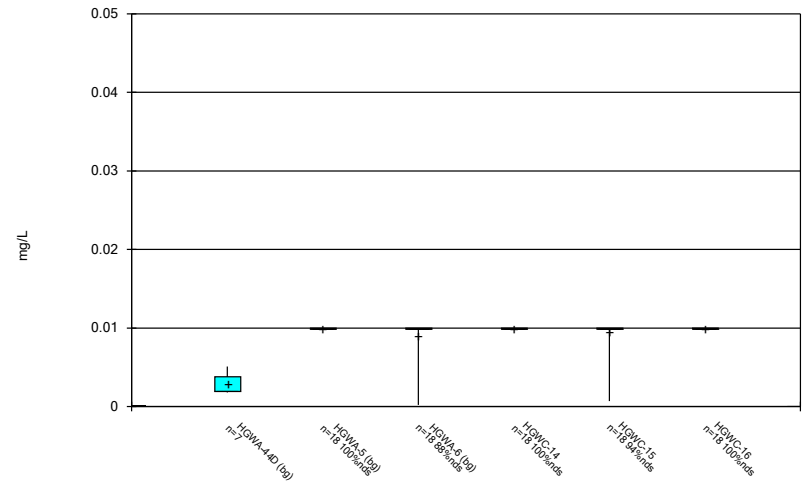
Constituent: Mercury Analysis Run 1/10/2022 1:01 PM  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

Box & Whiskers Plot



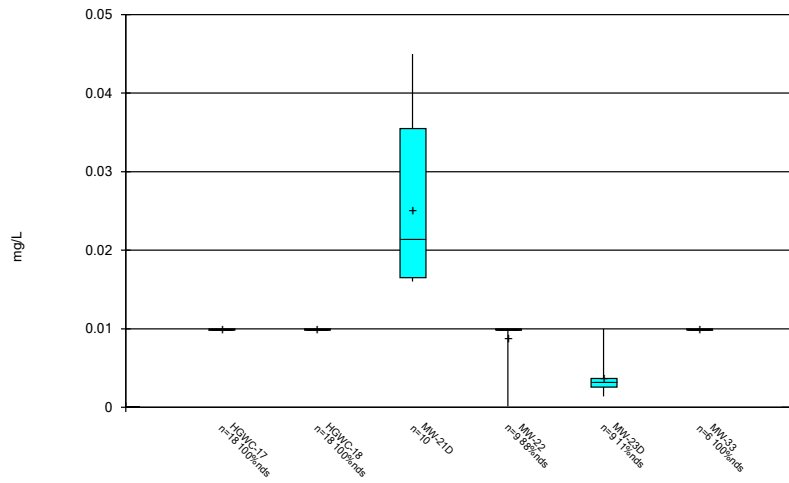
Constituent: Molybdenum Analysis Run 1/10/2022 1:01 PM  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

Box & Whiskers Plot



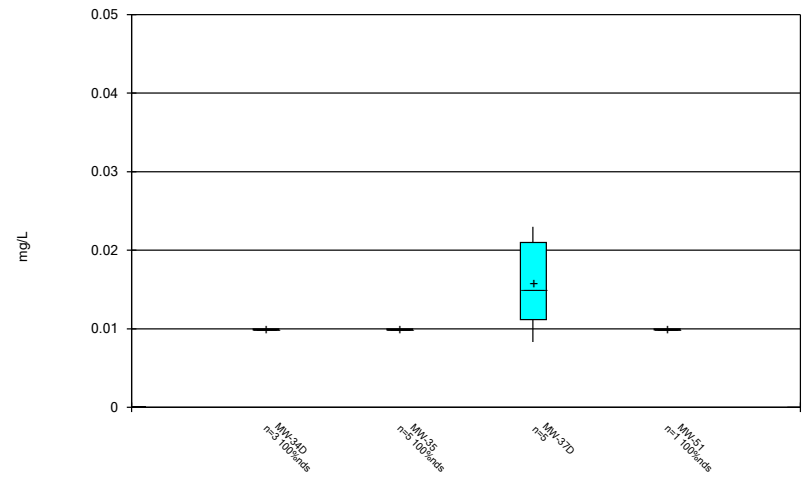
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 Plant Hammond Client: Southern Company Data: Hammond AP-2

Box & Whiskers Plot



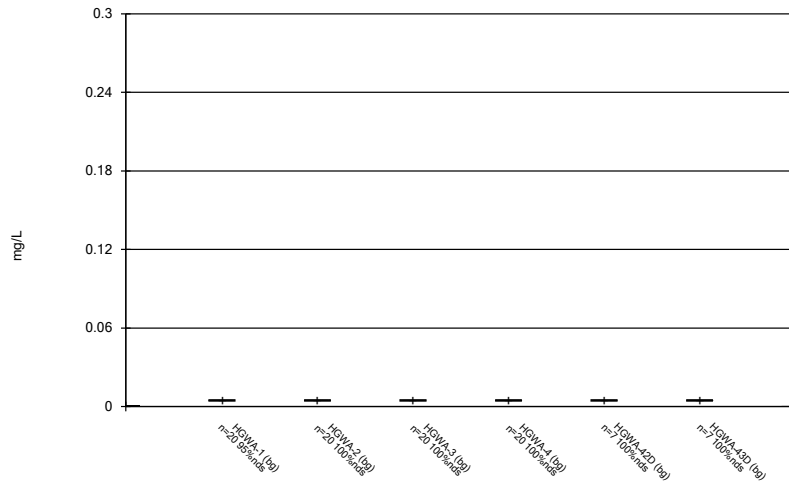
Constituent: Molybdenum Analysis Run 1/10/2022 1:01 PM  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

Box & Whiskers Plot



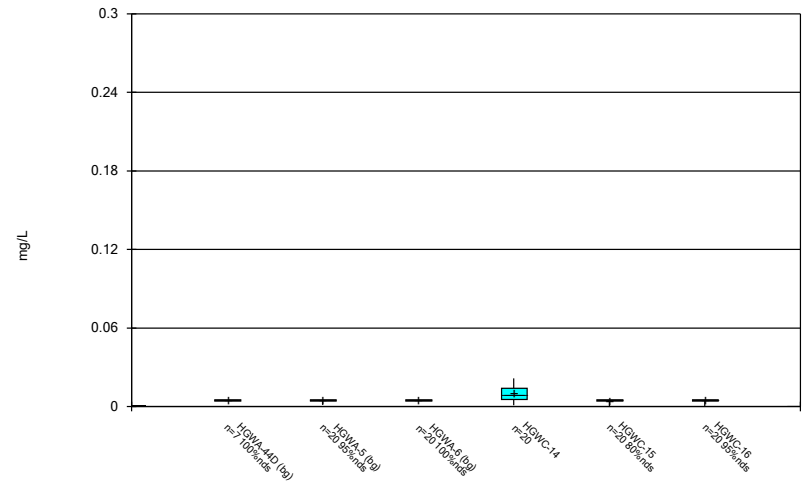
Constituent: Molybdenum Analysis Run 1/10/2022 1:01 PM  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

Box & Whiskers Plot



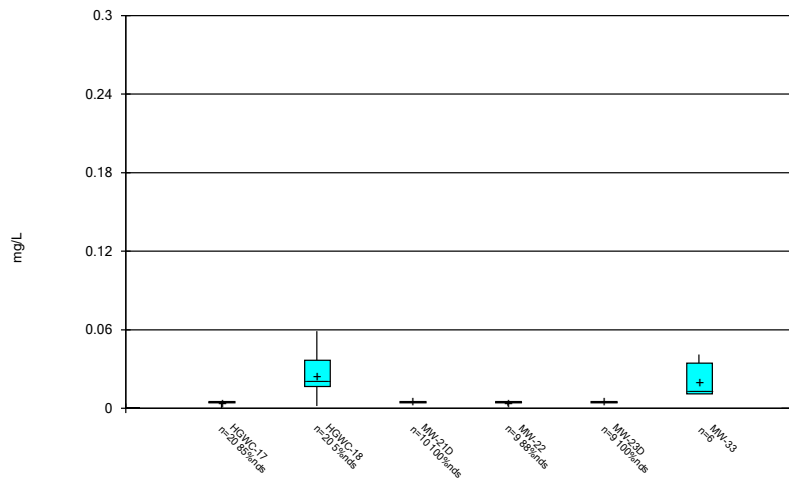
Constituent: Selenium Analysis Run 1/10/2022 1:01 PM  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

Box & Whiskers Plot



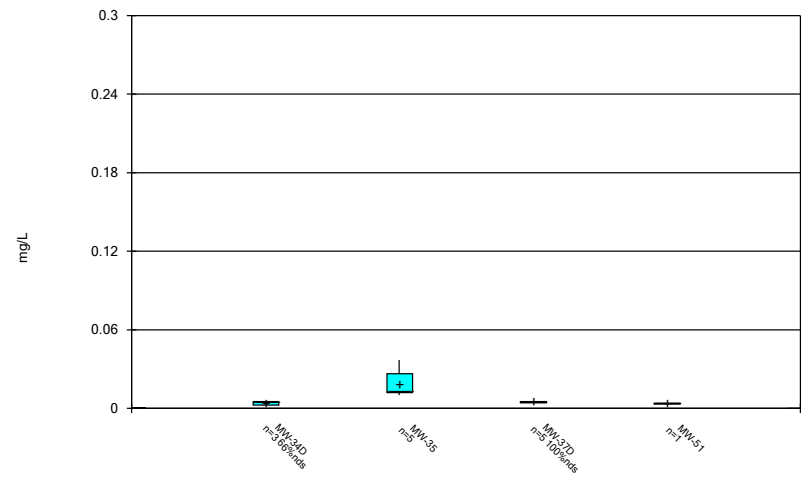
Constituent: Selenium Analysis Run 1/10/2022 1:01 PM  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

Box & Whiskers Plot



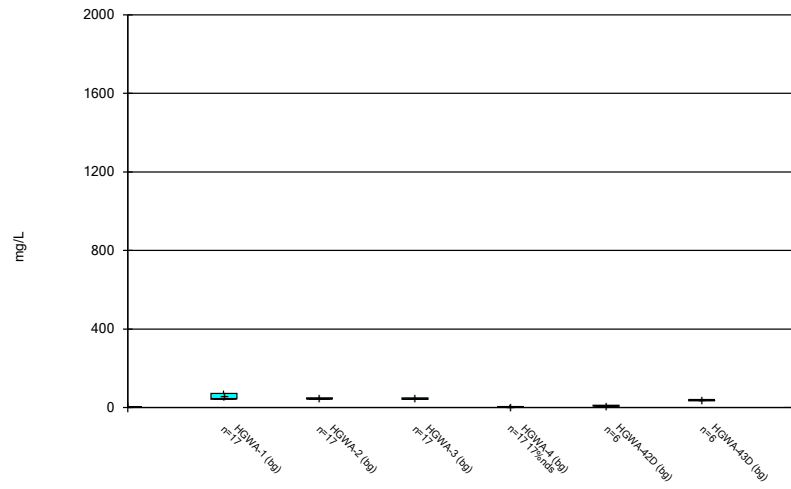
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 Plant Hammond Client: Southern Company Data: Hammond AP-2

Box & Whiskers Plot



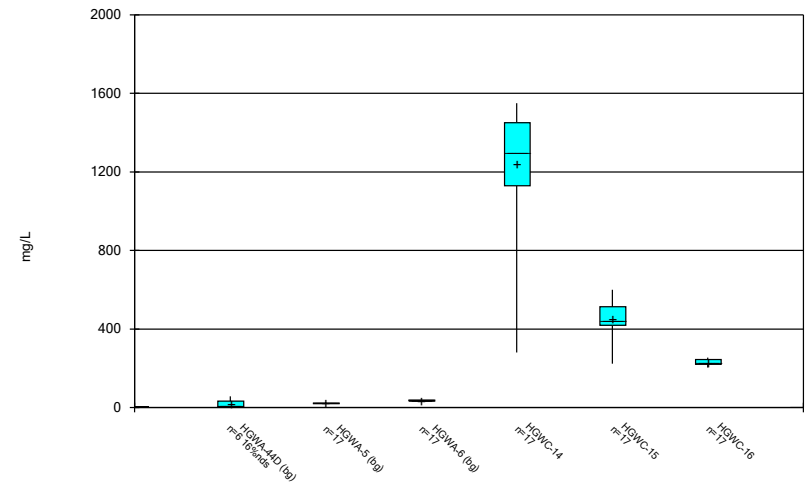
Constituent: Selenium Analysis Run 1/10/2022 1:01 PM  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Box & Whiskers Plot



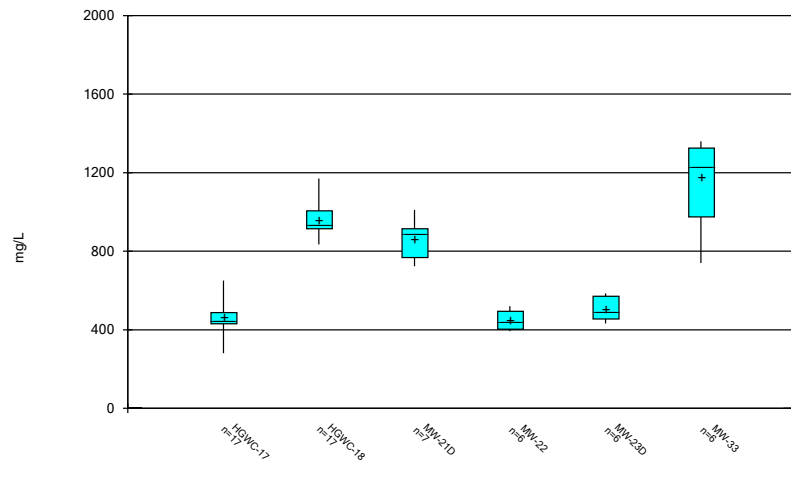
Constituent: Sulfate Analysis Run 1/10/2022 1:01 PM  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Box & Whiskers Plot



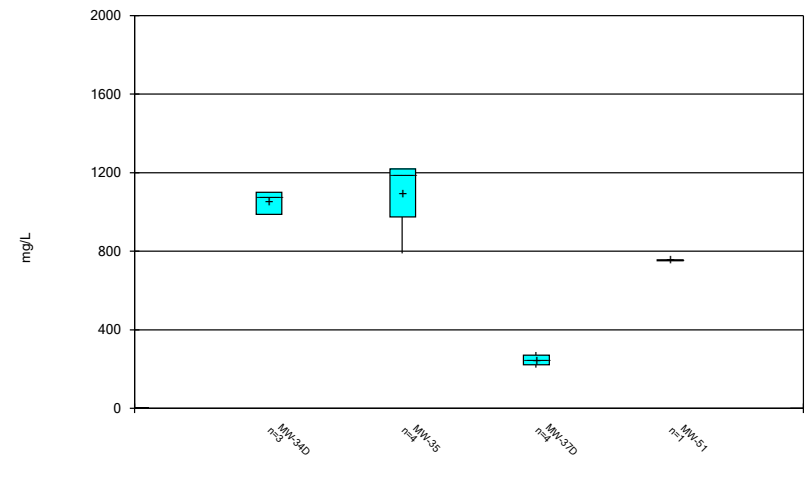
Constituent: Sulfate Analysis Run 1/10/2022 1:01 PM  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Box & Whiskers Plot



Constituent: Sulfate Analysis Run 1/10/2022 1:01 PM  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

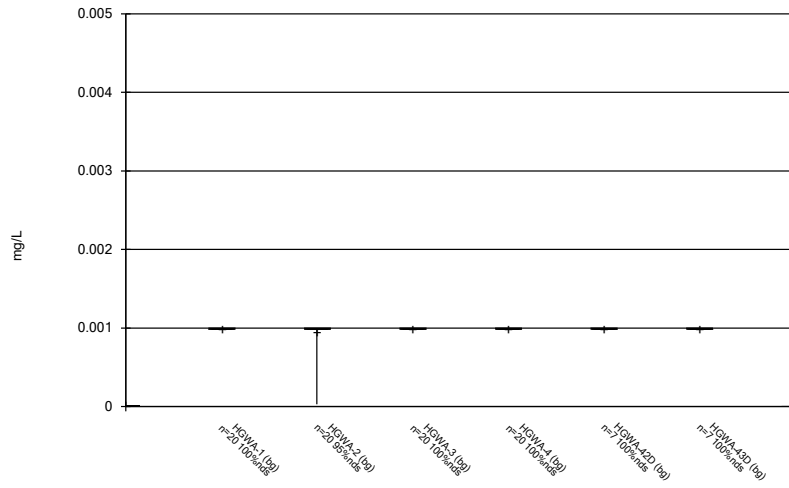
### Box & Whiskers Plot



Constituent: Sulfate Analysis Run 1/10/2022 1:01 PM  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

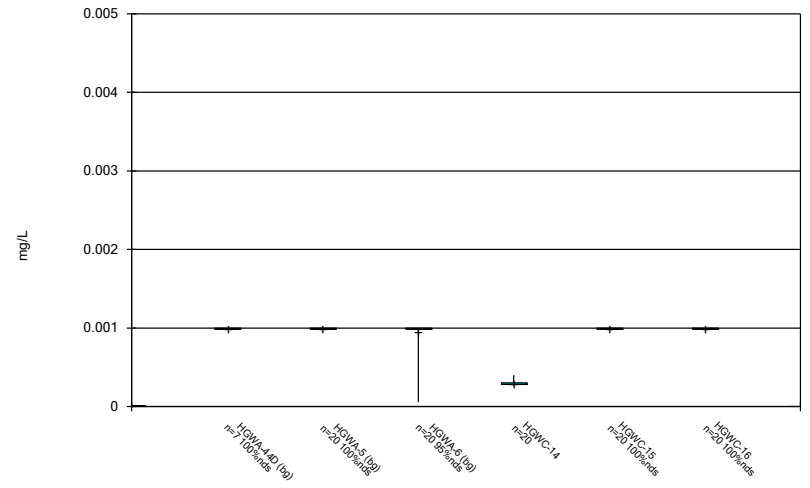


Box & Whiskers Plot



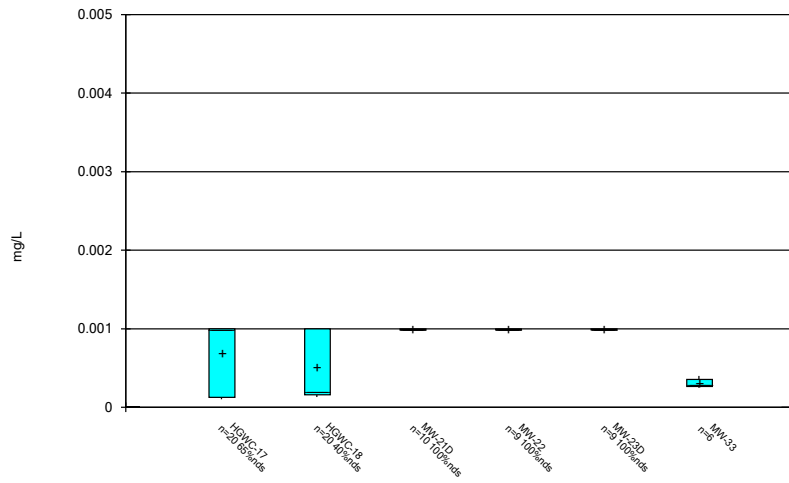
Constituent: Thallium Analysis Run 1/10/2022 1:01 PM  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

Box & Whiskers Plot



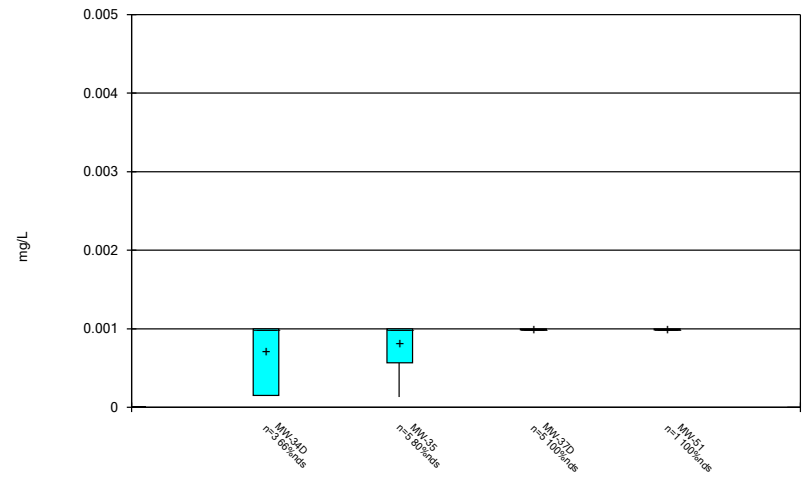
Constituent: Thallium Analysis Run 1/10/2022 1:01 PM  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

Box & Whiskers Plot



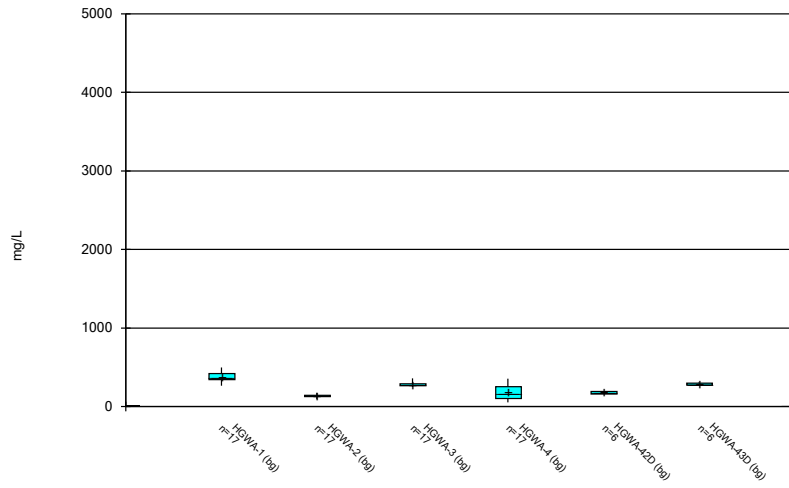
Constituent: Thallium Analysis Run 1/10/2022 1:01 PM  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

Box & Whiskers Plot



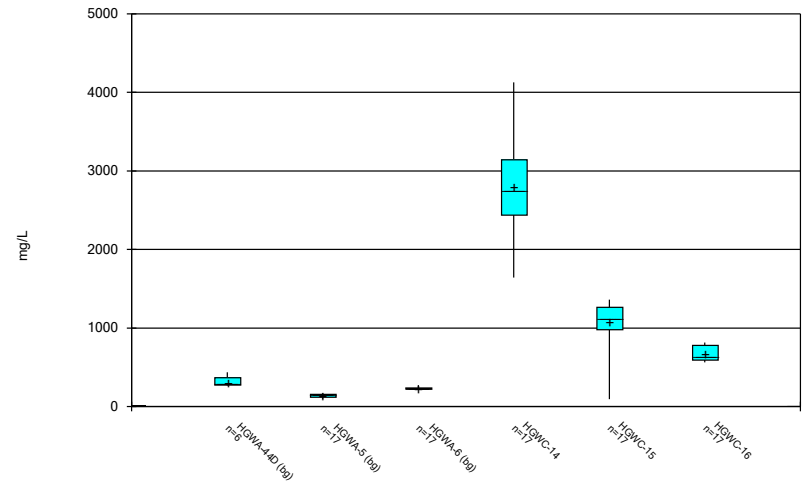
Constituent: Thallium Analysis Run 1/10/2022 1:01 PM  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

Box & Whiskers Plot



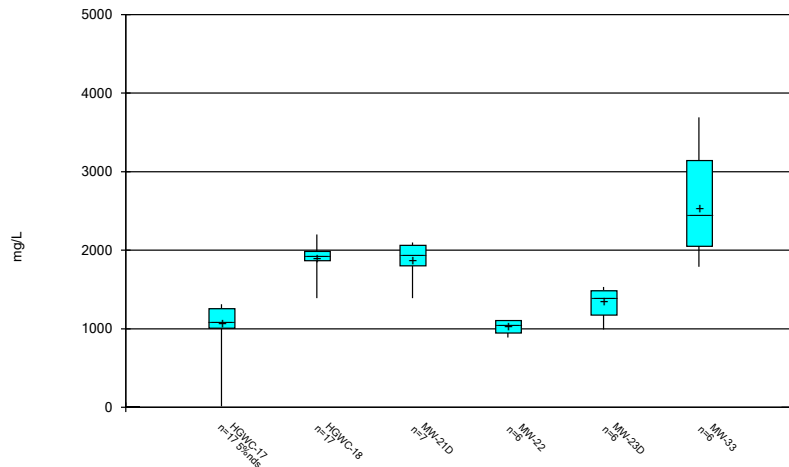
Constituent: Total Dissolved Solids Analysis Run 1/10/2022 1:01 PM  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

Box & Whiskers Plot



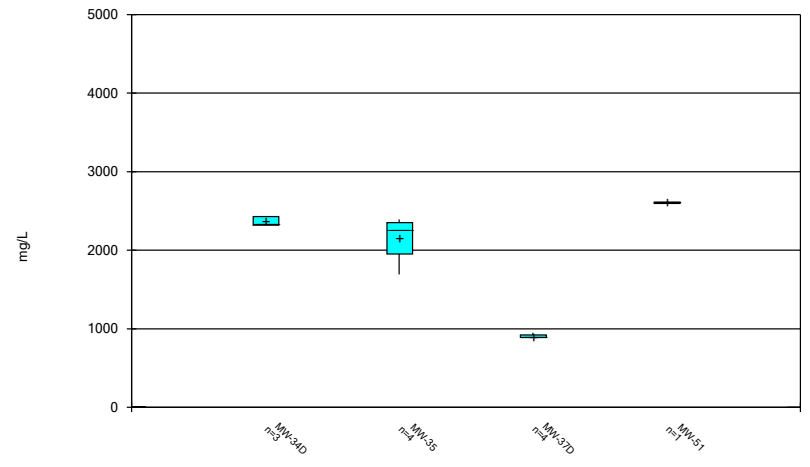
Constituent: Total Dissolved Solids Analysis Run 1/10/2022 1:01 PM  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

Box & Whiskers Plot



Constituent: Total Dissolved Solids Analysis Run 1/10/2022 1:01 PM  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

Box & Whiskers Plot



Constituent: Total Dissolved Solids Analysis Run 1/10/2022 1:01 PM  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

FIGURE C.

# Outlier Summary

Plant Hammond Client: Southern Company Data: Hammond AP-2 Printed 10/20/2021, 2:40 PM

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No outliers were flagged.

FIGURE D.

# Appendix III Interwell Prediction Limits - Significant Results

Plant Hammond Client: Southern Company Data: Hammond AP-2 Printed 10/25/2021, 4:06 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	%NDs	Transform	Alpha	Method
Boron (mg/L)	HGWC-14	0.4	n/a	8/18/2021	8.6	Yes	120	5.833	n/a	0.0001351	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-15	0.4	n/a	8/19/2021	2.1	Yes	120	5.833	n/a	0.0001351	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-16	0.4	n/a	8/19/2021	2.5	Yes	120	5.833	n/a	0.0001351	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-17	0.4	n/a	8/18/2021	5.3	Yes	120	5.833	n/a	0.0001351	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-18	0.4	n/a	8/19/2021	8.6	Yes	120	5.833	n/a	0.0001351	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-14	141.8	n/a	8/18/2021	583	Yes	120	0	ln(x)	0.001504	Param Inter 1 of 2
Calcium (mg/L)	HGWC-15	141.8	n/a	8/19/2021	203	Yes	120	0	ln(x)	0.001504	Param Inter 1 of 2
Calcium (mg/L)	HGWC-16	141.8	n/a	8/19/2021	207	Yes	120	0	ln(x)	0.001504	Param Inter 1 of 2
Calcium (mg/L)	HGWC-17	141.8	n/a	8/18/2021	281	Yes	120	0	ln(x)	0.001504	Param Inter 1 of 2
Calcium (mg/L)	HGWC-18	141.8	n/a	8/19/2021	416	Yes	120	0	ln(x)	0.001504	Param Inter 1 of 2
Chloride (mg/L)	HGWC-14	39.9	n/a	8/18/2021	141	Yes	120	0	n/a	0.0001351	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-15	39.9	n/a	8/19/2021	89.9	Yes	120	0	n/a	0.0001351	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-16	39.9	n/a	8/19/2021	90.1	Yes	120	0	n/a	0.0001351	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-17	39.9	n/a	8/18/2021	90.7	Yes	120	0	n/a	0.0001351	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-18	39.9	n/a	8/19/2021	95.8	Yes	120	0	n/a	0.0001351	NP Inter (normality) 1 of 2
Field pH (s.u.)	HGWC-18	7.92	4.9	8/19/2021	4.43	Yes	147	0	n/a	0.0001832	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-14	85.9	n/a	8/18/2021	768	Yes	120	3.333	n/a	0.0001351	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-15	85.9	n/a	8/19/2021	223	Yes	120	3.333	n/a	0.0001351	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-16	85.9	n/a	8/19/2021	228	Yes	120	3.333	n/a	0.0001351	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-17	85.9	n/a	8/18/2021	280	Yes	120	3.333	n/a	0.0001351	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-18	85.9	n/a	8/19/2021	934	Yes	120	3.333	n/a	0.0001351	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-14	496	n/a	8/18/2021	2350	Yes	120	0	n/a	0.0001351	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-15	496	n/a	8/19/2021	958	Yes	120	0	n/a	0.0001351	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-16	496	n/a	8/19/2021	816	Yes	120	0	n/a	0.0001351	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-17	496	n/a	8/18/2021	1290	Yes	120	0	n/a	0.0001351	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-18	496	n/a	8/19/2021	1750	Yes	120	0	n/a	0.0001351	NP Inter (normality) 1 of 2

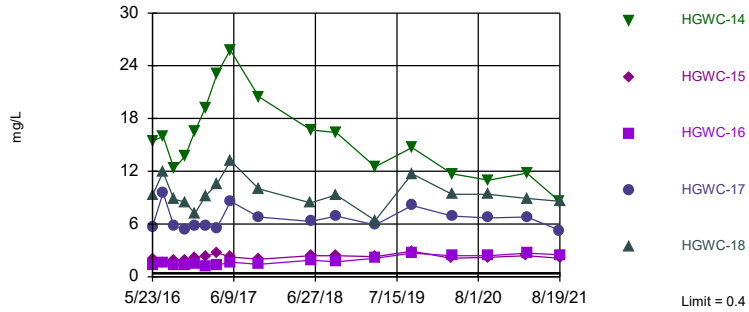
# Appendix III Interwell Prediction Limits - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-2 Printed 10/25/2021, 4:06 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg	N	%NDs	Transform	Alpha	Method
Boron (mg/L)	HGWC-14	0.4	n/a	8/18/2021	8.6	Yes	120	5.833	n/a		0.0001351	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-15	0.4	n/a	8/19/2021	2.1	Yes	120	5.833	n/a		0.0001351	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-16	0.4	n/a	8/19/2021	2.5	Yes	120	5.833	n/a		0.0001351	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-17	0.4	n/a	8/18/2021	5.3	Yes	120	5.833	n/a		0.0001351	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-18	0.4	n/a	8/19/2021	8.6	Yes	120	5.833	n/a		0.0001351	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-14	141.8	n/a	8/18/2021	583	Yes	120	0	ln(x)		0.001504	Param Inter 1 of 2
Calcium (mg/L)	HGWC-15	141.8	n/a	8/19/2021	203	Yes	120	0	ln(x)		0.001504	Param Inter 1 of 2
Calcium (mg/L)	HGWC-16	141.8	n/a	8/19/2021	207	Yes	120	0	ln(x)		0.001504	Param Inter 1 of 2
Calcium (mg/L)	HGWC-17	141.8	n/a	8/18/2021	281	Yes	120	0	ln(x)		0.001504	Param Inter 1 of 2
Calcium (mg/L)	HGWC-18	141.8	n/a	8/19/2021	416	Yes	120	0	ln(x)		0.001504	Param Inter 1 of 2
Chloride (mg/L)	HGWC-14	39.9	n/a	8/18/2021	141	Yes	120	0	n/a		0.0001351	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-15	39.9	n/a	8/19/2021	89.9	Yes	120	0	n/a		0.0001351	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-16	39.9	n/a	8/19/2021	90.1	Yes	120	0	n/a		0.0001351	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-17	39.9	n/a	8/18/2021	90.7	Yes	120	0	n/a		0.0001351	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-18	39.9	n/a	8/19/2021	95.8	Yes	120	0	n/a		0.0001351	NP Inter (normality) 1 of 2
Field pH (s.u.)	HGWC-14	7.92	4.9	8/18/2021	4.9	No	147	0	n/a		0.0001832	NP Inter (normality) 1 of 2
Field pH (s.u.)	HGWC-15	7.92	4.9	8/19/2021	6.18	No	147	0	n/a		0.0001832	NP Inter (normality) 1 of 2
Field pH (s.u.)	HGWC-16	7.92	4.9	8/19/2021	7.04	No	147	0	n/a		0.0001832	NP Inter (normality) 1 of 2
Field pH (s.u.)	HGWC-17	7.92	4.9	8/18/2021	6.43	No	147	0	n/a		0.0001832	NP Inter (normality) 1 of 2
<b>Field pH (s.u.)</b>	<b>HGWC-18</b>	<b>7.92</b>	<b>4.9</b>	<b>8/19/2021</b>	<b>4.43</b>	<b>Yes</b>	<b>147</b>	<b>0</b>	<b>n/a</b>		<b>0.0001832</b>	<b>NP Inter (normality) 1 of 2</b>
Fluoride (mg/L)	HGWC-14	0.87	n/a	8/18/2021	0.1ND	No	147	33.33	n/a		0.00009158	NP Inter (normality) 1 of 2
Fluoride (mg/L)	HGWC-15	0.87	n/a	8/19/2021	0.1ND	No	147	33.33	n/a		0.00009158	NP Inter (normality) 1 of 2
Fluoride (mg/L)	HGWC-16	0.87	n/a	8/19/2021	0.1ND	No	147	33.33	n/a		0.00009158	NP Inter (normality) 1 of 2
Fluoride (mg/L)	HGWC-17	0.87	n/a	8/18/2021	0.062J	No	147	33.33	n/a		0.00009158	NP Inter (normality) 1 of 2
Fluoride (mg/L)	HGWC-18	0.87	n/a	8/19/2021	0.31	No	147	33.33	n/a		0.00009158	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-14	85.9	n/a	8/18/2021	768	Yes	120	3.333	n/a		0.0001351	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-15	85.9	n/a	8/19/2021	223	Yes	120	3.333	n/a		0.0001351	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-16	85.9	n/a	8/19/2021	228	Yes	120	3.333	n/a		0.0001351	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-17	85.9	n/a	8/18/2021	280	Yes	120	3.333	n/a		0.0001351	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-18	85.9	n/a	8/19/2021	934	Yes	120	3.333	n/a		0.0001351	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-14	496	n/a	8/18/2021	2350	Yes	120	0	n/a		0.0001351	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-15	496	n/a	8/19/2021	958	Yes	120	0	n/a		0.0001351	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-16	496	n/a	8/19/2021	816	Yes	120	0	n/a		0.0001351	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-17	496	n/a	8/18/2021	1290	Yes	120	0	n/a		0.0001351	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-18	496	n/a	8/19/2021	1750	Yes	120	0	n/a		0.0001351	NP Inter (normality) 1 of 2

Exceeds Limit: HGWC-14, HGWC-15, HGWC-16, HGWC-17, HGWC-18

Prediction Limit  
Interwell Non-parametric

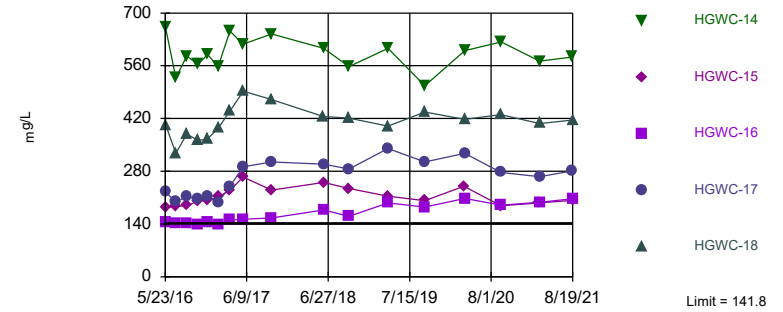


Non-parametric test used in lieu of parametric prediction limit because the Chi Squared normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 120 background values. 5.833% NDs. Annual per-constituent alpha = 0.00135. Individual comparison alpha = 0.0001351 (1 of 2). Comparing 5 points to limit.

Constituent: Boron Analysis Run 10/25/2021 4:04 PM View: Interwell PL  
Plant Hammond Client: Southern Company Data: Hammond AP-2

Exceeds Limit: HGWC-14, HGWC-15, HGWC-16, HGWC-17, HGWC-18

Prediction Limit  
Interwell Parametric

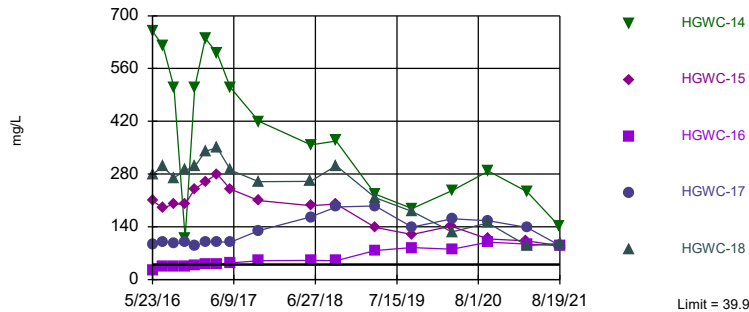


Background Data Summary (based on natural log transformation): Mean=3.815, Std. Dev.=0.6339, n=120. Normality test: Chi Squared @alpha = 0.01, calculated = 8.333, critical = 14.07. Kappa = 1.797 (c=7, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.001504. Comparing 5 points to limit.

Constituent: Calcium Analysis Run 10/25/2021 4:04 PM View: Interwell PL  
Plant Hammond Client: Southern Company Data: Hammond AP-2

Exceeds Limit: HGWC-14, HGWC-15, HGWC-16, HGWC-17, HGWC-18

Prediction Limit  
Interwell Non-parametric

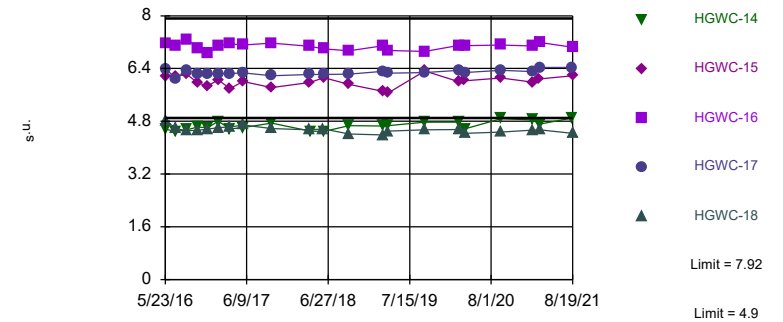


Non-parametric test used in lieu of parametric prediction limit because the Chi Squared normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 120 background values. Annual per-constituent alpha = 0.00135. Individual comparison alpha = 0.0001351 (1 of 2). Comparing 5 points to limit.

Constituent: Chloride Analysis Run 10/25/2021 4:04 PM View: Interwell PL  
Plant Hammond Client: Southern Company Data: Hammond AP-2

Exceeds Limits: HGWC-18

Prediction Limit  
Interwell Non-parametric



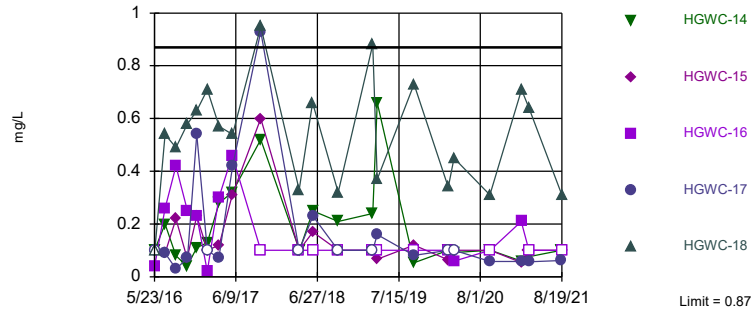
Non-parametric test used in lieu of parametric prediction limit because the Chi Squared normality test showed the data to be non-normal at the 0.01 alpha level. Limits are highest and lowest of 147 background values. Annual per-constituent alpha = 0.001831. Individual comparison alpha = 0.0001832 (1 of 2). Comparing 5 points to limit.

Constituent: Field pH Analysis Run 10/25/2021 4:04 PM View: Interwell PL  
Plant Hammond Client: Southern Company Data: Hammond AP-2



Within Limit

Prediction Limit  
 Interwell Non-parametric

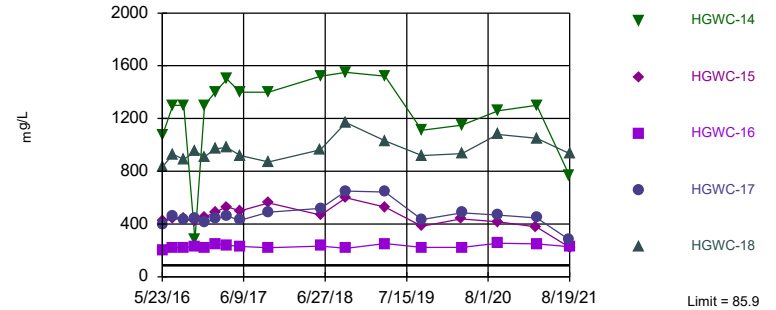


Non-parametric test used in lieu of parametric prediction limit because the Chi Squared normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 147 background values. 33.33% NDs. Annual per-constituent alpha = 0.0009155. Individual comparison alpha = 0.00009158 (1 of 2). Comparing 5 points to limit.

Constituent: Fluoride Analysis Run 10/25/2021 4:04 PM View: Interwell PL  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

Exceeds Limit: HGWC-14, HGWC-15,  
 HGWC-16, HGWC-17, HGWC-18

Prediction Limit  
 Interwell Non-parametric

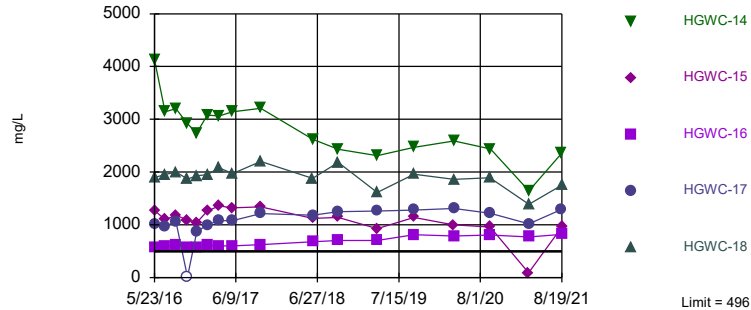


Non-parametric test used in lieu of parametric prediction limit because the Chi Squared normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 120 background values. 3.333% NDs. Annual per-constituent alpha = 0.00135. Individual comparison alpha = 0.0001351 (1 of 2). Comparing 5 points to limit.

Constituent: Sulfate Analysis Run 10/25/2021 4:04 PM View: Interwell PL  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

Exceeds Limit: HGWC-14, HGWC-15,  
 HGWC-16, HGWC-17, HGWC-18

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 120 background values. Annual per-constituent alpha = 0.00135. Individual comparison alpha = 0.0001351 (1 of 2). Comparing 5 points to limit.

Constituent: Total Dissolved Solids Analysis Run 10/25/2021 4:04 PM View: Interwell PL  
 Plant Hammond Client: Southern Company Data: Hammond AP-2





# Prediction Limit

Constituent: Boron (mg/L) Analysis Run 10/25/2021 4:06 PM View: Interwell PL  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWC-16	HGWC-18	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-42D (bg)
5/19/2016					
5/20/2016					
5/23/2016	1.36				
5/24/2016		9.33			
7/11/2016					
7/12/2016	1.62	11.9			
8/30/2016					
9/1/2016	1.31	8.8			
10/19/2016					
10/20/2016					
10/24/2016					
10/25/2016	1.27	8.5			
12/6/2016					
12/7/2016	1.42				
12/8/2016		7.15			
1/24/2017					
1/26/2017	1.19	9.17			
3/21/2017					
3/22/2017	1.32				
3/23/2017		10.6			
5/22/2017					
5/23/2017					
5/24/2017	1.67				
5/25/2017		13.2			
10/3/2017					
10/4/2017	1.43	10			
6/4/2018					
6/5/2018		8.4			
6/6/2018	1.9				
10/1/2018					
10/2/2018					
10/3/2018	1.7	9.3			
4/1/2019					
4/2/2019					
4/4/2019	2.1				
4/5/2019		6.4			
9/23/2019					
9/24/2019					
9/25/2019	2.7	11.7			
3/25/2020					
3/26/2020					
3/30/2020	2.4				
3/31/2020		9.4			
9/15/2020		9.4			
9/16/2020			0.061 (J)	0.23	
9/17/2020	2.4				0.098 (J)
9/18/2020					
11/10/2020			0.057 (J)	0.29	
11/11/2020					0.058 (J)
12/15/2020			0.052 (J)	0.31	0.043 (J)
1/19/2021			0.049 (J)	0.4	
1/20/2021					0.045 (J)

# Prediction Limit

Constituent: Boron (mg/L) Analysis Run 10/25/2021 4:06 PM View: Interwell PL  
Plant Hammond Client: Southern Company Data: Hammond AP-2

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	HGWC-16	HGWC-18	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-42D (bg)
3/10/2021				0.39	0.048
3/11/2021			0.06		
3/16/2021					
3/17/2021	2.7				
3/18/2021		8.9			
8/11/2021			0.042		
8/12/2021					0.044
8/13/2021				0.31	
8/18/2021					
8/19/2021	2.5	8.6			





# Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 10/25/2021 4:06 PM View: Interwell PL  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWC-16	HGWC-18	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-42D (bg)
5/19/2016					
5/20/2016					
5/23/2016	146				
5/24/2016		403			
7/11/2016					
7/12/2016	142	328			
8/30/2016					
9/1/2016	141	379			
10/19/2016					
10/20/2016					
10/24/2016					
10/25/2016	138	362			
12/6/2016					
12/7/2016	146				
12/8/2016		366			
1/24/2017					
1/26/2017	139	394			
3/21/2017					
3/22/2017	150				
3/23/2017		440			
5/22/2017					
5/23/2017					
5/24/2017	153				
5/25/2017		492			
10/3/2017					
10/4/2017	156	470			
6/4/2018					
6/5/2018		425			
6/6/2018	177				
10/1/2018					
10/2/2018					
10/3/2018	160	421			
4/1/2019					
4/2/2019					
4/4/2019	196				
4/5/2019		400			
9/23/2019					
9/24/2019					
9/25/2019	185	437			
3/25/2020					
3/26/2020					
3/30/2020	208				
3/31/2020		418			
9/15/2020		430			
9/16/2020			56	30	
9/17/2020	190				43.8
9/18/2020					
11/10/2020			63.3	33.6	
11/11/2020					44.4
12/15/2020			62.6	28.7	47.3
1/19/2021			60.1	33	
1/20/2021					41.8



# Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 10/25/2021 4:06 PM View: Interwell PL  
Plant Hammond Client: Southern Company Data: Hammond AP-2

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	HGWC-16	HGWC-18	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-42D (bg)
3/10/2021				18.3	43.4
3/11/2021			59.6		
3/16/2021					
3/17/2021	198				
3/18/2021		407			
8/11/2021			61		
8/12/2021					43.6
8/13/2021				28.9	
8/18/2021					
8/19/2021	207	416			





# Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 10/25/2021 4:06 PM View: Interwell PL  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWC-16	HGWC-18	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-42D (bg)
5/19/2016					
5/20/2016					
5/23/2016	25.8				
5/24/2016		280			
7/11/2016					
7/12/2016	34	300			
8/30/2016					
9/1/2016	34	270			
10/19/2016					
10/20/2016					
10/24/2016					
10/25/2016	35	290			
12/6/2016					
12/7/2016	38				
12/8/2016		300			
1/24/2017					
1/26/2017	41	340			
3/21/2017					
3/22/2017	41				
3/23/2017		350			
5/22/2017					
5/23/2017					
5/24/2017	44				
5/25/2017		290			
10/3/2017					
10/4/2017	50	260			
6/4/2018					
6/5/2018		261			
6/6/2018	50.6				
10/1/2018					
10/2/2018					
10/3/2018	49.9	302			
4/1/2019					
4/2/2019					
4/4/2019	76.8				
4/5/2019		217			
9/23/2019					
9/24/2019					
9/25/2019	84.4	181			
3/25/2020					
3/26/2020					
3/30/2020	80.2				
3/31/2020		126			
9/15/2020		150			
9/16/2020			4.1	7.2	
9/17/2020	99.3				5.8
9/18/2020					
11/10/2020			4.4	7.8	
11/11/2020					3.1
12/15/2020			4.7	9.4	3.2
1/19/2021			4.1	9.5	
1/20/2021					2.8

# Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 10/25/2021 4:06 PM View: Interwell PL  
Plant Hammond Client: Southern Company Data: Hammond AP-2

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	HGWC-16	HGWC-18	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-42D (bg)
3/10/2021				12.3	3
3/11/2021			4.5		
3/16/2021					
3/17/2021	93.8				
3/18/2021		90.2			
8/11/2021			3.5		
8/12/2021					2.6
8/13/2021				39.9	
8/18/2021					
8/19/2021	90.1	95.8			



# Prediction Limit

Constituent: Field pH (s.u.) Analysis Run 10/25/2021 4:06 PM View: Interwell PL  
Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-1 (bg)	HGWA-4 (bg)	HGWA-3 (bg)	HGWA-2 (bg)	HGWA-5 (bg)	HGWA-6 (bg)	HGWC-16	HGWC-14	HGWC-17
9/15/2020	7.15	5.75	7.29	5.22	6.33	7.37			
9/16/2020									6.35
9/17/2020							7.11		
9/18/2020								4.88	
11/10/2020									
11/11/2020									
12/15/2020									
1/19/2021									
1/20/2021									
2/8/2021	7.11	4.94							
2/9/2021			7.23	5.42	6.35	7.4			
2/10/2021							7.08		
2/11/2021								4.84	6.31
2/12/2021									
3/10/2021	6.95	5.28							
3/11/2021			7.33	5.8	6.48	7.56			
3/16/2021									
3/17/2021							7.19	4.72	
3/18/2021									6.43
8/11/2021	6.98								
8/12/2021		5.26	7.31	5.05	6.46	7.47			
8/13/2021									
8/18/2021								4.9	6.43
8/19/2021							7.04		

# Prediction Limit

Constituent: Field pH (s.u.) Analysis Run 10/25/2021 4:06 PM View: Interwell PL  
Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWC-15	HGWC-18	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-42D (bg)
5/19/2016					
5/20/2016					
5/23/2016	6.17				
5/24/2016		4.83			
7/11/2016					
7/12/2016	6.17	4.58			
8/30/2016					
9/1/2016	6.22	4.51			
10/19/2016					
10/20/2016					
10/24/2016	5.97				
10/25/2016		4.53			
12/6/2016					
12/7/2016	5.87				
12/8/2016		4.56			
1/24/2017					
1/26/2017	6.05	4.61			
3/21/2017					
3/22/2017					
3/23/2017	5.79	4.63			
5/22/2017					
5/23/2017					
5/24/2017	6.01				
5/25/2017		4.69			
10/3/2017					
10/4/2017	5.82	4.58			
4/2/2018					
4/3/2018	5.98	4.54			
4/4/2018					
6/4/2018					
6/5/2018		4.57			
6/6/2018	6.12				
10/1/2018					
10/2/2018					
10/3/2018	5.92	4.41			
3/11/2019					
3/12/2019					
3/14/2019	5.71	4.39			
3/15/2019					
4/1/2019					
4/2/2019					
4/4/2019	5.66				
4/5/2019		4.5			
9/23/2019					
9/24/2019	6.33				
9/25/2019		4.54			
3/2/2020					
3/3/2020	6	4.55			
3/25/2020					
3/26/2020	6.03				
3/30/2020					
3/31/2020		4.43			



# Prediction Limit

Constituent: Field pH (s.u.) Analysis Run 10/25/2021 4:06 PM View: Interwell PL  
Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWC-15	HGWC-18	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-42D (bg)
9/15/2020		4.47			
9/16/2020			7.52	7.83	
9/17/2020	6.11				7.62
9/18/2020					
11/10/2020			7.27	7.84	
11/11/2020					7.68
12/15/2020			7.39	7.87	7.64
1/19/2021			7.39	7.86	
1/20/2021					7.68
2/8/2021					7.64
2/9/2021			7.44	7.84	
2/10/2021					
2/11/2021		4.53			
2/12/2021	5.99				
3/10/2021				7.92	7.7
3/11/2021			7.46		
3/16/2021	6.08				
3/17/2021					
3/18/2021		4.54			
8/11/2021			7.4		
8/12/2021					7.7
8/13/2021				7.77	
8/18/2021					
8/19/2021	6.18	4.43			



# Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 10/25/2021 4:06 PM View: Interwell PL  
Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-1 (bg)	HGWA-4 (bg)	HGWA-3 (bg)	HGWA-2 (bg)	HGWA-5 (bg)	HGWA-6 (bg)	HGWC-16	HGWC-14	HGWC-17
9/15/2020	0.082 (J)	<0.1	<0.1	<0.1	0.061 (J)	<0.1			
9/16/2020									0.058 (J)
9/17/2020							<0.1		
9/18/2020								<0.1	
11/10/2020									
11/11/2020									
12/15/2020									
1/19/2021									
1/20/2021									
2/8/2021	0.078 (J)	<0.1							
2/9/2021			0.074 (J)	<0.1	0.053 (J)	<0.1			
2/10/2021							0.21		
2/11/2021								0.059 (J)	0.058 (J)
2/12/2021									
3/10/2021	0.079 (J)	<0.1							
3/11/2021			<0.1	0.1	0.06 (J)	0.17			
3/16/2021									
3/17/2021							<0.1	0.076 (J)	
3/18/2021									0.057 (J)
8/11/2021	0.058 (J)								
8/12/2021		<0.1	<0.1	<0.1	<0.1	<0.1			
8/13/2021									
8/18/2021								<0.1	0.062 (J)
8/19/2021							<0.1		

# Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 10/25/2021 4:06 PM View: Interwell PL  
Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWC-15	HGWC-18	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-42D (bg)
5/19/2016					
5/20/2016					
5/23/2016	<0.1				
5/24/2016		<0.1			
7/11/2016					
7/12/2016	0.09 (J)	0.54			
8/30/2016					
9/1/2016	0.22 (J)	0.49			
10/19/2016					
10/20/2016					
10/24/2016	0.07 (J)				
10/25/2016		0.58			
12/6/2016					
12/7/2016	0.23 (J)				
12/8/2016		0.63			
1/24/2017					
1/26/2017	<0.1	0.71			
3/21/2017					
3/22/2017					
3/23/2017	0.12 (J)	0.57			
5/22/2017					
5/23/2017					
5/24/2017	0.31				
5/25/2017		0.54			
10/3/2017					
10/4/2017	0.6	0.95			
4/2/2018					
4/3/2018	<0.1	0.33			
4/4/2018					
6/4/2018					
6/5/2018		0.66			
6/6/2018	0.17 (J)				
10/1/2018					
10/2/2018					
10/3/2018	<0.1	0.32			
3/11/2019					
3/12/2019					
3/14/2019	<0.1	0.88			
3/15/2019					
4/1/2019					
4/2/2019					
4/4/2019	0.066 (J)				
4/5/2019		0.37			
9/23/2019					
9/24/2019	0.12 (J)				
9/25/2019		0.73			
3/2/2020					
3/3/2020	0.064 (J)	0.34			
3/25/2020					
3/26/2020	<0.1				
3/30/2020					
3/31/2020		0.45			

# Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 10/25/2021 4:06 PM View: Interwell PL  
Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWC-15	HGWC-18	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-42D (bg)
9/15/2020		0.31			
9/16/2020			0.22	0.52	
9/17/2020	<0.1				0.2
9/18/2020					
11/10/2020			0.19	0.59	
11/11/2020					0.1
12/15/2020			0.21	0.67	0.11
1/19/2021			0.16	0.74	
1/20/2021					0.082 (J)
2/8/2021					0.096 (J)
2/9/2021			0.19	0.44	
2/10/2021					
2/11/2021		0.71			
2/12/2021	0.053 (J)				
3/10/2021				0.65	0.11
3/11/2021			0.2		
3/16/2021	<0.1				
3/17/2021					
3/18/2021		0.64			
8/11/2021			0.15		
8/12/2021					0.079 (J)
8/13/2021				0.87	
8/18/2021					
8/19/2021	<0.1	0.31			





# Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 10/25/2021 4:06 PM View: Interwell PL  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWC-16	HGWC-18	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-42D (bg)
5/19/2016					
5/20/2016					
5/23/2016	203				
5/24/2016		834			
7/11/2016					
7/12/2016	220	930			
8/30/2016					
9/1/2016	220	890			
10/19/2016					
10/20/2016					
10/24/2016					
10/25/2016	230	950			
12/6/2016					
12/7/2016	220				
12/8/2016		910			
1/24/2017					
1/26/2017	250	970			
3/21/2017					
3/22/2017	240				
3/23/2017		980			
5/22/2017					
5/23/2017					
5/24/2017	230				
5/25/2017		920			
10/3/2017					
10/4/2017	220	870			
6/4/2018					
6/5/2018		962			
6/6/2018	233				
10/1/2018					
10/2/2018					
10/3/2018	215	1170			
4/1/2019					
4/2/2019					
4/4/2019	251				
4/5/2019		1030			
9/23/2019					
9/24/2019					
9/25/2019	223	920			
3/25/2020					
3/26/2020					
3/30/2020	223				
3/31/2020		934			
9/15/2020		1080			
9/16/2020			43	6.9	
9/17/2020	254				10.9
9/18/2020					
11/10/2020			39	6.3	
11/11/2020					9.4
12/15/2020			38.8	6.7	10.9
1/19/2021			37.3	7.4	
1/20/2021					9.8



# Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 10/25/2021 4:06 PM View: Interwell PL  
Plant Hammond Client: Southern Company Data: Hammond AP-2

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	HGWC-16	HGWC-18	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-42D (bg)
3/10/2021				<1	10.8
3/11/2021			38.6		
3/16/2021					
3/17/2021	250				
3/18/2021		1050			
8/11/2021			30.5		
8/12/2021					7.8
8/13/2021				56.1	
8/18/2021					
8/19/2021	228	934			





# Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 10/25/2021 4:06 PM View: Interwell PL  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWC-16	HGWC-18	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-42D (bg)
5/19/2016					
5/20/2016					
5/23/2016	570				
5/24/2016		1900			
7/11/2016					
7/12/2016	585	1950			
8/30/2016					
9/1/2016	625	2000			
10/19/2016					
10/20/2016					
10/24/2016					
10/25/2016	563	1870			
12/6/2016					
12/7/2016	561				
12/8/2016		1930			
1/24/2017					
1/26/2017	608	1950			
3/21/2017					
3/22/2017	599				
3/23/2017		2080			
5/22/2017					
5/23/2017					
5/24/2017	598				
5/25/2017		1970			
10/3/2017					
10/4/2017	626	2200			
6/4/2018					
6/5/2018		1880			
6/6/2018	678				
10/1/2018					
10/2/2018					
10/3/2018	700	2180			
4/1/2019					
4/2/2019					
4/4/2019	704				
4/5/2019		1610			
9/23/2019					
9/24/2019					
9/25/2019	813	1960			
3/25/2020					
3/26/2020					
3/30/2020	787				
3/31/2020		1860			
9/15/2020		1890			
9/16/2020			272	270	
9/17/2020	804				188
9/18/2020					
11/10/2020			307	287	
11/11/2020					175
12/15/2020			289	295	193
1/19/2021			270	278	
1/20/2021					158

# Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 10/25/2021 4:06 PM View: Interwell PL  
Plant Hammond Client: Southern Company Data: Hammond AP-2

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	HGWC-16	HGWC-18	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-42D (bg)
3/10/2021				289	163
3/11/2021			279		
3/16/2021					
3/17/2021	768				
3/18/2021		1390			
8/11/2021			277		
8/12/2021					179
8/13/2021				436	
8/18/2021					
8/19/2021	816	1750			

FIGURE E.

# Appendix III Trend Test - Significant Results

Plant Hammond Client: Southern Company Data: Hammond AP-2 Printed 10/28/2021, 1:56 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Boron (mg/L)	HGWA-2 (bg)	0.002396	83	63	Yes	17	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-16	0.2698	92	63	Yes	17	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-4 (bg)	-9.822	-72	-63	Yes	17	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWC-16	13.22	103	63	Yes	17	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWA-4 (bg)	-0.3912	-101	-63	Yes	17	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWA-44D (bg)	13.69	15	14	Yes	6	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWC-14	-88.48	-81	-63	Yes	17	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWC-15	-23.76	-72	-63	Yes	17	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWC-16	13.31	122	63	Yes	17	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWC-18	-38.27	-74	-63	Yes	17	0	n/a	n/a	0.01	NP
Field pH (s.u.)	HGWA-4 (bg)	-0.2968	-125	-87	Yes	21	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-2 (bg)	1.201	66	63	Yes	17	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-4 (bg)	-0.6292	-64	-63	Yes	17	17.65	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-4 (bg)	-35.66	-75	-63	Yes	17	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWC-14	-225.6	-85	-63	Yes	17	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWC-16	51.84	100	63	Yes	17	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWC-17	76.01	85	63	Yes	17	5.882	n/a	n/a	0.01	NP

# Appendix III Trend Test - All Results

Plant Hammond    Client: Southern Company    Data: Hammond AP-2    Printed 10/28/2021, 1:56 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Boron (mg/L)	HGWA-1 (bg)	-0.00001787	-1	-63	No	17	0	n/a	n/a	0.01	NP
<b>Boron (mg/L)</b>	<b>HGWA-2 (bg)</b>	<b>0.002396</b>	<b>83</b>	<b>63</b>	<b>Yes</b>	<b>17</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Boron (mg/L)	HGWA-3 (bg)	-0.00005607	-6	-63	No	17	17.65	n/a	n/a	0.01	NP
Boron (mg/L)	HGWA-4 (bg)	-0.001013	-45	-63	No	17	5.882	n/a	n/a	0.01	NP
Boron (mg/L)	HGWA-42D (bg)	-0.03067	-7	-14	No	6	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWA-43D (bg)	-0.02108	-9	-14	No	6	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWA-44D (bg)	0.3042	8	14	No	6	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWA-5 (bg)	0	-1	-63	No	17	11.76	n/a	n/a	0.01	NP
Boron (mg/L)	HGWA-6 (bg)	-0.000592	-30	-63	No	17	5.882	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-14	-1.128	-46	-63	No	17	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-15	0.06648	43	63	No	17	0	n/a	n/a	0.01	NP
<b>Boron (mg/L)</b>	<b>HGWC-16</b>	<b>0.2698</b>	<b>92</b>	<b>63</b>	<b>Yes</b>	<b>17</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Boron (mg/L)	HGWC-17	0.1465	20	63	No	17	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-18	-0.0772	-11	-63	No	17	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-1 (bg)	3.043	50	63	No	17	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-2 (bg)	0.3671	20	63	No	17	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-3 (bg)	2.778	62	63	No	17	0	n/a	n/a	0.01	NP
<b>Calcium (mg/L)</b>	<b>HGWA-4 (bg)</b>	<b>-9.822</b>	<b>-72</b>	<b>-63</b>	<b>Yes</b>	<b>17</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Calcium (mg/L)	HGWA-42D (bg)	-0.8391	-3	-14	No	6	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-43D (bg)	-2.444	-1	-14	No	6	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-44D (bg)	-5.272	-5	-14	No	6	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-5 (bg)	0.02191	1	63	No	17	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-6 (bg)	0.3964	23	63	No	17	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWC-14	-3.085	-8	-63	No	17	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWC-15	4.047	35	63	No	17	0	n/a	n/a	0.01	NP
<b>Calcium (mg/L)</b>	<b>HGWC-16</b>	<b>13.22</b>	<b>103</b>	<b>63</b>	<b>Yes</b>	<b>17</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Calcium (mg/L)	HGWC-17	19.04	57	63	No	17	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWC-18	9.741	36	63	No	17	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWA-1 (bg)	0.7317	37	63	No	17	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWA-2 (bg)	-0.2131	-62	-63	No	17	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWA-3 (bg)	-0.1136	-44	-63	No	17	0	n/a	n/a	0.01	NP
<b>Chloride (mg/L)</b>	<b>HGWA-4 (bg)</b>	<b>-0.3912</b>	<b>-101</b>	<b>-63</b>	<b>Yes</b>	<b>17</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Chloride (mg/L)	HGWA-42D (bg)	-0.9419	-11	-14	No	6	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWA-43D (bg)	-0.6657	-2	-14	No	6	0	n/a	n/a	0.01	NP
<b>Chloride (mg/L)</b>	<b>HGWA-44D (bg)</b>	<b>13.69</b>	<b>15</b>	<b>14</b>	<b>Yes</b>	<b>6</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Chloride (mg/L)	HGWA-5 (bg)	-0.08274	-48	-63	No	17	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWA-6 (bg)	-0.09831	-58	-63	No	17	0	n/a	n/a	0.01	NP
<b>Chloride (mg/L)</b>	<b>HGWC-14</b>	<b>-88.48</b>	<b>-81</b>	<b>-63</b>	<b>Yes</b>	<b>17</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
<b>Chloride (mg/L)</b>	<b>HGWC-15</b>	<b>-23.76</b>	<b>-72</b>	<b>-63</b>	<b>Yes</b>	<b>17</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
<b>Chloride (mg/L)</b>	<b>HGWC-16</b>	<b>13.31</b>	<b>122</b>	<b>63</b>	<b>Yes</b>	<b>17</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Chloride (mg/L)	HGWC-17	12.31	54	63	No	17	0	n/a	n/a	0.01	NP
<b>Chloride (mg/L)</b>	<b>HGWC-18</b>	<b>-38.27</b>	<b>-74</b>	<b>-63</b>	<b>Yes</b>	<b>17</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Field pH (s.u.)	HGWA-1 (bg)	-0.03025	-64	-87	No	21	0	n/a	n/a	0.01	NP
Field pH (s.u.)	HGWA-2 (bg)	-0.04184	-39	-87	No	21	0	n/a	n/a	0.01	NP
Field pH (s.u.)	HGWA-3 (bg)	-0.007267	-10	-87	No	21	0	n/a	n/a	0.01	NP
<b>Field pH (s.u.)</b>	<b>HGWA-4 (bg)</b>	<b>-0.2968</b>	<b>-125</b>	<b>-87</b>	<b>Yes</b>	<b>21</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Field pH (s.u.)	HGWA-42D (bg)	0.08202	12	18	No	7	0	n/a	n/a	0.01	NP
Field pH (s.u.)	HGWA-43D (bg)	0.01789	4	18	No	7	0	n/a	n/a	0.01	NP
Field pH (s.u.)	HGWA-44D (bg)	0.025	2	18	No	7	0	n/a	n/a	0.01	NP
Field pH (s.u.)	HGWA-5 (bg)	-0.03644	-70	-87	No	21	0	n/a	n/a	0.01	NP
Field pH (s.u.)	HGWA-6 (bg)	-0.016	-36	-87	No	21	0	n/a	n/a	0.01	NP
Field pH (s.u.)	HGWC-18	-0.02477	-80	-87	No	21	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-1 (bg)	1.842	35	63	No	17	0	n/a	n/a	0.01	NP
<b>Sulfate (mg/L)</b>	<b>HGWA-2 (bg)</b>	<b>1.201</b>	<b>66</b>	<b>63</b>	<b>Yes</b>	<b>17</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Sulfate (mg/L)	HGWA-3 (bg)	1.343	51	63	No	17	0	n/a	n/a	0.01	NP
<b>Sulfate (mg/L)</b>	<b>HGWA-4 (bg)</b>	<b>-0.6292</b>	<b>-64</b>	<b>-63</b>	<b>Yes</b>	<b>17</b>	<b>17.65</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Sulfate (mg/L)	HGWA-42D (bg)	-2.131	-6	-14	No	6	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-43D (bg)	-12.17	-13	-14	No	6	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-44D (bg)	4.171	3	14	No	6	16.67	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-5 (bg)	-0.4049	-21	-63	No	17	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-6 (bg)	0	-6	-63	No	17	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-14	4.913	10	63	No	17	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-15	-7.462	-19	-63	No	17	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-16	2.763	45	63	No	17	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-17	8.609	29	63	No	17	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-18	25.85	52	63	No	17	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-1 (bg)	3.302	12	63	No	17	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-2 (bg)	-2.657	-23	-63	No	17	0	n/a	n/a	0.01	NP



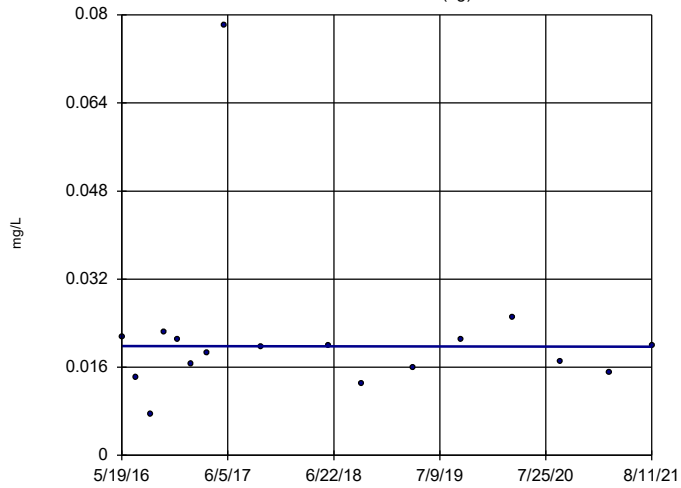
# Appendix III Trend Test - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-2 Printed 10/28/2021, 1:56 PM

<u>Constituent</u>	<u>Well</u>	<u>Slope</u>	<u>Calc.</u>	<u>Critical</u>	<u>Sig.</u>	<u>N</u>	<u>%NDs</u>	<u>Normality</u>	<u>Xform</u>	<u>Alpha</u>	<u>Method</u>
Total Dissolved Solids (mg/L)	HGWA-3 (bg)	-0.5858	-13	-63	No	17	0	n/a	n/a	0.01	NP
<b>Total Dissolved Solids (mg/L)</b>	<b>HGWA-4 (bg)</b>	<b>-35.66</b>	<b>-75</b>	<b>-63</b>	<b>Yes</b>	<b>17</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Total Dissolved Solids (mg/L)	HGWA-42D (bg)	-21.29	-3	-14	No	6	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-43D (bg)	-5.84	-3	-14	No	6	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-44D (bg)	83.43	9	14	No	6	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-5 (bg)	-5.106	-29	-63	No	17	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-6 (bg)	-0.7708	-9	-63	No	17	0	n/a	n/a	0.01	NP
<b>Total Dissolved Solids (mg/L)</b>	<b>HGWC-14</b>	<b>-225.6</b>	<b>-85</b>	<b>-63</b>	<b>Yes</b>	<b>17</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Total Dissolved Solids (mg/L)	HGWC-15	-63.49	-53	-63	No	17	0	n/a	n/a	0.01	NP
<b>Total Dissolved Solids (mg/L)</b>	<b>HGWC-16</b>	<b>51.84</b>	<b>100</b>	<b>63</b>	<b>Yes</b>	<b>17</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
<b>Total Dissolved Solids (mg/L)</b>	<b>HGWC-17</b>	<b>76.01</b>	<b>85</b>	<b>63</b>	<b>Yes</b>	<b>17</b>	<b>5.882</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Total Dissolved Solids (mg/L)	HGWC-18	-27.77	-33	-63	No	17	0	n/a	n/a	0.01	NP

### Sen's Slope Estimator

HGWA-1 (bg)

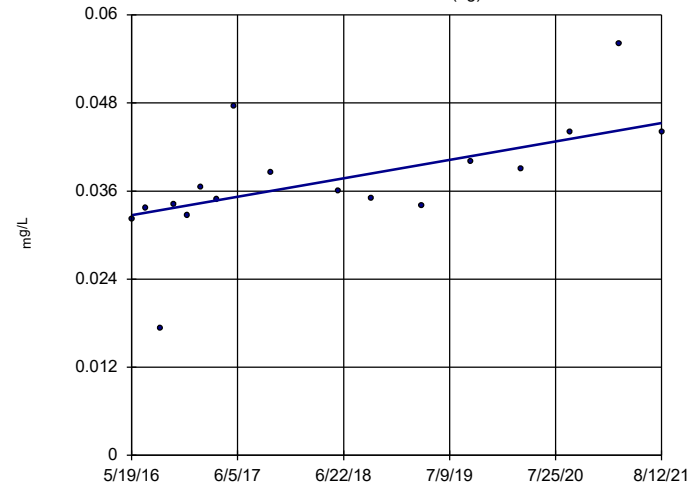


n = 17  
 Slope = -0.0001787  
 units per year.  
 Mann-Kendall  
 statistic = -1  
 critical = -63  
 Trend not sig-  
 nificant at 99%  
 confidence level  
 ( $\alpha = 0.005$  per  
 tail).

Constituent: Boron Analysis Run 10/28/2021 1:52 PM View: Appendix III Trend Test  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator

HGWA-2 (bg)

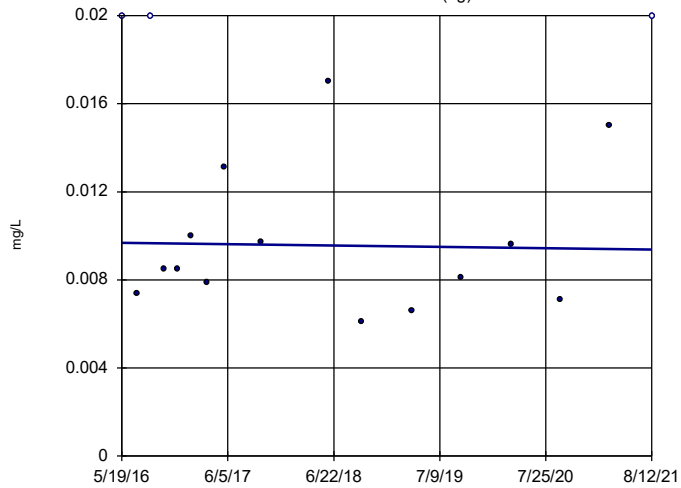


n = 17  
 Slope = 0.002396  
 units per year.  
 Mann-Kendall  
 statistic = 83  
 critical = 63  
 Increasing trend  
 significant at 99%  
 confidence level  
 ( $\alpha = 0.005$  per  
 tail).

Constituent: Boron Analysis Run 10/28/2021 1:52 PM View: Appendix III Trend Test  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator

HGWA-3 (bg)

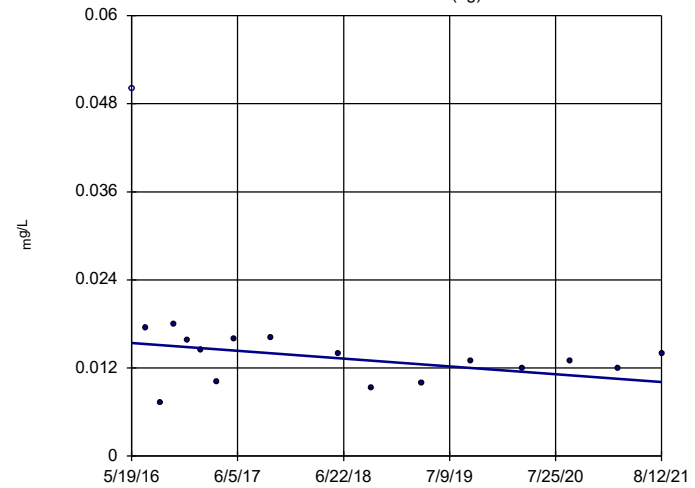


n = 17  
 Slope = -0.00005607  
 units per year.  
 Mann-Kendall  
 statistic = -6  
 critical = -63  
 Trend not sig-  
 nificant at 99%  
 confidence level  
 ( $\alpha = 0.005$  per  
 tail).

Constituent: Boron Analysis Run 10/28/2021 1:52 PM View: Appendix III Trend Test  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator

HGWA-4 (bg)

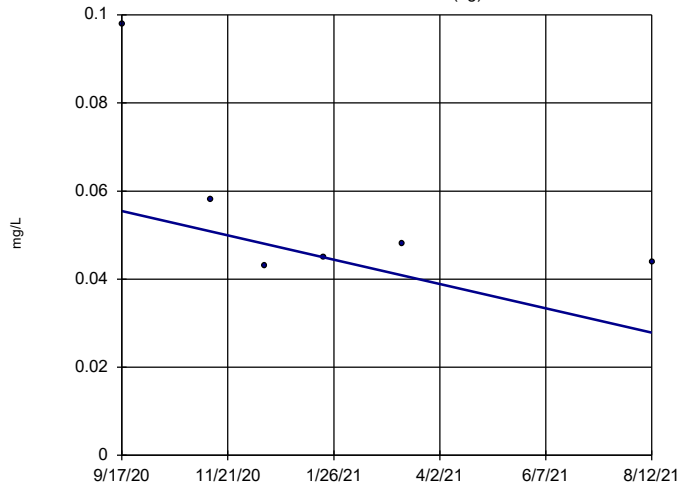


n = 17  
 Slope = -0.001013  
 units per year.  
 Mann-Kendall  
 statistic = -45  
 critical = -63  
 Trend not sig-  
 nificant at 99%  
 confidence level  
 ( $\alpha = 0.005$  per  
 tail).

Constituent: Boron Analysis Run 10/28/2021 1:52 PM View: Appendix III Trend Test  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator

HGWA-42D (bg)

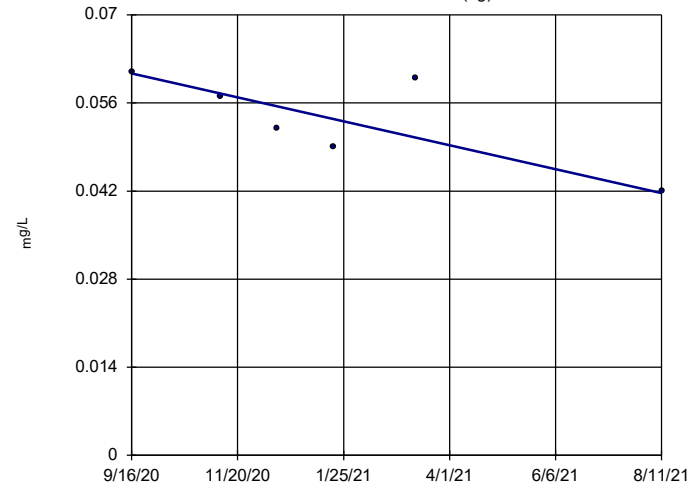


n = 6  
 Slope = -0.03067  
 units per year.  
 Mann-Kendall  
 statistic = -7  
 critical = -14  
 Trend not sig-  
 nificant at 99%  
 confidence level  
 ( $\alpha = 0.005$  per  
 tail).

Constituent: Boron Analysis Run 10/28/2021 1:52 PM View: Appendix III Trend Test  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator

HGWA-43D (bg)

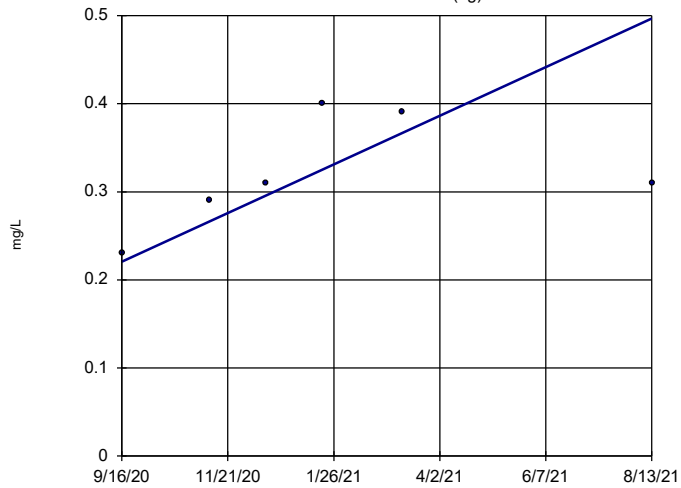


n = 6  
 Slope = -0.02108  
 units per year.  
 Mann-Kendall  
 statistic = -9  
 critical = -14  
 Trend not sig-  
 nificant at 99%  
 confidence level  
 ( $\alpha = 0.005$  per  
 tail).

Constituent: Boron Analysis Run 10/28/2021 1:53 PM View: Appendix III Trend Test  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator

HGWA-44D (bg)



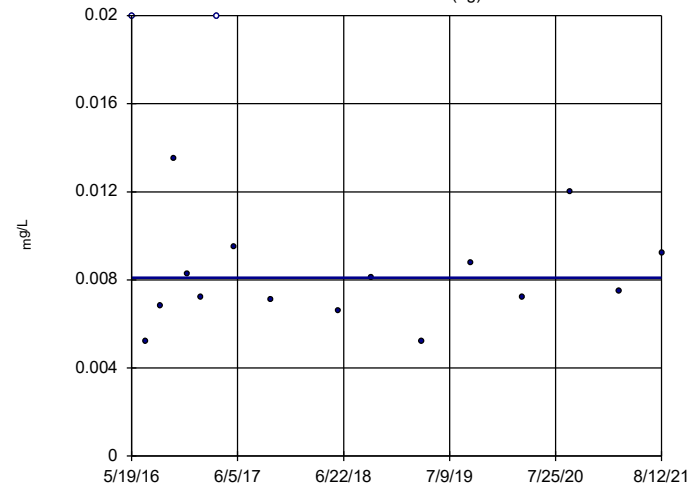
n = 6  
 Slope = 0.3042  
 units per year.  
 Mann-Kendall  
 statistic = 8  
 critical = 14  
 Trend not sig-  
 nificant at 99%  
 confidence level  
 ( $\alpha = 0.005$  per  
 tail).

Constituent: Boron Analysis Run 10/28/2021 1:53 PM View: Appendix III Trend Test  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

Hollow symbols indicate censored values.

### Sen's Slope Estimator

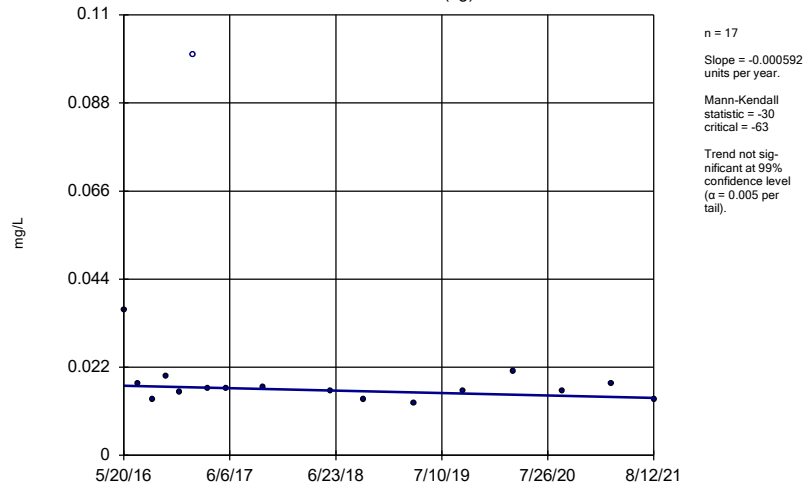
HGWA-5 (bg)



n = 17  
 Slope = 0  
 units per year.  
 Mann-Kendall  
 statistic = -1  
 critical = -63  
 Trend not sig-  
 nificant at 99%  
 confidence level  
 ( $\alpha = 0.005$  per  
 tail).

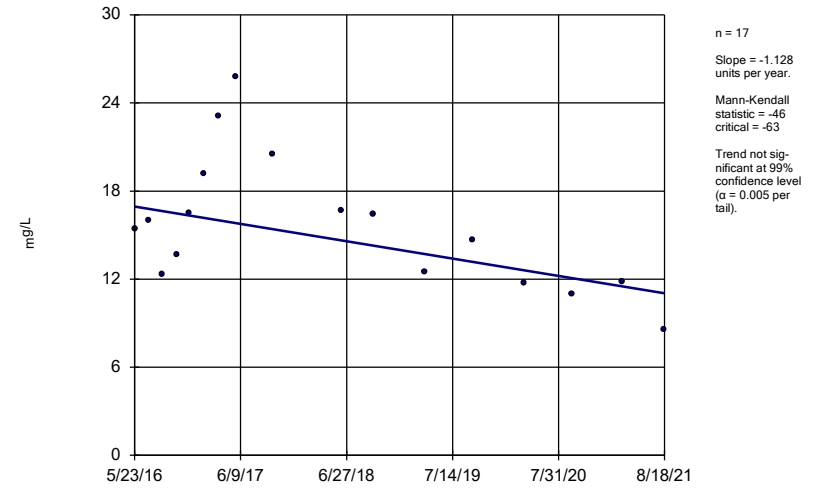
Constituent: Boron Analysis Run 10/28/2021 1:53 PM View: Appendix III Trend Test  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator HGWA-6 (bg)



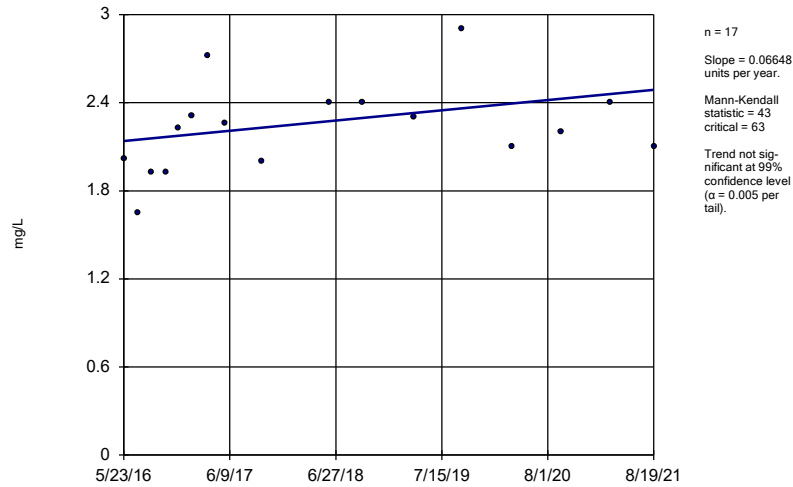
Constituent: Boron Analysis Run 10/28/2021 1:53 PM View: Appendix III Trend Test  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator HGWC-14



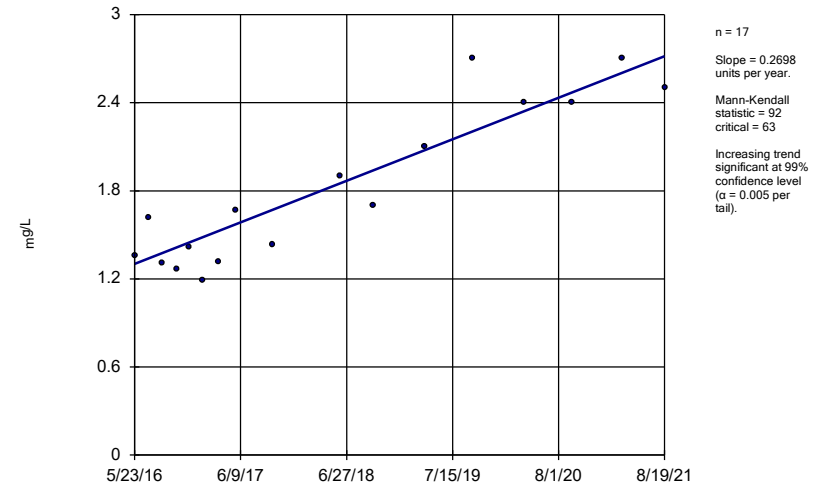
Constituent: Boron Analysis Run 10/28/2021 1:53 PM View: Appendix III Trend Test  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator HGWC-15



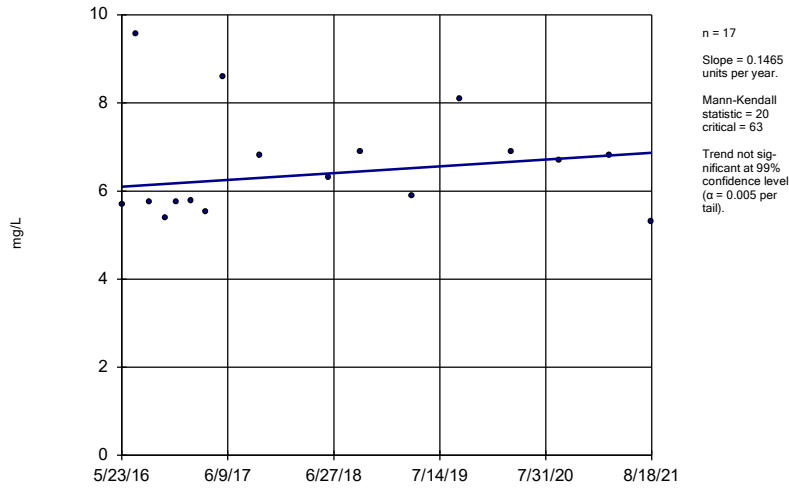
Constituent: Boron Analysis Run 10/28/2021 1:53 PM View: Appendix III Trend Test  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator HGWC-16



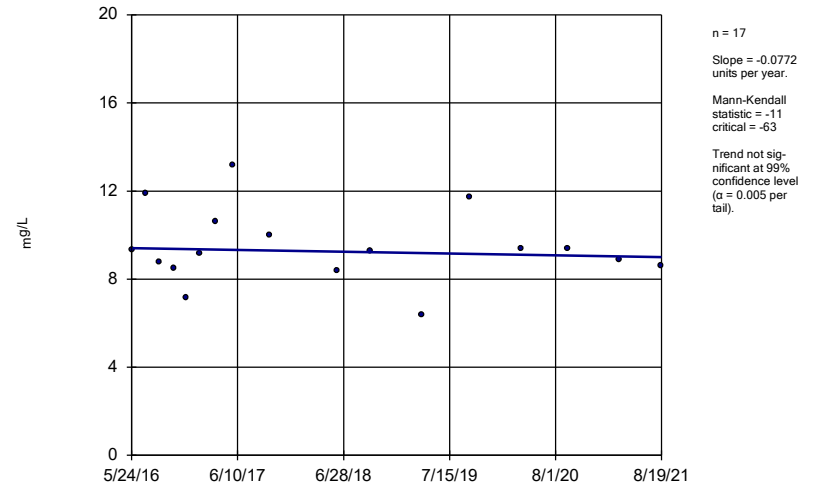
Constituent: Boron Analysis Run 10/28/2021 1:53 PM View: Appendix III Trend Test  
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sen's Slope Estimator  
HGWC-17



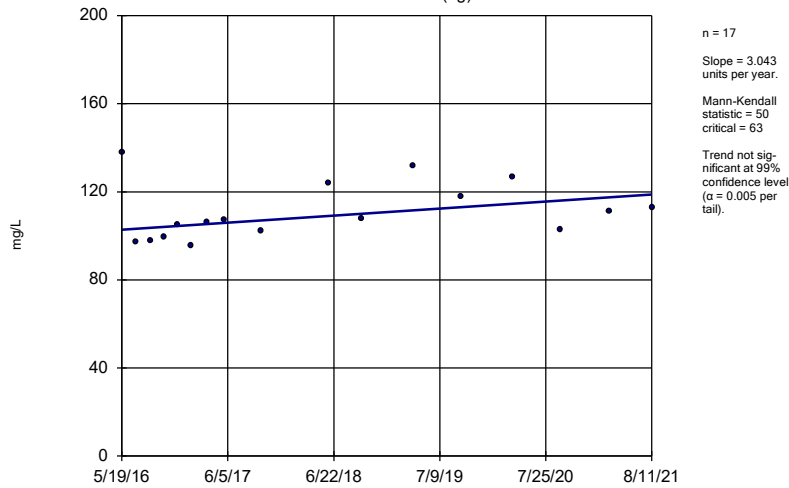
Constituent: Boron Analysis Run 10/28/2021 1:53 PM View: Appendix III Trend Test  
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sen's Slope Estimator  
HGWC-18



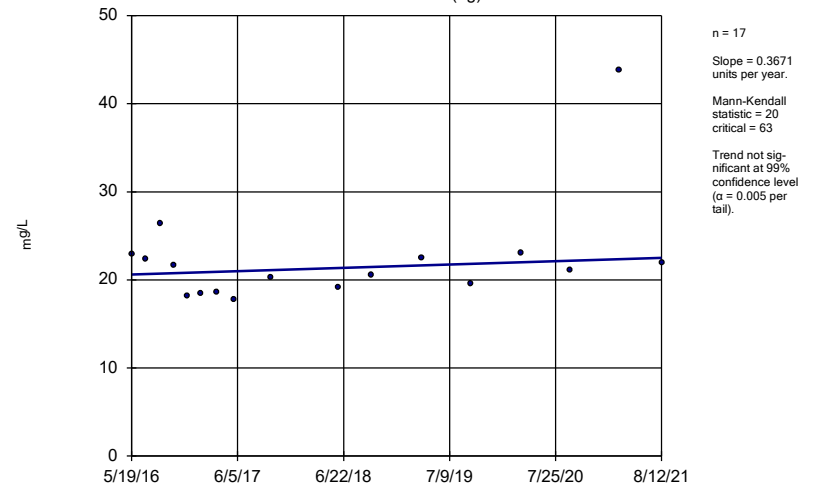
Constituent: Boron Analysis Run 10/28/2021 1:53 PM View: Appendix III Trend Test  
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sen's Slope Estimator  
HGWA-1 (bg)



Constituent: Calcium Analysis Run 10/28/2021 1:53 PM View: Appendix III Trend Test  
Plant Hammond Client: Southern Company Data: Hammond AP-2

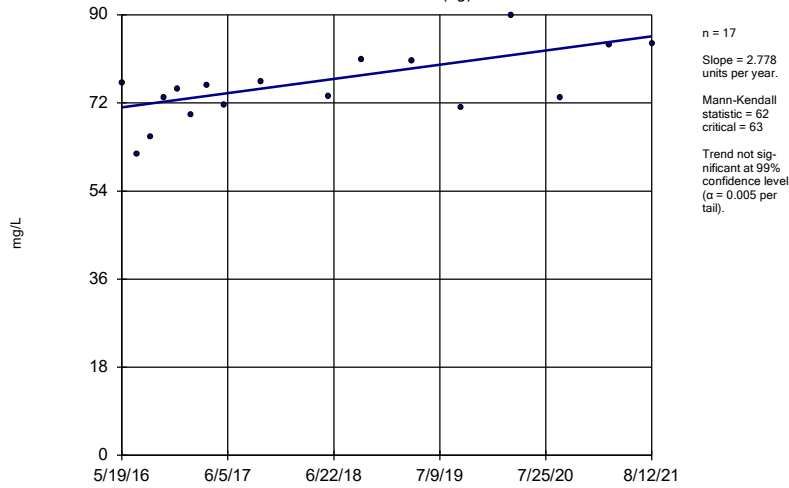
Sen's Slope Estimator  
HGWA-2 (bg)



Constituent: Calcium Analysis Run 10/28/2021 1:53 PM View: Appendix III Trend Test  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator

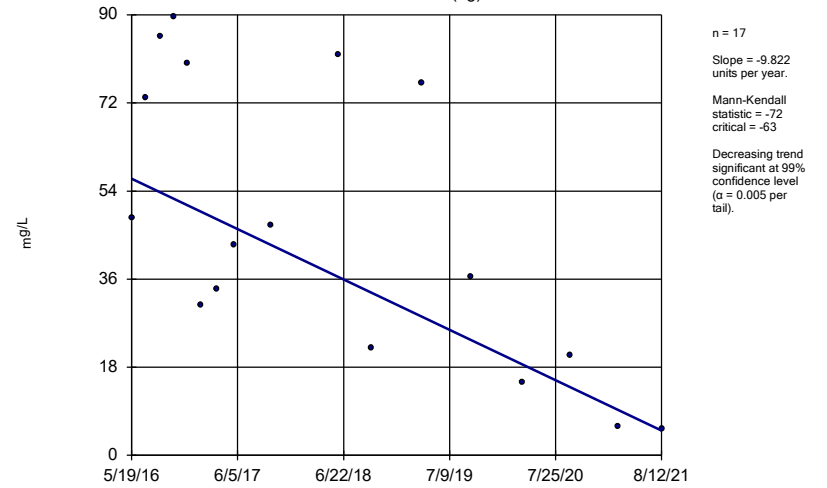
HGWA-3 (bg)



Constituent: Calcium Analysis Run 10/28/2021 1:53 PM View: Appendix III Trend Test  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator

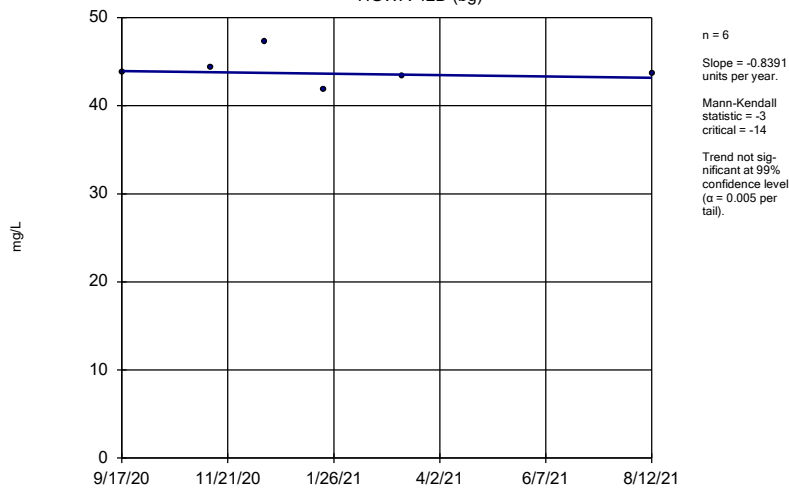
HGWA-4 (bg)



Constituent: Calcium Analysis Run 10/28/2021 1:53 PM View: Appendix III Trend Test  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator

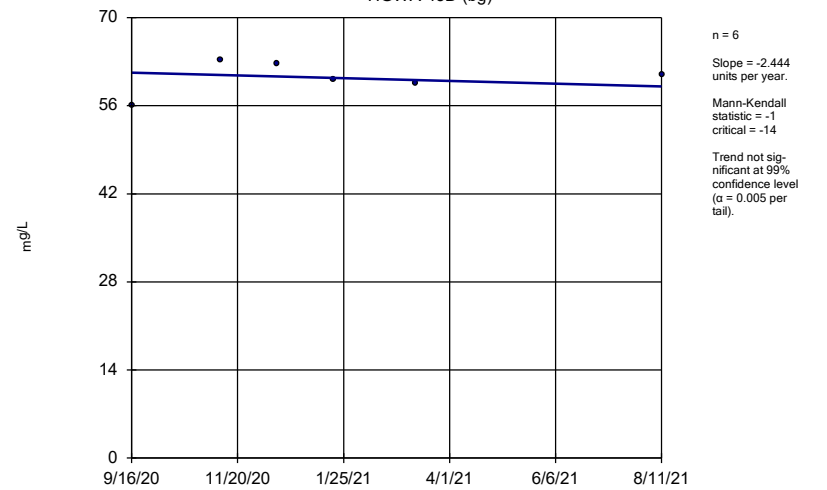
HGWA-42D (bg)



Constituent: Calcium Analysis Run 10/28/2021 1:53 PM View: Appendix III Trend Test  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator

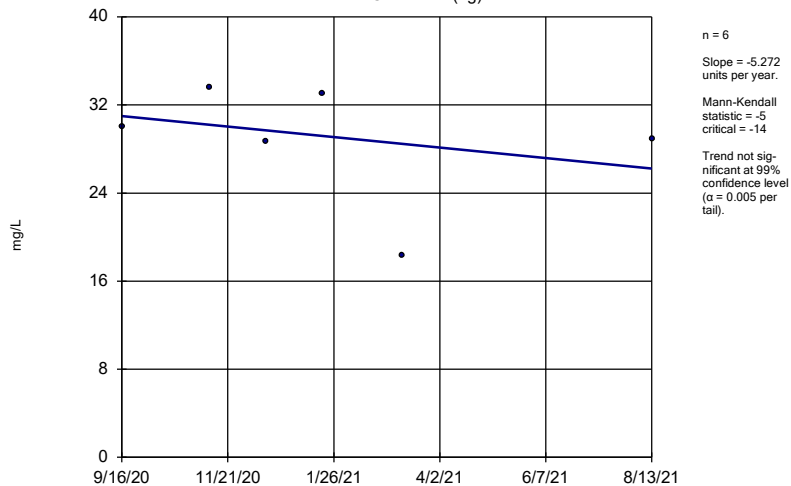
HGWA-43D (bg)



Constituent: Calcium Analysis Run 10/28/2021 1:53 PM View: Appendix III Trend Test  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

Sen's Slope Estimator

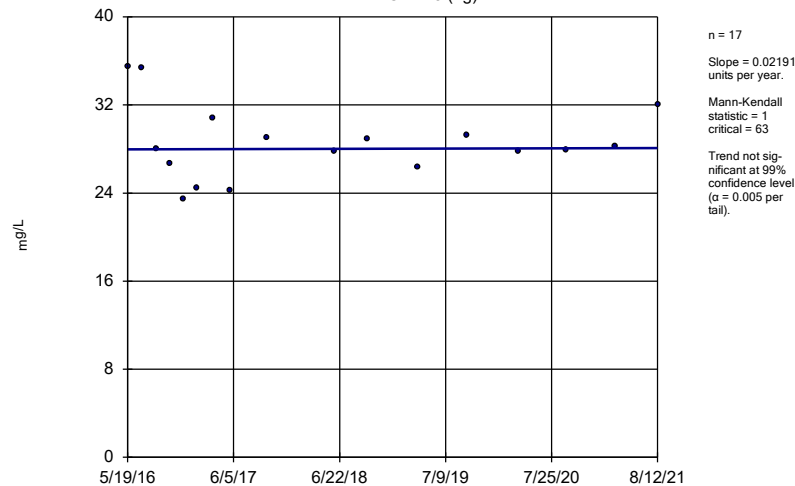
HGWA-44D (bg)



Constituent: Calcium Analysis Run 10/28/2021 1:53 PM View: Appendix III Trend Test  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

Sen's Slope Estimator

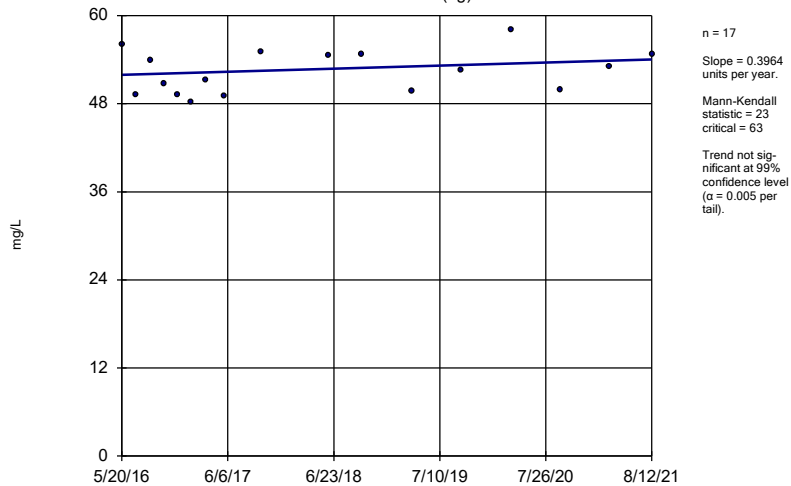
HGWA-5 (bg)



Constituent: Calcium Analysis Run 10/28/2021 1:53 PM View: Appendix III Trend Test  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

Sen's Slope Estimator

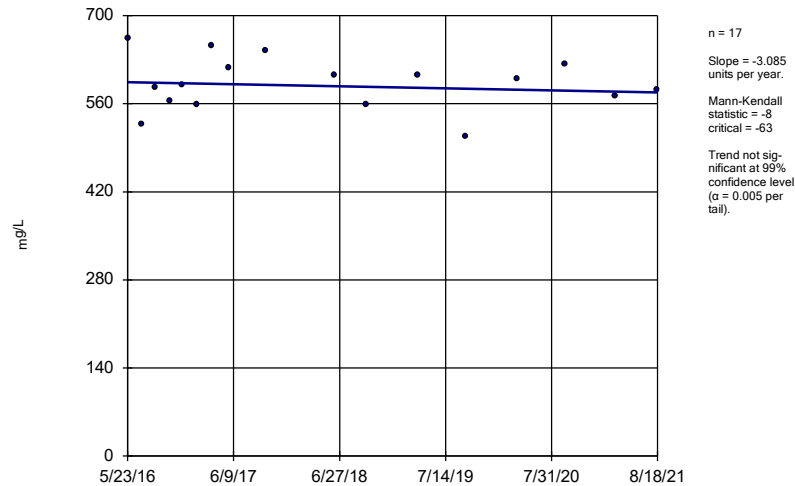
HGWA-6 (bg)



Constituent: Calcium Analysis Run 10/28/2021 1:53 PM View: Appendix III Trend Test  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

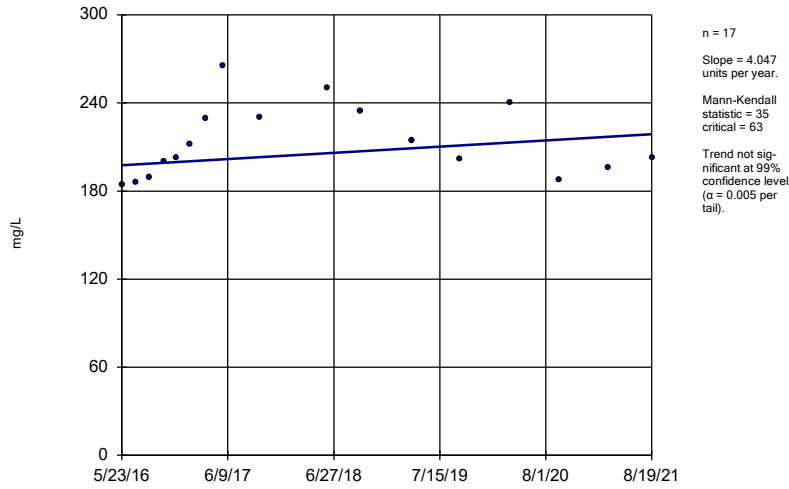
Sen's Slope Estimator

HGWC-14



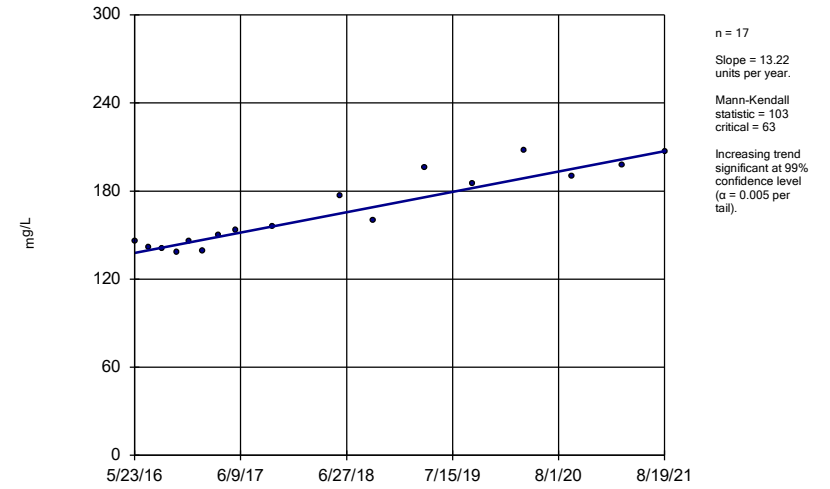
Constituent: Calcium Analysis Run 10/28/2021 1:53 PM View: Appendix III Trend Test  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator HGWC-15



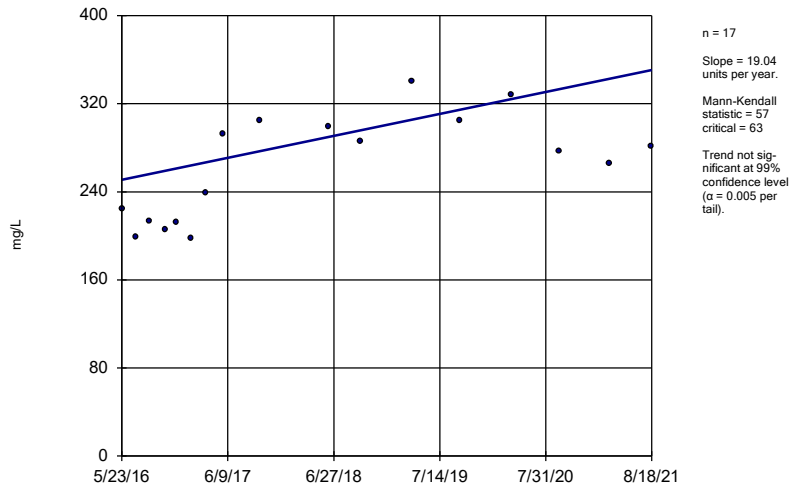
Constituent: Calcium Analysis Run 10/28/2021 1:53 PM View: Appendix III Trend Test  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator HGWC-16



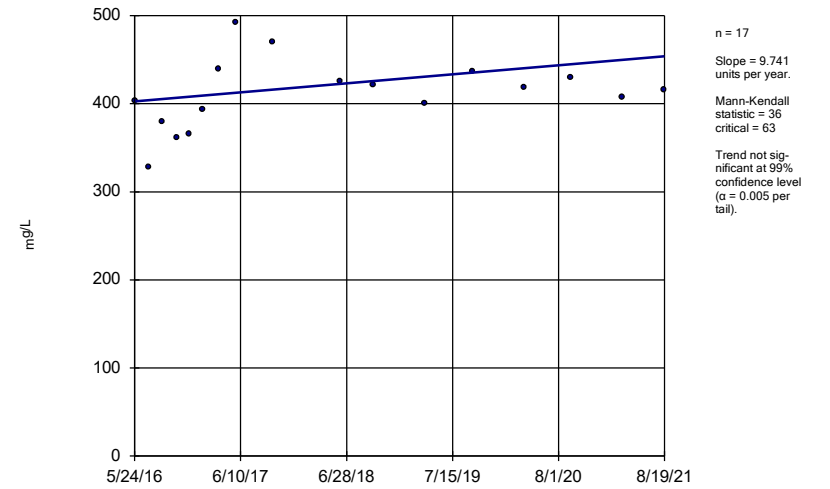
Constituent: Calcium Analysis Run 10/28/2021 1:53 PM View: Appendix III Trend Test  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator HGWC-17



Constituent: Calcium Analysis Run 10/28/2021 1:53 PM View: Appendix III Trend Test  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator HGWC-18

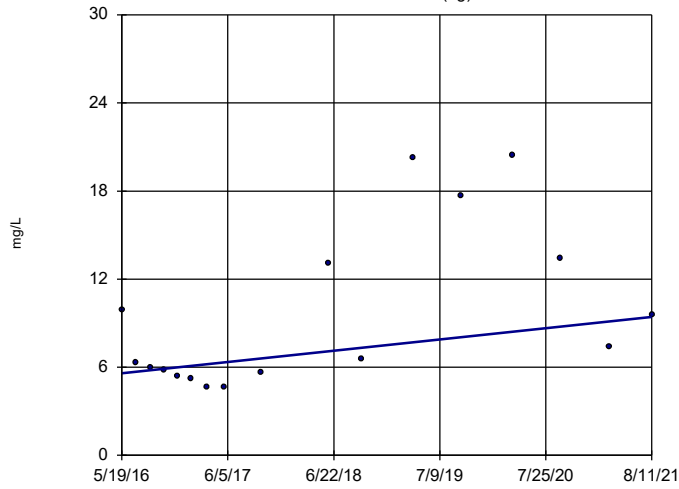


Constituent: Calcium Analysis Run 10/28/2021 1:53 PM View: Appendix III Trend Test  
Plant Hammond Client: Southern Company Data: Hammond AP-2



### Sen's Slope Estimator

HGWA-1 (bg)

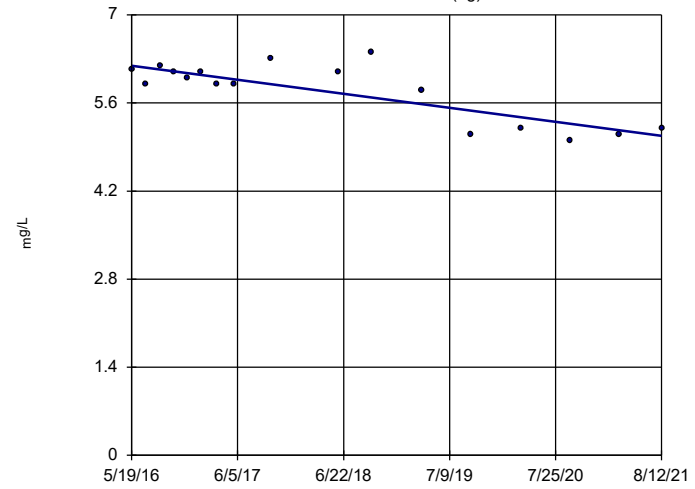


n = 17  
 Slope = 0.7317 units per year.  
 Mann-Kendall statistic = 37  
 critical = 63  
 Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Chloride Analysis Run 10/28/2021 1:53 PM View: Appendix III Trend Test  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator

HGWA-2 (bg)

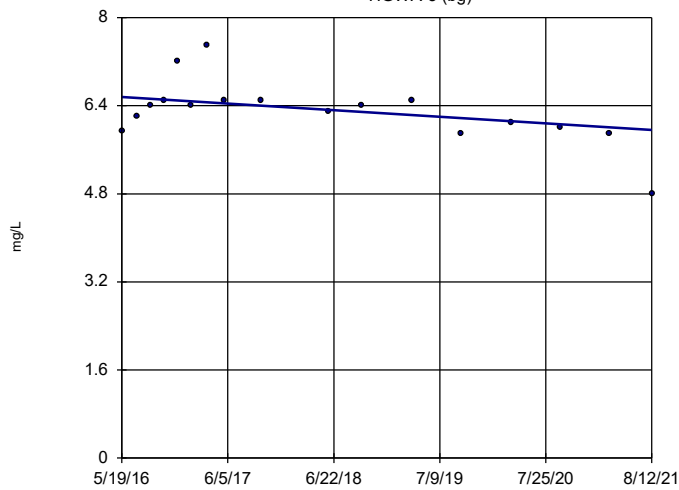


n = 17  
 Slope = -0.2131 units per year.  
 Mann-Kendall statistic = -62  
 critical = -63  
 Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Chloride Analysis Run 10/28/2021 1:53 PM View: Appendix III Trend Test  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator

HGWA-3 (bg)

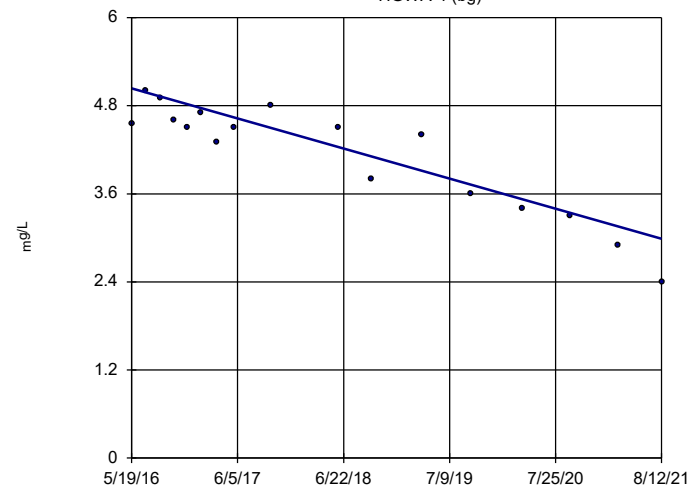


n = 17  
 Slope = -0.1136 units per year.  
 Mann-Kendall statistic = -44  
 critical = -63  
 Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Chloride Analysis Run 10/28/2021 1:53 PM View: Appendix III Trend Test  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator

HGWA-4 (bg)

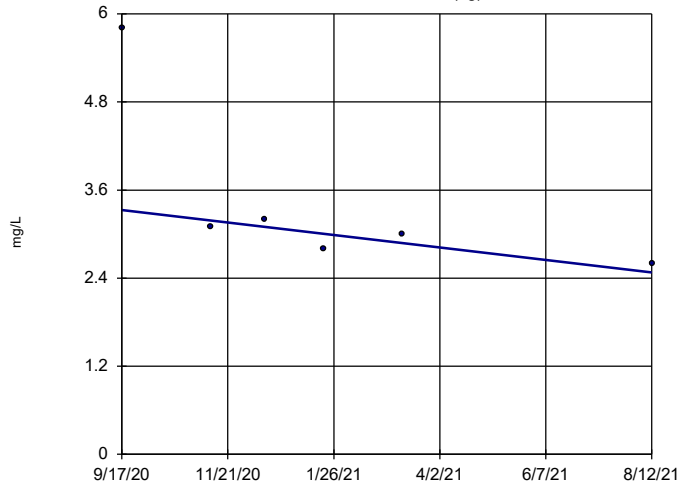


n = 17  
 Slope = -0.3912 units per year.  
 Mann-Kendall statistic = -101  
 critical = -63  
 Decreasing trend significant at 99% confidence level (α = 0.005 per tail).

Constituent: Chloride Analysis Run 10/28/2021 1:53 PM View: Appendix III Trend Test  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator

HGWA-42D (bg)

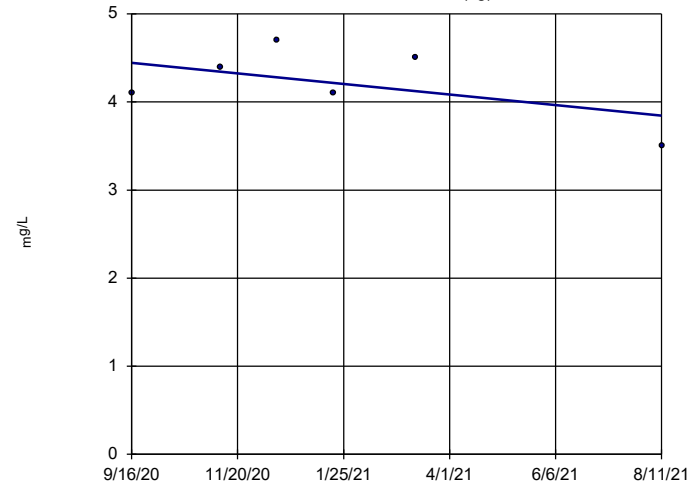


n = 6  
 Slope = -0.9419 units per year.  
 Mann-Kendall statistic = -11  
 critical = -14  
 Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Chloride Analysis Run 10/28/2021 1:53 PM View: Appendix III Trend Test  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator

HGWA-43D (bg)

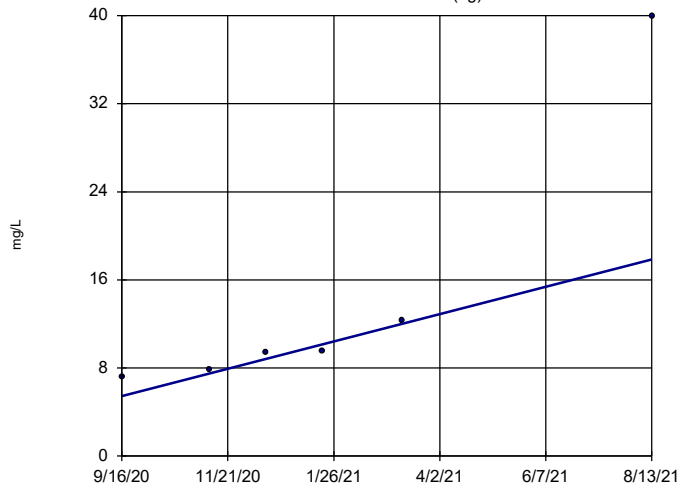


n = 6  
 Slope = -0.6657 units per year.  
 Mann-Kendall statistic = -2  
 critical = -14  
 Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Chloride Analysis Run 10/28/2021 1:53 PM View: Appendix III Trend Test  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator

HGWA-44D (bg)

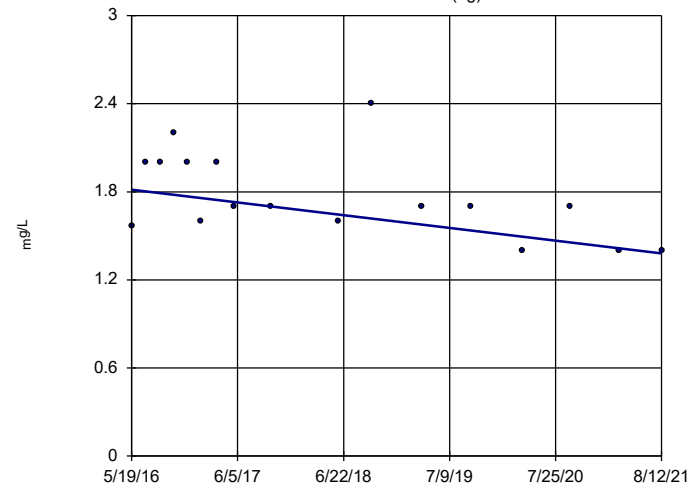


n = 6  
 Slope = 13.69 units per year.  
 Mann-Kendall statistic = 15  
 critical = 14  
 Increasing trend significant at 99% confidence level (α = 0.005 per tail).

Constituent: Chloride Analysis Run 10/28/2021 1:53 PM View: Appendix III Trend Test  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator

HGWA-5 (bg)

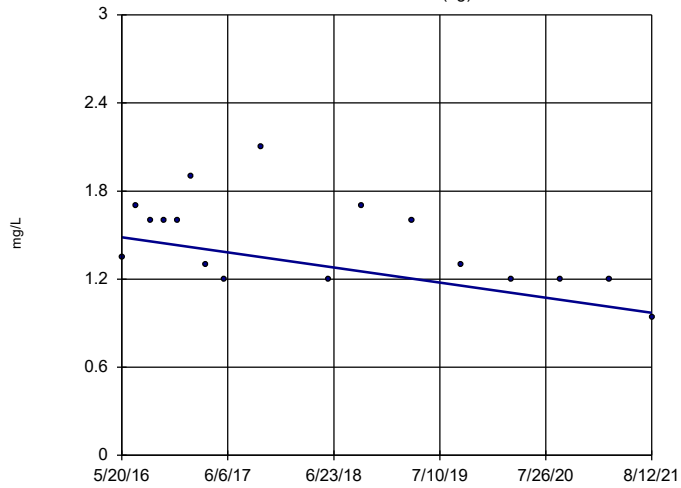


n = 17  
 Slope = -0.08274 units per year.  
 Mann-Kendall statistic = -48  
 critical = -63  
 Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Chloride Analysis Run 10/28/2021 1:53 PM View: Appendix III Trend Test  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator

HGWA-6 (bg)

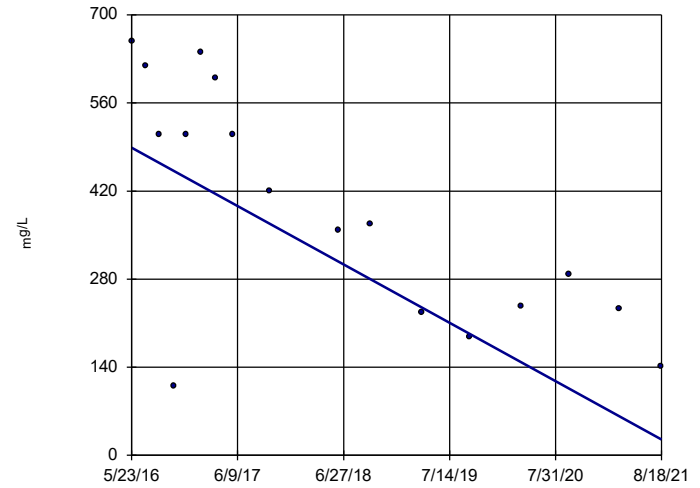


n = 17  
Slope = -0.09831  
units per year.  
Mann-Kendall  
statistic = -58  
critical = -63  
Trend not sig-  
nificant at 99%  
confidence level  
( $\alpha = 0.005$  per  
tail).

Constituent: Chloride Analysis Run 10/28/2021 1:53 PM View: Appendix III Trend Test  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator

HGWC-14

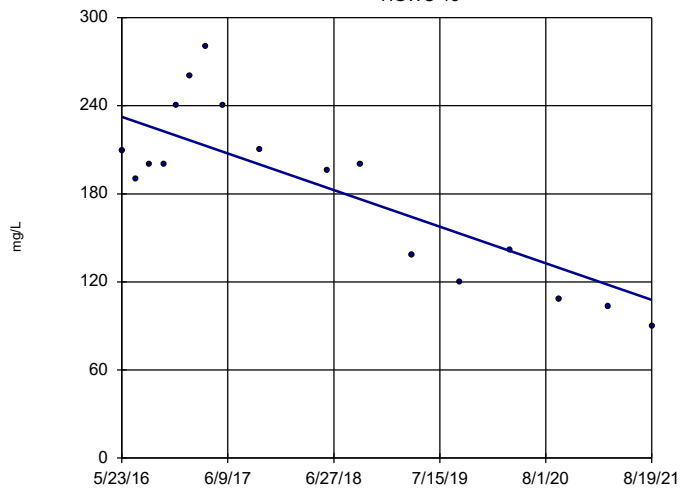


n = 17  
Slope = -88.48  
units per year.  
Mann-Kendall  
statistic = -81  
critical = -63  
Decreasing trend  
significant at 99%  
confidence level  
( $\alpha = 0.005$  per  
tail).

Constituent: Chloride Analysis Run 10/28/2021 1:53 PM View: Appendix III Trend Test  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator

HGWC-15

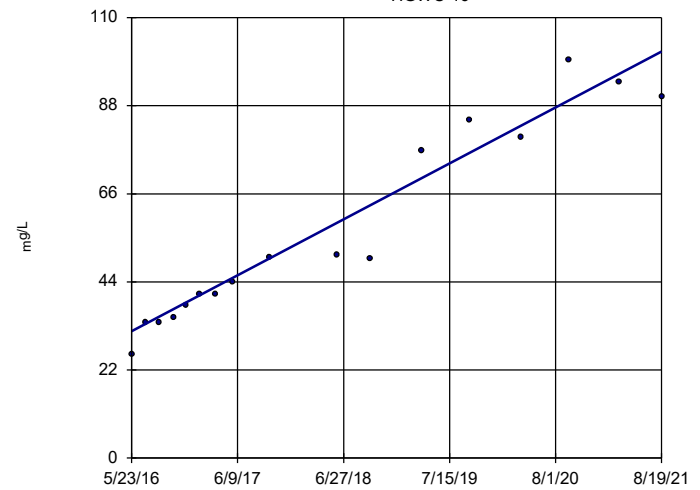


n = 17  
Slope = -23.76  
units per year.  
Mann-Kendall  
statistic = -72  
critical = -63  
Decreasing trend  
significant at 99%  
confidence level  
( $\alpha = 0.005$  per  
tail).

Constituent: Chloride Analysis Run 10/28/2021 1:53 PM View: Appendix III Trend Test  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator

HGWC-16

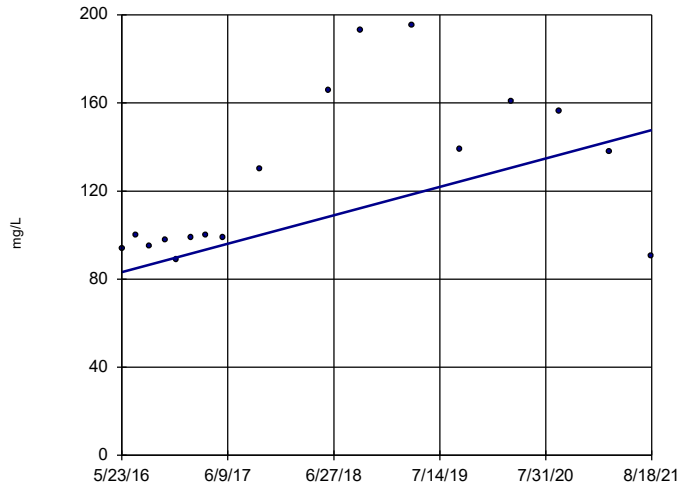


n = 17  
Slope = 13.31  
units per year.  
Mann-Kendall  
statistic = 122  
critical = 63  
Increasing trend  
significant at 99%  
confidence level  
( $\alpha = 0.005$  per  
tail).

Constituent: Chloride Analysis Run 10/28/2021 1:53 PM View: Appendix III Trend Test  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator

HGWC-17

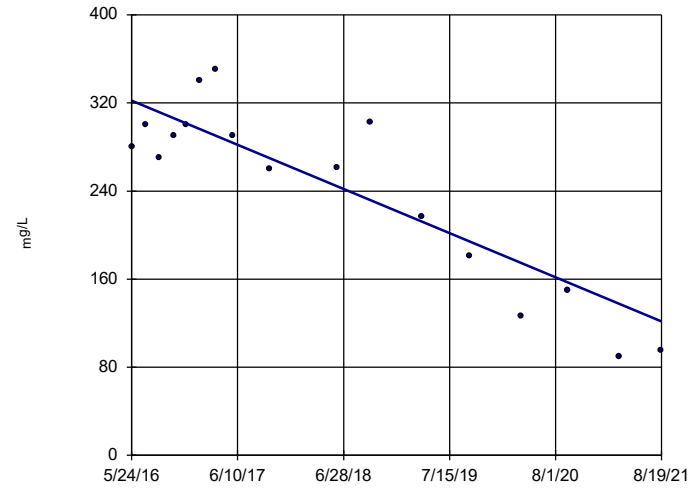


n = 17  
 Slope = 12.31  
 units per year.  
 Mann-Kendall  
 statistic = 54  
 critical = 63  
 Trend not sig-  
 nificant at 99%  
 confidence level  
 ( $\alpha = 0.005$  per  
 tail).

Constituent: Chloride Analysis Run 10/28/2021 1:53 PM View: Appendix III Trend Test  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator

HGWC-18

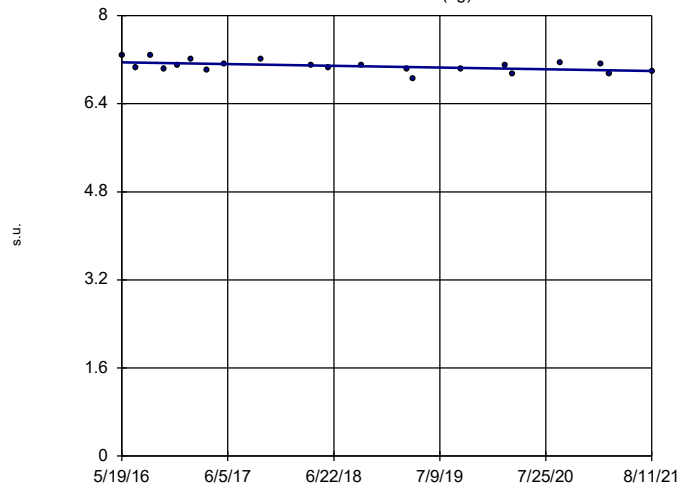


n = 17  
 Slope = -38.27  
 units per year.  
 Mann-Kendall  
 statistic = -74  
 critical = -63  
 Decreasing trend  
 significant at 99%  
 confidence level  
 ( $\alpha = 0.005$  per  
 tail).

Constituent: Chloride Analysis Run 10/28/2021 1:53 PM View: Appendix III Trend Test  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator

HGWA-1 (bg)

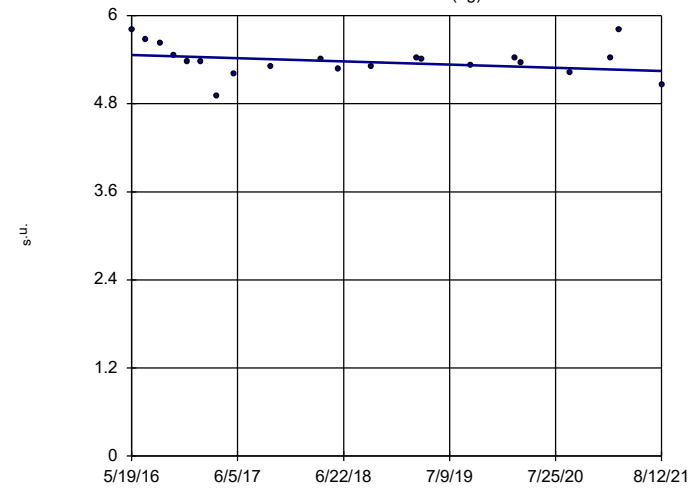


n = 21  
 Slope = -0.03025  
 units per year.  
 Mann-Kendall  
 statistic = -64  
 critical = -87  
 Trend not sig-  
 nificant at 99%  
 confidence level  
 ( $\alpha = 0.005$  per  
 tail).

Constituent: Field pH Analysis Run 10/28/2021 1:53 PM View: Appendix III Trend Test  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator

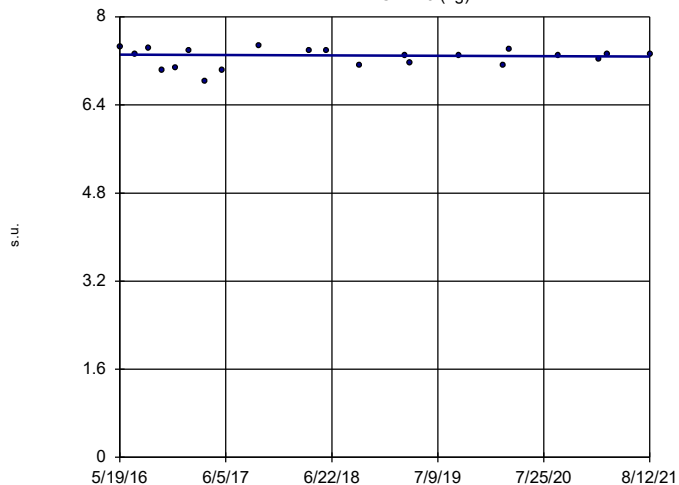
HGWA-2 (bg)



n = 21  
 Slope = -0.04184  
 units per year.  
 Mann-Kendall  
 statistic = -39  
 critical = -87  
 Trend not sig-  
 nificant at 99%  
 confidence level  
 ( $\alpha = 0.005$  per  
 tail).

Constituent: Field pH Analysis Run 10/28/2021 1:53 PM View: Appendix III Trend Test  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

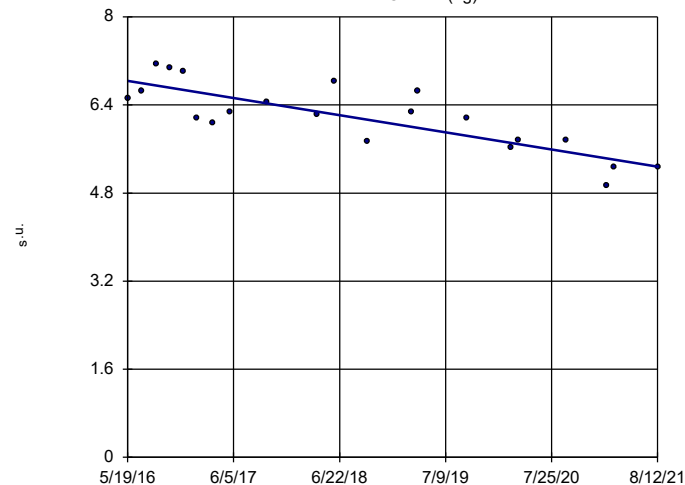
Sen's Slope Estimator  
HGWA-3 (bg)



n = 21  
Slope = -0.007267  
units per year.  
Mann-Kendall  
statistic = -10  
critical = -87  
Trend not sig-  
nificant at 99%  
confidence level  
(α = 0.005 per  
tail).

Constituent: Field pH Analysis Run 10/28/2021 1:53 PM View: Appendix III Trend Test  
Plant Hammond Client: Southern Company Data: Hammond AP-2

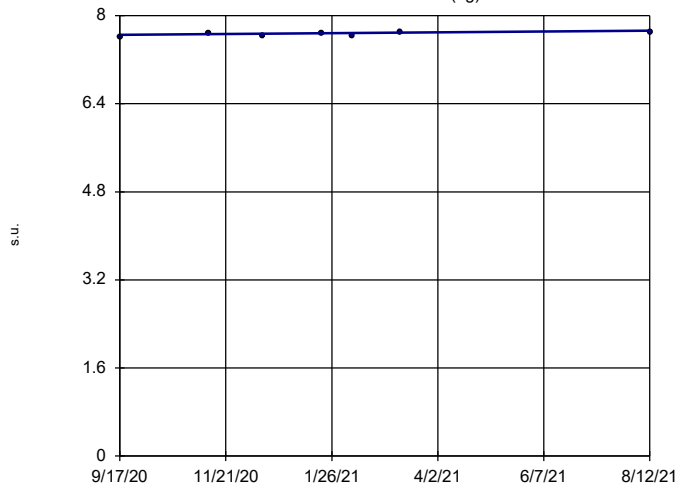
Sen's Slope Estimator  
HGWA-4 (bg)



n = 21  
Slope = -0.2968  
units per year.  
Mann-Kendall  
statistic = -125  
critical = -87  
Decreasing trend  
significant at 99%  
confidence level  
(α = 0.005 per  
tail).

Constituent: Field pH Analysis Run 10/28/2021 1:53 PM View: Appendix III Trend Test  
Plant Hammond Client: Southern Company Data: Hammond AP-2

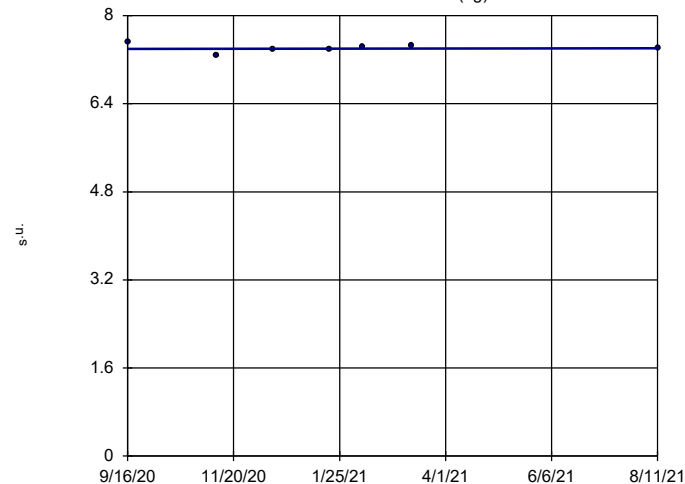
Sen's Slope Estimator  
HGWA-42D (bg)



n = 7  
Slope = 0.08202  
units per year.  
Mann-Kendall  
statistic = 12  
critical = 18  
Trend not sig-  
nificant at 99%  
confidence level  
(α = 0.005 per  
tail).

Constituent: Field pH Analysis Run 10/28/2021 1:53 PM View: Appendix III Trend Test  
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sen's Slope Estimator  
HGWA-43D (bg)

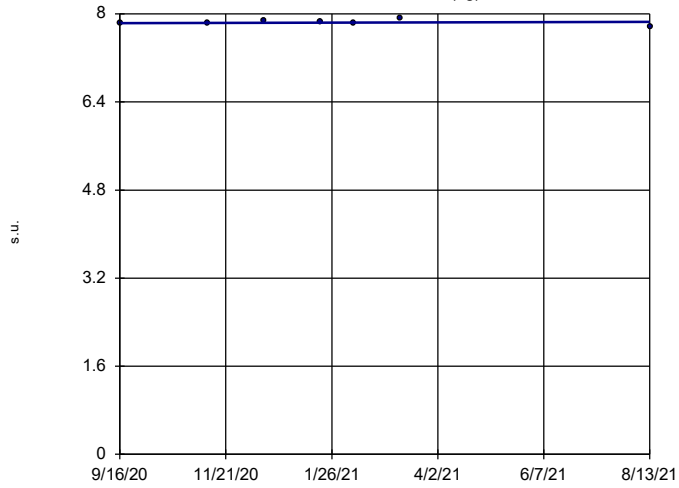


n = 7  
Slope = 0.01789  
units per year.  
Mann-Kendall  
statistic = 4  
critical = 18  
Trend not sig-  
nificant at 99%  
confidence level  
(α = 0.005 per  
tail).

Constituent: Field pH Analysis Run 10/28/2021 1:53 PM View: Appendix III Trend Test  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator

HGWA-44D (bg)

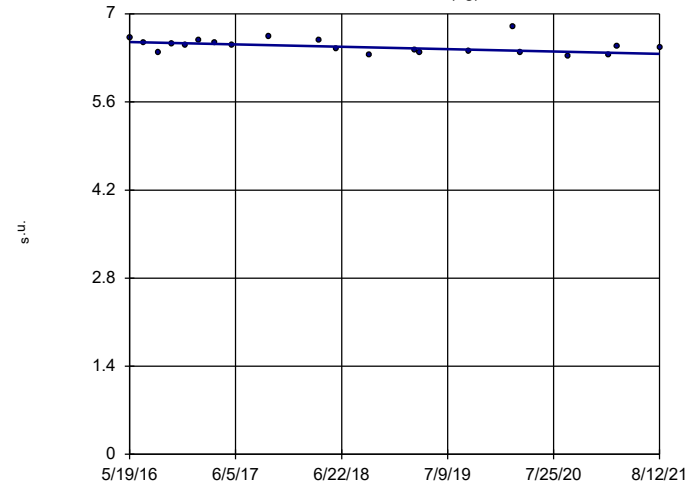


n = 7  
 Slope = 0.025  
 units per year.  
 Mann-Kendall  
 statistic = 2  
 critical = 18  
 Trend not sig-  
 nificant at 99%  
 confidence level  
 ( $\alpha = 0.005$  per  
 tail).

Constituent: Field pH Analysis Run 10/28/2021 1:53 PM View: Appendix III Trend Test  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator

HGWA-5 (bg)

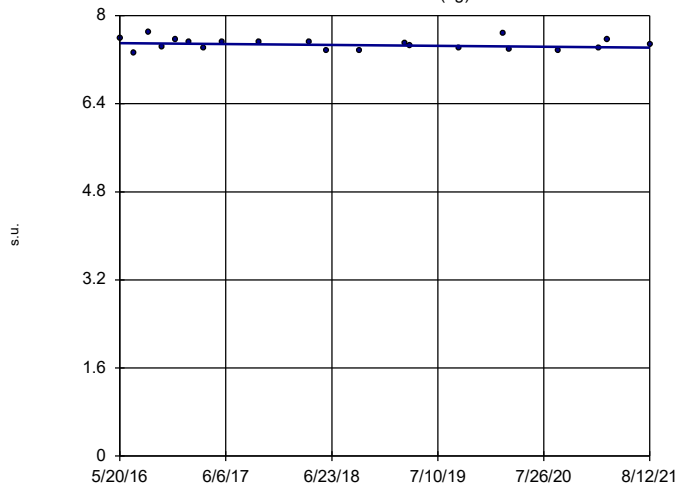


n = 21  
 Slope = -0.03644  
 units per year.  
 Mann-Kendall  
 statistic = -70  
 critical = -87  
 Trend not sig-  
 nificant at 99%  
 confidence level  
 ( $\alpha = 0.005$  per  
 tail).

Constituent: Field pH Analysis Run 10/28/2021 1:53 PM View: Appendix III Trend Test  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator

HGWA-6 (bg)

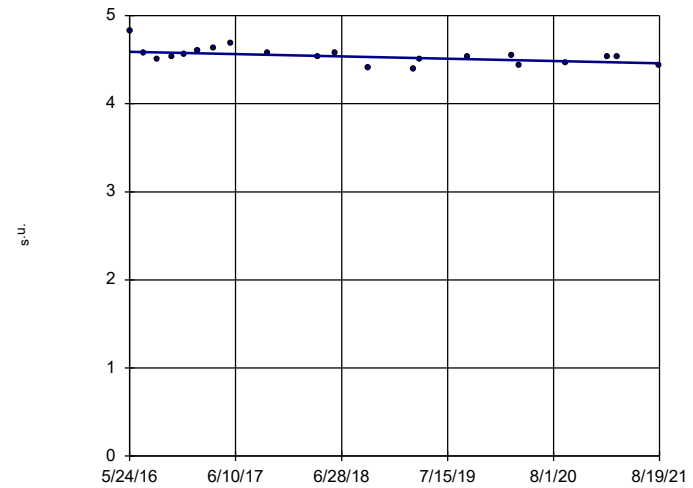


n = 21  
 Slope = -0.016  
 units per year.  
 Mann-Kendall  
 statistic = -36  
 critical = -87  
 Trend not sig-  
 nificant at 99%  
 confidence level  
 ( $\alpha = 0.005$  per  
 tail).

Constituent: Field pH Analysis Run 10/28/2021 1:53 PM View: Appendix III Trend Test  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator

HGWC-18

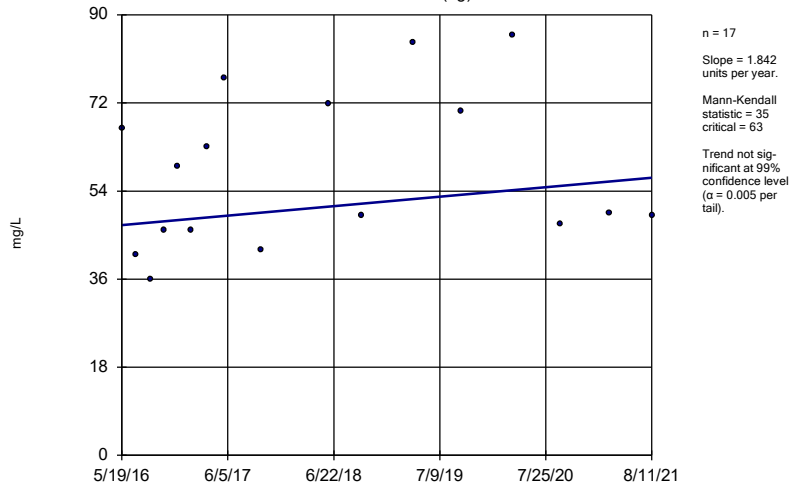


n = 21  
 Slope = -0.02477  
 units per year.  
 Mann-Kendall  
 statistic = -80  
 critical = -87  
 Trend not sig-  
 nificant at 99%  
 confidence level  
 ( $\alpha = 0.005$  per  
 tail).

Constituent: Field pH Analysis Run 10/28/2021 1:53 PM View: Appendix III Trend Test  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator

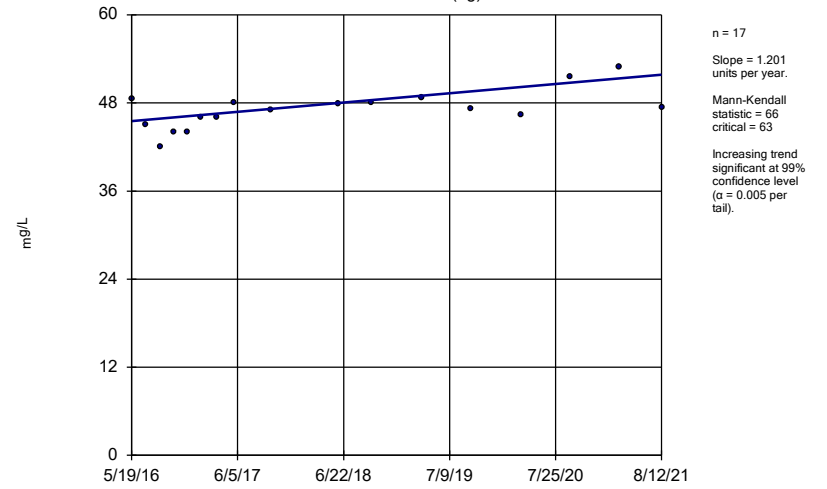
HGWA-1 (bg)



Constituent: Sulfate Analysis Run 10/28/2021 1:53 PM View: Appendix III Trend Test  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator

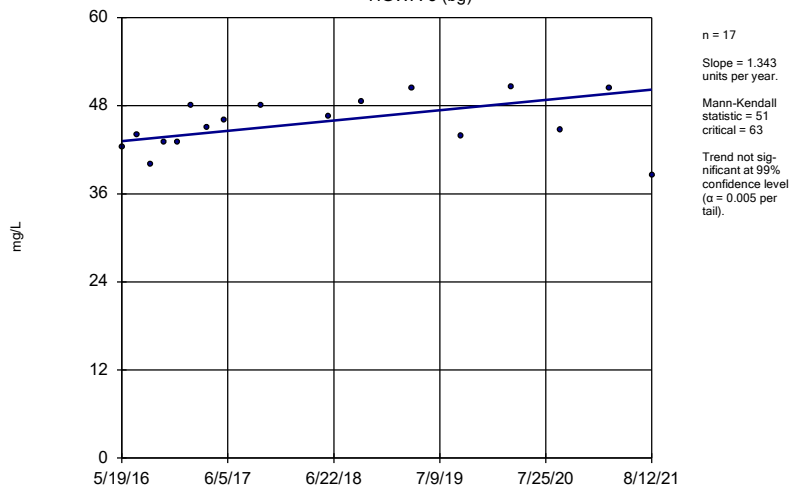
HGWA-2 (bg)



Constituent: Sulfate Analysis Run 10/28/2021 1:53 PM View: Appendix III Trend Test  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator

HGWA-3 (bg)

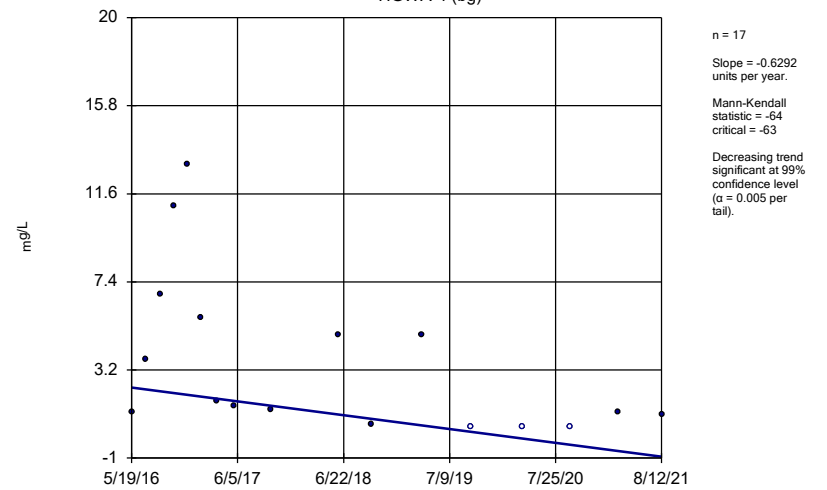


Constituent: Sulfate Analysis Run 10/28/2021 1:53 PM View: Appendix III Trend Test  
Plant Hammond Client: Southern Company Data: Hammond AP-2

Hollow symbols indicate censored values.

### Sen's Slope Estimator

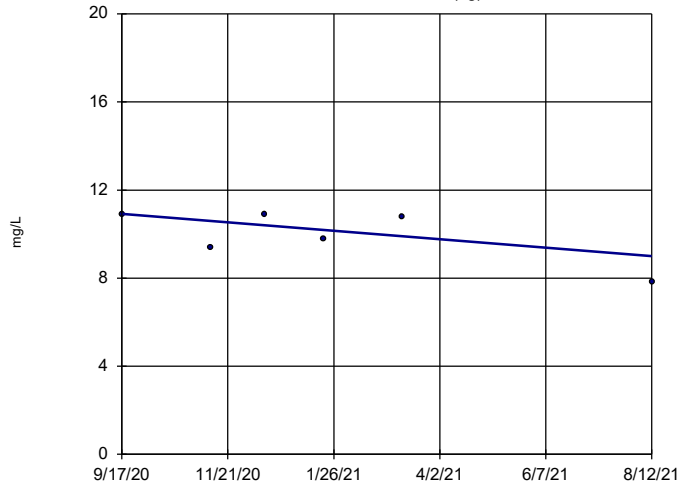
HGWA-4 (bg)



Constituent: Sulfate Analysis Run 10/28/2021 1:53 PM View: Appendix III Trend Test  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator

HGWA-42D (bg)

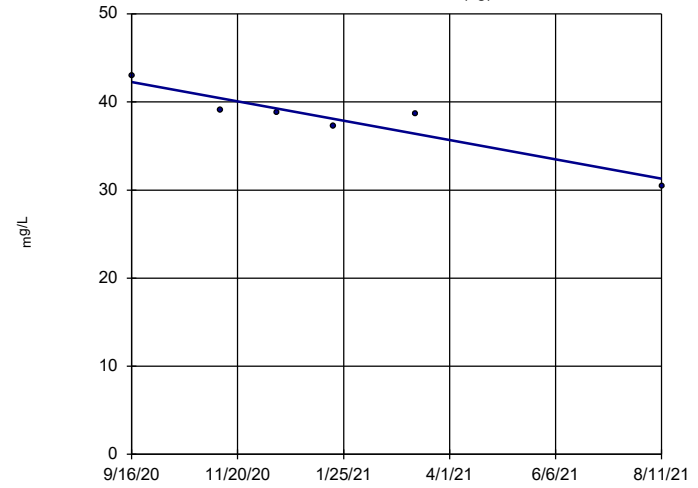


n = 6  
 Slope = -2.131 units per year.  
 Mann-Kendall statistic = -6  
 critical = -14  
 Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Sulfate Analysis Run 10/28/2021 1:53 PM View: Appendix III Trend Test  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator

HGWA-43D (bg)

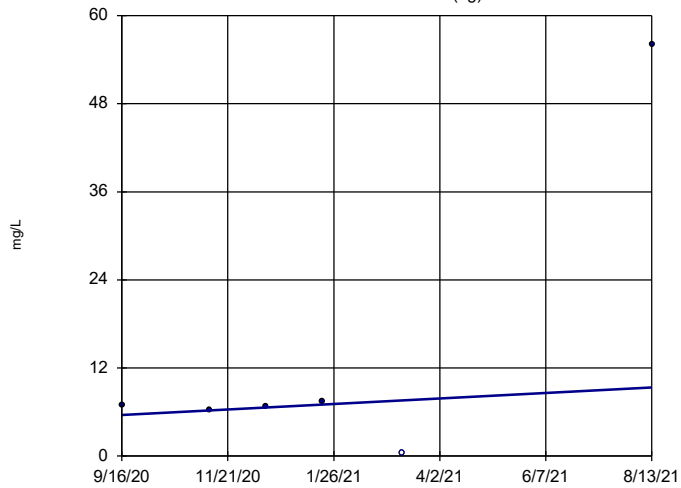


n = 6  
 Slope = -12.17 units per year.  
 Mann-Kendall statistic = -13  
 critical = -14  
 Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Sulfate Analysis Run 10/28/2021 1:53 PM View: Appendix III Trend Test  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator

HGWA-44D (bg)

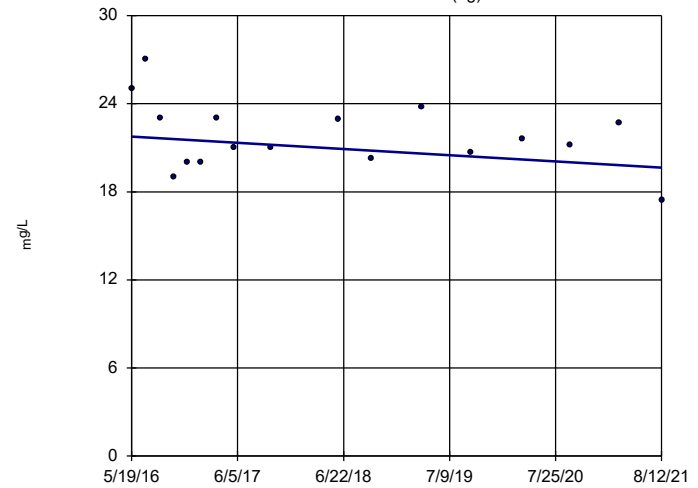


n = 6  
 Slope = 4.171 units per year.  
 Mann-Kendall statistic = 3  
 critical = 14  
 Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Sulfate Analysis Run 10/28/2021 1:53 PM View: Appendix III Trend Test  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator

HGWA-5 (bg)



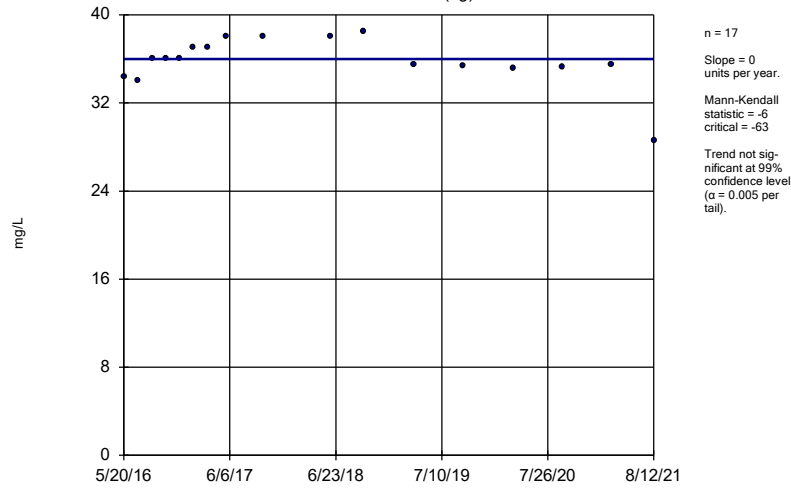
n = 17  
 Slope = -0.4049 units per year.  
 Mann-Kendall statistic = -21  
 critical = -63  
 Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Sulfate Analysis Run 10/28/2021 1:53 PM View: Appendix III Trend Test  
 Plant Hammond Client: Southern Company Data: Hammond AP-2



### Sen's Slope Estimator

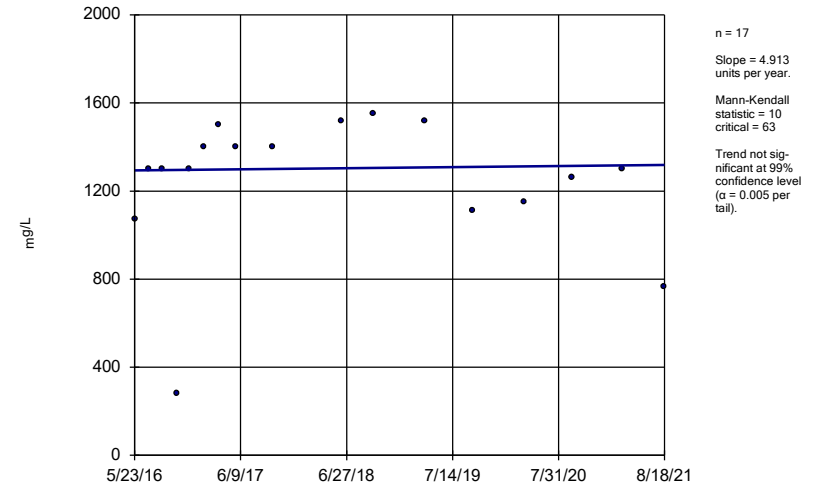
HGWA-6 (bg)



Constituent: Sulfate Analysis Run 10/28/2021 1:53 PM View: Appendix III Trend Test  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator

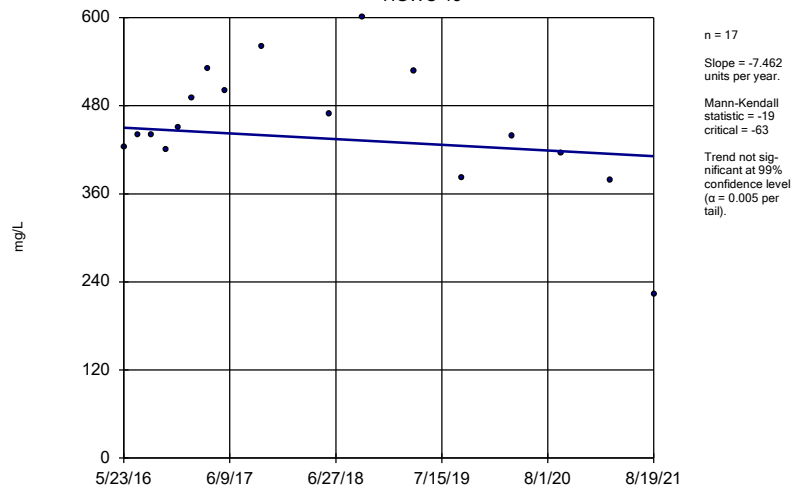
HGWC-14



Constituent: Sulfate Analysis Run 10/28/2021 1:53 PM View: Appendix III Trend Test  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator

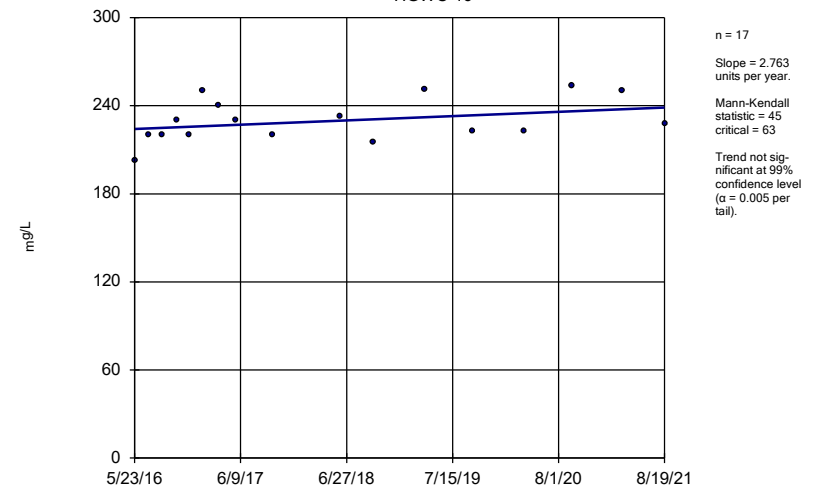
HGWC-15



Constituent: Sulfate Analysis Run 10/28/2021 1:53 PM View: Appendix III Trend Test  
Plant Hammond Client: Southern Company Data: Hammond AP-2

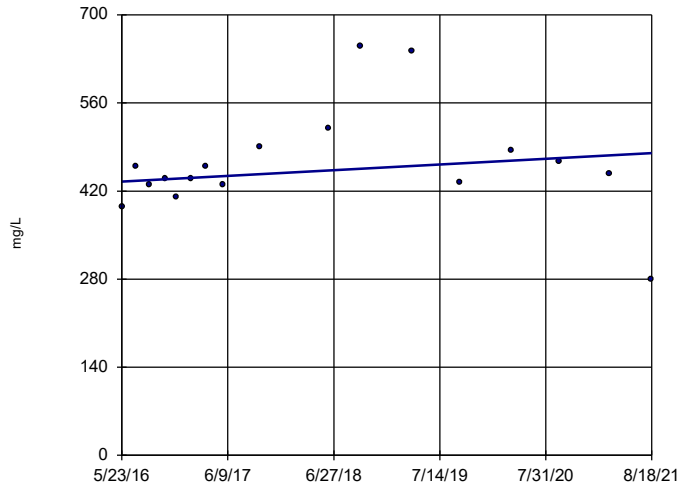
### Sen's Slope Estimator

HGWC-16



Constituent: Sulfate Analysis Run 10/28/2021 1:53 PM View: Appendix III Trend Test  
Plant Hammond Client: Southern Company Data: Hammond AP-2

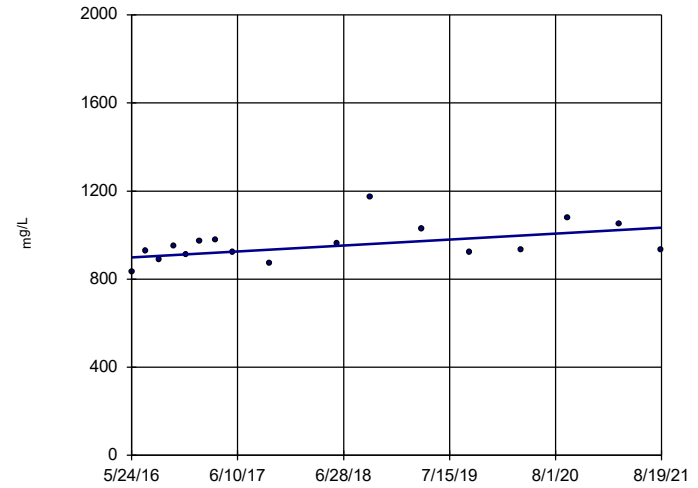
### Sen's Slope Estimator HGWC-17



n = 17  
 Slope = 8.609  
 units per year.  
 Mann-Kendall  
 statistic = 29  
 critical = 63  
 Trend not sig-  
 nificant at 99%  
 confidence level  
 ( $\alpha = 0.005$  per  
 tail).

Constituent: Sulfate Analysis Run 10/28/2021 1:53 PM View: Appendix III Trend Test  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

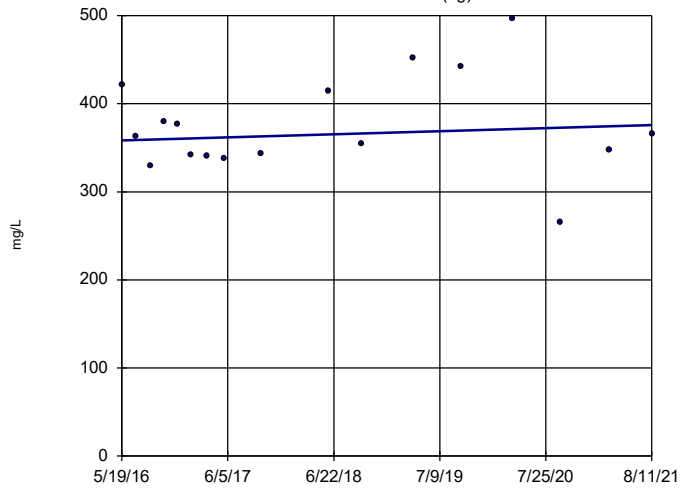
### Sen's Slope Estimator HGWC-18



n = 17  
 Slope = 25.85  
 units per year.  
 Mann-Kendall  
 statistic = 52  
 critical = 63  
 Trend not sig-  
 nificant at 99%  
 confidence level  
 ( $\alpha = 0.005$  per  
 tail).

Constituent: Sulfate Analysis Run 10/28/2021 1:53 PM View: Appendix III Trend Test  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

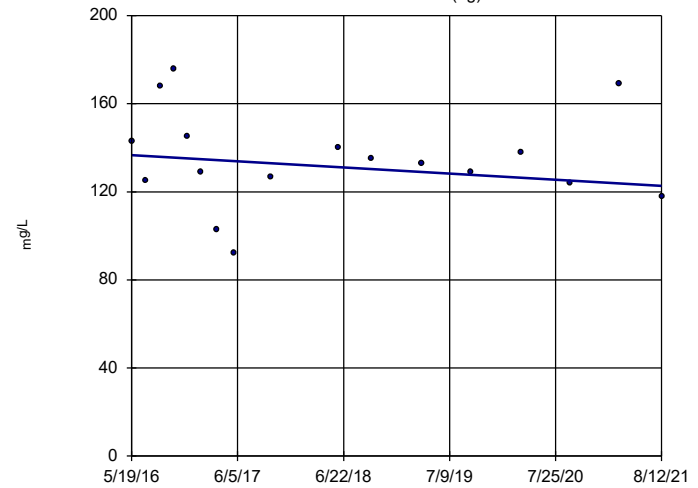
### Sen's Slope Estimator HGWA-1 (bg)



n = 17  
 Slope = 3.302  
 units per year.  
 Mann-Kendall  
 statistic = 12  
 critical = 63  
 Trend not sig-  
 nificant at 99%  
 confidence level  
 ( $\alpha = 0.005$  per  
 tail).

Constituent: Total Dissolved Solids Analysis Run 10/28/2021 1:53 PM View: Appendix III Trend Test  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator HGWA-2 (bg)

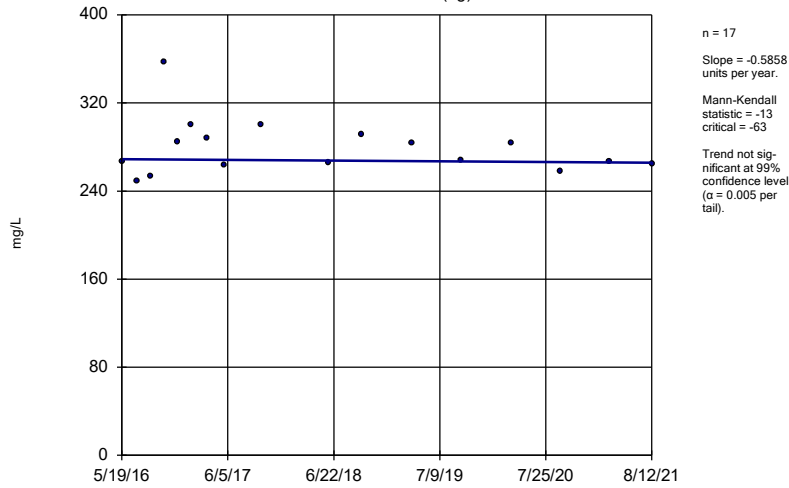


n = 17  
 Slope = -2.657  
 units per year.  
 Mann-Kendall  
 statistic = -23  
 critical = -63  
 Trend not sig-  
 nificant at 99%  
 confidence level  
 ( $\alpha = 0.005$  per  
 tail).

Constituent: Total Dissolved Solids Analysis Run 10/28/2021 1:53 PM View: Appendix III Trend Test  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator

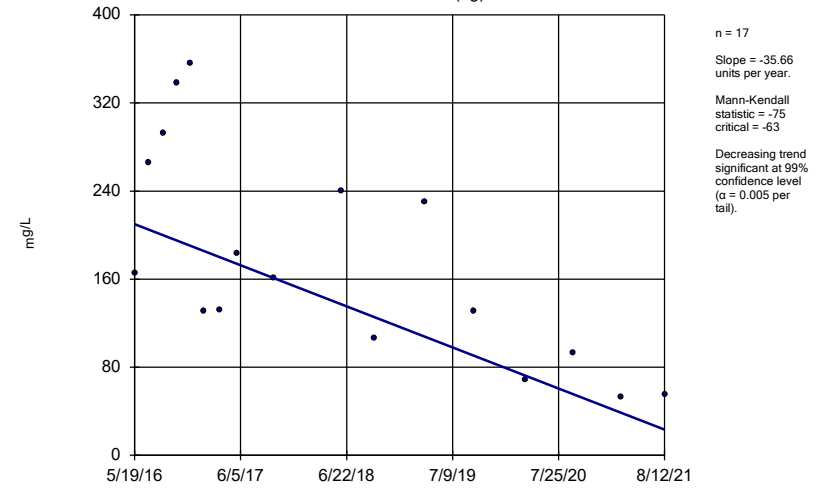
HGWA-3 (bg)



Constituent: Total Dissolved Solids Analysis Run 10/28/2021 1:53 PM View: Appendix III Trend Test  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator

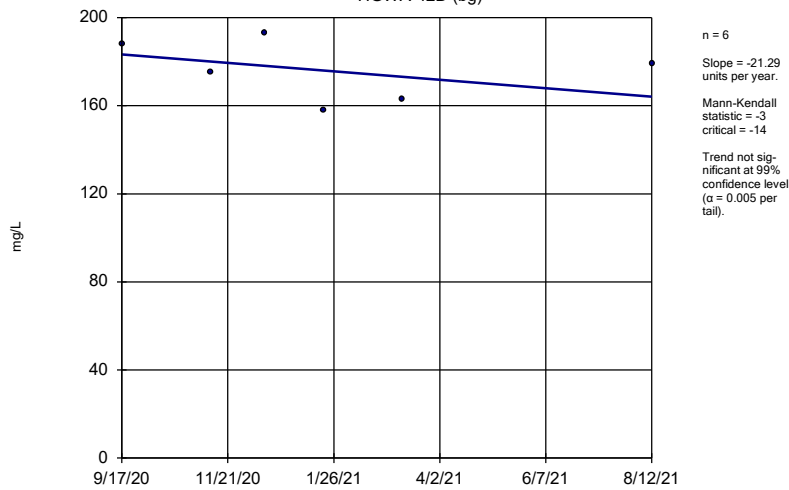
HGWA-4 (bg)



Constituent: Total Dissolved Solids Analysis Run 10/28/2021 1:53 PM View: Appendix III Trend Test  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator

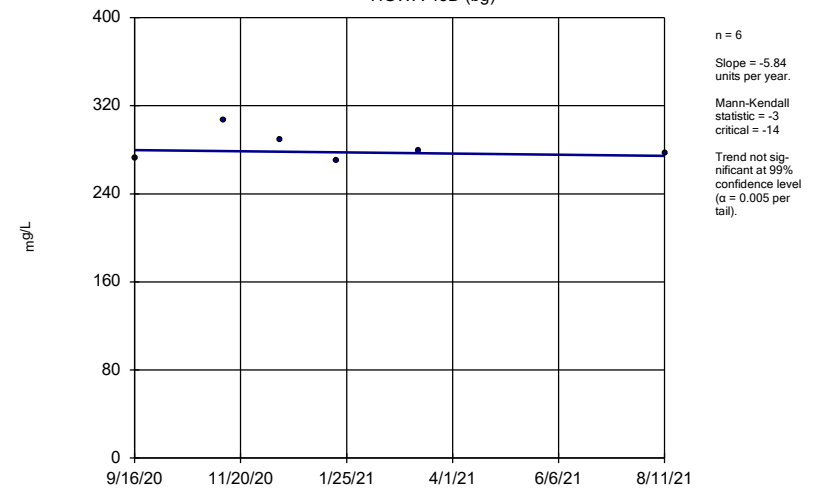
HGWA-42D (bg)



Constituent: Total Dissolved Solids Analysis Run 10/28/2021 1:53 PM View: Appendix III Trend Test  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator

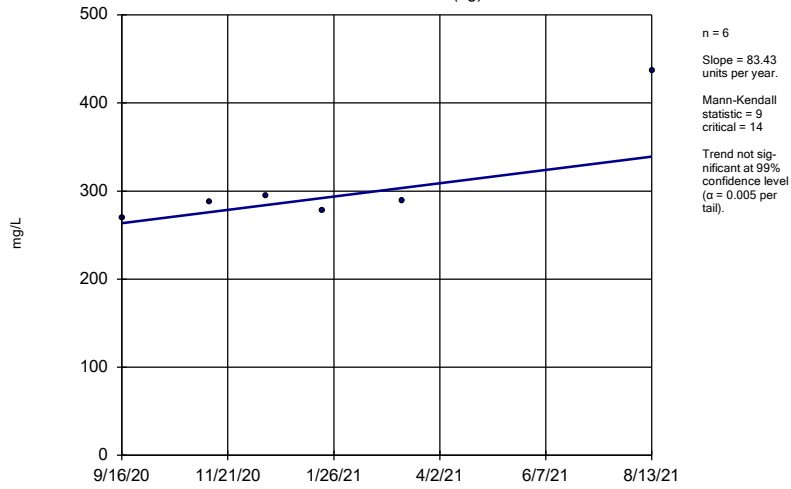
HGWA-43D (bg)



Constituent: Total Dissolved Solids Analysis Run 10/28/2021 1:53 PM View: Appendix III Trend Test  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator

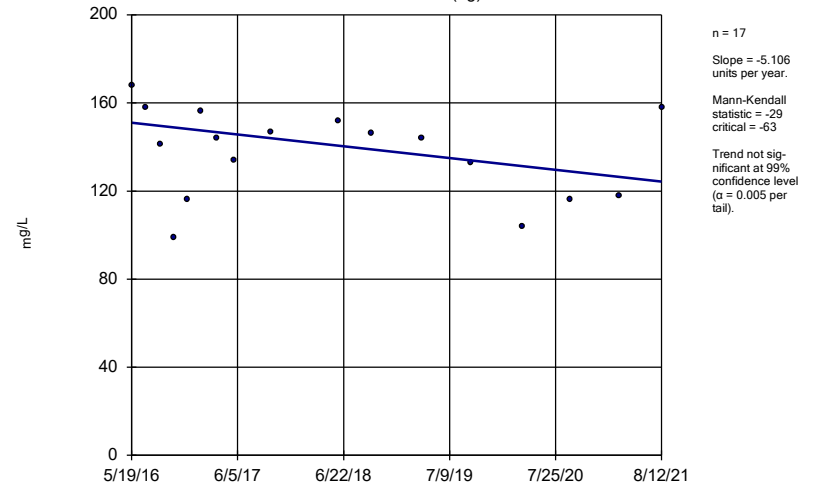
HGWA-44D (bg)



Constituent: Total Dissolved Solids Analysis Run 10/28/2021 1:53 PM View: Appendix III Trend Test  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator

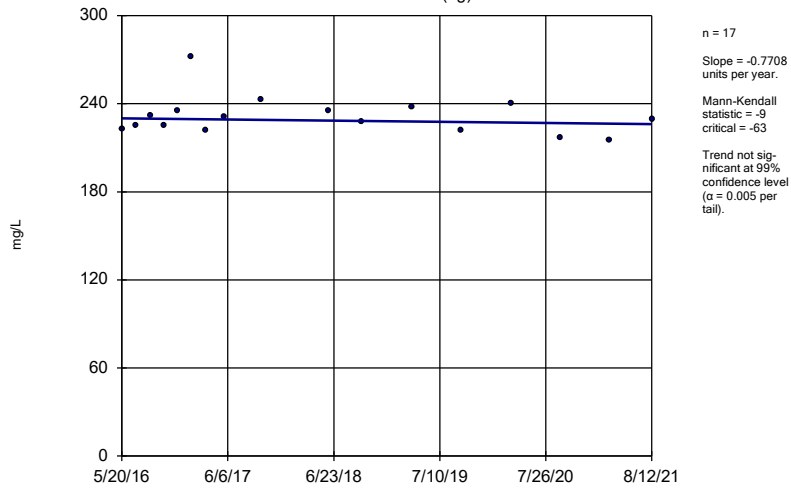
HGWA-5 (bg)



Constituent: Total Dissolved Solids Analysis Run 10/28/2021 1:53 PM View: Appendix III Trend Test  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator

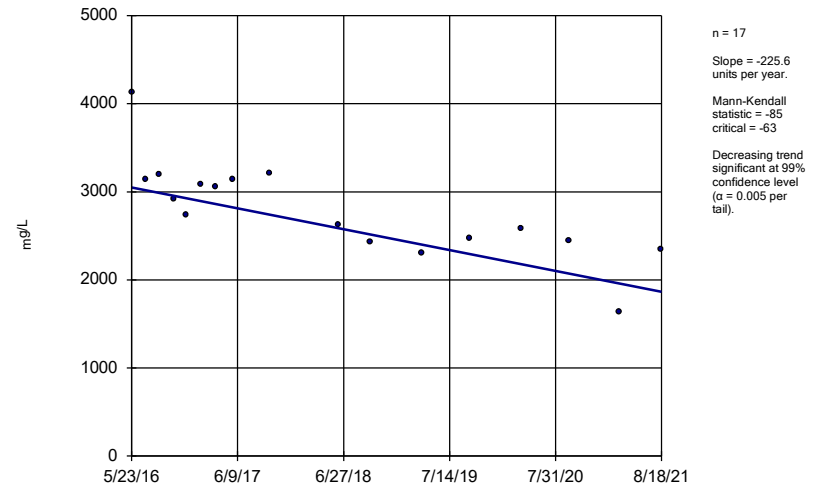
HGWA-6 (bg)



Constituent: Total Dissolved Solids Analysis Run 10/28/2021 1:53 PM View: Appendix III Trend Test  
Plant Hammond Client: Southern Company Data: Hammond AP-2

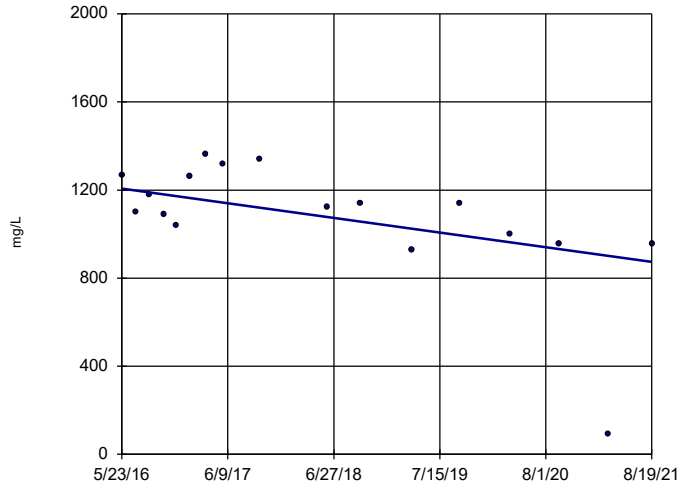
### Sen's Slope Estimator

HGWC-14



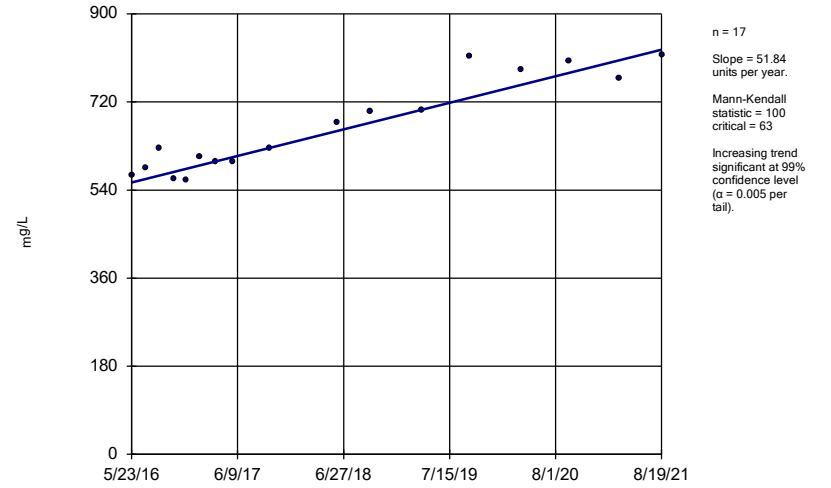
Constituent: Total Dissolved Solids Analysis Run 10/28/2021 1:53 PM View: Appendix III Trend Test  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator HGWC-15



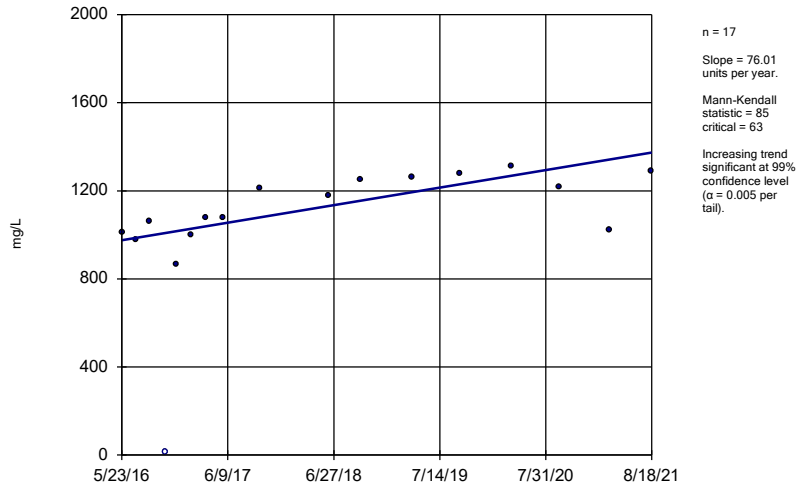
Constituent: Total Dissolved Solids Analysis Run 10/28/2021 1:53 PM View: Appendix III Trend Test  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator HGWC-16



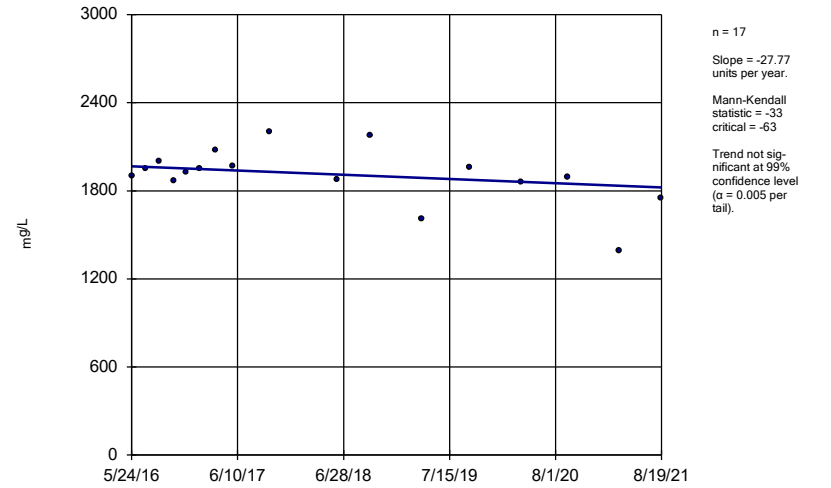
Constituent: Total Dissolved Solids Analysis Run 10/28/2021 1:53 PM View: Appendix III Trend Test  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator HGWC-17



Constituent: Total Dissolved Solids Analysis Run 10/28/2021 1:53 PM View: Appendix III Trend Test  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator HGWC-18



Constituent: Total Dissolved Solids Analysis Run 10/28/2021 1:54 PM View: Appendix III Trend Test  
Plant Hammond Client: Southern Company Data: Hammond AP-2

FIGURE F.

# Upper Tolerance Limit

Plant Hammond Client: Southern Company Data: Hammond AP-2 Printed 10/28/2021, 1:58 PM

<u>Constituent</u>	<u>Well</u>	<u>Upper Lim.</u>	<u>Date</u>	<u>Observ.</u>	<u>Sig.</u>	<u>Bq N</u>	<u>%NDs</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Antimony (mg/L)	n/a	0.003	n/a	n/a	n/a	108	80.56	n/a	0.003928	NP Inter(NDs)
Arsenic (mg/L)	n/a	0.005	n/a	n/a	n/a	141	81.56	n/a	0.0007228	NP Inter(NDs)
Barium (mg/L)	n/a	0.46	n/a	n/a	n/a	141	0	n/a	0.0007228	NP Inter(normality)
Beryllium (mg/L)	n/a	0.0005	n/a	n/a	n/a	129	83.72	n/a	0.001338	NP Inter(NDs)
Cadmium (mg/L)	n/a	0.0005	n/a	n/a	n/a	141	92.91	n/a	0.0007228	NP Inter(NDs)
Chromium (mg/L)	n/a	0.019	n/a	n/a	n/a	129	82.95	n/a	0.001338	NP Inter(NDs)
Cobalt (mg/L)	n/a	0.038	n/a	n/a	n/a	141	70.21	n/a	0.0007228	NP Inter(NDs)
Combined Radium 226 + 228 (pCi/L)	n/a	1.666	n/a	n/a	n/a	141	0	sqrt(x)	0.05	Inter
Fluoride (mg/L)	n/a	0.87	n/a	n/a	n/a	147	33.33	n/a	0.0005313	NP Inter(normality)
Lead (mg/L)	n/a	0.001	n/a	n/a	n/a	129	69.77	n/a	0.001338	NP Inter(NDs)
Lithium (mg/L)	n/a	0.034	n/a	n/a	n/a	141	19.15	n/a	0.0007228	NP Inter(normality)
Mercury (mg/L)	n/a	0.0005	n/a	n/a	n/a	87	90.8	n/a	0.01153	NP Inter(NDs)
Molybdenum (mg/L)	n/a	0.01	n/a	n/a	n/a	129	86.05	n/a	0.001338	NP Inter(NDs)
Selenium (mg/L)	n/a	0.005	n/a	n/a	n/a	141	98.58	n/a	0.0007228	NP Inter(NDs)
Thallium (mg/L)	n/a	0.001	n/a	n/a	n/a	141	98.58	n/a	0.0007228	NP Inter(NDs)

FIGURE G.



<b>PLANT HAMMOND AP-2 GWPS (State)</b>				
<b>Constituent Name</b>	<b>MCL</b>	<b>CCR-Rule Specified</b>	<b>Background Limit</b>	<b>Federal GWPS</b>
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		0.46	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		0.0019	0.1
Cobalt, Total (mg/L)	n/a	0.006	0.038	0.038
Combined Radium, Total (pCi/L)	5		1.67	5
Fluoride, Total (mg/L)	4		0.87	4
Lead, Total (mg/L)	n/a	0.015	0.001	0.001
Lithium, Total (mg/L)	n/a	0.04	0.034	0.034
Mercury	0.002		0.0005	0.002
Molybdenum, Total (mg/L)	n/a	0.1	0.01	0.01
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.

<b>PLANT HAMMOND AP-2 GWPS (Federal)</b>				
<b>Constituent Name</b>	<b>MCL</b>	<b>CCR-Rule Specified</b>	<b>Background Limit</b>	<b>Federal GWPS</b>
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		0.46	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		0.0019	0.1
Cobalt, Total (mg/L)	n/a	0.006	0.038	0.038
Combined Radium, Total (pCi/L)	5		1.67	5
Fluoride, Total (mg/L)	4		0.87	4
Lead, Total (mg/L)	n/a	0.015	0.001	0.015
Lithium, Total (mg/L)	n/a	0.04	0.034	0.04
Mercury	0.002		0.0005	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 I.

# State Confidence Intervals - Significant Results

Plant Hammond Client: Southern Company Data: Hammond AP-2 Printed 11/2/2021, 10:24 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Cobalt (mg/L)	HGWC-18	0.1883	0.1606	0.038	Yes	20	0.1745	0.02448	0	None	No	0.01	Param.
Cobalt (mg/L)	MW-33	0.05804	0.04939	0.038	Yes	7	0.05371	0.003638	0	None	No	0.01	Param.
Cobalt (mg/L)	MW-35	0.1023	0.0797	0.038	Yes	5	0.091	0.006745	0	None	No	0.01	Param.
Lead (mg/L)	HGWC-14	0.001721	0.001392	0.001	Yes	18	0.001557	0.0002717	5.556	None	No	0.01	Param.
Lead (mg/L)	HGWC-18	0.001449	0.001183	0.001	Yes	18	0.001316	0.0002198	5.556	None	No	0.01	Param.
Lead (mg/L)	MW-33	0.001787	0.001613	0.001	Yes	6	0.0017	0.00006325	0	None	No	0.01	Param.
Molybdenum (mg/L)	MW-21D	0.03424	0.01596	0.01	Yes	10	0.0251	0.01025	0	None	No	0.01	Param.

# State Confidence Intervals - All Results

Plant Hammond    Client: Southern Company    Data: Hammond AP-2    Printed 11/2/2021, 10:24 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Antimony (mg/L)	HGWC-14	0.003	0.00043	0.006	No	14	0.002624	0.0009572	85.71	None	No	0.01	NP (NDs)
Antimony (mg/L)	HGWC-18	0.003	0.0008	0.006	No	14	0.002843	0.000588	92.86	None	No	0.01	NP (NDs)
Antimony (mg/L)	MW-22	0.003	0.0016	0.006	No	5	0.00272	0.0006261	80	None	No	0.031	NP (NDs)
Arsenic (mg/L)	HGWC-14	0.005777	0.004011	0.01	No	20	0.004894	0.001554	15	None	No	0.01	Param.
Arsenic (mg/L)	HGWC-15	0.005	0.0008	0.01	No	20	0.004317	0.001671	85	None	No	0.01	NP (NDs)
Arsenic (mg/L)	HGWC-16	0.005	0.0012	0.01	No	20	0.004145	0.001766	80	None	No	0.01	NP (NDs)
Arsenic (mg/L)	HGWC-17	0.005	0.0012	0.01	No	20	0.003968	0.001836	75	None	No	0.01	NP (NDs)
Arsenic (mg/L)	HGWC-18	0.006947	0.004817	0.01	No	20	0.005882	0.001875	0	None	No	0.01	Param.
Arsenic (mg/L)	MW-21D	0.005	0.001	0.01	No	10	0.003749	0.002032	70	None	No	0.011	NP (NDs)
Arsenic (mg/L)	MW-22	0.005	0.00045	0.01	No	9	0.004494	0.001517	88.89	None	No	0.002	NP (NDs)
Arsenic (mg/L)	MW-23D	0.005	0.00082	0.01	No	9	0.004091	0.001804	77.78	None	No	0.002	NP (NDs)
Arsenic (mg/L)	MW-33	0.008048	0.003485	0.01	No	6	0.005767	0.001661	0	None	No	0.01	Param.
Arsenic (mg/L)	MW-35	0.005818	0.003702	0.01	No	5	0.00504	0.0005683	20	Kaplan-Meier	No	0.01	Param.
Arsenic (mg/L)	MW-37D	0.00278	0.0007865	0.01	No	5	0.00307	0.001836	40	Kaplan-Meier	No	0.01	Param.
Barium (mg/L)	HGWC-14	0.0228	0.019	2	No	20	0.02465	0.01786	5	None	No	0.01	NP (normality)
Barium (mg/L)	HGWC-15	0.02813	0.01874	2	No	20	0.02344	0.008265	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-16	0.1124	0.1002	2	No	20	0.1063	0.01075	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-17	0.02619	0.02345	2	No	20	0.02482	0.002408	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-18	0.0336	0.029	2	No	20	0.03391	0.01588	5	None	No	0.01	NP (normality)
Barium (mg/L)	MW-21D	0.07273	0.04547	2	No	10	0.0591	0.01527	0	None	No	0.01	Param.
Barium (mg/L)	MW-22	0.03476	0.01702	2	No	9	0.02589	0.009185	0	None	No	0.01	Param.
Barium (mg/L)	MW-23D	0.07005	0.05283	2	No	9	0.06144	0.008918	0	None	No	0.01	Param.
Barium (mg/L)	MW-33	0.02837	0.02297	2	No	6	0.02567	0.001966	0	None	No	0.01	Param.
Barium (mg/L)	MW-35	0.03259	0.02341	2	No	5	0.028	0.002739	0	None	No	0.01	Param.
Barium (mg/L)	MW-37D	0.1907	0.0987	2	No	5	0.142	0.02864	0	None	sqrt(x)	0.01	Param.
Beryllium (mg/L)	HGWC-14	0.0005223	0.0004266	0.004	No	18	0.0004744	0.00007913	11.11	None	No	0.01	Param.
Beryllium (mg/L)	HGWC-17	0.0005	0.000067	0.004	No	18	0.0004508	0.0001431	88.89	None	No	0.01	NP (NDs)
Beryllium (mg/L)	HGWC-18	0.00345	0.002894	0.004	No	18	0.00306	0.0007528	5.556	None	x^3	0.01	Param.
Beryllium (mg/L)	MW-22	0.0005	0.000047	0.004	No	9	0.0003068	0.0002293	55.56	None	No	0.002	NP (NDs)
Beryllium (mg/L)	MW-33	0.001117	0.0009029	0.004	No	6	0.00101	0.00007797	0	None	No	0.01	Param.
Beryllium (mg/L)	MW-35	0.00061	0.00032	0.004	No	5	0.000508	0.0001381	0	None	No	0.031	NP (normality)
Beryllium (mg/L)	MW-37D	0.0005	0.00012	0.004	No	5	0.000424	0.0001699	80	None	No	0.031	NP (NDs)
Cadmium (mg/L)	HGWC-14	0.0005	0.0001	0.005	No	20	0.0002934	0.000194	45	None	No	0.01	NP (normality)
Cadmium (mg/L)	HGWC-15	0.002228	0.001529	0.005	No	20	0.001911	0.0006795	0	None	sqrt(x)	0.01	Param.
Cadmium (mg/L)	HGWC-17	0.0005	0.00007	0.005	No	20	0.0004785	0.00009615	95	None	No	0.01	NP (NDs)
Cadmium (mg/L)	HGWC-18	0.002329	0.001731	0.005	No	20	0.00203	0.0005263	5	None	No	0.01	Param.
Cadmium (mg/L)	MW-22	0.002144	0.001488	0.005	No	9	0.001696	0.0005966	0	None	x^5	0.01	Param.
Cadmium (mg/L)	MW-23D	0.0006	0.00012	0.005	No	9	0.0004711	0.0001389	55.56	None	No	0.002	NP (NDs)
Cadmium (mg/L)	MW-33	0.0002199	0.0001534	0.005	No	6	0.0001867	0.00002422	0	None	No	0.01	Param.
Cadmium (mg/L)	MW-35	0.002198	0.0004143	0.005	No	5	0.001306	0.0005321	0	None	No	0.01	Param.
Chromium (mg/L)	HGWC-14	0.005	0.00066	0.1	No	18	0.004504	0.001443	88.89	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-15	0.005	0.0012	0.1	No	18	0.004284	0.001654	83.33	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-16	0.005	0.0021	0.1	No	18	0.004345	0.001539	83.33	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-17	0.005	0.0018	0.1	No	18	0.004346	0.00152	83.33	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-18	0.005	0.00063	0.1	No	18	0.004252	0.001722	83.33	None	No	0.01	NP (NDs)
Chromium (mg/L)	MW-21D	0.005	0.00074	0.1	No	10	0.004131	0.001832	80	None	No	0.011	NP (NDs)
Chromium (mg/L)	MW-22	0.005	0.0004	0.1	No	9	0.004017	0.001953	77.78	None	No	0.002	NP (NDs)
Chromium (mg/L)	MW-23D	0.005	0.00083	0.1	No	9	0.004077	0.001832	77.78	None	No	0.002	NP (NDs)
Chromium (mg/L)	MW-33	0.005	0.00069	0.1	No	6	0.004282	0.00176	83.33	None	No	0.0155	NP (NDs)
Chromium (mg/L)	MW-35	0.005	0.00079	0.1	No	5	0.003324	0.002295	60	None	No	0.031	NP (NDs)
Chromium (mg/L)	MW-37D	0.005	0.0014	0.1	No	5	0.00424	0.00159	60	None	No	0.031	NP (NDs)
Cobalt (mg/L)	HGWC-14	0.02946	0.02405	0.038	No	20	0.02623	0.00609	5	None	x^2	0.01	Param.
Cobalt (mg/L)	HGWC-15	0.04589	0.02837	0.038	No	20	0.03713	0.01543	0	None	No	0.01	Param.
Cobalt (mg/L)	HGWC-16	0.005	0.00037	0.038	No	20	0.004532	0.001439	90	None	No	0.01	NP (NDs)
Cobalt (mg/L)	HGWC-17	0.01612	0.01373	0.038	No	20	0.01493	0.002107	0	None	No	0.01	Param.
<b>Cobalt (mg/L)</b>	<b>HGWC-18</b>	<b>0.1883</b>	<b>0.1606</b>	<b>0.038</b>	<b>Yes</b>	<b>20</b>	<b>0.1745</b>	<b>0.02448</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.01</b>	<b>Param.</b>
Cobalt (mg/L)	MW-21D	0.005	0.005	0.038	No	10	0.004534	0.001474	90	None	No	0.011	NP (NDs)
Cobalt (mg/L)	MW-22	0.03873	0.02372	0.038	No	9	0.03122	0.007775	0	None	No	0.01	Param.
Cobalt (mg/L)	MW-23D	0.001193	0.0009469	0.038	No	9	0.00107	0.0001275	0	None	No	0.01	Param.
<b>Cobalt (mg/L)</b>	<b>MW-33</b>	<b>0.05804</b>	<b>0.04939</b>	<b>0.038</b>	<b>Yes</b>	<b>7</b>	<b>0.05371</b>	<b>0.003638</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.01</b>	<b>Param.</b>
<b>Cobalt (mg/L)</b>	<b>MW-35</b>	<b>0.1023</b>	<b>0.0797</b>	<b>0.038</b>	<b>Yes</b>	<b>5</b>	<b>0.091</b>	<b>0.006745</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.01</b>	<b>Param.</b>
Cobalt (mg/L)	MW-37D	0.005	0.00048	0.038	No	5	0.003396	0.002226	60	None	No	0.031	NP (NDs)

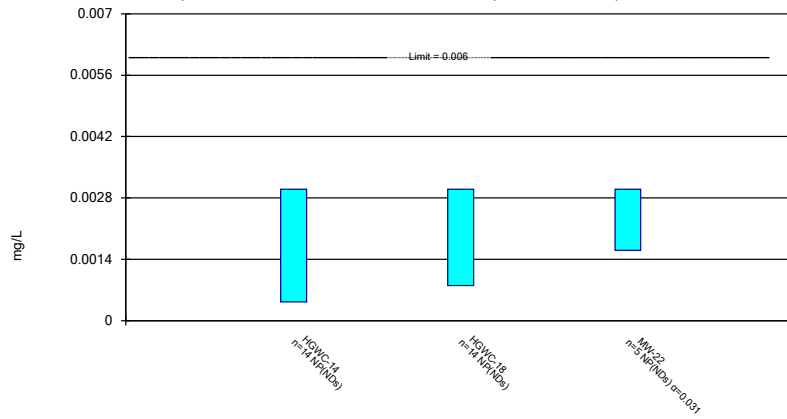
# State Confidence Intervals - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-2 Printed 11/2/2021, 10:24 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Combined Radium 226 + 228 (pCi/L)	HGWC-14	1.624	1.153	5	No	20	1.389	0.4145	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-15	0.9293	0.4792	5	No	20	0.7043	0.3964	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-16	0.99	0.5444	5	No	20	0.7672	0.3923	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-17	1.029	0.6628	5	No	20	0.8457	0.3221	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-18	2.254	1.706	5	No	20	1.98	0.4826	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-21D	1.245	0.4197	5	No	10	0.8326	0.4628	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-22	1.218	0.4005	5	No	9	0.8091	0.4232	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-23D	1.143	0.5748	5	No	9	0.859	0.2943	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-33	2.868	0.8967	5	No	6	1.882	0.7174	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-35	3.953	-0.1194	5	No	5	1.917	1.215	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-37D	2.036	-0.1249	5	No	5	0.9556	0.6448	0	None	No	0.01	Param.
Fluoride (mg/L)	HGWC-14	0.2249	0.08438	4	No	21	0.1819	0.1587	23.81	Kaplan-Meier	sqrt(x)	0.01	Param.
Fluoride (mg/L)	HGWC-15	0.17	0.09	4	No	21	0.1435	0.1219	42.86	None	No	0.01	NP (normality)
Fluoride (mg/L)	HGWC-16	0.25	0.059	4	No	21	0.1594	0.1198	52.38	None	No	0.01	NP (NDs)
Fluoride (mg/L)	HGWC-17	0.16	0.062	4	No	21	0.1693	0.2143	33.33	None	No	0.01	NP (normality)
Fluoride (mg/L)	HGWC-18	0.6473	0.4156	4	No	21	0.5314	0.2101	4.762	None	No	0.01	Param.
Fluoride (mg/L)	MW-21D	0.1	0.1	4	No	10	0.1	4.7e-10	90	None	No	0.011	NP (NDs)
Fluoride (mg/L)	MW-22	0.28	0.1	4	No	9	0.1233	0.05958	77.78	None	No	0.002	NP (NDs)
Fluoride (mg/L)	MW-23D	0.16	0.1	4	No	9	0.1111	0.02261	77.78	None	No	0.002	NP (NDs)
Fluoride (mg/L)	MW-33	0.3234	0.1231	4	No	7	0.2186	0.09191	0	None	sqrt(x)	0.01	Param.
Fluoride (mg/L)	MW-35	0.1	0.03995	4	No	5	0.076	0.02239	20	Kaplan-Meier	No	0.01	Param.
Fluoride (mg/L)	MW-37D	0.1025	0.03866	4	No	5	0.0706	0.01906	0	None	No	0.01	Param.
<b>Lead (mg/L)</b>	<b>HGWC-14</b>	<b>0.001721</b>	<b>0.001392</b>	<b>0.001</b>	<b>Yes</b>	<b>18</b>	<b>0.001557</b>	<b>0.0002717</b>	<b>5.556</b>	<b>None</b>	<b>No</b>	<b>0.01</b>	<b>Param.</b>
Lead (mg/L)	HGWC-15	0.001	0.0002	0.001	No	18	0.0008014	0.0003833	72.22	None	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-16	0.001	0.000094	0.001	No	18	0.0005568	0.0004572	50	None	No	0.01	NP (normality)
Lead (mg/L)	HGWC-17	0.001	0.000088	0.001	No	18	0.0006003	0.0004605	55.56	None	No	0.01	NP (NDs)
<b>Lead (mg/L)</b>	<b>HGWC-18</b>	<b>0.001449</b>	<b>0.001183</b>	<b>0.001</b>	<b>Yes</b>	<b>18</b>	<b>0.001316</b>	<b>0.0002198</b>	<b>5.556</b>	<b>None</b>	<b>No</b>	<b>0.01</b>	<b>Param.</b>
Lead (mg/L)	MW-21D	0.001	0.000048	0.001	No	10	0.0006828	0.0004451	60	None	No	0.011	NP (NDs)
Lead (mg/L)	MW-22	0.001	0.000036	0.001	No	9	0.0006922	0.000462	66.67	None	No	0.002	NP (NDs)
Lead (mg/L)	MW-23D	0.001	0.000051	0.001	No	9	0.0008012	0.0003954	77.78	None	No	0.002	NP (NDs)
<b>Lead (mg/L)</b>	<b>MW-33</b>	<b>0.001787</b>	<b>0.001613</b>	<b>0.001</b>	<b>Yes</b>	<b>6</b>	<b>0.0017</b>	<b>0.00006325</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.01</b>	<b>Param.</b>
Lead (mg/L)	MW-35	0.001087	0.00009334	0.001	No	5	0.000672	0.0003485	20	Kaplan-Meier	No	0.01	Param.
Lead (mg/L)	MW-37D	0.001537	-0.0004793	0.001	No	5	0.0008344	0.000626	40	Kaplan-Meier	No	0.01	Param.
Lithium (mg/L)	HGWC-15	0.007436	0.002055	0.034	No	20	0.0131	0.01235	30	Kaplan-Meier	ln(x)	0.01	Param.
Lithium (mg/L)	HGWC-16	0.0042	0.0029	0.034	No	20	0.004575	0.004859	5	None	No	0.01	NP (normality)
Lithium (mg/L)	HGWC-17	0.025	0.0011	0.034	No	20	0.01306	0.01225	50	None	No	0.01	NP (normality)
Lithium (mg/L)	HGWC-18	0.01452	0.01238	0.034	No	20	0.01345	0.001893	0	None	No	0.01	Param.
Lithium (mg/L)	MW-21D	0.02555	0.02125	0.034	No	10	0.0234	0.002413	0	None	No	0.01	Param.
Lithium (mg/L)	MW-22	0.002	0.0011	0.034	No	9	0.001333	0.0002784	0	None	No	0.002	NP (normality)
Lithium (mg/L)	MW-23D	0.002555	0.002133	0.034	No	9	0.002344	0.0002186	0	None	No	0.01	Param.
Lithium (mg/L)	MW-33	0.001201	0.0008654	0.034	No	6	0.001033	0.0001223	0	None	No	0.01	Param.
Lithium (mg/L)	MW-35	0.004936	0.003304	0.034	No	5	0.00412	0.0004868	0	None	No	0.01	Param.
Lithium (mg/L)	MW-37D	0.03898	0.02822	0.034	No	5	0.0336	0.003209	0	None	No	0.01	Param.
Molybdenum (mg/L)	HGWC-15	0.01	0.0007	0.01	No	18	0.009483	0.002192	94.44	None	No	0.01	NP (NDs)
<b>Molybdenum (mg/L)</b>	<b>MW-21D</b>	<b>0.03424</b>	<b>0.01596</b>	<b>0.01</b>	<b>Yes</b>	<b>10</b>	<b>0.0251</b>	<b>0.01025</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.01</b>	<b>Param.</b>
Molybdenum (mg/L)	MW-22	0.01	0.00013	0.01	No	9	0.008903	0.00329	88.89	None	No	0.002	NP (NDs)
Molybdenum (mg/L)	MW-23D	0.005336	0.001968	0.01	No	9	0.003711	0.002464	11.11	None	ln(x)	0.01	Param.
Molybdenum (mg/L)	MW-37D	0.02512	0.006598	0.01	No	5	0.01586	0.005527	0	None	No	0.01	Param.
Selenium (mg/L)	HGWC-14	0.0129	0.006872	0.05	No	20	0.009886	0.005307	0	None	No	0.01	Param.
Selenium (mg/L)	HGWC-15	0.005	0.0041	0.05	No	20	0.004355	0.001477	80	None	No	0.01	NP (NDs)
Selenium (mg/L)	HGWC-16	0.005	0.000089	0.05	No	20	0.004754	0.001098	95	None	No	0.01	NP (NDs)
Selenium (mg/L)	HGWC-17	0.005	0.0023	0.05	No	20	0.00444	0.001415	85	None	No	0.01	NP (NDs)
Selenium (mg/L)	HGWC-18	0.03325	0.01734	0.05	No	20	0.02529	0.01402	5	None	No	0.01	Param.
Selenium (mg/L)	MW-22	0.005	0.002	0.05	No	9	0.004667	0.001	88.89	None	No	0.002	NP (NDs)
Selenium (mg/L)	MW-33	0.03659	0.008223	0.05	No	6	0.01983	0.01216	0	None	ln(x)	0.01	Param.
Selenium (mg/L)	MW-35	0.03653	0.005955	0.05	No	5	0.0182	0.01073	0	None	x^(1/3)	0.01	Param.
Thallium (mg/L)	HGWC-14	0.000306	0.00028	0.002	No	20	0.0002958	0.00003042	0	None	No	0.01	NP (normality)
Thallium (mg/L)	HGWC-17	0.001	0.00012	0.002	No	20	0.00069	0.0004335	65	None	No	0.01	NP (NDs)
Thallium (mg/L)	HGWC-18	0.001	0.00015	0.002	No	20	0.0005015	0.0004181	40	None	No	0.01	NP (normality)
Thallium (mg/L)	MW-33	0.0003737	0.0002329	0.002	No	6	0.0003033	0.00005125	0	None	No	0.01	Param.
Thallium (mg/L)	MW-35	0.001	0.00013	0.002	No	5	0.000826	0.0003891	80	None	No	0.031	NP (NDs)

### Non-Parametric Confidence Interval

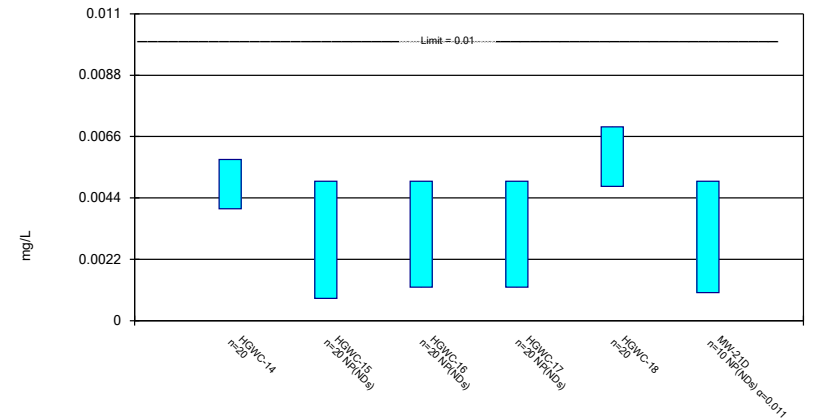
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted.



Constituent: Antimony Analysis Run 11/2/2021 10:21 AM View: Appendix IV  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Parametric and Non-Parametric (NP) Confidence Interval

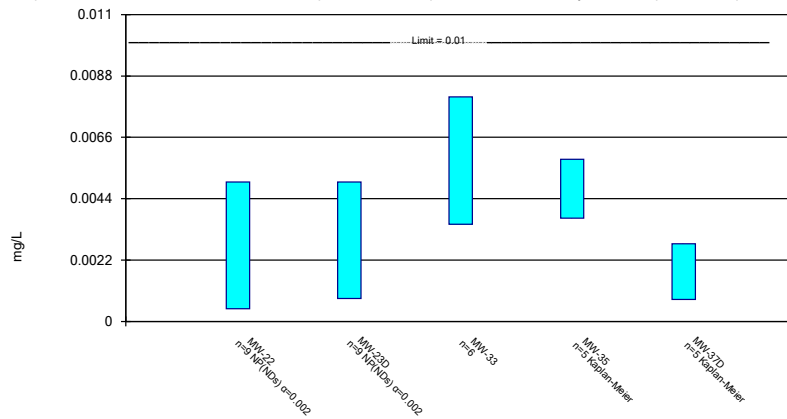
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Arsenic Analysis Run 11/2/2021 10:21 AM View: Appendix IV  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Parametric and Non-Parametric (NP) Confidence Interval

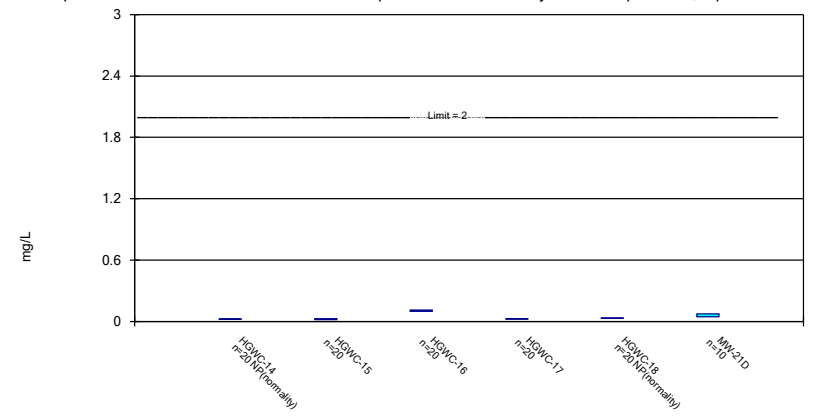
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Constituent: Arsenic Analysis Run 11/2/2021 10:22 AM View: Appendix IV  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.

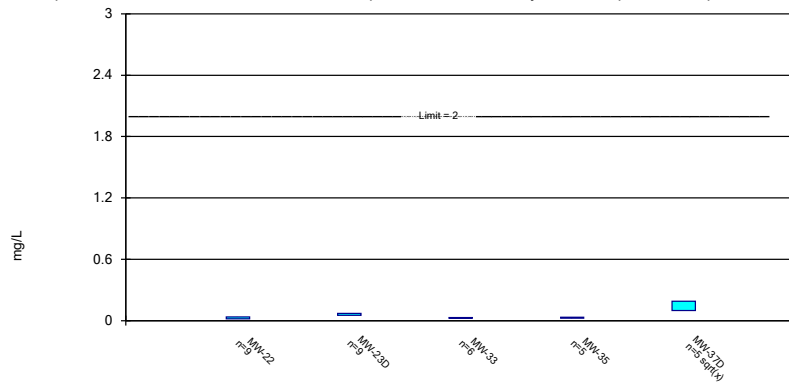


Constituent: Barium Analysis Run 11/2/2021 10:22 AM View: Appendix IV  
 Plant Hammond Client: Southern Company Data: Hammond AP-2



### Parametric Confidence Interval

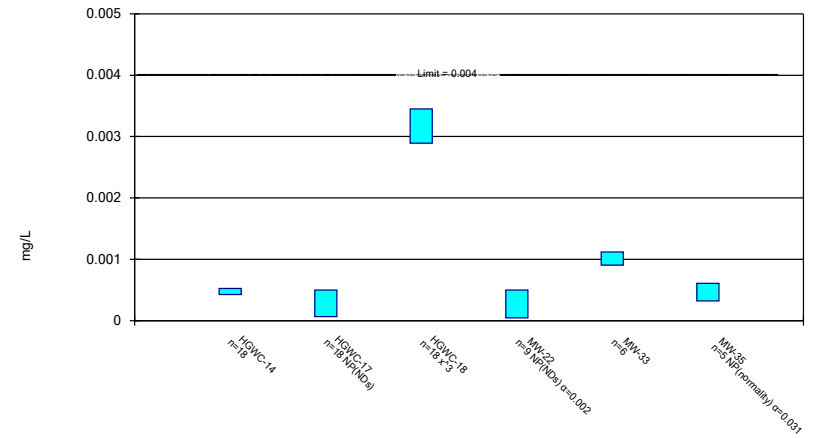
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Constituent: Barium Analysis Run 11/2/2021 10:22 AM View: Appendix IV  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Parametric and Non-Parametric (NP) Confidence Interval

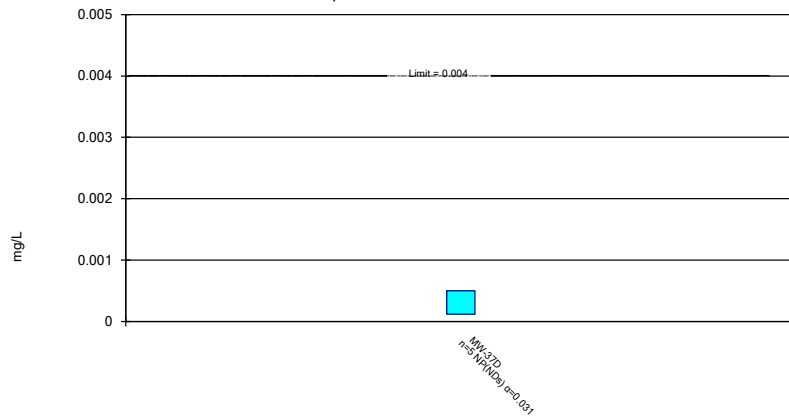
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Beryllium Analysis Run 11/2/2021 10:22 AM View: Appendix IV  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Non-Parametric Confidence Interval

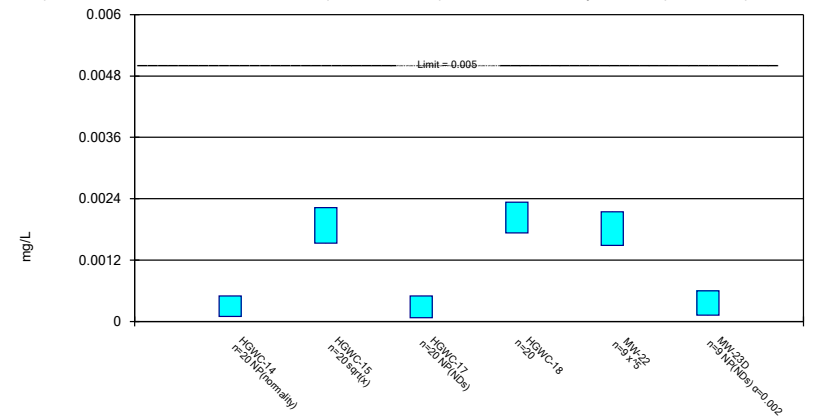
Compliance Limit is not exceeded.



Constituent: Beryllium Analysis Run 11/2/2021 10:22 AM View: Appendix IV  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Parametric and Non-Parametric (NP) Confidence Interval

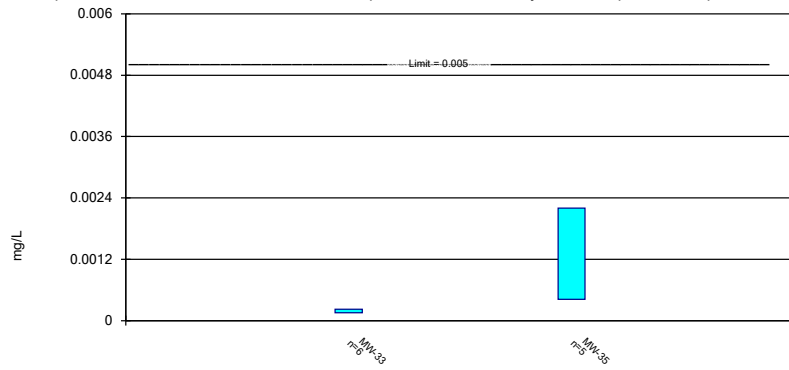
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cadmium Analysis Run 11/2/2021 10:22 AM View: Appendix IV  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Parametric Confidence Interval

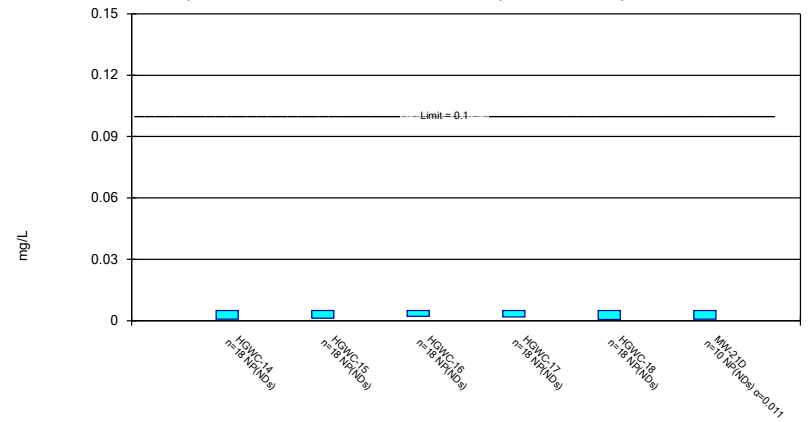
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cadmium Analysis Run 11/2/2021 10:22 AM View: Appendix IV  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Non-Parametric Confidence Interval

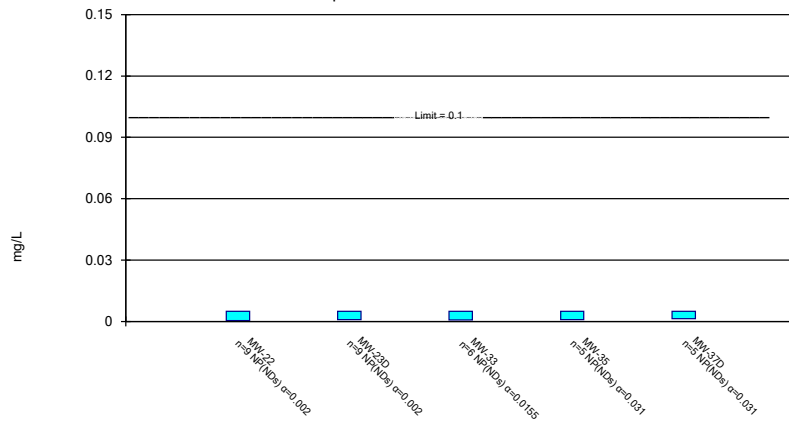
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted.



Constituent: Chromium Analysis Run 11/2/2021 10:22 AM View: Appendix IV  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Non-Parametric Confidence Interval

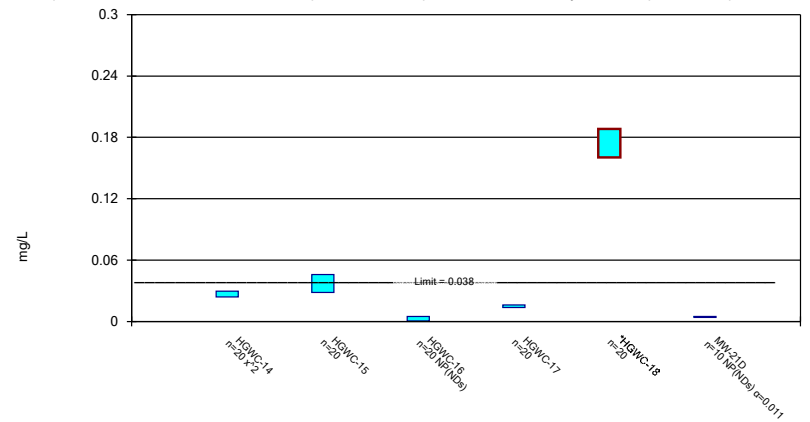
Compliance Limit is not exceeded.



Constituent: Chromium Analysis Run 11/2/2021 10:22 AM View: Appendix IV  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Parametric and Non-Parametric (NP) Confidence Interval

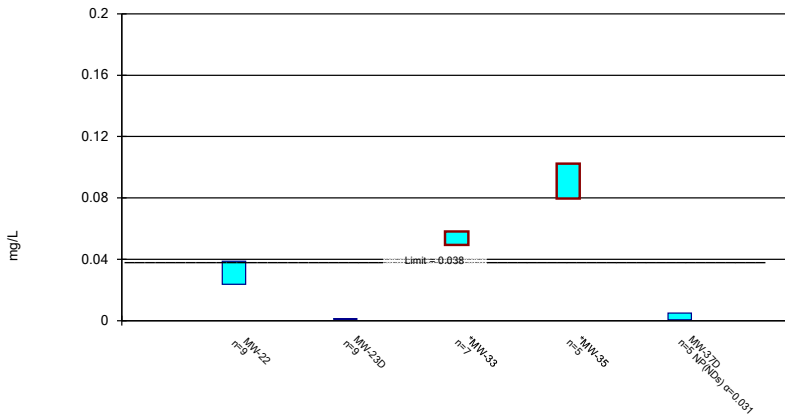
Compliance limit is exceeded.\* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cobalt Analysis Run 11/2/2021 10:22 AM View: Appendix IV  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Parametric and Non-Parametric (NP) Confidence Interval

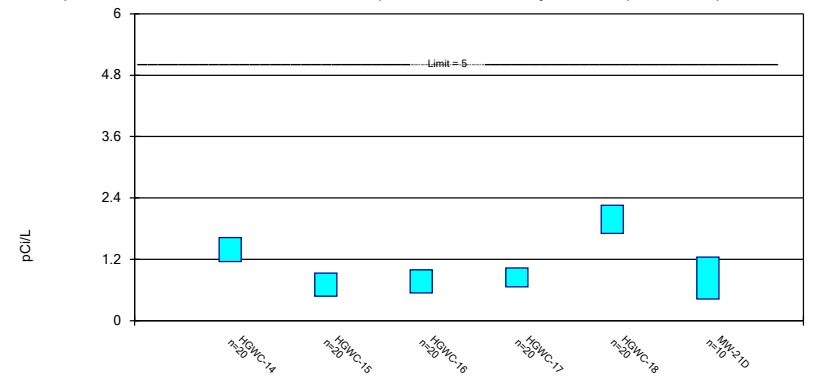
Compliance limit is exceeded.\* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cobalt Analysis Run 11/2/2021 10:22 AM View: Appendix IV  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Parametric Confidence Interval

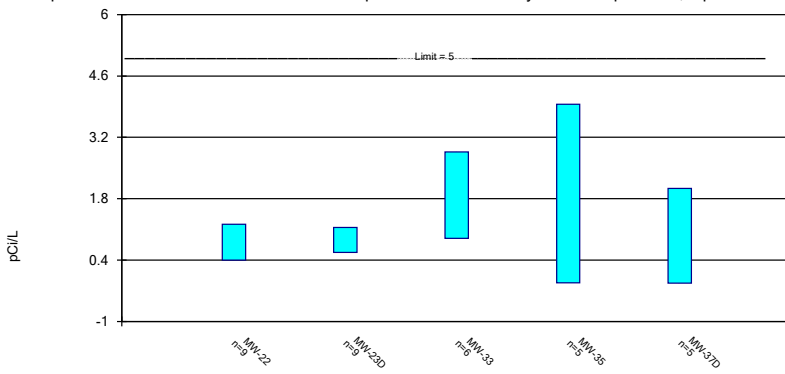
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Combined Radium 226 + 228 Analysis Run 11/2/2021 10:22 AM View: Appendix IV  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Parametric Confidence Interval

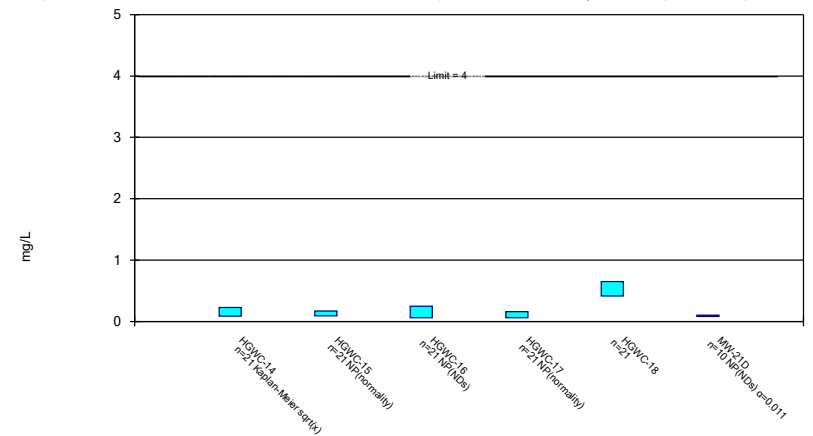
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Combined Radium 226 + 228 Analysis Run 11/2/2021 10:22 AM View: Appendix IV  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Parametric and Non-Parametric (NP) Confidence Interval

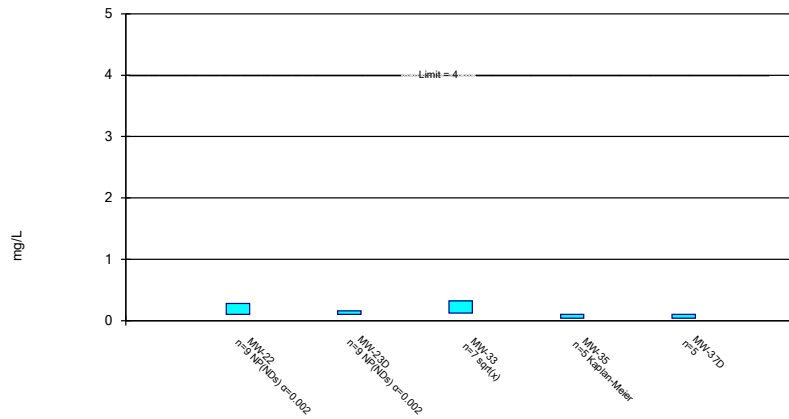
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Fluoride Analysis Run 11/2/2021 10:22 AM View: Appendix IV  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

Parametric and Non-Parametric (NP) Confidence Interval

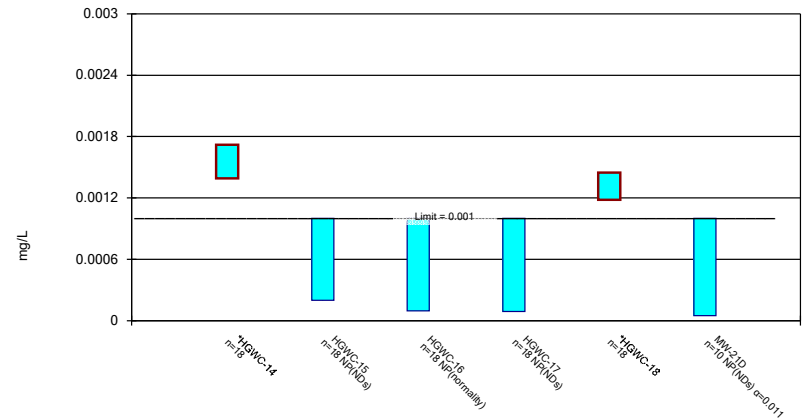
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Fluoride Analysis Run 11/2/2021 10:22 AM View: Appendix IV  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

Parametric and Non-Parametric (NP) Confidence Interval

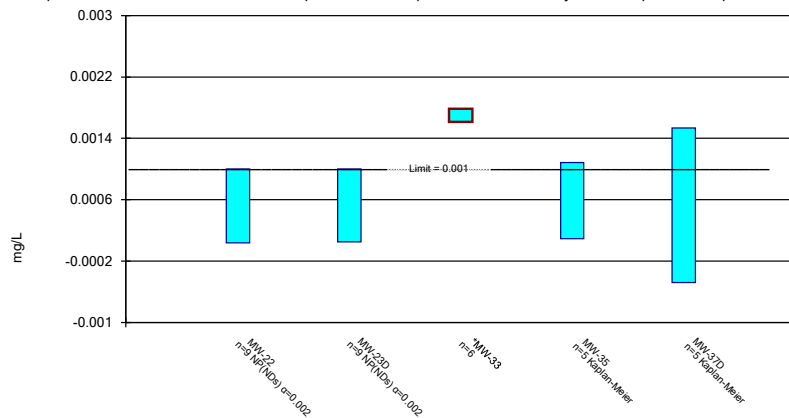
Compliance limit is exceeded.\* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Lead Analysis Run 11/2/2021 10:22 AM View: Appendix IV  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

Parametric and Non-Parametric (NP) Confidence Interval

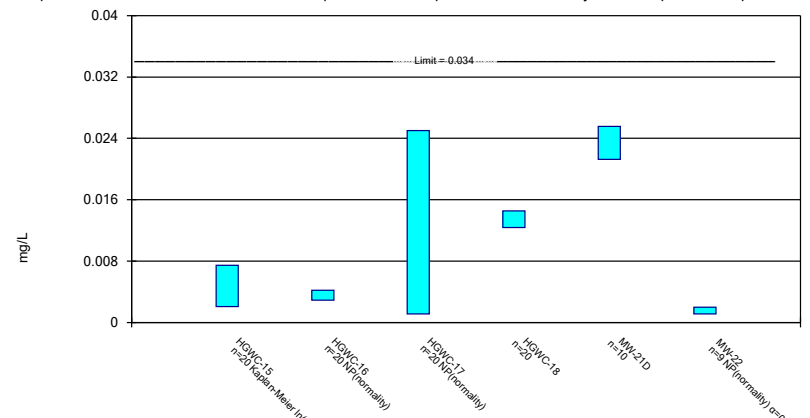
Compliance limit is exceeded.\* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Lead Analysis Run 11/2/2021 10:22 AM View: Appendix IV  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

Parametric and Non-Parametric (NP) Confidence Interval

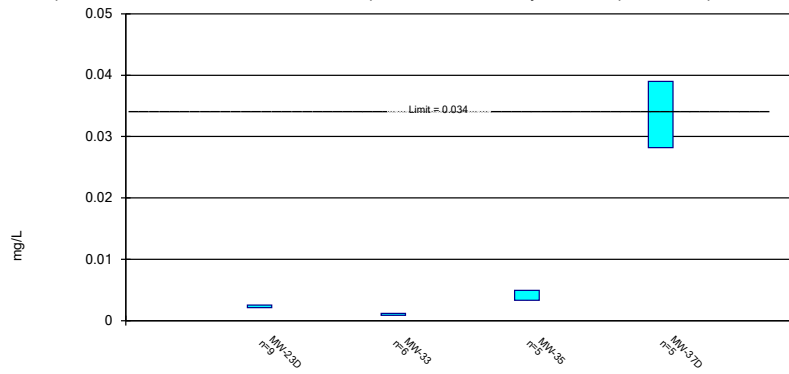
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Lithium Analysis Run 11/2/2021 10:22 AM View: Appendix IV  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Parametric Confidence Interval

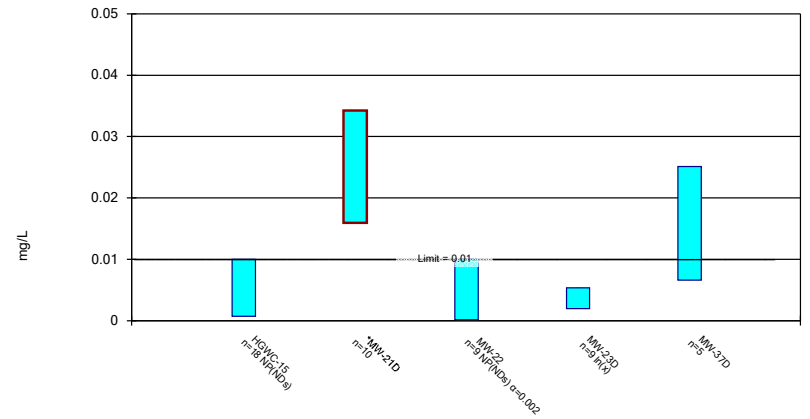
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Lithium Analysis Run 11/2/2021 10:22 AM View: Appendix IV  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Parametric and Non-Parametric (NP) Confidence Interval

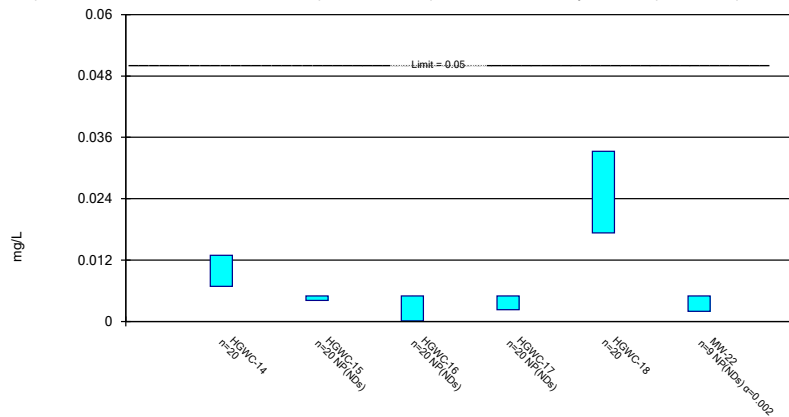
Compliance limit is exceeded.\* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Molybdenum Analysis Run 11/2/2021 10:22 AM View: Appendix IV  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Parametric and Non-Parametric (NP) Confidence Interval

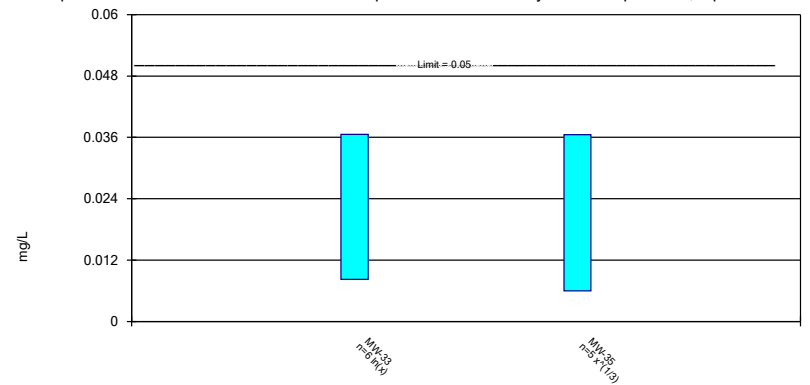
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Selenium Analysis Run 11/2/2021 10:22 AM View: Appendix IV  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Parametric Confidence Interval

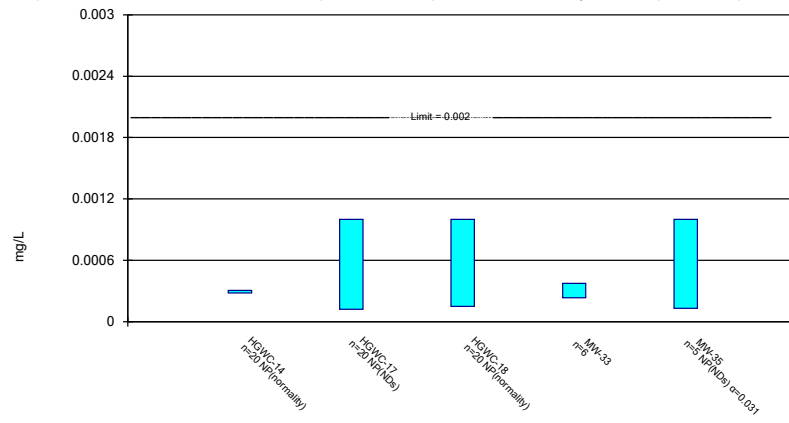
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Selenium Analysis Run 11/2/2021 10:22 AM View: Appendix IV  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Thallium    Analysis Run 11/2/2021 10:22 AM    View: Appendix IV  
Plant Hammond    Client: Southern Company    Data: Hammond AP-2

# Confidence Interval

Constituent: Antimony (mg/L) Analysis Run 11/2/2021 10:24 AM View: Appendix IV

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWC-14	HGWC-18	MW-22
5/23/2016	<0.003		
5/24/2016		<0.003	
7/12/2016	0.0003 (J)	<0.003	
9/1/2016	<0.003	<0.003	
10/24/2016	<0.003		
10/25/2016		<0.003	
12/7/2016	<0.003		
12/8/2016		<0.003	
1/26/2017	<0.003	<0.003	
3/23/2017	<0.003	<0.003	
5/24/2017	<0.003		
5/25/2017		<0.003	
4/3/2018		<0.003	
4/4/2018	<0.003		
3/14/2019	<0.003	<0.003	
3/15/2019			<0.003
3/2/2020			<0.003
3/3/2020	<0.003	<0.003	
2/11/2021	0.00043 (J)	<0.003	
2/15/2021			<0.003
3/17/2021	<0.003		<0.003
3/18/2021		<0.003	
8/18/2021	<0.003		
8/19/2021		0.0008 (J)	0.0016 (J)
Mean	0.002624	0.002843	0.00272
Std. Dev.	0.0009572	0.000588	0.0006261
Upper Lim.	0.003	0.003	0.003
Lower Lim.	0.00043	0.0008	0.0016

# Confidence Interval

Constituent: Arsenic (mg/L) Analysis Run 11/2/2021 10:24 AM View: Appendix IV

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWC-14	HGWC-15	HGWC-16	HGWC-17	HGWC-18	MW-21D
5/23/2016	0.00268 (J)	<0.005	<0.005	<0.005		
5/24/2016					0.00294 (J)	
7/12/2016	0.0059	<0.005	<0.005	<0.005	0.0074	
9/1/2016	0.0056	<0.005	<0.005	<0.005	0.0073	
10/24/2016	0.0058	<0.005				
10/25/2016			<0.005	<0.005	0.006	
12/7/2016	<0.005	<0.005	<0.005	<0.005		
12/8/2016					0.007	
1/26/2017	0.0089	<0.005	<0.005	<0.005	0.0068	
3/22/2017			0.0005 (J)	0.0007 (J)		
3/23/2017	0.0069	0.0008 (J)			0.0082	
5/24/2017	0.0048 (J)	<0.005	<0.005			
5/25/2017				0.0007 (J)	0.006	
4/3/2018		<0.005	<0.005	<0.005	0.0062	
4/4/2018	0.0052					
6/5/2018					0.008	
6/6/2018	0.0059	<0.005	<0.005	0.00097 (J)		
10/3/2018	0.0032 (J)	<0.005	<0.005	<0.005	0.0039 (J)	
3/14/2019	0.0029 (J)	<0.005			0.0036 (J)	
3/15/2019			<0.005	<0.005		<0.005
4/4/2019		0.00017 (J)	0.0001 (J)			0.00019 (J)
4/5/2019	<0.005			<0.005	0.0015 (J)	
9/24/2019	0.0039 (J)	0.00037 (J)				
9/25/2019			<0.005	<0.005	0.0044 (J)	<0.005
3/3/2020	0.0035 (J)	<0.005	<0.005	<0.005	0.0057	<0.005
3/26/2020		<0.005				
3/30/2020	0.0051		0.0011 (J)			
3/31/2020				0.0008 (J)	0.0056	
4/1/2020						0.0013 (J)
6/17/2020						<0.005
9/15/2020					0.0074	
9/16/2020				<0.005		
9/17/2020		<0.005	<0.005			
9/18/2020	0.0029 (J)					
9/21/2020						<0.005
2/10/2021			0.0012 (J)			
2/11/2021	0.0062			0.0012 (J)	0.0069 (B)	0.001 (J)
2/12/2021		<0.005				
3/16/2021		<0.005				
3/17/2021	<0.005		<0.005			
3/18/2021				<0.005	0.0083 (J)	<0.005
8/18/2021	0.0035 (J)			<0.005		
8/19/2021		<0.005	<0.005		0.0045 (J)	<0.005
Mean	0.004894	0.004317	0.004145	0.003968	0.005882	0.003749
Std. Dev.	0.001554	0.001671	0.001766	0.001836	0.001875	0.002032
Upper Lim.	0.005777	0.005	0.005	0.005	0.006947	0.005
Lower Lim.	0.004011	0.0008	0.0012	0.0012	0.004817	0.001



# Confidence Interval

Constituent: Arsenic (mg/L) Analysis Run 11/2/2021 10:24 AM View: Appendix IV  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

	MW-22	MW-23D	MW-33	MW-35	MW-37D
3/14/2019		<0.005			
3/15/2019	<0.005				
4/5/2019	<0.005	<0.005			
9/26/2019		<0.005			
9/27/2019	0.00045 (J)				
3/2/2020	<0.005	<0.005			
3/27/2020	<0.005				
4/1/2020		0.00082 (J)	0.0061		
6/17/2020			0.0031 (J)		
6/18/2020				0.005 (J)	0.0021 (J)
9/17/2020	<0.005	<0.005			
9/21/2020			0.0083	0.0059	
9/23/2020					0.00095 (J)
2/11/2021					0.0023 (J)
2/12/2021		0.001 (J)	0.0059		
2/15/2021	<0.005			0.005	
3/12/2021					<0.005
3/17/2021	<0.005	<0.005			
3/18/2021			0.0054 (J)		
3/19/2021				<0.005	
8/18/2021			0.0058	0.0043 (J)	<0.005
8/19/2021	<0.005	<0.005			
Mean	0.004494	0.004091	0.005767	0.00504	0.00307
Std. Dev.	0.001517	0.001804	0.001661	0.0005683	0.001836
Upper Lim.	0.005	0.005	0.008048	0.005818	0.00278
Lower Lim.	0.00045	0.00082	0.003485	0.003702	0.0007865

# Confidence Interval

Constituent: Barium (mg/L) Analysis Run 11/2/2021 10:24 AM View: Appendix IV

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWC-14	HGWC-15	HGWC-16	HGWC-17	HGWC-18	MW-21D
5/23/2016	<0.2	0.0315 (J)	0.0841	0.0222 (J)		
5/24/2016					<0.2	
7/12/2016	0.0214	0.0372	0.0886	0.0221	0.0346	
9/1/2016	0.0208	0.0364	0.0934	0.0227	0.0336	
10/24/2016	0.0208	0.0326				
10/25/2016			0.0991	0.0225	0.0349	
12/7/2016	0.022	0.0301	0.101	0.0227		
12/8/2016					0.0339	
1/26/2017	0.0238	0.0287	0.105	0.0229	0.0293	
3/22/2017			0.11	0.0248		
3/23/2017	0.0244	0.0329			0.0313	
5/24/2017	0.0228	0.0283	0.106			
5/25/2017				0.0255	0.0336	
4/3/2018		0.019	0.099	0.025	0.028	
4/4/2018	0.021					
6/5/2018					0.03	
6/6/2018	0.022	0.022	0.11	0.028		
10/3/2018	0.02	0.025	0.11	0.028	0.032	
3/14/2019	0.019	0.021			0.029	
3/15/2019			0.13	0.029		0.09
4/4/2019		0.018	0.11			0.075
4/5/2019	0.016			0.022	0.021	
9/24/2019	0.021	0.019				
9/25/2019			0.11	0.025	0.03	0.066
3/3/2020	0.018	0.018	0.12	0.026	0.026	0.058
3/26/2020		0.016				
3/30/2020	0.02		0.11			
3/31/2020				0.029	0.029	
4/1/2020						0.066
6/17/2020						0.054
9/15/2020					0.03	
9/16/2020				0.025		
9/17/2020		0.017	0.11			
9/18/2020	0.019					
9/21/2020						0.049
2/10/2021			0.11			
2/11/2021	0.02			0.025	0.03	0.044
2/12/2021		0.014				
3/16/2021		0.012				
3/17/2021	0.023		0.12			
3/18/2021				0.027	0.031	0.047
8/18/2021	0.018			0.022		
8/19/2021		0.01	0.1		0.031	0.042
Mean	0.02465	0.02344	0.1063	0.02482	0.03391	0.0591
Std. Dev.	0.01786	0.008265	0.01075	0.002408	0.01588	0.01527
Upper Lim.	0.0228	0.02813	0.1124	0.02619	0.0336	0.07273
Lower Lim.	0.019	0.01874	0.1002	0.02345	0.029	0.04547

# Confidence Interval

Constituent: Barium (mg/L) Analysis Run 11/2/2021 10:24 AM View: Appendix IV  
Plant Hammond Client: Southern Company Data: Hammond AP-2

	MW-22	MW-23D	MW-33	MW-35	MW-37D
3/14/2019		0.082			
3/15/2019	0.044				
4/5/2019	0.036	0.061			
9/26/2019		0.064			
9/27/2019	0.028				
3/2/2020	0.027	0.06			
3/27/2020	0.025				
4/1/2020		0.065	0.027		
6/17/2020			0.024		
6/18/2020				0.029	0.19
9/17/2020	0.02	0.057			
9/21/2020			0.024	0.028	
9/23/2020					0.14
2/11/2021					0.14
2/12/2021		0.056	0.025		
2/15/2021	0.017			0.026	
3/12/2021					0.12
3/17/2021	0.018	0.058			
3/18/2021			0.029		
3/19/2021				0.032	
8/18/2021			0.025	0.025	0.12
8/19/2021	0.018	0.05			
Mean	0.02589	0.06144	0.02567	0.028	0.142
Std. Dev.	0.009185	0.008918	0.001966	0.002739	0.02864
Upper Lim.	0.03476	0.07005	0.02837	0.03259	0.1907
Lower Lim.	0.01702	0.05283	0.02297	0.02341	0.0987

# Confidence Interval

Constituent: Beryllium (mg/L) Analysis Run 11/2/2021 10:24 AM View: Appendix IV

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWC-14	HGWC-17	HGWC-18	MW-22	MW-33	MW-35
5/23/2016	<0.0005	<0.0005				
5/24/2016			0.00278 (J)			
7/12/2016	0.0005 (J)	<0.0005	0.0032			
9/1/2016	0.0005 (J)	<0.0005	0.0034			
10/24/2016	0.0005 (J)					
10/25/2016		<0.0005	0.0034			
12/7/2016	0.0006 (J)	<0.0005				
12/8/2016			0.0033			
1/26/2017	0.0005 (J)	<0.0005	0.0034			
3/22/2017		<0.0005				
3/23/2017	0.0006 (J)		0.0036			
5/24/2017	0.0005 (J)					
5/25/2017		<0.0005	0.0036			
4/3/2018		<0.0005	<0.0005			
4/4/2018	<0.0005					
3/14/2019	0.00043 (J)		0.0026 (J)			
3/15/2019		<0.0005		<0.0005		
4/5/2019	0.00027 (J)	<0.0005	0.0022 (J)	<0.0005		
9/24/2019	0.00044 (J)					
9/25/2019		<0.0005	0.0031			
9/27/2019				<0.0005		
3/2/2020				<0.0005		
3/3/2020	0.00043 (J)	<0.0005	0.0029 (J)			
3/27/2020				<0.0005		
3/30/2020	0.00043 (J)					
3/31/2020		<0.0005	0.003			
4/1/2020				0.0011 (J)		
6/17/2020				0.00099 (J)		
6/18/2020						0.00032 (J)
9/15/2020			0.0033			
9/16/2020		<0.0005				
9/17/2020				4.7E-05 (J)		
9/18/2020	0.00043 (J)					
9/21/2020				0.0009 (J)		0.0004 (J)
2/11/2021	0.00044 (J)	6.7E-05 (J)	0.0036			
2/12/2021					0.001 (J)	
2/15/2021				6.2E-05 (J)		0.0006 (J)
3/17/2021	0.00058			8.2E-05 (J)		
3/18/2021		4.8E-05 (J)	0.0038		0.0011	
3/19/2021						0.00061
8/18/2021	0.00039 (J)	<0.0005			0.00097	0.00061
8/19/2021			0.0034	7E-05 (J)		
Mean	0.0004744	0.0004508	0.00306	0.0003068	0.00101	0.000508
Std. Dev.	7.913E-05	0.0001431	0.0007528	0.0002293	7.797E-05	0.0001381
Upper Lim.	0.0005223	0.0005	0.00345	0.0005	0.001117	0.00061
Lower Lim.	0.0004266	6.7E-05	0.002894	4.7E-05	0.0009029	0.00032

# Confidence Interval

Constituent: Beryllium (mg/L) Analysis Run 11/2/2021 10:24 AM View: Appendix IV  
Plant Hammond Client: Southern Company Data: Hammond AP-2

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	MW-37D
6/18/2020	0.00012 (J)
9/23/2020	<0.0005
2/11/2021	<0.0005
3/12/2021	<0.0005
8/18/2021	<0.0005
Mean	0.000424
Std. Dev.	0.0001699
Upper Lim.	0.0005
Lower Lim.	0.00012

# Confidence Interval

Constituent: Cadmium (mg/L) Analysis Run 11/2/2021 10:24 AM View: Appendix IV

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWC-14	HGWC-15	HGWC-17	HGWC-18	MW-22	MW-23D
5/23/2016	0.000139 (J)	0.00271 (J)	<0.0005			
5/24/2016				<0.0005		
7/12/2016	<0.0005	0.0019	<0.0005	0.0022		
9/1/2016	0.0001 (J)	0.0017	<0.0005	0.0024		
10/24/2016	0.0002 (J)	0.0018				
10/25/2016			<0.0005	0.0022		
12/7/2016	0.0001 (J)	0.0018	<0.0005			
12/8/2016				0.0024		
1/26/2017	0.0001 (J)	0.0013	<0.0005	0.0025		
3/22/2017			7E-05 (J)			
3/23/2017	0.0002 (J)	0.002		0.0025		
5/24/2017	0.0001 (J)	0.0041				
5/25/2017			<0.0005	0.0027		
4/3/2018		0.0022	<0.0005	0.0022		
4/4/2018	<0.0005					
6/5/2018				0.0022		
6/6/2018	0.00012 (J)	0.0021	<0.0005			
10/3/2018	0.0001 (J)	0.0026	<0.0005	0.0027		
3/14/2019	<0.0005	0.0024		0.0019		<0.0005
3/15/2019			<0.0005		0.00082 (J)	
4/4/2019		0.0018				
4/5/2019	7.9E-05 (J)		<0.0005	0.0017	0.00064 (J)	<0.0005
9/24/2019	<0.0005	0.0014 (J)				
9/25/2019			<0.0005	0.0023 (J)		
9/26/2019						<0.0005
9/27/2019					0.0014 (J)	
3/2/2020					0.0021 (J)	<0.0005
3/3/2020	<0.0005	0.0015 (J)	<0.0005	0.0021 (J)		
3/26/2020		0.0016 (J)				
3/27/2020					0.0019 (J)	
3/30/2020	<0.0005					
3/31/2020			<0.0005	0.0017 (J)		
4/1/2020						<0.0005
9/15/2020				0.0019 (J)		
9/16/2020			<0.0005			
9/17/2020		0.0016 (J)			0.0021 (J)	0.0006 (J)
9/18/2020	<0.0005					
2/11/2021	<0.0005		<0.0005	0.0016 (J)		
2/12/2021		0.0014 (J)				0.00045 (J)
2/15/2021					0.002 (J)	
3/16/2021		0.0011				
3/17/2021	<0.0005				0.0022	0.00057
3/18/2021			<0.0005	0.0015		
8/18/2021	0.00013 (J)		<0.0005			
8/19/2021		0.0012		0.0014	0.0021	0.00012 (J)
Mean	0.0002934	0.001911	0.0004785	0.00203	0.001696	0.0004711
Std. Dev.	0.000194	0.0006795	9.615E-05	0.0005263	0.0005966	0.0001389
Upper Lim.	0.0005	0.002228	0.0005	0.002329	0.002144	0.0006
Lower Lim.	0.0001	0.001529	7E-05	0.001731	0.001488	0.00012

# Confidence Interval

Constituent: Cadmium (mg/L) Analysis Run 11/2/2021 10:24 AM View: Appendix IV  
Plant Hammond Client: Southern Company Data: Hammond AP-2

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	MW-33	MW-35
4/1/2020	0.00022 (J)	
6/17/2020	0.00021 (J)	
6/18/2020		0.00053 (J)
9/21/2020	0.00016 (J)	0.001 (J)
2/12/2021	0.00017 (J)	
2/15/2021		0.0017 (J)
3/18/2021	0.00019 (J)	
3/19/2021		0.0018
8/18/2021	0.00017 (J)	0.0015
Mean	0.0001867	0.001306
Std. Dev.	2.422E-05	0.0005321
Upper Lim.	0.0002199	0.002198
Lower Lim.	0.0001534	0.0004143

# Confidence Interval

Constituent: Chromium (mg/L) Analysis Run 11/2/2021 10:24 AM View: Appendix IV

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWC-14	HGWC-15	HGWC-16	HGWC-17	HGWC-18	MW-21D
5/23/2016	<0.005	<0.005	<0.005	<0.005		
5/24/2016					<0.005	
7/12/2016	<0.005	<0.005	<0.005	<0.005	<0.005	
9/1/2016	<0.005	<0.005	<0.005	<0.005	<0.005	
10/24/2016	<0.005	<0.005				
10/25/2016			<0.005	<0.005	<0.005	
12/7/2016	<0.005	<0.005	<0.005	<0.005		
12/8/2016					<0.005	
1/26/2017	<0.005	<0.005	<0.005	<0.005	<0.005	
3/22/2017			0.0021 (J)	<0.005		
3/23/2017	<0.005	0.0005 (J)			0.0005 (J)	
5/24/2017	<0.005	<0.005	<0.005			
5/25/2017				<0.005	<0.005	
4/3/2018		<0.005	<0.005	<0.005	<0.005	
4/4/2018	<0.005					
3/14/2019	<0.005	<0.005			<0.005	
3/15/2019			<0.005	<0.005		<0.005
4/4/2019		<0.005	<0.005			<0.005
4/5/2019	<0.005			<0.005	<0.005	
9/24/2019	<0.005	0.00041 (J)				
9/25/2019			<0.005	<0.005	<0.005	<0.005
3/3/2020	0.00042 (J)	<0.005	0.00071 (J)	0.0018 (J)	0.0004 (J)	<0.005
3/26/2020		<0.005				
3/30/2020	0.00066 (J)		0.0004 (J)			
3/31/2020				<0.005	<0.005	
4/1/2020						<0.005
6/17/2020						0.00057 (J)
9/15/2020					0.00063 (J)	
9/16/2020				<0.005		
9/17/2020		<0.005	<0.005			
9/18/2020	<0.005					
9/21/2020						<0.005
2/10/2021			<0.005			
2/11/2021	<0.005			0.00074 (J)	<0.005	<0.005
2/12/2021		<0.005				
3/16/2021		0.0012 (J)				
3/17/2021	<0.005		<0.005			
3/18/2021				0.00069 (J)	<0.005	0.00074 (J)
8/18/2021	<0.005			<0.005		
8/19/2021		<0.005	<0.005		<0.005	<0.005
Mean	0.004504	0.004284	0.004345	0.004346	0.004252	0.004131
Std. Dev.	0.001443	0.001654	0.001539	0.00152	0.001722	0.001832
Upper Lim.	0.005	0.005	0.005	0.005	0.005	0.005
Lower Lim.	0.00066	0.0012	0.0021	0.0018	0.00063	0.00074



# Confidence Interval

Constituent: Chromium (mg/L) Analysis Run 11/2/2021 10:24 AM View: Appendix IV  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

	MW-22	MW-23D	MW-33	MW-35	MW-37D
3/14/2019		<0.005			
3/15/2019	<0.005				
4/5/2019	<0.005	<0.005			
9/26/2019		<0.005			
9/27/2019	0.0004 (J)				
3/2/2020	<0.005	<0.005			
3/27/2020	<0.005				
4/1/2020		0.00086 (J)	0.00069 (J)		
6/17/2020			<0.005		
6/18/2020				<0.005	0.0048 (J)
9/17/2020	<0.005	<0.005			
9/21/2020			<0.005	0.00079 (J)	
9/23/2020					<0.005
2/11/2021					0.0014 (J)
2/12/2021		<0.005	<0.005		
2/15/2021	<0.005			<0.005	
3/12/2021					<0.005
3/17/2021	0.00075 (J)	0.00083 (J)			
3/18/2021			<0.005		
3/19/2021				0.00083 (J)	
8/18/2021			<0.005	<0.005	<0.005
8/19/2021	<0.005	<0.005			
Mean	0.004017	0.004077	0.004282	0.003324	0.00424
Std. Dev.	0.001953	0.001832	0.00176	0.002295	0.00159
Upper Lim.	0.005	0.005	0.005	0.005	0.005
Lower Lim.	0.0004	0.00083	0.00069	0.00079	0.0014

# Confidence Interval

Constituent: Cobalt (mg/L) Analysis Run 11/2/2021 10:24 AM View: Appendix IV  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWC-14	HGWC-15	HGWC-16	HGWC-17	HGWC-18	MW-21D
5/23/2016	<0.005	0.0419 (J)	<0.005	0.0167		
5/24/2016					0.17 (J)	
7/12/2016	0.0232	0.0393	<0.005	0.0148	0.168	
9/1/2016	0.0248	0.045	<0.005	0.0151	0.18	
10/24/2016	0.0253	0.0557				
10/25/2016			<0.005	0.0141	0.188	
12/7/2016	0.0269	0.0536	<0.005	0.0141		
12/8/2016					0.206	
1/26/2017	0.0294	0.055	<0.005	0.0154	0.195	
3/22/2017			<0.005	0.0169		
3/23/2017	0.0311	0.0715			0.223	
5/24/2017	0.0279	0.0446	<0.005			
5/25/2017				0.0154	0.209	
4/3/2018		0.032	<0.005	0.016	0.19	
4/4/2018	0.025					
6/5/2018					0.19	
6/6/2018	0.027	0.032	<0.005	0.018		
10/3/2018	0.023	0.051	<0.005	0.016	0.19	
3/14/2019	0.025	0.038			0.16	
3/15/2019			<0.005	0.017		<0.005
4/4/2019		0.035	0.00028 (J)			0.00034 (J)
4/5/2019	0.021			0.016	0.14	
9/24/2019	0.026	0.022				
9/25/2019			<0.005	0.015	0.18	<0.005
3/3/2020	0.029	0.03	0.00037 (J)	0.016	0.15	<0.005
3/26/2020		0.022				
3/30/2020	0.028		<0.005			
3/31/2020				0.016	0.16	
4/1/2020						<0.005
6/17/2020						<0.005
9/15/2020					0.16	
9/16/2020				0.013		
9/17/2020		0.026	<0.005			
9/18/2020	0.027					
9/21/2020						<0.005
2/10/2021			<0.005			
2/11/2021	0.033			0.012	0.14	<0.005
2/12/2021		0.019				
3/16/2021		0.018				
3/17/2021	0.034		<0.005			
3/18/2021				0.012	0.14	<0.005
8/18/2021	0.033			0.009		
8/19/2021		0.011	<0.005		0.15	<0.005
Mean	0.02623	0.03713	0.004532	0.01493	0.1745	0.004534
Std. Dev.	0.00609	0.01543	0.001439	0.002107	0.02448	0.001474
Upper Lim.	0.02946	0.04589	0.005	0.01612	0.1883	0.005
Lower Lim.	0.02405	0.02837	0.00037	0.01373	0.1606	0.005

# Confidence Interval

Constituent: Cobalt (mg/L) Analysis Run 11/2/2021 10:24 AM View: Appendix IV  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

	MW-22	MW-23D	MW-33	MW-35	MW-37D
3/14/2019		0.0013 (J)			
3/15/2019	0.028				
4/5/2019	0.022	0.0012 (J)			
9/26/2019		0.00098 (J)			
9/27/2019	0.035				
1/22/2020			0.052		
3/2/2020	0.043	0.0011 (J)			
3/27/2020	0.025				
4/1/2020		0.0011 (J)	0.058		
6/17/2020			0.053		
6/18/2020				0.091	0.0015 (J)
9/17/2020	0.029	0.00096 (J)			
9/21/2020			0.047	0.084	
9/23/2020					<0.005
2/11/2021					0.00048 (J)
2/12/2021		0.001 (J)	0.055		
2/15/2021	0.038			0.095	
3/12/2021					<0.005
3/17/2021	0.039	0.0011 (J)			
3/18/2021			0.057		
3/19/2021				0.1	
8/18/2021			0.054	0.085	<0.005
8/19/2021	0.022	0.00089 (J)			
Mean	0.03122	0.00107	0.05371	0.091	0.003396
Std. Dev.	0.007775	0.0001275	0.003638	0.006745	0.002226
Upper Lim.	0.03873	0.001193	0.05804	0.1023	0.005
Lower Lim.	0.02372	0.0009469	0.04939	0.0797	0.00048

# Confidence Interval

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 11/2/2021 10:24 AM View: Appendix IV

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWC-14	HGWC-15	HGWC-16	HGWC-17	HGWC-18	MW-21D
5/23/2016	0.568 (U)	0.171 (U)		0.618 (U)		
5/24/2016					1.82	
7/1/2016			0 (U)			
7/12/2016	1.31	0.611 (U)	0.182 (U)	0.867	1.76	
9/1/2016	1.64	0.766 (U)	1.23	0.857 (U)	1.51	
10/24/2016	1.88	0.969				
10/25/2016			1.05 (U)	1.11 (U)	2.69	
12/7/2016	1.35	0.302 (U)	1.11 (U)	0.964 (U)		
12/8/2016					2.21	
1/26/2017	2.1	0.626 (U)	1.29 (U)	0.612 (U)	2.26	
3/22/2017			0.453 (U)	0.437 (U)		
3/23/2017	1.17	0.662 (U)			1.81	
5/24/2017	1 (U)	0.202 (U)	1.05 (U)			
5/25/2017				1.21 (U)	1.63	
4/3/2018		0.384 (U)	0.783 (U)	0.409 (U)	2.53	
4/4/2018	1.72					
6/5/2018					1.91	
6/6/2018	1.31 (U)	1.32 (U)	0.595 (U)	0.772 (U)		
10/3/2018	1.48	0.858 (U)	1.03 (U)	1.08 (U)	2.22	
3/14/2019	1.5	0.462 (U)			1.37 (U)	
3/15/2019			0.591 (U)	0.917 (U)		0.972 (U)
4/4/2019		0.512 (U)	0.96 (U)			0.791 (U)
4/5/2019	1.43 (U)			1.07 (U)	2.22	
9/24/2019	1.17	0.582 (U)				
9/25/2019			0.643 (U)	1.54	2.77	0.751 (U)
3/3/2020	1.84	1.43	1.32 (U)	1.33	2.35	1.94
3/26/2020		0.855 (U)				
3/30/2020	1.08 (U)		0.288 (U)			
3/31/2020				0.591 (U)	2.7	
4/1/2020						0.758 (U)
6/17/2020						0.691 (U)
9/15/2020					1.65	
9/16/2020				0.295 (U)		
9/17/2020		0.395 (U)	1.1 (U)			
9/18/2020	1.8 (U)					
9/21/2020						0.436 (U)
2/10/2021			0.773 (U)			
2/11/2021	0.73 (U)			0.831 (U)	1.11	0.317 (U)
2/12/2021		1.65				
3/16/2021		0.801 (U)				
3/17/2021	1.84		0.228 (U)			
3/18/2021				0.856 (U)	1.63	0.5 (U)
8/18/2021	0.858 (U)			0.548 (U)		
8/19/2021		0.527 (U)	0.668 (U)		1.45	1.17
Mean	1.389	0.7043	0.7672	0.8457	1.98	0.8326
Std. Dev.	0.4145	0.3964	0.3923	0.3221	0.4826	0.4628
Upper Lim.	1.624	0.9293	0.99	1.029	2.254	1.245
Lower Lim.	1.153	0.4792	0.5444	0.6628	1.706	0.4197

# Confidence Interval

Constituent: Combined Radium 226 + 228 (pCi/L)    Analysis Run 11/2/2021 10:24 AM    View: Appendix IV  
 Plant Hammond    Client: Southern Company    Data: Hammond AP-2

	MW-22	MW-23D	MW-33	MW-35	MW-37D
3/14/2019		0.872 (U)			
3/15/2019	0.977				
4/5/2019	1.06 (U)	0.932 (U)			
9/26/2019		1.25			
9/27/2019	1.44 (U)				
3/2/2020	0.872 (U)	0.964 (U)			
3/27/2020	0.96 (U)				
4/1/2020		0.914 (U)	2.57		
6/17/2020			1.43 (U)		
6/18/2020				2.02	1.79
9/17/2020	0.0879 (U)	0.32 (U)			
9/21/2020			2.53	3.85	
9/23/2020					0.98 (U)
2/11/2021					0.12 (U)
2/12/2021		1.21 (U)	2.26		
2/15/2021	0.215 (U)			1.52	
3/12/2021					0.578 (U)
3/17/2021	0.981 (U)	0.579 (U)			
3/18/2021			0.733 (U)		
3/19/2021				0.524 (U)	
8/18/2021			1.77	1.67	1.31
8/19/2021	0.689 (U)	0.69 (U)			
Mean	0.8091	0.859	1.882	1.917	0.9556
Std. Dev.	0.4232	0.2943	0.7174	1.215	0.6448
Upper Lim.	1.218	1.143	2.868	3.953	2.036
Lower Lim.	0.4005	0.5748	0.8967	-0.1194	-0.1249

# Confidence Interval

Constituent: Fluoride (mg/L) Analysis Run 11/2/2021 10:24 AM View: Appendix IV  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWC-14	HGWC-15	HGWC-16	HGWC-17	HGWC-18	MW-21D
5/23/2016	<0.1	<0.1	0.038 (J)	<0.1		
5/24/2016					<0.1	
7/12/2016	0.2 (J)	0.09 (J)	0.26 (J)	0.09 (J)	0.54	
9/1/2016	0.08 (J)	0.22 (J)	0.42	0.03 (J)	0.49	
10/24/2016	0.04 (J)	0.07 (J)				
10/25/2016			0.25 (J)	0.07 (J)	0.58	
12/7/2016	0.11 (J)	0.23 (J)	0.23 (J)	0.54		
12/8/2016					0.63	
1/26/2017	0.13 (J)	<0.1	0.02 (J)	<0.1	0.71	
3/22/2017			0.3	0.07 (J)		
3/23/2017	0.28 (J)	0.12 (J)			0.57	
5/24/2017	0.32	0.31	0.46			
5/25/2017				0.42	0.54	
10/4/2017	0.52	0.6	<0.1	0.93	0.95	
4/3/2018		<0.1	<0.1	<0.1	0.33	
4/4/2018	<0.1					
6/5/2018					0.66	
6/6/2018	0.25 (J)	0.17 (J)	<0.1	0.23 (J)		
10/3/2018	0.21 (J)	<0.1	<0.1	<0.1	0.32	
3/14/2019	0.24 (J)	<0.1			0.88	
3/15/2019			<0.1	<0.1		<0.1
4/4/2019		0.066 (J)	<0.1			0.1 (J)
4/5/2019	0.66			0.16 (J)	0.37	
9/24/2019	0.053 (J)	0.12 (J)				
9/25/2019			<0.1	0.081 (J)	0.73	<0.1
3/3/2020	<0.1	0.064 (J)	<0.1	<0.1	0.34	<0.1
3/26/2020		<0.1				
3/30/2020	0.092 (J)		0.059 (J)			
3/31/2020				<0.1	0.45	
4/1/2020						<0.1
6/17/2020						<0.1
9/15/2020					0.31	
9/16/2020				0.058 (J)		
9/17/2020		<0.1	<0.1			
9/18/2020	<0.1					
9/21/2020						<0.1
2/10/2021			0.21			
2/11/2021	0.059 (J)			0.058 (J)	0.71	<0.1
2/12/2021		0.053 (J)				
3/16/2021		<0.1				
3/17/2021	0.076 (J)		<0.1			
3/18/2021				0.057 (J)	0.64	<0.1
8/18/2021	<0.1			0.062 (J)		
8/19/2021		<0.1	<0.1		0.31	<0.1
Mean	0.1819	0.1435	0.1594	0.1693	0.5314	0.1
Std. Dev.	0.1587	0.1219	0.1198	0.2143	0.2101	4.7E-10
Upper Lim.	0.2249	0.17	0.25	0.16	0.6473	0.1
Lower Lim.	0.08438	0.09	0.059	0.062	0.4156	0.1

# Confidence Interval

Constituent: Fluoride (mg/L) Analysis Run 11/2/2021 10:24 AM View: Appendix IV

Plant Hammond Client: Southern Company Data: Hammond AP-2

	MW-22	MW-23D	MW-33	MW-35	MW-37D
3/14/2019		<0.1			
3/15/2019	<0.1				
4/5/2019	0.13 (J)	0.14 (J)			
9/26/2019		0.16 (J)			
9/27/2019	0.28 (J)				
1/22/2020			0.18 (J)		
3/2/2020	<0.1	<0.1			
3/27/2020	<0.1				
4/1/2020		<0.1	0.15 (J)		
6/17/2020			0.25		
6/18/2020				0.053 (J)	0.1
9/17/2020	<0.1	<0.1			
9/21/2020			0.14	<0.1	
9/23/2020					0.065 (J)
2/11/2021					0.077 (J)
2/12/2021		<0.1	0.25		
2/15/2021	<0.1			0.093 (J)	
3/12/2021					0.061 (J)
3/17/2021	<0.1	<0.1			
3/18/2021			0.4		
3/19/2021				0.082 (J)	
8/18/2021			0.16	0.052 (J)	0.05 (J)
8/19/2021	<0.1	<0.1			
Mean	0.1233	0.1111	0.2186	0.076	0.0706
Std. Dev.	0.05958	0.02261	0.09191	0.02239	0.01906
Upper Lim.	0.28	0.16	0.3234	0.1	0.1025
Lower Lim.	0.1	0.1	0.1231	0.03995	0.03866

# Confidence Interval

Constituent: Lead (mg/L) Analysis Run 11/2/2021 10:24 AM View: Appendix IV

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWC-14	HGWC-15	HGWC-16	HGWC-17	HGWC-18	MW-21D
5/23/2016	0.00182 (J)	<0.001	<0.001	<0.001		
5/24/2016					0.00154 (J)	
7/12/2016	0.0015 (J)	<0.001	<0.001	<0.001	0.0012 (J)	
9/1/2016	0.0016 (J)	<0.001	<0.001	<0.001	0.0014 (J)	
10/24/2016	0.0016 (J)	<0.001				
10/25/2016			<0.001	<0.001	0.0015 (J)	
12/7/2016	0.0018 (J)	<0.001	<0.001	<0.001		
12/8/2016					0.0017 (J)	
1/26/2017	0.002 (J)	<0.001	0.0001 (J)	<0.001	0.0013 (J)	
3/22/2017			0.0002 (J)	0.0001 (J)		
3/23/2017	0.0019 (J)	0.001 (J)			0.001 (J)	
5/24/2017	0.0016 (J)	0.0001 (J)	0.0001 (J)			
5/25/2017				<0.001	0.0012 (J)	
4/3/2018		<0.001	<0.001	<0.001	<0.001	
4/4/2018	<0.001					
3/14/2019	0.0014 (J)	<0.001			0.0015 (J)	
3/15/2019			<0.001	<0.001		<0.001
4/4/2019		7.2E-05 (J)	0.00016 (J)			<0.001
4/5/2019	0.0012 (J)			7.6E-05 (J)	0.0015 (J)	
9/24/2019	0.0013 (J)	0.0002 (J)				
9/25/2019			<0.001	8.9E-05 (J)	0.0015 (J)	<0.001
3/3/2020	0.0017 (J)	5.3E-05 (J)	0.00016 (J)	0.00013 (J)	0.0013 (J)	4.7E-05 (J)
3/26/2020		<0.001				
3/30/2020	0.0015 (J)		7.3E-05 (J)			
3/31/2020				7.7E-05 (J)	0.0014 (J)	
4/1/2020						4.8E-05 (J)
6/17/2020						<0.001
9/15/2020					0.0014 (J)	
9/16/2020				6.5E-05 (J)		
9/17/2020		<0.001	7.8E-05 (J)			
9/18/2020	0.0012 (J)					
9/21/2020						<0.001
2/10/2021			9.4E-05 (J)			
2/11/2021	0.0015 (J)			0.00018 (J)	0.00098 (J)	0.00066 (J)
2/12/2021		<0.001				
3/16/2021		<0.001				
3/17/2021	0.0019		5.8E-05 (J)			
3/18/2021				8.8E-05 (J)	0.00096 (J)	7.3E-05 (J)
8/18/2021	0.0015			<0.001		
8/19/2021		<0.001	<0.001		0.0013	<0.001
Mean	0.001557	0.0008014	0.0005568	0.0006003	0.001316	0.0006828
Std. Dev.	0.0002717	0.0003833	0.0004572	0.0004605	0.0002198	0.0004451
Upper Lim.	0.001721	0.001	0.001	0.001	0.001449	0.001
Lower Lim.	0.001392	0.0002	9.4E-05	8.8E-05	0.001183	4.8E-05



# Confidence Interval

Constituent: Lead (mg/L) Analysis Run 11/2/2021 10:24 AM View: Appendix IV

Plant Hammond Client: Southern Company Data: Hammond AP-2

	MW-22	MW-23D	MW-33	MW-35	MW-37D
3/14/2019		<0.001			
3/15/2019	<0.001				
4/5/2019	<0.001	<0.001			
9/26/2019		<0.001			
9/27/2019	0.0001 (J)				
3/2/2020	9.4E-05 (J)	5.1E-05 (J)			
3/27/2020	<0.001				
4/1/2020		<0.001	0.0017 (J)		
6/17/2020			0.0017 (J)		
6/18/2020				0.00016 (J)	0.0017 (J)
9/17/2020	<0.001	0.00016 (J)			
9/21/2020			0.0017 (J)	0.00099 (J)	
9/23/2020					8.2E-05 (J)
2/11/2021					0.00039 (J)
2/12/2021		<0.001	0.0018 (J)		
2/15/2021	3.6E-05 (J)			0.00055 (J)	
3/12/2021					<0.001
3/17/2021	<0.001	<0.001			
3/18/2021			0.0017		
3/19/2021				0.00066 (J)	
8/18/2021			0.0016	<0.001	<0.001
8/19/2021	<0.001	<0.001			
Mean	0.0006922	0.0008012	0.0017	0.000672	0.0008344
Std. Dev.	0.000462	0.0003954	6.325E-05	0.0003485	0.000626
Upper Lim.	0.001	0.001	0.001787	0.001087	0.001537
Lower Lim.	3.6E-05	5.1E-05	0.001613	9.334E-05	-0.0004793

# Confidence Interval

Constituent: Lithium (mg/L) Analysis Run 11/2/2021 10:24 AM View: Appendix IV

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWC-15	HGWC-16	HGWC-17	HGWC-18	MW-21D	MW-22
5/23/2016	<0.05	<0.05	<0.05			
5/24/2016				0.0142 (J)		
7/12/2016	<0.05	0.0037 (J)	<0.05	0.0141 (J)		
9/1/2016	0.0021 (J)	0.0033 (J)	<0.05	0.0158 (J)		
10/24/2016	<0.05					
10/25/2016		0.0029 (J)	<0.05	0.016 (J)		
12/7/2016	<0.05	0.0029 (J)	<0.05			
12/8/2016				0.0144 (J)		
1/26/2017	<0.05	0.0028 (J)	<0.05	0.0136 (J)		
3/22/2017		0.0025 (J)	<0.05			
3/23/2017	0.0016 (J)			0.0151 (J)		
5/24/2017	0.0029 (J)	0.0029 (J)				
5/25/2017			0.0011 (J)	0.0154 (J)		
4/3/2018	0.0026 (J)	0.0028 (J)	<0.05	0.013 (J)		
6/5/2018				0.013 (J)		
6/6/2018	0.0013 (J)	0.0031 (J)	<0.05			
10/3/2018	0.0017 (J)	0.0026 (J)	<0.05	0.015 (J)		
3/14/2019	<0.05			0.011 (J)		
3/15/2019		0.0041 (J)	0.0011 (J)		0.025 (J)	0.002 (J)
4/4/2019	0.0009 (J)	0.0032 (J)			0.019 (J)	
4/5/2019			0.00074 (J)	0.0084 (J)		0.0013 (J)
9/24/2019	0.0012 (J)					
9/25/2019		0.0038 (J)	0.0011 (J)	0.015 (J)	0.024 (J)	
9/27/2019						0.0013 (J)
3/2/2020						0.0015 (J)
3/3/2020	0.0084 (J)	0.0047 (J)	0.0012 (J)	0.012 (J)	0.026 (J)	
3/26/2020	0.0061 (J)					
3/27/2020						0.0013 (J)
3/30/2020		0.0041 (J)				
3/31/2020			0.0009 (J)	0.012 (J)		
4/1/2020					0.026 (J)	
6/17/2020					0.023 (J)	
9/15/2020				0.014 (J)		
9/16/2020			0.0012 (J)			
9/17/2020	0.0094 (J)	0.0043 (J)				0.0011 (J)
9/21/2020					0.022 (J)	
2/10/2021		0.0038 (J)				
2/11/2021			0.0013 (J)	0.011 (J)	0.021 (J)	
2/12/2021	0.036					
2/15/2021						0.0011 (J)
3/16/2021	0.032					
3/17/2021		0.0048 (J)				0.0012 (J)
3/18/2021			0.0014 (J)	0.013 (J)	0.026 (J)	
8/18/2021			0.0012 (J)			
8/19/2021	0.0058 (J)	0.0042 (J)		0.013 (J)	0.022 (J)	0.0012 (J)
Mean	0.0131	0.004575	0.01306	0.01345	0.0234	0.001333
Std. Dev.	0.01235	0.004859	0.01225	0.001893	0.002413	0.0002784
Upper Lim.	0.007436	0.0042	0.025	0.01452	0.02555	0.002
Lower Lim.	0.002055	0.0029	0.0011	0.01238	0.02125	0.0011

# Confidence Interval

Constituent: Lithium (mg/L) Analysis Run 11/2/2021 10:24 AM View: Appendix IV  
Plant Hammond Client: Southern Company Data: Hammond AP-2

	MW-23D	MW-33	MW-35	MW-37D
3/14/2019	0.0028 (J)			
4/5/2019	0.0021 (J)			
9/26/2019	0.0023 (J)			
3/2/2020	0.0025 (J)			
4/1/2020	0.0024 (J)	0.0011 (J)		
6/17/2020		0.00097 (J)		
6/18/2020			0.0046 (J)	0.038 (J)
9/17/2020	0.0021 (J)			
9/21/2020		0.00086 (J)	0.0036 (J)	
9/23/2020				0.031
2/11/2021				0.034
2/12/2021	0.0023 (J)	0.0011 (J)		
2/15/2021			0.0043 (J)	
3/12/2021				0.035
3/17/2021	0.0024 (J)			
3/18/2021		0.0012 (J)		
3/19/2021			0.0045 (J)	
8/18/2021		0.00097 (J)	0.0036 (J)	0.03
8/19/2021	0.0022 (J)			
Mean	0.002344	0.001033	0.00412	0.0336
Std. Dev.	0.0002186	0.0001223	0.0004868	0.003209
Upper Lim.	0.002555	0.001201	0.004936	0.03898
Lower Lim.	0.002133	0.0008654	0.003304	0.02822

# Confidence Interval

Constituent: Molybdenum (mg/L) Analysis Run 11/2/2021 10:24 AM View: Appendix IV  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWC-15	MW-21D	MW-22	MW-23D	MW-37D
5/23/2016	<0.01				
7/12/2016	0.0007 (J)				
9/1/2016	<0.01				
10/24/2016	<0.01				
12/7/2016	<0.01				
1/26/2017	<0.01				
3/23/2017	<0.01				
5/24/2017	<0.01				
4/3/2018	<0.01				
3/14/2019	<0.01			<0.01	
3/15/2019		0.045	<0.01		
4/4/2019	<0.01	0.033			
4/5/2019			0.00013 (J)	0.0014 (J)	
9/24/2019	<0.01				
9/25/2019		0.038			
9/26/2019				0.0025 (J)	
9/27/2019			<0.01		
3/2/2020			<0.01	0.003 (J)	
3/3/2020	<0.01	0.025			
3/26/2020	<0.01				
3/27/2020			<0.01		
4/1/2020		0.024		0.0032 (J)	
6/17/2020		0.019			
6/18/2020					0.023
9/17/2020	<0.01		<0.01	0.0026 (J)	
9/21/2020		0.017			
9/23/2020					0.015
2/11/2021		0.016			0.019
2/12/2021	<0.01			0.0039 (J)	
2/15/2021			<0.01		
3/12/2021					0.014
3/16/2021	<0.01				
3/17/2021			<0.01	0.0034 (J)	
3/18/2021		0.016			
8/18/2021					0.0083 (J)
8/19/2021	<0.01	0.018	<0.01	0.0034 (J)	
Mean	0.009483	0.0251	0.008903	0.003711	0.01586
Std. Dev.	0.002192	0.01025	0.00329	0.002464	0.005527
Upper Lim.	0.01	0.03424	0.01	0.005336	0.02512
Lower Lim.	0.0007	0.01596	0.00013	0.001968	0.006598

# Confidence Interval

Constituent: Selenium (mg/L) Analysis Run 11/2/2021 10:24 AM View: Appendix IV

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWC-14	HGWC-15	HGWC-16	HGWC-17	HGWC-18	MW-22
5/23/2016	0.017	<0.005	<0.005	<0.005		
5/24/2016					<0.005	
7/12/2016	0.0146	<0.005	<0.005	<0.005	0.036	
9/1/2016	0.0137	<0.005	<0.005	0.0014 (J)	0.0347	
10/24/2016	0.0135	0.0012 (J)				
10/25/2016			<0.005	<0.005	0.0282	
12/7/2016	0.01 (J)	0.0041 (J)	<0.005	0.0023 (J)		
12/8/2016					0.0373	
1/26/2017	0.0214	<0.005	<0.005	<0.005	0.0385	
3/22/2017			<0.005	<0.005		
3/23/2017	0.0167	0.0016 (J)			0.0414	
5/24/2017	0.0083 (J)	<0.005	<0.005			
5/25/2017				<0.005	0.019	
4/3/2018		<0.005	<0.005	<0.005	0.029	
4/4/2018	0.012					
6/5/2018					0.038	
6/6/2018	0.014	<0.005	<0.005	<0.005		
10/3/2018	0.0056 (J)	<0.005	<0.005	<0.005	0.017	
3/14/2019	0.0048 (J)	<0.005			0.016	
3/15/2019			<0.005	<0.005		<0.005
4/4/2019		0.00021 (J)	8.9E-05 (J)			
4/5/2019	0.00091 (J)			9.3E-05 (J)	0.0018 (J)	<0.005
9/24/2019	0.0064 (J)	<0.005				
9/25/2019			<0.005	<0.005	0.02	
9/27/2019						<0.005
3/2/2020						<0.005
3/3/2020	0.0045 (J)	<0.005	<0.005	<0.005	0.014	
3/26/2020		<0.005				
3/27/2020						<0.005
3/30/2020	0.0049 (J)		<0.005			
3/31/2020				<0.005	0.019	
9/15/2020					0.059	
9/16/2020				<0.005		
9/17/2020		<0.005	<0.005			0.002 (J)
9/18/2020	0.0045 (J)					
2/10/2021			<0.005			
2/11/2021	0.0072 (J)			<0.005	0.023	
2/12/2021		<0.005				
2/15/2021						<0.005
3/16/2021		<0.005				
3/17/2021	0.01 (J)		<0.005			<0.005
3/18/2021				<0.005	0.019 (J)	
8/18/2021	0.0077			<0.005		
8/19/2021		<0.005	<0.005		0.01	<0.005
Mean	0.009886	0.004355	0.004754	0.00444	0.02529	0.004667
Std. Dev.	0.005307	0.001477	0.001098	0.001415	0.01402	0.001
Upper Lim.	0.0129	0.005	0.005	0.005	0.03325	0.005
Lower Lim.	0.006872	0.0041	8.9E-05	0.0023	0.01734	0.002

# Confidence Interval

Constituent: Selenium (mg/L) Analysis Run 11/2/2021 10:24 AM View: Appendix IV  
Plant Hammond Client: Southern Company Data: Hammond AP-2

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	MW-33	MW-35
4/1/2020	0.011	
6/17/2020	0.014	
6/18/2020		0.014
9/21/2020	0.041	0.037
2/12/2021	0.011	
2/15/2021		0.01
3/18/2021	0.028	
3/19/2021		0.016 (J)
8/18/2021	0.014	0.014
Mean	0.01983	0.0182
Std. Dev.	0.01216	0.01073
Upper Lim.	0.03659	0.03653
Lower Lim.	0.008223	0.005955

# Confidence Interval

Constituent: Thallium (mg/L)    Analysis Run 11/2/2021 10:24 AM    View: Appendix IV  
 Plant Hammond    Client: Southern Company    Data: Hammond AP-2

	HGWC-14	HGWC-17	HGWC-18	MW-33	MW-35
5/23/2016	0.000306 (J)	<0.001			
5/24/2016			<0.001		
7/12/2016	0.0003 (J)	0.0001 (J)	0.0002 (J)		
9/1/2016	0.0003 (J)	<0.001	<0.001		
10/24/2016	0.0004				
10/25/2016		<0.001	<0.001		
12/7/2016	0.0003 (J)	<0.001			
12/8/2016			<0.001		
1/26/2017	0.0003 (J)	<0.001	<0.001		
3/22/2017		0.0001 (J)			
3/23/2017	0.0003 (J)		0.0002 (J)		
5/24/2017	0.0003 (J)				
5/25/2017		0.0001 (J)	0.0002 (J)		
4/3/2018		<0.001	0.00014 (J)		
4/4/2018	0.00028 (J)				
6/5/2018			0.00016 (J)		
6/6/2018	0.00029 (J)	<0.001			
10/3/2018	0.00029 (J)	<0.001	<0.001		
3/14/2019	0.00028 (J)		<0.001		
3/15/2019		<0.001			
4/5/2019	0.00028 (J)	0.00013 (J)	0.00014 (J)		
9/24/2019	0.0003 (J)				
9/25/2019		0.00012 (J)	0.00019 (J)		
3/3/2020	0.00026 (J)	0.00011 (J)	0.00013 (J)		
3/30/2020	0.00028 (J)				
3/31/2020		0.00014 (J)	0.00015 (J)		
4/1/2020				0.00029 (J)	
6/17/2020				0.00028 (J)	
6/18/2020					0.00013 (J)
9/15/2020			0.00016 (J)		
9/16/2020		<0.001			
9/18/2020	0.00028 (J)				
9/21/2020				0.00029 (J)	<0.001
2/11/2021	0.00026 (J)	<0.001	<0.001		
2/12/2021				0.00025 (J)	
2/15/2021					<0.001
3/17/2021	0.00034 (J)				
3/18/2021		<0.001	0.00016 (J)	0.00031 (J)	
3/19/2021					<0.001
8/18/2021	0.00027 (J)	<0.001		0.0004 (J)	<0.001
8/19/2021			0.0002 (J)		
Mean	0.0002958	0.00069	0.0005015	0.0003033	0.000826
Std. Dev.	3.042E-05	0.0004335	0.0004181	5.125E-05	0.0003891
Upper Lim.	0.000306	0.001	0.001	0.0003737	0.001
Lower Lim.	0.00028	0.00012	0.00015	0.0002329	0.00013

FIGURE J.



# Federal Confidence Intervals - Significant Results

Plant Hammond Client: Southern Company Data: Hammond AP-2 Printed 11/2/2021, 10:28 AM

<u>Constituent</u>	<u>Well</u>	<u>Upper Lim.</u>	<u>Lower Lim.</u>	<u>Compliance</u>	<u>Sig. N</u>	<u>Mean</u>	<u>Std. Dev.</u>	<u>%NDs</u>	<u>ND Adj.</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Cobalt (mg/L)	HGWC-18	0.1883	0.1606	0.038	Yes 20	0.1745	0.02448	0	None	No	0.01	Param.
Cobalt (mg/L)	MW-33	0.05804	0.04939	0.038	Yes 7	0.05371	0.003638	0	None	No	0.01	Param.
Cobalt (mg/L)	MW-35	0.1023	0.0797	0.038	Yes 5	0.091	0.006745	0	None	No	0.01	Param.

# Federal Confidence Intervals - All Results

Plant Hammond    Client: Southern Company    Data: Hammond AP-2    Printed 11/2/2021, 10:28 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Antimony (mg/L)	HGWC-14	0.003	0.00043	0.006	No	14	0.002624	0.0009572	85.71	None	No	0.01	NP (NDs)
Antimony (mg/L)	HGWC-18	0.003	0.0008	0.006	No	14	0.002843	0.000588	92.86	None	No	0.01	NP (NDs)
Antimony (mg/L)	MW-22	0.003	0.0016	0.006	No	5	0.00272	0.0006261	80	None	No	0.031	NP (NDs)
Arsenic (mg/L)	HGWC-14	0.005777	0.004011	0.01	No	20	0.004894	0.001554	15	None	No	0.01	Param.
Arsenic (mg/L)	HGWC-15	0.005	0.0008	0.01	No	20	0.004317	0.001671	85	None	No	0.01	NP (NDs)
Arsenic (mg/L)	HGWC-16	0.005	0.0012	0.01	No	20	0.004145	0.001766	80	None	No	0.01	NP (NDs)
Arsenic (mg/L)	HGWC-17	0.005	0.0012	0.01	No	20	0.003968	0.001836	75	None	No	0.01	NP (NDs)
Arsenic (mg/L)	HGWC-18	0.006947	0.004817	0.01	No	20	0.005882	0.001875	0	None	No	0.01	Param.
Arsenic (mg/L)	MW-21D	0.005	0.001	0.01	No	10	0.003749	0.002032	70	None	No	0.011	NP (NDs)
Arsenic (mg/L)	MW-22	0.005	0.00045	0.01	No	9	0.004494	0.001517	88.89	None	No	0.002	NP (NDs)
Arsenic (mg/L)	MW-23D	0.005	0.00082	0.01	No	9	0.004091	0.001804	77.78	None	No	0.002	NP (NDs)
Arsenic (mg/L)	MW-33	0.008048	0.003485	0.01	No	6	0.005767	0.001661	0	None	No	0.01	Param.
Arsenic (mg/L)	MW-35	0.005818	0.003702	0.01	No	5	0.00504	0.0005683	20	Kaplan-Meier	No	0.01	Param.
Arsenic (mg/L)	MW-37D	0.00278	0.0007865	0.01	No	5	0.00307	0.001836	40	Kaplan-Meier	No	0.01	Param.
Barium (mg/L)	HGWC-14	0.0228	0.019	2	No	20	0.02465	0.01786	5	None	No	0.01	NP (normality)
Barium (mg/L)	HGWC-15	0.02813	0.01874	2	No	20	0.02344	0.008265	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-16	0.1124	0.1002	2	No	20	0.1063	0.01075	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-17	0.02619	0.02345	2	No	20	0.02482	0.002408	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-18	0.0336	0.029	2	No	20	0.03391	0.01588	5	None	No	0.01	NP (normality)
Barium (mg/L)	MW-21D	0.07273	0.04547	2	No	10	0.0591	0.01527	0	None	No	0.01	Param.
Barium (mg/L)	MW-22	0.03476	0.01702	2	No	9	0.02589	0.009185	0	None	No	0.01	Param.
Barium (mg/L)	MW-23D	0.07005	0.05283	2	No	9	0.06144	0.008918	0	None	No	0.01	Param.
Barium (mg/L)	MW-33	0.02837	0.02297	2	No	6	0.02567	0.001966	0	None	No	0.01	Param.
Barium (mg/L)	MW-35	0.03259	0.02341	2	No	5	0.028	0.002739	0	None	No	0.01	Param.
Barium (mg/L)	MW-37D	0.1907	0.0987	2	No	5	0.142	0.02864	0	None	sqrt(x)	0.01	Param.
Beryllium (mg/L)	HGWC-14	0.0005223	0.0004266	0.004	No	18	0.0004744	0.00007913	11.11	None	No	0.01	Param.
Beryllium (mg/L)	HGWC-17	0.0005	0.000067	0.004	No	18	0.0004508	0.0001431	88.89	None	No	0.01	NP (NDs)
Beryllium (mg/L)	HGWC-18	0.00345	0.002894	0.004	No	18	0.00306	0.0007528	5.556	None	x^3	0.01	Param.
Beryllium (mg/L)	MW-22	0.0005	0.000047	0.004	No	9	0.0003068	0.0002293	55.56	None	No	0.002	NP (NDs)
Beryllium (mg/L)	MW-33	0.001117	0.0009029	0.004	No	6	0.00101	0.00007797	0	None	No	0.01	Param.
Beryllium (mg/L)	MW-35	0.00061	0.00032	0.004	No	5	0.000508	0.0001381	0	None	No	0.031	NP (normality)
Beryllium (mg/L)	MW-37D	0.0005	0.00012	0.004	No	5	0.000424	0.0001699	80	None	No	0.031	NP (NDs)
Cadmium (mg/L)	HGWC-14	0.0005	0.0001	0.005	No	20	0.0002934	0.000194	45	None	No	0.01	NP (normality)
Cadmium (mg/L)	HGWC-15	0.002228	0.001529	0.005	No	20	0.001911	0.0006795	0	None	sqrt(x)	0.01	Param.
Cadmium (mg/L)	HGWC-17	0.0005	0.00007	0.005	No	20	0.0004785	0.00009615	95	None	No	0.01	NP (NDs)
Cadmium (mg/L)	HGWC-18	0.002329	0.001731	0.005	No	20	0.00203	0.0005263	5	None	No	0.01	Param.
Cadmium (mg/L)	MW-22	0.002144	0.001488	0.005	No	9	0.001696	0.0005966	0	None	x^5	0.01	Param.
Cadmium (mg/L)	MW-23D	0.0006	0.00012	0.005	No	9	0.0004711	0.0001389	55.56	None	No	0.002	NP (NDs)
Cadmium (mg/L)	MW-33	0.0002199	0.0001534	0.005	No	6	0.0001867	0.00002422	0	None	No	0.01	Param.
Cadmium (mg/L)	MW-35	0.002198	0.0004143	0.005	No	5	0.001306	0.0005321	0	None	No	0.01	Param.
Chromium (mg/L)	HGWC-14	0.005	0.00066	0.1	No	18	0.004504	0.001443	88.89	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-15	0.005	0.0012	0.1	No	18	0.004284	0.001654	83.33	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-16	0.005	0.0021	0.1	No	18	0.004345	0.001539	83.33	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-17	0.005	0.0018	0.1	No	18	0.004346	0.00152	83.33	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-18	0.005	0.00063	0.1	No	18	0.004252	0.001722	83.33	None	No	0.01	NP (NDs)
Chromium (mg/L)	MW-21D	0.005	0.00074	0.1	No	10	0.004131	0.001832	80	None	No	0.011	NP (NDs)
Chromium (mg/L)	MW-22	0.005	0.0004	0.1	No	9	0.004017	0.001953	77.78	None	No	0.002	NP (NDs)
Chromium (mg/L)	MW-23D	0.005	0.00083	0.1	No	9	0.004077	0.001832	77.78	None	No	0.002	NP (NDs)
Chromium (mg/L)	MW-33	0.005	0.00069	0.1	No	6	0.004282	0.00176	83.33	None	No	0.0155	NP (NDs)
Chromium (mg/L)	MW-35	0.005	0.00079	0.1	No	5	0.003324	0.002295	60	None	No	0.031	NP (NDs)
Chromium (mg/L)	MW-37D	0.005	0.0014	0.1	No	5	0.00424	0.00159	60	None	No	0.031	NP (NDs)
Cobalt (mg/L)	HGWC-14	0.02946	0.02405	0.038	No	20	0.02623	0.00609	5	None	x^2	0.01	Param.
Cobalt (mg/L)	HGWC-15	0.04589	0.02837	0.038	No	20	0.03713	0.01543	0	None	No	0.01	Param.
Cobalt (mg/L)	HGWC-16	0.005	0.00037	0.038	No	20	0.004532	0.001439	90	None	No	0.01	NP (NDs)
Cobalt (mg/L)	HGWC-17	0.01612	0.01373	0.038	No	20	0.01493	0.002107	0	None	No	0.01	Param.
<b>Cobalt (mg/L)</b>	<b>HGWC-18</b>	<b>0.1883</b>	<b>0.1606</b>	<b>0.038</b>	<b>Yes</b>	<b>20</b>	<b>0.1745</b>	<b>0.02448</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.01</b>	<b>Param.</b>
Cobalt (mg/L)	MW-21D	0.005	0.005	0.038	No	10	0.004534	0.001474	90	None	No	0.011	NP (NDs)
Cobalt (mg/L)	MW-22	0.03873	0.02372	0.038	No	9	0.03122	0.007775	0	None	No	0.01	Param.
Cobalt (mg/L)	MW-23D	0.001193	0.0009469	0.038	No	9	0.00107	0.0001275	0	None	No	0.01	Param.
<b>Cobalt (mg/L)</b>	<b>MW-33</b>	<b>0.05804</b>	<b>0.04939</b>	<b>0.038</b>	<b>Yes</b>	<b>7</b>	<b>0.05371</b>	<b>0.003638</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.01</b>	<b>Param.</b>
<b>Cobalt (mg/L)</b>	<b>MW-35</b>	<b>0.1023</b>	<b>0.0797</b>	<b>0.038</b>	<b>Yes</b>	<b>5</b>	<b>0.091</b>	<b>0.006745</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.01</b>	<b>Param.</b>
Cobalt (mg/L)	MW-37D	0.005	0.00048	0.038	No	5	0.003396	0.002226	60	None	No	0.031	NP (NDs)

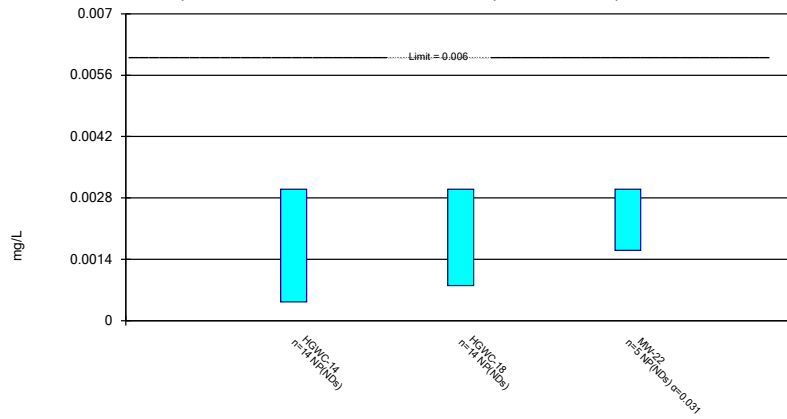
# Federal Confidence Intervals - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-2 Printed 11/2/2021, 10:28 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Combined Radium 226 + 228 (pCi/L)	HGWC-14	1.624	1.153	5	No	20	1.389	0.4145	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-15	0.9293	0.4792	5	No	20	0.7043	0.3964	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-16	0.99	0.5444	5	No	20	0.7672	0.3923	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-17	1.029	0.6628	5	No	20	0.8457	0.3221	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-18	2.254	1.706	5	No	20	1.98	0.4826	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-21D	1.245	0.4197	5	No	10	0.8326	0.4628	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-22	1.218	0.4005	5	No	9	0.8091	0.4232	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-23D	1.143	0.5748	5	No	9	0.859	0.2943	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-33	2.868	0.8967	5	No	6	1.882	0.7174	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-35	3.953	-0.1194	5	No	5	1.917	1.215	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-37D	2.036	-0.1249	5	No	5	0.9556	0.6448	0	None	No	0.01	Param.
Fluoride (mg/L)	HGWC-14	0.2249	0.08438	4	No	21	0.1819	0.1587	23.81	Kaplan-Meier	sqrt(x)	0.01	Param.
Fluoride (mg/L)	HGWC-15	0.17	0.09	4	No	21	0.1435	0.1219	42.86	None	No	0.01	NP (normality)
Fluoride (mg/L)	HGWC-16	0.25	0.059	4	No	21	0.1594	0.1198	52.38	None	No	0.01	NP (NDs)
Fluoride (mg/L)	HGWC-17	0.16	0.062	4	No	21	0.1693	0.2143	33.33	None	No	0.01	NP (normality)
Fluoride (mg/L)	HGWC-18	0.6473	0.4156	4	No	21	0.5314	0.2101	4.762	None	No	0.01	Param.
Fluoride (mg/L)	MW-21D	0.1	0.1	4	No	10	0.1	4.7e-10	90	None	No	0.011	NP (NDs)
Fluoride (mg/L)	MW-22	0.28	0.1	4	No	9	0.1233	0.05958	77.78	None	No	0.002	NP (NDs)
Fluoride (mg/L)	MW-23D	0.16	0.1	4	No	9	0.1111	0.02261	77.78	None	No	0.002	NP (NDs)
Fluoride (mg/L)	MW-33	0.3234	0.1231	4	No	7	0.2186	0.09191	0	None	sqrt(x)	0.01	Param.
Fluoride (mg/L)	MW-35	0.1	0.03995	4	No	5	0.076	0.02239	20	Kaplan-Meier	No	0.01	Param.
Fluoride (mg/L)	MW-37D	0.1025	0.03866	4	No	5	0.0706	0.01906	0	None	No	0.01	Param.
Lead (mg/L)	HGWC-14	0.001721	0.001392	0.015	No	18	0.001557	0.0002717	5.556	None	No	0.01	Param.
Lead (mg/L)	HGWC-15	0.001	0.0002	0.015	No	18	0.0008014	0.0003833	72.22	None	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-16	0.001	0.000094	0.015	No	18	0.0005568	0.0004572	50	None	No	0.01	NP (normality)
Lead (mg/L)	HGWC-17	0.001	0.000088	0.015	No	18	0.0006003	0.0004605	55.56	None	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-18	0.001449	0.001183	0.015	No	18	0.001316	0.0002198	5.556	None	No	0.01	Param.
Lead (mg/L)	MW-21D	0.001	0.000048	0.015	No	10	0.0006828	0.0004451	60	None	No	0.011	NP (NDs)
Lead (mg/L)	MW-22	0.001	0.000036	0.015	No	9	0.0006922	0.000462	66.67	None	No	0.002	NP (NDs)
Lead (mg/L)	MW-23D	0.001	0.000051	0.015	No	9	0.0008012	0.0003954	77.78	None	No	0.002	NP (NDs)
Lead (mg/L)	MW-33	0.001787	0.001613	0.015	No	6	0.0017	0.0006325	0	None	No	0.01	Param.
Lead (mg/L)	MW-35	0.001087	0.0009334	0.015	No	5	0.000672	0.0003485	20	Kaplan-Meier	No	0.01	Param.
Lead (mg/L)	MW-37D	0.001537	-0.0004793	0.015	No	5	0.0008344	0.000626	40	Kaplan-Meier	No	0.01	Param.
Lithium (mg/L)	HGWC-15	0.007436	0.002055	0.04	No	20	0.0131	0.01235	30	Kaplan-Meier	ln(x)	0.01	Param.
Lithium (mg/L)	HGWC-16	0.0042	0.0029	0.04	No	20	0.004575	0.004859	5	None	No	0.01	NP (normality)
Lithium (mg/L)	HGWC-17	0.025	0.0011	0.04	No	20	0.01306	0.01225	50	None	No	0.01	NP (normality)
Lithium (mg/L)	HGWC-18	0.01452	0.01238	0.04	No	20	0.01345	0.001893	0	None	No	0.01	Param.
Lithium (mg/L)	MW-21D	0.02555	0.02125	0.04	No	10	0.0234	0.002413	0	None	No	0.01	Param.
Lithium (mg/L)	MW-22	0.002	0.0011	0.04	No	9	0.001333	0.0002784	0	None	No	0.002	NP (normality)
Lithium (mg/L)	MW-23D	0.002555	0.002133	0.04	No	9	0.002344	0.0002186	0	None	No	0.01	Param.
Lithium (mg/L)	MW-33	0.001201	0.0008654	0.04	No	6	0.001033	0.0001223	0	None	No	0.01	Param.
Lithium (mg/L)	MW-35	0.004936	0.003304	0.04	No	5	0.00412	0.0004868	0	None	No	0.01	Param.
Lithium (mg/L)	MW-37D	0.03898	0.02822	0.04	No	5	0.0336	0.003209	0	None	No	0.01	Param.
Molybdenum (mg/L)	HGWC-15	0.01	0.0007	0.1	No	18	0.009483	0.002192	94.44	None	No	0.01	NP (NDs)
Molybdenum (mg/L)	MW-21D	0.03424	0.01596	0.1	No	10	0.0251	0.01025	0	None	No	0.01	Param.
Molybdenum (mg/L)	MW-22	0.01	0.00013	0.1	No	9	0.008903	0.00329	88.89	None	No	0.002	NP (NDs)
Molybdenum (mg/L)	MW-23D	0.005336	0.001968	0.1	No	9	0.003711	0.002464	11.11	None	ln(x)	0.01	Param.
Molybdenum (mg/L)	MW-37D	0.02512	0.006598	0.1	No	5	0.01586	0.005527	0	None	No	0.01	Param.
Selenium (mg/L)	HGWC-14	0.0129	0.006872	0.05	No	20	0.009886	0.005307	0	None	No	0.01	Param.
Selenium (mg/L)	HGWC-15	0.005	0.0041	0.05	No	20	0.004355	0.001477	80	None	No	0.01	NP (NDs)
Selenium (mg/L)	HGWC-16	0.005	0.000089	0.05	No	20	0.004754	0.001098	95	None	No	0.01	NP (NDs)
Selenium (mg/L)	HGWC-17	0.005	0.0023	0.05	No	20	0.00444	0.001415	85	None	No	0.01	NP (NDs)
Selenium (mg/L)	HGWC-18	0.03325	0.01734	0.05	No	20	0.02529	0.01402	5	None	No	0.01	Param.
Selenium (mg/L)	MW-22	0.005	0.002	0.05	No	9	0.004667	0.001	88.89	None	No	0.002	NP (NDs)
Selenium (mg/L)	MW-33	0.03659	0.008223	0.05	No	6	0.01983	0.01216	0	None	ln(x)	0.01	Param.
Selenium (mg/L)	MW-35	0.03653	0.005955	0.05	No	5	0.0182	0.01073	0	None	x^(1/3)	0.01	Param.
Thallium (mg/L)	HGWC-14	0.000306	0.00028	0.002	No	20	0.0002958	0.00003042	0	None	No	0.01	NP (normality)
Thallium (mg/L)	HGWC-17	0.001	0.00012	0.002	No	20	0.00069	0.0004335	65	None	No	0.01	NP (NDs)
Thallium (mg/L)	HGWC-18	0.001	0.00015	0.002	No	20	0.0005015	0.0004181	40	None	No	0.01	NP (normality)
Thallium (mg/L)	MW-33	0.0003737	0.0002329	0.002	No	6	0.0003033	0.00005125	0	None	No	0.01	Param.
Thallium (mg/L)	MW-35	0.001	0.00013	0.002	No	5	0.000826	0.0003891	80	None	No	0.031	NP (NDs)

### Non-Parametric Confidence Interval

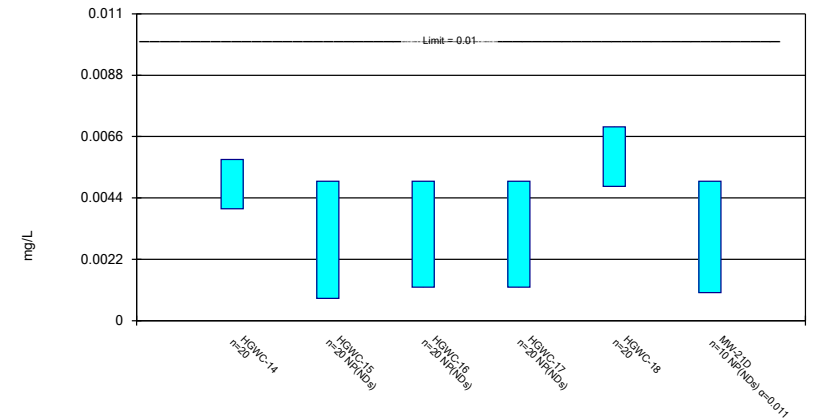
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted.



Constituent: Antimony Analysis Run 11/2/2021 10:25 AM View: Appendix IV  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Parametric and Non-Parametric (NP) Confidence Interval

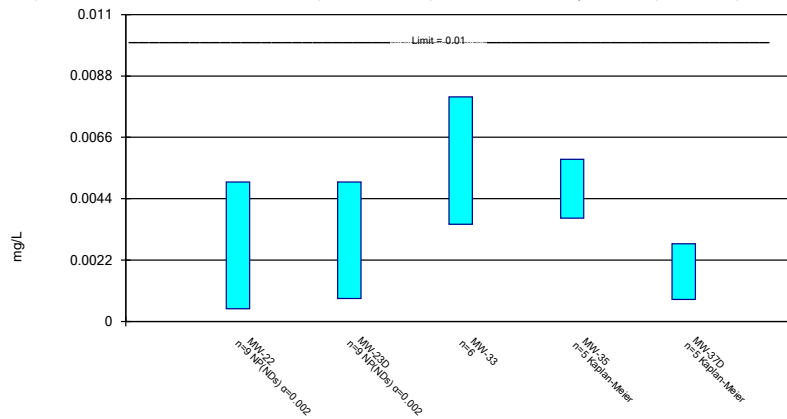
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Arsenic Analysis Run 11/2/2021 10:25 AM View: Appendix IV  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Parametric and Non-Parametric (NP) Confidence Interval

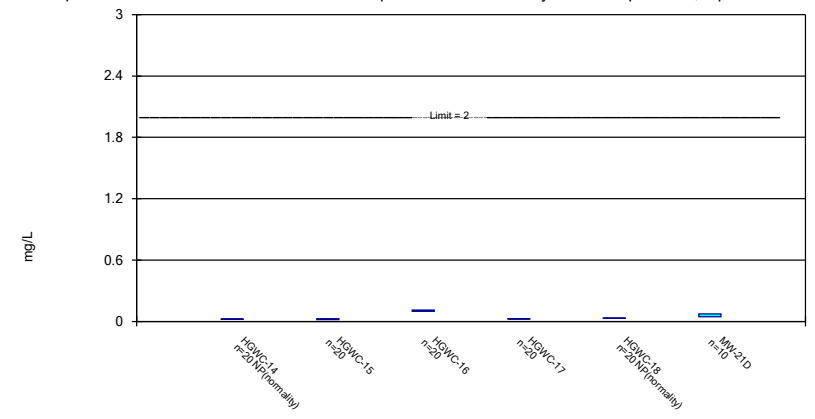
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Constituent: Arsenic Analysis Run 11/2/2021 10:25 AM View: Appendix IV  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Parametric and Non-Parametric (NP) Confidence Interval

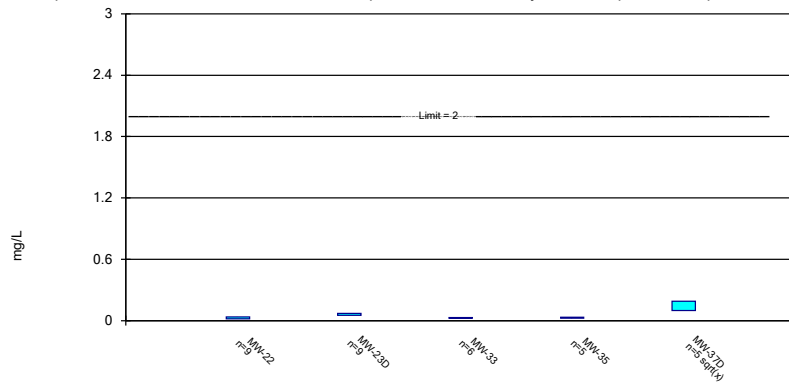
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Constituent: Barium Analysis Run 11/2/2021 10:25 AM View: Appendix IV  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Parametric Confidence Interval

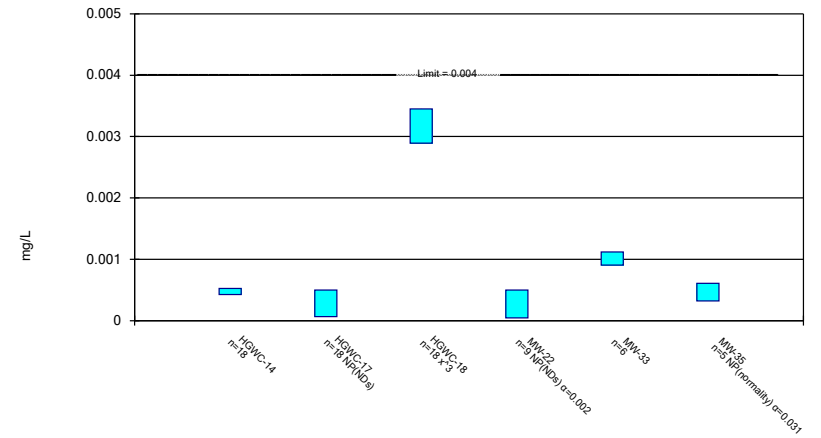
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Constituent: Barium Analysis Run 11/2/2021 10:25 AM View: Appendix IV  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Parametric and Non-Parametric (NP) Confidence Interval

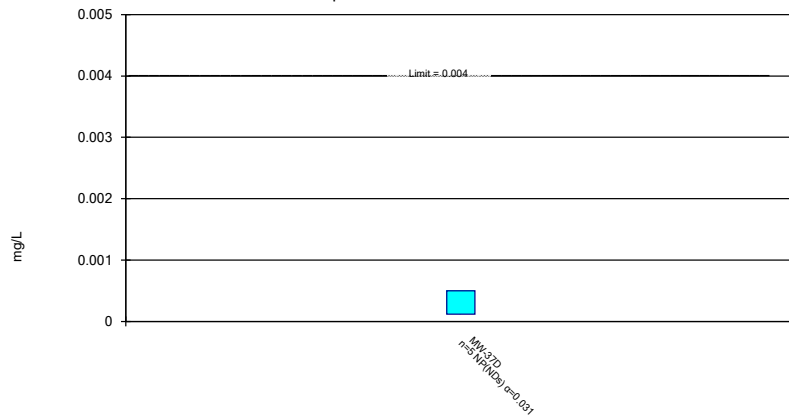
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Beryllium Analysis Run 11/2/2021 10:25 AM View: Appendix IV  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Non-Parametric Confidence Interval

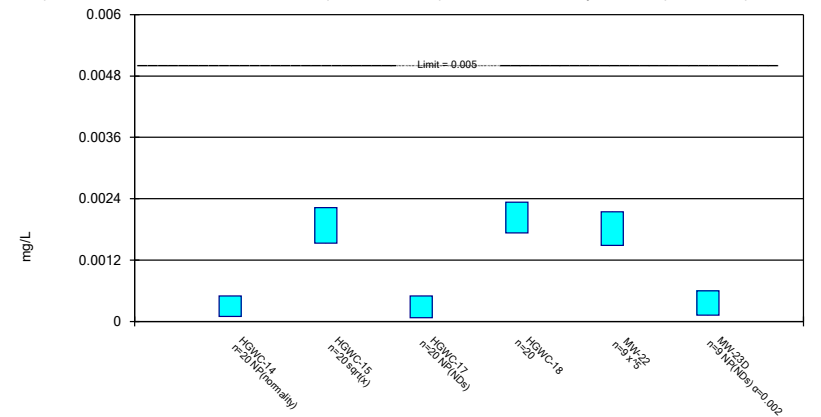
Compliance Limit is not exceeded.



Constituent: Beryllium Analysis Run 11/2/2021 10:25 AM View: Appendix IV  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Parametric and Non-Parametric (NP) Confidence Interval

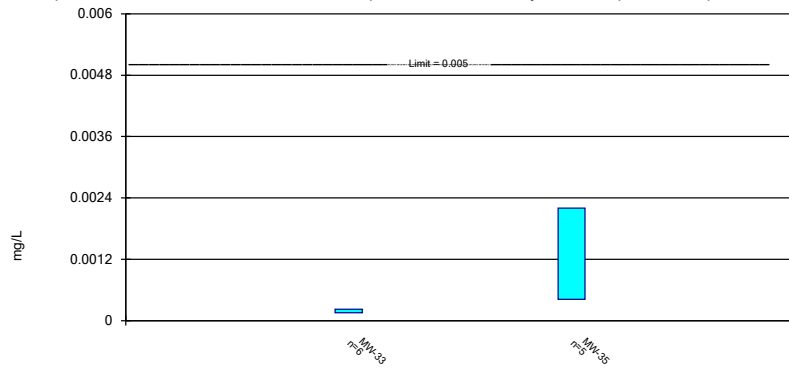
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cadmium Analysis Run 11/2/2021 10:25 AM View: Appendix IV  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Parametric Confidence Interval

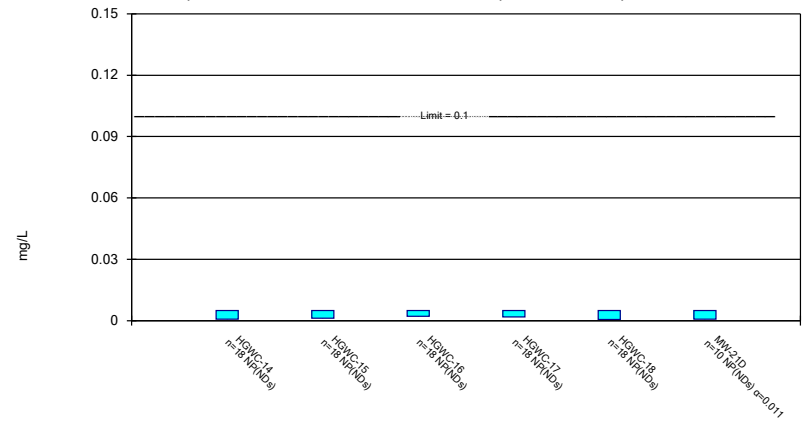
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cadmium Analysis Run 11/2/2021 10:25 AM View: Appendix IV  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Non-Parametric Confidence Interval

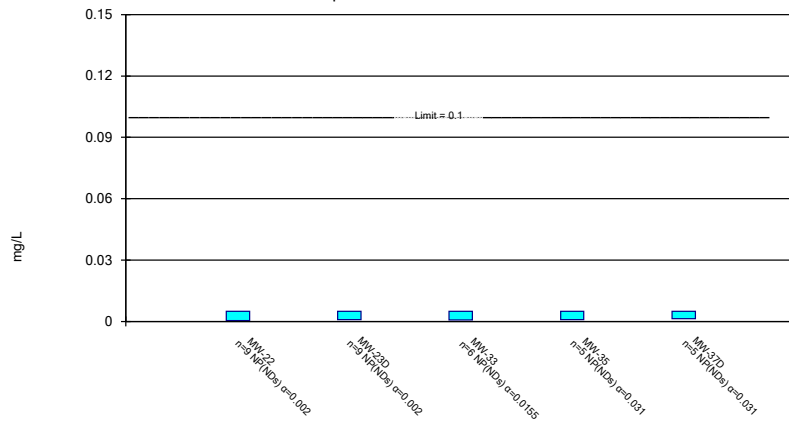
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted.



Constituent: Chromium Analysis Run 11/2/2021 10:25 AM View: Appendix IV  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Non-Parametric Confidence Interval

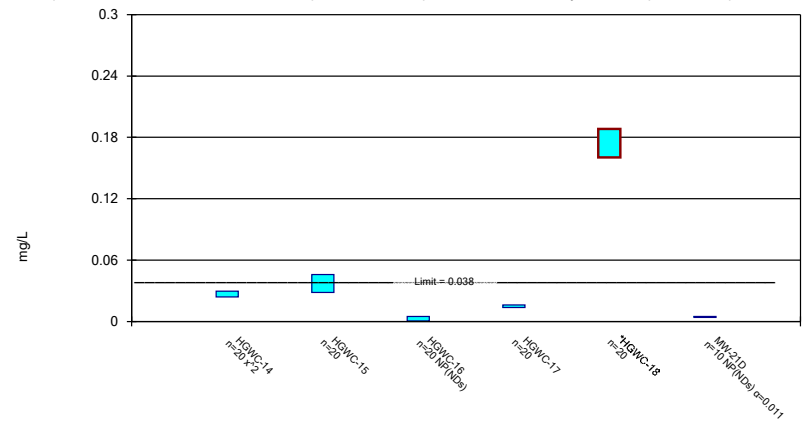
Compliance Limit is not exceeded.



Constituent: Chromium Analysis Run 11/2/2021 10:25 AM View: Appendix IV  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Parametric and Non-Parametric (NP) Confidence Interval

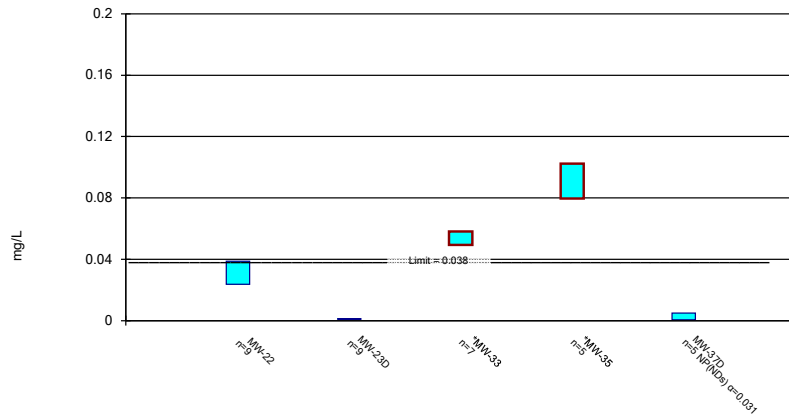
Compliance limit is exceeded.\* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cobalt Analysis Run 11/2/2021 10:25 AM View: Appendix IV  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Parametric and Non-Parametric (NP) Confidence Interval

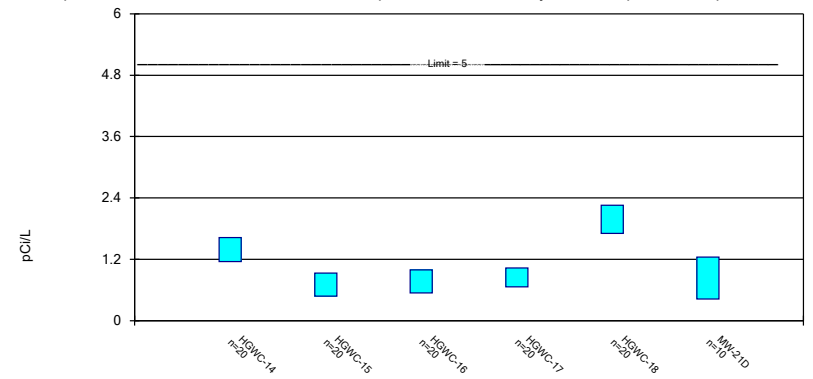
Compliance limit is exceeded.\* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cobalt Analysis Run 11/2/2021 10:25 AM View: Appendix IV  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Parametric Confidence Interval

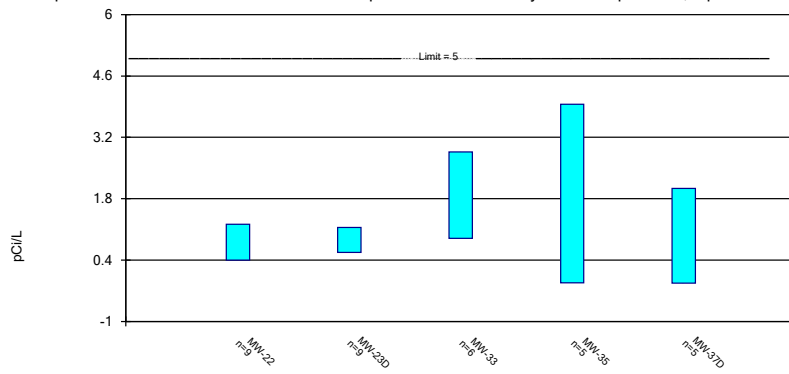
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Combined Radium 226 + 228 Analysis Run 11/2/2021 10:25 AM View: Appendix IV  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Parametric Confidence Interval

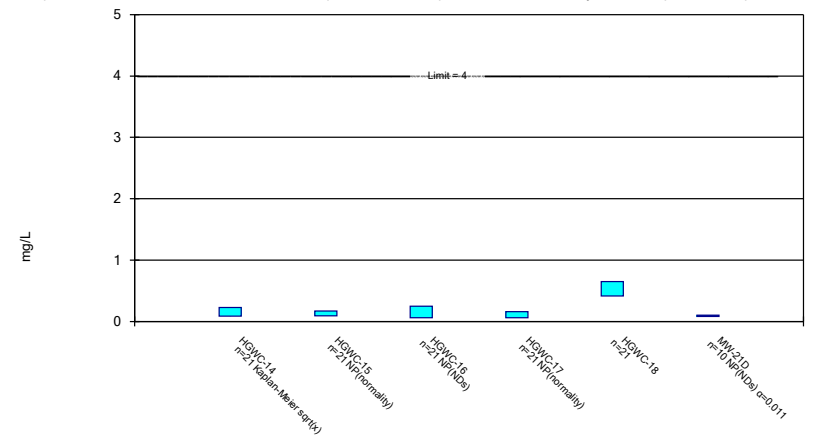
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Combined Radium 226 + 228 Analysis Run 11/2/2021 10:25 AM View: Appendix IV  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Parametric and Non-Parametric (NP) Confidence Interval

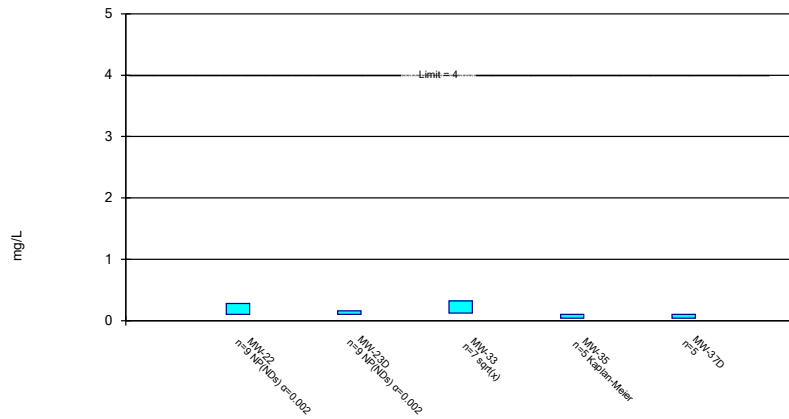
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Fluoride Analysis Run 11/2/2021 10:25 AM View: Appendix IV  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

Parametric and Non-Parametric (NP) Confidence Interval

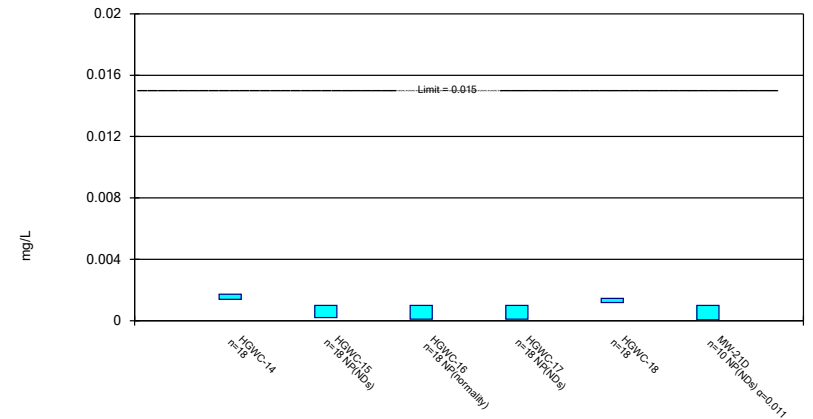
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Fluoride Analysis Run 11/2/2021 10:25 AM View: Appendix IV  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

Parametric and Non-Parametric (NP) Confidence Interval

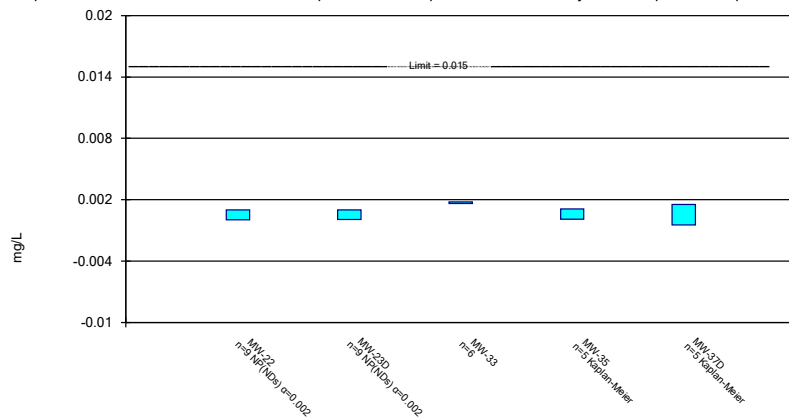
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Lead Analysis Run 11/2/2021 10:25 AM View: Appendix IV  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

Parametric and Non-Parametric (NP) Confidence Interval

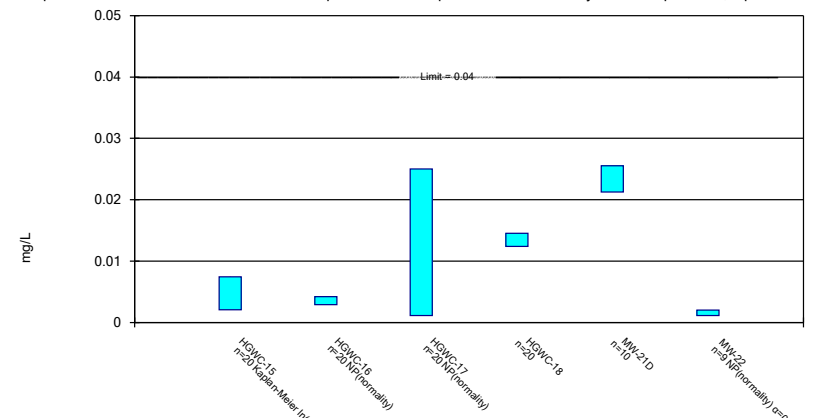
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Lead Analysis Run 11/2/2021 10:25 AM View: Appendix IV  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.

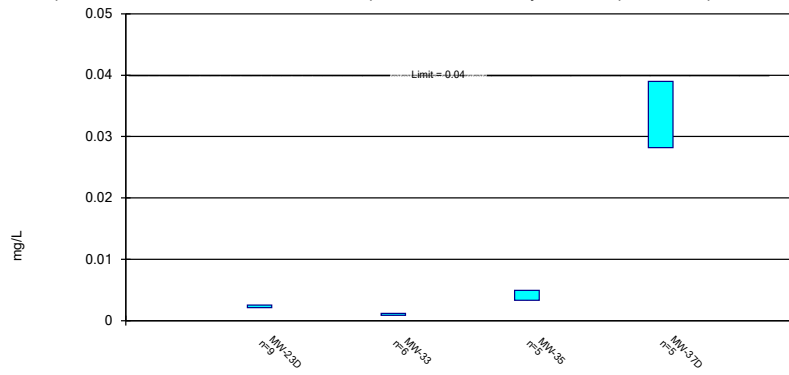


Constituent: Lithium Analysis Run 11/2/2021 10:25 AM View: Appendix IV  
 Plant Hammond Client: Southern Company Data: Hammond AP-2



### Parametric Confidence Interval

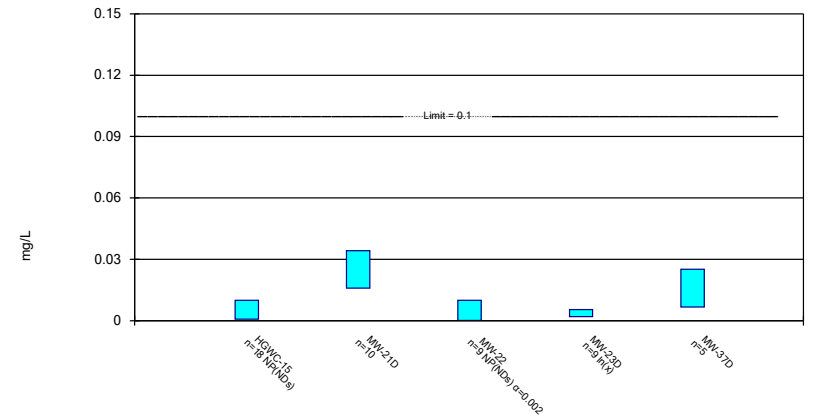
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Lithium Analysis Run 11/2/2021 10:26 AM View: Appendix IV  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Parametric and Non-Parametric (NP) Confidence Interval

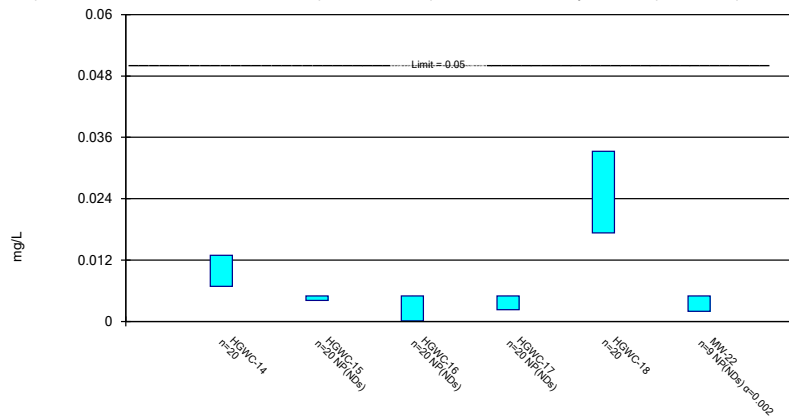
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Molybdenum Analysis Run 11/2/2021 10:26 AM View: Appendix IV  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Parametric and Non-Parametric (NP) Confidence Interval

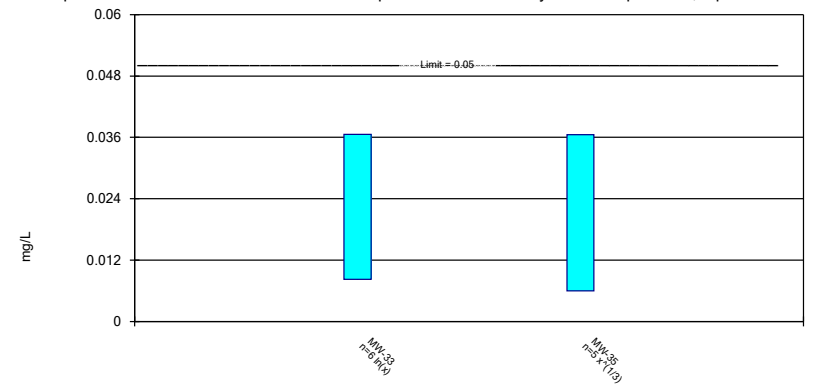
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Selenium Analysis Run 11/2/2021 10:26 AM View: Appendix IV  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Parametric Confidence Interval

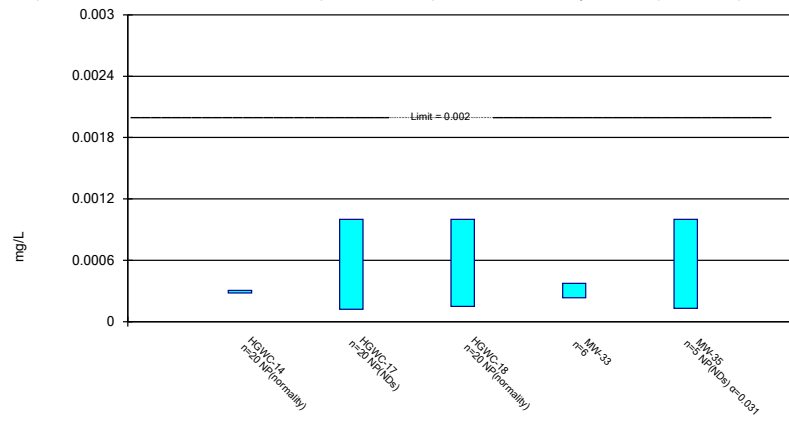
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Selenium Analysis Run 11/2/2021 10:26 AM View: Appendix IV  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

### Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Thallium    Analysis Run 11/2/2021 10:26 AM    View: Appendix IV  
Plant Hammond    Client: Southern Company    Data: Hammond AP-2

# Confidence Interval

Constituent: Antimony (mg/L) Analysis Run 11/2/2021 10:28 AM View: Appendix IV

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWC-14	HGWC-18	MW-22
5/23/2016	<0.003		
5/24/2016		<0.003	
7/12/2016	0.0003 (J)	<0.003	
9/1/2016	<0.003	<0.003	
10/24/2016	<0.003		
10/25/2016		<0.003	
12/7/2016	<0.003		
12/8/2016		<0.003	
1/26/2017	<0.003	<0.003	
3/23/2017	<0.003	<0.003	
5/24/2017	<0.003		
5/25/2017		<0.003	
4/3/2018		<0.003	
4/4/2018	<0.003		
3/14/2019	<0.003	<0.003	
3/15/2019			<0.003
3/2/2020			<0.003
3/3/2020	<0.003	<0.003	
2/11/2021	0.00043 (J)	<0.003	
2/15/2021			<0.003
3/17/2021	<0.003		<0.003
3/18/2021		<0.003	
8/18/2021	<0.003		
8/19/2021		0.0008 (J)	0.0016 (J)
Mean	0.002624	0.002843	0.00272
Std. Dev.	0.0009572	0.000588	0.0006261
Upper Lim.	0.003	0.003	0.003
Lower Lim.	0.00043	0.0008	0.0016

# Confidence Interval

Constituent: Arsenic (mg/L) Analysis Run 11/2/2021 10:28 AM View: Appendix IV

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWC-14	HGWC-15	HGWC-16	HGWC-17	HGWC-18	MW-21D
5/23/2016	0.00268 (J)	<0.005	<0.005	<0.005		
5/24/2016					0.00294 (J)	
7/12/2016	0.0059	<0.005	<0.005	<0.005	0.0074	
9/1/2016	0.0056	<0.005	<0.005	<0.005	0.0073	
10/24/2016	0.0058	<0.005				
10/25/2016			<0.005	<0.005	0.006	
12/7/2016	<0.005	<0.005	<0.005	<0.005		
12/8/2016					0.007	
1/26/2017	0.0089	<0.005	<0.005	<0.005	0.0068	
3/22/2017			0.0005 (J)	0.0007 (J)		
3/23/2017	0.0069	0.0008 (J)			0.0082	
5/24/2017	0.0048 (J)	<0.005	<0.005			
5/25/2017				0.0007 (J)	0.006	
4/3/2018		<0.005	<0.005	<0.005	0.0062	
4/4/2018	0.0052					
6/5/2018					0.008	
6/6/2018	0.0059	<0.005	<0.005	0.00097 (J)		
10/3/2018	0.0032 (J)	<0.005	<0.005	<0.005	0.0039 (J)	
3/14/2019	0.0029 (J)	<0.005			0.0036 (J)	
3/15/2019			<0.005	<0.005		<0.005
4/4/2019		0.00017 (J)	0.0001 (J)			0.00019 (J)
4/5/2019	<0.005			<0.005	0.0015 (J)	
9/24/2019	0.0039 (J)	0.00037 (J)				
9/25/2019			<0.005	<0.005	0.0044 (J)	<0.005
3/3/2020	0.0035 (J)	<0.005	<0.005	<0.005	0.0057	<0.005
3/26/2020		<0.005				
3/30/2020	0.0051		0.0011 (J)			
3/31/2020				0.0008 (J)	0.0056	
4/1/2020						0.0013 (J)
6/17/2020						<0.005
9/15/2020					0.0074	
9/16/2020				<0.005		
9/17/2020		<0.005	<0.005			
9/18/2020	0.0029 (J)					
9/21/2020						<0.005
2/10/2021			0.0012 (J)			
2/11/2021	0.0062			0.0012 (J)	0.0069 (B)	0.001 (J)
2/12/2021		<0.005				
3/16/2021		<0.005				
3/17/2021	<0.005		<0.005			
3/18/2021				<0.005	0.0083 (J)	<0.005
8/18/2021	0.0035 (J)			<0.005		
8/19/2021		<0.005	<0.005		0.0045 (J)	<0.005
Mean	0.004894	0.004317	0.004145	0.003968	0.005882	0.003749
Std. Dev.	0.001554	0.001671	0.001766	0.001836	0.001875	0.002032
Upper Lim.	0.005777	0.005	0.005	0.005	0.006947	0.005
Lower Lim.	0.004011	0.0008	0.0012	0.0012	0.004817	0.001

# Confidence Interval

Constituent: Arsenic (mg/L) Analysis Run 11/2/2021 10:28 AM View: Appendix IV  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

	MW-22	MW-23D	MW-33	MW-35	MW-37D
3/14/2019		<0.005			
3/15/2019	<0.005				
4/5/2019	<0.005	<0.005			
9/26/2019		<0.005			
9/27/2019	0.00045 (J)				
3/2/2020	<0.005	<0.005			
3/27/2020	<0.005				
4/1/2020		0.00082 (J)	0.0061		
6/17/2020			0.0031 (J)		
6/18/2020				0.005 (J)	0.0021 (J)
9/17/2020	<0.005	<0.005			
9/21/2020			0.0083	0.0059	
9/23/2020					0.00095 (J)
2/11/2021					0.0023 (J)
2/12/2021		0.001 (J)	0.0059		
2/15/2021	<0.005			0.005	
3/12/2021					<0.005
3/17/2021	<0.005	<0.005			
3/18/2021			0.0054 (J)		
3/19/2021				<0.005	
8/18/2021			0.0058	0.0043 (J)	<0.005
8/19/2021	<0.005	<0.005			
Mean	0.004494	0.004091	0.005767	0.00504	0.00307
Std. Dev.	0.001517	0.001804	0.001661	0.0005683	0.001836
Upper Lim.	0.005	0.005	0.008048	0.005818	0.00278
Lower Lim.	0.00045	0.00082	0.003485	0.003702	0.0007865

# Confidence Interval

Constituent: Barium (mg/L) Analysis Run 11/2/2021 10:28 AM View: Appendix IV

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWC-14	HGWC-15	HGWC-16	HGWC-17	HGWC-18	MW-21D
5/23/2016	<0.2	0.0315 (J)	0.0841	0.0222 (J)		
5/24/2016					<0.2	
7/12/2016	0.0214	0.0372	0.0886	0.0221	0.0346	
9/1/2016	0.0208	0.0364	0.0934	0.0227	0.0336	
10/24/2016	0.0208	0.0326				
10/25/2016			0.0991	0.0225	0.0349	
12/7/2016	0.022	0.0301	0.101	0.0227		
12/8/2016					0.0339	
1/26/2017	0.0238	0.0287	0.105	0.0229	0.0293	
3/22/2017			0.11	0.0248		
3/23/2017	0.0244	0.0329			0.0313	
5/24/2017	0.0228	0.0283	0.106			
5/25/2017				0.0255	0.0336	
4/3/2018		0.019	0.099	0.025	0.028	
4/4/2018	0.021					
6/5/2018					0.03	
6/6/2018	0.022	0.022	0.11	0.028		
10/3/2018	0.02	0.025	0.11	0.028	0.032	
3/14/2019	0.019	0.021			0.029	
3/15/2019			0.13	0.029		0.09
4/4/2019		0.018	0.11			0.075
4/5/2019	0.016			0.022	0.021	
9/24/2019	0.021	0.019				
9/25/2019			0.11	0.025	0.03	0.066
3/3/2020	0.018	0.018	0.12	0.026	0.026	0.058
3/26/2020		0.016				
3/30/2020	0.02		0.11			
3/31/2020				0.029	0.029	
4/1/2020						0.066
6/17/2020						0.054
9/15/2020					0.03	
9/16/2020				0.025		
9/17/2020		0.017	0.11			
9/18/2020	0.019					
9/21/2020						0.049
2/10/2021			0.11			
2/11/2021	0.02			0.025	0.03	0.044
2/12/2021		0.014				
3/16/2021		0.012				
3/17/2021	0.023		0.12			
3/18/2021				0.027	0.031	0.047
8/18/2021	0.018			0.022		
8/19/2021		0.01	0.1		0.031	0.042
Mean	0.02465	0.02344	0.1063	0.02482	0.03391	0.0591
Std. Dev.	0.01786	0.008265	0.01075	0.002408	0.01588	0.01527
Upper Lim.	0.0228	0.02813	0.1124	0.02619	0.0336	0.07273
Lower Lim.	0.019	0.01874	0.1002	0.02345	0.029	0.04547

# Confidence Interval

Constituent: Barium (mg/L) Analysis Run 11/2/2021 10:28 AM View: Appendix IV

Plant Hammond Client: Southern Company Data: Hammond AP-2

	MW-22	MW-23D	MW-33	MW-35	MW-37D
3/14/2019		0.082			
3/15/2019	0.044				
4/5/2019	0.036	0.061			
9/26/2019		0.064			
9/27/2019	0.028				
3/2/2020	0.027	0.06			
3/27/2020	0.025				
4/1/2020		0.065	0.027		
6/17/2020			0.024		
6/18/2020				0.029	0.19
9/17/2020	0.02	0.057			
9/21/2020			0.024	0.028	
9/23/2020					0.14
2/11/2021					0.14
2/12/2021		0.056	0.025		
2/15/2021	0.017			0.026	
3/12/2021					0.12
3/17/2021	0.018	0.058			
3/18/2021			0.029		
3/19/2021				0.032	
8/18/2021			0.025	0.025	0.12
8/19/2021	0.018	0.05			
Mean	0.02589	0.06144	0.02567	0.028	0.142
Std. Dev.	0.009185	0.008918	0.001966	0.002739	0.02864
Upper Lim.	0.03476	0.07005	0.02837	0.03259	0.1907
Lower Lim.	0.01702	0.05283	0.02297	0.02341	0.0987

# Confidence Interval

Constituent: Beryllium (mg/L) Analysis Run 11/2/2021 10:28 AM View: Appendix IV

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWC-14	HGWC-17	HGWC-18	MW-22	MW-33	MW-35
5/23/2016	<0.0005	<0.0005				
5/24/2016			0.00278 (J)			
7/12/2016	0.0005 (J)	<0.0005	0.0032			
9/1/2016	0.0005 (J)	<0.0005	0.0034			
10/24/2016	0.0005 (J)					
10/25/2016		<0.0005	0.0034			
12/7/2016	0.0006 (J)	<0.0005				
12/8/2016			0.0033			
1/26/2017	0.0005 (J)	<0.0005	0.0034			
3/22/2017		<0.0005				
3/23/2017	0.0006 (J)		0.0036			
5/24/2017	0.0005 (J)					
5/25/2017		<0.0005	0.0036			
4/3/2018		<0.0005	<0.0005			
4/4/2018	<0.0005					
3/14/2019	0.00043 (J)		0.0026 (J)			
3/15/2019		<0.0005		<0.0005		
4/5/2019	0.00027 (J)	<0.0005	0.0022 (J)	<0.0005		
9/24/2019	0.00044 (J)					
9/25/2019		<0.0005	0.0031			
9/27/2019				<0.0005		
3/2/2020				<0.0005		
3/3/2020	0.00043 (J)	<0.0005	0.0029 (J)			
3/27/2020				<0.0005		
3/30/2020	0.00043 (J)					
3/31/2020		<0.0005	0.003			
4/1/2020				0.0011 (J)		
6/17/2020				0.00099 (J)		
6/18/2020						0.00032 (J)
9/15/2020			0.0033			
9/16/2020		<0.0005				
9/17/2020				4.7E-05 (J)		
9/18/2020	0.00043 (J)					
9/21/2020				0.0009 (J)		0.0004 (J)
2/11/2021	0.00044 (J)	6.7E-05 (J)	0.0036			
2/12/2021					0.001 (J)	
2/15/2021				6.2E-05 (J)		0.0006 (J)
3/17/2021	0.00058			8.2E-05 (J)		
3/18/2021		4.8E-05 (J)	0.0038		0.0011	
3/19/2021						0.00061
8/18/2021	0.00039 (J)	<0.0005			0.00097	0.00061
8/19/2021			0.0034	7E-05 (J)		
Mean	0.0004744	0.0004508	0.00306	0.0003068	0.00101	0.000508
Std. Dev.	7.913E-05	0.0001431	0.0007528	0.0002293	7.797E-05	0.0001381
Upper Lim.	0.0005223	0.0005	0.00345	0.0005	0.001117	0.00061
Lower Lim.	0.0004266	6.7E-05	0.002894	4.7E-05	0.0009029	0.00032



# Confidence Interval

Constituent: Beryllium (mg/L) Analysis Run 11/2/2021 10:28 AM View: Appendix IV  
Plant Hammond Client: Southern Company Data: Hammond AP-2

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	MW-37D
6/18/2020	0.00012 (J)
9/23/2020	<0.0005
2/11/2021	<0.0005
3/12/2021	<0.0005
8/18/2021	<0.0005
Mean	0.000424
Std. Dev.	0.0001699
Upper Lim.	0.0005
Lower Lim.	0.00012

# Confidence Interval

Constituent: Cadmium (mg/L) Analysis Run 11/2/2021 10:28 AM View: Appendix IV

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWC-14	HGWC-15	HGWC-17	HGWC-18	MW-22	MW-23D
5/23/2016	0.000139 (J)	0.00271 (J)	<0.0005			
5/24/2016				<0.0005		
7/12/2016	<0.0005	0.0019	<0.0005	0.0022		
9/1/2016	0.0001 (J)	0.0017	<0.0005	0.0024		
10/24/2016	0.0002 (J)	0.0018				
10/25/2016			<0.0005	0.0022		
12/7/2016	0.0001 (J)	0.0018	<0.0005			
12/8/2016				0.0024		
1/26/2017	0.0001 (J)	0.0013	<0.0005	0.0025		
3/22/2017			7E-05 (J)			
3/23/2017	0.0002 (J)	0.002		0.0025		
5/24/2017	0.0001 (J)	0.0041				
5/25/2017			<0.0005	0.0027		
4/3/2018		0.0022	<0.0005	0.0022		
4/4/2018	<0.0005					
6/5/2018				0.0022		
6/6/2018	0.00012 (J)	0.0021	<0.0005			
10/3/2018	0.0001 (J)	0.0026	<0.0005	0.0027		
3/14/2019	<0.0005	0.0024		0.0019		<0.0005
3/15/2019			<0.0005		0.00082 (J)	
4/4/2019		0.0018				
4/5/2019	7.9E-05 (J)		<0.0005	0.0017	0.00064 (J)	<0.0005
9/24/2019	<0.0005	0.0014 (J)				
9/25/2019			<0.0005	0.0023 (J)		
9/26/2019						<0.0005
9/27/2019					0.0014 (J)	
3/2/2020					0.0021 (J)	<0.0005
3/3/2020	<0.0005	0.0015 (J)	<0.0005	0.0021 (J)		
3/26/2020		0.0016 (J)				
3/27/2020					0.0019 (J)	
3/30/2020	<0.0005					
3/31/2020			<0.0005	0.0017 (J)		
4/1/2020						<0.0005
9/15/2020				0.0019 (J)		
9/16/2020			<0.0005			
9/17/2020		0.0016 (J)			0.0021 (J)	0.0006 (J)
9/18/2020	<0.0005					
2/11/2021	<0.0005		<0.0005	0.0016 (J)		
2/12/2021		0.0014 (J)				0.00045 (J)
2/15/2021					0.002 (J)	
3/16/2021		0.0011				
3/17/2021	<0.0005				0.0022	0.00057
3/18/2021			<0.0005	0.0015		
8/18/2021	0.00013 (J)		<0.0005			
8/19/2021		0.0012		0.0014	0.0021	0.00012 (J)
Mean	0.0002934	0.001911	0.0004785	0.00203	0.001696	0.0004711
Std. Dev.	0.000194	0.0006795	9.615E-05	0.0005263	0.0005966	0.0001389
Upper Lim.	0.0005	0.002228	0.0005	0.002329	0.002144	0.0006
Lower Lim.	0.0001	0.001529	7E-05	0.001731	0.001488	0.00012

# Confidence Interval

Constituent: Cadmium (mg/L) Analysis Run 11/2/2021 10:28 AM View: Appendix IV  
Plant Hammond Client: Southern Company Data: Hammond AP-2

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	MW-33	MW-35
4/1/2020	0.00022 (J)	
6/17/2020	0.00021 (J)	
6/18/2020		0.00053 (J)
9/21/2020	0.00016 (J)	0.001 (J)
2/12/2021	0.00017 (J)	
2/15/2021		0.0017 (J)
3/18/2021	0.00019 (J)	
3/19/2021		0.0018
8/18/2021	0.00017 (J)	0.0015
Mean	0.0001867	0.001306
Std. Dev.	2.422E-05	0.0005321
Upper Lim.	0.0002199	0.002198
Lower Lim.	0.0001534	0.0004143

# Confidence Interval

Constituent: Chromium (mg/L) Analysis Run 11/2/2021 10:28 AM View: Appendix IV

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWC-14	HGWC-15	HGWC-16	HGWC-17	HGWC-18	MW-21D
5/23/2016	<0.005	<0.005	<0.005	<0.005		
5/24/2016					<0.005	
7/12/2016	<0.005	<0.005	<0.005	<0.005	<0.005	
9/1/2016	<0.005	<0.005	<0.005	<0.005	<0.005	
10/24/2016	<0.005	<0.005				
10/25/2016			<0.005	<0.005	<0.005	
12/7/2016	<0.005	<0.005	<0.005	<0.005		
12/8/2016					<0.005	
1/26/2017	<0.005	<0.005	<0.005	<0.005	<0.005	
3/22/2017			0.0021 (J)	<0.005		
3/23/2017	<0.005	0.0005 (J)			0.0005 (J)	
5/24/2017	<0.005	<0.005	<0.005			
5/25/2017				<0.005	<0.005	
4/3/2018		<0.005	<0.005	<0.005	<0.005	
4/4/2018	<0.005					
3/14/2019	<0.005	<0.005			<0.005	
3/15/2019			<0.005	<0.005		<0.005
4/4/2019		<0.005	<0.005			<0.005
4/5/2019	<0.005			<0.005	<0.005	
9/24/2019	<0.005	0.00041 (J)				
9/25/2019			<0.005	<0.005	<0.005	<0.005
3/3/2020	0.00042 (J)	<0.005	0.00071 (J)	0.0018 (J)	0.0004 (J)	<0.005
3/26/2020		<0.005				
3/30/2020	0.00066 (J)		0.0004 (J)			
3/31/2020				<0.005	<0.005	
4/1/2020						<0.005
6/17/2020						0.00057 (J)
9/15/2020					0.00063 (J)	
9/16/2020				<0.005		
9/17/2020		<0.005	<0.005			
9/18/2020	<0.005					
9/21/2020						<0.005
2/10/2021			<0.005			
2/11/2021	<0.005			0.00074 (J)	<0.005	<0.005
2/12/2021		<0.005				
3/16/2021		0.0012 (J)				
3/17/2021	<0.005		<0.005			
3/18/2021				0.00069 (J)	<0.005	0.00074 (J)
8/18/2021	<0.005			<0.005		
8/19/2021		<0.005	<0.005		<0.005	<0.005
Mean	0.004504	0.004284	0.004345	0.004346	0.004252	0.004131
Std. Dev.	0.001443	0.001654	0.001539	0.00152	0.001722	0.001832
Upper Lim.	0.005	0.005	0.005	0.005	0.005	0.005
Lower Lim.	0.00066	0.0012	0.0021	0.0018	0.00063	0.00074

# Confidence Interval

Constituent: Chromium (mg/L) Analysis Run 11/2/2021 10:28 AM View: Appendix IV  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

	MW-22	MW-23D	MW-33	MW-35	MW-37D
3/14/2019		<0.005			
3/15/2019	<0.005				
4/5/2019	<0.005	<0.005			
9/26/2019		<0.005			
9/27/2019	0.0004 (J)				
3/2/2020	<0.005	<0.005			
3/27/2020	<0.005				
4/1/2020		0.00086 (J)	0.00069 (J)		
6/17/2020			<0.005		
6/18/2020				<0.005	0.0048 (J)
9/17/2020	<0.005	<0.005			
9/21/2020			<0.005	0.00079 (J)	
9/23/2020					<0.005
2/11/2021					0.0014 (J)
2/12/2021		<0.005	<0.005		
2/15/2021	<0.005			<0.005	
3/12/2021					<0.005
3/17/2021	0.00075 (J)	0.00083 (J)			
3/18/2021			<0.005		
3/19/2021				0.00083 (J)	
8/18/2021			<0.005	<0.005	<0.005
8/19/2021	<0.005	<0.005			
Mean	0.004017	0.004077	0.004282	0.003324	0.00424
Std. Dev.	0.001953	0.001832	0.00176	0.002295	0.00159
Upper Lim.	0.005	0.005	0.005	0.005	0.005
Lower Lim.	0.0004	0.00083	0.00069	0.00079	0.0014

# Confidence Interval

Constituent: Cobalt (mg/L) Analysis Run 11/2/2021 10:28 AM View: Appendix IV

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWC-14	HGWC-15	HGWC-16	HGWC-17	HGWC-18	MW-21D
5/23/2016	<0.005	0.0419 (J)	<0.005	0.0167		
5/24/2016					0.17 (J)	
7/12/2016	0.0232	0.0393	<0.005	0.0148	0.168	
9/1/2016	0.0248	0.045	<0.005	0.0151	0.18	
10/24/2016	0.0253	0.0557				
10/25/2016			<0.005	0.0141	0.188	
12/7/2016	0.0269	0.0536	<0.005	0.0141		
12/8/2016					0.206	
1/26/2017	0.0294	0.055	<0.005	0.0154	0.195	
3/22/2017			<0.005	0.0169		
3/23/2017	0.0311	0.0715			0.223	
5/24/2017	0.0279	0.0446	<0.005			
5/25/2017				0.0154	0.209	
4/3/2018		0.032	<0.005	0.016	0.19	
4/4/2018	0.025					
6/5/2018					0.19	
6/6/2018	0.027	0.032	<0.005	0.018		
10/3/2018	0.023	0.051	<0.005	0.016	0.19	
3/14/2019	0.025	0.038			0.16	
3/15/2019			<0.005	0.017		<0.005
4/4/2019		0.035	0.00028 (J)			0.00034 (J)
4/5/2019	0.021			0.016	0.14	
9/24/2019	0.026	0.022				
9/25/2019			<0.005	0.015	0.18	<0.005
3/3/2020	0.029	0.03	0.00037 (J)	0.016	0.15	<0.005
3/26/2020		0.022				
3/30/2020	0.028		<0.005			
3/31/2020				0.016	0.16	
4/1/2020						<0.005
6/17/2020						<0.005
9/15/2020					0.16	
9/16/2020				0.013		
9/17/2020		0.026	<0.005			
9/18/2020	0.027					
9/21/2020						<0.005
2/10/2021			<0.005			
2/11/2021	0.033			0.012	0.14	<0.005
2/12/2021		0.019				
3/16/2021		0.018				
3/17/2021	0.034		<0.005			
3/18/2021				0.012	0.14	<0.005
8/18/2021	0.033			0.009		
8/19/2021		0.011	<0.005		0.15	<0.005
Mean	0.02623	0.03713	0.004532	0.01493	0.1745	0.004534
Std. Dev.	0.00609	0.01543	0.001439	0.002107	0.02448	0.001474
Upper Lim.	0.02946	0.04589	0.005	0.01612	0.1883	0.005
Lower Lim.	0.02405	0.02837	0.00037	0.01373	0.1606	0.005

# Confidence Interval

Constituent: Cobalt (mg/L) Analysis Run 11/2/2021 10:28 AM View: Appendix IV  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

	MW-22	MW-23D	MW-33	MW-35	MW-37D
3/14/2019		0.0013 (J)			
3/15/2019	0.028				
4/5/2019	0.022	0.0012 (J)			
9/26/2019		0.00098 (J)			
9/27/2019	0.035				
1/22/2020			0.052		
3/2/2020	0.043	0.0011 (J)			
3/27/2020	0.025				
4/1/2020		0.0011 (J)	0.058		
6/17/2020			0.053		
6/18/2020				0.091	0.0015 (J)
9/17/2020	0.029	0.00096 (J)			
9/21/2020			0.047	0.084	
9/23/2020					<0.005
2/11/2021					0.00048 (J)
2/12/2021		0.001 (J)	0.055		
2/15/2021	0.038			0.095	
3/12/2021					<0.005
3/17/2021	0.039	0.0011 (J)			
3/18/2021			0.057		
3/19/2021				0.1	
8/18/2021			0.054	0.085	<0.005
8/19/2021	0.022	0.00089 (J)			
Mean	0.03122	0.00107	0.05371	0.091	0.003396
Std. Dev.	0.007775	0.0001275	0.003638	0.006745	0.002226
Upper Lim.	0.03873	0.001193	0.05804	0.1023	0.005
Lower Lim.	0.02372	0.0009469	0.04939	0.0797	0.00048

# Confidence Interval

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 11/2/2021 10:28 AM View: Appendix IV

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWC-14	HGWC-15	HGWC-16	HGWC-17	HGWC-18	MW-21D
5/23/2016	0.568 (U)	0.171 (U)		0.618 (U)		
5/24/2016					1.82	
7/1/2016			0 (U)			
7/12/2016	1.31	0.611 (U)	0.182 (U)	0.867	1.76	
9/1/2016	1.64	0.766 (U)	1.23	0.857 (U)	1.51	
10/24/2016	1.88	0.969				
10/25/2016			1.05 (U)	1.11 (U)	2.69	
12/7/2016	1.35	0.302 (U)	1.11 (U)	0.964 (U)		
12/8/2016					2.21	
1/26/2017	2.1	0.626 (U)	1.29 (U)	0.612 (U)	2.26	
3/22/2017			0.453 (U)	0.437 (U)		
3/23/2017	1.17	0.662 (U)			1.81	
5/24/2017	1 (U)	0.202 (U)	1.05 (U)			
5/25/2017				1.21 (U)	1.63	
4/3/2018		0.384 (U)	0.783 (U)	0.409 (U)	2.53	
4/4/2018	1.72					
6/5/2018					1.91	
6/6/2018	1.31 (U)	1.32 (U)	0.595 (U)	0.772 (U)		
10/3/2018	1.48	0.858 (U)	1.03 (U)	1.08 (U)	2.22	
3/14/2019	1.5	0.462 (U)			1.37 (U)	
3/15/2019			0.591 (U)	0.917 (U)		0.972 (U)
4/4/2019		0.512 (U)	0.96 (U)			0.791 (U)
4/5/2019	1.43 (U)			1.07 (U)	2.22	
9/24/2019	1.17	0.582 (U)				
9/25/2019			0.643 (U)	1.54	2.77	0.751 (U)
3/3/2020	1.84	1.43	1.32 (U)	1.33	2.35	1.94
3/26/2020		0.855 (U)				
3/30/2020	1.08 (U)		0.288 (U)			
3/31/2020				0.591 (U)	2.7	
4/1/2020						0.758 (U)
6/17/2020						0.691 (U)
9/15/2020					1.65	
9/16/2020				0.295 (U)		
9/17/2020		0.395 (U)	1.1 (U)			
9/18/2020	1.8 (U)					
9/21/2020						0.436 (U)
2/10/2021			0.773 (U)			
2/11/2021	0.73 (U)			0.831 (U)	1.11	0.317 (U)
2/12/2021		1.65				
3/16/2021		0.801 (U)				
3/17/2021	1.84		0.228 (U)			
3/18/2021				0.856 (U)	1.63	0.5 (U)
8/18/2021	0.858 (U)			0.548 (U)		
8/19/2021		0.527 (U)	0.668 (U)		1.45	1.17
Mean	1.389	0.7043	0.7672	0.8457	1.98	0.8326
Std. Dev.	0.4145	0.3964	0.3923	0.3221	0.4826	0.4628
Upper Lim.	1.624	0.9293	0.99	1.029	2.254	1.245
Lower Lim.	1.153	0.4792	0.5444	0.6628	1.706	0.4197



# Confidence Interval

Constituent: Combined Radium 226 + 228 (pCi/L)    Analysis Run 11/2/2021 10:28 AM    View: Appendix IV  
 Plant Hammond    Client: Southern Company    Data: Hammond AP-2

	MW-22	MW-23D	MW-33	MW-35	MW-37D
3/14/2019		0.872 (U)			
3/15/2019	0.977				
4/5/2019	1.06 (U)	0.932 (U)			
9/26/2019		1.25			
9/27/2019	1.44 (U)				
3/2/2020	0.872 (U)	0.964 (U)			
3/27/2020	0.96 (U)				
4/1/2020		0.914 (U)	2.57		
6/17/2020			1.43 (U)		
6/18/2020				2.02	1.79
9/17/2020	0.0879 (U)	0.32 (U)			
9/21/2020			2.53	3.85	
9/23/2020					0.98 (U)
2/11/2021					0.12 (U)
2/12/2021		1.21 (U)	2.26		
2/15/2021	0.215 (U)			1.52	
3/12/2021					0.578 (U)
3/17/2021	0.981 (U)	0.579 (U)			
3/18/2021			0.733 (U)		
3/19/2021				0.524 (U)	
8/18/2021			1.77	1.67	1.31
8/19/2021	0.689 (U)	0.69 (U)			
Mean	0.8091	0.859	1.882	1.917	0.9556
Std. Dev.	0.4232	0.2943	0.7174	1.215	0.6448
Upper Lim.	1.218	1.143	2.868	3.953	2.036
Lower Lim.	0.4005	0.5748	0.8967	-0.1194	-0.1249

# Confidence Interval

Constituent: Fluoride (mg/L) Analysis Run 11/2/2021 10:28 AM View: Appendix IV

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWC-14	HGWC-15	HGWC-16	HGWC-17	HGWC-18	MW-21D
5/23/2016	<0.1	<0.1	0.038 (J)	<0.1		
5/24/2016					<0.1	
7/12/2016	0.2 (J)	0.09 (J)	0.26 (J)	0.09 (J)	0.54	
9/1/2016	0.08 (J)	0.22 (J)	0.42	0.03 (J)	0.49	
10/24/2016	0.04 (J)	0.07 (J)				
10/25/2016			0.25 (J)	0.07 (J)	0.58	
12/7/2016	0.11 (J)	0.23 (J)	0.23 (J)	0.54		
12/8/2016					0.63	
1/26/2017	0.13 (J)	<0.1	0.02 (J)	<0.1	0.71	
3/22/2017			0.3	0.07 (J)		
3/23/2017	0.28 (J)	0.12 (J)			0.57	
5/24/2017	0.32	0.31	0.46			
5/25/2017				0.42	0.54	
10/4/2017	0.52	0.6	<0.1	0.93	0.95	
4/3/2018		<0.1	<0.1	<0.1	0.33	
4/4/2018	<0.1					
6/5/2018					0.66	
6/6/2018	0.25 (J)	0.17 (J)	<0.1	0.23 (J)		
10/3/2018	0.21 (J)	<0.1	<0.1	<0.1	0.32	
3/14/2019	0.24 (J)	<0.1			0.88	
3/15/2019			<0.1	<0.1		<0.1
4/4/2019		0.066 (J)	<0.1			0.1 (J)
4/5/2019	0.66			0.16 (J)	0.37	
9/24/2019	0.053 (J)	0.12 (J)				
9/25/2019			<0.1	0.081 (J)	0.73	<0.1
3/3/2020	<0.1	0.064 (J)	<0.1	<0.1	0.34	<0.1
3/26/2020		<0.1				
3/30/2020	0.092 (J)		0.059 (J)			
3/31/2020				<0.1	0.45	
4/1/2020						<0.1
6/17/2020						<0.1
9/15/2020					0.31	
9/16/2020				0.058 (J)		
9/17/2020		<0.1	<0.1			
9/18/2020	<0.1					
9/21/2020						<0.1
2/10/2021			0.21			
2/11/2021	0.059 (J)			0.058 (J)	0.71	<0.1
2/12/2021		0.053 (J)				
3/16/2021		<0.1				
3/17/2021	0.076 (J)		<0.1			
3/18/2021				0.057 (J)	0.64	<0.1
8/18/2021	<0.1			0.062 (J)		
8/19/2021		<0.1	<0.1		0.31	<0.1
Mean	0.1819	0.1435	0.1594	0.1693	0.5314	0.1
Std. Dev.	0.1587	0.1219	0.1198	0.2143	0.2101	4.7E-10
Upper Lim.	0.2249	0.17	0.25	0.16	0.6473	0.1
Lower Lim.	0.08438	0.09	0.059	0.062	0.4156	0.1

# Confidence Interval

Constituent: Fluoride (mg/L)    Analysis Run 11/2/2021 10:28 AM    View: Appendix IV  
 Plant Hammond    Client: Southern Company    Data: Hammond AP-2

	MW-22	MW-23D	MW-33	MW-35	MW-37D
3/14/2019		<0.1			
3/15/2019	<0.1				
4/5/2019	0.13 (J)	0.14 (J)			
9/26/2019		0.16 (J)			
9/27/2019	0.28 (J)				
1/22/2020			0.18 (J)		
3/2/2020	<0.1	<0.1			
3/27/2020	<0.1				
4/1/2020		<0.1	0.15 (J)		
6/17/2020			0.25		
6/18/2020				0.053 (J)	0.1
9/17/2020	<0.1	<0.1			
9/21/2020			0.14	<0.1	
9/23/2020					0.065 (J)
2/11/2021					0.077 (J)
2/12/2021		<0.1	0.25		
2/15/2021	<0.1			0.093 (J)	
3/12/2021					0.061 (J)
3/17/2021	<0.1	<0.1			
3/18/2021			0.4		
3/19/2021				0.082 (J)	
8/18/2021			0.16	0.052 (J)	0.05 (J)
8/19/2021	<0.1	<0.1			
Mean	0.1233	0.1111	0.2186	0.076	0.0706
Std. Dev.	0.05958	0.02261	0.09191	0.02239	0.01906
Upper Lim.	0.28	0.16	0.3234	0.1	0.1025
Lower Lim.	0.1	0.1	0.1231	0.03995	0.03866

# Confidence Interval

Constituent: Lead (mg/L) Analysis Run 11/2/2021 10:28 AM View: Appendix IV

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWC-14	HGWC-15	HGWC-16	HGWC-17	HGWC-18	MW-21D
5/23/2016	0.00182 (J)	<0.001	<0.001	<0.001		
5/24/2016					0.00154 (J)	
7/12/2016	0.0015 (J)	<0.001	<0.001	<0.001	0.0012 (J)	
9/1/2016	0.0016 (J)	<0.001	<0.001	<0.001	0.0014 (J)	
10/24/2016	0.0016 (J)	<0.001				
10/25/2016			<0.001	<0.001	0.0015 (J)	
12/7/2016	0.0018 (J)	<0.001	<0.001	<0.001		
12/8/2016					0.0017 (J)	
1/26/2017	0.002 (J)	<0.001	0.0001 (J)	<0.001	0.0013 (J)	
3/22/2017			0.0002 (J)	0.0001 (J)		
3/23/2017	0.0019 (J)	0.001 (J)			0.001 (J)	
5/24/2017	0.0016 (J)	0.0001 (J)	0.0001 (J)			
5/25/2017				<0.001	0.0012 (J)	
4/3/2018		<0.001	<0.001	<0.001	<0.001	
4/4/2018	<0.001					
3/14/2019	0.0014 (J)	<0.001			0.0015 (J)	
3/15/2019			<0.001	<0.001		<0.001
4/4/2019		7.2E-05 (J)	0.00016 (J)			<0.001
4/5/2019	0.0012 (J)			7.6E-05 (J)	0.0015 (J)	
9/24/2019	0.0013 (J)	0.0002 (J)				
9/25/2019			<0.001	8.9E-05 (J)	0.0015 (J)	<0.001
3/3/2020	0.0017 (J)	5.3E-05 (J)	0.00016 (J)	0.00013 (J)	0.0013 (J)	4.7E-05 (J)
3/26/2020		<0.001				
3/30/2020	0.0015 (J)		7.3E-05 (J)			
3/31/2020				7.7E-05 (J)	0.0014 (J)	
4/1/2020						4.8E-05 (J)
6/17/2020						<0.001
9/15/2020					0.0014 (J)	
9/16/2020				6.5E-05 (J)		
9/17/2020		<0.001	7.8E-05 (J)			
9/18/2020	0.0012 (J)					
9/21/2020						<0.001
2/10/2021			9.4E-05 (J)			
2/11/2021	0.0015 (J)			0.00018 (J)	0.00098 (J)	0.00066 (J)
2/12/2021		<0.001				
3/16/2021		<0.001				
3/17/2021	0.0019		5.8E-05 (J)			
3/18/2021				8.8E-05 (J)	0.00096 (J)	7.3E-05 (J)
8/18/2021	0.0015			<0.001		
8/19/2021		<0.001	<0.001		0.0013	<0.001
Mean	0.001557	0.0008014	0.0005568	0.0006003	0.001316	0.0006828
Std. Dev.	0.0002717	0.0003833	0.0004572	0.0004605	0.0002198	0.0004451
Upper Lim.	0.001721	0.001	0.001	0.001	0.001449	0.001
Lower Lim.	0.001392	0.0002	9.4E-05	8.8E-05	0.001183	4.8E-05

# Confidence Interval

Constituent: Lead (mg/L) Analysis Run 11/2/2021 10:28 AM View: Appendix IV

Plant Hammond Client: Southern Company Data: Hammond AP-2

	MW-22	MW-23D	MW-33	MW-35	MW-37D
3/14/2019		<0.001			
3/15/2019	<0.001				
4/5/2019	<0.001	<0.001			
9/26/2019		<0.001			
9/27/2019	0.0001 (J)				
3/2/2020	9.4E-05 (J)	5.1E-05 (J)			
3/27/2020	<0.001				
4/1/2020		<0.001	0.0017 (J)		
6/17/2020			0.0017 (J)		
6/18/2020				0.00016 (J)	0.0017 (J)
9/17/2020	<0.001	0.00016 (J)			
9/21/2020			0.0017 (J)	0.00099 (J)	
9/23/2020					8.2E-05 (J)
2/11/2021					0.00039 (J)
2/12/2021		<0.001	0.0018 (J)		
2/15/2021	3.6E-05 (J)			0.00055 (J)	
3/12/2021					<0.001
3/17/2021	<0.001	<0.001			
3/18/2021			0.0017		
3/19/2021				0.00066 (J)	
8/18/2021			0.0016	<0.001	<0.001
8/19/2021	<0.001	<0.001			
Mean	0.0006922	0.0008012	0.0017	0.000672	0.0008344
Std. Dev.	0.000462	0.0003954	6.325E-05	0.0003485	0.000626
Upper Lim.	0.001	0.001	0.001787	0.001087	0.001537
Lower Lim.	3.6E-05	5.1E-05	0.001613	9.334E-05	-0.0004793

# Confidence Interval

Constituent: Lithium (mg/L) Analysis Run 11/2/2021 10:28 AM View: Appendix IV

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWC-15	HGWC-16	HGWC-17	HGWC-18	MW-21D	MW-22
5/23/2016	<0.05	<0.05	<0.05			
5/24/2016				0.0142 (J)		
7/12/2016	<0.05	0.0037 (J)	<0.05	0.0141 (J)		
9/1/2016	0.0021 (J)	0.0033 (J)	<0.05	0.0158 (J)		
10/24/2016	<0.05					
10/25/2016		0.0029 (J)	<0.05	0.016 (J)		
12/7/2016	<0.05	0.0029 (J)	<0.05			
12/8/2016				0.0144 (J)		
1/26/2017	<0.05	0.0028 (J)	<0.05	0.0136 (J)		
3/22/2017		0.0025 (J)	<0.05			
3/23/2017	0.0016 (J)			0.0151 (J)		
5/24/2017	0.0029 (J)	0.0029 (J)				
5/25/2017			0.0011 (J)	0.0154 (J)		
4/3/2018	0.0026 (J)	0.0028 (J)	<0.05	0.013 (J)		
6/5/2018				0.013 (J)		
6/6/2018	0.0013 (J)	0.0031 (J)	<0.05			
10/3/2018	0.0017 (J)	0.0026 (J)	<0.05	0.015 (J)		
3/14/2019	<0.05			0.011 (J)		
3/15/2019		0.0041 (J)	0.0011 (J)		0.025 (J)	0.002 (J)
4/4/2019	0.0009 (J)	0.0032 (J)			0.019 (J)	
4/5/2019			0.00074 (J)	0.0084 (J)		0.0013 (J)
9/24/2019	0.0012 (J)					
9/25/2019		0.0038 (J)	0.0011 (J)	0.015 (J)	0.024 (J)	
9/27/2019						0.0013 (J)
3/2/2020						0.0015 (J)
3/3/2020	0.0084 (J)	0.0047 (J)	0.0012 (J)	0.012 (J)	0.026 (J)	
3/26/2020	0.0061 (J)					
3/27/2020						0.0013 (J)
3/30/2020		0.0041 (J)				
3/31/2020			0.0009 (J)	0.012 (J)		
4/1/2020					0.026 (J)	
6/17/2020					0.023 (J)	
9/15/2020				0.014 (J)		
9/16/2020			0.0012 (J)			
9/17/2020	0.0094 (J)	0.0043 (J)				0.0011 (J)
9/21/2020					0.022 (J)	
2/10/2021		0.0038 (J)				
2/11/2021			0.0013 (J)	0.011 (J)	0.021 (J)	
2/12/2021	0.036					
2/15/2021						0.0011 (J)
3/16/2021	0.032					
3/17/2021		0.0048 (J)				0.0012 (J)
3/18/2021			0.0014 (J)	0.013 (J)	0.026 (J)	
8/18/2021			0.0012 (J)			
8/19/2021	0.0058 (J)	0.0042 (J)		0.013 (J)	0.022 (J)	0.0012 (J)
Mean	0.0131	0.004575	0.01306	0.01345	0.0234	0.001333
Std. Dev.	0.01235	0.004859	0.01225	0.001893	0.002413	0.0002784
Upper Lim.	0.007436	0.0042	0.025	0.01452	0.02555	0.002
Lower Lim.	0.002055	0.0029	0.0011	0.01238	0.02125	0.0011

# Confidence Interval

Constituent: Lithium (mg/L) Analysis Run 11/2/2021 10:28 AM View: Appendix IV

Plant Hammond Client: Southern Company Data: Hammond AP-2

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	MW-23D	MW-33	MW-35	MW-37D
3/14/2019	0.0028 (J)			
4/5/2019	0.0021 (J)			
9/26/2019	0.0023 (J)			
3/2/2020	0.0025 (J)			
4/1/2020	0.0024 (J)	0.0011 (J)		
6/17/2020		0.00097 (J)		
6/18/2020			0.0046 (J)	0.038 (J)
9/17/2020	0.0021 (J)			
9/21/2020		0.00086 (J)	0.0036 (J)	
9/23/2020				0.031
2/11/2021				0.034
2/12/2021	0.0023 (J)	0.0011 (J)		
2/15/2021			0.0043 (J)	
3/12/2021				0.035
3/17/2021	0.0024 (J)			
3/18/2021		0.0012 (J)		
3/19/2021			0.0045 (J)	
8/18/2021		0.00097 (J)	0.0036 (J)	0.03
8/19/2021	0.0022 (J)			
Mean	0.002344	0.001033	0.00412	0.0336
Std. Dev.	0.0002186	0.0001223	0.0004868	0.003209
Upper Lim.	0.002555	0.001201	0.004936	0.03898
Lower Lim.	0.002133	0.0008654	0.003304	0.02822

# Confidence Interval

Constituent: Molybdenum (mg/L) Analysis Run 11/2/2021 10:28 AM View: Appendix IV  
 Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWC-15	MW-21D	MW-22	MW-23D	MW-37D
5/23/2016	<0.01				
7/12/2016	0.0007 (J)				
9/1/2016	<0.01				
10/24/2016	<0.01				
12/7/2016	<0.01				
1/26/2017	<0.01				
3/23/2017	<0.01				
5/24/2017	<0.01				
4/3/2018	<0.01				
3/14/2019	<0.01			<0.01	
3/15/2019		0.045	<0.01		
4/4/2019	<0.01	0.033			
4/5/2019			0.00013 (J)	0.0014 (J)	
9/24/2019	<0.01				
9/25/2019		0.038			
9/26/2019				0.0025 (J)	
9/27/2019			<0.01		
3/2/2020			<0.01	0.003 (J)	
3/3/2020	<0.01	0.025			
3/26/2020	<0.01				
3/27/2020			<0.01		
4/1/2020		0.024		0.0032 (J)	
6/17/2020		0.019			
6/18/2020					0.023
9/17/2020	<0.01		<0.01	0.0026 (J)	
9/21/2020		0.017			
9/23/2020					0.015
2/11/2021		0.016			0.019
2/12/2021	<0.01			0.0039 (J)	
2/15/2021			<0.01		
3/12/2021					0.014
3/16/2021	<0.01				
3/17/2021			<0.01	0.0034 (J)	
3/18/2021		0.016			
8/18/2021					0.0083 (J)
8/19/2021	<0.01	0.018	<0.01	0.0034 (J)	
Mean	0.009483	0.0251	0.008903	0.003711	0.01586
Std. Dev.	0.002192	0.01025	0.00329	0.002464	0.005527
Upper Lim.	0.01	0.03424	0.01	0.005336	0.02512
Lower Lim.	0.0007	0.01596	0.00013	0.001968	0.006598



# Confidence Interval

Constituent: Selenium (mg/L) Analysis Run 11/2/2021 10:28 AM View: Appendix IV

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWC-14	HGWC-15	HGWC-16	HGWC-17	HGWC-18	MW-22
5/23/2016	0.017	<0.005	<0.005	<0.005		
5/24/2016					<0.005	
7/12/2016	0.0146	<0.005	<0.005	<0.005	0.036	
9/1/2016	0.0137	<0.005	<0.005	0.0014 (J)	0.0347	
10/24/2016	0.0135	0.0012 (J)				
10/25/2016			<0.005	<0.005	0.0282	
12/7/2016	0.01 (J)	0.0041 (J)	<0.005	0.0023 (J)		
12/8/2016					0.0373	
1/26/2017	0.0214	<0.005	<0.005	<0.005	0.0385	
3/22/2017			<0.005	<0.005		
3/23/2017	0.0167	0.0016 (J)			0.0414	
5/24/2017	0.0083 (J)	<0.005	<0.005			
5/25/2017				<0.005	0.019	
4/3/2018		<0.005	<0.005	<0.005	0.029	
4/4/2018	0.012					
6/5/2018					0.038	
6/6/2018	0.014	<0.005	<0.005	<0.005		
10/3/2018	0.0056 (J)	<0.005	<0.005	<0.005	0.017	
3/14/2019	0.0048 (J)	<0.005			0.016	
3/15/2019			<0.005	<0.005		<0.005
4/4/2019		0.00021 (J)	8.9E-05 (J)			
4/5/2019	0.00091 (J)			9.3E-05 (J)	0.0018 (J)	<0.005
9/24/2019	0.0064 (J)	<0.005				
9/25/2019			<0.005	<0.005	0.02	
9/27/2019						<0.005
3/2/2020						<0.005
3/3/2020	0.0045 (J)	<0.005	<0.005	<0.005	0.014	
3/26/2020		<0.005				
3/27/2020						<0.005
3/30/2020	0.0049 (J)		<0.005			
3/31/2020				<0.005	0.019	
9/15/2020					0.059	
9/16/2020				<0.005		
9/17/2020		<0.005	<0.005			0.002 (J)
9/18/2020	0.0045 (J)					
2/10/2021			<0.005			
2/11/2021	0.0072 (J)			<0.005	0.023	
2/12/2021		<0.005				
2/15/2021						<0.005
3/16/2021		<0.005				
3/17/2021	0.01 (J)		<0.005			<0.005
3/18/2021				<0.005	0.019 (J)	
8/18/2021	0.0077			<0.005		
8/19/2021		<0.005	<0.005		0.01	<0.005
Mean	0.009886	0.004355	0.004754	0.00444	0.02529	0.004667
Std. Dev.	0.005307	0.001477	0.001098	0.001415	0.01402	0.001
Upper Lim.	0.0129	0.005	0.005	0.005	0.03325	0.005
Lower Lim.	0.006872	0.0041	8.9E-05	0.0023	0.01734	0.002

# Confidence Interval

Constituent: Selenium (mg/L) Analysis Run 11/2/2021 10:28 AM View: Appendix IV  
Plant Hammond Client: Southern Company Data: Hammond AP-2

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	MW-33	MW-35
4/1/2020	0.011	
6/17/2020	0.014	
6/18/2020		0.014
9/21/2020	0.041	0.037
2/12/2021	0.011	
2/15/2021		0.01
3/18/2021	0.028	
3/19/2021		0.016 (J)
8/18/2021	0.014	0.014
Mean	0.01983	0.0182
Std. Dev.	0.01216	0.01073
Upper Lim.	0.03659	0.03653
Lower Lim.	0.008223	0.005955

# Confidence Interval

Constituent: Thallium (mg/L)    Analysis Run 11/2/2021 10:28 AM    View: Appendix IV  
 Plant Hammond    Client: Southern Company    Data: Hammond AP-2

	HGWC-14	HGWC-17	HGWC-18	MW-33	MW-35
5/23/2016	0.000306 (J)	<0.001			
5/24/2016			<0.001		
7/12/2016	0.0003 (J)	0.0001 (J)	0.0002 (J)		
9/1/2016	0.0003 (J)	<0.001	<0.001		
10/24/2016	0.0004				
10/25/2016		<0.001	<0.001		
12/7/2016	0.0003 (J)	<0.001			
12/8/2016			<0.001		
1/26/2017	0.0003 (J)	<0.001	<0.001		
3/22/2017		0.0001 (J)			
3/23/2017	0.0003 (J)		0.0002 (J)		
5/24/2017	0.0003 (J)				
5/25/2017		0.0001 (J)	0.0002 (J)		
4/3/2018		<0.001	0.00014 (J)		
4/4/2018	0.00028 (J)				
6/5/2018			0.00016 (J)		
6/6/2018	0.00029 (J)	<0.001			
10/3/2018	0.00029 (J)	<0.001	<0.001		
3/14/2019	0.00028 (J)		<0.001		
3/15/2019		<0.001			
4/5/2019	0.00028 (J)	0.00013 (J)	0.00014 (J)		
9/24/2019	0.0003 (J)				
9/25/2019		0.00012 (J)	0.00019 (J)		
3/3/2020	0.00026 (J)	0.00011 (J)	0.00013 (J)		
3/30/2020	0.00028 (J)				
3/31/2020		0.00014 (J)	0.00015 (J)		
4/1/2020				0.00029 (J)	
6/17/2020				0.00028 (J)	
6/18/2020					0.00013 (J)
9/15/2020			0.00016 (J)		
9/16/2020		<0.001			
9/18/2020	0.00028 (J)				
9/21/2020				0.00029 (J)	<0.001
2/11/2021	0.00026 (J)	<0.001	<0.001		
2/12/2021				0.00025 (J)	
2/15/2021					<0.001
3/17/2021	0.00034 (J)				
3/18/2021		<0.001	0.00016 (J)	0.00031 (J)	
3/19/2021					<0.001
8/18/2021	0.00027 (J)	<0.001		0.0004 (J)	<0.001
8/19/2021			0.0002 (J)		
Mean	0.0002958	0.00069	0.0005015	0.0003033	0.000826
Std. Dev.	3.042E-05	0.0004335	0.0004181	5.125E-05	0.0003891
Upper Lim.	0.000306	0.001	0.001	0.0003737	0.001
Lower Lim.	0.00028	0.00012	0.00015	0.0002329	0.00013

FIGURE K.

# Appendix IV Trend Tests - Significant Results

Plant Hammond Client: Southern Company Data: Hammond AP-2 Printed 11/2/2021, 10:40 AM

<u>Constituent</u>	<u>Well</u>	<u>Slope</u>	<u>Calc.</u>	<u>Critical</u>	<u>Sig.</u>	<u>N</u>	<u>%NDs</u>	<u>Normality</u>	<u>Xform</u>	<u>Alpha</u>	<u>Method</u>
<b>Molybdenum (mg/L)</b>	<b>MW-21D</b>	<b>-0.01052</b>	<b>-36</b>	<b>-30</b>	<b>Yes</b>	<b>10</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>

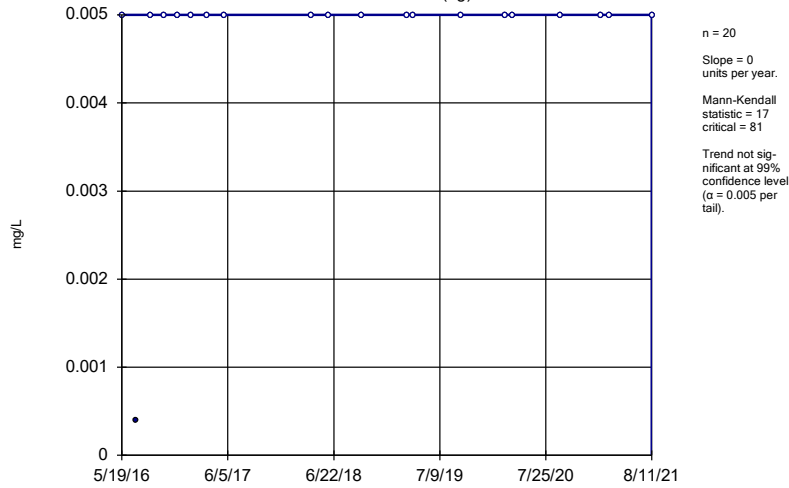
# Appendix IV Trend Tests - All Results

Plant Hammond    Client: Southern Company    Data: Hammond AP-2    Printed 11/2/2021, 10:40 AM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Cobalt (mg/L)	HGWA-1 (bg)	0	17	81	No	20	95	n/a	n/a	0.01	NP
Cobalt (mg/L)	HGWA-2 (bg)	-0.001281	-52	-81	No	20	0	n/a	n/a	0.01	NP
Cobalt (mg/L)	HGWA-3 (bg)	0	0	81	No	20	100	n/a	n/a	0.01	NP
Cobalt (mg/L)	HGWA-4 (bg)	0	-67	-81	No	20	75	n/a	n/a	0.01	NP
Cobalt (mg/L)	HGWA-42D (bg)	0	2	18	No	7	85.71	n/a	n/a	0.01	NP
Cobalt (mg/L)	HGWA-43D (bg)	0	0	18	No	7	100	n/a	n/a	0.01	NP
Cobalt (mg/L)	HGWA-44D (bg)	0	0	18	No	7	100	n/a	n/a	0.01	NP
Cobalt (mg/L)	HGWA-5 (bg)	0	4	81	No	20	25	n/a	n/a	0.01	NP
Cobalt (mg/L)	HGWA-6 (bg)	0	0	81	No	20	100	n/a	n/a	0.01	NP
Cobalt (mg/L)	HGWC-18	-0.00945	-81	-81	No	20	0	n/a	n/a	0.01	NP
Cobalt (mg/L)	MW-33	0.001272	3	18	No	7	0	n/a	n/a	0.01	NP
Cobalt (mg/L)	MW-35	0.003568	2	12	No	5	0	n/a	n/a	0.01	NP
Lead (mg/L)	HGWA-1 (bg)	0	-26	-68	No	18	83.33	n/a	n/a	0.01	NP
Lead (mg/L)	HGWA-2 (bg)	-0.000003012	-48	-68	No	18	55.56	n/a	n/a	0.01	NP
Lead (mg/L)	HGWA-3 (bg)	0	7	68	No	18	83.33	n/a	n/a	0.01	NP
Lead (mg/L)	HGWA-4 (bg)	0	-49	-68	No	18	66.67	n/a	n/a	0.01	NP
Lead (mg/L)	HGWA-42D (bg)	0.00122	12	18	No	7	42.86	n/a	n/a	0.01	NP
Lead (mg/L)	HGWA-43D (bg)	0.0003578	13	18	No	7	14.29	n/a	n/a	0.01	NP
Lead (mg/L)	HGWA-44D (bg)	0.0008343	2	18	No	7	28.57	n/a	n/a	0.01	NP
Lead (mg/L)	HGWA-5 (bg)	0	13	68	No	18	88.89	n/a	n/a	0.01	NP
Lead (mg/L)	HGWA-6 (bg)	0	-3	-68	No	18	88.89	n/a	n/a	0.01	NP
Lead (mg/L)	HGWC-14	-0.00003088	-30	-68	No	18	5.556	n/a	n/a	0.01	NP
Lead (mg/L)	HGWC-18	-0.00004794	-40	-68	No	18	5.556	n/a	n/a	0.01	NP
Lead (mg/L)	MW-33	0	-3	-14	No	6	0	n/a	n/a	0.01	NP
Molybdenum (mg/L)	HGWA-1 (bg)	0	0	68	No	18	100	n/a	n/a	0.01	NP
Molybdenum (mg/L)	HGWA-2 (bg)	0	0	68	No	18	100	n/a	n/a	0.01	NP
Molybdenum (mg/L)	HGWA-3 (bg)	0	0	68	No	18	100	n/a	n/a	0.01	NP
Molybdenum (mg/L)	HGWA-4 (bg)	0	0	68	No	18	100	n/a	n/a	0.01	NP
Molybdenum (mg/L)	HGWA-42D (bg)	0	7	18	No	7	71.43	n/a	n/a	0.01	NP
Molybdenum (mg/L)	HGWA-43D (bg)	-0.001109	-4	-18	No	7	0	n/a	n/a	0.01	NP
Molybdenum (mg/L)	HGWA-44D (bg)	0.003529	12	18	No	7	0	n/a	n/a	0.01	NP
Molybdenum (mg/L)	HGWA-5 (bg)	0	0	68	No	18	100	n/a	n/a	0.01	NP
Molybdenum (mg/L)	HGWA-6 (bg)	0	19	68	No	18	88.89	n/a	n/a	0.01	NP
<b>Molybdenum (mg/L)</b>	<b>MW-21D</b>	<b>-0.01052</b>	<b>-36</b>	<b>-30</b>	<b>Yes</b>	<b>10</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>

### Sen's Slope Estimator

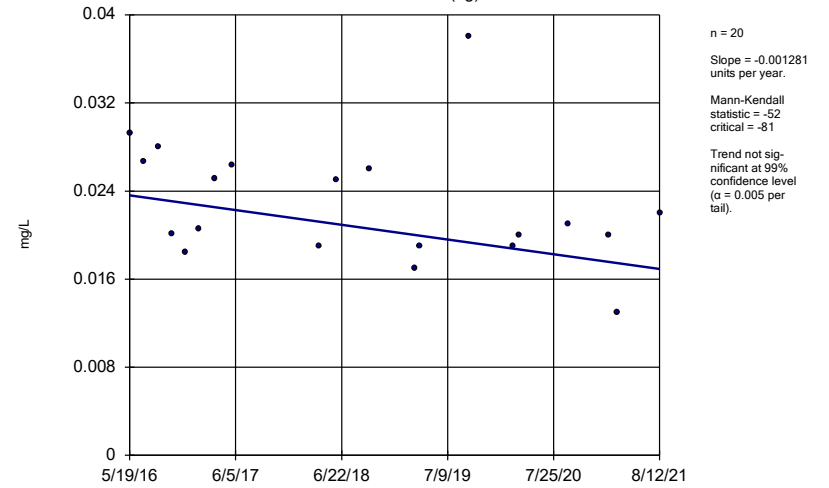
HGWA-1 (bg)



Constituent: Cobalt Analysis Run 11/2/2021 10:38 AM View: Appendix IV Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator

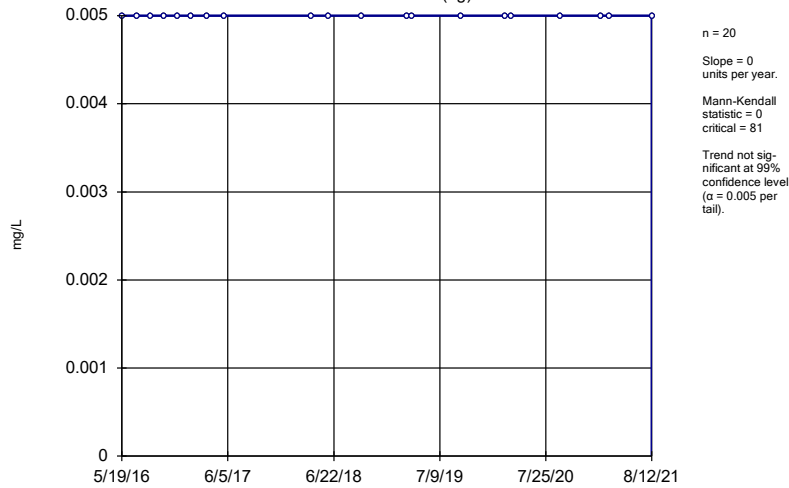
HGWA-2 (bg)



Constituent: Cobalt Analysis Run 11/2/2021 10:38 AM View: Appendix IV Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator

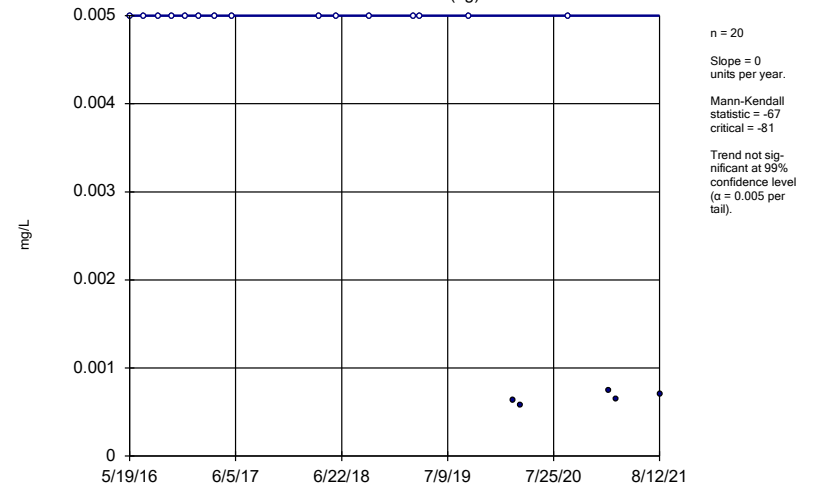
HGWA-3 (bg)



Constituent: Cobalt Analysis Run 11/2/2021 10:38 AM View: Appendix IV Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator

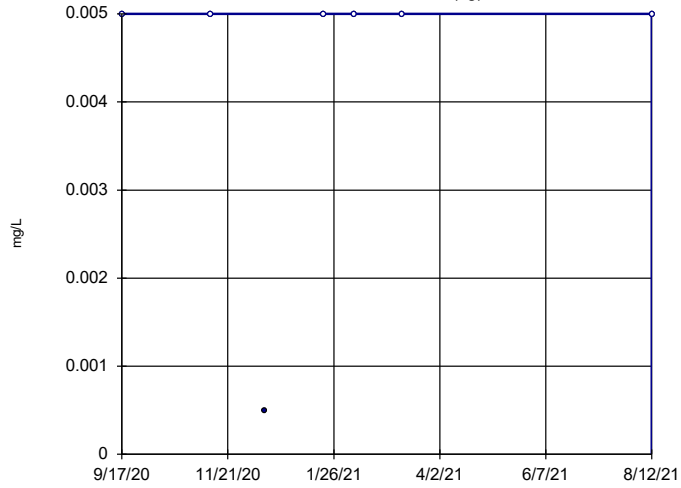
HGWA-4 (bg)



Constituent: Cobalt Analysis Run 11/2/2021 10:38 AM View: Appendix IV Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator

HGWA-42D (bg)

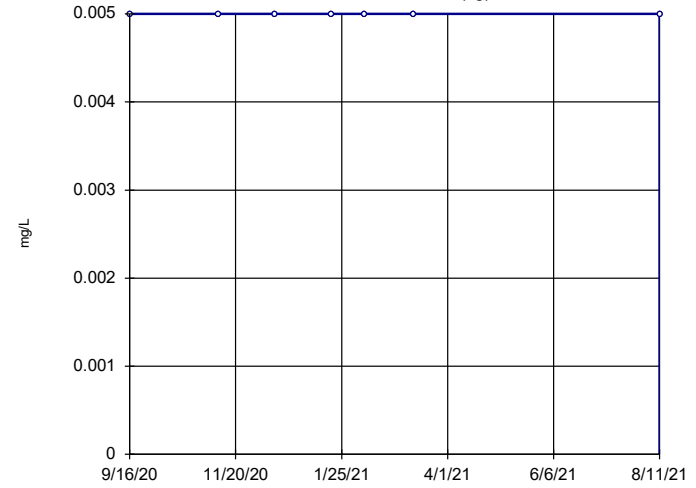


n = 7  
Slope = 0  
units per year.  
Mann-Kendall  
statistic = 2  
critical = 18  
Trend not sig-  
nificant at 99%  
confidence level  
( $\alpha = 0.005$  per  
tail).

Constituent: Cobalt Analysis Run 11/2/2021 10:38 AM View: Appendix IV Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator

HGWA-43D (bg)

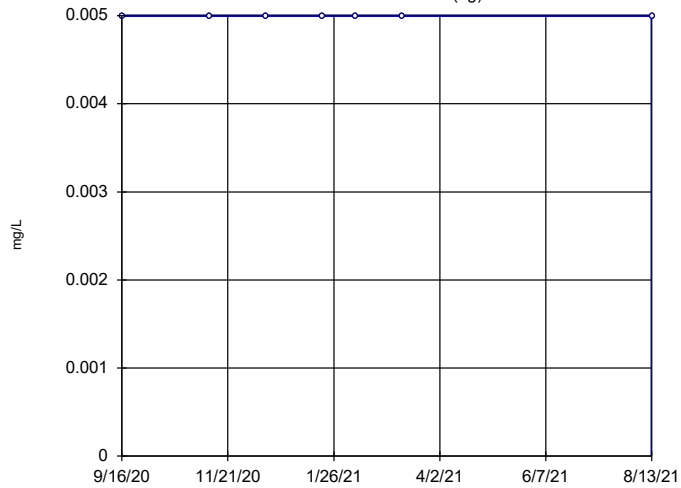


n = 7  
Slope = 0  
units per year.  
Mann-Kendall  
statistic = 0  
critical = 18  
Trend not sig-  
nificant at 99%  
confidence level  
( $\alpha = 0.005$  per  
tail).

Constituent: Cobalt Analysis Run 11/2/2021 10:38 AM View: Appendix IV Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator

HGWA-44D (bg)

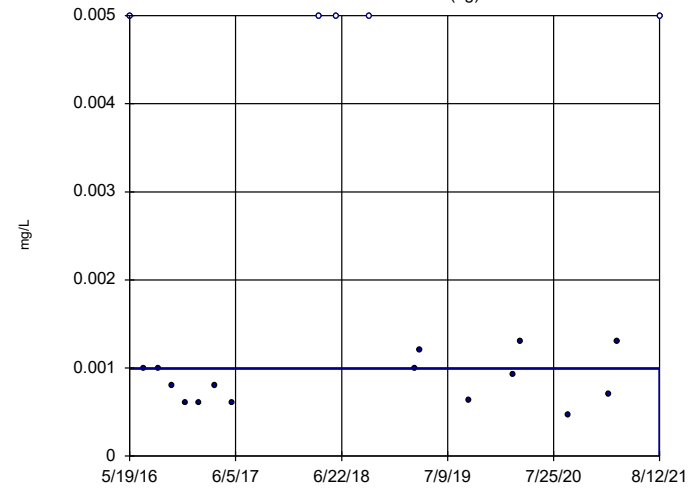


n = 7  
Slope = 0  
units per year.  
Mann-Kendall  
statistic = 0  
critical = 18  
Trend not sig-  
nificant at 99%  
confidence level  
( $\alpha = 0.005$  per  
tail).

Constituent: Cobalt Analysis Run 11/2/2021 10:38 AM View: Appendix IV Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator

HGWA-5 (bg)



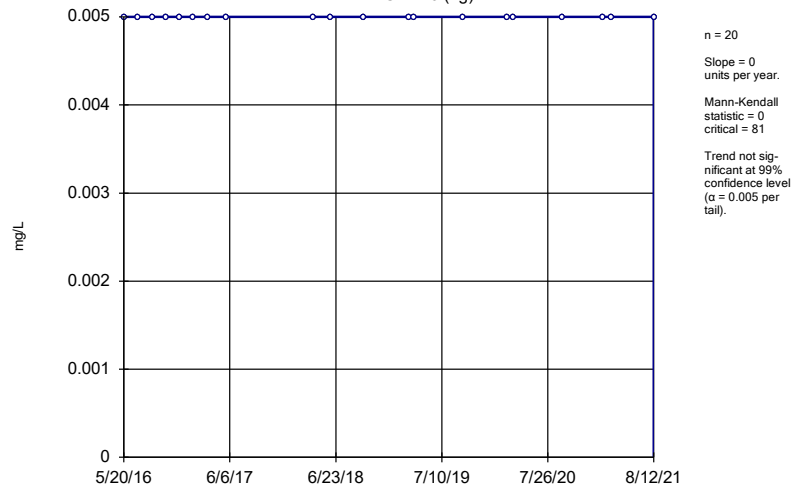
n = 20  
Slope = 0  
units per year.  
Mann-Kendall  
statistic = 4  
critical = 81  
Trend not sig-  
nificant at 99%  
confidence level  
( $\alpha = 0.005$  per  
tail).

Constituent: Cobalt Analysis Run 11/2/2021 10:38 AM View: Appendix IV Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-2



### Sen's Slope Estimator

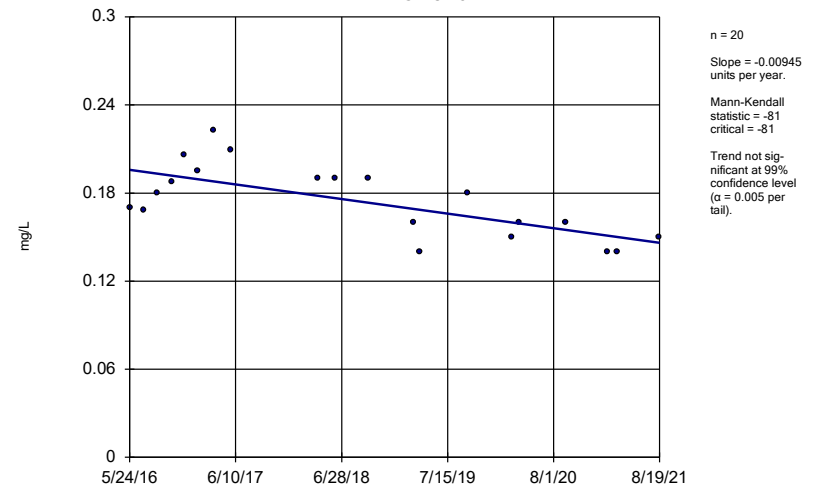
HGWA-6 (bg)



Constituent: Cobalt Analysis Run 11/2/2021 10:38 AM View: Appendix IV Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator

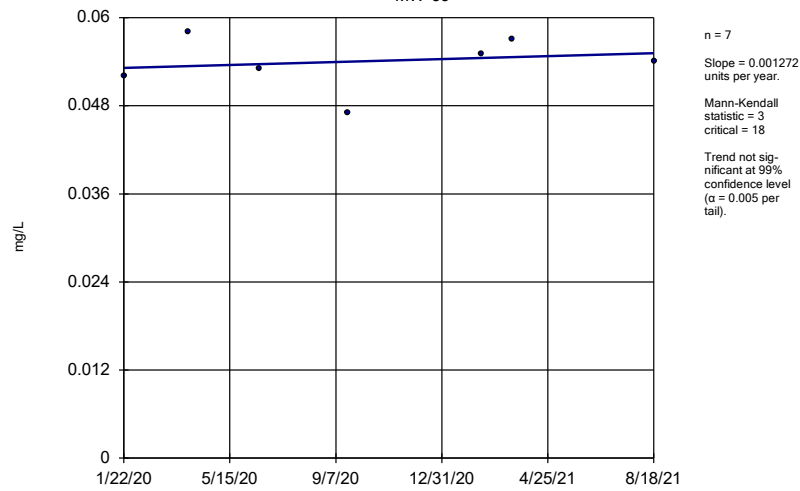
HGWC-18



Constituent: Cobalt Analysis Run 11/2/2021 10:38 AM View: Appendix IV Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator

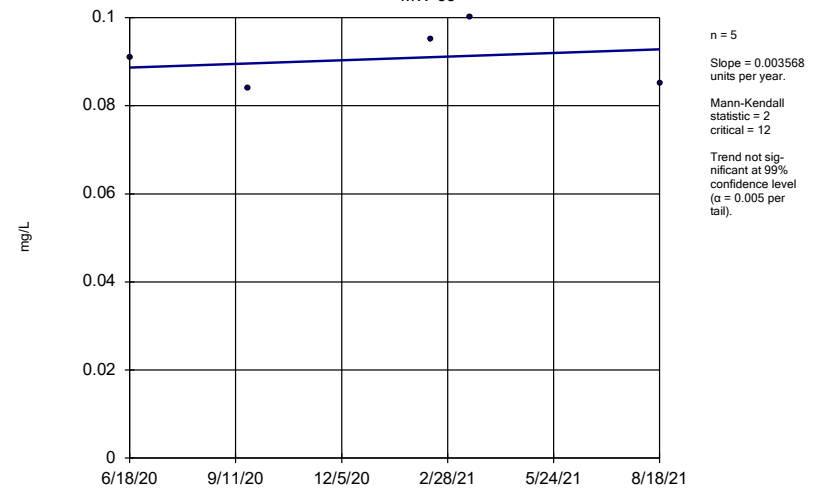
MW-33



Constituent: Cobalt Analysis Run 11/2/2021 10:38 AM View: Appendix IV Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-2

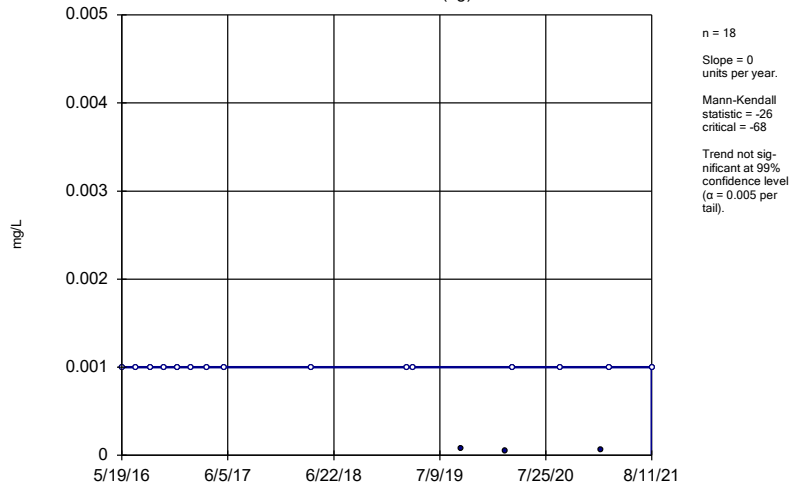
### Sen's Slope Estimator

MW-35



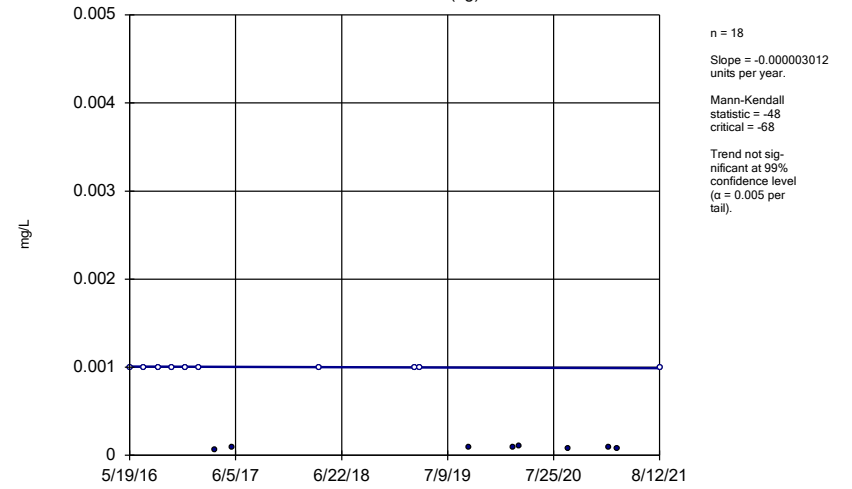
Constituent: Cobalt Analysis Run 11/2/2021 10:38 AM View: Appendix IV Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator HGWA-1 (bg)



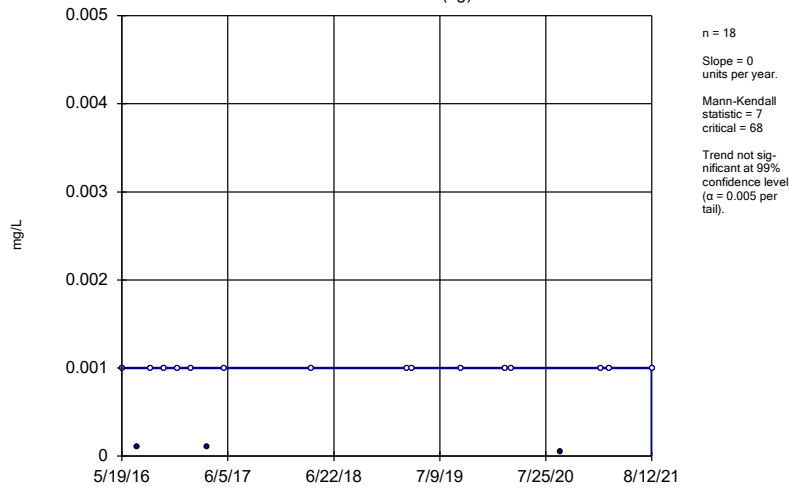
Constituent: Lead Analysis Run 11/2/2021 10:38 AM View: Appendix IV Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator HGWA-2 (bg)



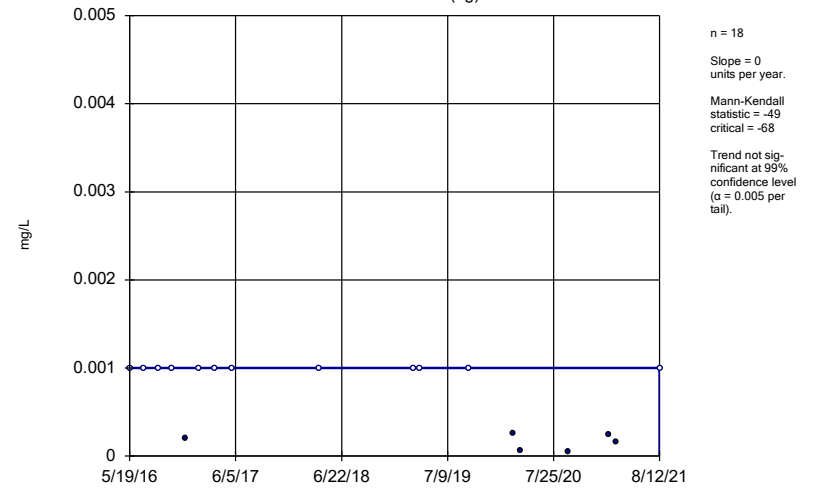
Constituent: Lead Analysis Run 11/2/2021 10:38 AM View: Appendix IV Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator HGWA-3 (bg)



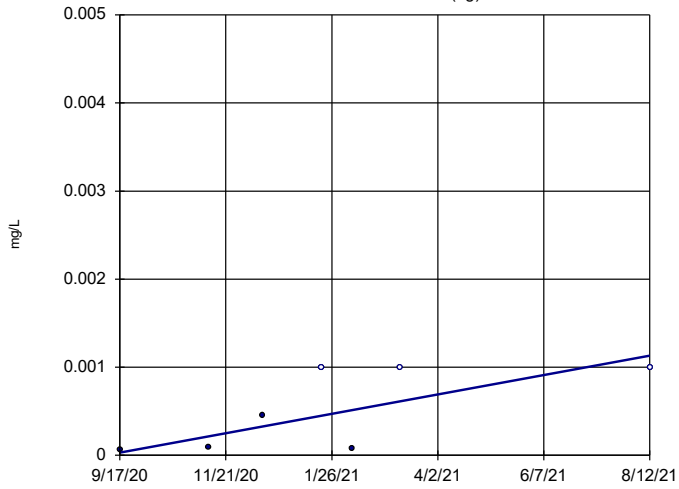
Constituent: Lead Analysis Run 11/2/2021 10:38 AM View: Appendix IV Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator HGWA-4 (bg)



Constituent: Lead Analysis Run 11/2/2021 10:38 AM View: Appendix IV Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-2

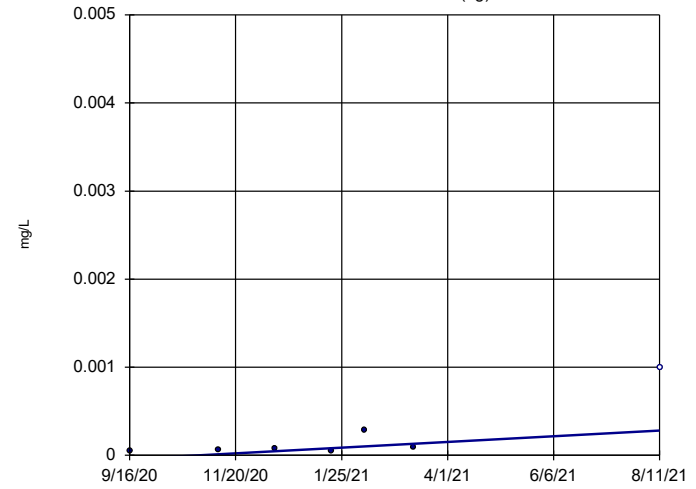
Sen's Slope Estimator  
HGWA-42D (bg)



n = 7  
Slope = 0.00122  
units per year.  
Mann-Kendall  
statistic = 12  
critical = 18  
Trend not sig-  
nificant at 99%  
confidence level  
( $\alpha = 0.005$  per  
tail).

Constituent: Lead Analysis Run 11/2/2021 10:38 AM View: Appendix IV Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-2

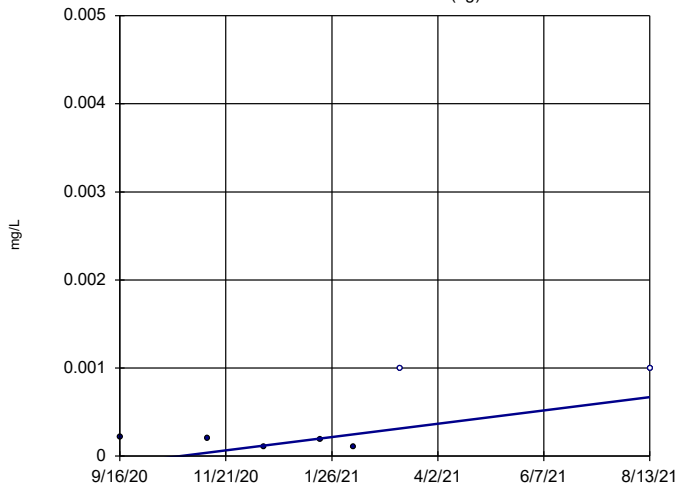
Sen's Slope Estimator  
HGWA-43D (bg)



n = 7  
Slope = 0.0003578  
units per year.  
Mann-Kendall  
statistic = 13  
critical = 18  
Trend not sig-  
nificant at 99%  
confidence level  
( $\alpha = 0.005$  per  
tail).

Constituent: Lead Analysis Run 11/2/2021 10:38 AM View: Appendix IV Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-2

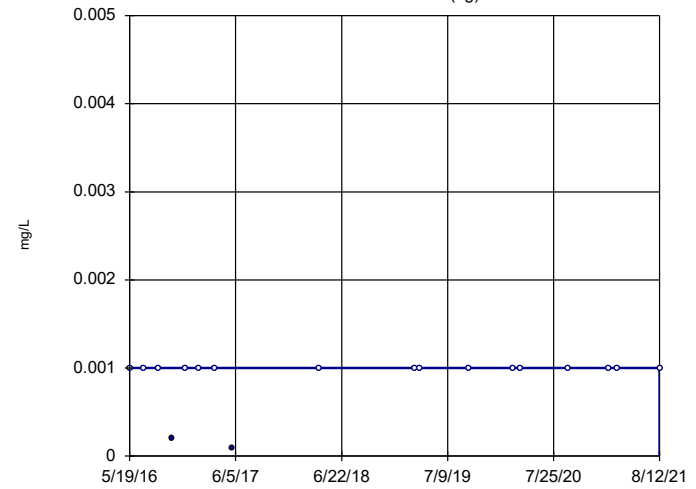
Sen's Slope Estimator  
HGWA-44D (bg)



n = 7  
Slope = 0.0008343  
units per year.  
Mann-Kendall  
statistic = 2  
critical = 18  
Trend not sig-  
nificant at 99%  
confidence level  
( $\alpha = 0.005$  per  
tail).

Constituent: Lead Analysis Run 11/2/2021 10:38 AM View: Appendix IV Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-2

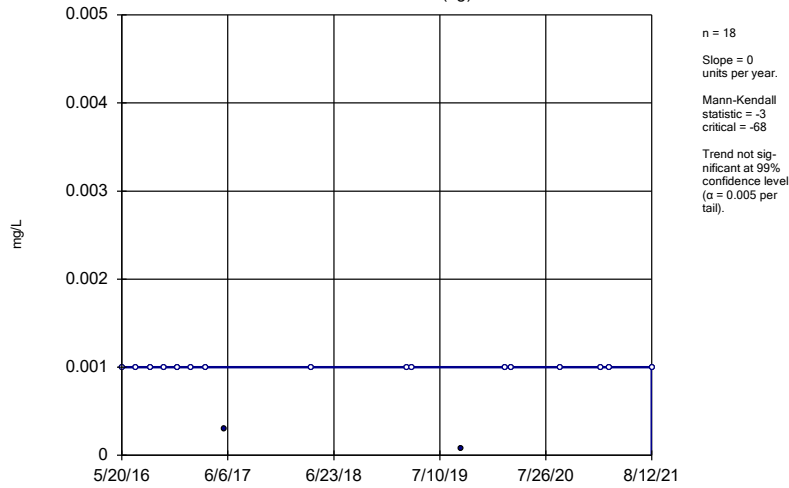
Sen's Slope Estimator  
HGWA-5 (bg)



n = 18  
Slope = 0  
units per year.  
Mann-Kendall  
statistic = 13  
critical = 68  
Trend not sig-  
nificant at 99%  
confidence level  
( $\alpha = 0.005$  per  
tail).

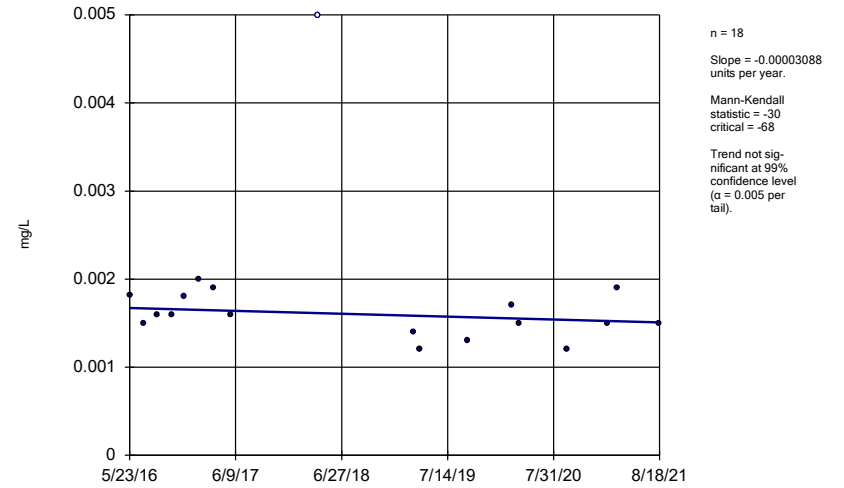
Constituent: Lead Analysis Run 11/2/2021 10:38 AM View: Appendix IV Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator HGWA-6 (bg)



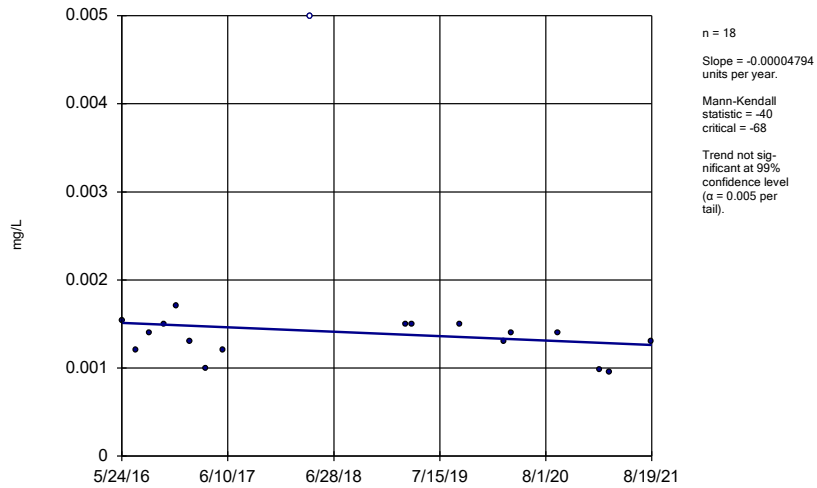
Constituent: Lead Analysis Run 11/2/2021 10:39 AM View: Appendix IV Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator HGWC-14



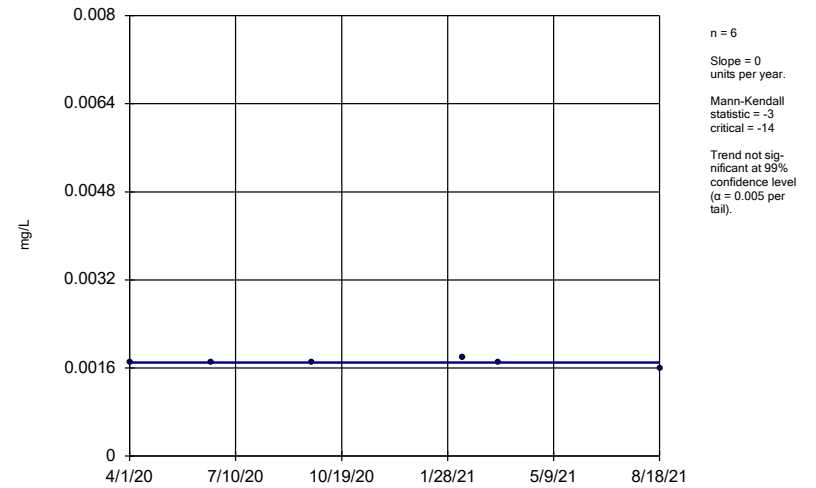
Constituent: Lead Analysis Run 11/2/2021 10:39 AM View: Appendix IV Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator HGWC-18



Constituent: Lead Analysis Run 11/2/2021 10:39 AM View: Appendix IV Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-2

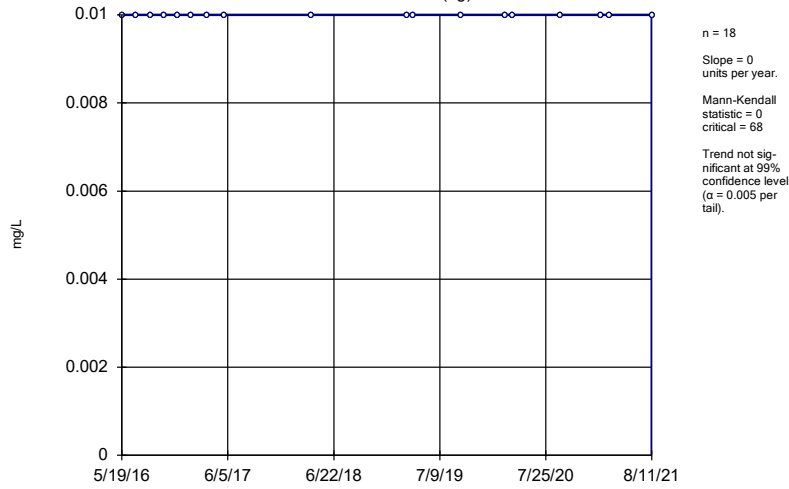
### Sen's Slope Estimator MW-33



Constituent: Lead Analysis Run 11/2/2021 10:39 AM View: Appendix IV Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator

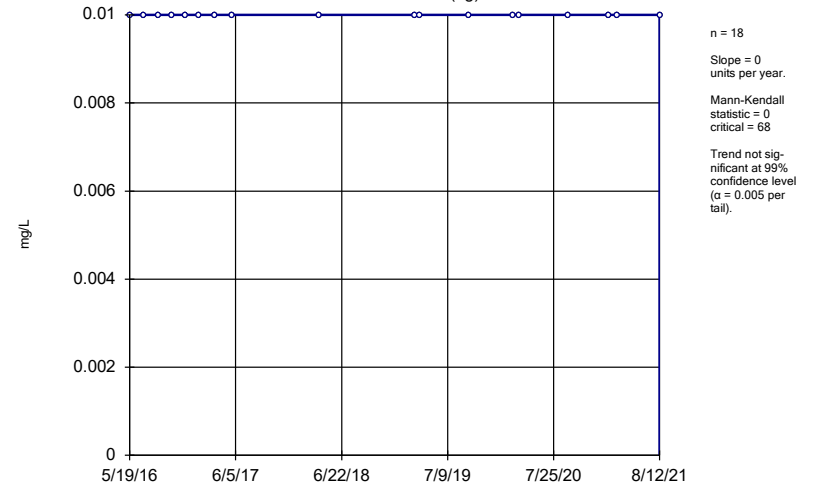
HGWA-1 (bg)



Constituent: Molybdenum Analysis Run 11/2/2021 10:39 AM View: Appendix IV Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator

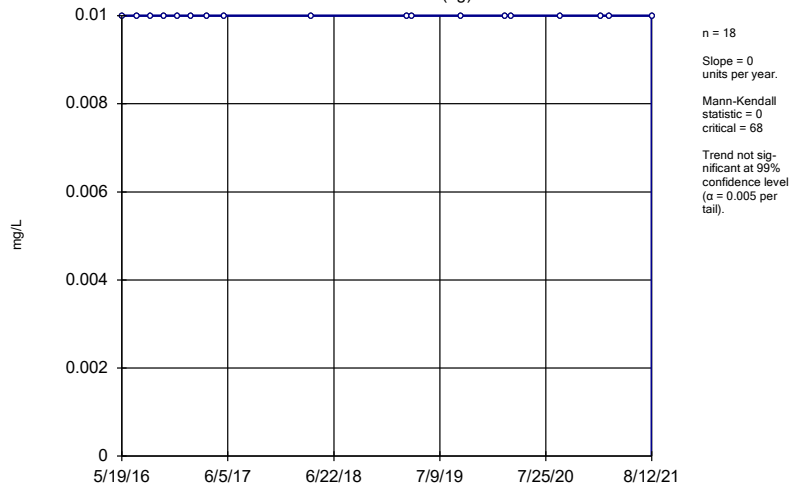
HGWA-2 (bg)



Constituent: Molybdenum Analysis Run 11/2/2021 10:39 AM View: Appendix IV Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator

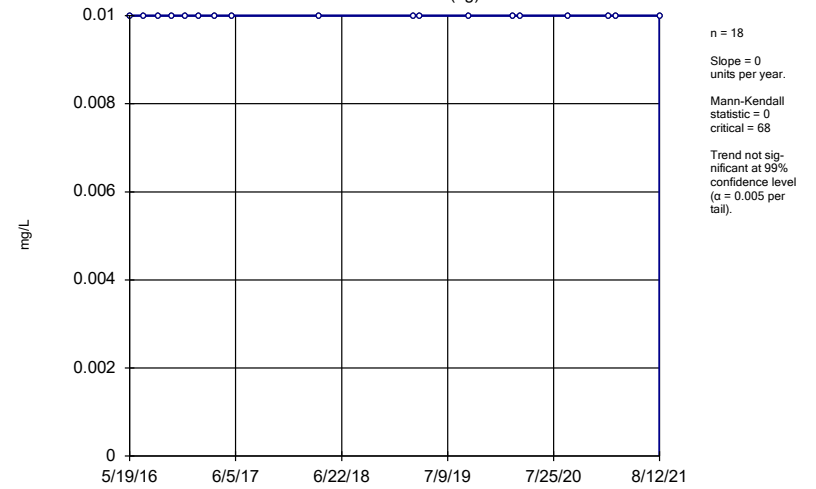
HGWA-3 (bg)



Constituent: Molybdenum Analysis Run 11/2/2021 10:39 AM View: Appendix IV Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator

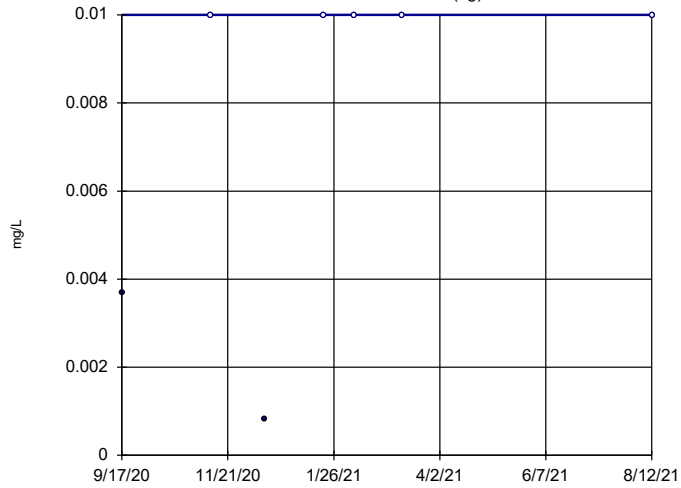
HGWA-4 (bg)



Constituent: Molybdenum Analysis Run 11/2/2021 10:39 AM View: Appendix IV Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator

HGWA-42D (bg)

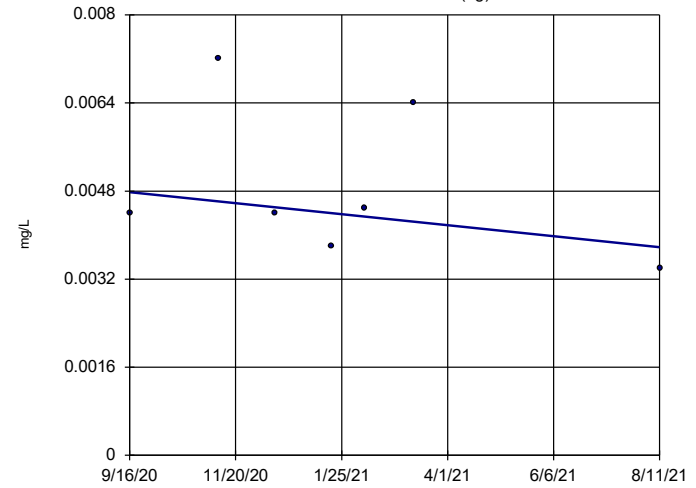


n = 7  
Slope = 0  
units per year.  
Mann-Kendall  
statistic = 7  
critical = 18  
Trend not sig-  
nificant at 99%  
confidence level  
( $\alpha = 0.005$  per  
tail).

Constituent: Molybdenum Analysis Run 11/2/2021 10:39 AM View: Appendix IV Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator

HGWA-43D (bg)

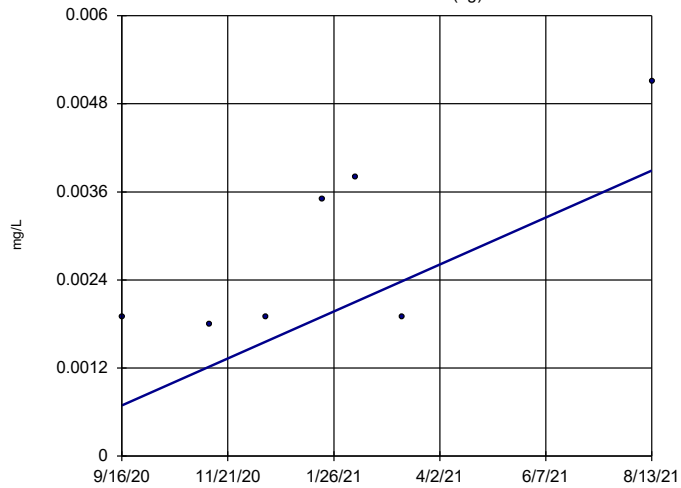


n = 7  
Slope = -0.001109  
units per year.  
Mann-Kendall  
statistic = -4  
critical = -18  
Trend not sig-  
nificant at 99%  
confidence level  
( $\alpha = 0.005$  per  
tail).

Constituent: Molybdenum Analysis Run 11/2/2021 10:39 AM View: Appendix IV Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-2

### Sen's Slope Estimator

HGWA-44D (bg)

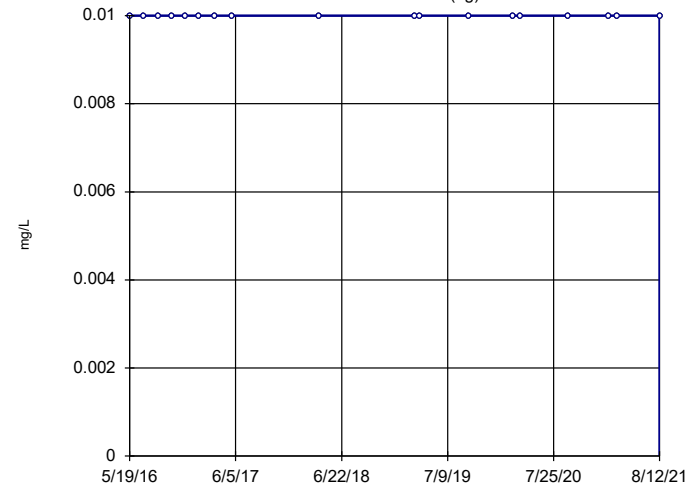


n = 7  
Slope = 0.003529  
units per year.  
Mann-Kendall  
statistic = 12  
critical = 18  
Trend not sig-  
nificant at 99%  
confidence level  
( $\alpha = 0.005$  per  
tail).

Constituent: Molybdenum Analysis Run 11/2/2021 10:39 AM View: Appendix IV Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-2

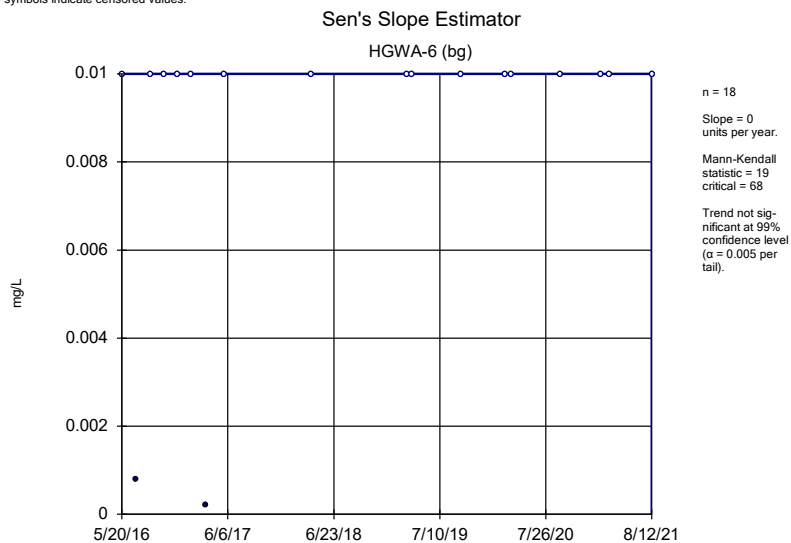
### Sen's Slope Estimator

HGWA-5 (bg)

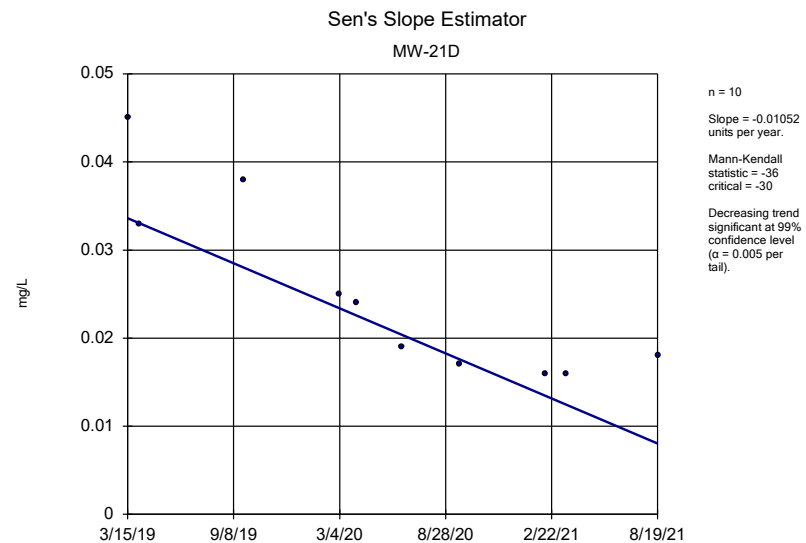


n = 18  
Slope = 0  
units per year.  
Mann-Kendall  
statistic = 0  
critical = 68  
Trend not sig-  
nificant at 99%  
confidence level  
( $\alpha = 0.005$  per  
tail).

Constituent: Molybdenum Analysis Run 11/2/2021 10:39 AM View: Appendix IV Trend Tests  
Plant Hammond Client: Southern Company Data: Hammond AP-2



Constituent: Molybdenum Analysis Run 11/2/2021 10:39 AM View: Appendix IV Trend Tests  
 Plant Hammond Client: Southern Company Data: Hammond AP-2



Constituent: Molybdenum Analysis Run 11/2/2021 10:39 AM View: Appendix IV Trend Tests  
 Plant Hammond Client: Southern Company Data: Hammond AP-2