Prepared for

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2020 SEMIANNUAL GROUNDWATER MONITORING & CORRECTIVE ACTION REPORT

GEORGIA POWER COMPANY
PLANT HAMMOND ASH POND 1 (AP-1)

Prepared by

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CERTIFICATION STATEMENT

This *2020 Semiannual Groundwater Monitoring & Corrective Action Report, Georgia Power Company - Plant Hammond – Ash Pond 1 (AP-1)* has been prepared in compliance with the United States Environmental Protection Agency coal combustion residual rule [40 Code of Federal Regulations (CFR) 257 Subpart D], specifically 40 CFR 257.90(e), and the Georgia Environmental Protection Division Rules for Solid Waste Management 391-3-4-.10 by a qualified groundwater scientist or engineer with Geosyntec Consultants.

August 31, 2020

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF APPENDICES

LIST OF ACRONYMS

ACM	Assessment of Corrective Measures
AP	ash pond
CCR	coal combustion residuals
CFR	Code of Federal Regulations
CFS	Civil Field Services
cm/sec	centimeters per second
DO	dissolved oxygen
ft	feet
ft/day	feet per day
ft/ft	feet per foot
GA EPD	Georgia Environmental Protection Division
Georgia Power	Georgia Power Company
GWPS	Groundwater Protection Standard
HAR	Hydrogeologic Assessment Report
MCL	Maximum Contaminant Level
K_h	horizontal hydraulic conductivity
mg/L	milligram per liter
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
USEPA	United States Environmental Protection Agency

1.0 INTRODUCTION

In accordance with the United States Environmental Protection Agency (USEPA) coal combustion residual (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 has prepared this *2020 Semiannual Groundwater Monitoring & Corrective Action Report* to document groundwater monitoring activities conducted at Georgia Power Company (Georgia Power) Plant Hammond (Site) Ash Pond 1 (AP-1). GA EPD Rules for Solid Waste Management 391-3-4-.10(6)(a) adopt the Federal CCR rule by reference. For ease of reference, the USEPA CCR rules are cited within this report. This report documents groundwater monitoring activities completed for AP-1 from January through August 2020 (referred herein as the reporting period).

Due to statistically significant levels (SSLs) of arsenic and molybdenum 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-1 in January 2019. Pursuant to 40 CFR 257.96(b), Georgia Power continues to monitor groundwater associated with AP-1 in accordance with the assessment monitoring program established for the unit in 2018, including annual and semiannual monitoring and reporting pursuant to 40 CFR 257.90 through 40 CFR 257.95 of the Federal CCR rule, and GA EPD Rules for Solid Waste Management 391-3-4-.10(6)(a).

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 decommissioned in July 2019 and no longer produce electricity.

AP-1 is a 35-acre surface impoundment located at Plant Hammond that received CCR materials from its commission in 1952 until 1969. After 1969, AP-1 was utilized as a co-treatment pond to handle return water flows from the other ponds and for recycling of process water for plant operations. Georgia Power will close AP-1 through removal of the CCR material from the CCR unit; closure activities will be conducted in accordance

with 40 CFR 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, published in 2016 to Georgia Power's CCR Rule Compliance website. Closure permit No. 057-023D(CCR) was approved by GA EPD on June 22, 2020.

1.2 Regional Geology & Hydrogeologic Setting

The following section summarizes the geologic and hydrogeologic conditions at AP-1 as described in the *Hydrogeologic Assessment Report Revision 01 – AP-1* (HAR Rev 01) submitted to GA EPD in December 2019 in support of the AP-1 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, which is characterized by Paleozoic sedimentary rocks that have been folded and faulted into the ridges and valleys that gave this region its name. Geologic mapping performed at the Site by Petrologic Solutions, Inc. under the direction of Golder (Golder, 2018) indicates that AP-1 is underlain by the middle units of the Cambrian age Conasauga Formation, consisting of mostly shaley limestone. Subsurface investigations at AP-1 describe the bedrock as limestone or shaley limestone. AP-1 is underlain primarily by five lithologic units: (i) fill, (ii) terrace alluvium, (iii) residuum, (iv) highly weathered/fractured shaley limestone bedrock, and (v) competent shaley limestone bedrock.

Based on subsurface investigations the fill material is composed of lean clay or gravelly lean clay with sand from the construction of the pond. The terrace alluvium consists of unconsolidated sediments associated with deposition from the Coosa River and Cabin Creek. Alluvium was variously described as well sorted and poorly sorted sand, clayey sand, sandy gravel, clayey gravel, or gravelly clay. The residuum clay layer or native soils have been derived from the in-place weathering of the shaley limestone bedrock. The residuum is generally described as a lean to fat clay, sometimes silty with some sand, and rarely gravel. The subsurface investigation data suggests the residuum thins out in places and the alluvial deposits is in direct contact with the upper fractured or the unweathered limestone bedrock. Just below the residuum clay layer is a gradational zone of varying proportions of clayey residuum and sand, gravel, and cobble-sized angular

pieces of partially weathered limestone, grading into a zone of fractured shaley limestone, before grading into unweathered, fresh shaley limestone bedrock. The upper highly weathered zone appears more as residuum with various sized rock fragments. The lower zone becomes less clayey with depth and is estimated to be approximately 10 feet thick. The limestone is described as medium to dark gray, very finely laminated with lighter and darker gray layers, and contains interbeds of calcareous shale.

1.2.2 Hydrogeologic Setting

The uppermost aquifer at AP-1 is a regional groundwater aquifer that occurs in the terrace alluvium, residuum, and the weathered and fractured bedrock. The uppermost aquifer is considered to be unconfined; however, localized, semi-confined conditions may be encountered due to the low-permeability clayey nature of the residual soils, or as a result of perched groundwater or poorly interconnected fracture networks in the bedrock. Based on observations of soil types and horizontal conductivity values, the movement of groundwater in the soil, and to some degree the highly weathered bedrock zone, can be characterized as low-to moderate permeability, porous media flow. Groundwater flow in the more competent underlying bedrock is characterized as fracture flow. Groundwater flow in the vicinity of AP-1 is to the east and south.

1.3 Groundwater Monitoring Well Network

In accordance with 40 CFR 257.91, a groundwater monitoring system was installed at AP-1 that (1) consists of a sufficient number of wells, (2) is installed at appropriate locations and depths to yield groundwater samples from the uppermost aquifer, and (3) represents 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.

The certified compliance monitoring well network for AP-1 consists of ten monitoring wells. The well network was certified by a professional engineer (PE) on October 17, 2017; the certification is maintained in the AP-1 Operating Record.

As part of the assessment program, ten additional groundwater monitoring wells were installed in 2018, 2019, and 2020 to provide additional data to characterize flow conditions downgradient of AP-1 and to horizontally and vertically delineate SSLs of arsenic and molybdenum. Wells MW-19, MW-20, and MW-29 were installed to provide horizontal delineation, and wells MW-24D, MW-25D, MW-26D, MW-27D, MW-28D,

MW-30D, and MW-40D were installed to provide vertical delineation. The delineation well network was supplemented by adding piezometers MW-5, MW-6, and MW-7, which were originally installed in 2014 to gauge water levels downgradient of AP-1. These three piezometers were suitably located downgradient of AP-1 and therefore reclassified as horizontal delineation wells. Pursuant to 40 CFR 257.195(g)(1)(iv), these delineation wells will continue to be sampled concurrently with the compliance monitoring well network.

A network of piezometers has been installed at the Site that are used to gauge water levels to define groundwater flow direction and gradients. There are three piezometers (AP1A-1, MW-1, MW-8) used to gauge groundwater levels in vicinity of AP-1.

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

2.0 GROUNDWATER MONITORING ACTIVITIES

In accordance with 40 CFR 257.90(e), the following describes monitoring-related activities performed during the reporting period and discusses any change in status of the monitoring program. All groundwater sampling was performed in accordance with 40 CFR 257.93.

2.1 Monitoring Well Installation and Maintenance

One additional groundwater monitoring well (MW-40D) was installed in April 2020 to vertically delineate groundwater conditions adjacent to well HGWC-7, MW-28D, and MW-30D. The location of well MW-40D is shown on **Figure 2**; well construction detail is also provided in **Table 1**. A well installation report that includes detailed boring and well construction logs for MW-40D is provided in **Appendix A**. The installation report was submitted to GA EPD in July 2020.

The AP-1 well network was re-surveyed by GEL Solutions on May 11-14, 2020. The top of the PVC well casing [top of casing (TOC) elevation] and the survey pin installed at each 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. The new survey data are incorporated into this report's applicable tables. A copy of the well survey data certified by a Georgia-licensed surveyor is included with the well installation report provided in **Appendix A**. A set of revised boring and well constructions logs that incorporate the new survey data will be submitted to EPD under separate cover in September 2020.

The well and piezometer networks are inspected during each groundwater monitoring event using GA EPD-based inspection criteria. Any issues identified with the wells (e.g., clogged weep holes within the outer protective casing, faded well identification signage, rusted locks and/or latches, etc.) are addressed before the following groundwater sampling event. The well inspection forms for the reporting period are provided in **Appendix B**.

2.2 Assessment Monitoring

Georgia Power initiated an assessment monitoring program for groundwater at AP-1 in January 2018. Statistical analyses of the 2018 assessment monitoring data identified an

SSL of arsenic in well HGWC-13 and SSLs of molybdenum in wells HGWC-7, HGWC-8, HGWC-9, HGWC-11, HGWC-12, and HGWC-13. Pursuant to 40 CFR 257.96, an ACM was initiated for AP-1 in January 2019. An *Assessment of Corrective Measures Report* (ACM Report) was subsequently prepared for AP-1 (Geosyntec, 2019b) and submitted to GA EPD in June 2019 and posted to the CCR compliance website in July 2019. In accordance with 40 CFR 257.96(b), groundwater continues to be monitored at AP-1 under the assessment monitoring program while the ACM phase is implemented. Assessment monitoring results from the 2019 monitoring events were summarized in the *2019 Annual Groundwater Monitoring and Corrective Action Report*, submitted in January 2020 (Geosyntec, 2020a).

The initial annual Appendix IV sampling event was conducted in early March 2020 with the first semiannual assessment monitoring event occurring in late March and early April 2020. The number of groundwater samples collected for analysis and the dates the samples were collected at AP-1 during this reporting period is summarized in **Table 2**. Details of these events and analytical results are discussed in Section 3, while the statistical results are discussed in Section 4.

2.3 Additional Groundwater Sampling

Supplemental groundwater sampling events were conducted during the reporting period to collect additional data in support of the continued evaluation of corrective measures as presented in ACM Report (Geosyntec, 2019b). The supplementary data will be used (i) to evaluate attenuation mechanisms and rates and aquifer capacity for attenuation; (ii) conduct geochemical fingerprinting of the groundwater relative to source water; and (iii) and establish a set of groundwater quality data for newly installed delineation wells. The scope of these additional efforts and associated results are presented in the *Semiannual Remedy Selection and Design Progress Report* provided in **Appendix C**.

3.0 SAMPLING METHODOLOGY & 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-1 during the reporting period.

3.1 Groundwater Level Measurement

Prior to each sampling event, a synoptic round of depth to groundwater level measurements were recorded from the AP-1 wells and piezometers and used to calculate the corresponding groundwater elevations. The calculated groundwater elevations for the March 2, 2020 and March 23, 2020 events are presented in **Table 3**. The May 2020 survey data was used to calculate the groundwater elevations for both events. The March 2 and March 23, 2020 elevations reported using the new survey data are generally representative of the groundwater elevations reported for prior monitoring events.

The groundwater elevation data were used to prepare potentiometric surface maps for the March 2, 2020 and March 23, 2020 events, which are presented on **Figures 3** and **4**, respectively. Groundwater in the AP-1 area flows under the influence of topography from slightly higher elevations on the north side of the Site in a generally easterly and southerly direction.

3.2 Groundwater Gradient and Flow Velocity

The groundwater hydraulic gradients within the uppermost aquifer beneath AP-1 were calculated using the groundwater elevation data from the March 2, 2020 and March 23, 2020 events. Hydraulic gradients were calculated along the flow path south of AP-1 between wells HGWC-13 and MW-7 and between wells HGWC-8 and MW-20 along the flow path east of AP-1. The supporting calculations are presented in **Table 4.** The table also presents the average hydraulic gradients calculated from the two measurement events. The general trajectory of the flow paths used in the calculations and associated potentiometric contour lines are shown on **Figures 3** and **4**.

The average hydraulic gradients along the southerly and easterly groundwater flow path lines associated with AP-1 are 0.024 feet per foot (ft/ft) and 0.024 ft/ft, respectively.

The approximate horizontal flow velocities associated with AP-1 were calculated using the following derivative of Darcy's Law. The calculations are presented on **Table 4**.

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

where:

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

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

i = Horizontal hydraulic gradient $\left(\frac{feet}{feet}\right)$

n_e = Effective porosity

The average horizontal hydraulic conductivity for AP-1 of 11.82 feet per day (ft/day) was computed from slug test data derived from ten locations across the AP-1 area and presented in the HAR Rev 01. An estimated effective porosity of 0.15 is used to represent average conditions at AP-1, derived based on review of literature, observed site lithology, and professional judgement. With these variables determined, and accounting for the averaged hydraulic gradient discussed above for the March 2, 2020 and March 23, 2020 events, the average groundwater flow velocity in the vicinity of AP-1 was calculated to be 1.9 ft/day (i.e., average of the southerly and easterly flow velocities). The flow velocity calculations are provided in **Table 4**.

3.3 Groundwater Sampling Procedures

Groundwater samples were collected from the compliance monitoring and delineation well networks using low-flow sampling procedures in accordance with 40 CFR 257.93(a). Nineteen of the 24 wells were purged and sampled using the dedicated bladder pump with tubing. Wells HGWC-10, HGWC-11, and MW-27D, and piezometer MW-1 were sampled using a peristaltic pump equipped with new disposable polyethylene tubing. Well MW-40D was sampled using non-dedicated bladder pump with disposable polyethylene tubing or using a bailer. All non-disposable equipment was decontaminated before use and between well locations.

A SmarTroll or AquaTroll (In-Situ field instrument) was used to monitor and record field water quality parameters [i.e., pH, conductivity, oxidation-reduction potential (ORP), temperature, and dissolved oxygen (DO)] during well purging to verify stabilization prior to sampling. Turbidity was measured using a LaMotte 2020we® portable turbidimeter. Groundwater samples were collected when the following stabilization criteria were met:

- pH ± 0.1 Standard Units (s.u.).
- Conductivity ± 5%.
- ±0.2 mg/L or ±10%, whichever is greater for DO > 0.5 mg/L. No criterion applies if DO < 0.5 mg/L, record only.
- Turbidity measured less than 10 nephelometric turbidity units (NTU).

Once stabilization was achieved, 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 forms generated during the reporting period, both for the routine assessment monitoring events and supplemental monitoring events, are provided in **Appendix D**.

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 parameters analyzed for this project. Analytical methods used for groundwater sample analysis are listed in the analytical laboratory reports included in **Appendix D**.

The groundwater analytical results from the March and March/April 2020 monitoring events and supplemental monitoring events are summarized in **Table 5**. The Pace Analytical laboratory reports associated with the results presented in **Table 5** are provided in **Appendix D** and in the *Semiannual Remedy Selection and Design Progress Report* provided in **Appendix C.**

3.5 Quality Assurance & 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, 2020b), and included the following: field duplicates, equipment blanks, and field blank samples. QA/QC samples were collected in laboratory-provided bottles 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 associated data validation report is provided in **Appendix D** with the laboratory reports.

4.0 STATISTICAL ANALYSIS

The following section summarizes the statistical analysis of Appendix III groundwater monitoring data performed pursuant to 40 CFR 257.93. In addition, pursuant to 40 CFR 257.95(d)(2), Georgia Power established groundwater protection standards (GWPS) for the Appendix IV constituents and completed statistical analyses of the Appendix IV groundwater monitoring data obtained during the March/April assessment monitoring event. The report generated from the analyses is provide in **Appendix E**. The March/April 2020 data were analyzed by Groundwater Stats Consulting (GSC) (GSC, 2020).

4.1 Statistical Methods

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

Appendix III statistical analysis was performed to determine if Appendix III constituents have returned to background levels. Appendix IV constituents were evaluated to determine if concentrations statistically exceeded the established state 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 40 CFR 257.95(d)(2) and presented in **Table 6**.

4.1.1 Appendix III Statistical Methods

Statistical tests used to evaluate the groundwater monitoring data consist of interwell prediction limits combined with a 1-of-2 verification resample plan for each of the Appendix III parameters. Interwell prediction limits (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 parameter. The most recent sample from each downgradient well is compared to the background limit to determine whether there are significant statistical increases (SSIs). An "initial

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

4.1.2 Appendix IV Statistical Methods

To statistically compare groundwater data to GWPS, confidence intervals are constructed for each of the detected Appendix IV constituents in each downgradient compliance monitoring well. 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, a statistically significant level (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 6**.

4.2 Statistical Analyses Results

Based on review of the Appendix III statistical analysis, groundwater conditions have not returned to background and assessment monitoring should continue. Based on the statistical analysis of Appendix IV constituents, the following constituents exceeded the state or federal GWPS for the March/April 2020 assessment monitoring event:

AP-1 (Federal CCR Rule):

- Arsenic: HGWC-13;
- Molybdenum: HGWC-8

AP-1 (GA EPD CCR Rule):

- Arsenic: HGWC-13;
- Lithium: HGWC-13;
- Molybdenum: HGWC-7, HGWC-8, HGWC-9, HGWC-11, HGWC-12, and HGWC-13.

The semiannual statistical evaluation results are consistent with the 2019 reporting year statistical results except the SSL exceedance of lithium in well HGWC-13 during this reporting period. A groundwater exceedance notification acknowledging the March/April 2020 SSLs was placed in the Operating Record on August 31, 2020, pursuant to 40 CFR 257.95(g).

4.3 Delineation Data

The following provides a summary of the statistical analyses performed for select delineation wells to assess the presence of SSLs of Appendix IV constituents. GSC

applied the methods described in Sections 4.1.2; the report generated from the analyses is provided as an addendum to the main statistical report in **Appendix E**. Due to non-routine (or ACM investigation) sampling, some Appendix IV constituents at a well location have differing number of data. GSC also statistically analyzed available Appendix III data as described in Section 4.1.1 and determined that SSIs were reported in the delineation wells. However, the focus of the following discussion relates to the Appendix IV data analysis to determine possible SSLs.

In accordance with Section 21.1.1 of the Unified Guidance (USEPA, 2009), four independent data is the minimum population size recommended to construct confidence intervals required to assess SSLs for Appendix IV constituents. At the time of this report, only the following delineation wells met this criteria: MW-5, MW-6, MW-7, MW-19, MW-20, MW-24D, MW-25D, MW-26D, MW-27D, MW-28D, MW-29, and MW-30D. The data set for delineation well MW-40D is limited to less than four independent datums and therefore not subject to the statistical analyses.

Confidence intervals were constructed for each of the detected Appendix IV constituents in the analyzed delineation wells and compared to both the state and federal GWPS. The analysis identified SSLs of the following Appendix IV constituents:

AP-1 Delineation Wells (Federal CCR Rule):

- Lithium: MW-25D, MW-30D;

AP-1 Delineation Wells (GA EPD CCR Rule):

- Lithium: MW-25D, MW-30D;
- Molybdenum: MW-19.

Based on the Appendix IV groundwater data from this reporting period, arsenic, lithium and molybdenum concentrations in horizontal delineation wells MW-5, MW-6, MW-7, MW-20, and MW-29 are below state and federal GWPS, and therefore, delineate these constituents to within the property boundary. The arsenic, lithium, and molybdenum concentrations reported in well HGWC-13 are vertically delineated to below the applicable state and federal GWPS by well MW-24D. Similarly, the molybdenum concentrations in wells MW-25D, MW-26D, MW-27D, and MW-28D are less than the GWPS, and therefore, vertically delineate molybdenum SSLs in wells HGWC-11, HGWC-12, HGWC-9, HGWC-8, and HGWC-7, respectively (the location of MW-25D

delineates both HGWC-11 and HGWC-12). The molybdenum and lithium SSLs identified in MW-19 and MW-25D, respectively, are horizontally delineated to below the state and federal GWPS by MW-7. Georgia Power will continue routine monitoring of MW-19 and MW-25D and will implement the necessary measures to further vertically delineate Appendix IV constituents in the vicinity of these wells if/as conditions change.

A demonstration document is being prepared to address the lithium SSL identified in MW-30D. The document will present the following lines of evidence that a release from AP-1 is not the source of the lithium SSL in MW-30D or other potential SSLs (molybdenum and fluoride) in this well or MW-40D but rather due to natural variation of groundwater conditions.

- A geochemical analysis was conducted to assess water samples collected from piezometers screened within the AP-1 CCR materials (PMW-01, PMW-02) relative to groundwater samples collected from wells located upgradient and downgradient of the unit. The results of the analysis provide compelling geochemical evidence that AP-1 is not the source of the water sampled in MW-30D or MW-40D. Details of the analysis are provided in the *Semiannual Remedy Selection and Design Progress Report* provided in **Appendix C.**

- Groundwater concentrations of fluoride and lithium are consistently reported an order of magnitude greater in MW-30D than the two pore water piezometers. Similarly, the fluoride concentration in MW-40D has been reported higher than the two pore water piezometers during two of the last three sampling events. Therefore, the elevated fluoride, lithium, and molybdenum concentrations reported in MW-30D and the elevated molybdenum and historically elevated fluoride concentrations reported in MW-40D are likely due to natural variation of groundwater conditions.

In late August 2020, Georgia Power installed additional background wells upgradient to AP-1 to better characterize the deeper zones of the aquifer. The wells will be sampled in September 2020 and the groundwater quality data obtained from these wells will complement the geochemical analysis results in support of completing the demonstration document. The demonstration document will be submitted to EPD either with or before submitting the *2020 Annual Groundwater Monitoring and Corrective Action Report* for AP-1 in January 2021.

5.0 MONITORING PROGRAM STATUS

5.1 Assessment Monitoring Status

Pursuant to 40 CFR 257.96(b), Georgia Power will continue to monitor the groundwater at AP-1 in accordance with the assessment monitoring program regulations of 40 CFR 257.95 while ACM efforts are implemented to address SSL concentrations of arsenic, lithium, and molybdenum in select AP-1 wells. Pursuant to 40 CFR 257.195(g) (1)(iv), the additional delineation wells will continue to be sampled as part of the ongoing semiannual assessment groundwater monitoring program.

5.2 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 C**. 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 semiannual reporting period.

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

6.0 CONCLUSIONS & FUTURE ACTIONS

This *2020 Semiannual Groundwater Monitoring & Corrective Action Report* for Plant Hammond AP-1 was prepared to fulfill the requirements of USEPA's CCR Rule and GA EPD Rules for Solid Waste Management 391-3-4-.10. Statistical evaluations of the groundwater monitoring data for AP-1 identified the presence of SSLs of arsenic in well HGWC-13, molybdenum in well HGWC-8, and lithium in delineation wells MW-25D and MW-30D above the state and federal GWPS. The analyses also identified SSLs of lithium in well HGWC-13 and molybdenum in wells HGWC-7, HGWC-9, HGWC-11, HGWC-12, HGWC-13, and MW-19 above the state GWPS, but not the federal GWPS.

Georgia Power will continue to monitor AP-1 groundwater under the assessment monitoring program and proceed with the evaluation of remedies presented in the ACM Report (Geosyntec, 2019b). A demonstration document will be submitted to GA EPD by January 2021 that presents evidence that the elevated concentrations of lithium, fluoride, and molybdenum in MW-30D and MW-40D originate from natural sources and not from AP-1. To further support both the preparation of the demonstrations document and ACM efforts, Georgia Power installed six additional monitoring wells upgradient of the four Hammond CCR units (AP-1, AP-2, AP-3, and AP-4) in late August 2020. The six new wells will be screened to characterize groundwater conditions in zones of the aquifer deeper than the six wells currently used to establish background conditions the Site (i.e., HGWA-1, HGWA-2, HGWA-3, HGWA-4, HGWA-5, and HGWA-6). Georgia Power will continue routine monitoring of MW-19 and MW-25D and will implement the necessary measures to further vertically delineate Appendix IV constituents in the vicinity of these wells if/as conditions change.

The second semiannual assessment monitoring event is scheduled to occur in September 2020.

7.0 REFERENCES

Geosyntec Consultants, 2019a. *2018 Annual Groundwater Monitoring and Corrective Action Report - Plant Hammond Ash Ponds 1 & 2 (AP-1 and AP-2)*. January 2019.

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TABLES

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

Well ID	Hydraulic Location	Installation Date	Northing [1]	Easting [1]	Ground Surface Elevation (ft)	Top of Casing Elevation [2] (ft)	Top of Screen Elevation [2] (ft)	Bottom of Screen Elevation [2] (ft)	Well Depth (ft BTOC) [3]	Screen Interval Length (ft)
Compliance Monitoring Well										
HGWA-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
HGWC-7	Downgradient	12/3/2015	1549520.67	1942319.75	576.55	579.18	561.55	551.55	27.96	10
HGWC-8	Downgradient	12/8/2015	1549114.61	1942392.56	577.14	579.82	564.64	554.64	25.51	10
HGWC-9	Downgradient	12/9/2015	1548693.30	1942215.03	577.72	580.36	543.72	533.72	46.97	10
HGWC-10	Downgradient	12/8/2015	1548469.25	1941644.43	576.76	579.37	566.76	556.76	22.94	10
HGWC-11	Downgradient	12/15/2015	1548477.91	1941146.79	578.12	580.67	565.19	555.19	25.78	10
HGWC-12	Downgradient	12/9/2015	1548476.53	1941152.34	578.14	580.73	555.64	545.64	35.42	10
HGWC-13	Downgradient	12/10/2015	1548628.03	1940900.60	592.94	595.76	560.94	550.94	45.15	10
Piezometer										
AP1A-1	Upgradient	12/15/2015	1550080.01	1941614.12	584.78	587.44	575.84	565.84	21.93	10
MW-1	Upgradient	12/2/2014	1549938.24	1941589.06	585.63	588.66	567.93	557.93	31.06	10
MW-8	Downgradient	10/29/2014	1548171.86	1940016.70	584.25	586.93	565.05	555.05	32.28	10
Delineation Monitoring Well										
MW-5	Downgradient	11/4/2014	1548436.02	1942448.85	578.00	581.14	560.70	550.70	30.84	10
MW-6	Downgradient	11/4/2014	1548383.12	1941689.01	579.18	581.84	559.28	549.28	32.96	10
MW-7	Downgradient	10/30/2014	1548230.47	1941087.44	574.94	577.73	561.24	551.24	26.89	10
MW-19	Downgradient	9/26/2018	1548422.94	1940943.01	577.46	580.65	561.45	551.45	29.53	10
MW-20	Downgradient	9/27/2018	1549029.68	1942736.85	575.96	579.00	554.96	544.96	34.37	10
MW-24D	Downgradient	11/7/2018	1548638.80	1940900.37	592.91	570.96	532.91	522.91	48.38	10
MW-25D	Downgradient	11/6/2018	1548473.00	1941162.20	577.71	580.59	527.71	517.71	63.21	10
MW-26D	Downgradient	11/14/2018	1548699.91	1942222.36	577.63	580.41	512.63	502.63	78.11	10
MW-27D	Downgradient	11/8/2018	1549103.57	1942390.80	576.84	579.70	526.84	516.84	63.19	10
MW-28D	Downgradient	11/13/2018	1549510.90	1942321.14	576.20	579.08	531.20	521.20	58.21	10
MW-29	Downgradient	11/13/2018	1549437.67	1942633.60	572.14	575.06	557.14	547.14	28.25	10
MW-30D	Downgradient	6/19/2019	1549530.00	1942318.45	576.20	578.59	481.20	471.20	107.72	10
MW-40D	Downgradient	4/29/2020	1549542.29	1942316.55	576.41	578.92	450.41	440.41	138.84	10

Notes:
ft = feet
ft BTOC = feet below top of casing
(1) Coordinates in North American Datum (NAD) 1983, State Plane, Georgia-West, feet. Survey completed by GEL Solutions dated May 19, 2020.
(2) Elevations referenced to the North Amervican Vertical Datum of 1988 (NAVD88). Survey completed by GEL Solutions dated May 19, 2020.
(3) Total well depth accounts for sump if data provided on well construction logs.

Table 2
Groundwater Sampling Event Summary
Plant Hammond AP-1, Floyd County, Georgia

Well ID	Hydraulic Location	Mar 2-4, 2020	Mar 23-Apr 2, 2020	Apr 9, 2020	May 11, 2020	May 19, 2020	Jun 16-Jun 19, 2020	Status of Monitoring Well
Purpose of Sampling Event:		**App. IV Annual**	**Assessment**	**Supplemental Delineation**	**Supplemental Delineation**	**Supplemental Delineation**	**Supplemental Delineation**	
Compliance Monitoring Well								
HGWA-1	Upgradient	X	X	--	--	--	X	Assessment
HGWA-2	Upgradient	X	X	--	--	--	--	Assessment
HGWA-3	Upgradient	X	X	--	--	--	X	Assessment
HGWC-7	Downgradient	X	X	--	--	--	X	Assessment
HGWC-8	Downgradient	X	X	--	--	--	X	Assessment
HGWC-9	Downgradient	X	X	--	--	--	--	Assessment
HGWC-10	Downgradient	X	X	--	--	--	--	Assessment
HGWC-11	Downgradient	X	X	--	--	--	--	Assessment
HGWC-12	Downgradient	X	X	--	--	--	--	Assessment
HGWC-13	Downgradient	X	X	--	--	--	--	Assessment
Delineation Monitoring Well								
MW-5	Downgradient	X	X	--	--	--	--	Assessment
MW-6	Downgradient	X	X	--	--	--	--	Assessment
MW-7	Downgradient	X	X	--	--	--	--	Assessment
MW-19	Downgradient	X	X	--	--	--	--	Assessment
MW-20	Downgradient	X	X	--	--	--	--	Assessment
MW-24D	Downgradient	X	X	--	--	--	--	Assessment
MW-25D	Downgradient	X	X	--	--	--	--	Assessment
MW-26D	Downgradient	X	X	--	--	--	--	Assessment
MW-27D	Downgradient	X	X	--	--	--	--	Assessment
MW-28D	Downgradient	X	X	--	--	--	--	Assessment
MW-29	Downgradient	X	X	--	--	--	--	Assessment
MW-30D	Downgradient	X	X	X	--	--	X	Assessment
MW-40D	Downgradient	--	--	--	X	X	X	Assessment
Piezometer								
MW-1	Upgradient	--	--	--	--	--	X	(1)

Note:
(1) Well MW-1 sampled in support of current ACM efforts but has not be reclassified part of the compliance or delineation well networks.

Table 3
Summary of Groundwater Elevations
Plant Hammond AP-1, Floyd County, Georgia

Well ID	Top of Casing Elevation [1] (ft)	March 2, 2020		March 23, 2020	
		Depth to Water (ft BTOC)	Groundwater Elevation (ft)	Depth to Water (ft BTOC)	Groundwater Elevation (ft)
Compliance Monitoring Well Network					
HGWA-1	595.21	7.40	587.81	7.37	587.84
HGWA-2	587.92	4.91	583.01	5.15	582.77
HGWA-3	587.74	4.47	583.27	4.69	583.05
HGWC-7	579.18	3.58	575.60	3.29	575.89
HGWC-8	579.82	2.15	577.67	2.35	577.47
HGWC-9	580.36	8.89	571.47	11.35	569.01
HGWC-10	579.37	10.71	568.66	9.80	569.57
HGWC-11	580.67	9.56	571.11	13.00	567.67
HGWC-12	580.73	10.09	570.64	13.37	567.36
HGWC-13	595.76	17.61	578.15	17.76	578.00
Piezometer					
AP1A-1	587.44	5.84	581.60	5.25	582.19
MW-1	588.66	7.15	581.51	6.51	582.15
MW-8	586.93	16.00	570.93	17.41	569.52
Delineation Monitoring Well					
MW-5	581.14	11.42	569.72	14.32	566.82
MW-6	581.84	10.96	570.88	14.25	567.59
MW-7	577.73	8.50	569.23	12.00	565.73
MW-19	580.65	7.54	573.11	9.35	571.30
MW-20	579.00	8.63	570.37	10.70	568.30
MW-24D	595.68	22.28	573.40	22.85	572.83
MW-25D	580.59	10.03	570.56	13.20	567.39
MW-26D	580.41	8.94	571.47	11.44	568.97
MW-27D	579.70	2.15	577.55	2.62	577.08
MW-28D	579.08	3.56	575.52	3.23	575.85
MW-29	575.06	3.61	571.45	3.26	571.80
MW-30D	578.59	1.80	576.79	3.69	574.90
MW-40D	578.92	--	--	--	--
Surface Water Gauge (ft MSL)					
AP-1	--	--	584.80	--	584.90[2]
Coosa River	--	--	568.50	--	565.50

Notes:
-- = not applicable
ft BTOC = feet below top of casing
(1) Elevations referenced to the North American Vertical Datum of 1988 (NAVD88). Survey data recorded on May 11-14, 2020.
(2) AP-1 staff gauge recorded March 24, 2020.

Table 4
Groundwater Gradient and Flow Velocity Calculations
Plant Hammond AP-1, Floyd County, Georgia

	Mar 2, 2020				Mar 23, 2020				
Flow Path Direction [1]	**h_1 (ft)**	**h_2 (ft)**	**Δl (ft)**	**Δh/Δl (ft/ft)**	**h_1 (ft)**	**h_2 (ft)**	**Δl (ft)**	**Δh/Δl (ft/ft)**	**Average Δh/Δl (ft/ft)**
Southerly Flow Path (HGWC-13 to MW-7)	578.15	569.23	450	0.020	578.00	565.73	450	0.027	0.024
Easterly Flow Path (HGWC-8 to MW-20)	577.67	570.37	350	0.021	577.47	568.30	350	0.026	0.024

			Average		
Flow Path Direction [1]	**K_h (ft/d)**	**n**	**Δh/Δl (ft/ft)**	**V (ft/d)[2]**	**V (ft/d)[3]**
Southerly Flow Path (HGWC-13 to MW-7)	11.82	0.15	0.024	1.9	1.9
Easterly Flow Path (HGWC-8 to MW-20)	11.82	0.15	0.024	1.9	

Notes:
ft = feet
ft/d = feet per day
ft/ft = feet per foot
ft/yr = feet per year
h_1, h_2 = point of interpreted groundwater elevation
Δh/Δl = hydraulic gradient
K_h = horizontal hydraulic conductivity
Δl = distance between location 1 and 2
n = effective porosity
V = groundwater flow velocity
(1) Flow path direction relative to the orientation of AP-1 and illustrated on Figures 3 and 4 of associated report.
(2) Groundwater flow velocity equation: $V = [K_h * (\Delta h/\Delta l)] / n$
(3) Average groundwater flow velocity for unit.

Table 5
Summary of Groundwater Analytical Data
Plant Hammond AP-1, Floyd County, Georgia

	Well ID:	HGWA-1	HGWA-1	HGWA-1	HGWA-2	HGWA-2	HGWA-3	HGWA-3	HGWA-3	HGWC-7	HGWC-7	HGWC-7	HGWC-8	HGWC-8	HGWC-8	HGWC-9	HGWC-9	HGWC-10	HGWC-10
	Sample Date:	3/2/2020	3/25/2020	6/16/2020	3/2/2020	3/25/2020	3/2/2020	3/25/2020	6/16/2020	3/4/2020	3/27/2020	6/17/2020	3/3/2020	3/27/2020	6/16/2020	3/4/2020	3/31/2020	3/3/2020	4/1/2020
	Parameter (1,2,3)																		
APPENDIX III	Boron*	--	0.025 J	0.021 J	--	0.039 J	--	0.0096 J	0.010 J	--	1.2	1.0	--	2.4	2.2	--	2.2	--	0.23
	Calcium*	--	127	130	--	23.0	--	89.8	85.1	--	119	112	--	133	120	--	182	--	96.2
	Chloride*	--	20.4	41.1	--	5.2	--	6.1	5.8	--	48.3	45.2	--	79.8	67.9	--	105	--	5.4
	Fluoride*	0.076 J	0.098 J	0.071 J	<0.050	<0.050	<0.050	<0.050	<0.050	0.077 J	0.059 J	0.077 J	0.45	0.46	0.45	0.080 J	0.074 J	0.11 J	0.12 J
	pH*	7.10	6.95	6.97	5.43	5.36	7.12	7.4	7.31	7.17	7.05	7.2	7.06	6.95	6.97	6.97	7.07	6.67	6.84
	Sulfate*	--	85.9	88.2	--	46.3	--	50.5	49.5	--	109	102	--	173	157	--	185	--	59.0
	TDS*	--	496	632	--	138	--	284	448	--	413	423	--	541	573	--	1010	--	290
APPENDIX IV	Antimony	<0.00027	<0.00027	--	<0.00027	<0.00027	<0.00027	<0.00027	--	<0.00027	<0.00027	--	<0.00027	<0.00027	--	0.00032 J	0.00042 J	<0.00027	<0.00027
	Arsenic+	<0.00035	<0.00035	--	0.00043 J	<0.00035	0.00040 J	<0.00035	--	<0.00035	<0.00035	--	<0.00035	<0.00035	--	<0.00035	<0.00035	<0.00035	<0.00035
	Barium	0.034	0.043	--	0.11	0.12	0.14	0.13	--	0.068	0.059	--	0.052	0.059	--	0.11	0.11	0.048	0.058
	Beryllium	<0.000074	<0.000074	--	0.00014 J	0.00016 J	<0.000074	<0.000074	--	0.000077 J	<0.000074	--	<0.000074	<0.000074	--	<0.000074	<0.000074	<0.000074	<0.000074
	Cadmium	<0.00011	<0.00011	--	<0.00011	0.00014 J	<0.00011	<0.00011	--	<0.00011	<0.00011	--	0.00017 J	0.00014 J	--	<0.00011	<0.00011	<0.00011	<0.00011
	Chromium	<0.00039	0.00072 J	--	0.00041 J	<0.00039	<0.00039	<0.00039	--	0.0016 J	0.00040 J	--	0.00070 J	<0.00039	--	<0.00039	0.00052 J	<0.00039	<0.00039
	Cobalt	<0.00030	<0.00030	--	0.019	0.020	<0.00030	<0.00030	--	0.0011 J	0.00074 J	--	0.0020 J	0.0018 J	--	0.00053 J	0.00051 J	<0.00030	<0.00030
	Fluoride	0.076 J	0.098 J	0.071 J	<0.050	<0.050	<0.050	<0.050	<0.050	0.077 J	0.059 J	0.077 J	0.45	0.46	0.45	0.080 J	0.074 J	0.11 J	0.12 J
	Lead	0.000048 J	<0.000046	--	0.000095 J	0.00011 J	<0.000046	<0.000046	--	0.00051 J	0.000054 J	--	0.00013 J	<0.000046	--	0.000084 J	0.00014 J	<0.000046	0.000050 J
	Lithium	0.0012 J	0.00083 J	--	0.0017 J	0.0017 J	0.0037 J	0.0035 J	--	0.0034 J	0.0020 J	--	0.0028 J	0.0026 J	--	0.0040 J	0.0043 J	<0.00078	<0.00078
	Mercury	<0.00014	--	--	<0.00014	--	<0.00014	--	--	<0.00014	--	--	<0.00014	--	--	<0.00014	--	<0.00014	--
	Molybdenum+	<0.00095	<0.00095	<0.00095	<0.00095	<0.00095	<0.00095	<0.00095	<0.00095	0.045	0.044	0.048	0.44	0.42	0.45	0.031	0.031	<0.00095	<0.00095
	Comb. Radium 226/228	0.610 U	4.36	--	1.58	0.621 U	0.249 U	0.833 U	--	0.624 U	0.485 U	--	0.835 U	1.04 U	--	1.03	1.20 U	0.667 U	0.235 U
	Selenium	<0.0013	<0.0013	--	<0.0013	<0.0013	<0.0013	<0.0013	--	<0.0013	<0.0013	--	<0.0013	<0.0013	--	<0.0013	<0.0013	<0.0013	0.0020 J
	Thallium	<0.000052	<0.000052	--	<0.000052	<0.000052	<0.000052	<0.000052	--	<0.000052	<0.000052	--	0.000061 J	0.000077 J	--	<0.000052	<0.000052	<0.000052	<0.000052

Notes:
-- = Parameter was not analyzed
J = Indicates the parameter was estimated and detected between the method detection limit (MDL) and the reporting limit (RL)
ND = Indicates the parameter was not detected above the analytical MDL
TDS = total dissolved solids
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) and combined radium reported as picocuries per liter (pCi/L).
(2) Metals were analyzed by EPA Method 6010D/6020B, Mercury was analyzed by EPA Method 7470A, anions were analyzed by EPA Method 300.0, TDS was analyzed by SM2540C, and combined radium by EPA Methods 9315/9320. The pH value presented was recorded at the time of sample collection in the field.
(3) Appendix III parameters with a "*" exhibited statistically significant increases (SSIs) over background concentrations during the October 2017 detection monitoring event. Similarly, Appendix IV parameters with a "+" exhibited statistically significant levels (SSLs) over established Groundwater Protection Standards (GWPS) during the April and September 2019 assessment monitoring event.
(4) Well is designated a delineation monitoring well.

Table 5
Summary of Groundwater Analytical Data
Plant Hammond AP-1, Floyd County, Georgia

	Well ID:	HGWC-11	HGWC-11	HGWC-12	HGWC-12	HGWC-13	HGWC-13	MW-5[4]	MW-5[4]	MW-6[4]	MW-6[4]	MW-7[4]	MW-7[4]	MW-19[4]	MW-19[4]	MW-20[4]	MW-20[4]	MW-24D[4]	MW-24D[4]	MW-25D[4]	MW-25D[4]
	Sample Date:	3/3/2020	3/31/2020	3/3/2020	3/26/2020	3/4/2020	3/30/2020	3/2/2020	3/26/2020	3/3/2020	3/27/2020	3/3/2020	3/30/2020	3/4/2020	3/26/2020	3/2/2020	3/27/2020	3/4/2020	3/30/2020	3/3/2020	3/26/2020
	Parameter (1,2,3)																				
APPENDIX III	Boron*	--	0.17	--	1.6	--	1.8	--	0.041 J	--	0.77	--	0.051 J	--	1.0	--	0.12	--	0.51	--	0.44
	Calcium*	--	124	--	145	--	234	--	89.6	--	186	--	31.1	--	171	--	126	--	84.4	--	27.0
	Chloride*	--	3.2	--	48.0	--	75.1	--	0.73 J	--	48.6	--	1.5	--	64.0	--	28.8	--	37.4	--	34.6
	Fluoride*	0.24 J	0.19 J	0.21 J	0.17 J	0.37	0.44	0.065 J	0.082 J	0.062 J	<0.050	<0.050	<0.050	0.096 J	0.12 J	<0.050	<0.050	0.051 J	0.064 J	1.4	1.6
	pH*	5.95	5.7	6.95	6.99	7.16	6.91	6.12	6.14	6.78	6.82	6.10	6.06	6.29	6.28	6.98	6.75	7.47	7.49	7.59	7.57
	Sulfate*	--	283	--	182	--	393	--	176	--	204	--	46.2	--	310	--	114	--	84.9	--	32.3
	TDS*	--	565	--	533	--	895	--	385	--	676	--	142	--	626	--	429	--	280	--	385
APPENDIX IV	Antimony	<0.00027	<0.00027	<0.00027	<0.00027	0.00061 J	0.00036 J	<0.00027	<0.00027	<0.00027	<0.00027	0.0013 J	<0.00027	<0.00027	<0.00027	<0.00027	<0.00027	0.0017 J	<0.00027	<0.00027	<0.00027
	Arsenic+	0.0022 J	0.0022 J	0.0023 J	0.0028 J	0.52	0.47	<0.00035	<0.00035	<0.00035	<0.00035	<0.00035	<0.00035	0.00045 J	<0.00035	0.00038 J	<0.00035	<0.00035	<0.00035	0.0010 J	0.00075 J
	Barium	0.022	0.026	0.092	0.089	0.10	0.080	0.049	0.046	0.090	0.086	0.043	0.050	0.069	0.067	0.099	0.093	0.081	0.056	0.42	0.45
	Beryllium	0.00012 J	0.00015 J	<0.000074	<0.000074	0.000093 J	0.000099 J	<0.000074	<0.000074	<0.000074	<0.000074	<0.000074	<0.000074	<0.000074	<0.000074	<0.000074	<0.000074	<0.000074	<0.000074	<0.000074	<0.000074
	Cadmium	<0.00011	<0.00011	0.00015 J	<0.00011	<0.00011	<0.00011	<0.00011	<0.00011	<0.00011	<0.00011	<0.00011	<0.00011	0.00026 J	0.00019 J	<0.00011	<0.00011	<0.00011	<0.00011	<0.00011	<0.00011
	Chromium	0.00061 J	<0.00039	<0.00039	<0.00039	<0.00039	0.00059 J	0.0042 J	0.0044 J	0.00044 J	0.00059 J	0.0015 J	0.0021 J	0.00066 J	0.00047 J	0.00071 J	0.00051 J	<0.00039	<0.00039	<0.00039	0.00061 J
	Cobalt	0.00087 J	0.0014 J	0.0013 J	0.0012 J	0.0066	0.0053	<0.00030	<0.00030	0.00094 J	0.00059 J	<0.00030	<0.00030	0.048	0.045	<0.00030	<0.00030	0.00056 J	<0.00030	<0.00030	<0.00030
	Fluoride	0.24 J	0.19 J	0.21 J	0.17 J	0.37	0.44	0.065 J	0.082 J	0.062 J	<0.050	<0.050	<0.050	0.096 J	0.12 J	<0.050	<0.050	0.051 J	0.064 J	1.4	1.6
	Lead	0.00021 J	0.00030 J	0.000056 J	0.00043 J	0.00014 J	0.00010 J	0.000047 J	<0.000046	0.00013 J	<0.000046	0.000062 J	<0.000046	0.00011 J	<0.000046	0.00017 J	0.00013 J	0.00019 J	0.000064 J	<0.000046	<0.000046
	Lithium	<0.00078	<0.00078	0.0063 J	0.0063 J	0.041	0.038	<0.00078	<0.00078	<0.00078	<0.00078	<0.00078	<0.00078	0.010 J	0.013 J	0.00082 J	0.0012 J	0.0026 J	0.0027 J	0.050	0.054
	Mercury	<0.00014	--	<0.00014	--	<0.00014	--	<0.00014	--	<0.00014	--	<0.00014	--	<0.00014	--	<0.00014	--	<0.00014	--	<0.00014	--
	Molybdenum+	0.011	0.0074 J	0.045	0.045	0.030	0.029	<0.00095	<0.00095	0.0022 J	0.0026 J	<0.00095	<0.00095	0.032	0.033	<0.00095	<0.00095	<0.00095	<0.00095	<0.00095	<0.00095
	Comb. Radium 226/228	0.716 U	1.30 U	0.971 U	0.209 U	0.708 U	0.602 U	0.964 U	1.10	0.757 U	0.758 U	1.15	0.830 U	1.04	1.10 U	0.653 U	0.100 U	0.333 U	0.107 U	1.36	0.793 U
	Selenium	0.016	0.019	<0.0013	<0.0013	<0.0013	<0.0013	0.0041 J	0.0039 J	<0.0013	<0.0013	<0.0013	0.0014 J	0.0044 J	0.0053 J	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013
	Thallium	<0.000052	<0.000052	0.000066 J	0.000080 J	0.00056 J	0.00048 J	<0.000052	<0.000052	0.000082 J	<0.000052	<0.000052	<0.000052	0.00026 J	0.00026 J	<0.000052	<0.000052	<0.000052	<0.000052	<0.000052	<0.000052

Table 5
Summary of Groundwater Analytical Data
Plant Hammond AP-1, Floyd County, Georgia

	Well ID:	MW-26D[4]	MW-26D[4]	MW-27D[4]	MW-27D[4]	MW-28D[4]	MW-28D[4]	MW-29[4]	MW-29[4]	MW-30D[4]	MW-30D[4]	MW-30D[4]	MW-30D[4]	MW-40D	MW-40D	MW-40D	MW-1
	Sample Date:	3/4/2020	3/31/2020	3/4/2020	4/2/2020	3/4/2020	3/27/2020	3/2/2020	3/30/2020	3/4/2020	3/31/2020	4/9/2020	6/17/2020	5/11/2020	5/19/2020	6/19/2020	6/16/2020
	Parameter (1,2,3)																
APPENDIX III	Boron*	--	1.8	--	0.13	--	0.14	--	1.3	--	0.90	--	0.77	0.093 J	0.13	0.19	0.19
	Calcium*	--	155	--	28.4	--	53.0	--	148	--	7.1	13.4	8.3	62.6	65.9	109	157
	Chloride*	--	98.0	--	27.9	--	33.0	--	71.2	--	111	96.0	92.5	51.2	47.3	145	29.6
	Fluoride*	0.052 J	<0.050	0.25 J	0.24 J	0.26 J	0.26 J	<0.050	<0.050	9.4	10.5	--	10.9	0.88	1.3	<0.050	0.20
	pH*	7.14	7.20	8.33	8.11	7.55	7.42	7.13	7.07	8.12	7.95	8.27	8.33	7.77	--	7.4	6.86
	Sulfate*	--	129	--	13.3	--	36.0	--	130	--	139	399	104	58.9	54.0	435	114
	TDS*	--	623	--	224	--	287	--	552	--	1130	--	1040	350	621	1420	653
APPENDIX IV	Antimony	0.0020 J	0.0013 J	0.00037 J	0.00030 J	<0.00027	<0.00027	<0.00027	<0.00027	<0.00027	0.00032 J	--	--	--	--	--	--
	Arsenic+	0.00060 J	<0.00035	0.00069 J	<0.00035	<0.00035	<0.00035	<0.00035	0.00037 J	0.0021 J	<0.00035	--	--	--	--	--	--
	Barium	0.17	0.11	0.95	1.0	0.77	0.64	0.088	0.080	0.065	0.29	--	--	--	--	--	--
	Beryllium	<0.000074	<0.000074	<0.000074	<0.000074	0.00014 J	<0.000074	<0.000074	<0.000074	<0.000074	<0.000074	--	--	--	--	--	--
	Cadmium	<0.00011	<0.00011	<0.00011	<0.00011	<0.00011	<0.00011	<0.00011	<0.00011	<0.00011	<0.00011	--	--	--	--	--	--
	Chromium	0.0028 J	0.0010 J	<0.00039	<0.00039	0.0027 J	<0.00039	<0.00039	0.0010 J	0.0013 J	0.00070 J	--	--	--	--	--	--
	Cobalt	<0.00030	0.00030 J	0.00045 J	<0.00030	0.00093 J	<0.00030	0.00067 J	0.00063 J	<0.00030	<0.00030	--	--	--	--	--	--
	Fluoride	0.052 J	<0.050	0.25 J	0.24 J	0.26 J	0.26 J	<0.050	<0.050	9.4	10.5	--	10.9	0.88	1.3	<0.050	0.20
	Lead	<0.000046	0.00010 J	<0.000046	0.00013 J	0.0010 J	0.000062 J	0.000090 J	0.00011 J	0.00041 J	0.000067 J	--	--	--	--	--	--
	Lithium	0.030 J	0.0036 J	0.0047 J	0.0068 J	0.015 J	0.014 J	0.0025 J	0.0023 J	0.18	0.25	--	--	--	--	--	--
	Mercury	<0.00014	--	<0.00014	--	<0.00014	--	<0.00014	--	<0.00014	--	--	--	--	--	--	--
	Molybdenum+	0.0074 J	0.0093 J	0.0058 J	0.0030 J	0.0090 J	0.0068 J	0.0025 J	0.0029 J	0.021	0.015	--	0.0062 J	0.014	0.014	0.015	<0.00095
	Comb. Radium 226/228	1.27 U	1.65	1.12	2.48	1.31	1.59	0.413 U	0.885 U	0.592 U	1.27 U	--	--	--	--	--	--
	Selenium	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	--	--	--	--	--	--
	Thallium	<0.000052	<0.000052	<0.000052	<0.000052	0.000092 J	<0.000052	<0.000052	<0.000052	<0.000052	<0.000052	--	--	--	--	--	--

Table 6

Summary of Background Concentrations and Groundwater Protection Standards
Plant Hammond AP-1, Floyd County, Georgia

Analyte	Units	Background[(1)]	Federal GWPS[(2)]	State GWPS[(3)]
Antimony	mg/L	0.003	0.006	0.006
Arsenic	mg/L	0.005	0.01	0.01
Barium	mg/L	0.14	2	2
Beryllium	mg/L	0.003	0.004	0.004
Cadmium	mg/L	0.0025	0.005	0.005
Chromium	mg/L	0.01	0.1	0.1
Cobalt	mg/L	0.038	0.038	0.038
Fluoride	mg/L	0.36	4	4
Lead	mg/L	0.005	0.015	0.005
Lithium	mg/L	0.03	0.04	0.03
Mercury	mg/L	0.0005	0.002	0.002
Molybdenum	mg/L	0.01	0.1	0.01
Selenium	mg/L	0.01	0.05	0.05
Thallium	mg/L	0.001	0.002	0.002
Combined Radium-226/228	pCi/L	4.36	5	5

Notes:

"mg/L" = milligrams per liter

"pCi/L" = picocuries per liter

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

FIGURES

N

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

0 400 800 1,600

SCALE IN FEET

SITE LOCATION MAP

GEORGIA POWER COMPANY
PLANT HAMMOND AP-1
FLOYD COUNTY, GEORGIA

Prepared For: Georgia Power

Prepared By: Geosyntec consultants

KENNESAW, GA | AUGUST 2020

FIGURE 1

N:\GA Power\Plant Hammond GW Services\GIS\mxd\Hammond\2020\CCR Reports\AP-1\Figure 1 Site Location Map.mxd 8/24/2020 3:47:11 PM

N

LEGEND

- Compliance Monitoring Well
- Horizontal Delineation Monitoring Well
- Vertical Delineation Monitoring Well
- Piezometer

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

0 150 300 600

SCALE IN FEET

MONITORING WELL NETWORK MAP

GEORGIA POWER COMPANY
PLANT HAMMOND AP-1
ROME, FLOYD COUNTY, GEORGIA

Prepared For: Georgia Power

Prepared By: Geosyntec consultants

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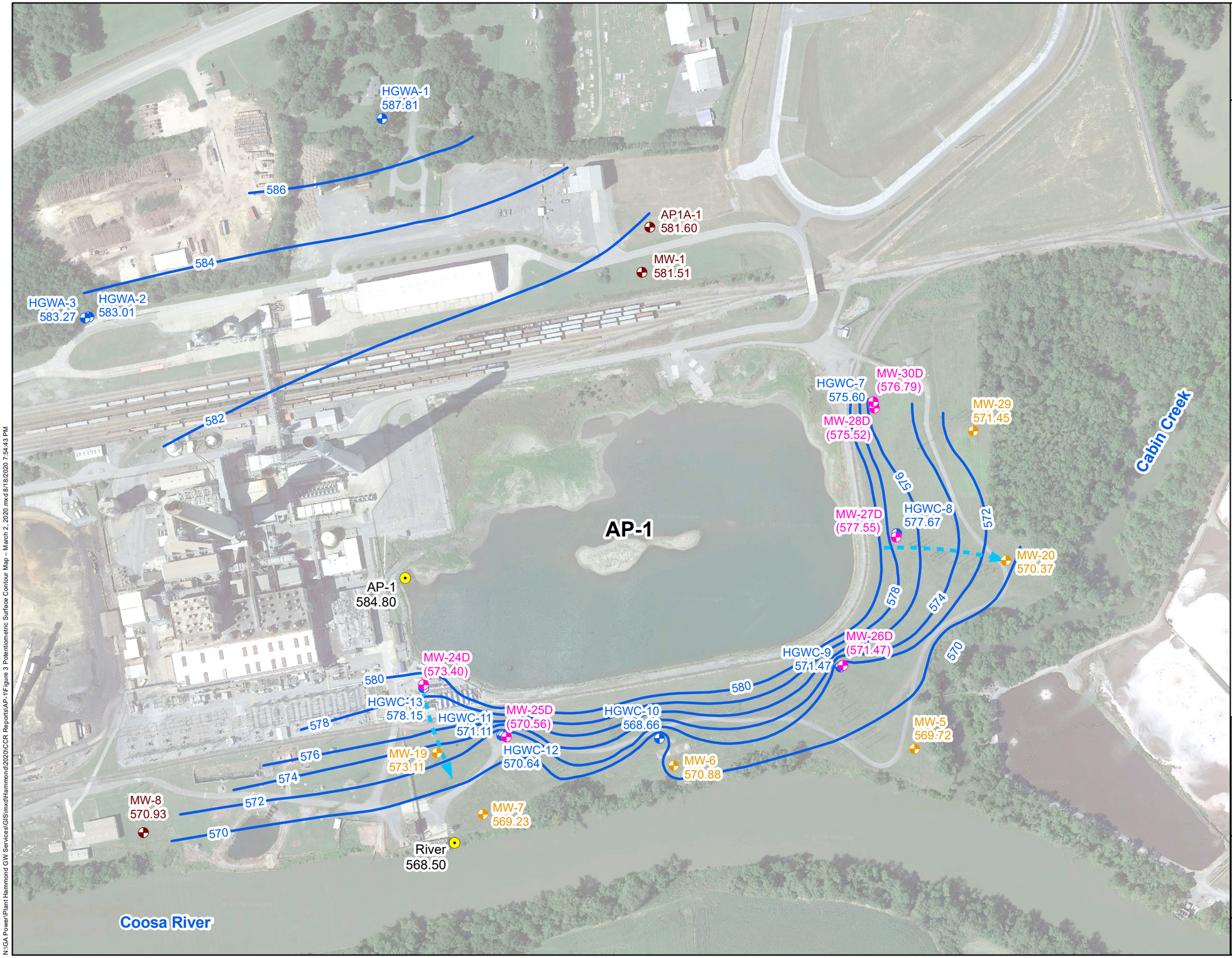
FIGURE 2

N:\GA Power\Plant Hammond GW Services\GIS\mxd\Hammond\2020\CCR Reports\AP-1\Figure 2 Monitoring Well Network Map.mxd 8/13/2020 11:41:03 AM



N:\GA Power\Plant Hammond GW Services\GIS\mxd\Hammond\2020\CCR Reports\AP-1\Figure 3 Potentiometric Surface Contour Map – March 2, 2020.mxd 8/18/2020 7:54:43 PM

N

LEGEND

- Compliance Monitoring Well
- Horizontal Delineation Monitoring Well
- Vertical Delineation Monitoring Well
- Piezometer
- Staff Gauge
- Groundwater Elevation Contour
- Approximate Groundwater Flow Direction

Notes:

1. Water level elevation recorded on March 2, 2020. Elevation provided in feet referenced to the North American Vertical Datum (NAVD) 88.
2. Water 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. The AP-1 surface water staff gauge measurement was not used in development of groundwater contours.
4. The map shows only the wells/piezometers currently installed at the time of the gauging event.
5. Aerial photograph source: Google Earth Pro, August 2019.

0 300 600

SCALE IN FEET

POTENTIOMETRIC SURFACE CONTOUR MAP - MARCH 2, 2020

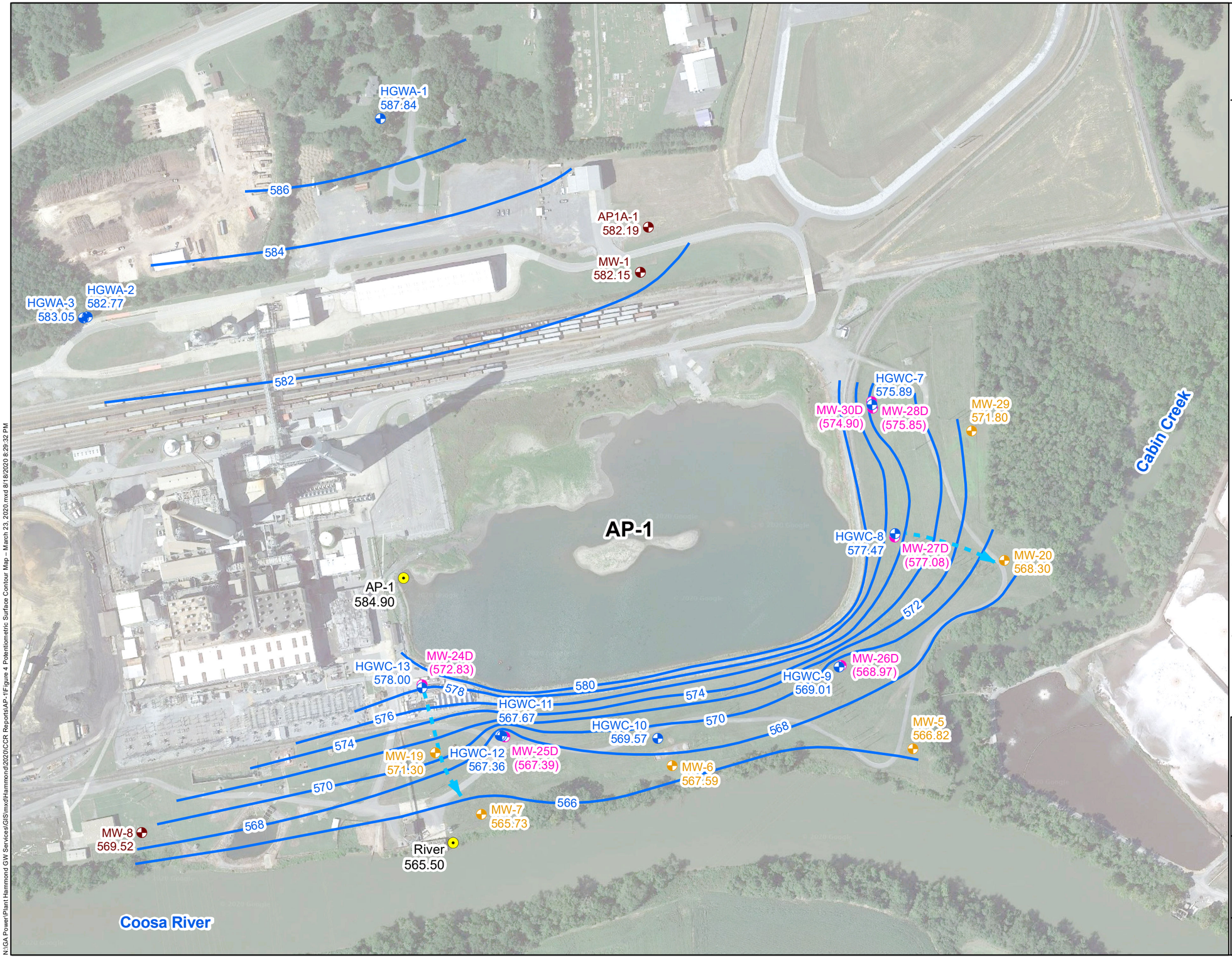
GEORGIA POWER COMPANY
PLANT HAMMOND AP-1
ROME, FLOYD COUNTY, GEORGIA

Prepared For: Georgia Power

Prepared By: Geosyntec consultants

KENNESAW, GA | AUGUST 2020

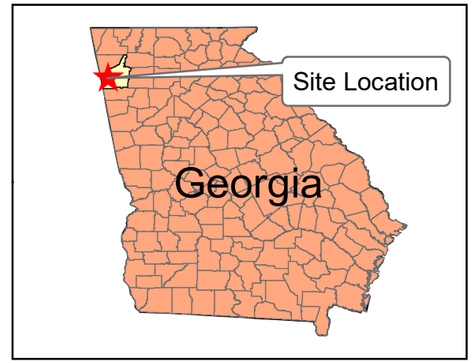
FIGURE 3



N

LEGEND

- Compliance Monitoring Well
- Horizontal Delineation Monitoring Well
- Vertical Delineation Monitoring Well
- Piezometer
- Staff Gauge
- Groundwater Elevation Contour
- Approximate Groundwater Flow Direction



Notes:
1. Water level elevation recorded on March 23, 2020. Elevation provided in feet referenced to the North American Vertical Datum (NAVD) 88.
2. Water 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. The AP-1 surface water staff gauge measurement was recorded on March 24, 2020; it was not used to develop the groundwater contours.
4. The map shows only the wells/piezometers currently installed at the time of the gauging event.
5. Aerial photograph source: Google Earth Pro, August 2019.

0 300 600

SCALE IN FEET

POTENTIOMETRIC SURFACE CONTOUR MAP - MARCH 23, 2020

GEORGIA POWER COMPANY
PLANT HAMMOND AP-1
ROME, FLOYD COUNTY, GEORGIA

Prepared For: Georgia Power

Prepared By: Geosyntec consultants

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FIGURE 4

N:\GA Power\Plant Hammond GW Services\GIS\mxd\Hammond\2020\CCR Reports\AP-1\Figure 4 Potentiometric Surface Contour Map – March 23, 2020.mxd 8/18/2020 8:29:32 PM

APPENDIX A

Well Design, Installation and Development Report – Addendum No 3, Plant Hammond Ash Pond 1 (AP-1)

Prepared for

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

WELL DESIGN, INSTALLATION, AND DEVELOPMENT REPORT - ADDENDUM No. 3

PLANT HAMMOND ASH POND 1 (AP-1)

Prepared by

Geosyntec consultants

engineers | scientists | innovators

1255 Roberts Boulevard, Suite 200
Kennesaw, Georgia 30144

Project Number GW6581B

July 2020

WELL DESIGN, INSTALLATION, AND DEVELOPMENT REPORT – ADDENDUM No. 3

Plant Hammond
Ash Pond 1
July 17, 2020

Whitney Law, P.E.
Project Manager
Geosyntec Consultants

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF APPENDICES

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
GPC	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 (GPC) Plant Hammond (Site) Ash Pond 1 (AP-1). 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, 2020), and meets the requirements promulgated in the United States Environmental Protection Agency (US EPA) coal combustion residual (CCR) rule [40 Code of Federal Regulations (CFR) Part 257, Subpart D], specifically 40 CFR §257.91(e)(1) and Georgia Environmental Protection Division (GA EPD) Rules for Solid Waste Management 391-3-4-.10.

Plant Hammond is located in Floyd County, approximately 10 miles west of Rome, Georgia. The current groundwater monitoring system at AP-1 includes 10 wells associated with the CCR compliance monitoring well network and a network of secondary groundwater monitoring wells and 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 Cascade Drilling, Inc of Midland, North Carolina under contact with, and the supervision of, Southern Company Services (SCS) Civil Field Services (CFS) personnel. 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 professional geologist employed with Geosyntec Consultants (Geosyntec) and registered to practice in the State of Georgia 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 wells.

This report presents the details for the installation and development of AP-1 area well MW-40D. The location of this well is shown on **Figure 1**. Well construction details are provided in **Table 1**; the boring and well construction log is included in **Appendix B**.

2.1 Drilling Method

The borehole was advanced using rotosonic drilling techniques with continuous core collection. Terra Sonic full size track mounted rig with a 6-inch sonic drill rod was used to install MW-40D. Care was taken so that the drilling methods did not introduce contamination of the groundwater from surface activities. Drilling equipment was cleaned prior to mobilizing to the site.

2.2 Screened Interval

Details regarding the well screen interval are provided in **Table 1**. The well is screened in the uppermost water bearing unit of the Site. AP-1 well MW-40D is screened from approximately 447 to 437 feet (ft) (referenced to the North American Vertical Datum of 1988). The well was constructed with 10 feet of well screen.

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 and was installed with a 10-foot nominal length pre-packed dual-wall well screen with 0.010-inch slots. The casing and pre-packed screen arrived pre-cleaned and packaged by the manufacturer. The pre-packed well screen was

constructed onsite by packing sand between slotted PVC and the well screen. Well construction materials are sufficiently durable to resist chemical and physical degradation and not interfere with the quality of groundwater samples. Casing and 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 wells; 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 wells. 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 Southern Products & Silica Co. silica sand filter pack was used as the appropriate gradation for the well. Highly Pure Quartzite 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 logs 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) was 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. Since the new well was constructed within 15 feet of an existing well, the bentonite seal was also brought above the elevation corresponding to the screen top of the nearby well. This was done to prevent grout from entering the water-bearing or screen zone. 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 Aqua Guard bentonite grout placed via tremie pipe 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 well was developed using a combination of surging and pumping, and bailingto (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 initially surged and purged until dry. During an additional attempt of well development the well was flushed with approximately 100 gallons of water (approximately 5 well volumes) to remove residual well construction materials, such as drilling mud in the form of a mud cake and/or formation soils had not washed out of the borehole. The well was then vacated using a bailer. The development form is included in **Appendix C**.

All equipment and tubing placed in the well was decontaminated and cleaned prior to use and tubing was disposed of upon completion.

4. SURVEY

Upon completion of the well installation, the 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 was 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 AP-1 well network 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.

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TABLE

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

Well ID	Purpose	Installation Date	Northing [1]	Easting [1]	Ground Surface Elevation [2] (ft NAVD88)	Top of Casing Elevation (ft NAVD88)	Top of Screen Elevation (ft NAVD88)	Bottom of Screen Elevation (ft NAVD88)	Well Depth (ft bgs) [3]
MW-40D	Delineation	4/29/2020	1549542.29	1942316.55	576.41	578.92	446.74	436.74	140.00

Notes:
ft bgs = feet below ground surface.
(1) Coordinates in North American Datum (NAD) 1983, State Plane, Georgia-West, feet. Survey completed by GEL Solutions in May 19, 2020.
(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.
(3) Total well depth accounts for 4-inch sump.

FIGURE

N:\GA Power\Plant Hammond GW Services\GIS\mxd\Hammond\2020\Well Installation Reports\2020.06_AP1AP2AP3\Figure 1_GW Monitoring Network_AP1.mxd 7/16/2020 4:52:08 PM

N

LEGEND

- Compliance Monitoring Well
- Horizontal Delineation Monitoring Well
- Piezometer
- Vertical Delineation Monitoring Well

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

0 300 600

SCALE IN FEET

GROUNDWATER MONITORING NETWORK MAP

GEORGIA POWER COMPANY
PLANT HAMMOND AP-1
ROME, FLOYD COUNTY, GEORGIA

Prepared For: Georgia Power

Prepared By: Geosyntec consultants

KENNESAW, GA | JULY 2020

FIGURE 1

APPENDIX A

Well Driller Performance Bonds

CONTINUATION
CERTIFICATE

Atlantic Specialty Insurance Company , Surety upon

a certain Bond No. 800033976

Issued on 9/27/2017
Expires on 6/30/2019
Renewed on 3/4/2019
Expires on 6/30/2021

dated effective 09/27/2017
(MONTH-DAY-YEAR)

on behalf of Ricky Davis / Cascade Drilling, L.P.
(PRINCIPAL)

and in favor of Department of Natural Resources, State of Georgia
(OBLIGEE)

does hereby continue said bond in force for the further period

beginning on 06/30/2019
(MONTH-DAY-YEAR)

and ending on 06/30/2021
(MONTH-DAY-YEAR)

Amount of bond Thirty Thousand and 00/100 Dollars ($30,000.00)

Description of bond Performance Bond for Water Well Contractors

Premium: $1200.00

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 March 4th, 2019
(MONTH-DAY-YEAR)

Atlantic Specialty Insurance Company

By Andrew P. Larsen
Attorney-in-Fact Andrew P. Larsen

Parker, Smith & Feek, Inc.
Agent

2233 112th Ave NE Bellevue, WA 98004
Address of Agent

425-709-3600
Telephone Number of Agent

S-0157/GE 8/08

XDP

APPENDIX B

Boring and Well Construction Log

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

MW-40D

CLIENT Southern Company Services
PROJECT NAME Plant Hammond Well Installation
PROJECT NUMBER GW6581B
PROJECT LOCATION Plant Hammond
DATE STARTED 4/28/20 **COMPLETED** 4/29/20
NORTHING 1549542.29 ft **EASTING** 1942316.55 ft
DRILLER Cascade Drilling
GROUND ELEVATION 576.41 ft **BORING DIAMETER** 6 in
DRILLING METHOD Sonic
TOP OF CASING ELEVATION 578.92 ft
SAMPLING METHOD 4" core 6" override
GEOPHYSICAL CONTRACTOR ---
RIG TYPE Terra Sonic Full Size Track Mounted Rig
LOGGED BY C. Hug **CHECKED BY** J. Ivanowski

DEPTH (ft)	ELEVATION (ft)	REMARKS	GRAPHIC LOG	MATERIAL DESCRIPTION	CONSTRUCTION DIAGRAM
0				Hydro Excavation (0 ft to 10 ft) NO SAMPLE	
	570				
10				566.4 CLAY, Brownish yellow (10YR 6/8) and light gray (10YR 7/1) mottled, high plasticity, some fine sand, trace silt, moist. 10.5 ft: Trace of fine, rounded quartz gravel.	Schedule 40 PVC 2"
				562.4 GRAVELLY CLAY, Dark gray (2.5Y 4/1) and pale brown (2.5Y 7/4) mottled, low to medium plasticity, sand is fine to medium grained, trace of fine, angular limestone gravel, moist to wet, increased gravel sized limestone fragments with depth.	Aquaguard Sodium Bentonite Grout
	560				
				557.4 PARTIALLY WEATHERED ROCK, Gray (2.5Y 6/1) and white (2.5Y 8/1), highly weathered, recovered as clayey and silty gravel and cobbles of limestone with fine to coarse sand, dry.	
20					
	550	No cavities or voids reported.			
30				546.4 LIMESTONE, Very dark gray (GLEY 1 3/) and gray (GLEY 1 6/), massive, fine grained, with white calcareous veins and mineralization along healed fracture planes, fresh to slightly weathered, hard, wet.	
	540	Steady drilling, hard drilling in places. No voids reported.		36 ft: Recovered as gravel sized fragments and pieces of core up to 5 inch long. Potential fines washed away.	
40					
	530				

(Continued Next Page)

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Kennesaw, GA 30144

CLIENT Southern Company Services **PROJECT NAME** Plant Hammond Well Installation

PROJECT NUMBER GW6581B **PROJECT LOCATION** Plant Hammond

DEPTH (ft)	ELEVATION (ft)	REMARKS	GRAPHIC LOG	MATERIAL DESCRIPTION	CONSTRUCTION DIAGRAM
50				LIMESTONE, Very dark gray (GLEY 1 3/) and gray (GLEY 1 6/), massive, fine grained, with white calcareous veins and mineralization along healed fracture planes, fresh to slightly weathered, hard, wet. *(continued)*	
	520				
60					
	510			From 66 ft: Zones of more competent rock fragments, less gravel sized fragments.	
70					Aquaguard Sodium Bentonite Grout
	500				
80					
	490				
90				From 91 ft: More competent, less fractured, recovered as intact pieces of core up to 6 inch length, with white mineralization along fracture planes.	
	480				
100					Bentonite coated 3/8" pellets
	470			From 106 ft: Very broken core, recovered as angular, gravel sized fragments	

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Kennesaw, GA 30144

CLIENT Southern Company Services **PROJECT NAME** Plant Hammond Well Installation

PROJECT NUMBER GW6581B **PROJECT LOCATION** Plant Hammond

DEPTH (ft)	ELEVATION (ft)	REMARKS	GRAPHIC LOG	MATERIAL DESCRIPTION	CONSTRUCTION DIAGRAM
110	460			of core, slightly silty. LIMESTONE, Very dark gray (GLEY 1 3/) and gray (GLEY 1 6/), massive, fine grained, with white calcareous veins and mineralization along healed fracture planes, fresh to slightly weathered, hard, wet. *(continued)*	Bentonite coated 3/8" pellets
120					
130	450				20/40 Silica Sand
140	440				0.010 slot size 2" Pre Pack, U-Pack Screen
					436.4

Bottom of borehole at 140.0 feet.

APPENDIX C

Well Development Form

Geosyntec consultants

WELL DEVELOPMENT LOG SHEET

Client: SCS
Site: Hammond
Well ID: MW-40D
Total Depth (ft) (after purge): 140
Depth to Water (ft): 14.92
Well Diameter (in): 2
Well Volume (gal) = $0.041d^2h$: 20.51
Well Volume (L) = gal * 3.785: 77.64
d = well diameter (inches); h = length of water column (feet)
Well Type: Flush / **Stick Up** (circled)
Well Lock: **Yes** (circled) / No
Well Cap Condition: **Good** (circled) / Replace
Well Tag Present: **Yes** (circled) / No

Project No.: GW6581
Location: AP-1
Pump Type/Model: bladder
Tubing Material: poly
Pump Intake Depth (ft): 140
Start/Stop Purge Time: 1510/1630
Purge Rate (mL/min): 350
Total Purge Volume (L): 10

Development Date: 5/5/2020
Field Personnel Name: Chad Russo

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.)
1615	8.04	208.2	406.4	10.5	11.05	23.4	79.04	350	5	
1630	8.08	213.6	285.1	10.96	10.96	43.1	87.35	250	10	pump stopped pulling water left for day
Stabilizing Criteria	+/- 0.1 SU	+/- 5%		0.2 mg/L or 10% for DO > 0.5 mg/L (whichever is greater)		< 5 NTUs				

CR 5/5/2020

Geosyntec consultants

WELL DEVELOPMENT LOG SHEET

Client: SCS
Site: Hammond
Well ID: MW-400
Total Depth (ft) (after purge): 190
Depth to Water (ft): 91.52
Well Diameter (in): 2
Well Volume (gal) = 0.041d²h: 7.95
Well Volume (L) = gal * 3.785: 30.09

Project No.: GW6591
Location: AP-1
Pump Type/Model: Bailer
Tubing Material: N/A
Pump Intake Depth (ft): N/A
Start/Stop Purge Time: 1120/1315
Purge Rate (mL/min): N/A
Total Purge Volume (L):

Development Date: 5/6/2026
Field Personnel Name: Chad Russo

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.)
1120						BR	112.41			
1150						OR	120.81			
1215						OR	129.35			
1250						OR	131.56			
1310						OR	136.43			
1315						OR	137.11			
							(OR)			
							5/6/2026			
Stabilizing Criteria	+/- 0.1 SU	+/- 5%		0.2 mg/L or 10% for DO > 0.5 mg/L (whichever is greater)		< 5 NTUs				

APPENDIX D

Certified Well Survey Data

Well ID	Casing Northing	Casing Easting	Top of Casing Elevation	Nail on Pad Northing	Nail on Pad Easting	Nail on Pad Elevation
AP1A-1	1550080.0050	1941614.1240	587.44	1550080.5990	1941613.9040	584.78
HGWA-1	1550423.3150	1940770.0000	595.21	1550424.4790	1940770.0550	592.32
HGWA-2	1549796.8670	1939845.1520	587.92	1549796.5130	1939845.2880	585.29
HGWA-3	1549794.4080	1939833.3900	587.74	1549794.0880	1939833.5600	585.23
HGWC-7	1549520.6650	1942319.7510	579.18	1549520.5890	1942320.0850	576.55
HGWC-8	1549114.6050	1942392.5560	579.82	1549114.5020	1942392.8550	577.14
HGWC-9	1548693.3000	1942215.0250	580.36	1548692.9890	1942215.1180	577.72
HGWC-10	1548469.2500	1941644.4320	579.37	1548469.5710	1941644.4340	576.76
HGWC-11	1548477.9080	1941146.7890	580.67	1548477.7080	1941146.7020	578.12
HGWC-12	1548476.5340	1941152.3430	580.73	1548475.9500	1941152.1790	578.14
HGWC-13	1548628.0320	1940900.6010	595.76	1548629.2680	1940900.3490	592.94
MW-1	1549938.2390	1941589.0590	588.66	1549939.5030	1941588.8340	585.63
MW-5	1548436.0170	1942448.8450	581.14	1548436.0640	1942447.5550	578.00
MW-6	1548383.1150	1941689.0050	581.84	1548384.4600	1941688.6600	579.18
MW-7	1548230.4670	1941087.4410	577.73	1548231.8360	1941086.8460	574.94
MW-8	1548171.8630	1940016.6970	586.93	1548173.5170	1940017.0010	584.25
MW-19	1548422.9360	1940943.0110	580.65	1548421.5880	1940943.4040	577.46
MW-20	1549029.6820	1942736.8510	579.00	1549028.9070	1942735.5530	575.96
MW-24D	1548638.7980	1940900.3660	595.68	1548637.3090	1940900.6270	592.91
MW-25D	1548473.0020	1941162.2000	580.59	1548471.7370	1941161.7310	577.71
MW-26D	1548699.9060	1942222.3600	580.41	1548699.0240	1942223.2540	577.63
MW-27D	1549103.5660	1942390.7990	579.70	1549103.6100	1942392.0210	576.84
MW-28D	1549510.9020	1942321.1440	579.08	1549511.1320	1942322.3460	576.20
MW-29	1549437.6710	1942633.5960	575.06	1549437.1050	1942632.4620	572.14
MW-30D	1549530.0040	1942318.4510	578.59	1549530.1910	1942319.7730	576.20
MW-40D	1549542.2900	1942316.5450	578.92	1549542.5160	1942317.8430	576.41

Benchmark	Northing	Easting	Elevation
BM H-3	1548237.4130	1941013.5710	574.63

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: 05/11/2020-05/14/2020 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 BENCHMARK BM H-3 SET BY GEL SOLUTIONS USING A TRIMBLE DINI LEVEL

5/19/2020

APPENDIX B

Well Inspection Forms

Groundwater Monitoring Well Integrity Form

Site Name: Plant Hammond
Permit Number:
Well ID: HGWA-1
Date, field conditions: 3-2-2020 Rain Wet Conditions

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

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

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Hammond AP-1/2
Permit Number:
Well ID: HGWA-2
Date, field conditions: 3/2/2020; 47°F; raining

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

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Hammond AP-1/2
Permit Number:
Well ID: HGWA-3
Date, field conditions: 3/2/2020; 54°F; raining

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

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Hammond AP-1
Permit Number:
Well ID: HGWC-4
Date, field conditions: 03.02.2020

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

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Hammond AP-1
Permit Number:
Well ID: HGWC-8
Date, field conditions: 05.02.2020 Rainy 45°F

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

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Hammond AP-1
Permit Number:
Well ID: HGWC-9
Date, field conditions: 03.02.2020 Rainy 15°F

		yes	no	n/a
1	Location/Identification			
a	Is the well visible and accessible?	X		
b	Is the well properly identified with the correct well ID?	X		
c	Is the well in a high traffic area and does the well require protection from traffic?		X	
d	Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	X		
2	Protective Casing			
a	Is the protective casing free from apparent damage and able to be secured?	X		
b	Is the casing free of degradation or deterioration?	X		
c	Does the casing have a functioning weep hole?	X		
d	Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	X		
e	Is the well locked and is the lock in good condition?	X		
3	Surface pad			
a	Is the well pad in good condition (not cracked or broken)?	X		
b	Is the well pad sloped away from the protective casing?	X		
c	Is the well pad in complete contact with the protective casing?	X		
d	Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)	X		
e	Is the pad surface clean (not covered with sediment or debris)?	X		
4	Internal casing			
a	Does the cap prevent entry of foreign material into the well?	X		
b	Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	X		
c	Is the well properly vented for equilibration of air pressure?	X		
d	Is the survey point clearly marked on the inner casing?	X		
e	Is the depth of the well consistent with the original well log?	X		
f	Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	X		
5	Sampling: Groundwater Wells Only:			
a	Does well recharge adequately when purged?			
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: Hammond AP-1
Permit Number: —
Well ID: HGWC-10
Date, field conditions: 03.02.2020 Rainy 15°C

		yes	no	n/a
1	**Location/Identification**			
a	Is the well visible and accessible?	X		
b	Is the well properly identified with the correct well ID?	X		
c	Is the well in a high traffic area and does the well require protection from traffic?	X	~~X~~ (SL)	
d	Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)		X	
2	**Protective Casing**			
a	Is the protective casing free from apparent damage and able to be secured?	X		
b	Is the casing free of degradation or deterioration?	X		
c	Does the casing have a functioning weep hole?	X		
d	Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	X		
e	Is the well locked and is the lock in good condition?	X		
3	**Surface pad**			
a	Is the well pad in good condition (not cracked or broken)?	X		
b	Is the well pad sloped away from the protective casing?	X		
c	Is the well pad in complete contact with the protective casing?	X		
d	Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)	X		
e	Is the pad surface clean (not covered with sediment or debris)?	X		
4	**Internal casing**			
a	Does the cap prevent entry of foreign material into the well?	X		
b	Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	X		
c	Is the well properly vented for equilibration of air pressure?	X		
d	Is the survey point clearly marked on the inner casing?	X		
e	Is the depth of the well consistent with the original well log?			X
f	Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	X		
5	**Sampling: Groundwater Wells Only:**			
a	Does well recharge adequately when purged?			
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: Hammond, AP-1
Permit Number:
Well ID: HGWC-11
Date, field conditions: 03.02.2020 Rainy 15°F

		yes	no	n/a
1	Location/Identification			
a	Is the well visible and accessible?	X		
b	Is the well properly identified with the correct well ID?	X		
c	Is the well in a high traffic area and does the well require protection from traffic?	X		
d	Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	X		
2	Protective Casing			
a	Is the protective casing free from apparent damage and able to be secured?	X		
b	Is the casing free of degradation or deterioration?	X		
c	Does the casing have a functioning weep hole?	X		
d	Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	X		
e	Is the well locked and is the lock in good condition?	X		
3	Surface pad			
a	Is the well pad in good condition (not cracked or broken)?	X		
b	Is the well pad sloped away from the protective casing?	X		
c	Is the well pad in complete contact with the protective casing?	X		
d	Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)	X		
e	Is the pad surface clean (not covered with sediment or debris)?	X		
4	Internal casing			
a	Does the cap prevent entry of foreign material into the well?	X		
b	Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	X		
c	Is the well properly vented for equilibration of air pressure?	X		
d	Is the survey point clearly marked on the inner casing?	X		
e	Is the depth of the well consistent with the original well log?			X
f	Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	X		
5	Sampling: Groundwater Wells Only:			
a	Does well recharge adequately when purged?			
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: Hammond AP-1
Permit Number:
Well ID: HGWC-12
Date, field conditions: 03.02.2020 Rainy 15°C

		yes	no	n/a
1	**Location/Identification**			
a	Is the well visible and accessible?	X		
b	Is the well properly identified with the correct well ID?	X		
c	Is the well in a high traffic area and does the well require protection from traffic?	X		
d	Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	X		
2	**Protective Casing**			
a	Is the protective casing free from apparent damage and able to be secured?	X		
b	Is the casing free of degradation or deterioration?	X		
c	Does the casing have a functioning weep hole?	X		
d	Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	X		
e	Is the well locked and is the lock in good condition?	X		
3	**Surface pad**			
a	Is the well pad in good condition (not cracked or broken)?	X		
b	Is the well pad sloped away from the protective casing?	X		
c	Is the well pad in complete contact with the protective casing?	X		
d	Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)	X		
e	Is the pad surface clean (not covered with sediment or debris)?	X		
4	**Internal casing**			
a	Does the cap prevent entry of foreign material into the well?	X		
b	Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	X		
c	Is the well properly vented for equilibration of air pressure?	X		
d	Is the survey point clearly marked on the inner casing?			
e	Is the depth of the well consistent with the original well log?	X		X
f	Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	X		
5	**Sampling: Groundwater Wells Only:**			
a	Does well recharge adequately when purged?			
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: Hammond AP-1
Permit Number:
Well ID: HGWS-13
Date, field conditions: 03/02/2020 rainy 50°F

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

mark in bladder cap. WL only

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Hammond AP-1
Permit Number: —
Well ID: AP1A-1
Date, field conditions: 03/02/2020 rainy 50°F

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

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Hammond AP-1
Permit Number:
Well ID: MW-1
Date, field conditions: 03/02/2020 rainy 50°F

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

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant Hammond
Permit Number:
Well ID: MW-5
Date, field conditions: 3-3-2020 Wet

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

7 Corrective actions as needed, by date:

Asphalt Pad.

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant Hammond
Permit Number:
Well ID: MW-6
Date, field conditions: 3-3-2020 Wet

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

7 Corrective actions as needed, by date:
Ants along Side of Pad.

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Hammond
Permit Number: —
Well ID: MW-7
Date, field conditions: 03/02/2020 rainy 50°F

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

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Hammond AP-1
Permit Number: —
Well ID: MW-8
Date, field conditions: 03/02/2020, rainy 50°F

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

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Hammond AP-1
Permit Number: —
Well ID: MW-19
Date, field conditions: 03/02/2020 rainy 50°F

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

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Hammond AP-1
Permit Number:
Well ID: MW-2A
Date, field conditions: 03.02.2020 Rainy 15°F

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

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Hammond AP-1
Permit Number: —
Well ID: MW-24D
Date, field conditions: 03.12.2020

		yes	no	n/a
1	**Location/Identification**			
a	Is the well visible and accessible?	X		
b	Is the well properly identified with the correct well ID?	X		
c	Is the well in a high traffic area and does the well require protection from traffic?	X		
d	Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	X		
2	**Protective Casing**			
a	Is the protective casing free from apparent damage and able to be secured?	X		
b	Is the casing free of degradation or deterioration?	X		
c	Does the casing have a functioning weep hole?	X		
d	Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	X		
e	Is the well locked and is the lock in good condition?	X		
3	**Surface pad**			
a	Is the well pad in good condition (not cracked or broken)?	X		
b	Is the well pad sloped away from the protective casing?	X		
c	Is the well pad in complete contact with the protective casing?	X		
d	Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)	X		
e	Is the pad surface clean (not covered with sediment or debris)?	X		
4	**Internal casing**			
a	Does the cap prevent entry of foreign material into the well?	X		
b	Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	X		
c	Is the well properly vented for equilibration of air pressure?	X		
d	Is the survey point clearly marked on the inner casing?	X		
e	Is the depth of the well consistent with the original well log?			X
f	Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	X		
5	**Sampling: Groundwater Wells Only:**			
a	Does well recharge adequately when purged?			
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: Hammond AP-1
Permit Number:
Well ID: MW-25D
Date, field conditions: 03.02.2020

		yes	no	n/a
1	Location/Identification			
a	Is the well visible and accessible?	X		
b	Is the well properly identified with the correct well ID?	X		
c	Is the well in a high traffic area and does the well require protection from traffic?	X		
d	Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	X		
2	Protective Casing			
a	Is the protective casing free from apparent damage and able to be secured?	X		
b	Is the casing free of degradation or deterioration?	X		
c	Does the casing have a functioning weep hole?	X		
d	Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	X		
e	Is the well locked and is the lock in good condition?	X		
3	Surface pad			
a	Is the well pad in good condition (not cracked or broken)?	X		
b	Is the well pad sloped away from the protective casing?	X		
c	Is the well pad in complete contact with the protective casing?	X		
d	Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)	X		
e	Is the pad surface clean (not covered with sediment or debris)?	X		
4	Internal casing			
a	Does the cap prevent entry of foreign material into the well?	X		
b	Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	X		
c	Is the well properly vented for equilibration of air pressure?	X		
d	Is the survey point clearly marked on the inner casing?	X		
e	Is the depth of the well consistent with the original well log?			X
f	Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	X		
5	Sampling: Groundwater Wells Only:			
a	Does well recharge adequately when purged?			
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: Hammond AP-1
Permit Number:
Well ID: MW-26D
Date, field conditions: 03.02.2020 Rainy 45°F

		yes	no	n/a
1	Location/Identification			
a	Is the well visible and accessible?	X		
b	Is the well properly identified with the correct well ID?	X		
c	Is the well in a high traffic area and does the well require protection from traffic?		X	
d	Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	X		
2	Protective Casing			
a	Is the protective casing free from apparent damage and able to be secured?	X		
b	Is the casing free of degradation or deterioration?	X		
c	Does the casing have a functioning weep hole?	X		
d	Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	X		
e	Is the well locked and is the lock in good condition?	X		
3	Surface pad			
a	Is the well pad in good condition (not cracked or broken)?	X		
b	Is the well pad sloped away from the protective casing?	X		
c	Is the well pad in complete contact with the protective casing?	X		
d	Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)	X		
e	Is the pad surface clean (not covered with sediment or debris)?	X		
4	Internal casing			
a	Does the cap prevent entry of foreign material into the well?	X		
b	Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	X		
c	Is the well properly vented for equilibration of air pressure?	X		
d	Is the survey point clearly marked on the inner casing?	X		
e	Is the depth of the well consistent with the original well log?			X
f	Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	X		
5	Sampling: Groundwater Wells Only:			
a	Does well recharge adequately when purged?			
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: Hammond AP-1
Permit Number:
Well ID: MW-27D
Date, field conditions: 03.02.2020 Rainy 15°F

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

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant Hammond AP1
Permit Number:
Well ID: MW-28D
Date, field conditions: 03.02.2020

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

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Hammond AP-1
Permit Number:
Well ID: ~~46~~ MW-29
Date, field conditions: 50°; 3/24/2020 raining

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

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Hammond AP-1
Permit Number:
Well ID: MW-30D
Date, field conditions: 03.02.2020 Rainy 45°F

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

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Hammond AP3, used data for POT map construction
Permit Number:
Well ID: MW-21
Date, field conditions: 03/02/2020 rainy, 50°F

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

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Hammond AP-3, used for POT map construction
Permit Number:
Well ID: MW-23 ~~AP-3~~ (SU)
Date, field conditions: 03.02.2020 Rainy, 15°F

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

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Hammond AP-3, used for PCI map purposes only
Permit Number: —
Well ID: MW-31
Date, field conditions: 03/02/2020 rainy 50°F

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

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Hammond AP-3, gauged for POT map
Permit Number:
Well ID: MW-32
Date, field conditions: 03.22.2020 Rainy 15°F

		yes	no	n/a
1	Location/Identification			
a	Is the well visible and accessible?	X		
b	Is the well properly identified with the correct well ID?	X		
c	Is the well in a high traffic area and does the well require protection from traffic?		X	
d	Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	X		
2	Protective Casing			
a	Is the protective casing free from apparent damage and able to be secured?	X		
b	Is the casing free of degradation or deterioration?	X		
c	Does the casing have a functioning weep hole?	X		
d	Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	X		
e	Is the well locked and is the lock in good condition?	X		
3	Surface pad			
a	Is the well pad in good condition (not cracked or broken)?	X		
b	Is the well pad sloped away from the protective casing?	X		
c	Is the well pad in complete contact with the protective casing?	X		
d	Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)	X		
e	Is the pad surface clean (not covered with sediment or debris)?	X		
4	Internal casing			
a	Does the cap prevent entry of foreign material into the well?	X		
b	Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	X		
c	Is the well properly vented for equilibration of air pressure?	X		
d	Is the survey point clearly marked on the inner casing?	X		X 60
e	Is the depth of the well consistent with the original well log?	60		X
f	Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	X		
5	Sampling: Groundwater Wells Only:			
a	Does well recharge adequately when purged?			X
b	If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?			X
c	Does the well require redevelopment (low flow, turbid)?			X
6	Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?	X		

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant Hammond AP-3, gauged for POT map
Permit Number:
Well ID: HGWA122
Date, field conditions: 03.02.20 Rainy 15°F

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

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Hammond AP-3, gauged for POT map
Permit Number:
Well ID: HGWC-120
Date, field conditions: 03/12/2020 rainy 50°F

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

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Hammond AP-3, gauged for POT map
Permit Number:
Well ID: HGWC 121A
Date, field conditions: 03.02.2020 Rainy 15°F

		yes	no	n/a
1	Location/Identification			
a	Is the well visible and accessible?	X		
b	Is the well properly identified with the correct well ID?	X		
c	Is the well in a high traffic area and does the well require protection from traffic?		X	
d	Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	X		
2	Protective Casing			
a	Is the protective casing free from apparent damage and able to be secured? Protective casing cracked	~~X~~ 50	X	
b	Is the casing free of degradation or deterioration?	X		
c	Does the casing have a functioning weep hole?	X		
d	Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	X		
e	Is the well locked and is the lock in good condition?	X		
3	Surface pad			
a	Is the well pad in good condition (not cracked or broken)?	X		
b	Is the well pad sloped away from the protective casing?	X		
c	Is the well pad in complete contact with the protective casing?	X		
d	Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)	X		
e	Is the pad surface clean (not covered with sediment or debris)?	X		
4	Internal casing			
a	Does the cap prevent entry of foreign material into the well?	X		
b	Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	X		
c	Is the well properly vented for equilibration of air pressure?	X		
d	Is the survey point clearly marked on the inner casing?	X		
e	Is the depth of the well consistent with the original well log?			X
f	Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	X		
5	Sampling: Groundwater Wells Only:			
a	Does well recharge adequately when purged?			X
b	If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?			X
c	Does the well require redevelopment (low flow, turbid)?			X
6	Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?	X		

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Hammond, AP-3, gauged for POT map
Permit Number:
Well ID: HGWC-124
Date, field conditions: 03/02/2020 Rainy 55°F

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

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant Hammond
Permit Number:
Well ID: HGWA-1
Date, field conditions: 3-25-2020 Wet Rain last night

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

7 Corrective actions as needed, by date:
Needs Blue QED Well cap 2-inch

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant Hammond AP-1/2
Permit Number: —
Well ID: HGWA-2
Date, field conditions: 3/25/2026 65°F; partly cloudy

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

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant Hammond AP-1/2
Permit Number: —
Well ID: HGWA-3
Date, field conditions: 3/25/2026 ~~60~~ 65°F; partly cloudy

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

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant Hammond, AP-1
Permit Number:
Well ID: HGWC-7
Date, field conditions: 3/27/2020, clear, 55°F

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

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant Hammond
Permit Number: —
Well ID: HGWC-8
Date, field conditions: cloudy 60's 3/27/20

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

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant Hammond
Permit Number: —
Well ID: HGWC-9
Date, field conditions: 3 31 20 Cloudy 60's

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

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant Hammond AP-1
Permit Number: /
Well ID: HGWC-10
Date, field conditions: 4-1-2020 Damp

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

7 Corrective actions as needed, by date:

None

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant Hammond AP-1
Permit Number: —
Well ID: HGWC-11
Date, field conditions: 3/31/2020 60°F cloudy

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

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant Hammond
Permit Number: —
Well ID: HGWC-12
Date, field conditions: Cloudy 50-60's 3/26/12

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

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant Hammond
Permit Number:
Well ID: HGWC-13
Date, field conditions: Cloudy 60's 3/30/20

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

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant Hammond, AP-1
Permit Number:
Well ID: AP1 A-1
Date, field conditions: 3/23/2020, Rainy, 53° F

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

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant Hammond
Permit Number:
Well ID: MW-1
Date, field conditions: 3/23/2020, Rainy, 53°F

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

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant Hammond
Permit Number: —
Well ID: MW-5
Date, field conditions: sunny 60's 3/26/20

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

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant Hammond
Permit Number: —
Well ID: MW-6
Date, field conditions: Sunny 70's 3/27/20

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

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant Hammond
Permit Number:
Well ID: MW-7
Date, field conditions: 3/27/20 sunny 70's

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

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant Hammond AP-2
Permit Number: —
Well ID: MW-8
Date, field conditions: 3-23-2020 Rain / Wet

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

7 Corrective actions as needed, by date:
None as of now.

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant Hammond
Permit Number:
Well ID: MW-19
Date, field conditions: Sunny- 60's 3/26/20

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

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant Hammond
Permit Number:
Well ID: MW-20
Date, field conditions: Clear 60's 3/27/20

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

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant Hammond
Permit Number:
Well ID: MW-24D
Date, field conditions: Cloudy 60° • 3/30/20

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

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant Hammond
Permit Number:
Well ID: MW-28D
Date, field conditions: Sunny 60's 3/26/20

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

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant Hammond
Permit Number: —
Well ID: MW-26D
Date, field conditions: 33130, cloudy Rain

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

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant Hammond, AP-1
Permit Number:
Well ID: MW-27D
Date, field conditions: Sunny, 45°F

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

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant Hammond
Permit Number:
Well ID: MW-28D
Date, field conditions: 3/27/2020, Clear, 55°F

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

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant Hammond
Permit Number: —
Well ID: MW-29
Date, field conditions: Cloudy 60's 3/30/20

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

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant Hammond, AP-1
Permit Number: —
Well ID: MW-30D
Date, field conditions: 3/31, 2020, Raining, 50°F

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

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

APPENDIX C

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 1 (AP-1)

Prepared by

engineers | scientists | innovators

1255 Roberts Boulevard, Suite 200
Kennesaw, Georgia 30144

Project Number GW6581B

August 2020

SEMIANNUAL REMEDY SELECTION AND DESIGN PROGRESS REPORT

GEORGIA POWER COMPANY - PLANT HAMMOND

ASH POND 1 (AP-1)

This *Semiannual Remedy Selection and Design Progress Report, Georgia Power Company - Plant Hammond, Ash Pond 1 (AP-1),* 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).

Report Prepared by:

_____ August 31, 2020

Whitney B. Law, P.E. Date

Georgia Professional Engineer No. 036641

Geosyntec consultants

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF APPENDICES

LIST OF ACRONYMS

ACM	Assessment of Corrective Measures
Al	aluminum
AP	ash pond
As	arsenic
CCR	coal combustion residuals
CFR	Code of Federal Regulations
CSM	conceptual site model
DPT	direct push technology
EPD	Georgia Environmental Protection Division
Fe	iron
Geosyntec	Geosyntec Consultants, Inc.
Georgia Power	Georgia Power Company
GWPS	Groundwater Protection Standard
K_h	horizontal hydraulic conductivity
Li	lithium
meq/L	milliequivalents per liter
mg/L	milligrams per liter
MNA	monitored natural attenuation
Mo	molybdenum
PRB	permeable reactive barriers
SEP	sequential extraction procedure
SSI	statistically significant increase
SSL	statistically significant level
US EPA	United States Environmental Protection Agency

1.0 INTRODUCTION

1.1 Purpose

This *Semiannual Remedy Selection and Design Progress Report* (the semiannual progress report) was prepared for Georgia Power Company (Georgia Power) Plant Hammond Ash Pond 1 (AP-1 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 (EPD) Rules for Solid Waste Management 391-3-4-.10(6)(a). This semiannual progress report describes the progress made since the issuance of the prior semiannual progress report in selecting and designing a remedy previously documented in the *Assessment of Corrective Measures Report – Plant Hammond Ash Pond 1 (AP-1)* (Geosyntec, 2019b) (ACM Report).

The purpose of the ACM Report (and subsequent semiannual progress reports) is to document the process of selecting corrective measure(s) for groundwater. This process is typically iterative and may be composed of multiple steps to analyze the effectiveness of corrective measures to improve groundwater quality. 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). Once selected based on these criteria, the corrective measure must meet the additional protection criteria outlined in § 257.97(b) and corresponding Rule 391-3-4-.10(6)(a). Additional details are provided within the ACM Report and the cited federal and state regulations. 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, 2019c, 2020b).

As discussed in the ACM Report, the following corrective measures are potentially feasible for use at AP-1. A comparative screening of the corrective measures is provided in **Table 1**.

1. Geochemical Manipulation (In-Situ Injection)
2. Hydraulic Containment (Pump and Treat)
3. Monitored Natural Attenuation (MNA)
4. Permeable Reactive Barrier (PRB)
5. Phytoremediation
6. Subsurface Vertical Barrier Walls

1.2 Site Background and Overview of AP-1 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 are decommissioned and electricity is no longer produced at the Site.

AP-1 is a 35-acre surface impoundment that received CCR materials from its commission in 1952 until 1969. After 1969, AP-1 was utilized as a co-treatment pond to handle return water flows from the other ponds and for recycling of process water for plant operations. Georgia Power will close AP-1 through removal of the CCR materials from the CCR unit; closure activities will be conducted 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, published in 2016 to Georgia Power's CCR compliance website.

1.3 Regulatory Program Status and Nature and Extent

CCR compliance groundwater monitoring-related activities have been performed for AP-1 since May 2016 pursuant to the CCR rule. Georgia Power initiated an assessment monitoring program in January 2018 after identifying statistically significant increases (SSIs) of Appendix III parameters in groundwater. Pursuant to § 257.95, samples were collected from the compliance monitoring well network, shown on **Figure 2**, and analyzed for Appendix IV constituents.

Statistical analyses of the 2018 assessment monitoring groundwater data identified statistically significant levels (SSLs) of molybdenum (Mo) and arsenic (As) at concentrations exceeding the state or federal groundwater protection standards (GWPS) in the following compliance monitoring wells: Mo (HGWC-7, HGWC-8, HGWC-9, HGWC-11, HGWC-12, and HGWC-13); and As (HGWC-13). Details of the analyses and supporting data are presented in the *2018 Annual Groundwater Monitoring and Corrective Action Report* (Geosyntec, 2019a). SSLs of Mo and As have been consistently identified in these wells since the 2018 reporting period. Pursuant to § 257.96, Georgia Power initiated an ACM for AP-1 in January 2019. The ACM Report was subsequently prepared for AP-1 and submitted to EPD in June 2019 and posted to the CCR compliance website in July 2019.

Since the ACM was initiated, ten additional groundwater monitoring wells have been installed to provide additional data to characterize flow conditions downgradient of AP-1 and to horizontally and vertically delineate As and Mo SSLs for the compliance monitoring wells identified above. The delineation well network was supplemented in March 2019 by incorporating existing downgradient piezometers MW-5, MW-6, and MW-7, which were originally installed in 2014. The well network is shown on **Figure 2**; **Table 2** provides well construction details. Supporting details and documents (e.g., boring logs, well construction table) have previously been submitted with the ACM Report or separate well installation reports. A potentiometric surface map illustrating the March 2020 groundwater elevations is provided on **Figure 3**.

Statistical analysis of the current 2020 assessment monitoring groundwater data identified SSLs of the below Appendix IV constituents at concentrations exceeding the noted state or federal GWPS. Details are provided in the *2020 Semiannual Groundwater Monitoring and Corrective Action Report* (Geosyntec, 2020d). Of note, the groundwater monitoring report also details the statistical analysis conducted on delineation wells with four or more independent data. Until recently, constructing confidence intervals required for the statistical analysis could not be accomplished due to a limited data set.

AP-1 (Federal CCR Rule):

- As: HGWC-13;
- Lithium (Li): MW-25D, MW-30D;
- Mo : HGWC-8

AP-1 (GA EPD CCR Rule):

- As: HGWC-13;
- Li: HGWC-13, MW-25D, MW-30D;
- Mo: HGWC-7, HGWC-8, HGWC-9, HGWC-11, HGWC-12, HGWC-13, and MW-19

Based on the groundwater data reported in the *2020 Semiannual Groundwater Monitoring and Corrective Action Report*, the SSLs identified in the following wells have been horizontally and vertically delineated to below the state and federal GWPS by the listed delineation wells.

- HGWC-7 – Mo is delineated horizontally by MW-29 and vertically by MW-28D
- HGWC-8 – Mo is delineated horizontally by MW-20 and vertically by MW-27D
- HGWC-9 – Mo is delineated horizontally by MW-5 and vertically by MW-26D
- HGWC-11 – Mo is delineated horizontally by MW-7 and vertically by MW-25D
- HGWC-12 – Mo is delineated horizontally by MW-7 and vertically by MW-25D
- HGWC-13 – Mo is delineated horizontally by MW-7 and vertically by MW-24D; As and Li are delineated horizontally by MW-19 and vertically by MW-24D

The Mo and Li SSLs identified in MW-19 and MW-25D, respectively are horizontally delineated to below the state GWPS by MW-7; vertical delineation of these constituents may require the installation of additional wells adjacent to MW-19 and MW-25D. Georgia Power is evaluating vertical delineation at these locations and will begin installing additional wells or demonstrate that these impacts are from a source other than AP-1 prior to the submittal of the January 2021 semiannual progress report.

Delineation well MW-40D reported molybdenum concentrations in excess of site background or MCLs during the current reporting period. However, statistical analysis of the MW-40D data is pending until four sampling events are completed in order to construct the confidence intervals required to evaluate potential SSLs. Georgia Power will continue to monitor these delineation wells and adaptively manage the Site as new data become available.

The geochemical fingerprinting analysis discussed in Section 3.1 indicates that elevated levels of Mo, Li, and fluoride (F) identified in MW-30D and Mo in MW-40D are not from AP-1. Georgia Power is currently installing additional upgradient wells to better characterize the deeper zones of the aquifer. The groundwater quality data obtained from these wells is intended to complement the geochemical analysis results in support of completing a demonstration document outlining the evidence that the source of water reported in MW-30D and MW-40D is not from AP-1. The demonstration document will be submitted to EPD either with or before submitting the *2020 Annual Groundwater Monitoring and Corrective Action Report* for AP-1 in January 2021.

Pursuant to § 257.96, groundwater in the vicinity of AP-1 continues to be monitored during the ACM phase in accordance with the established assessment monitoring program.

2.0 SUMMARY OF WORK COMPLETED

2.1 Field Activities

The following summarizes the field investigations and data evaluations completed since the issuance of the *Supplemental Semi-Annual Remedy Selection and Design Progress Report* in January 2020 (Geosyntec, 2020b) in support of delineating Appendix IV SSLs and evaluation of the corrective measures presented in the ACM Report. The two routine assessment monitoring events conducted in early March and late March/early April 2020 are discussed in the *2020 Semiannual Groundwater Monitoring and Corrective Action Report*.

- *March 3, 2020*: Aquifer solid samples obtained from vertical delineation wells MW-24D, MW-26D, MW-27D, MW-28D, and MW-30D were submitted for several laboratory analyses as further discussed in Section 2.2.

- *April 9, 2020*: A supplementary sampling event was conducted to analyze a groundwater sample from MW-30D for major cations and anions in support of evaluating the geochemical composition of the groundwater. The two AP-1 pore water piezometers (PMW-01 and PMW-02) were also sampled during that event. The pore water samples were analyzed for the same major cations and anions, as well as Appendix III and IV constituents.

- *April 29, 2020*: Georgia Power proactively installed a vertical delineation well (MW-40D) while awaiting additional characterization data for MW-30D, the results of which suggest the vertical delineation may no longer be necessary because the F, Li, and Mo detections reported in MW-30D do not appear to be related to pore water from AP-1.

- *May 11 and 19, 2020*: A sample was collected from newly installed delineation well MW-40D on May 11, 2020 and analyzed for Appendix III constituents and Mo. MW-40D was resampled on May 19, 2020 to confirm the initial results received.

- *June 16 - 19, 2020*: A supplementary delineation event was conducted to collect groundwater samples from select upgradient and downgradient wells to analyze for major cations and anions in support of evaluating the geochemical composition of the groundwater. The samples were also analyzed for Appendix III and select Appendix IV constituents.

- *July 27 - 29, 2020*: A series of pneumatic slug and short duration pumping tests were conducted in select wells downgradient of AP-1 to refine the understanding of localized hydrogeologic conditions within the potential groundwater treatment area.

- *August 4-5, 2020*: Unconsolidated aquifer solid materials were collected from the alluvium, residuum, and/or highly weathered rock zones using a direct push technology (DPT) rig. Samples were collected from one location upgradient of AP-1 and five locations downgradient of the unit.

2.2 Collection of Aquifer Solids

2.2.1 Consolidated (Bedrock) Aquifer Solids

Aquifer matrix samples were collected from the screen interval in the boring cores retained after installing the vertical delineation wells at Plant Hammond. Aquifer matrix samples were collected from AP-1 vertical delineation wells MW-24D, MW-26D, MW-27D, MW-28D, and MW-30D. The aquifer matrix samples provided to the laboratory were unweathered limestone bedrock material.

The aquifer matrix samples were initially submitted to Eurofins TestAmerica (Canton, OH) for particle reduction (i.e., mechanical pulverization of sample) before being submitted to Eurofins TestAmerica (Knoxville, TN) for sequential extraction procedure (SEP) analyses of Mo. The Canton, OH, laboratory retained samples to analyze for total metals concentrations. The analysis for total Mo, Fe, and Al was conducted to evaluate whether a substantial natural source of Mo might be present within the bedrock matrix, and Fe and Al were included to indirectly assess the presence of Fe and/or Al oxides/hydroxides within the geologic material; the presence of these oxides/hydroxides have the ability to bind Mo to the rock matrix and thereby reduce its mobility. The samples were also analyzed for TOC and percent moisture.

2.2.2 Unconsolidated (Soil/Weathered Bedrock) Aquifer Solids

Separate from the efforts described in Section 2.2.1, a DPT rig was used to collect aquifer matrix samples from the saturated unconsolidated zone at six locations in the vicinity of AP-1. Five borehole locations were selected to provide representative materials from the potential groundwater treatment area downgradient of AP-1. A sample was also collected from one location upgradient of the unit to be representative of background conditions. The approximate locations of the boreholes are illustrated on **Figure 2**. The sample depths were selected based on review of available boring logs from monitoring wells in

the vicinity of the DPT boreholes to target the alluvium, residuum and/or highly weathered rock zones. The sample depths generally correspond with the screen interval depths of the compliance monitoring wells reporting impacted groundwater.

The aquifer matrix samples were sent to SiREM analytical laboratory (Guelph, Ontario) to evaluate attenuation mechanisms and rates and aquifer capacity for attenuation, as well as the mineralogical characterization by application of the following analytical/testing methods.

- *Cation and Anion Exchange Capacity*: Separate tests that indicate relative adsorptive capacity for cationic and anionic metals.

- *Total Sulfur, Sulfide*: Total amount of oxidized and reduced sulfur relevant to speciation of metals prone to coprecipitate with and/or form sulfide minerals.

- *Organic Carbon Content*: Presence of substrate for adsorption and energy source for microbially mediated mineral transformations.

- *Total Metals Concentration*: Total concentrations of targeted constituents in the solid phase. The samples will be analyzed for Mo, Li, F, As, Fe, Al, and manganese (Mn).

- *X-Ray Diffraction, Scanning Electron Microscopy (SEM) and energy dispersive x-ray analysis (EDXA)*: Qualitative confirmation of mineral phases present and whether they contain targeted constituents.

Data obtained from these analyses will be used to evaluate the viability of select corrective measures (i.e., MNA and phytoremediation). The laboratory results are expected to be received by early October 2020 and will be presented in the January 2021 semiannual progress report.

2.3 Aquifer Testing

Aquifer testing using a pneumatic slug testing method was performed at seven monitoring wells and piezometers downgradient of AP-1 to estimate the horizontal hydraulic conductivity (K_h) of the aquifer within the screen interval. The seven wells tested included HGWC-7, HGWC-8, HGWC-9, HGWC-12, HGWC-13, MW-19, and MW-25D. For each test, an In-Situ Level Troll® pressure transducer was lowered into the well screen. A pressure-tight PVC and brass "tree" assembly connected to a compressed nitrogen gas tank was used to conduct the test by injecting compressed gas and measuring

water level drawdown and recovery. The water level change was recorded at one (1) second intervals until approximately 90 percent recovery had been attained.

In wells where the applied pressure was not sufficient to lower the groundwater level (i.e., HGWC-8 and MW-25), an aquifer recovery test was performed instead of the slug testing. Water was pumped from these wells and the In-Situ Level Troll® pressure transducer measured groundwater recovery.

Drawdown time graphs were generated by AQTESOLV for curve matching to applicable analytical solutions to generate an estimate of K_h. Two analytical models were used for curve matching: (i) the Bouwer-Rice (1976) model, which is used for an unconfined aquifer that exhibits a smooth exponential recovery to static water levels during the test and assumes quasi steady-state conditions and ignores elastic storage in the aquifer; and (ii) the Kansas Geological Survey (KGS) model (Hyder et al., 1994), which accounts for elastic storage in the aquifer in unconfined aquifers.

3.0 SUMMARY OF RESULTS

The following presents the results of the work outlined in Section 2.

3.1 Groundwater and Pore Water Analysis

Results from groundwater samples collected in April and June 2020 from wells located upgradient of AP-1 (i.e., HGWA-1, HGWA-3, MW-1) and downgradient of the unit (i.e., HGWC-7, HGWC-8, MW-30D, MW-40D) as well as sampling locations within the unit (i.e., PMW-01 and PMW-02) were used to conduct a geochemical fingerprinting analysis of groundwater and pore water. **Figure 2** depicts the locations of the monitoring well network and pore water piezometers. The geochemical groundwater data from the April and June 2020 supplementary sampling events are presented in **Table 3**; the laboratory reports associated with the data are provided in **Appendix A**. Table 3 also presents the Appendix III and IV data for the two routine assessment monitoring events conducted in early March and late March/early April 2020.

To conduct a geochemical fingerprinting analysis, collected samples were analyzed for the major cations (i.e., calcium, magnesium, sodium, and potassium) and anions (i.e., chloride, sulfate, and bicarbonate). Prior to proceeding with this geochemical evaluation, a charge balance of the major ions was conducted for each sample. A charge balance is mathematically expressed as the percent difference between cation and anion concentrations. The charge balance, which gives an indication of the analytical data quality, should generally be within ±10 percent, and all samples used in this analysis were within this criterion.

The major ions were used to construct Piper and Stiff diagrams, which are among the most common tools for assessing geochemical similarities and differences between aqueous samples. Laboratory data, which are normally reported in mg/L, are converted to milliequivalents per liter (meq/L) when plotted on a Piper or Stiff diagram.

Piper diagrams are trilinear diagrams that plot the relative contributions of major ions to the overall geochemical makeup of a liquid sample. The diagram has three components. The large diamond-shaped component displays the combined cation and anion composition of major solutes. The two smaller triangular components display the cation components and the anion components, separately and in greater detail. The sample data are plotted as a percentage of the total milliequivalents on the diagram with each component reaching 100 percent at its respective corner of the diagram. If the results from discrete samples plot relatively close to each other, their respective chemical

compositions are similar, and they might have a similar (or the same) source of solutes. One can also see mixing of different waters if the samples fall along straight lines between various water types (e.g., mixing of calcium/magnesium carbonate water, such as limestone or dolomite with calcium sulfate water, such as gypsum).

Stiff diagrams plot the chemical compositions of each sample as polygons. Similar-shaped polygons for different samples indicate similar geochemical compositions, and they might have a similar (or the same) source of solutes. The relative size of each polygon is an indication of the ionic strength (or "concentration") of the respective sample.

The resulting Piper diagram is presented as **Figure 4**, and the Stiff diagrams are presented as **Figure 5A** and **Figure 5B**.

As can be seen on **Figure 4**, the groundwater samples from the background compliance monitoring wells HGWA-1 and HGWA-3 and piezometer MW-1, all three located upgradient of AP-1, plot close to each other within the Ca-HCO_3 portion of the diamond-shape Piper diagram, as would be expected from wells screened within limestone and unimpacted by AP-1. Samples collected from pore water piezometers PMW-01 and PMW-02 plot towards the Ca-SO_4 corner of the diagram, which is indicative of CCR materials. There appears to be some variability within the CCR materials in AP-1. Downgradient well HGWC-8 plots close to PMW-02, which suggests that this groundwater well is affected by pore water from the area represented by PMW-02. Downgradient well HGWC-7 plots along the mixing line between wells upgradient of AP-1 and AP-1 pore water samples, which suggests mixing between these two end-members. The interpreted groundwater flow directions are shown on **Figure 3**. In clear contrast, the groundwater samples collected from MW-30D and MW-40D plot close to the Na-HCO_3 corner of the diamond. This area is located on the opposite side of the Piper diagram from the pore water piezometers, suggesting there is no contribution from AP-1 to these deeper wells; they exhibit a very different geochemistry, and this deeper flow zone is likely more saline as a consequence of low recharge in the deeper bedrock due to fewer fractures and extended interactions between groundwater and the rock matrix, which dissolves additional solutes from the matrix into groundwater.

Figures 4A and **4B** depict two Stiff diagrams, one for the upgradient wells (HGWA-1, HGWA-3, and MW-1) and the two downgradient shallow compliance wells (HGWC-7 and HGWC-8) (**Figure 4A**), and one comparing the chemical signature of the two pore water piezometers (PMW-01 and PMW-02) with the two deep delineation wells (MW-30D and MW-40D) (**Figure 4B**). Note the difference in scales for the cations and anions

between **Figure 4A** and **Figure 4B**, with concentrations approximately two to three times higher in the deeper groundwater wells and the pore water piezometers compared to the shallow background and compliance wells. The graphical representations of these samples are consistent with the trilinear diagram, indicating that the geochemical signature of the pore water at AP-1 is distinctly different from the geochemical signatures of delineation wells MW-30D and MW-40D.

These geochemical fingerprinting results support the conclusion that the water collected from delineation wells MW-30D and MW-40D is from a source other than AP-1. This is further supported by lower concentrations of F and Li in the two CCR pore water piezometers PMW-01 [i.e., F (0.31 mg/L); Li (0.043 mg/L)] and PMW-02 [i.e., F (0.82 mg/L); Li (0.018 J)] relative to MW-30D. The concentrations of F and Li in delineation well MW-30D have been consistently around 10 mg/L and 0.21 mg/L, respectively. Similarly, the F concentration in MW-40D has been reported higher than the two CCR pore water piezometers during two of the last three sampling events (Geosyntec, 2020d). Therefore, the elevated F, Li, and Mo concentrations reported in MW-30D and the elevated Mo and historically elevated F concentrations reported in MW-40D are likely due to natural variation of groundwater conditions. Georgia Power is currently installing additional upgradient wells to characterize the deeper zones of the aquifer. The groundwater quality data obtained from these wells will be incorporated into the demonstration document being prepared for MW-30D and 40D. The demonstration document will be submitted to EPD either with or before submitting the *2020 Annual Groundwater Monitoring and Corrective Action Report* for AP-1 in January 2021.

3.2 Summary of Consolidated Aquifer Solids Analysis

The geochemical fractionation of a metal within aquifer solids may be assessed with the specialized laboratory-based SEP analysis. SEPs are chemical extractions used to remove metals from specific solid-associated phases. SEPs use progressively stronger reagents to solubilize metals from increasingly recalcitrant phases. Although these procedures do not identify the specific metal phases in a soil/aquifer matrix, they do provide a means to evaluate the relative stability in relation to oxidation/reduction (redox) potential and pH fluctuations (Tessier et al, 1979; Kuo et al., 1983; Sposito et al., 1984; Hickey and Kittrick, 1984; Gruebel et al., 1988).

Due to the absence of detectable total Mo in core samples above the laboratory's analytical reporting limit (i.e., 2 mg/kg), and matrix interference of limestone material with acidic extractant solution that resulted in excessive "foaming" (i.e., due to effervescence), the laboratory discontinued the SEP process. Additional details of the

procedure and analyses, and the laboratory-issued reports providing the total metals concentrations for Al, Fe, and Mo, TOC, and percent moisture data are presented in the previously submitted *Progress Report – Molybdenum Delineation – Plant Bowen Ash Pond 1 (AP-1) and Plant Hammond AP-1* (Geosyntec, 2020c).

3.3 Summary of Aquifer Testing and Data Analyses

The AQTESOLV data plots are provided in **Appendix B**. **Table 4** provides a summary of the well construction data, AQTESOLV input parameters, and estimated horizontal hydraulic conductivity values. Despite different underlying assumptions, the two methods yielded similar estimates of K_h values.

The K_h values (using the mean of the two methods) for the alluvium was 4.3×10^{-3} centimeters per second (cm/sec) (HGWC-8). K_h of the wells screened in the alluvium and residuum ranged between 5.6×10^{-4} cm/sec (MW-19) and 7.4×10^{-4} cm/sec (HGWC-13). K_h of the residuum and highly weathered shaley limestone ranged between 5.4×10^{-4} cm/sec (HGWC-7) and 8.0×10^{-3} cm/sec (HGWC-12). K_h of the unweathered (competent) shaley limestone unit in MW-25D was estimated at 6.6×10^{-5} cm/sec, two-orders of magnitude lower than the K_h estimated for weathered and fractured shaley limestone in well HGWA-1 (HAR Rev. 01, December 2019). The difference is likely attributed to the degree of weathering and fracturing in these two wells. Overall, the K_h values estimated for the lithologic units are consistent with historical K_h values estimated for these lithologic units (Geosyntec, 2019d).

These new data will be used to supplement existing hydraulic conductivity data. An updated understanding of aquifer properties, including conductivity, will help refine the conceptual site model, and support assessment of certain groundwater corrective measures, such as hydraulic containment, MNA, or phytoremediation.

4.0 UPDATED CONCEPTUAL SITE MODEL

The additional data collected since the issuance of the *Supplemental Semi-Annual Remedy Selection and Design Progress Report* in January 2020 (Geosyntec, 2020b), and presented herein together with new data evaluation tools and interpretations, allow the development of a more refined conceptual site model (CSM). The following bullets summarize the current understanding of the CSM within the context of selecting an appropriate groundwater corrective measure for AP-1.

- Groundwater conditions continue to change, leading to the reduction of groundwater concentrations to below applicable state GWPS (e.g., Mo in MW-26D and MW-28D).

- Mo in HGWC-7 is currently vertically delineated by MW-28D. Deep delineation wells MW-30D and MW-40D, installed to delineate Mo at HGWC-7 prior to concentrations in MW-28D declining below the GWPS, exhibit elevated concentrations of F, Mo, and Li and Mo, respectively. However, these deep wells appear to be screened within zones of low/slow recharge that affect the geochemistry of groundwater at depth, which is supported by groundwater sample results collected from these wells. The concentrations of Mo, F, and Li in these wells do not appear to be related to AP-1 based on the geochemical fingerprinting analysis presented herein. Elevated Mo, F, and Li concentrations in MW-30D and elevated Mo concentrations in MW-40D are likely attributable to natural variation in groundwater conditions due to long residence times within the aquifer matrix.

- SSLs in the compliance monitoring well network (HGWC-7, HGWC-8, HGWC-9, HGWC-11, HGWC-12, and HGWC-13) are horizontally and vertically delineated to below the state and federal GWPS. The Mo and Li SSLs identified in delineation wells MW-19 and MW-25D, respectively, are horizontally delineated to below the state GWPS by MW-7; vertical delineation of these constituents may require the installation of additional wells adjacent to MW-19 and MW-25D. Georgia Power is evaluating vertical delineation at these locations and will install additional wells or demonstrate that these impacts are from a source other than AP-1 prior to the submittal of the January 2021 semiannual progress report.

- Elevated As concentrations within compliance well HGWC-13 are limited to the immediate vicinity of this well. The As groundwater concentrations in HGWC-

13 are vertically and horizontally delineated to below the federal and state GWPS by MW-24D and MW-19, respectively; As has not been reported above the reporting limit in either delineation well (Geosyntec, 2020d).

- The elevated Mo concentrations above the federal GWPS within well HGWC-8 are currently not well understood since Mo pore water concentrations are substantially lower than groundwater Mo concentrations in this well. However, Mo concentrations in groundwater in this area are vertically and horizontally delineated to below the federal and state GWPS by MW-27D and MW-20, respectively.

5.0 UPDATED EVALUATION OF CORRECTIVE MEASURES

Based on the data collected to date, two of the six potential corrective measures are less appropriate to evaluate to treat As and Mo in groundwater in further detail going forward; these include:

Permeable Reactive Barrier (PRB) (*Corrective Measure Not Retained*)

PRB technology typically involves the installation of a permeable subsurface wall constructed with reactive media for the removal of constituents as groundwater passes through. PRBs are oriented perpendicular to groundwater flow direction so that the PRB will intercept groundwater targeted for treatment either immediately downgradient of a source area or upgradient of a receptor. Either ZVI-Carbon matrix or solid carbon (bio-barrier) are currently proposed for the concurrent removal of As and Mo. The carbon could be composed of peat moss, mulch or another carbon source.

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 PRB media is designed to be more hydraulically conductive than the saturated media surrounding the PRB so that groundwater will flow through the PRB and will not 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.

While PRB media are potentially applicable to treat Co and Mo in groundwater, a PRB cannot treat groundwater downgradient of its likely alignment along the compliance boundary and would rely on some other measure to address these impacts. Additionally, keying the PRB into competent bedrock is challenging due to the complexity of the site geology and varied. Depth to competent bedrock varies on a small-scale (feet to tens of feet) spatially depending on the weathering characteristics of the fractured bedrock, limiting the feasibility of constructing a PRB along the entire length and depth of the affected areas. The implementation of PRBs can also be challenged by biofouling and mineral precipitation, which reduce the effectiveness of media over time and can increase the amount of maintenance needed for media changeouts. For these reasons, a PRB is not likely implementable, effective, or reliable and this corrective measure was not retained.

Vertical Barrier Wall (*Corrective Measure Not Retained*)

This corrective measure involves placing a barrier to groundwater flow, frequently around or upgradient of a source area, to physically control groundwater flow through isolation or redirection. 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. 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.

Like PRBs, the design and technique used to construct a barrier wall typically depend on the length of the barrier and the depth to a competent bedrock. Sheet piling, trenching, and vertical drilling are the most common methods for barrier construction. Sheet piling and trenching are typically limited to depths of approximately 50 feet below ground surface (ft bgs), even though specialty drilling/installation techniques can achieve depths up to approximately 90 ft bgs. Construction of a vertical barrier would involve drilling to competent bedrock and injecting bentonite or grout into terrace alluvium, residuum, and highly weathered/fractured limestone bedrock. Keying the vertical barrier into bedrock may be difficult to achieve consistently due to the complex site geology. Competent bedrock depths are greater than 50 ft bgs at the site. Depth to competent bedrock significantly varies on a small-scale (feet to tens of feet) spatially depending on the weathering characteristics of the fractured bedrock. Further, it does not address downgradient groundwater impacts. For these reasons, the barrier may not be implementable, effective, or reliable. Accordingly, the vertical barrier technology was not retained for further consideration.

Based on this analysis, future data collections and analysis efforts should focus on further evaluating the following four potential groundwater corrective measures:

Geochemical Injections (*Corrective Measure Retained*)

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 As and Mo. Under anaerobic conditions, As would be attenuated within sparingly soluble sulfide minerals; this approach might also increase the attenuation of Mo. 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 As (and potentially, 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 As. This potential corrective measure may be feasible around well HGWC-13 as a direct measure to attenuate elevated As concentrations in a localized area through the formation of sparingly soluble minerals. Due to the extent of groundwater detections, a separate corrective measure would likely need to be used to address Mo conditions reported in the larger portion of the anticipated treatment area downgradient of AP-1; either hydraulic containment or MNA could be applied more efficiently to the larger treatment area relative to completing a network of geochemical injections over the same area. Geochemical injection measures applicable to treating Li in vicinity of HGWC-13 will be evaluated during the second half of 2020 and reported in the January 2021 semiannual progress report.

Hydraulic Containment (Corrective Measure Retained)

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. It is applicable to a variable mix of inorganic constituents, including dissolved As, Li, and Mo. This potential corrective measure may still be feasible through targeted extraction of impacted groundwater.

Monitored Natural Attenuation (Corrective Measure Retained)

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 (redox) reactions), MNA effectively reduces the dissolved concentrations of inorganic constituents in groundwater. Attenuation mechanisms for As, Li, and Mo at AP-1, 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, 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 As and Mo, the main attenuation processes include sorption to iron and manganese oxides (As and Mo), and formation of sparingly soluble sulfide minerals (As). For Li, the main attenuation processes include dilution and dispersion. This potential corrective measure may either be a stand-alone corrective measure or be part of a combination of corrective measures to address groundwater impacts, depending on the outcome of upcoming data collections and statistical analyses.

Phytoremediation (Corrective Measure Retained)

Phytoremediation uses trees and other plants to uptake or immobilize constituents or achieve hydraulic control without the need for an above-ground water treatment system and infrastructure. Within the context of AP-1, this corrective measure would likely use an engineered (proprietary) TreeWell® phytoremediation system along the point of compliance or downgradient edge of the impacted groundwater for hydraulic control. The system promotes root development to the targeted groundwater zone (depth), allowing for hydraulic control of impacted groundwater. This potential corrective measure may still be feasible through targeted placement of TreeWell® units downgradient of AP-1 to promote the uptake of impacted groundwater at the Site and provide hydraulic containment without the need to treat extracted groundwater in an aboveground treatment system.

Given that groundwater conditions continue to change and are likely to also be affected by closure and construction activities at AP-1, an adaptive site management approach will be used to address groundwater impacts as a consequence of closure activities. The data collection efforts outlined in this report will further refine the CSM and allow a more detailed evaluation of the four potential groundwater corrective measures retained for further consideration.

6.0 PLANNED ACTIVITIES & ANTICIPATED SCHEDULE

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, 2019a) 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. At this time, and as discussed in Section 5, four of the six corrective measures outlined in the ACM Report are being retained for further evaluation (i.e., geochemical injections, hydraulic containment, MNA, and phytoremediation). Once sufficient data are available to make technically sound decisions regarding the ability to implement one or more specific corrective measures, necessary steps will be taken to design and implement a remedy for AP-1 in accordance with § 257.98.

Supplementary data collection and evaluation activities proposed to be completed during the next semiannual reporting period are presented in **Table 5**.

- *Installation of additional deep-screened background monitoring wells to establish background conditions in the deeper zone;*

- *Evaluate vertical delineation of the Mo and Li SSLs in delineation wells MW-19 and MW-25D, respectively, to determine if additional vertical delineation wells are necessary or demonstrate that these impacts are from a source other than AP-1 prior to the submittal of the January 2021 semiannual progress report;*

- *Complete a series of specialized analyses on unconsolidated aquifer matrix samples and evaluate the results for attenuation mechanism and rates, aquifer capacity for attenuation, and mineralogical characterization;*

- *Perform a conceptual-level feasibility study of a hydraulic containment remedial strategy to determine conceptual layouts for a hydraulic containment approach, including the use of TreeWells®;*

- *Apply recent results for the aquifer testing in conjunction with additional geochemical characterizations and potentially the use of SEP to analyze unconsolidated material to evaluate on-going attenuation processes that could be*

further enhanced and to develop a conceptual geochemical injection plan and layout focused on treating As in the vicinity of HGWC-13; evaluate system design requirements, including possible reagents or air-sparging and relevant concept level capital and operational schedules; and.

- *Evaluate conceptual schedule for implementation and constructability of the three retained groundwater corrective measures at a feasibility level to support the selection of an appropriate groundwater corrective measure.*

Georgia Power will continue to prepare semiannual progress reports to document AP-1 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.

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TABLES

Table 1
Evaluation of Remedial Technologies
Plant Hammond AP-1, Floyd County, Georgia

Geosyntec consultants

	Regulatory Citation for Criteria:	40 CFR 257.96(C)(1)	
Corrective Measure	**Description**	**Performance**	**Reliability**
Geochemical Approaches (In-Situ Injection)	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 As and Mo. Under anaerobic conditions, As would be attenuated within sparingly soluble sulfide minerals; this approach might also increase the attenuation of Mo. 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 As (and potentially, 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 As. (*Application to Li being evaluated during second half of 2020, as this is a new SSL reported for the current reporting period)* .	The effective immobilization of As 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 are somewhat less complex, additional aquifer characterization is needed to further evaluate these options. It is currently not well understood whether molybdenum can be efficiently attenuated using in-situ redox manipulations due to slow reaction kinetics. Mo attenuation under both aerobic and anaerobic conditions needs to be further evaluated but is expected to occur. Mo is more strongly sorbed to aluminum oxides than other metal oxides, and it is generally less sorptive and more mobile compared to As.	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). 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 As and Mo in groundwater.
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. 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 As, Li, and Mo.	Hydraulic containment is effective, but it is unclear whether full groundwater remediation can be achieved without further understanding attenuation mechanisms at the Site. At AP-1, 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). This is needed 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.	Generally reliable for hydraulic containment, but uncertainty exists whether groundwater remediation goals can be achieved within a reasonable time frame without further understanding attenuation mechanisms.
Monitored Natural Attenuation (MNA)	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 arsenic (As), lithium (Li), and molybdenum (Mo) at AP-1, 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 As and Mo, the main attenuation processes include sorption to iron and manganese oxides (As and Mo), and formation of sparingly soluble sulfide minerals (As). The main attenuation processes for Li is dilution and dispersion.	Physical and chemical MNA mechanisms for arsenic and molybdenum, including dilution, dispersion, sorption, and oxidation reduction reactions can be effective at achieving groundwater protection standards (GWPS) within a reasonable time frame. Attenuation processes for As and Mo are already occurring at the site as evidenced by groundwater data from the delineation wells. 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 As, Li, and Mo at AP-1 will further enhance ongoing MNA.	Reliable as long as the aquifer conditions that result in As, Li, and 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 As and/or Mo, or in combination with a second technology.
Permeable Reactive Barrier	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 As and Mo. The carbon could be composed of peat moss, mulch or another carbon source. Exact placement of the PRB is determined by site-specific 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 are ineffective at treating Li due to the chemistry and the inability for Li to sorb or precipitate.	PRBs have been shown to effectively address As in groundwater, but additional testing is required for Mo to select the appropriate reactive media. The approach is expected to achieve GWPS for both constituents as impacted groundwater passes through the reactive barrier. Mo redox kinetics may be slow and hence a thicker wall might be needed relative to solely treating for As. Furthermore, additional testing is required to select the appropriate sorptive media mix, especially related to Mo. However, PRB media is ineffective for treating Li.	Reliable groundwater corrective measure technology for select inorganics, 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.
Phytoremediation / *TreeWells*	Phytoremediation uses trees and other plants to uptake or immobilize constituents or achieve hydraulic control without the need for an above-ground water treatment system and infrastructure. Within the context of AP-1, this corrective measure would likely use an engineered (proprietary) TreeWell® phytoremediation system along the point of compliance or downgradient edge of the impacted groundwater for hydraulic control. The system promotes root development to the targeted groundwater zone (depth), allowing for hydraulic control of impacted groundwater. In addition, immobilization of As, Li, and Mo within the root zone as well as incidental uptake of dissolved As, Li, and Mo with groundwater is expected to occur concurrent with hydraulic control.	Once established (typically at the end of the third growing season), a TreeWell system is effective for providing hydraulic containment of groundwater, and potential reduction of As and Mo concentrations through immobilization and/or uptake and sequestration in the tree biomass; however, the main purpose is to provide hydraulic control. Given the current groundwater flow velocities, the approach is currently not considered viable. However, changing site conditions may make the corrective measure viable for the area downgradient of AP-1. Additional aquifer testing and/or groundwater flow modeling may be needed to confirm the suitability at that time.	Engineered phytoremediation is a proven technology where hydrogeologic factors are taken into account (e.g., hydraulic conductivity, flow velocity, depth to impacted groundwater zone, etc.). This is considered an active remedial approach through the use of trees as the "pumps" driving the system. Careful design will be needed to select the proper species, which will include consideration of groundwater chemistry, plant uptake of constituents, and groundwater flow modeling to evaluate the required number and placement of TreeWell units.
Subsurface Vertical Barrier Walls	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 belowground 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-1, 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 As, Li, 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.

Table 1
Evaluation of Remedial Technologies
Plant Hammond AP-1, Floyd County, Georgia

Geosyntec consultants

Corrective Measure	40 CFR 257.96(C)(1) Ease of Implementation	40 CFR 257.96(C)(1) Potential Impacts	40 CFR 257.96(C)(2) Time Requirement to Begin/Complete
Geochemical Approaches (In-Situ Injection)	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.	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 processes have the potential to mobilize naturally-occurring constituents as an unintended consequence if not properly studied and implemented.	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 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.
Hydraulic Containment	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 As and Mo; currently reported Li groundwater concentrations may not warrant treatment to meet ecological standards for discharge. 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.	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.	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 without additional data collection to better understand attenuation mechanisms for As and Mo.
Monitored Natural Attenuation (MNA)	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.	None. MNA relies on the natural processes active in the aquifer matrix to reduce constituent concentrations without disturbing the surface or the subsurface.	The infrastructure to initiate MNA is already in place. Demonstrating attenuation mechanisms and capacity can be time-consuming and can take up to 24 months. MNA is expected to be successful within a reasonable time frame following pond closure. Engineering measures will be implemented during closure of AP-1 to minimize potential impacts to the subsurface during closure activities and routine groundwater monitoring will be used to verify that groundwater impacts remain stable or decrease over time.
Permeable Reactive Barrier	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. Depth to competent bedrock varies on a small-scale (feet to tens of feet) spatially depending on the weathering characteristics of the fractured bedrock, limiting the feasibility of constructing a PRB along the entire length and depth of the affected areas	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.	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.
Phytoremediation / *TreeWells*	Reasonably implementable to moderate. Engineered approach has been proven effective, and specific depth zones can be targeted. Trees are installed as "tree wells" in a large diameter boring to get the roots deep enough to intercept impacted groundwater flow paths. Area must be clear of above and below-ground structures (i.e., power lines). The system, once established (approximately three growing seasons), is a self-maintaining, sustainable remedial system that has no external energy requirements and little maintenance (i.e., efforts normally associated with landscaping).	Minimal impacts are expected. In fact, there are several positive impacts expected, including enhanced aesthetics, wildlife habitat, and limited energy consumption.	The design phase will require some groundwater modeling for optimal placement of the TreeWell units, which may take up to 6 months. Depending on the number of required units, the installation effort is expected to last several weeks. Hydraulic capture/control is expected approximately three years after planting and system performance is expected to further improve over time.
Subsurface Vertical Barrier Walls	Moderate to difficult. Trenching will be required to fill in the various slurry mixes; alternatively, sheet pile installations can 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. Depth to competent bedrock varies on a small-scale (feet to tens of feet) spatially depending on the weathering characteristics of the fractured bedrock, limiting the feasibility of constructing a PRB along the entire length and depth of the affected areas	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.	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.

Table 1
Evaluation of Remedial Technologies
Plant Hammond AP-1, Floyd County, Georgia

Geosyntec consultants

	40 CFR 257.96(C)(3)			
Corrective Measure	**Institutional Requirements**	**Other Env or Public Health Requirements**	**Relative Costs**	**Evaluation of Retainage**
Geochemical Approaches (In-Situ Injection)	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.	None expected at this point. Based on downgradient sampling results near adjacent water features, there currently are no complete exposure pathways for potential receptors downgradient of AP-1. Potential for mobilization of redox-sensitive constituents exists during implementation of an anerobic attenuation approach. Following installation, the remedy is passive.	Medium (depending on expanse of injection network required and injectate volume required per derived design parameters)	Retained for further analysis; feasible around well HGWC-13 to attenuate elevated As concentrations in a localized area through the formation of sparingly soluble minerals due to the extent of groundwater detections; a separate corrective measure would likely need to be used to address Mo conditions reported in the larger portion of the anticipated treatment area downgradient of AP-1.
Hydraulic Containment	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.	Based on downgradient sampling results near adjacent water features, there currently are no complete exposure pathways for potential receptors downgradient of AP-1. Above-ground treatment components may need to be present for an extended period of time, generating residuals requiring management and disposal.	Medium to high (depending on remedy duration, complexity of above-ground treatment system, and volume of water processed)	Retained for further analysis; could be considered an effective measure to maintain hydraulic control along Coosa River should closure construction activities require an interim groundwater treatment configuration.
Monitored Natural Attenuation (MNA)	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.	Little to no physical disruption to remediation areas and no adverse construction-related impacts are expected on the surrounding community. Based on downgradient sampling results near adjacent water features, there currently are no complete exposure pathways for potential receptors downgradient of AP-1.	Low to medium	Retained for further analysis; may be used as a stand-alone corrective measure or in conjunction with other potential groundwater corrective measures following source control (i.e., excavation of CCR materials).
Permeable Reactive Barrier	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.	None expected at this point. Based on downgradient sampling results near adjacent water features, there currently are no complete exposure pathways for potential receptors downgradient of AP-1. 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.	Medium to high (for installation) - minimal O&M requirements if replacement is not necessary	Not retained for further analysis; PRB media is ineffective to treat Li; depth to competent bedrock varies on a small-scale (feet to tens of feet) limiting the feasibility of constructing a PRB along the entire length and depth of the affected areas; does not address downgradient groundwater when installed along the compliance boundary; potential for increased maintenance due to potential biofouling and mineral precipitation.
Phytoremediation / *TreeWells*	Deed restrictions may be necessary for groundwater areas upgradient of the TreeWell system. No other institutional requirements are expected at this time.	None expected at this point. Based on downgradient sampling results near adjacent water features, there currently are no complete exposure pathways for potential receptors downgradient of AP-1. Following installation, the remedy is passive and does not require external energy.	Medium (for installation) - minimal O&M requirements	Retained for further analysis; feasible through placement of TreeWell units downgradient of AP-1; likely needs to be used in conjunction with other potential groundwater corrective measures (e.g., geochemical injections) to address As in vicinity of HGWC-13; could be considered an effective measure to maintain hydraulic control along Coosa River should closure construction activities require an interim groundwater treatment configuration.
Subsurface Vertical Barrier Walls	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.	Based on downgradient sampling results near adjacent water features, there currently are no complete exposure pathways for potential receptors downgradient of AP-1. 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.	Medium to high (depending on length and depth of wall, remedy duration and complexity of above-ground treatment system)	Not retained for further analysis; depth to competent bedrock varies on a small-scale (feet to tens of feet) limiting the feasibility of constructing a barrier wall along the entire length and depth of the affected areas; does not address downgradient groundwater when installed along the compliance boundary.

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

Well ID	Hydraulic Location	Installation Date	Northing [1]	Easting [1]	Ground Surface Elevation (ft)	Top of Casing Elevation [2] (ft)	Top of Screen Elevation [2] (ft)	Bottom of Screen Elevation [2] (ft)	Well Depth (ft BTOC) [3]	Screen Interval Length (ft)
Compliance Monitoring Well										
HGWA-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
HGWC-7	Downgradient	12/3/2015	1549520.67	1942319.75	576.55	579.18	561.55	551.55	27.96	10
HGWC-8	Downgradient	12/8/2015	1549114.61	1942392.56	577.14	579.82	564.64	554.64	25.51	10
HGWC-9	Downgradient	12/9/2015	1548693.30	1942215.03	577.72	580.36	543.72	533.72	46.97	10
HGWC-10	Downgradient	12/8/2015	1548469.25	1941644.43	576.76	579.37	566.76	556.76	22.94	10
HGWC-11	Downgradient	12/15/2015	1548477.91	1941146.79	578.12	580.67	565.19	555.19	25.78	10
HGWC-12	Downgradient	12/9/2015	1548476.53	1941152.34	578.14	580.73	555.64	545.64	35.42	10
HGWC-13	Downgradient	12/10/2015	1548628.03	1940900.60	592.94	595.76	560.94	550.94	45.15	10
Piezometer										
AP1A-1	Upgradient	12/15/2015	1550080.01	1941614.12	584.78	587.44	575.84	565.84	21.93	10
MW-1	Upgradient	12/2/2014	1549938.24	1941589.06	585.63	588.66	567.93	557.93	31.06	10
MW-8	Downgradient	10/29/2014	1548171.86	1940016.70	584.25	586.93	565.05	555.05	32.28	10
Delineation Monitoring Well										
MW-5	Downgradient	11/4/2014	1548436.02	1942448.85	578.00	581.14	560.70	550.70	30.84	10
MW-6	Downgradient	11/4/2014	1548383.12	1941689.01	579.18	581.84	559.28	549.28	32.96	10
MW-7	Downgradient	10/30/2014	1548230.47	1941087.44	574.94	577.73	561.24	551.24	26.89	10
MW-19	Downgradient	9/26/2018	1548422.94	1940943.01	577.46	580.65	561.45	551.45	29.53	10
MW-20	Downgradient	9/27/2018	1549029.68	1942736.85	575.96	579.00	554.96	544.96	34.37	10
MW-24D	Downgradient	11/7/2018	1548638.80	1940900.37	592.91	570.96	532.91	522.91	48.38	10
MW-25D	Downgradient	11/6/2018	1548473.00	1941162.20	577.71	580.59	527.71	517.71	63.21	10
MW-26D	Downgradient	11/14/2018	1548699.91	1942222.36	577.63	580.41	512.63	502.63	78.11	10
MW-27D	Downgradient	11/8/2018	1549103.57	1942390.80	576.84	579.70	526.84	516.84	63.19	10
MW-28D	Downgradient	11/13/2018	1549510.90	1942321.14	576.20	579.08	531.20	521.20	58.21	10
MW-29	Downgradient	11/13/2018	1549437.67	1942633.60	572.14	575.06	557.14	547.14	28.25	10
MW-30D	Downgradient	6/19/2019	1549530.00	1942318.45	576.20	578.59	481.20	471.20	107.72	10
MW-40D	Downgradient	4/29/2020	1549542.29	1942316.55	576.41	578.92	450.41	440.41	138.84	10

Notes:
ft = feet
ft BTOC = feet below top of casing
(1) Coordinates in North American Datum (NAD) 1983, State Plane, Georgia-West, feet. Survey completed by GEL Solutions dated May 19, 2020.
(2) Elevations referenced to the North Amervican Vertical Datum of 1988 (NAVD88). Survey completed by GEL Solutions dated May 19, 2020.
(3) Total well depth accounts for sump if data provided on well construction logs.

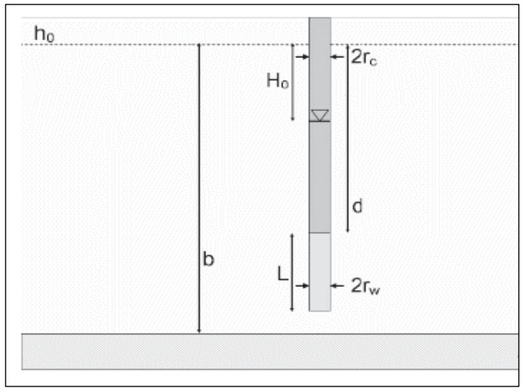
Table 3
Water Quality Analytical Summary
Plant Hammond AP-1, Floyd County, Georgia

	Well ID:	HGWA-1	HGWA-1	HGWA-1	HGWA-3	HGWA-3	HGWA-3	MW-1	HGWC-7	HGWC-7	HGWC-7	HGWC-8	HGWC-8	HGWC-8	MW-30D	MW-30D	MW-30D	MW-40D	MW-40D	MW-40D	PMW-01	PMW-02
	Sample Date:	3/2/2020	3/25/2020	6/16/2020	3/2/2020	3/25/2020	6/16/2020	6/16/2020	3/4/2020	3/27/2020	6/17/2020	3/3/2020	3/27/2020	6/16/2020	3/4/2020	3/31/2020	6/17/2020	5/11/2020	5/19/2020	6/19/2020	4/9/2020	4/9/2020
	Parameter (1,2,3)																					
APPENDIX III	Boron	--	0.025 J	0.021 J	--	0.0096 J	0.010 J	0.19	--	1.2	1.0	--	2.4	2.2	--	0.90	0.77	0.093 J	0.13	0.19	1.7	3.2
	Calcium	--	127	130	--	89.8	85.1	157	--	119	112	--	133	120	--	7.1	8.3	62.6	65.9	109	577	258
	Chloride	--	20.4	41.1	--	6.1	5.8	29.6	--	48.3	45.2	--	79.8	67.9	--	111	92.5	51.2	47.3	145	69.5	72.7
	Fluoride	0.076 J	0.098 J	0.071 J	<0.050	<0.050	<0.050	0.20	0.077 J	0.059 J	0.077 J	0.45	0.46	0.45	9.4	10.5	10.9	0.88	1.3	<0.050	0.31	0.82
	pH	7.10	6.95	6.97	7.12	7.40	7.31	6.86	7.17	7.05	7.20	7.06	6.95	6.97	8.12	7.95	8.33	7.77	--	7.40	6.58	7.40
	Sulfate	--	85.9	88.2	--	50.5	49.5	114	--	109	102	--	173	157	--	139	104	58.9	54.0	435	1160	454
	TDS	--	496	632	--	284	448	653	--	413	423	--	541	573	--	1130	1040	350	621	1420	2170	1090
APPENDIX IV	Antimony	<0.00027	<0.00027	--	<0.00027	<0.00027	--	--	<0.00027	<0.00027	--	<0.00027	<0.00027	--	<0.00027	0.00032 J	--	--	--	--	<0.00027	0.00054 J
	Arsenic	<0.00035	<0.00035	--	0.00040 J	<0.00035	--	--	<0.00035	<0.00035	--	<0.00035	<0.00035	--	0.0021 J	<0.00035	--	--	--	--	0.16	0.72
	Barium	0.034	0.043	--	0.14	0.13	--	--	0.068	0.059	--	0.052	0.059	--	0.065	0.29	--	--	--	--	0.056	0.16
	Beryllium	<0.000074	<0.000074	--	<0.000074	<0.000074	--	--	0.000077 J	<0.000074	--	<0.000074	<0.000074	--	<0.000074	<0.000074	--	--	--	--	<0.000074	<0.000074
	Cadmium	<0.00011	<0.00011	--	<0.00011	<0.00011	--	--	<0.00011	<0.00011	--	0.00017 J	0.00014 J	--	<0.00011	<0.00011	--	--	--	--	<0.00011	<0.00011
	Chromium	<0.00039	0.00072 J	--	<0.00039	<0.00039	--	--	0.0016 J	0.00040 J	--	0.00070 J	<0.00039	--	0.0013 J	0.00070 J	--	--	--	--	<0.00039	<0.00039
	Cobalt	<0.00030	<0.00030	--	<0.00030	<0.00030	--	--	0.0011 J	0.00074 J	--	0.0020 J	0.0018 J	--	<0.00030	<0.00030	--	--	--	--	0.00056 J	<0.00030
	Fluoride	0.076 J	0.098 J	0.071 J	<0.050	<0.050	<0.050	0.20	0.077 J	0.059 J	0.077 J	0.45	0.46	0.45	9.4	10.5	10.9	0.88	1.3	<0.050	0.31	0.82
	Lead	0.000048 J	<0.000046	--	<0.000046	<0.000046	--	--	0.00051 J	0.000054 J	--	0.00013 J	<0.000046	--	0.00041 J	0.000067 J	--	--	--	--	<0.000046	0.000053 J
	Lithium	0.0012 J	0.00083 J	--	0.0037 J	0.0035 J	--	--	0.0034 J	0.0020 J	--	0.0028 J	0.0026 J	--	0.18	0.25	--	--	--	--	0.043	0.018 J
	Mercury	<0.00014	--	--	<0.00014	--	--	--	<0.00014	--	--	<0.00014	--	--	<0.00014	--	--	--	--	--	<0.14	<0.14
	Molybdenum	<0.00095	<0.00095	<0.00095	<0.00095	<0.00095	<0.00095	<0.00095	0.045	0.044	0.048	0.44	0.42	0.45	0.021	0.015	0.0062 J	0.014	0.014	0.015	0.0057 J	0.050
	Comb. Radium 226/228	0.610 U	4.36	--	0.249 U	0.833 U	--	--	0.624 U	0.485 U	--	0.835 U	1.04 U	--	0.592 U	1.27 U	--	--	--	--	1.03 U	0.352 U
	Selenium	<0.0013	<0.0013	--	<0.0013	<0.0013	--	--	<0.0013	<0.0013	--	<0.0013	<0.0013	--	<0.0013	<0.0013	--	--	--	--	<0.0063	<0.0063
	Thallium	<0.000052	<0.000052	--	<0.000052	<0.000052	--	--	<0.000052	<0.000052	--	0.000061 J	0.000077 J	--	<0.000052	<0.000052	--	--	--	--	<0.000052	0.00059 J
GEOCHEM	Bicarb. Alkalinity	--	--	345	--	--	195	376	--	--	171	--	--	126	--	--	654.0	--	--	955	185	236
	Iron	--	--	<0.015	--	--	1.3	0.78	--	--	0.56	--	--	0.057	--	--	<0.015	--	--	8.8	15.5	0.95
	Magnesium	--	--	4.7	--	--	5.2	23.7	--	--	10.3	--	--	16.4	--	--	2.3	--	--	14.7	57.4	25.6
	Manganese	--	--	0.034 J	--	--	0.24	0.36	--	--	0.22	--	--	0.23	--	--	0.013 J	--	--	0.31	9.80	1.1
	Potassium	--	--	0.32	--	--	0.44	0.39	--	--	2.7	--	--	7.2	--	--	1.4	--	--	9.3	8.7	8.1
	Sodium	--	--	58.5	--	--	5.9	12.5	--	--	10.3	--	--	9.2	--	--	376	--	--	464	17.1	43.7
	Sulfide	--	--	<0.050	--	--	<0.050	<0.050	--	--	<0.050	--	--	<0.050	--	--	0.051 J	--	--	<0.050	<0.050	<0.050

Notes:
-- = Parameter was not analyzed
J = Indicates the parameter was estimated and detected between the method detection limit (MDL) and the reporting limit (RL)
ND = Indicates the parameter was not detected above the analytical MDL
TDS = total dissolved solids
U = Indicates the parameter was not detected above the analytical minimum detectable concentration (MDC) (Specific to combined radium)
(1) Appendix III/IV parameter per 40 CFR 257 Subpart D. Parameters are reported in units of milligrams per liter (mg/L), except for pH reported as s.u. (standard units) and combined radium reported as picocuries per liter (pCi/L).
(2) Metals were analyzed by EPA Method 6010D/6020B, Mercury was analyzed by EPA Method 7470A, anions were analyzed by EPA Method 300.0, TDS was analyzed by SM2540C, and combined radium by EPA Methods 9315/9320. The pH value presented was recorded at the time of sample collection in the field.

Table 4
Summary of AQTESOLV Input Parameters and Estimated Horizontal Hydraulic Conductivity Values
Plant Hammond AP-1, Floyd County, Georgia

Well Information									AQTESOLV Input Parameters												Horizontal Hydraulic Conductivity (Kh)					
Well ID	Screen Zone Material	Test number	Depth to Sensor [ft bTOC]	Static DTW [ft bTOC]	DTW after Pressure Release [ft bTOC]	Top Screen Depth [ft TOC]	Bottom Screen Depth [ft bTOC]	Total Depth [ft bTOC]	Ho [ft]	H [ft]	b [ft]	Kv/Kh	d [ft]	L [ft]	T [ft]	r(c) [ft]	r(eq) [ft]	r(p) [ft]	r(w) [ft]	r(sk) [ft]	Bouwer-Rice Kh [ft/day]	KGS Kh [ft/day]	GeoMean Kh [ft/day]	Bouwer-Rice Kh [cm/sec]	KGS Kh [cm/sec]	GeomeanMean Kh [cm/sec]
HGWC-8	Terrace Alluvium	ST	20.0	4.91	7.36	15.18	25.18	25.51	2.45	20.60	20.60	0.1	10.27	10.0	15.09	0.083	0.03	0	0.083	0.25	**12.6**	**12.0**	**12.3**	**4.5E-03**	**4.2E-03**	**4.3E-03**
		PT	20.0	4.98	6.34	15.18	25.18	25.51	1.36	20.53	20.53	0.1	10.20	10.0	15.02	0.083	0.03	0	0.083	0.25	**10.0**	**6.0**	**7.7**	**3.5E-03**	**2.1E-03**	**2.7E-03**
HGWC-13	Terrace alluvium, Residuum	ST	42.0	20.48	30.28	34.82	44.82	45.15	9.80	24.67	24.67	0.1	14.34	10.0	21.52	0.083	0.03	0	0.083	0.25	**2.2**	**2.0**	**2.1**	**7.8E-04**	**7.0E-04**	**7.4E-04**
MW-19	Terrace alluvium, Residuum	ST	24.5	11.65	17.88	19.20	29.20	29.53	6.23	17.88	17.88	0.1	7.55	10.0	12.85	0.083	0.03	0	0.083	0.25	**1.6**	**1.6**	**1.6**	**5.6E-04**	**5.6E-04**	**5.6E-04**
HGWC-9	Terrace alluvium, Residuum, Highly weathered shaley limestone, Competent shaley limestone	ST	43.0	13.72	24.73	36.64	46.64	46.97	11.01	33.25	33.25	0.1	22.92	10.0	29.28	0.083	0.03	0	0.083	0.25	**6.3**	**6.8**	**6.6**	**2.2E-03**	**2.4E-03**	**2.3E-03**
HGWC-7	Residuum, Highly weathered shaley limestone	ST	25.0	5.39	13.17	17.63	27.63	27.96	7.78	22.57	22.57	0.1	12.24	10.0	19.61	0.083	0.03	0	0.083	0.25	**1.6**	**1.5**	**1.5**	**5.6E-04**	**5.2E-04**	**5.4E-04**
HGWC-12	Residuum, Highly weathered shaley limestone, Competent shaley limestone	ST	30.0	14.81	26.06	25.09	35.09	35.42	11.25	20.61	20.61	0.1	10.28	10.0	15.19	0.083	0.03	0	0.083	0.25	**21.9**	**23.6**	**22.7**	**7.7E-03**	**8.3E-03**	**8.0E-03**
MW-25D	Bedrock (unweathered shaley limestone)	PT	59.0	16.61	23.26	52.88	62.88	63.21	6.65	46.60	46.60	0.1	36.27	10.0	42.39	0.083	0.03	0	0.083	0.25	**0.2**	**0.2**	**0.2**	**6.4E-05**	**6.9E-05**	**6.6E-05**



Notes:

Ho Observed initial displacement (change in water level from static).
H Static water column height.
b Saturated thickness of aquifer. If bottom of aquifer is unknown set b=bottom of well.
Kv/Kh Ratio of vertical to horizontal hydraulic conductivity.
d Depth to top of well screen - this is the length from the water level (or top confining unit) to the top of the screen.
L Length of well screen.
T Transducer Depth below the water table - Note: only used by the Butler-Zahn (2004) & McElwee-Zenner solution. If using Bouwer-Rice or other solution methods, set to zero.
r(c) Inside radius of well casing.
r(eq) Radius of downhole equipment.
r(p) Inside radius of packer.
r(w) Radius of well open or perforated interval.
r(sk) Outside radius of well skin distrubed zone enveloping filter pack.
DTW Depth to water
ST Slug Test (data obtained from pneumatic slug testing.)
PT Pumping Test (data obtained by evacuating water from well using a monsoon submersible pump).
TOC Top Of Casing

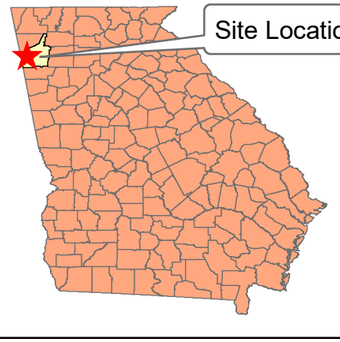
Table 5
Proposed ACM Supplementary Data Analyses and Collection Tasks for Second Semiannual Period 2020
Plant Hammond AP-1, Flyod County, Georgia

Data Collection Event	Applicable CMs [1]	Applicability/Rationale	Field Component	Parameters of Interest (POI)	Analytical Lab Performing Analysis
Installation of additional deep-screened background monitoring wells upgradient of Hammond AP-1, AP-2, AP-3, AP-4	3	Establish background conditions in zones of the aquifer deeper than the six wells currently used to establish background conditions (i.e., HGWA-1, HGWA-2, HGWA-3, HGWA-4, HGWA-5, and HGWA-6). Refine/expand the current conceptual site model (CSM) and further evaluate MNA strategy.	Use a sonic drill rig to set a 2-in diameter PVC well at six locations; total well depths ranging approximately from 40 to 112 feet below ground surface.	In addition to routine App III/IV parameters: major cations (i.e., calcium, magnesium, sodium, and potassium) and anions (i.e., chloride, sulfate, and bicarbonate), sulfide, iron, manganese.	Pace-ATL (analytical lab); SCS Civil Field Services (well installation)
Complete an evaluation of the analytical results from specialized analysis of collected saturated unconsolidated aquifer matrix samples	1, 3, 4	Evaluation of aquifer matrix for: (i) attenuation mechanisms and rates, and aquifer capacity for attenuation; and (ii) mineralogical characterization.	Aquifer matrix samples collected and submitted to the lab in August 2020.	Total sulfur, sulfide; organic carbon content; total concentrations of Mo, Li, F, As, Fe, Al, Mg; X-Ray Diffraction, Scanning Electron Microscopy (SEM) and energy dispersive x-ray analysis (EDXA); cation/anion exchange capacity.	SiREM
Perform a conceptual-level feasibility study of applied corrective measures using existing groundwater flow model	1, 2, 4	Evaluate potential hydraulic capture zones using either phytoremediation or mechanical groundwater extraction systems (extraction well gallery); determine conceptual layouts to achieve hydraulic capture in target areas.	Not Applicable (Desktop Study)	Conceptually determine layouts for phytoremediation or extraction well gallery to provide effective hydraulic containment while minimizing additional infrastructure or land requirements.	No lab data required; Geosyntec desk-top analyses
Evaluate conceptual schedule for implementation and constructability of retained groundwater corrective measures	1, 2, 4	Analysis of conceptual schedules and practical constructability of possible layouts of corrective measures will aid the future selection process of (an) appropriate groundwater corrective measure(s).	Not Applicable (Consult with system installation contractors to derive concept-level construction schedules and practical constructability for possible layouts.)	Feasibility-level construction schedules and level of effort for implementation.	No lab data required; Geosyntec desk-top analyses

Note:
(1) Corrective Measure (CM) Codes:
1 - Geochemical Injections
2 - Hydraulic Containment
3 - Monitored Natural Attenuation (MNA)
4 - Phytoremediation (TreeWells®)

FIGURES

N



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

0 400 800 1,600

SCALE IN FEET

SITE LOCATION MAP

GEORGIA POWER COMPANY
PLANT HAMMOND AP-1
FLOYD COUNTY, GEORGIA

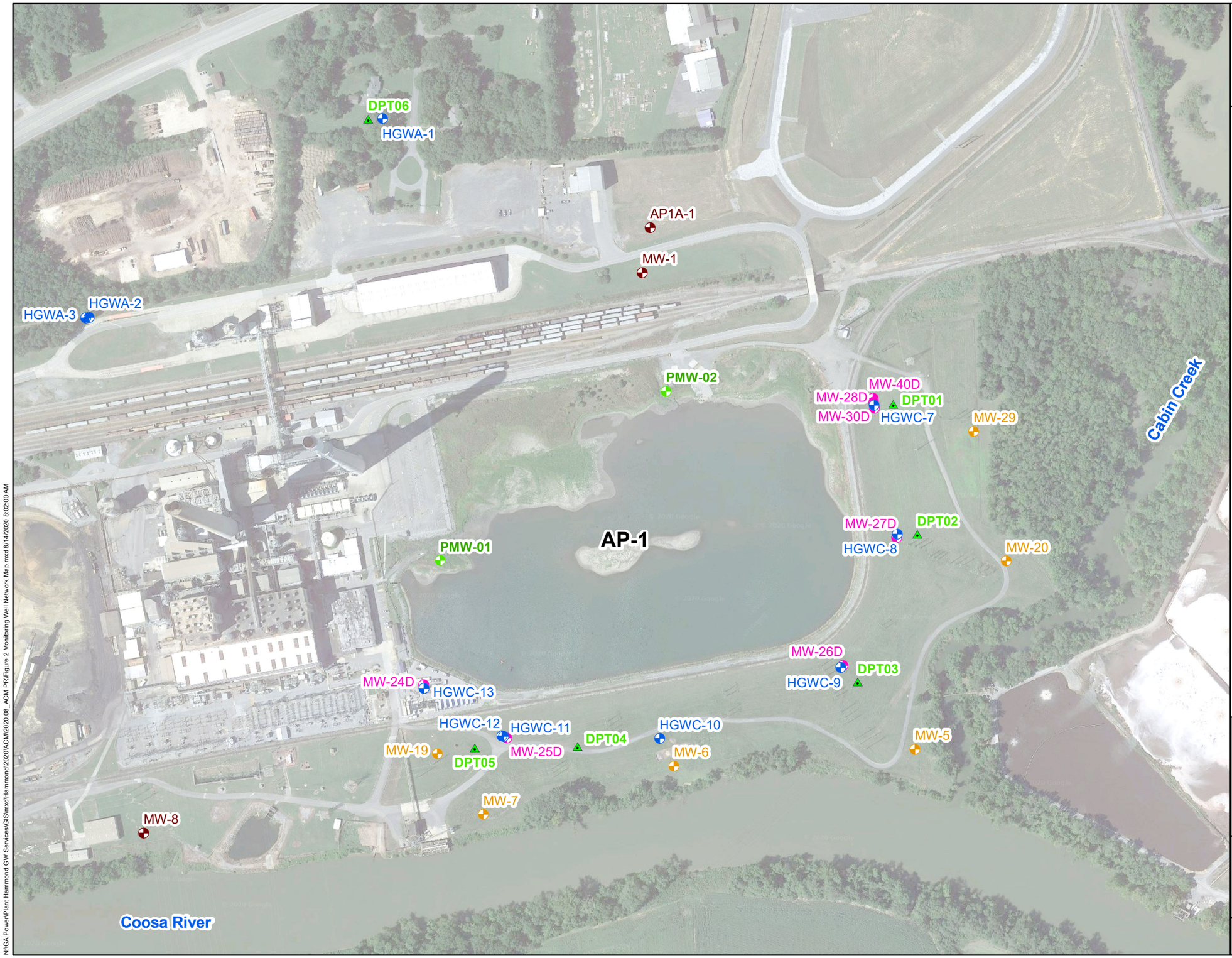
Prepared For: Georgia Power

Prepared By: Geosyntec consultants

KENNESAW, GA | AUGUST 2020

FIGURE 1

N:\GA Power\Plant Hammond GW Services\GIS\mxd\Hammond\2020\CCR Reports\AP-1\Figure 1 Site Location Map.mxd 8/13/2020 12:36:24 PM



N

LEGEND

- Compliance Monitoring Well
- Horizontal Delineation Monitoring Well
- Vertical Delineation Monitoring Well
- Piezometer
- Pore Water Piezometer
- DPT Borehole (unsurveyed location)

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

0 150 300 600

SCALE IN FEET

MONITORING WELL NETWORK AND SAMPLING LOCATION MAP

GEORGIA POWER COMPANY
PLANT HAMMOND AP-1
ROME, FLOYD COUNTY, GEORGIA

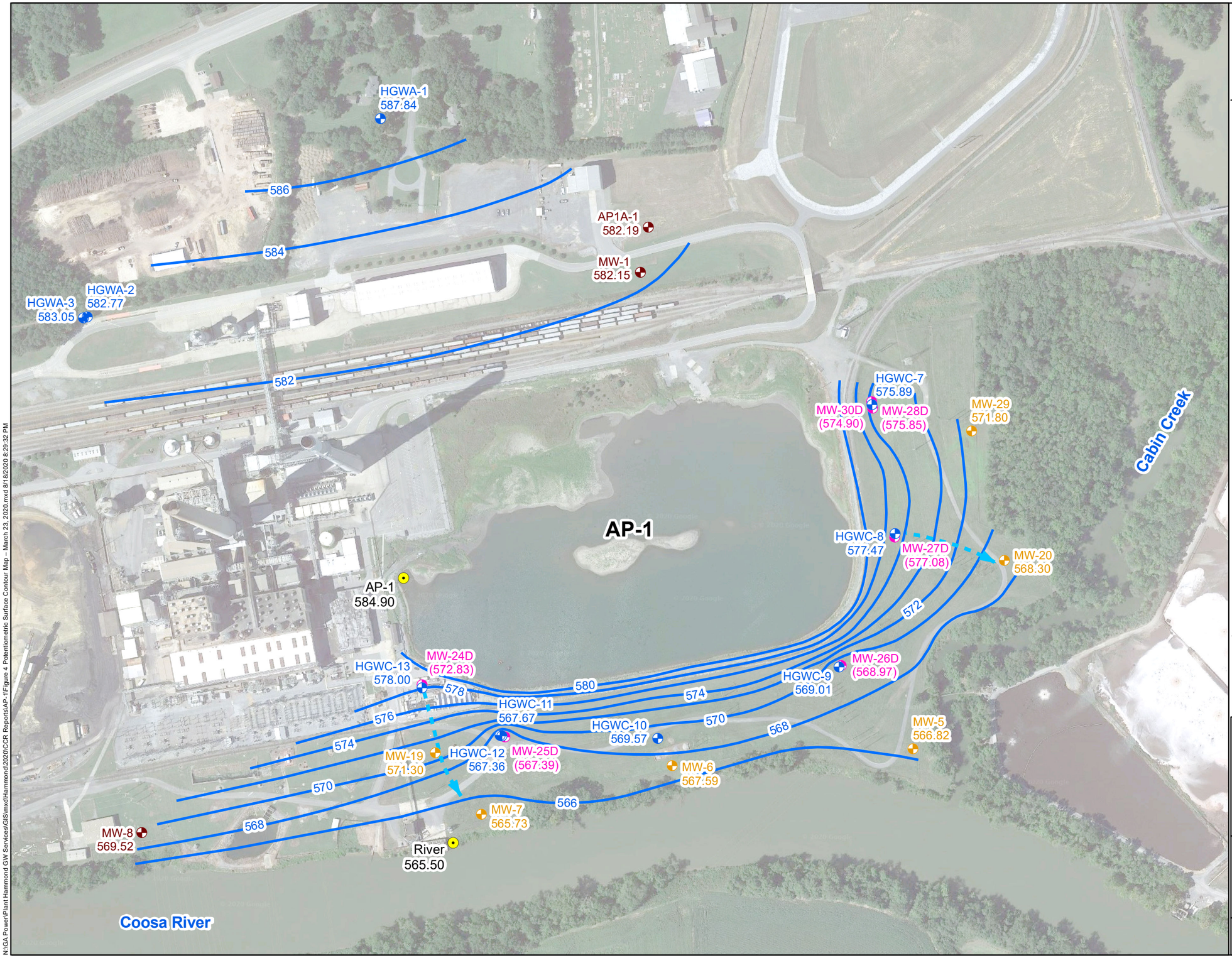
Prepared For: Georgia Power

Prepared By: Geosyntec consultants

KENNESAW, GA | AUGUST 2020

FIGURE 2

N:\GA Power\Plant Hammond GW Services\GIS\mxd\Hammond\2020\ACM\2020.08_ACM PR\Figure 2 Monitoring Well Network Map.mxd 8/14/2020 8:02:00 AM



N:\GA Power\Plant Hammond GW Services\GIS\mxd\Hammond\2020\CCR Reports\AP-1\Figure 4 Potentiometric Surface Contour Map – March 23, 2020.mxd 8/18/2020 8:29:32 PM

N

LEGEND

- Compliance Monitoring Well
- Horizontal Delineation Monitoring Well
- Vertical Delineation Monitoring Well
- Piezometer
- Staff Gauge
- Groundwater Elevation Contour
- Approximate Groundwater Flow Direction

Notes:

1. Water level elevation recorded on March 23, 2020. Elevation provided in feet referenced to the North American Vertical Datum (NAVD) 88.
2. Water 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. The AP-1 surface water staff gauge measurement was recorded on March 24, 2020; it was not used to develop the groundwater contours.
4. The map shows only the wells/piezometers currently installed at the time of the gauging event.
5. Aerial photograph source: Google Earth Pro, August 2019.

0 300 600

SCALE IN FEET

POTENTIOMETRIC SURFACE CONTOUR MAP - MARCH 23, 2020

GEORGIA POWER COMPANY
PLANT HAMMOND AP-1
ROME, FLOYD COUNTY, GEORGIA

Prepared For: Georgia Power

Prepared By: Geosyntec consultants

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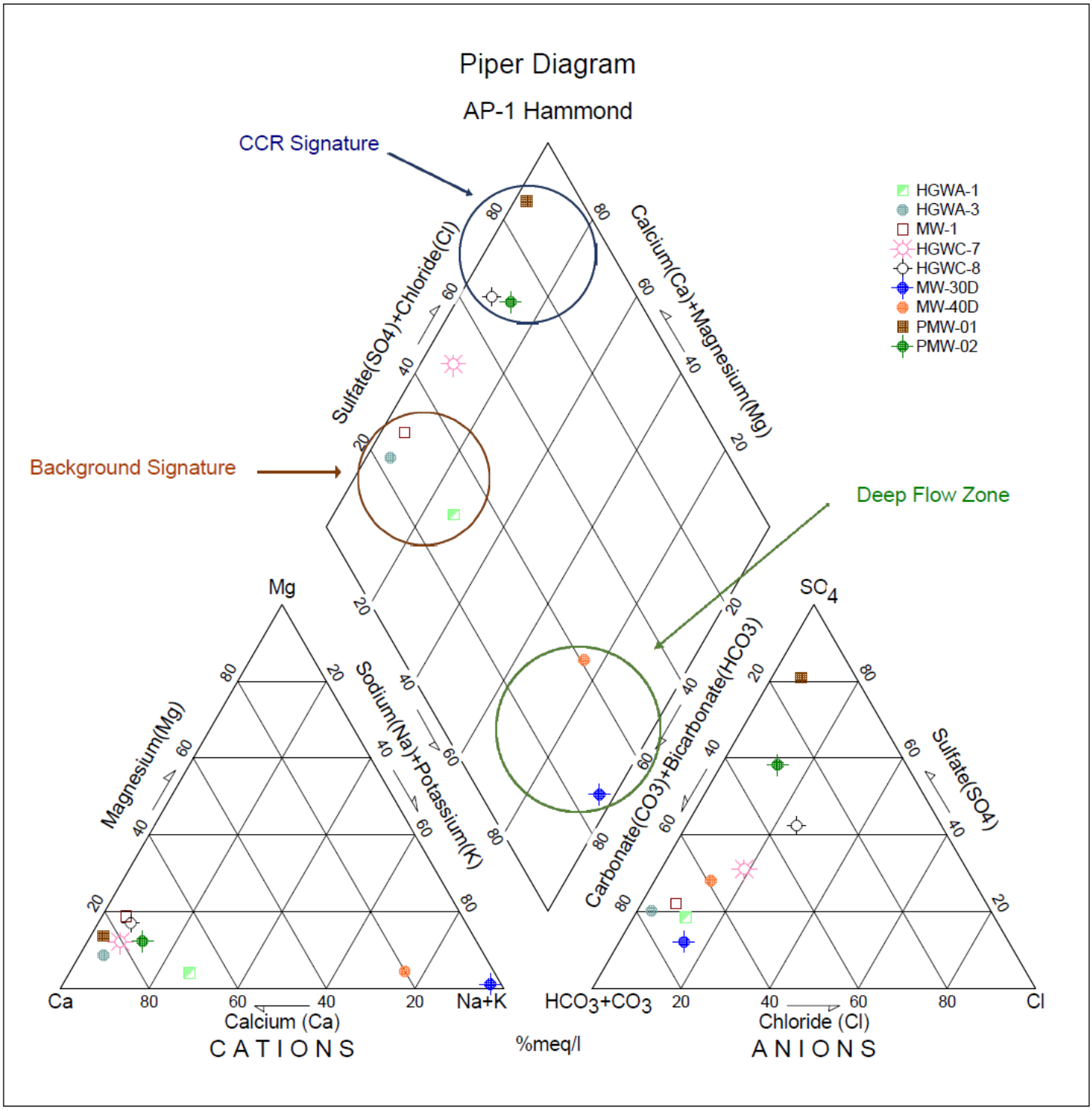
FIGURE 3



Sample Date				
HGWA-1	**HGWA-3**	**MW-1**	**HGWC-7**	**HGWC-8**
6/16/2020	6/16/2020	6/16/2020	6/17/2020	6/16/2020
MW-30D	**MW-40D**	**PMW-01**	**PMW-02**	**--**
6/17/2020	6/19/2020	4/9/2020	4/9/2020	--

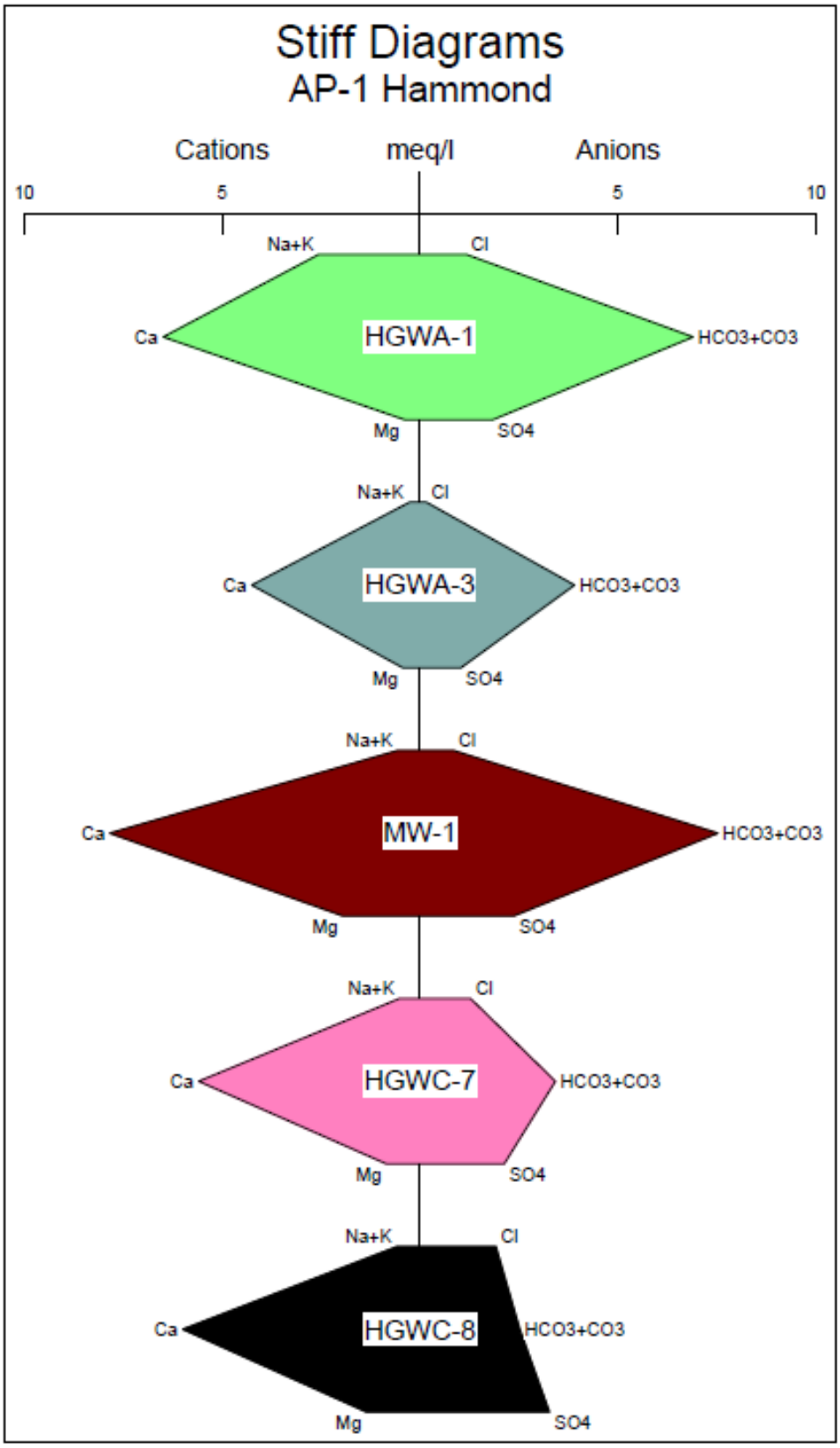
Piper Trilinear Plot

Georgia Power Company
Plant Hammond AP-1
Bartow County, Georgia

Prepared For: Georgia Power
Prepared By: Geosyntec consultants

Kennesaw, GA | August 2020

Figure 4

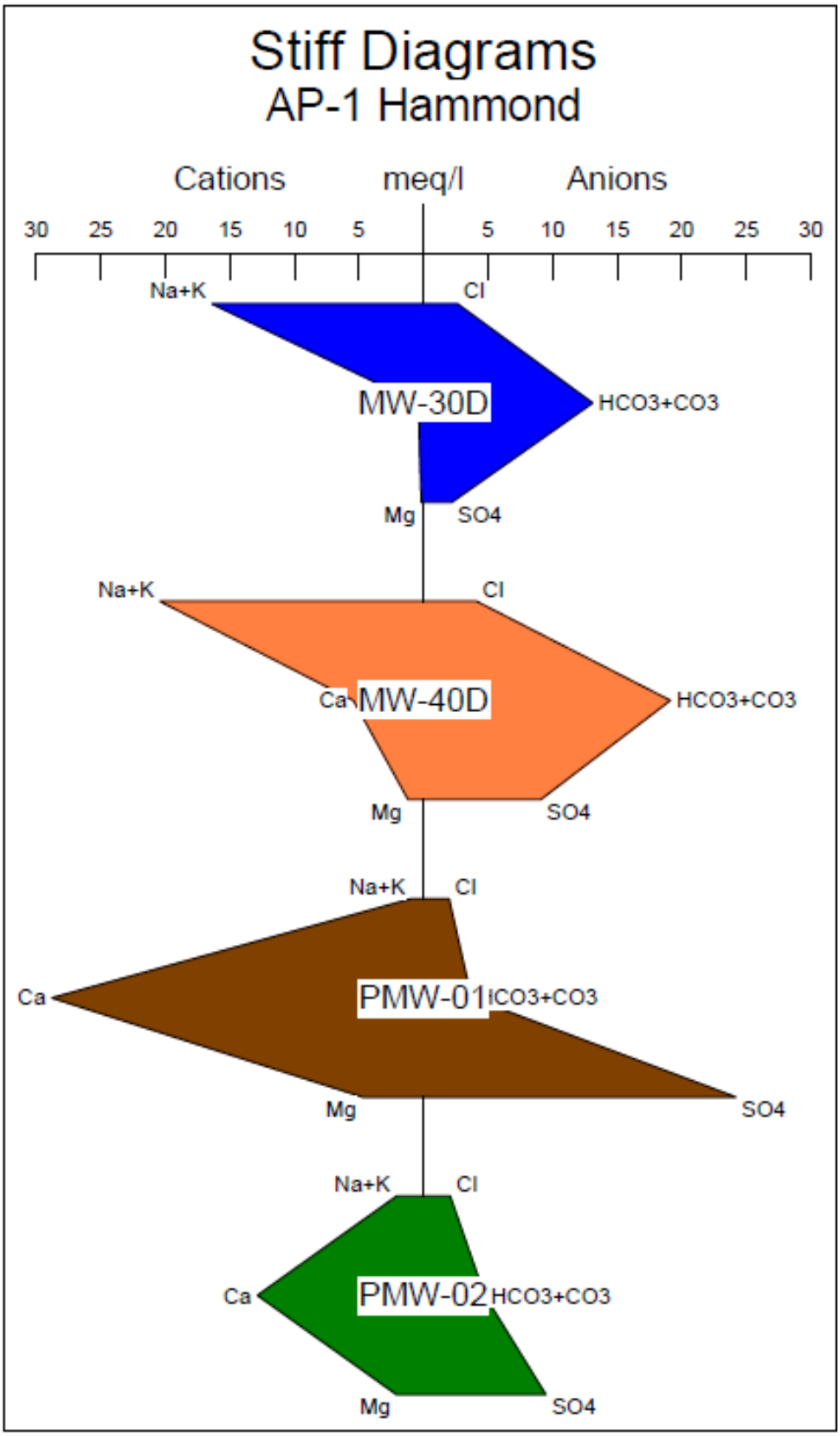


Stiff Diagram – Background & Compliance Wells
Georgia Power Company
Plant Hammond AP-1
Bartow County, Georgia

Prepared For: Georgia Power
Prepared By: Geosyntec consultants

Kennesaw, GA | August 2020

Figure 5A



Stiff Diagram – Deep Delineation Wells & AP-1 Pore Water Piezometers
Georgia Power Company
Plant Hammond AP-1
Bartow County, Georgia

Prepared For: Georgia Power
Prepared By: Geosyntec consultants

Kennesaw, GA | August 2020

Figure 5B

APPENDIX A

Laboratory Analytical Reports

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

April 21, 2020

Joju Abraham
Georgia Power - Coal Combustion Residuals
2480 Maner Road
Atlanta, GA 30339

RE: Project: HAMMOND AP-1 PMW NON ROUTINE
Pace Project No.: 2630908

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on April 10, 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 - Atlanta, GA

This report was revised 4/21/20 to correct the site name to Hammond.

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

Sincerely,

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

Enclosures

cc: Kristen Jurinko
Whitney Law, Geosyntec Consultants
Noelia Muskus, Geosyntec Consultants
Lauren Petty, Southern Company Services, Inc.

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

CERTIFICATIONS

Project: HAMMOND AP-1 PMW NON ROUTINE
Pace Project No.: 2630908

Pace Analytical Services Atlanta
110 Technology Parkway Peachtree Corners, GA 30092
Florida DOH Certification #: E87315
Georgia DW Inorganics Certification #: 812
Georgia DW Microbiology Certification #: 812
North Carolina Certification #: 381
South Carolina Certification #: 98011001
Virginia Certification #: 460204

Pace Analytical Services Asheville
2225 Riverside Drive, Asheville, NC 28804
Florida/NELAP Certification #: E87648
Massachusetts Certification #: M-NC030
North Carolina Drinking Water Certification #: 37712
North Carolina Wastewater Certification #: 40
South Carolina Certification #: 99030001
Virginia/VELAP Certification #: 460222

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

SAMPLE SUMMARY

Project: HAMMOND AP-1 PMW NON ROUTINE
Pace Project No.: 2630908

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2630908001	**PMW-01**	Water	04/09/20 18:22	04/10/20 11:35
2630908002	**PMW-02**	Water	04/09/20 10:08	04/10/20 11:35

REPORT OF LABORATORY ANALYSIS

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

SAMPLE ANALYTE COUNT

Project: HAMMOND AP-1 PMW NON ROUTINE
Pace Project No.: 2630908

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
2630908001	**PMW-01**	EPA 6010D	DRB	5	PASI-GA
		EPA 6020B	CSW	14	PASI-GA
		EPA 7470A	VHB	1	PASI-GA
		SM 2320B-2011	ECH	2	PASI-A
		SM 2540C	KN	1	PASI-GA
		SM 4500-S2D-2011	MJP	1	PASI-A
		EPA 300.0 Rev 2.1 1993	BRJ	3	PASI-A
2630908002	**PMW-02**	EPA 6010D	DRB	5	PASI-GA
		EPA 6020B	CSW	14	PASI-GA
		EPA 7470A	VHB	1	PASI-GA
		SM 2320B-2011	ECH	2	PASI-A
		SM 2540C	KN	1	PASI-GA
		SM 4500-S2D-2011	MJP	1	PASI-A
		EPA 300.0 Rev 2.1 1993	BRJ	3	PASI-A

PASI-A = Pace Analytical Services - Asheville
PASI-GA = Pace Analytical Services - Atlanta, GA

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

SUMMARY OF DETECTION

Project: HAMMOND AP-1 PMW NON ROUTINE
Pace Project No.: 2630908

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
2630908001	**PMW-01**					
	Field pH	6.58	Std. Units		04/10/20 17:17	
EPA 6010D	Calcium	577	mg/L	10.0	04/17/20 14:52	
EPA 6010D	Magnesium	57.4	mg/L	0.050	04/16/20 17:33	
EPA 6010D	Manganese	9.8	mg/L	0.040	04/16/20 17:33	
EPA 6010D	Potassium	8.7	mg/L	0.20	04/16/20 17:33	
EPA 6010D	Sodium	17.1	mg/L	1.0	04/16/20 17:33	
EPA 6020B	Arsenic	0.16	mg/L	0.025	04/14/20 16:13	
EPA 6020B	Barium	0.056	mg/L	0.010	04/13/20 17:22	
EPA 6020B	Boron	1.7	mg/L	0.10	04/13/20 17:22	
EPA 6020B	Cobalt	0.00056J	mg/L	0.0050	04/13/20 17:22	
EPA 6020B	Iron	15.5	mg/L	0.20	04/14/20 16:13	
EPA 6020B	Lithium	0.043	mg/L	0.030	04/13/20 17:22	
EPA 6020B	Molybdenum	0.0057J	mg/L	0.010	04/13/20 17:22	
EPA 6020B	Thallium	0.00023J	mg/L	0.0010	04/13/20 17:22	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	185	mg/L	5.0	04/16/20 15:42	
SM 2320B-2011	Alkalinity, Total as CaCO3	185	mg/L	5.0	04/16/20 15:42	
SM 2540C	Total Dissolved Solids	2170	mg/L	10.0	04/14/20 17:57	
EPA 300.0 Rev 2.1 1993	Chloride	69.5	mg/L	1.0	04/16/20 03:21	M6
EPA 300.0 Rev 2.1 1993	Fluoride	0.31	mg/L	0.30	04/16/20 03:21	
EPA 300.0 Rev 2.1 1993	Sulfate	1160	mg/L	22.0	04/16/20 18:50	M6
2630908002	**PMW-02**					
	Field pH	7.4	Std. Units		04/10/20 17:17	
EPA 6010D	Calcium	258	mg/L	1.0	04/16/20 17:36	M1
EPA 6010D	Magnesium	25.6	mg/L	0.050	04/16/20 17:36	M1
EPA 6010D	Manganese	1.1	mg/L	0.040	04/16/20 17:36	
EPA 6010D	Potassium	8.1	mg/L	0.20	04/16/20 17:36	
EPA 6010D	Sodium	43.7	mg/L	1.0	04/16/20 17:36	M1
EPA 6020B	Antimony	0.00054J	mg/L	0.0030	04/13/20 17:28	
EPA 6020B	Arsenic	0.72	mg/L	0.0050	04/13/20 17:28	
EPA 6020B	Barium	0.16	mg/L	0.010	04/13/20 17:28	
EPA 6020B	Boron	3.2	mg/L	0.10	04/13/20 17:28	
EPA 6020B	Iron	0.95	mg/L	0.040	04/13/20 17:28	
EPA 6020B	Lead	0.000053J	mg/L	0.0050	04/13/20 17:28	
EPA 6020B	Lithium	0.018J	mg/L	0.030	04/13/20 17:28	
EPA 6020B	Molybdenum	0.050	mg/L	0.010	04/13/20 17:28	
EPA 6020B	Thallium	0.00059J	mg/L	0.0010	04/13/20 17:28	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	236	mg/L	5.0	04/16/20 21:43	
SM 2320B-2011	Alkalinity, Total as CaCO3	236	mg/L	5.0	04/16/20 21:43	
SM 2540C	Total Dissolved Solids	1090	mg/L	10.0	04/14/20 17:57	
EPA 300.0 Rev 2.1 1993	Chloride	72.7	mg/L	1.0	04/16/20 04:05	
EPA 300.0 Rev 2.1 1993	Fluoride	0.82	mg/L	0.30	04/16/20 04:05	
EPA 300.0 Rev 2.1 1993	Sulfate	454	mg/L	9.0	04/16/20 19:33	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: HAMMOND AP-1 PMW NON ROUTINE
Pace Project No.: 2630908

Sample: PMW-01 **Lab ID: 2630908001** Collected: 04/09/20 18:22 Received: 04/10/20 11:35 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Atlanta, GA								
Field pH	**6.58**	Std. Units			1		04/10/20 17:17		
6010D MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Atlanta, GA								
Calcium	**577**	mg/L	10.0	1.4	10	04/16/20 13:14	04/17/20 14:52	7440-70-2	
Magnesium	**57.4**	mg/L	0.050	0.011	1	04/16/20 13:14	04/16/20 17:33	7439-95-4	
Manganese	**9.8**	mg/L	0.040	0.0061	1	04/16/20 13:14	04/16/20 17:33	7439-96-5	
Potassium	**8.7**	mg/L	0.20	0.026	1	04/16/20 13:14	04/16/20 17:33	7440-09-7	
Sodium	**17.1**	mg/L	1.0	0.19	1	04/16/20 13:14	04/16/20 17:33	7440-23-5	
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA								
Antimony	ND	mg/L	0.0030	0.00027	1	04/13/20 13:00	04/13/20 17:22	7440-36-0	
Arsenic	**0.16**	mg/L	0.025	0.0018	5	04/13/20 13:00	04/14/20 16:13	7440-38-2	
Barium	**0.056**	mg/L	0.010	0.00049	1	04/13/20 13:00	04/13/20 17:22	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000074	1	04/13/20 13:00	04/13/20 17:22	7440-41-7	
Boron	**1.7**	mg/L	0.10	0.0049	1	04/13/20 13:00	04/13/20 17:22	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00011	1	04/13/20 13:00	04/13/20 17:22	7440-43-9	
Chromium	ND	mg/L	0.010	0.00039	1	04/13/20 13:00	04/13/20 17:22	7440-47-3	
Cobalt	**0.00056J**	mg/L	0.0050	0.00030	1	04/13/20 13:00	04/13/20 17:22	7440-48-4	
Iron	**15.5**	mg/L	0.20	0.049	5	04/13/20 13:00	04/14/20 16:13	7439-89-6	
Lead	ND	mg/L	0.0050	0.000046	1	04/13/20 13:00	04/13/20 17:22	7439-92-1	
Lithium	**0.043**	mg/L	0.030	0.00078	1	04/13/20 13:00	04/13/20 17:22	7439-93-2	
Molybdenum	**0.0057J**	mg/L	0.010	0.00095	1	04/13/20 13:00	04/13/20 17:22	7439-98-7	
Selenium	ND	mg/L	0.050	0.0063	5	04/13/20 13:00	04/14/20 16:13	7782-49-2	
Thallium	**0.00023J**	mg/L	0.0010	0.000052	1	04/13/20 13:00	04/13/20 17:22	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Atlanta, GA								
Mercury	ND	ug/L	0.50	0.14	1	04/13/20 08:50	04/13/20 12:49	7439-97-6	
2320B Alkalinity	Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville								
Alkalinity,Bicarbonate (CaCO3)	**185**	mg/L	5.0	5.0	1		04/16/20 15:42		
Alkalinity, Total as CaCO3	**185**	mg/L	5.0	5.0	1		04/16/20 15:42		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Atlanta, GA								
Total Dissolved Solids	**2170**	mg/L	10.0	10.0	1		04/14/20 17:57		
4500S2D Sulfide Water	Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville								
Sulfide	ND	mg/L	0.10	0.050	1		04/15/20 12:09	18496-25-8	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: HAMMOND AP-1 PMW NON ROUTINE
Pace Project No.: 2630908

Sample: PMW-01 **Lab ID: 2630908001** Collected: 04/09/20 18:22 Received: 04/10/20 11:35 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**69.5**	mg/L	1.0	0.60	1		04/16/20 03:21	16887-00-6	M6
Fluoride	**0.31**	mg/L	0.30	0.050	1		04/16/20 03:21	16984-48-8	
Sulfate	**1160**	mg/L	22.0	11.0	22		04/16/20 18:50	14808-79-8	M6

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: HAMMOND AP-1 PMW NON ROUTINE
Pace Project No.: 2630908

Sample: PMW-02 **Lab ID: 2630908002** Collected: 04/09/20 10:08 Received: 04/10/20 11:35 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Atlanta, GA								
Field pH	**7.4**	Std. Units			1		04/10/20 17:17		
6010D MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Atlanta, GA								
Calcium	**258**	mg/L	1.0	0.14	1	04/16/20 13:14	04/16/20 17:36	7440-70-2	M1
Magnesium	**25.6**	mg/L	0.050	0.011	1	04/16/20 13:14	04/16/20 17:36	7439-95-4	M1
Manganese	**1.1**	mg/L	0.040	0.0061	1	04/16/20 13:14	04/16/20 17:36	7439-96-5	
Potassium	**8.1**	mg/L	0.20	0.026	1	04/16/20 13:14	04/16/20 17:36	7440-09-7	
Sodium	**43.7**	mg/L	1.0	0.19	1	04/16/20 13:14	04/16/20 17:36	7440-23-5	M1
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA								
Antimony	**0.00054J**	mg/L	0.0030	0.00027	1	04/13/20 13:00	04/13/20 17:28	7440-36-0	
Arsenic	**0.72**	mg/L	0.0050	0.00035	1	04/13/20 13:00	04/13/20 17:28	7440-38-2	
Barium	**0.16**	mg/L	0.010	0.00049	1	04/13/20 13:00	04/13/20 17:28	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000074	1	04/13/20 13:00	04/13/20 17:28	7440-41-7	
Boron	**3.2**	mg/L	0.10	0.0049	1	04/13/20 13:00	04/13/20 17:28	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00011	1	04/13/20 13:00	04/13/20 17:28	7440-43-9	
Chromium	ND	mg/L	0.010	0.00039	1	04/13/20 13:00	04/13/20 17:28	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00030	1	04/13/20 13:00	04/13/20 17:28	7440-48-4	
Iron	**0.95**	mg/L	0.040	0.0097	1	04/13/20 13:00	04/13/20 17:28	7439-89-6	
Lead	**0.000053J**	mg/L	0.0050	0.000046	1	04/13/20 13:00	04/13/20 17:28	7439-92-1	
Lithium	**0.018J**	mg/L	0.030	0.00078	1	04/13/20 13:00	04/13/20 17:28	7439-93-2	
Molybdenum	**0.050**	mg/L	0.010	0.00095	1	04/13/20 13:00	04/13/20 17:28	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	04/13/20 13:00	04/13/20 17:28	7782-49-2	
Thallium	**0.00059J**	mg/L	0.0010	0.000052	1	04/13/20 13:00	04/13/20 17:28	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Atlanta, GA								
Mercury	ND	ug/L	0.50	0.14	1	04/13/20 08:50	04/13/20 12:59	7439-97-6	
2320B Alkalinity	Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville								
Alkalinity,Bicarbonate (CaCO3)	**236**	mg/L	5.0	5.0	1		04/16/20 21:43		
Alkalinity, Total as CaCO3	**236**	mg/L	5.0	5.0	1		04/16/20 21:43		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Atlanta, GA								
Total Dissolved Solids	**1090**	mg/L	10.0	10.0	1		04/14/20 17:57		
4500S2D Sulfide Water	Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville								
Sulfide	ND	mg/L	0.10	0.050	1		04/15/20 12:10	18496-25-8	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: HAMMOND AP-1 PMW NON ROUTINE
Pace Project No.: 2630908

Sample: PMW-02 **Lab ID: 2630908002** Collected: 04/09/20 10:08 Received: 04/10/20 11:35 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**72.7**	mg/L	1.0	0.60	1		04/16/20 04:05	16887-00-6	
Fluoride	**0.82**	mg/L	0.30	0.050	1		04/16/20 04:05	16984-48-8	
Sulfate	**454**	mg/L	9.0	4.5	9		04/16/20 19:33	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: HAMMOND AP-1 PMW NON ROUTINE
Pace Project No.: 2630908

QC Batch: 45454
QC Batch Method: EPA 7470A
Analysis Method: EPA 7470A
Analysis Description: 7470 Mercury
Laboratory: Pace Analytical Services - Atlanta, GA
Associated Lab Samples: 2630908001, 2630908002

METHOD BLANK: 209843 Matrix: Water
Associated Lab Samples: 2630908001, 2630908002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	ug/L	ND	0.50	0.14	04/13/20 12:45	

LABORATORY CONTROL SAMPLE: 209844

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	2.5	2.4	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 209845 209846

Parameter	Units	2630908001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	ND	2.5	2.5	2.5	2.4	98	94	75-125	4	20	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: HAMMOND AP-1 PMW NON ROUTINE
Pace Project No.: 2630908

QC Batch: 45592
QC Batch Method: EPA 3010A
Analysis Method: EPA 6010D
Analysis Description: 6010D MET
Laboratory: Pace Analytical Services - Atlanta, GA
Associated Lab Samples: 2630908001, 2630908002

METHOD BLANK: 210512 Matrix: Water
Associated Lab Samples: 2630908001, 2630908002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	0.14	04/16/20 17:18	
Magnesium	mg/L	ND	0.050	0.011	04/16/20 17:18	
Manganese	mg/L	ND	0.040	0.0061	04/16/20 17:18	
Potassium	mg/L	ND	0.20	0.026	04/16/20 17:18	
Sodium	mg/L	ND	1.0	0.19	04/16/20 17:18	

LABORATORY CONTROL SAMPLE: 210513

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	mg/L	1	1.0	101	80-120	
Magnesium	mg/L	1	1.0	103	80-120	
Manganese	mg/L	1	0.97	97	80-120	
Potassium	mg/L	1	0.97	97	80-120	
Sodium	mg/L	1	1.0	102	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 210528 210529

Parameter	Units	2630908002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Calcium	mg/L	258	1	1	262	265	333	619	75-125	1	20	M1
Magnesium	mg/L	25.6	1	1	27.0	27.4	138	171	75-125	1	20	M1
Manganese	mg/L	1.1	1	1	2.0	2.1	96	99	75-125	2	20	
Potassium	mg/L	8.1	1	1	9.1	9.2	107	118	75-125	1	20	
Sodium	mg/L	43.7	1	1	45.1	45.6	134	185	75-125	1	20	M1

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
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(770)734-4200

QUALITY CONTROL DATA

Project: HAMMOND AP-1 PMW NON ROUTINE
Pace Project No.: 2630908

QC Batch: 45464
QC Batch Method: EPA 3005A
Analysis Method: EPA 6020B
Analysis Description: 6020B MET
Laboratory: Pace Analytical Services - Atlanta, GA
Associated Lab Samples: 2630908001, 2630908002

METHOD BLANK: 209861 Matrix: Water
Associated Lab Samples: 2630908001, 2630908002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00027	04/13/20 16:42	
Arsenic	mg/L	ND	0.0050	0.00035	04/13/20 16:42	
Barium	mg/L	ND	0.010	0.00049	04/13/20 16:42	
Beryllium	mg/L	ND	0.0030	0.000074	04/13/20 16:42	
Boron	mg/L	ND	0.10	0.0049	04/13/20 16:42	
Cadmium	mg/L	ND	0.0025	0.00011	04/13/20 16:42	
Chromium	mg/L	ND	0.010	0.00039	04/13/20 16:42	
Cobalt	mg/L	ND	0.0050	0.00030	04/13/20 16:42	
Iron	mg/L	ND	0.040	0.0097	04/13/20 16:42	
Lead	mg/L	ND	0.0050	0.000046	04/13/20 16:42	
Lithium	mg/L	ND	0.030	0.00078	04/13/20 16:42	
Molybdenum	mg/L	ND	0.010	0.00095	04/13/20 16:42	
Selenium	mg/L	ND	0.010	0.0013	04/13/20 16:42	
Thallium	mg/L	ND	0.0010	0.000052	04/13/20 16:42	

LABORATORY CONTROL SAMPLE: 209862

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.11	112	80-120	
Arsenic	mg/L	0.1	0.11	106	80-120	
Barium	mg/L	0.1	0.10	105	80-120	
Beryllium	mg/L	0.1	0.10	104	80-120	
Boron	mg/L	1	1.1	105	80-120	
Cadmium	mg/L	0.1	0.11	107	80-120	
Chromium	mg/L	0.1	0.11	107	80-120	
Cobalt	mg/L	0.1	0.11	105	80-120	
Iron	mg/L	1	1.0	105	80-120	
Lead	mg/L	0.1	0.11	105	80-120	
Lithium	mg/L	0.1	0.10	101	80-120	
Molybdenum	mg/L	0.1	0.11	107	80-120	
Selenium	mg/L	0.1	0.10	105	80-120	
Thallium	mg/L	0.1	0.11	107	80-120	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: HAMMOND AP-1 PMW NON ROUTINE
Pace Project No.: 2630908

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 209904 209905

Parameter	Units	2630907001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	mg/L	ND	0.1	0.1	0.11	0.11	113	109	75-125	4	20	
Arsenic	mg/L	ND	0.1	0.1	0.10	0.10	105	101	75-125	3	20	
Barium	mg/L	0.18	0.1	0.1	0.28	0.28	99	98	75-125	1	20	
Beryllium	mg/L	ND	0.1	0.1	0.10	0.10	102	101	75-125	1	20	
Boron	mg/L	0.74	1	1	1.8	1.9	109	111	75-125	1	20	
Cadmium	mg/L	ND	0.1	0.1	0.10	0.10	105	101	75-125	4	20	
Chromium	mg/L	ND	0.1	0.1	0.11	0.10	105	101	75-125	4	20	
Cobalt	mg/L	ND	0.1	0.1	0.10	0.10	104	100	75-125	3	20	
Iron	mg/L	0.10J	1	1	1.1	1.1	103	99	75-125	4	20	
Lead	mg/L	0.00026J	0.1	0.1	0.10	0.097	100	97	75-125	4	20	
Lithium	mg/L	0.20	0.1	0.1	0.30	0.31	102	108	75-125	2	20	
Molybdenum	mg/L	0.014	0.1	0.1	0.13	0.12	113	107	75-125	5	20	
Selenium	mg/L	ND	0.1	0.1	0.097	0.098	96	98	75-125	2	20	
Thallium	mg/L	ND	0.1	0.1	0.098	0.095	98	95	75-125	3	20	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: HAMMOND AP-1 PMW NON ROUTINE
Pace Project No.: 2630908

QC Batch: 536610
QC Batch Method: SM 2320B-2011
Analysis Method: SM 2320B-2011
Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 2630908001, 2630908002

METHOD BLANK: 2862347 Matrix: Water
Associated Lab Samples: 2630908001, 2630908002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	ND	5.0	5.0	04/16/20 15:18	
Alkalinity,Bicarbonate (CaCO3)	mg/L	ND	5.0	5.0	04/16/20 15:18	

LABORATORY CONTROL SAMPLE: 2862348

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	50	51.3	103	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2862349 2862350

Parameter	Units	92472992089 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	12.5	50	50	65.0	65.2	105	105	80-120	0	25	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2862351 2862352

Parameter	Units	92472992093 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	84.2	50	50	137	139	105	109	80-120	1	25	

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

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: HAMMOND AP-1 PMW NON ROUTINE
Pace Project No.: 2630908

QC Batch: 45512
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Atlanta, GA

Associated Lab Samples: 2630908001, 2630908002

LABORATORY CONTROL SAMPLE: 209985

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	379	95	84-108	

SAMPLE DUPLICATE: 209986

Parameter	Units	2630821024 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	223	244	9	10	

SAMPLE DUPLICATE: 209987

Parameter	Units	92473254002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	17.0	18.0	6	10	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: HAMMOND AP-1 PMW NON ROUTINE
Pace Project No.: 2630908

QC Batch: 536291
QC Batch Method: SM 4500-S2D-2011
Analysis Method: SM 4500-S2D-2011
Analysis Description: 4500S2D Sulfide Water
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 2630908001, 2630908002

METHOD BLANK: 2860729 Matrix: Water
Associated Lab Samples: 2630908001, 2630908002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide	mg/L	ND	0.10	0.050	04/15/20 11:58	

LABORATORY CONTROL SAMPLE: 2860730

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide	mg/L	0.5	0.47	94	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2860731 2860732

Parameter	Units	92473428001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfide	mg/L	ND	0.5	0.5	0.59	0.59	116	116	80-120	0	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2860733 2860734

Parameter	Units	2630862001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfide	mg/L	ND	0.5	0.5	0.66	0.66	129	129	80-120	0	10	M1

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: HAMMOND AP-1 PMW NON ROUTINE
Pace Project No.: 2630908

QC Batch: 536461
QC Batch Method: EPA 300.0 Rev 2.1 1993
Analysis Method: EPA 300.0 Rev 2.1 1993
Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 2630908001, 2630908002

METHOD BLANK: 2861738 Matrix: Water
Associated Lab Samples: 2630908001, 2630908002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	04/16/20 02:52	
Fluoride	mg/L	ND	0.10	0.050	04/16/20 02:52	
Sulfate	mg/L	ND	1.0	0.50	04/16/20 02:52	

LABORATORY CONTROL SAMPLE: 2861739

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	50.9	102	90-110	
Fluoride	mg/L	2.5	2.7	108	90-110	
Sulfate	mg/L	50	51.3	103	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2861740 2861741

Parameter	Units	2630908001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	69.5	50	50	102	101	64	64	90-110	0	10	M6
Fluoride	mg/L	0.31	2.5	2.5	3.1	3.0	110	108	90-110	1	10	
Sulfate	mg/L	1160	50	50	1200	1200	71	73	90-110	0	10	M6

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2861742 2861743

Parameter	Units	92473637001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	66.4	50	50	104	106	74	78	90-110	2	10	M1
Fluoride	mg/L	0.31	2.5	2.5	2.4	2.3	84	81	90-110	2	10	M1
Sulfate	mg/L	51.7	50	50	91.7	98.3	80	93	90-110	7	10	M1

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REPORT OF LABORATORY ANALYSIS

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

QUALIFIERS

Project: HAMMOND AP-1 PMW NON ROUTINE
Pace Project No.: 2630908

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.

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.

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.

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

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: HAMMOND AP-1 PMW NON ROUTINE
Pace Project No.: 2630908

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2630908001	**PMW-01**				
2630908002	**PMW-02**				
2630908001	**PMW-01**	EPA 3010A	45592	EPA 6010D	45599
2630908002	**PMW-02**	EPA 3010A	45592	EPA 6010D	45599
2630908001	**PMW-01**	EPA 3005A	45464	EPA 6020B	45489
2630908002	**PMW-02**	EPA 3005A	45464	EPA 6020B	45489
2630908001	**PMW-01**	EPA 7470A	45454	EPA 7470A	45456
2630908002	**PMW-02**	EPA 7470A	45454	EPA 7470A	45456
2630908001	**PMW-01**	SM 2320B-2011	536610		
2630908002	**PMW-02**	SM 2320B-2011	536610		
2630908001	**PMW-01**	SM 2540C	45512		
2630908002	**PMW-02**	SM 2540C	45512		
2630908001	**PMW-01**	SM 4500-S2D-2011	536291		
2630908002	**PMW-02**	SM 4500-S2D-2011	536291		
2630908001	**PMW-01**	EPA 300.0 Rev 2.1 1993	536461		
2630908002	**PMW-02**	EPA 300.0 Rev 2.1 1993	536461		

Pace Analytical
www.pacelabs.com

CHAIN-OF-CUSTODY / Analytical Request Document

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

WO# : 2630908

2630908

Section A Required Client Information:

Company:	GA Power
Address:	Atlanta, GA
Email To:	SCS Contacts
Phone:	Fax:
Requested Due Date/TAT:	~~10 Day~~ 5 day

Section B Required Project Information:

Report To:	SCS Contacts
Copy To:	Geosyntec Contacts
Purchase Order No.:	
Project Name:	AP-1 PMW Non-Routine Sampling
Project Number:	GW6581B

Section C Invoice Information:

Attention:	Southern Co.
Company Name:	
Address:	
Pace Quote Reference:	
Pace Project Manager:	Kevin Herring
Pace Profile #:	2928-5

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☑ OTHER ~~CCR~~

Site Location STATE: GA

Section D Required Client Information

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

Valid Matrix Codes

MATRIX	CODE
DRINKING WATER	DW
WATER	WT
WASTE WATER	WW
PRODUCT	P
SOIL/SOLID	SL
OIL	OL
WIPE	WP
AIR	AR
OTHER	OT
TISSUE	TS

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED DATE	COLLECTED TIME	COMPOSITE DATE	COMPOSITE TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	Chloride, Fluoride, Sulfate	TDS	Metals 6010/6020*	RAD 226/228	Sulfide 4500S2D	Total Alkalinity Bicarbonate 2320B	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	PMW-01	WT	G	4/9	1822			19	5	3½		3					1	N	X	X	X	X	X	X	N	pH = 6.58
2	PMW-02	WT	G	4/9	1008			18	5	3½		3					1	N	X	X	X	X	X	X	N	pH = 7.4 Last sample
3																		N								
4																		N								
5																		N								
6																		N								
7																		N								
8																		N								
9																		N								
10																		N								
11																		N								
12																		N								

CR

4/9/2024

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
Please note dry wells, strike thorugh any wells not sampled, and note when the last sample for the event has been taken.	Chad Russo/SCS	4/9/20	2020	Nadia Mufleh/Geosyntec	4/9/20	2020				
	Nadia Mufleh/Geosyntec	4/10/20	1135	[illegible]/Pace	4/10/20	1135				
*Metals=Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Fe, Pb, Li, Hg, Mg, Mn, Mo, Na,K, Se, Tl	[illegible] Pace	4/10/20	1245	K. Willey/Pace	4/10/20	1245	1.3	Y	N	Y
							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: Chad Russo

SIGNATURE of SAMPLER: Chad Russo

DATE Signed (MM/DD/YY): 4/9/2020

*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.

Sample Condition Upon Receipt

Pace Analytical

Client Name: GA Power

Project #
WO#: 2630908

PM: KH Due Date: 04/17/20
CLIENT: 26-GA Power

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

Tracking #: _____

Custody Seal on Cooler/Box Present: ☐ yes ☑ no Seals intact: ☐ yes ☐ no

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

Thermometer Used THR214 Type of Ice: ~~Wet~~ Blue None ☐ Samples on ice, cooling process has begun

Cooler Temperature 1.3 Biological Tissue is Frozen: Yes No

Date and Initials of person examining contents: KRW 4/10/20

Temp should be above freezing to 6°C

		Comments:
Chain of Custody Present:	☑Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☑Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☑Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☑Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☑Yes ☐No ☐N/A	5.
Short Hold Time Analysis (<72hr):	☐Yes ☑No ☐N/A	6.
Rush Turn Around Time Requested:	☐Yes ☑No ☐N/A	7.
Sufficient Volume:	☑Yes ☐No ☐N/A	8.
Correct Containers Used:	☑Yes ☐No ☐N/A	9.
-Pace Containers Used:	☑Yes ☐No ☐N/A	
Containers Intact:	☑Yes ☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes ☐No ☑N/A	11.
Sample Labels match COC:	☑Yes ☐No ☐N/A	12.
-Includes date/time/ID/Analysis Matrix: WT		
All containers needing preservation have been checked.	☑Yes ☐No ☐N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	☑Yes ☐No ☐N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	☐Yes ☐No	Initial when completed 4/10/20 KRW Lot # of added preservative
Samples checked for dechlorination:	☐Yes ☐No ☑N/A	14.
Headspace in VOA Vials (>6mm):	☐Yes ☐No ☑N/A	15.
Trip Blank Present:	☐Yes ☐No ☑N/A	16.
Trip Blank Custody Seals Present	☐Yes ☐No ☑N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ **Date:** _____

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

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

August 10, 2020

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

RE: Project: HAMMOND AP-1 NON ROUTINE
Pace Project No.: 92482346

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory between June 17, 2020 and June 22, 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

This report was revised 8/5/20 to remove extra metals reported on sample MW-30D due to a lab error.

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
Whitney Law, Geosyntec Consultants
Noelia Muskus, Geosyntec Consultants
Ms. Lauren Petty, Southern Co. Services
Nardos Tilahun, GeoSyntec
Dawit Yifru, Geosyntec Consultants, Inc.

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

CERTIFICATIONS

Project: HAMMOND AP-1 NON ROUTINE
Pace Project No.: 92482346

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

Pace Analytical Services Asheville
2225 Riverside Drive, Asheville, NC 28804
Florida/NELAP Certification #: E87648
Massachusetts Certification #: M-NC030
North Carolina Drinking Water Certification #: 37712
North Carolina Wastewater Certification #: 40
South Carolina Certification #: 99030001
Virginia/VELAP Certification #: 460222

Pace Analytical Services Peachtree Corners
110 Technology Pkwy, Peachtree Corners, GA 30092
Florida DOH Certification #: E87315
Georgia DW Inorganics Certification #: 812
Georgia DW Microbiology Certification #: 812
North Carolina Certification #: 381
South Carolina Certification #: 98011001
Virginia Certification #: 460204

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

SAMPLE SUMMARY

Project: HAMMOND AP-1 NON ROUTINE
Pace Project No.: 92482346

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92482346001	**HGWC-8**	Water	06/16/20 15:15	06/17/20 10:57
92482346002	**MW-1**	Water	06/16/20 14:10	06/17/20 10:57
92482346003	**HGWA-1**	Water	06/16/20 09:48	06/17/20 10:57
92482346004	**HGWA-3**	Water	06/16/20 11:16	06/17/20 10:57
92482346005	**HGWC-7**	Water	06/17/20 13:00	06/18/20 10:37
92482346006	**FB-01**	Water	06/17/20 17:05	06/18/20 10:37
92482346007	**MW-30D**	Water	06/17/20 13:44	06/18/20 10:37
92482346008	**MW-30D FILTERED**	Water	06/17/20 13:49	06/18/20 10:37
92482346009	**MW-40D**	Water	06/19/20 10:25	06/22/20 10:45

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

SAMPLE ANALYTE COUNT

Project: HAMMOND AP-1 NON ROUTINE
Pace Project No.: 92482346

Lab ID	Sample ID	Method	Analysts	Analytes Reported
92482346001	**HGWC-8**	EPA 6010D	DRB	6
		EPA 6020B	CW1	2
		SM 2450C-2011	VB	1
		SM 2320B-2011	ECH	3
		SM 4500-S2D-2011	LMS1	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92482346002	**MW-1**	EPA 6010D	DRB	6
		EPA 6020B	CW1	2
		SM 2450C-2011	VB	1
		SM 2320B-2011	ECH	3
		SM 4500-S2D-2011	LMS1	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92482346003	**HGWA-1**	EPA 6010D	DRB	6
		EPA 6020B	CW1	2
		SM 2450C-2011	VB	1
		SM 2320B-2011	ECH	3
		SM 4500-S2D-2011	LMS1	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92482346004	**HGWA-3**	EPA 6010D	DRB	6
		EPA 6020B	CW1	2
		SM 2450C-2011	VB	1
		SM 2320B-2011	ECH	3
		SM 4500-S2D-2011	LMS1	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92482346005	**HGWC-7**	EPA 6010D	DRB	6
		EPA 6020B	CW1	2
		SM 2450C-2011	JRS	1
		SM 2320B-2011	ECH	3
		SM 4500-S2D-2011	LMS1	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92482346006	**FB-01**	EPA 6010D	DRB	5
		EPA 6020B	CW1	3
		SM 2450C-2011	JRS	1
		SM 2320B-2011	ECH	3
		SM 4500-S2D-2011	LMS1	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92482346007	**MW-30D**	EPA 6010D	DRB	5

REPORT OF LABORATORY ANALYSIS

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

SAMPLE ANALYTE COUNT

Project: HAMMOND AP-1 NON ROUTINE
Pace Project No.: 92482346

Lab ID	Sample ID	Method	Analysts	Analytes Reported
		EPA 6020B	CW1	3
		SM 2450C-2011	JRS	1
		SM 2320B-2011	ECH	3
		SM 4500-S2D-2011	LMS1	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92482346008	**MW-30D FILTERED**	EPA 6010D	DRB	6
		EPA 6020B	CW1	2
		SM 2450C-2011	JRS	1
		SM 2320B-2011	ECH	3
		SM 4500-S2D-2011	LMS1	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92482346009	**MW-40D**	EPA 6010D	DRB	6
		EPA 6020B	CW1	2
		SM 2450C-2011	JRS	1
		SM 2320B-2011	ECH	3
		SM 4500-S2D-2011	LMS1	1
		EPA 300.0 Rev 2.1 1993	CDC	3

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

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

SUMMARY OF DETECTION

Project: HAMMOND AP-1 NON ROUTINE
Pace Project No.: 92482346

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92482346001	**HGWC-8**					
	pH	6.97	Std. Units		06/30/20 17:10	
EPA 6010D	Calcium	120	mg/L	1.0	06/19/20 16:47	
EPA 6010D	Iron	0.057	mg/L	0.040	06/19/20 16:47	
EPA 6010D	Magnesium	16.4	mg/L	0.050	06/19/20 16:47	
EPA 6010D	Manganese	0.23	mg/L	0.040	06/19/20 16:47	
EPA 6010D	Potassium	7.2	mg/L	0.20	06/19/20 16:47	
EPA 6010D	Sodium	9.2	mg/L	1.0	06/19/20 16:47	
EPA 6020B	Boron	2.2	mg/L	0.10	06/19/20 15:21	
EPA 6020B	Molybdenum	0.45	mg/L	0.010	06/19/20 15:21	
SM 2450C-2011	Total Dissolved Solids	573	mg/L	10.0	06/18/20 11:23	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	126	mg/L	5.0	06/29/20 16:48	
SM 2320B-2011	Alkalinity, Total as CaCO3	126	mg/L	5.0	06/29/20 16:48	
EPA 300.0 Rev 2.1 1993	Chloride	67.9	mg/L	1.0	06/24/20 22:13	
EPA 300.0 Rev 2.1 1993	Fluoride	0.45	mg/L	0.10	06/24/20 22:13	
EPA 300.0 Rev 2.1 1993	Sulfate	157	mg/L	3.0	06/25/20 07:57	
92482346002	**MW-1**					
	pH	6.86	Std. Units		06/30/20 17:10	
EPA 6010D	Calcium	157	mg/L	1.0	06/19/20 16:51	
EPA 6010D	Iron	0.78	mg/L	0.040	06/19/20 16:51	
EPA 6010D	Magnesium	23.7	mg/L	0.050	06/19/20 16:51	
EPA 6010D	Manganese	0.36	mg/L	0.040	06/19/20 16:51	
EPA 6010D	Potassium	0.39	mg/L	0.20	06/19/20 16:51	
EPA 6010D	Sodium	12.5	mg/L	1.0	06/19/20 16:51	
EPA 6020B	Boron	0.19	mg/L	0.10	06/19/20 15:27	
SM 2450C-2011	Total Dissolved Solids	653	mg/L	10.0	06/18/20 11:24	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	376	mg/L	5.0	06/29/20 19:20	
SM 2320B-2011	Alkalinity, Total as CaCO3	376	mg/L	5.0	06/29/20 19:20	
EPA 300.0 Rev 2.1 1993	Chloride	29.6	mg/L	1.0	06/24/20 22:28	
EPA 300.0 Rev 2.1 1993	Fluoride	0.20	mg/L	0.10	06/24/20 22:28	
EPA 300.0 Rev 2.1 1993	Sulfate	114	mg/L	2.0	06/25/20 08:13	
92482346003	**HGWA-1**					
	pH	6.97	Std. Units		06/30/20 17:10	
EPA 6010D	Calcium	130	mg/L	1.0	06/19/20 17:07	
EPA 6010D	Magnesium	4.7	mg/L	0.050	06/19/20 17:07	
EPA 6010D	Manganese	0.034J	mg/L	0.040	06/19/20 17:07	
EPA 6010D	Potassium	0.32	mg/L	0.20	06/19/20 17:07	
EPA 6010D	Sodium	58.5	mg/L	1.0	06/19/20 17:07	
EPA 6020B	Boron	0.021J	mg/L	0.10	06/19/20 15:33	
SM 2450C-2011	Total Dissolved Solids	632	mg/L	10.0	06/18/20 11:25	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	345	mg/L	5.0	06/30/20 12:34	
SM 2320B-2011	Alkalinity, Total as CaCO3	345	mg/L	5.0	06/30/20 12:34	
EPA 300.0 Rev 2.1 1993	Chloride	41.1	mg/L	1.0	06/24/20 22:42	
EPA 300.0 Rev 2.1 1993	Fluoride	0.071J	mg/L	0.10	06/24/20 22:42	
EPA 300.0 Rev 2.1 1993	Sulfate	88.2	mg/L	1.0	06/24/20 22:42	
92482346004	**HGWA-3**					
	pH	7.31	Std. Units		06/30/20 17:10	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
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SUMMARY OF DETECTION

Project: HAMMOND AP-1 NON ROUTINE
Pace Project No.: 92482346

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92482346004	**HGWA-3**					
EPA 6010D	Calcium	85.1	mg/L	1.0	06/19/20 17:11	
EPA 6010D	Iron	1.3	mg/L	0.040	06/19/20 17:11	
EPA 6010D	Magnesium	5.2	mg/L	0.050	06/19/20 17:11	
EPA 6010D	Manganese	0.24	mg/L	0.040	06/19/20 17:11	
EPA 6010D	Potassium	0.44	mg/L	0.20	06/19/20 17:11	
EPA 6010D	Sodium	5.9	mg/L	1.0	06/19/20 17:11	
EPA 6020B	Boron	0.010J	mg/L	0.10	06/19/20 15:38	
SM 2450C-2011	Total Dissolved Solids	448	mg/L	10.0	06/18/20 11:25	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	195	mg/L	5.0	06/29/20 17:23	
SM 2320B-2011	Alkalinity, Total as CaCO3	195	mg/L	5.0	06/29/20 17:23	
EPA 300.0 Rev 2.1 1993	Chloride	5.8	mg/L	1.0	06/24/20 22:56	
EPA 300.0 Rev 2.1 1993	Sulfate	49.5	mg/L	1.0	06/24/20 22:56	
92482346005	**HGWC-7**					
	pH	7.2	Std. Units		06/30/20 17:10	
EPA 6010D	Calcium	112	mg/L	1.0	06/22/20 15:01	M1
EPA 6010D	Iron	0.56	mg/L	0.040	06/22/20 15:01	
EPA 6010D	Magnesium	10.3	mg/L	0.050	06/22/20 15:01	M1
EPA 6010D	Manganese	0.22	mg/L	0.040	06/22/20 15:01	
EPA 6010D	Potassium	2.7	mg/L	0.20	06/22/20 15:01	
EPA 6010D	Sodium	10.3	mg/L	1.0	06/22/20 15:01	M1
EPA 6020B	Boron	1.0	mg/L	0.10	06/19/20 19:33	
EPA 6020B	Molybdenum	0.048	mg/L	0.010	06/19/20 19:33	
SM 2450C-2011	Total Dissolved Solids	423	mg/L	10.0	06/19/20 18:06	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	171	mg/L	5.0	06/29/20 18:03	
SM 2320B-2011	Alkalinity, Total as CaCO3	171	mg/L	5.0	06/29/20 18:03	
EPA 300.0 Rev 2.1 1993	Chloride	45.2	mg/L	1.0	06/25/20 04:43	
EPA 300.0 Rev 2.1 1993	Fluoride	0.077J	mg/L	0.10	06/25/20 04:43	
EPA 300.0 Rev 2.1 1993	Sulfate	102	mg/L	2.0	06/25/20 09:31	
92482346007	**MW-30D**					
	pH	8.33	Std. Units		08/10/20 09:13	
EPA 6010D	Calcium	8.3	mg/L	1.0	06/22/20 15:53	
EPA 6010D	Magnesium	2.3	mg/L	0.050	06/22/20 15:53	
EPA 6010D	Manganese	0.013J	mg/L	0.040	06/22/20 15:53	
EPA 6010D	Potassium	1.4	mg/L	0.20	06/22/20 15:53	
EPA 6010D	Sodium	376	mg/L	10.0	06/23/20 12:29	
EPA 6020B	Boron	0.77	mg/L	0.10	06/19/20 20:07	
EPA 6020B	Molybdenum	0.0062J	mg/L	0.010	06/19/20 20:07	
SM 2450C-2011	Total Dissolved Solids	1040	mg/L	10.0	06/19/20 18:07	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	654	mg/L	5.0	06/30/20 12:45	
SM 2320B-2011	Alkalinity, Total as CaCO3	654	mg/L	5.0	06/30/20 12:45	
SM 4500-S2D-2011	Sulfide	0.051J	mg/L	0.10	06/24/20 18:52	
EPA 300.0 Rev 2.1 1993	Chloride	92.5	mg/L	3.0	06/25/20 09:47	
EPA 300.0 Rev 2.1 1993	Fluoride	10.9	mg/L	0.30	06/25/20 09:47	
EPA 300.0 Rev 2.1 1993	Sulfate	104	mg/L	3.0	06/25/20 09:47	
92482346008	**MW-30D FILTERED**					
	pH	8.33	Std. Units		06/30/20 17:10	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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SUMMARY OF DETECTION

Project: HAMMOND AP-1 NON ROUTINE
Pace Project No.: 92482346

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92482346008	**MW-30D FILTERED**					
EPA 6010D	Calcium	4.2	mg/L	1.0	06/22/20 15:57	
EPA 6010D	Iron	0.043	mg/L	0.040	06/22/20 15:57	
EPA 6010D	Magnesium	1.7	mg/L	0.050	06/22/20 15:57	
EPA 6010D	Potassium	1.2	mg/L	0.20	06/22/20 15:57	
EPA 6010D	Sodium	325	mg/L	10.0	06/23/20 12:33	
EPA 6020B	Boron	0.73	mg/L	0.10	06/19/20 20:13	
EPA 6020B	Molybdenum	0.0093J	mg/L	0.010	06/19/20 20:13	
SM 2450C-2011	Total Dissolved Solids	850	mg/L	10.0	06/19/20 18:08	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	582	mg/L	5.0	06/30/20 12:57	
SM 2320B-2011	Alkalinity, Total as CaCO3	583	mg/L	5.0	06/30/20 12:57	
EPA 300.0 Rev 2.1 1993	Chloride	85.1	mg/L	1.0	06/25/20 05:27	
EPA 300.0 Rev 2.1 1993	Fluoride	10.3	mg/L	0.30	06/25/20 10:02	
EPA 300.0 Rev 2.1 1993	Sulfate	92.3	mg/L	3.0	06/25/20 10:02	
92482346009	**MW-40D**					
	pH	7.4	Std. Units		06/30/20 17:10	
EPA 6010D	Calcium	109	mg/L	1.0	06/29/20 16:50	
EPA 6010D	Iron	8.8	mg/L	0.040	06/29/20 16:50	
EPA 6010D	Magnesium	14.7	mg/L	0.050	06/29/20 16:50	
EPA 6010D	Manganese	0.31	mg/L	0.040	06/29/20 16:50	
EPA 6010D	Potassium	9.3	mg/L	0.20	06/29/20 16:50	
EPA 6010D	Sodium	464	mg/L	10.0	06/30/20 12:14	
EPA 6020B	Boron	0.19	mg/L	0.10	06/25/20 16:35	
EPA 6020B	Molybdenum	0.015	mg/L	0.010	06/25/20 16:35	
SM 2450C-2011	Total Dissolved Solids	1420	mg/L	10.0	06/22/20 17:40	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	955	mg/L	5.0	06/30/20 16:50	
SM 2320B-2011	Alkalinity, Total as CaCO3	955	mg/L	5.0	06/30/20 16:50	
EPA 300.0 Rev 2.1 1993	Chloride	145	mg/L	9.0	06/26/20 09:14	
EPA 300.0 Rev 2.1 1993	Sulfate	435	mg/L	9.0	06/26/20 09:14	

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: HAMMOND AP-1 NON ROUTINE
Pace Project No.: 92482346

Sample: HGWC-8 **Lab ID: 92482346001** Collected: 06/16/20 15:15 Received: 06/17/20 10:57 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Charlotte								
pH	**6.97**	Std. Units			1		06/30/20 17:10		
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Calcium	**120**	mg/L	1.0	0.14	1	06/18/20 16:00	06/19/20 16:47	7440-70-2	
Iron	**0.057**	mg/L	0.040	0.015	1	06/18/20 16:00	06/19/20 16:47	7439-89-6	
Magnesium	**16.4**	mg/L	0.050	0.011	1	06/18/20 16:00	06/19/20 16:47	7439-95-4	
Manganese	**0.23**	mg/L	0.040	0.0061	1	06/18/20 16:00	06/19/20 16:47	7439-96-5	
Potassium	**7.2**	mg/L	0.20	0.026	1	06/18/20 16:00	06/19/20 16:47	7440-09-7	
Sodium	**9.2**	mg/L	1.0	0.19	1	06/18/20 16:00	06/19/20 16:47	7440-23-5	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Boron	**2.2**	mg/L	0.10	0.0049	1	06/18/20 13:00	06/19/20 15:21	7440-42-8	
Molybdenum	**0.45**	mg/L	0.010	0.00095	1	06/18/20 13:00	06/19/20 15:21	7439-98-7	
2540C Total Dissolved Solids	Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	**573**	mg/L	10.0	10.0	1		06/18/20 11:23		
2320B Alkalinity	Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville								
Alkalinity,Bicarbonate (CaCO3)	**126**	mg/L	5.0	5.0	1		06/29/20 16:48		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		06/29/20 16:48		
Alkalinity, Total as CaCO3	**126**	mg/L	5.0	5.0	1		06/29/20 16:48		
4500S2D Sulfide Water	Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville								
Sulfide	ND	mg/L	0.10	0.050	1		06/19/20 18:57	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**67.9**	mg/L	1.0	0.60	1		06/24/20 22:13	16887-00-6	
Fluoride	**0.45**	mg/L	0.10	0.050	1		06/24/20 22:13	16984-48-8	
Sulfate	**157**	mg/L	3.0	1.5	3		06/25/20 07:57	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: HAMMOND AP-1 NON ROUTINE
Pace Project No.: 92482346

Sample: MW-1 **Lab ID: 92482346002** Collected: 06/16/20 14:10 Received: 06/17/20 10:57 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Charlotte								
pH	**6.86**	Std. Units			1		06/30/20 17:10		
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Calcium	**157**	mg/L	1.0	0.14	1	06/18/20 16:00	06/19/20 16:51	7440-70-2	
Iron	**0.78**	mg/L	0.040	0.015	1	06/18/20 16:00	06/19/20 16:51	7439-89-6	
Magnesium	**23.7**	mg/L	0.050	0.011	1	06/18/20 16:00	06/19/20 16:51	7439-95-4	
Manganese	**0.36**	mg/L	0.040	0.0061	1	06/18/20 16:00	06/19/20 16:51	7439-96-5	
Potassium	**0.39**	mg/L	0.20	0.026	1	06/18/20 16:00	06/19/20 16:51	7440-09-7	
Sodium	**12.5**	mg/L	1.0	0.19	1	06/18/20 16:00	06/19/20 16:51	7440-23-5	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Boron	**0.19**	mg/L	0.10	0.0049	1	06/18/20 13:00	06/19/20 15:27	7440-42-8	
Molybdenum	ND	mg/L	0.010	0.00095	1	06/18/20 13:00	06/19/20 15:27	7439-98-7	
2540C Total Dissolved Solids	Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	**653**	mg/L	10.0	10.0	1		06/18/20 11:24		
2320B Alkalinity	Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville								
Alkalinity,Bicarbonate (CaCO3)	**376**	mg/L	5.0	5.0	1		06/29/20 19:20		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		06/29/20 19:20		
Alkalinity, Total as CaCO3	**376**	mg/L	5.0	5.0	1		06/29/20 19:20		
4500S2D Sulfide Water	Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville								
Sulfide	ND	mg/L	0.10	0.050	1		06/19/20 18:57	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**29.6**	mg/L	1.0	0.60	1		06/24/20 22:28	16887-00-6	
Fluoride	**0.20**	mg/L	0.10	0.050	1		06/24/20 22:28	16984-48-8	
Sulfate	**114**	mg/L	2.0	1.0	2		06/25/20 08:13	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: HAMMOND AP-1 NON ROUTINE
Pace Project No.: 92482346

Sample: HGWA-1 **Lab ID: 92482346003** Collected: 06/16/20 09:48 Received: 06/17/20 10:57 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Charlotte								
pH	**6.97**	Std. Units			1		06/30/20 17:10		
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Calcium	**130**	mg/L	1.0	0.14	1	06/18/20 16:00	06/19/20 17:07	7440-70-2	
Iron	ND	mg/L	0.040	0.015	1	06/18/20 16:00	06/19/20 17:07	7439-89-6	
Magnesium	**4.7**	mg/L	0.050	0.011	1	06/18/20 16:00	06/19/20 17:07	7439-95-4	
Manganese	**0.034J**	mg/L	0.040	0.0061	1	06/18/20 16:00	06/19/20 17:07	7439-96-5	
Potassium	**0.32**	mg/L	0.20	0.026	1	06/18/20 16:00	06/19/20 17:07	7440-09-7	
Sodium	**58.5**	mg/L	1.0	0.19	1	06/18/20 16:00	06/19/20 17:07	7440-23-5	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Boron	**0.021J**	mg/L	0.10	0.0049	1	06/18/20 13:00	06/19/20 15:33	7440-42-8	
Molybdenum	ND	mg/L	0.010	0.00095	1	06/18/20 13:00	06/19/20 15:33	7439-98-7	
2540C Total Dissolved Solids	Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	**632**	mg/L	10.0	10.0	1		06/18/20 11:25		
2320B Alkalinity	Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville								
Alkalinity,Bicarbonate (CaCO3)	**345**	mg/L	5.0	5.0	1		06/30/20 12:34		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		06/30/20 12:34		
Alkalinity, Total as CaCO3	**345**	mg/L	5.0	5.0	1		06/30/20 12:34		
4500S2D Sulfide Water	Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville								
Sulfide	ND	mg/L	0.10	0.050	1		06/19/20 18:57	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**41.1**	mg/L	1.0	0.60	1		06/24/20 22:42	16887-00-6	
Fluoride	**0.071J**	mg/L	0.10	0.050	1		06/24/20 22:42	16984-48-8	
Sulfate	**88.2**	mg/L	1.0	0.50	1		06/24/20 22:42	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: HAMMOND AP-1 NON ROUTINE
Pace Project No.: 92482346

Sample: HGWA-3 **Lab ID: 92482346004** Collected: 06/16/20 11:16 Received: 06/17/20 10:57 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Charlotte								
pH	**7.31**	Std. Units			1		06/30/20 17:10		
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Calcium	**85.1**	mg/L	1.0	0.14	1	06/18/20 16:00	06/19/20 17:11	7440-70-2	
Iron	**1.3**	mg/L	0.040	0.015	1	06/18/20 16:00	06/19/20 17:11	7439-89-6	
Magnesium	**5.2**	mg/L	0.050	0.011	1	06/18/20 16:00	06/19/20 17:11	7439-95-4	
Manganese	**0.24**	mg/L	0.040	0.0061	1	06/18/20 16:00	06/19/20 17:11	7439-96-5	
Potassium	**0.44**	mg/L	0.20	0.026	1	06/18/20 16:00	06/19/20 17:11	7440-09-7	
Sodium	**5.9**	mg/L	1.0	0.19	1	06/18/20 16:00	06/19/20 17:11	7440-23-5	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Boron	**0.010J**	mg/L	0.10	0.0049	1	06/18/20 13:00	06/19/20 15:38	7440-42-8	
Molybdenum	ND	mg/L	0.010	0.00095	1	06/18/20 13:00	06/19/20 15:38	7439-98-7	
2540C Total Dissolved Solids	Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	**448**	mg/L	10.0	10.0	1		06/18/20 11:25		
2320B Alkalinity	Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville								
Alkalinity,Bicarbonate (CaCO3)	**195**	mg/L	5.0	5.0	1		06/29/20 17:23		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		06/29/20 17:23		
Alkalinity, Total as CaCO3	**195**	mg/L	5.0	5.0	1		06/29/20 17:23		
4500S2D Sulfide Water	Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville								
Sulfide	ND	mg/L	0.10	0.050	1		06/19/20 18:58	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**5.8**	mg/L	1.0	0.60	1		06/24/20 22:56	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		06/24/20 22:56	16984-48-8	
Sulfate	**49.5**	mg/L	1.0	0.50	1		06/24/20 22:56	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: HAMMOND AP-1 NON ROUTINE
Pace Project No.: 92482346

Sample: HGWC-7 **Lab ID: 92482346005** Collected: 06/17/20 13:00 Received: 06/18/20 10:37 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Charlotte								
pH	**7.2**	Std. Units			1		06/30/20 17:10		
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Calcium	**112**	mg/L	1.0	0.14	1	06/19/20 14:00	06/22/20 15:01	7440-70-2	M1
Iron	**0.56**	mg/L	0.040	0.015	1	06/19/20 14:00	06/22/20 15:01	7439-89-6	
Magnesium	**10.3**	mg/L	0.050	0.011	1	06/19/20 14:00	06/22/20 15:01	7439-95-4	M1
Manganese	**0.22**	mg/L	0.040	0.0061	1	06/19/20 14:00	06/22/20 15:01	7439-96-5	
Potassium	**2.7**	mg/L	0.20	0.026	1	06/19/20 14:00	06/22/20 15:01	7440-09-7	
Sodium	**10.3**	mg/L	1.0	0.19	1	06/19/20 14:00	06/22/20 15:01	7440-23-5	M1
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Boron	**1.0**	mg/L	0.10	0.0049	1	06/19/20 12:30	06/19/20 19:33	7440-42-8	
Molybdenum	**0.048**	mg/L	0.010	0.00095	1	06/19/20 12:30	06/19/20 19:33	7439-98-7	
2540C Total Dissolved Solids	Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	**423**	mg/L	10.0	10.0	1		06/19/20 18:06		
2320B Alkalinity	Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville								
Alkalinity,Bicarbonate (CaCO3)	**171**	mg/L	5.0	5.0	1		06/29/20 18:03		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		06/29/20 18:03		
Alkalinity, Total as CaCO3	**171**	mg/L	5.0	5.0	1		06/29/20 18:03		
4500S2D Sulfide Water	Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville								
Sulfide	ND	mg/L	0.10	0.050	1		06/24/20 18:51	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**45.2**	mg/L	1.0	0.60	1		06/25/20 04:43	16887-00-6	
Fluoride	**0.077J**	mg/L	0.10	0.050	1		06/25/20 04:43	16984-48-8	
Sulfate	**102**	mg/L	2.0	1.0	2		06/25/20 09:31	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: HAMMOND AP-1 NON ROUTINE
Pace Project No.: 92482346

Sample: FB-01 **Lab ID: 92482346006** Collected: 06/17/20 17:05 Received: 06/18/20 10:37 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Calcium	ND	mg/L	1.0	0.14	1	06/19/20 14:00	06/22/20 15:49	7440-70-2	
Magnesium	ND	mg/L	0.050	0.011	1	06/19/20 14:00	06/22/20 15:49	7439-95-4	
Manganese	ND	mg/L	0.040	0.0061	1	06/19/20 14:00	06/22/20 15:49	7439-96-5	
Potassium	ND	mg/L	0.20	0.026	1	06/19/20 14:00	06/22/20 15:49	7440-09-7	
Sodium	ND	mg/L	1.0	0.19	1	06/19/20 14:00	06/22/20 15:49	7440-23-5	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Boron	ND	mg/L	0.10	0.0049	1	06/19/20 12:30	06/19/20 19:50	7440-42-8	
Iron	ND	mg/L	0.040	0.0097	1	06/19/20 12:30	06/19/20 19:50	7439-89-6	
Molybdenum	ND	mg/L	0.010	0.00095	1	06/19/20 12:30	06/19/20 19:50	7439-98-7	
2540C Total Dissolved Solids	Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	ND	mg/L	10.0	10.0	1		06/19/20 18:07		
2320B Alkalinity	Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville								
Alkalinity,Bicarbonate (CaCO3)	ND	mg/L	5.0	5.0	1		06/29/20 18:14		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		06/29/20 18:14		
Alkalinity, Total as CaCO3	ND	mg/L	5.0	5.0	1		06/29/20 18:14		
4500S2D Sulfide Water	Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville								
Sulfide	ND	mg/L	0.10	0.050	1		06/24/20 18:52	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	ND	mg/L	1.0	0.60	1		06/25/20 04:58	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		06/25/20 04:58	16984-48-8	
Sulfate	ND	mg/L	1.0	0.50	1		06/25/20 04:58	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: HAMMOND AP-1 NON ROUTINE
Pace Project No.: 92482346

Sample: MW-30D **Lab ID: 92482346007** Collected: 06/17/20 13:44 Received: 06/18/20 10:37 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Charlotte								
pH	**8.33**	Std. Units			1		08/10/20 09:13		
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Calcium	**8.3**	mg/L	1.0	0.14	1	06/19/20 14:00	06/22/20 15:53	7440-70-2	
Magnesium	**2.3**	mg/L	0.050	0.011	1	06/19/20 14:00	06/22/20 15:53	7439-95-4	
Manganese	**0.013J**	mg/L	0.040	0.0061	1	06/19/20 14:00	06/22/20 15:53	7439-96-5	
Potassium	**1.4**	mg/L	0.20	0.026	1	06/19/20 14:00	06/22/20 15:53	7440-09-7	
Sodium	**376**	mg/L	10.0	1.9	10	06/19/20 14:00	06/23/20 12:29	7440-23-5	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Boron	**0.77**	mg/L	0.10	0.0049	1	06/19/20 12:30	06/19/20 20:07	7440-42-8	
Iron	ND	mg/L	0.040	0.0097	1	06/19/20 12:30	06/19/20 19:50	7439-89-6	
Molybdenum	**0.0062J**	mg/L	0.010	0.00095	1	06/19/20 12:30	06/19/20 20:07	7439-98-7	
2540C Total Dissolved Solids	Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	**1040**	mg/L	10.0	10.0	1		06/19/20 18:07		
2320B Alkalinity	Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville								
Alkalinity,Bicarbonate (CaCO3)	**654**	mg/L	5.0	5.0	1		06/30/20 12:45		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		06/30/20 12:45		
Alkalinity, Total as CaCO3	**654**	mg/L	5.0	5.0	1		06/30/20 12:45		
4500S2D Sulfide Water	Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville								
Sulfide	**0.051J**	mg/L	0.10	0.050	1		06/24/20 18:52	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**92.5**	mg/L	3.0	1.8	3		06/25/20 09:47	16887-00-6	
Fluoride	**10.9**	mg/L	0.30	0.15	3		06/25/20 09:47	16984-48-8	
Sulfate	**104**	mg/L	3.0	1.5	3		06/25/20 09:47	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: HAMMOND AP-1 NON ROUTINE
Pace Project No.: 92482346

Sample: MW-30D FILTERED **Lab ID: 92482346008** Collected: 06/17/20 13:49 Received: 06/18/20 10:37 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Charlotte								
pH	**8.33**	Std. Units			1		06/30/20 17:10		
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Calcium	**4.2**	mg/L	1.0	0.14	1	06/19/20 14:00	06/22/20 15:57	7440-70-2	
Iron	**0.043**	mg/L	0.040	0.015	1	06/19/20 14:00	06/22/20 15:57	7439-89-6	
Magnesium	**1.7**	mg/L	0.050	0.011	1	06/19/20 14:00	06/22/20 15:57	7439-95-4	
Manganese	ND	mg/L	0.040	0.0061	1	06/19/20 14:00	06/22/20 15:57	7439-96-5	
Potassium	**1.2**	mg/L	0.20	0.026	1	06/19/20 14:00	06/22/20 15:57	7440-09-7	
Sodium	**325**	mg/L	10.0	1.9	10	06/19/20 14:00	06/23/20 12:33	7440-23-5	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Boron	**0.73**	mg/L	0.10	0.0049	1	06/19/20 12:30	06/19/20 20:13	7440-42-8	
Molybdenum	**0.0093J**	mg/L	0.010	0.00095	1	06/19/20 12:30	06/19/20 20:13	7439-98-7	
2540C Total Dissolved Solids	Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	**850**	mg/L	10.0	10.0	1		06/19/20 18:08		
2320B Alkalinity	Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville								
Alkalinity,Bicarbonate (CaCO3)	**582**	mg/L	5.0	5.0	1		06/30/20 12:57		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		06/30/20 12:57		
Alkalinity, Total as CaCO3	**583**	mg/L	5.0	5.0	1		06/30/20 12:57		
4500S2D Sulfide Water	Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville								
Sulfide	ND	mg/L	0.10	0.050	1		06/24/20 18:53	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**85.1**	mg/L	1.0	0.60	1		06/25/20 05:27	16887-00-6	
Fluoride	**10.3**	mg/L	0.30	0.15	3		06/25/20 10:02	16984-48-8	
Sulfate	**92.3**	mg/L	3.0	1.5	3		06/25/20 10:02	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: HAMMOND AP-1 NON ROUTINE
Pace Project No.: 92482346

Sample: MW-40D **Lab ID: 92482346009** Collected: 06/19/20 10:25 Received: 06/22/20 10:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Charlotte								
pH	**7.4**	Std. Units			1		06/30/20 17:10		
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Calcium	**109**	mg/L	1.0	0.14	1	06/29/20 12:40	06/29/20 16:50	7440-70-2	
Iron	**8.8**	mg/L	0.040	0.015	1	06/29/20 12:40	06/29/20 16:50	7439-89-6	
Magnesium	**14.7**	mg/L	0.050	0.011	1	06/29/20 12:40	06/29/20 16:50	7439-95-4	
Manganese	**0.31**	mg/L	0.040	0.0061	1	06/29/20 12:40	06/29/20 16:50	7439-96-5	
Potassium	**9.3**	mg/L	0.20	0.026	1	06/29/20 12:40	06/29/20 16:50	7440-09-7	
Sodium	**464**	mg/L	10.0	1.9	10	06/29/20 12:40	06/30/20 12:14	7440-23-5	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Boron	**0.19**	mg/L	0.10	0.0049	1	06/24/20 13:30	06/25/20 16:35	7440-42-8	
Molybdenum	**0.015**	mg/L	0.010	0.00095	1	06/24/20 13:30	06/25/20 16:35	7439-98-7	
2540C Total Dissolved Solids	Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	**1420**	mg/L	10.0	10.0	1		06/22/20 17:40		
2320B Alkalinity	Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville								
Alkalinity,Bicarbonate (CaCO3)	**955**	mg/L	5.0	5.0	1		06/30/20 16:50		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		06/30/20 16:50		
Alkalinity, Total as CaCO3	**955**	mg/L	5.0	5.0	1		06/30/20 16:50		
4500S2D Sulfide Water	Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville								
Sulfide	ND	mg/L	1.0	0.50	10		06/24/20 19:01	18496-25-8	D3
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**145**	mg/L	9.0	5.4	9		06/26/20 09:14	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		06/26/20 02:27	16984-48-8	
Sulfate	**435**	mg/L	9.0	4.5	9		06/26/20 09:14	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
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QUALITY CONTROL DATA

Project: HAMMOND AP-1 NON ROUTINE
Pace Project No.: 92482346

QC Batch: 548325
QC Batch Method: EPA 3010A
Analysis Method: EPA 6010D
Analysis Description: 6010D ATL
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92482346001, 92482346002, 92482346003, 92482346004

METHOD BLANK: 2917356 Matrix: Water
Associated Lab Samples: 92482346001, 92482346002, 92482346003, 92482346004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	0.14	06/19/20 15:48	
Iron	mg/L	ND	0.040	0.015	06/19/20 15:48	
Magnesium	mg/L	ND	0.050	0.011	06/19/20 15:48	
Manganese	mg/L	ND	0.040	0.0061	06/19/20 15:48	
Potassium	mg/L	ND	0.20	0.026	06/22/20 12:08	
Sodium	mg/L	ND	1.0	0.19	06/22/20 12:08	

LABORATORY CONTROL SAMPLE: 2917357

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	mg/L	1	1.0	102	80-120	
Iron	mg/L	1	1.0	104	80-120	
Magnesium	mg/L	1	1.1	106	80-120	
Manganese	mg/L	1	1.0	101	80-120	
Potassium	mg/L	1	0.98	98	80-120	
Sodium	mg/L	1	1.0	104	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2917358 2917359

Parameter	Units	92482102001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Calcium	mg/L	174	1	1	174	182	-20	757	75-125	4	20	M1
Iron	mg/L	0.20	1	1	1.2	1.3	103	108	75-125	4	20	
Magnesium	mg/L	23.4	1	1	24.3	25.4	94	206	75-125	5	20	M1
Manganese	mg/L	0.88	1	1	1.9	1.9	98	104	75-125	3	20	
Potassium	mg/L	6.5	1	1	7.5	7.8	101	134	75-125	4	20	M1
Sodium	mg/L	9.6	1	1	10.6	11.0	100	140	75-125	4	20	M1

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

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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QUALITY CONTROL DATA

Project: HAMMOND AP-1 NON ROUTINE
Pace Project No.: 92482346

QC Batch: 548539
QC Batch Method: EPA 3010A
Analysis Method: EPA 6010D
Analysis Description: 6010D ATL
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92482346005, 92482346006, 92482346007, 92482346008

METHOD BLANK: 2918225 Matrix: Water
Associated Lab Samples: 92482346005, 92482346006, 92482346007, 92482346008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	0.14	06/22/20 14:53	
Iron	mg/L	ND	0.040	0.015	06/22/20 14:53	
Magnesium	mg/L	ND	0.050	0.011	06/22/20 14:53	
Manganese	mg/L	ND	0.040	0.0061	06/22/20 14:53	
Potassium	mg/L	ND	0.20	0.026	06/22/20 14:53	
Sodium	mg/L	ND	1.0	0.19	06/22/20 14:53	

LABORATORY CONTROL SAMPLE: 2918226

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	mg/L	1	0.99J	99	80-120	
Iron	mg/L	1	1.0	102	80-120	
Magnesium	mg/L	1	1.0	104	80-120	
Manganese	mg/L	1	0.99	99	80-120	
Potassium	mg/L	1	0.97	97	80-120	
Sodium	mg/L	1	1.1	113	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2918227 2918228

Parameter	Units	92482346005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Calcium	mg/L	112	1	1	110	114	-256	180	75-125	4	20	M1
Iron	mg/L	0.56	1	1	1.6	1.6	103	108	75-125	3	20	
Magnesium	mg/L	10.3	1	1	11.0	11.4	74	117	75-125	4	20	M1
Manganese	mg/L	0.22	1	1	1.2	1.2	96	100	75-125	3	20	
Potassium	mg/L	2.7	1	1	3.7	3.8	95	107	75-125	3	20	
Sodium	mg/L	10.3	1	1	11.0	11.4	68	109	75-125	4	20	M1

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: HAMMOND AP-1 NON ROUTINE
Pace Project No.: 92482346

QC Batch: 550184
QC Batch Method: EPA 3010A
Analysis Method: EPA 6010D
Analysis Description: 6010D ATL
Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92482346009

METHOD BLANK: 2925536 Matrix: Water
Associated Lab Samples: 92482346009

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	0.14	06/29/20 16:20	
Iron	mg/L	ND	0.040	0.015	06/29/20 16:20	
Magnesium	mg/L	ND	0.050	0.011	06/29/20 16:20	
Manganese	mg/L	ND	0.040	0.0061	06/29/20 16:20	
Potassium	mg/L	0.039J	0.20	0.026	06/29/20 16:20	
Sodium	mg/L	ND	1.0	0.19	06/29/20 16:20	

LABORATORY CONTROL SAMPLE: 2925537

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	mg/L	1	0.97J	97	80-120	
Iron	mg/L	1	1.0	102	80-120	
Magnesium	mg/L	1	1.0	104	80-120	
Manganese	mg/L	1	0.99	99	80-120	
Potassium	mg/L	1	1.1	105	80-120	
Sodium	mg/L	1	1.1	113	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2925538 2925539

Parameter	Units	92482800004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Calcium	mg/L	41.3	1	1	41.9	41.8	60	49	75-125	0	20	M1
Iron	mg/L	0.12	1	1	1.1	1.1	102	100	75-125	2	20	
Magnesium	mg/L	10.8	1	1	11.7	11.6	86	78	75-125	1	20	
Manganese	mg/L	0.026J	1	1	0.99	0.99	97	97	75-125	0	20	
Potassium	mg/L	0.53	1	1	1.5	1.5	97	95	75-125	1	20	
Sodium	mg/L	27.0	1	1	27.6	27.6	61	61	75-125	0	20	M1

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(770)734-4200

QUALITY CONTROL DATA

Project: HAMMOND AP-1 NON ROUTINE
Pace Project No.: 92482346

QC Batch: 548037
QC Batch Method: EPA 3005A
Analysis Method: EPA 6020B
Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92482346001, 92482346002, 92482346003, 92482346004

METHOD BLANK: 2915983 Matrix: Water
Associated Lab Samples: 92482346001, 92482346002, 92482346003, 92482346004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Boron	mg/L	ND	0.10	0.0049	06/19/20 14:13	
Molybdenum	mg/L	ND	0.010	0.00095	06/19/20 14:13	

LABORATORY CONTROL SAMPLE: 2915984

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron	mg/L	1	1.1	106	80-120	
Molybdenum	mg/L	0.1	0.11	107	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2915985 2915986

Parameter	Units	92482102001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron	mg/L	1.2	1	1	2.2	2.2	97	98	75-125	1	20	
Molybdenum	mg/L	0.035	0.1	0.1	0.14	0.14	107	102	75-125	3	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: HAMMOND AP-1 NON ROUTINE
Pace Project No.: 92482346

QC Batch: 548509
QC Batch Method: EPA 3005A
Analysis Method: EPA 6020B
Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92482346005, 92482346006, 92482346007, 92482346008

METHOD BLANK: 2918043 Matrix: Water
Associated Lab Samples: 92482346005, 92482346006, 92482346007, 92482346008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Boron	mg/L	ND	0.10	0.0049	06/19/20 17:32	
Iron	mg/L	ND	0.040	0.0097	06/19/20 17:32	
Molybdenum	mg/L	ND	0.010	0.00095	06/19/20 17:32	

LABORATORY CONTROL SAMPLE: 2918044

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron	mg/L	1	1.0	102	80-120	
Iron	mg/L	1	1.0	100	80-120	
Molybdenum	mg/L	0.1	0.10	102	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2918045 2918046

Parameter	Units	92482427001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron	mg/L	54.3 ug/L	1	1	1.0	1.0	96	96	75-125	0	20	
Iron	mg/L	639 ug/L	1	1	1.6	1.6	95	95	75-125	0	20	
Molybdenum	mg/L	ND	0.1	0.1	0.099	0.097	99	97	75-125	2	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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QUALITY CONTROL DATA

Project: HAMMOND AP-1 NON ROUTINE
Pace Project No.: 92482346

QC Batch: 549351
QC Batch Method: EPA 3005A
Analysis Method: EPA 6020B
Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92482346009

METHOD BLANK: 2921563 Matrix: Water
Associated Lab Samples: 92482346009

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Boron	mg/L	ND	0.10	0.0049	06/25/20 16:01	
Molybdenum	mg/L	ND	0.010	0.00095	06/25/20 16:01	

LABORATORY CONTROL SAMPLE: 2921564

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron	mg/L	1	0.97	97	80-120	
Molybdenum	mg/L	0.1	0.097	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2921565 2921566

Parameter	Units	92482800006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron	mg/L	0.086J	1	1	0.96	0.96	87	87	75-125	0	20	
Molybdenum	mg/L	ND	0.1	0.1	0.094	0.090	93	90	75-125	4	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: HAMMOND AP-1 NON ROUTINE
Pace Project No.: 92482346

QC Batch: 548159
QC Batch Method: SM 2450C-2011
Analysis Method: SM 2450C-2011
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92482346001, 92482346002, 92482346003, 92482346004

METHOD BLANK: 2916338 Matrix: Water
Associated Lab Samples: 92482346001, 92482346002, 92482346003, 92482346004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	06/18/20 10:55	

LABORATORY CONTROL SAMPLE: 2916339

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	418	104	84-108	

SAMPLE DUPLICATE: 2916340

Parameter	Units	92482102004 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	665	818	21	10	D6

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: HAMMOND AP-1 NON ROUTINE
Pace Project No.: 92482346

QC Batch: 548606 | 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: 92482346005, 92482346006, 92482346007, 92482346008

METHOD BLANK: 2918729 Matrix: Water
Associated Lab Samples: 92482346005, 92482346006, 92482346007, 92482346008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	06/19/20 17:58	

LABORATORY CONTROL SAMPLE: 2918730

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	419	105	84-108	

SAMPLE DUPLICATE: 2918731

Parameter	Units	92482647001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	18.0	15.0	18	10	D6

SAMPLE DUPLICATE: 2918732

Parameter	Units	92482647005 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	28.0	43.0	42	10	D6

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: HAMMOND AP-1 NON ROUTINE
Pace Project No.: 92482346

QC Batch: 548907
QC Batch Method: SM 2450C-2011
Analysis Method: SM 2450C-2011
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92482346009

METHOD BLANK: 2919762 Matrix: Water
Associated Lab Samples: 92482346009

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	06/22/20 17:30	

LABORATORY CONTROL SAMPLE: 2919763

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

SAMPLE DUPLICATE: 2919764

Parameter	Units	92482662002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	163	182	11	10	D6

SAMPLE DUPLICATE: 2919765

Parameter	Units	92482737002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	97.0	86.0	12	10	D6

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: HAMMOND AP-1 NON ROUTINE
Pace Project No.: 92482346

QC Batch: 549851
QC Batch Method: SM 2320B-2011
Analysis Method: SM 2320B-2011
Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92482346001, 92482346002, 92482346003, 92482346004, 92482346005, 92482346006, 92482346007, 92482346008

METHOD BLANK: 2923886 Matrix: Water
Associated Lab Samples: 92482346001, 92482346002, 92482346003, 92482346004, 92482346005, 92482346006, 92482346007, 92482346008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	ND	5.0	5.0	06/29/20 15:57	
Alkalinity,Bicarbonate (CaCO3)	mg/L	ND	5.0	5.0	06/29/20 15:57	
Alkalinity,Carbonate (CaCO3)	mg/L	ND	5.0	5.0	06/29/20 15:57	

LABORATORY CONTROL SAMPLE: 2923887

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	50	52.7	105	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2923888 2923889

Parameter	Units	92482268001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	ND	50	50	54.3	54.2	109	108	80-120	0	25	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2923890 2923891

Parameter	Units	92482880003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	8.3	50	50	63.0	63.9	109	111	80-120	2	25	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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QUALITY CONTROL DATA

Project: HAMMOND AP-1 NON ROUTINE
Pace Project No.: 92482346

QC Batch: 550396
QC Batch Method: SM 2320B-2011
Analysis Method: SM 2320B-2011
Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92482346009

METHOD BLANK: 2926273 Matrix: Water
Associated Lab Samples: 92482346009

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	ND	5.0	5.0	06/30/20 13:53	
Alkalinity,Bicarbonate (CaCO3)	mg/L	ND	5.0	5.0	06/30/20 13:53	
Alkalinity,Carbonate (CaCO3)	mg/L	ND	5.0	5.0	06/30/20 13:53	

LABORATORY CONTROL SAMPLE: 2926274

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	50	49.6	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2926275 2926276

Parameter	Units	92483174015 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	ND	50	50	50.7	50.1	101	100	80-120	1	25	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2926277 2926278

Parameter	Units	92482649003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	ND	50	50	57.1	57.5	104	105	80-120	1	25	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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QUALITY CONTROL DATA

Project: HAMMOND AP-1 NON ROUTINE
Pace Project No.: 92482346

QC Batch: 548296
QC Batch Method: SM 4500-S2D-2011
Analysis Method: SM 4500-S2D-2011
Analysis Description: 4500S2D Sulfide Water
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92482346001, 92482346002, 92482346003, 92482346004

METHOD BLANK: 2917145 Matrix: Water
Associated Lab Samples: 92482346001, 92482346002, 92482346003, 92482346004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide	mg/L	ND	0.10	0.050	06/19/20 18:51	

LABORATORY CONTROL SAMPLE: 2917146

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide	mg/L	0.5	0.53	105	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2917149 2917150

Parameter	Units	92482295001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfide	mg/L	ND	0.5	0.5	0.51	0.51	99	98	80-120	1	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2918737 2918738

Parameter	Units	92482295007 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfide	mg/L	ND	0.5	0.5	0.81	0.81	152	152	80-120	0	10	M1

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: HAMMOND AP-1 NON ROUTINE
Pace Project No.: 92482346

QC Batch: 549379
QC Batch Method: SM 4500-S2D-2011
Analysis Method: SM 4500-S2D-2011
Analysis Description: 4500S2D Sulfide Water
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92482346005, 92482346006, 92482346007, 92482346008

METHOD BLANK: 2921729 Matrix: Water
Associated Lab Samples: 92482346005, 92482346006, 92482346007, 92482346008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide	mg/L	ND	0.10	0.050	06/24/20 18:37	

LABORATORY CONTROL SAMPLE: 2921730

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide	mg/L	0.5	0.54	108	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2921731 2921732

Parameter	Units	92482441001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfide	mg/L	<0.050	0.5	0.5	0.54	0.54	107	107	80-120	0	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2921733 2921734

Parameter	Units	92482441002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfide	mg/L	<0.050	0.5	0.5	0.25	0.25	49	49	80-120	0	10	M1

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: HAMMOND AP-1 NON ROUTINE
Pace Project No.: 92482346

QC Batch: 549382
QC Batch Method: SM 4500-S2D-2011
Analysis Method: SM 4500-S2D-2011
Analysis Description: 4500S2D Sulfide Water
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92482346009

METHOD BLANK: 2921743 Matrix: Water
Associated Lab Samples: 92482346009

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide	mg/L	ND	0.10	0.050	06/24/20 18:53	

LABORATORY CONTROL SAMPLE: 2921744

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide	mg/L	0.5	0.55	109	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2921745 2921746

Parameter	Units	92482649001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfide	mg/L	ND	0.5	0.5	0.55	0.54	110	109	80-120	1	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2921747 2921748

Parameter	Units	92482649002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfide	mg/L	ND	0.5	0.5	0.34	0.34	67	67	80-120	1	10	M1

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: HAMMOND AP-1 NON ROUTINE
Pace Project No.: 92482346

QC Batch: 548965
QC Batch Method: EPA 300.0 Rev 2.1 1993
Analysis Method: EPA 300.0 Rev 2.1 1993
Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92482346001, 92482346002, 92482346003, 92482346004

METHOD BLANK: 2919910 Matrix: Water
Associated Lab Samples: 92482346001, 92482346002, 92482346003, 92482346004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	06/24/20 15:56	
Fluoride	mg/L	ND	0.10	0.050	06/24/20 15:56	
Sulfate	mg/L	ND	1.0	0.50	06/24/20 15:56	

LABORATORY CONTROL SAMPLE: 2919911

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	2.7	106	90-110	
Sulfate	mg/L	50	51.0	102	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2919912 2919913

Parameter	Units	92482711001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	8.2	50	50	56.6	56.6	97	97	90-110	0	10	
Fluoride	mg/L	0.57	2.5	2.5	2.7	2.8	86	88	90-110	1	10	M1
Sulfate	mg/L	13.6	50	50	62.3	62.3	98	97	90-110	0	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2919914 2919915

Parameter	Units	92482268001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	14.5	50	50	62.7	63.0	96	97	90-110	1	10	
Fluoride	mg/L	ND	2.5	2.5	2.6	2.7	104	107	90-110	3	10	
Sulfate	mg/L	ND	50	50	48.8	49.1	98	98	90-110	1	10	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: HAMMOND AP-1 NON ROUTINE
Pace Project No.: 92482346

QC Batch: 549186
QC Batch Method: EPA 300.0 Rev 2.1 1993
Analysis Method: EPA 300.0 Rev 2.1 1993
Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92482346005, 92482346006, 92482346007, 92482346008

METHOD BLANK: 2920985 Matrix: Water
Associated Lab Samples: 92482346005, 92482346006, 92482346007, 92482346008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	06/24/20 23:11	
Fluoride	mg/L	ND	0.10	0.050	06/24/20 23:11	
Sulfate	mg/L	ND	1.0	0.50	06/24/20 23:11	

LABORATORY CONTROL SAMPLE: 2920986

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	51.2	102	90-110	
Fluoride	mg/L	2.5	2.4	97	90-110	
Sulfate	mg/L	50	51.9	104	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2920987 2920988

Parameter	Units	92482762001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	1.2	50	50	49.9	49.9	97	97	90-110	0	10	
Fluoride	mg/L	ND	2.5	2.5	2.4	2.5	97	97	90-110	1	10	
Sulfate	mg/L	ND	50	50	48.9	48.9	97	97	90-110	0	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2920989 2920990

Parameter	Units	92483147008 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	2.7	50	50	55.2	57.4	105	110	90-110	4	10	
Fluoride	mg/L	ND	2.5	2.5	2.5	2.6	97	102	90-110	5	10	
Sulfate	mg/L	0.74J	50	50	53.3	55.4	105	109	90-110	4	10	

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

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: HAMMOND AP-1 NON ROUTINE
Pace Project No.: 92482346

QC Batch: 549586
QC Batch Method: EPA 300.0 Rev 2.1 1993
Analysis Method: EPA 300.0 Rev 2.1 1993
Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92482346009

METHOD BLANK: 2922599 Matrix: Water
Associated Lab Samples: 92482346009

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	06/25/20 23:34	
Fluoride	mg/L	ND	0.10	0.050	06/25/20 23:34	
Sulfate	mg/L	ND	1.0	0.50	06/25/20 23:34	

LABORATORY CONTROL SAMPLE: 2922600

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	51.0	102	90-110	
Fluoride	mg/L	2.5	2.6	105	90-110	
Sulfate	mg/L	50	51.7	103	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2922601 2922602

Parameter	Units	92483177002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	3.9	50	50	55.0	54.3	102	101	90-110	1	10	
Fluoride	mg/L	ND	2.5	2.5	2.5	2.7	99	107	90-110	8	10	
Sulfate	mg/L	ND	50	50	52.6	51.6	103	101	90-110	2	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2922603 2922604

Parameter	Units	92483187001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	15.7	50	50	67.7	65.2	104	99	90-110	4	10	
Fluoride	mg/L	ND	2.5	2.5	2.6	2.5	104	100	90-110	4	10	
Sulfate	mg/L	88.7	50	50	128	126	78	75	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

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

QUALIFIERS

Project: HAMMOND AP-1 NON ROUTINE
Pace Project No.: 92482346

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.

WORKORDER QUALIFIERS

WO: 92482346

[2] This report was revised 8/7/20 to correct a sample mix up between samples MW-30D and the Field Blank.

ANALYTE QUALIFIERS

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.

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

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

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: HAMMOND AP-1 NON ROUTINE
Pace Project No.: 92482346

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92482346001	**HGWC-8**				
92482346002	**MW-1**				
92482346003	**HGWA-1**				
92482346004	**HGWA-3**				
92482346005	**HGWC-7**				
92482346007	**MW-30D**				
92482346008	**MW-30D FILTERED**				
92482346009	**MW-40D**				
92482346001	**HGWC-8**	EPA 3010A	548325	EPA 6010D	548371
92482346002	**MW-1**	EPA 3010A	548325	EPA 6010D	548371
92482346003	**HGWA-1**	EPA 3010A	548325	EPA 6010D	548371
92482346004	**HGWA-3**	EPA 3010A	548325	EPA 6010D	548371
92482346005	**HGWC-7**	EPA 3010A	548539	EPA 6010D	548601
92482346006	**FB-01**	EPA 3010A	548539	EPA 6010D	548601
92482346007	**MW-30D**	EPA 3010A	548539	EPA 6010D	548601
92482346008	**MW-30D FILTERED**	EPA 3010A	548539	EPA 6010D	548601
92482346009	**MW-40D**	EPA 3010A	550184	EPA 6010D	550253
92482346001	**HGWC-8**	EPA 3005A	548037	EPA 6020B	548275
92482346002	**MW-1**	EPA 3005A	548037	EPA 6020B	548275
92482346003	**HGWA-1**	EPA 3005A	548037	EPA 6020B	548275
92482346004	**HGWA-3**	EPA 3005A	548037	EPA 6020B	548275
92482346005	**HGWC-7**	EPA 3005A	548509	EPA 6020B	548546
92482346006	**FB-01**	EPA 3005A	548509	EPA 6020B	548546
92482346007	**MW-30D**	EPA 3005A	548509	EPA 6020B	548546
92482346008	**MW-30D FILTERED**	EPA 3005A	548509	EPA 6020B	548546
92482346009	**MW-40D**	EPA 3005A	549351	EPA 6020B	549398
92482346001	**HGWC-8**	SM 2450C-2011	548159		
92482346002	**MW-1**	SM 2450C-2011	548159		
92482346003	**HGWA-1**	SM 2450C-2011	548159		
92482346004	**HGWA-3**	SM 2450C-2011	548159		
92482346005	**HGWC-7**	SM 2450C-2011	548606		
92482346006	**FB-01**	SM 2450C-2011	548606		
92482346007	**MW-30D**	SM 2450C-2011	548606		
92482346008	**MW-30D FILTERED**	SM 2450C-2011	548606		
92482346009	**MW-40D**	SM 2450C-2011	548907		
92482346001	**HGWC-8**	SM 2320B-2011	549851		
92482346002	**MW-1**	SM 2320B-2011	549851		
92482346003	**HGWA-1**	SM 2320B-2011	549851		
92482346004	**HGWA-3**	SM 2320B-2011	549851		
92482346005	**HGWC-7**	SM 2320B-2011	549851		
92482346006	**FB-01**	SM 2320B-2011	549851		
92482346007	**MW-30D**	SM 2320B-2011	549851		
92482346008	**MW-30D FILTERED**	SM 2320B-2011	549851		

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: HAMMOND AP-1 NON ROUTINE
Pace Project No.: 92482346

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92482346009	**MW-40D**	SM 2320B-2011	550396		
92482346001	**HGWC-8**	SM 4500-S2D-2011	548296		
92482346002	**MW-1**	SM 4500-S2D-2011	548296		
92482346003	**HGWA-1**	SM 4500-S2D-2011	548296		
92482346004	**HGWA-3**	SM 4500-S2D-2011	548296		
92482346005	**HGWC-7**	SM 4500-S2D-2011	549379		
92482346006	**FB-01**	SM 4500-S2D-2011	549379		
92482346007	**MW-30D**	SM 4500-S2D-2011	549379		
92482346008	**MW-30D FILTERED**	SM 4500-S2D-2011	549379		
92482346009	**MW-40D**	SM 4500-S2D-2011	549382		
92482346001	**HGWC-8**	EPA 300.0 Rev 2.1 1993	548965		
92482346002	**MW-1**	EPA 300.0 Rev 2.1 1993	548965		
92482346003	**HGWA-1**	EPA 300.0 Rev 2.1 1993	548965		
92482346004	**HGWA-3**	EPA 300.0 Rev 2.1 1993	548965		
92482346005	**HGWC-7**	EPA 300.0 Rev 2.1 1993	549186		
92482346006	**FB-01**	EPA 300.0 Rev 2.1 1993	549186		
92482346007	**MW-30D**	EPA 300.0 Rev 2.1 1993	549186		
92482346008	**MW-30D FILTERED**	EPA 300.0 Rev 2.1 1993	549186		
92482346009	**MW-40D**	EPA 300.0 Rev 2.1 1993	549586		

WO# : 92482346

92482346

Pace Analytical

CHAIN-OF-CUSTODY / Analytical Request Docu

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

Page: 1 of 2

Section A Required Client Information		Section B Required Project Information		Section C Invoice Information	
Company:	GA Power	Report To:	SCS Contacts	Attention:	Southern Co.
Address:	Atlanta, GA	Copy To:	Geosyntec Contacts	Company Name:	
				Address:	
Email To:	SCS Contacts	Purchase Order No.:		Pace Quote Reference:	
Phone:	Fax:	Project Name:	Plant Hammond AP-1 Non-Routine	Pace Project Manager:	Kevin Herring
Requested Due Date/TAT:	5 Day	Project Number:	GW6581B	Pace Profile #:	

REGULATORY AGENCY

NPDES ☐ GROUND WATE ☐ DRINKING WATER

UST ☐ RCRA ☑ OTHER ~~CCR~~

Site Location STATE: GA

Section D Required Client Information

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

Valid Matrix Codes

MATRIX	CODE
DRINKING WATER	DW
WATER	WT
WASTE WATER	WW
PRODUCT	P
SOIL/SOLID	SL
OIL	OL
WIPE	WP
AIR	AR
OTHER	OT
TISSUE	TS

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED DATE	COLLECTED TIME	COMPOSITE DATE	COMPOSITE TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	Chloride, Fluoride, Sulfate	TDS	Metals*	Alkalinity, Bicarbonate	Sulfide	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
																		Requested Analysis Filtered (Y/N)	N	N	N	N	N		
1	~~HGWA-1~~	WT	G						5	3		1					1		X	X	X	X	X	N	~~pH =~~
2	~~HGWA-3~~	WT	G						5	3		1					1		X	X	X	X	X	N	~~pH =~~
3	~~HGWC-7~~	WT	G						5	3		1					1		X	X	X	X	X	N	~~pH =~~
4	HGWC-8	WT	G	6/16/2020	1515			21	5	3		1					1		X	X	X	X	X	N	pH = 6.97
5	MW-1	WT	G	6/16/2020	1410			20	5	3		1					1		X	X	X	X	X	N	pH = 6.86
6	~~MW-30D~~	WT	G						5	3		1					1		X	X	X	X	X	N	~~pH =~~
7	~~MW-40D~~	WT	G						5	3		1					1		X	X	X	X	X	N	pH =
8																									
9																									
10																									
11																									
12																									

6/16/2020

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
Please note dry wells, strike through any wells not sampled, and note when the last sample for the event has been taken.	Shawn Lin, Geosyntec	6/16/2020	1620	Chad Kuglar / Geo	6/16/20	1620				
	Chad Kuglar / Geo	6/16/2020	1755	Nadia Mankou / Geo	6/16/20	1755				
*Metals=B, Ca, Fe, Mg, Mn, Mo, K, Na	Nadia Mankou / Geo	6/17/20	1056	/ Pace	6.17.20	1057				
	/ Pace	6.17.20	1411	K. Wellington / PACE	6/17/20	1411	3.3	Y	N	Y

SAMPLER NAME AND SIGNATURE			
PRINT Name of SAMPLER:	Shawn Lin		
SIGNATURE of SAMPLER:	Shawn Lin	DATE Signed (MM/DD/YY):	6/16/2020

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.

WO#: 92482346
PM: KLH1 Due Date: 07/01/20
CLIENT: GA-GA Power

Pace Analytical

CHAIN-OF-CUSTODY / Analytical Request Document

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

Page: 2 of 2

Section A Required Client Information

Company	GA Power
Address	Atlanta, GA
Email To	SCS Contacts
Phone	Fax
Requested Due Date/TAT:	5 Day

Section B Required Project Information

Report To	SCS Contacts
Copy To	Geosyntec Contacts
Purchase Order No.	
Project Name	Plant Hammond AP-1 Non-Routine
Project Number	GW6581B

Section C Invoice Information

Attention	Southern Co.
Company Name	
Address	
Pace Quote Reference	
Pace Project Manager	Kevin Herring
Pace Profile #	

REGULATORY AGENCY

NPDES | GROUND WATER | DRINKING WATER | UST | RCRA | ✓ OTHER ~~CCR~~

Site Location STATE: GA

Section D Required Client Information

Valid Matrix Codes: MATRIX / CODE — DRINKING WATER DW; WATER WT; WASTE WATER WW; PRODUCT P; SOIL/SOLID SL; OIL OL; WIPE WP; AIR AR; OTHER OT; TISSUE TS

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

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	TIME	COMPOSITE END/GRAB DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Chloride, Fluoride, Sulfate (N)	TDS (N)	Metals* (N)	Alkalinity, Bicarbonate (N)	Sulfide (N)	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	HGWA-1	WT	G	6/16/20	0948	—	—	17	5	3		1					1	X	X	X	X	X	N	pH = 6.97
2	HGWA-3	WT	G	6/16/20	1116	—	—	18	5	3		1					1	X	X	X	X	X	N	pH = 7.31
3	~~HGWC-7~~	~~WT~~	~~G~~			—	—		~~5~~	~~3~~		~~1~~					~~1~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~N~~	~~pH =~~
4	~~HGWC-8~~	~~WT~~	~~G~~			—	—		~~5~~	~~3~~		~~1~~					~~1~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~N~~	~~pH =~~
5	~~MW-1~~	~~WT~~	~~G~~			—	—		~~5~~	~~3~~		~~1~~					~~1~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~N~~	~~pH =~~
6	~~MW-30D~~	~~WT~~	~~G~~			—	—		~~5~~	~~3~~		~~1~~					~~1~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~N~~	~~pH =~~
7	~~MW-40D~~	~~WT~~	~~G~~			—	—		~~5~~	~~3~~		~~1~~					~~1~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~N~~	~~pH =~~
8								CR																
9																								
10								6/16/2020																
11																								
12																								

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
Please note dry wells, strike thorugh any wells not sampled, and note when the last sample for the event has been taken	Chad Russ / Geo	6/16/2020	1755	Nelia Munkus / Geo	6/16/20	1755				
	Nelia Munkus / Geosyntec	6/17/20	1056	[illegible] / Pace	6.17.20	1057				
*Metals=B, Ca, Fe, Mg, Mn, Mo, K, Na	[illegible] / Pace	6.17.20	1411	K. Wellington / Pace	6/17/20	1411	3.3	Y	N	Y
							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: Chad Russ

SIGNATURE of SAMPLER: Chad Russ   DATE Signed (MM/DD/YY): 6/16/2020

*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

Pace Analytical
www.pacelabs.com

CHAIN-OF-CUSTODY / Analytical Request Do[cument]

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WO#: 92482346
PM: KLH1 Due Date: 07/01/20
CLIENT: GA-GA Power

Section A Required Client Information		Section B Required Project Information		Section C Invoice Information	
Company:	GA Power	Report To:	SCS Contacts	Attention:	Southern Co.
Address:	Atlanta, GA	Copy To:	Geosyntec Contacts	Company Name:	
				Address:	
Email To:	SCS Contacts	Purchase Order No.:		Pace Quote Reference:	
Phone:	Fax:	Project Name:	Plant Hammond AP-1 Non-Routine	Pace Project Manager:	Kevin Herring
Requested Due Date/TAT:	5 Day	Project Number:	GW6581B	Pace Profile #:	

REGULATORY AGENCY: NPDES / GROUND WATER / DRINKING WATER / UST / RCRA / OTHER ✓ (CCR struck)

Site Location STATE: GA

Section D Required Client Information

Valid Matrix Codes: DRINKING WATER DW; WATER WT; WASTE WATER WW; PRODUCT P; SOIL/SOLID SL; OIL OL; WIPE WP; AIR AR; OTHER OT; TISSUE TS

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

Requested Analysis Filtered (Y/N): N N N N N

ITEM #	SAMPLE ID	MATRIX CODE	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED DATE	COLLECTED TIME	COMPOSITE DATE	COMPOSITE TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Chloride, Fluoride, Sulfate	TDS	Metals*	Alkalinity, Bicarbonate	Sulfide	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	~~HGWA-1~~	WT	G			—	—		5	3		1					1	X	X	X	X	X	N	pH =
2	~~HGWA-3~~	WT	G			—			5	3		1					1	X	X	X	X	X	N	pH =
3	HGWC-7	WT	G	6/17/20	1300	—	—	20	5	3		1					1	X	X	X	X	X	N	pH = 7.2
4	~~HGWC-8~~	WT	G						5	3		1					1	X	X	X	X	X	N	pH =
5	~~MW-1~~	WT	G						5	3		1					1	X	X	X	X	X	N	pH =
6	MW-30D	WT	G	6/17/20	1347	—	—	21	5	3		1					1	X	X	X	X	X	N	pH = 8.33
7	~~MW-40D~~	WT	G			—			5	3		1					1	X	X	X	X	X	N	pH =
8	(CG) ~~EB-01~~ FB-01	WT	G	6/17/20	1705	—	—		5	3		1					1	X	X	X	X	X	N	
9	MW-30D Filtered	WT	G	6/17/20	1349	—	—	21	5	3		1					1	X	X	X	X	X	N	pH = 8.33
10																								
11																								
12																								

(CG 6/17/2020)

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
Please note dry wells, strike thorugh any wells not sampled, and note when the last sample for the event has been taken.	Chad Russo / GCO	6/17/2020	1845	[signature] / Geosyntec	6/17/20	1845				
	[signature] / Geosyntec	6/18/20	1037	[signature] / Pace	6/18/20	1037				
*Metals=B, Ca, Fe, Mg, Mn, Mo, K, Na	[signature] / Pace	6/18/20	1443	[signature] / Pace	6/18/20	1443	3.2	Y	N	Y
							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: Chad Russo

SIGNATURE of SAMPLER: Chad Russo DATE Signed (MM/DD/YY): 6/17/2020

Pace Analytical
www.pacelabs.com

CHAIN-OF-CUSTODY / Analytical Request Docu

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

WO# : 92482346

PM: KLH1 Due Date: 07/01/20

CLIENT: GA-GA Power

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	GA Power	Report To:	SCS Contacts	Attention:	Southern Co.
Address:	Atlanta, GA	Copy To:	Geosyntec Contacts	Company Name:	
				Address:	
Email To:	SCS Contacts	Purchase Order No.:		Pace Quote Reference:	
Phone:	Fax:	Project Name:	Plant Hammond AP-1 Non-Routine	Pace Project Manager:	Kevin Herring
Requested Due Date/TAT:	5 Day	Project Number:	GW6581B	Pace Profile #:	

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

Site Location STATE: GA

Section D Required Client Information

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

Valid Matrix Codes

MATRIX	CODE
DRINKING WATER	DW
WATER	WT
WASTE WATER	WW
PRODUCT	P
SOIL/SOLID	SL
OIL	OL
WIPE	WP
AIR	AR
OTHER	OT
TISSUE	TS

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED DATE	COLLECTED TIME	COMPOSITE DATE	COMPOSITE TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	Chloride, Fluoride, Sulfate	TDS	Metals*	Alkalinity, Bicarbonate	Sulfide	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
																		Requested Analysis Filtered (Y/N)	N	N	N	N	N		92482346
1	~~HGWA-1~~	WT	G						5	3		1					1		X	X	X	X	X	N	pH=
2	HGWA-3	WT	G						5	3		1					1		X	X	X	X	X	N	pH=
3	HGWC-7	WT	G						5	3		1					1		X	X	X	X	X	N	pH=
4	~~HGWC-8~~	WT	G						5	3		1					1		X	X	X	X	X	N	pH=
5	~~MW-1~~	WT	G						5	3		1					1		X	X	X	X	X	N	pH=
6	MW-30D	WT	G						5	3		1					1		X	X	X	X	X	N	pH=
7	MW-40D	WT	G	6/19/20	1525			2°	5	3		1					1		X	X	X	X	X	N	pH=7.4/Last sample
8	~~EB-01~~	WT	G						5	3		1					1		X	X	X	X	X	N	
9																									
10																									
11																									
12																									

6/19/2020

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS: Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
Please note dry wells, strike thorugh any wells not sampled, and note when the last sample for the event has been taken.	Chad Russo/GEO	6/19/20	1745	Nadia Mostan/Geosyntec	6/19/20	1745				
	Nadia Mostan/Geosyntec	6/22/20	1045	/Pace	6/22/20	1045				
*Metals=B Ca, Fe, Mg, Mn, Mo, K, Na	/Pace	6/22/20	1353	6/22/20	1353		3.8	X	N	X

SAMPLER NAME AND SIGNATURE

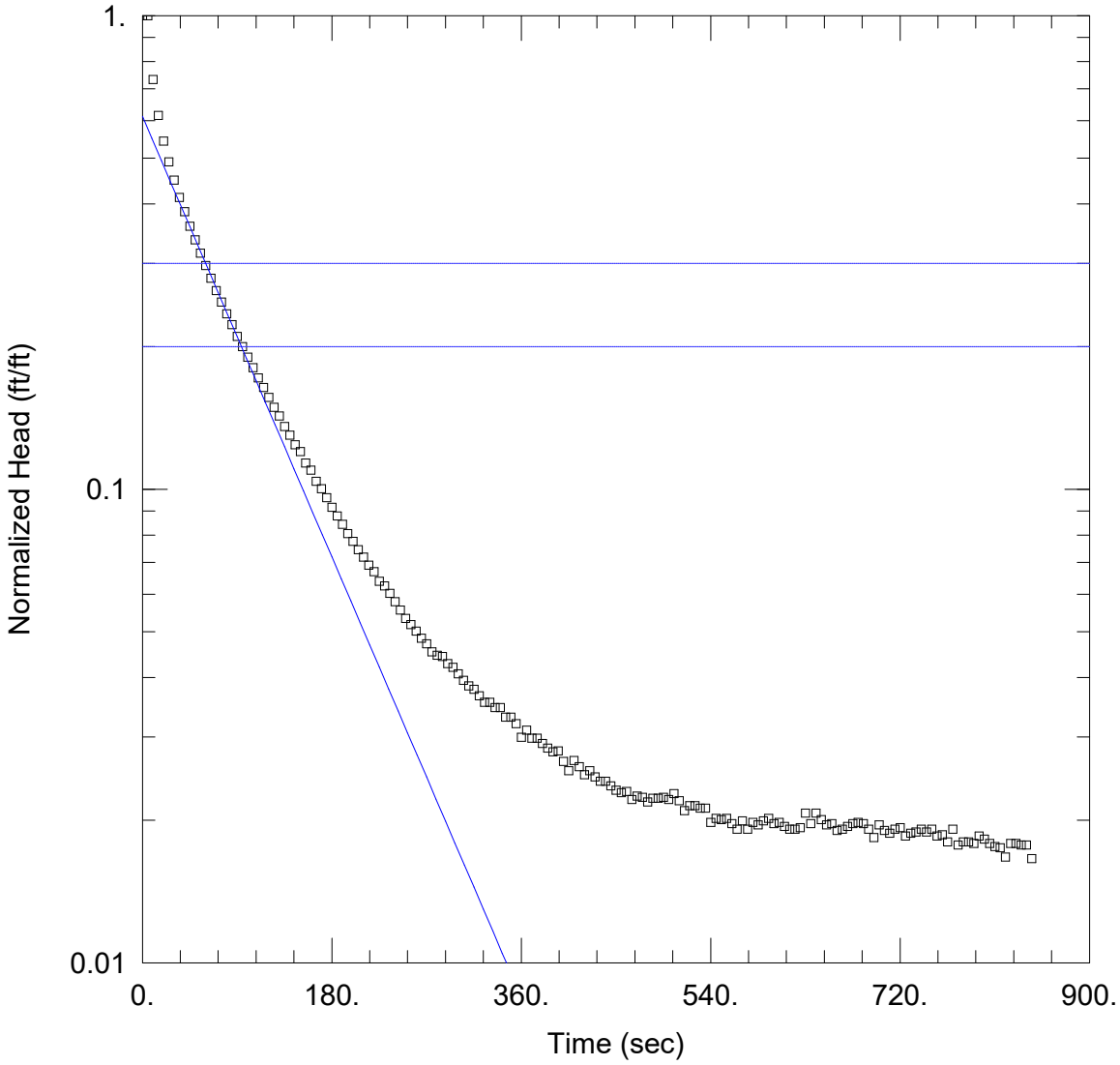
PRINT Name of SAMPLER: Chad Russo

SIGNATURE of SAMPLER: Chad Russo DATE Signed (MM/DD/YY): 6/19/2020

*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.

APPENDIX B

AQTESOLV Data Plots



WELL TEST ANALYSIS

Data Set: \...\HGWC-7.aqt
Date: 08/11/20 Time: 16:58:57

PROJECT INFORMATION

Company: SouthernGeosyntec Consultants
Client: SOuthern Company Services
Project: GW6581B
Location: AP-1
Test Well: HGWC-7
Test Date: 7/27/2020

AQUIFER DATA

Saturated Thickness: 22.57 ft Anisotropy Ratio (Kz/Kr): 0.1

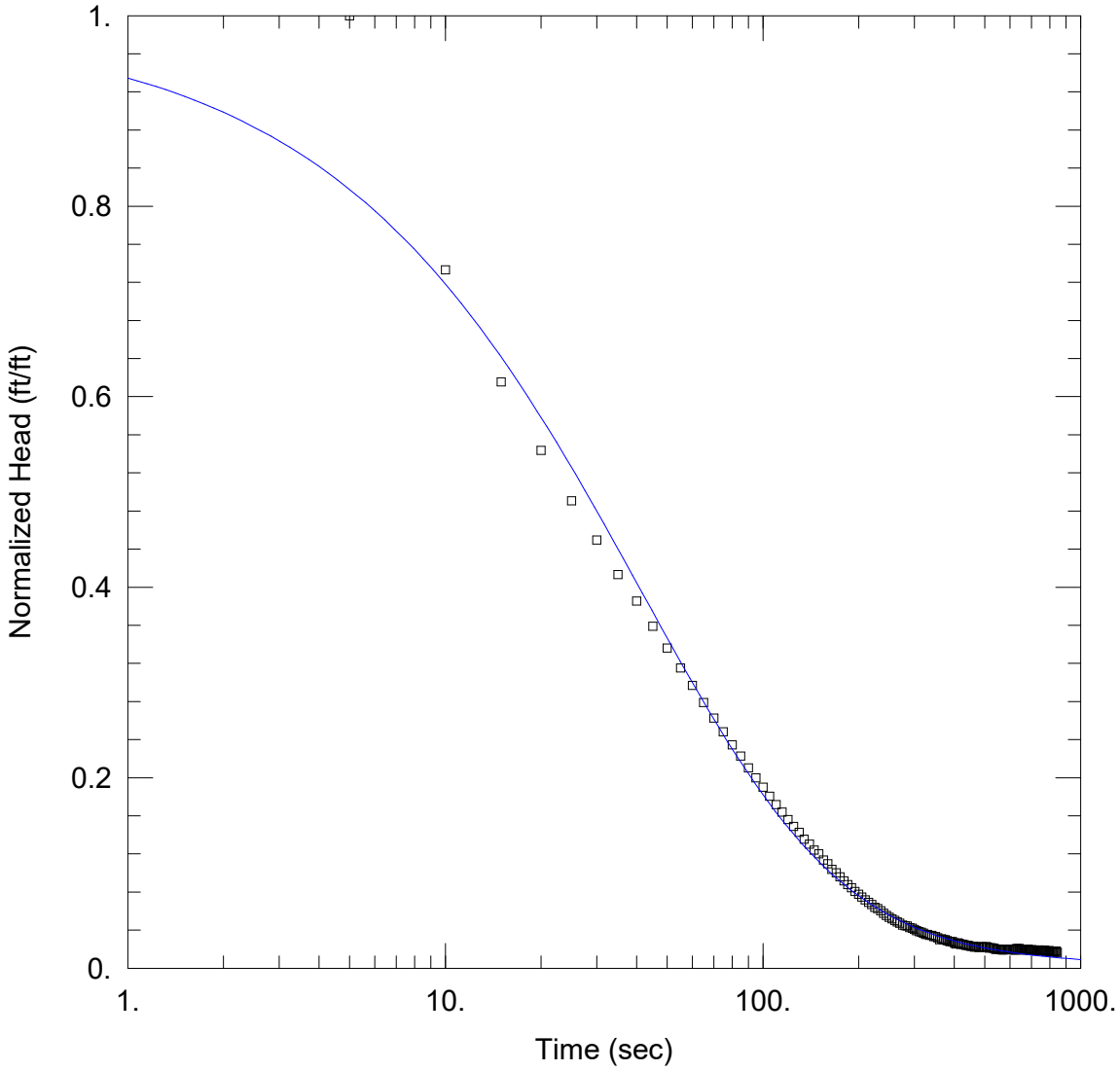
WELL DATA (HGWC-7)

Initial Displacement: 7.78 ft
Total Well Penetration Depth: 22.24 ft
Casing Radius: 0.083 ft
Static Water Column Height: 22.57 ft
Screen Length: 10. ft
Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice

K = 1.578 ft/day y0 = 4.764 ft



WELL TEST ANALYSIS

Data Set: \...\HGWC-7.aqt
Date: 08/11/20 Time: 16:59:38

PROJECT INFORMATION

Company: SouthernGeosyntec Consultants
Client: SOuthern Company Services
Project: GW6581B
Location: AP-1
Test Well: HGWC-7
Test Date: 7/27/2020

AQUIFER DATA

Saturated Thickness: 22.57 ft

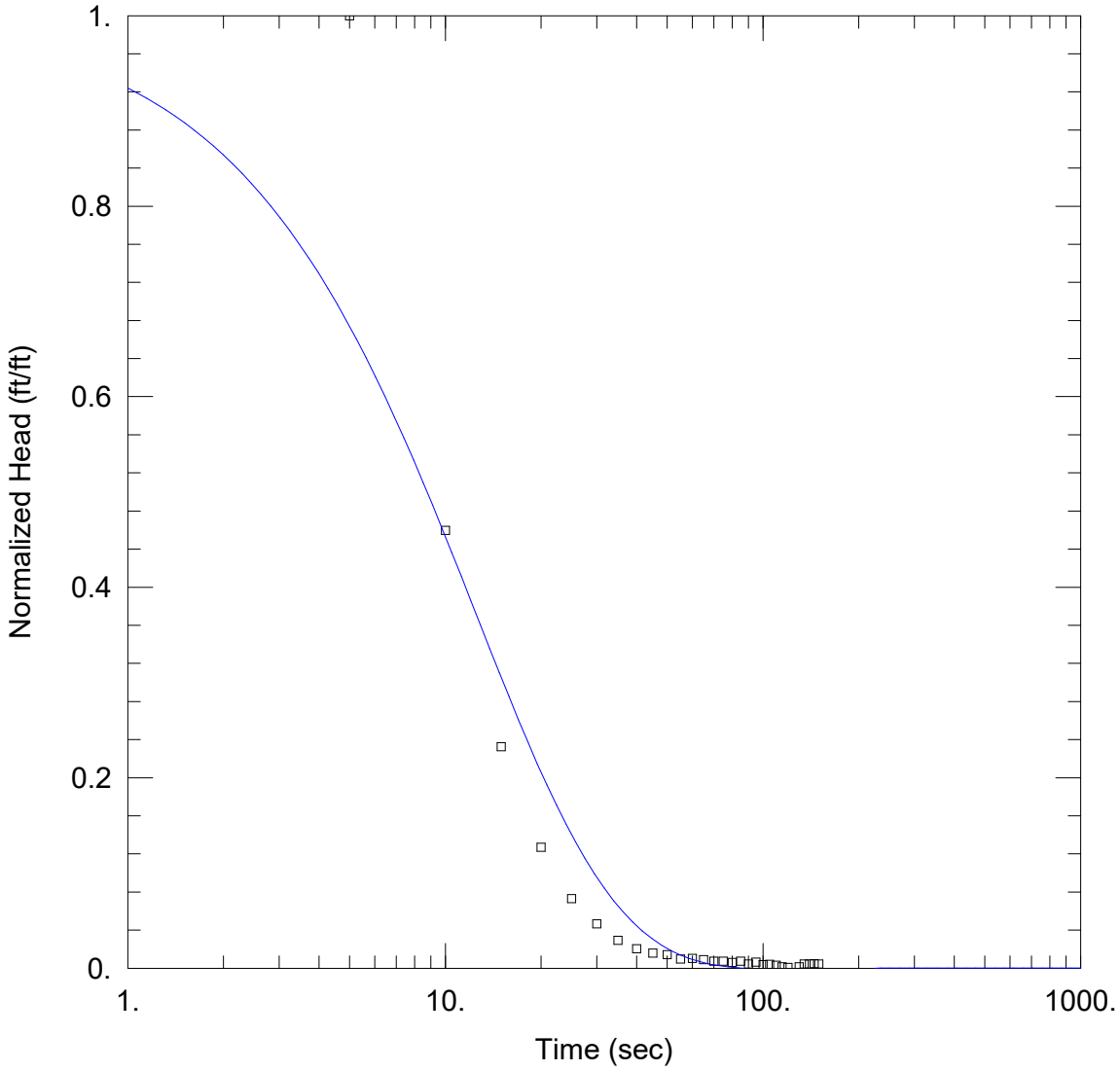
WELL DATA (HGWC-7)

Initial Displacement: 7.78 ft
Total Well Penetration Depth: 22.24 ft
Casing Radius: 0.083 ft
Static Water Column Height: 22.57 ft
Screen Length: 10. ft
Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: KGS Model

Kr = 1.482 ft/day
Ss = 0.001143 ft^{-1}



WELL TEST ANALYSIS

Data Set: \...\HGWC-8_slug.aqt
Date: 08/11/20 Time: 17:26:17

PROJECT INFORMATION

Company: SouthernGeosyntec Consultants
Client: Southern Company Services
Project: GW6581B
Location: AP-1
Test Well: HGWC-8_slug
Test Date: 7/27/2020

AQUIFER DATA

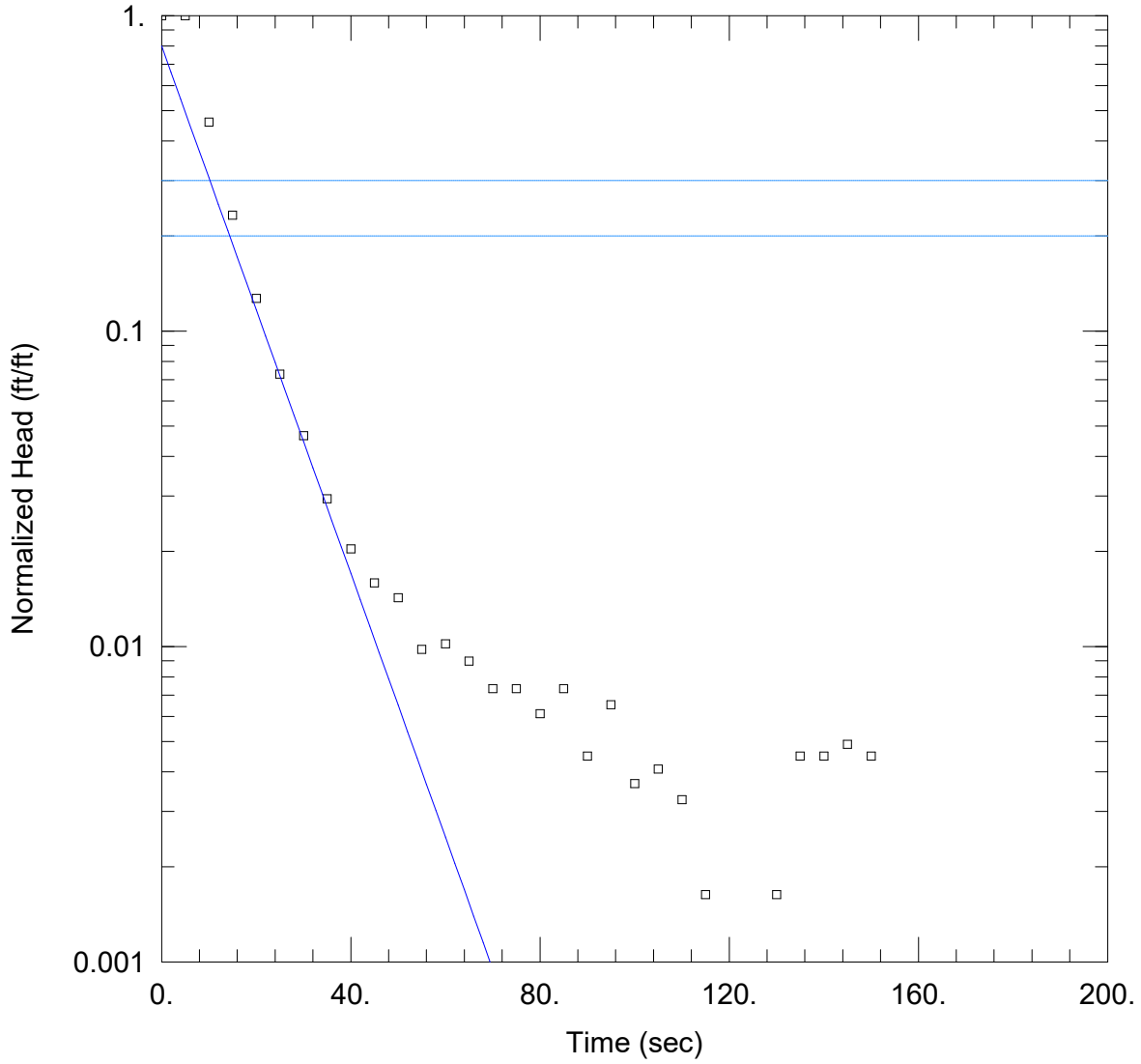
Saturated Thickness: 20.6 ft

WELL DATA (New Well)

Initial Displacement: 2.45 ft
Total Well Penetration Depth: 20.27 ft
Casing Radius: 0.083 ft
Static Water Column Height: 20.6 ft
Screen Length: 10. ft
Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: KGS Model
Kr = 12. ft/day
Ss = 4.854E-12 ft^{-1}



WELL TEST ANALYSIS

Data Set: \...\HGWC-8_slug.aqt
Date: 08/11/20 Time: 17:28:07

PROJECT INFORMATION

Company: SouthernGeosyntec Consultants
Client: Southern Company Services
Project: GW6581B
Location: AP-1
Test Well: HGWC-8_slug
Test Date: 7/27/2020

AQUIFER DATA

Saturated Thickness: 20.6 ft Anisotropy Ratio (Kz/Kr): 0.1

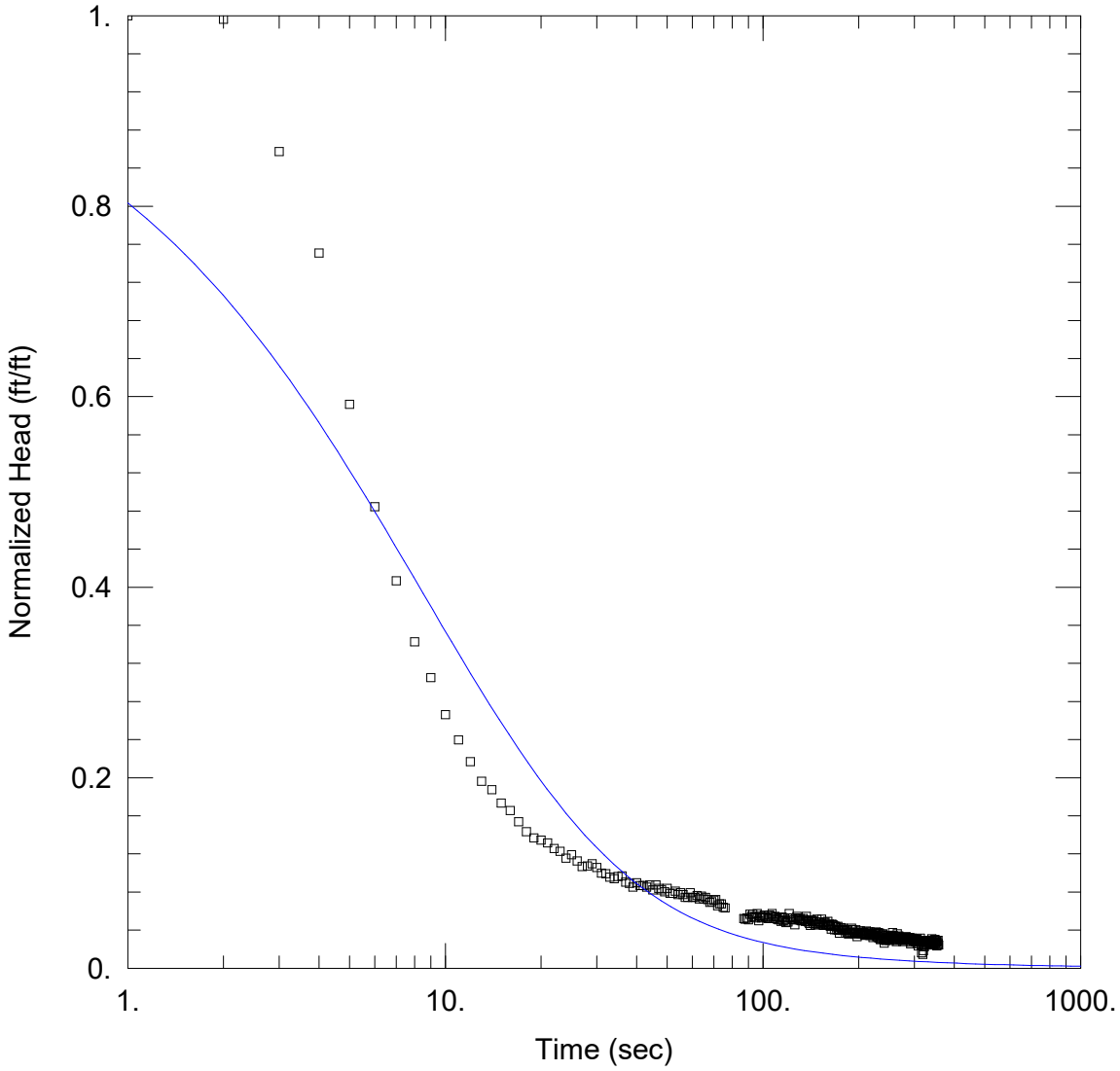
WELL DATA (New Well)

Initial Displacement: 2.45 ft
Total Well Penetration Depth: 20.27 ft
Casing Radius: 0.083 ft
Static Water Column Height: 20.6 ft
Screen Length: 10. ft
Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice

K = 12.62 ft/day y0 = 1.962 ft



WELL TEST ANALYSIS

Data Set: \...\HGWC-8_pump.aqt
Date: 08/11/20 Time: 17:17:40

PROJECT INFORMATION

Company: SouthernGeosyntec Consultants
Client: SOuthern Company Services
Project: GW6581B
Location: AP-1
Test Well: HGWC-8
Test Date: 7/27/2020

AQUIFER DATA

Saturated Thickness: 20.53 ft

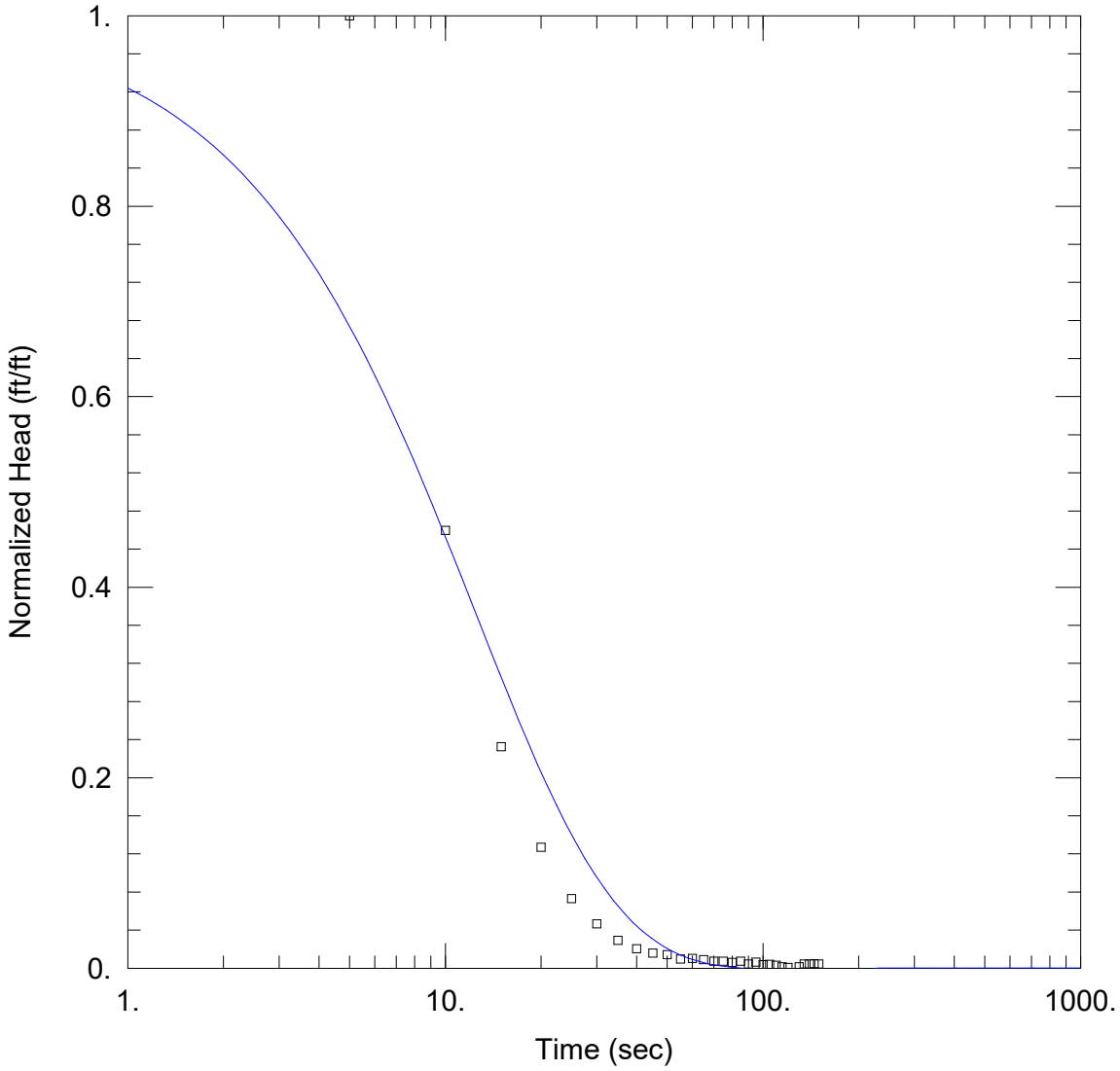
WELL DATA (HGWC-8)

Initial Displacement: 1.36 ft
Total Well Penetration Depth: 20.27 ft
Casing Radius: 0.083 ft
Static Water Column Height: 20.53 ft
Screen Length: 10. ft
Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: KGS Model

Kr = 6.009 ft/day
Ss = 0.002574 ft^{-1}



WELL TEST ANALYSIS

Data Set: \...\HGWC-8_slug.aqt
Date: 08/11/20 Time: 17:29:29

PROJECT INFORMATION

Company: SouthernGeosyntec Consultants
Client: Southern Company Services
Project: GW6581B
Location: AP-1
Test Well: HGWC-8_slug
Test Date: 7/27/2020

AQUIFER DATA

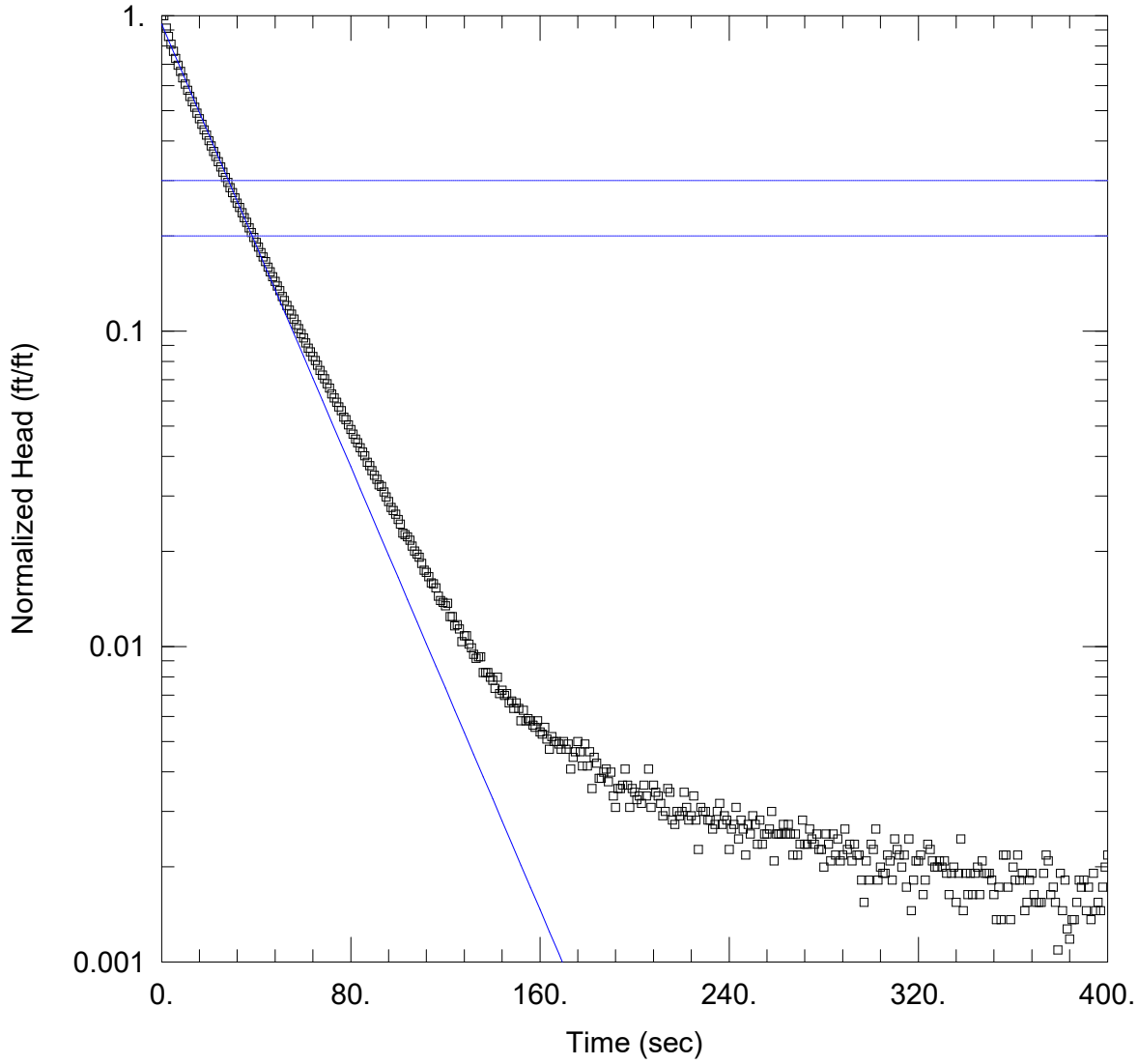
Saturated Thickness: 20.6 ft

WELL DATA (New Well)

Initial Displacement: 2.45 ft
Total Well Penetration Depth: 20.27 ft
Casing Radius: 0.083 ft
Static Water Column Height: 20.6 ft
Screen Length: 10. ft
Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: KGS Model
Kr = 12. ft/day
Ss = 4.854E-12 ft^{-1}



WELL TEST ANALYSIS

Data Set: \...\HGWC-9.aqt
Date: 08/11/20 Time: 17:31:08

PROJECT INFORMATION

Company: Geosyntec Consultants
Client: Southern Company Services
Project: GW6581B
Location: AP-1
Test Well: HGWC-9
Test Date: 7/27/2020

AQUIFER DATA

Saturated Thickness: 33.25 ft Anisotropy Ratio (Kz/Kr): 0.1

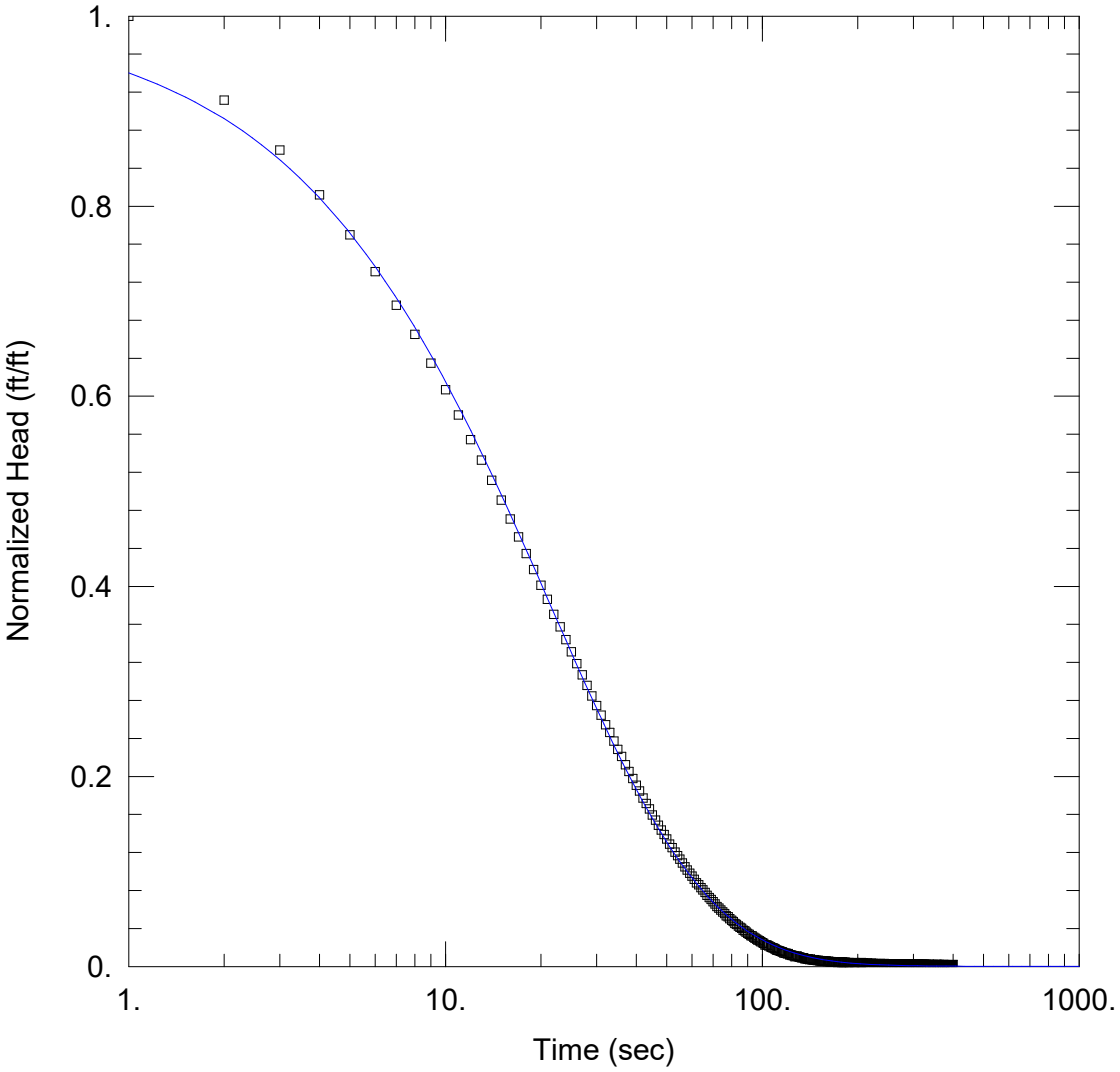
WELL DATA (New Well)

Initial Displacement: 11.01 ft
Total Well Penetration Depth: 32.92 ft
Casing Radius: 0.083 ft
Static Water Column Height: 33.25 ft
Screen Length: 10. ft
Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice

K = 5.619 ft/day y0 = 10.36 ft



WELL TEST ANALYSIS

Data Set: \...\HGWC-9.aqt
Date: 08/11/20 Time: 17:48:54

PROJECT INFORMATION

Company: Geosyntec Consultants
Client: Southern Company Services
Project: GW6581B
Location: AP-1
Test Well: HGWC-9
Test Date: 7/27/2020

AQUIFER DATA

Saturated Thickness: 33.25 ft

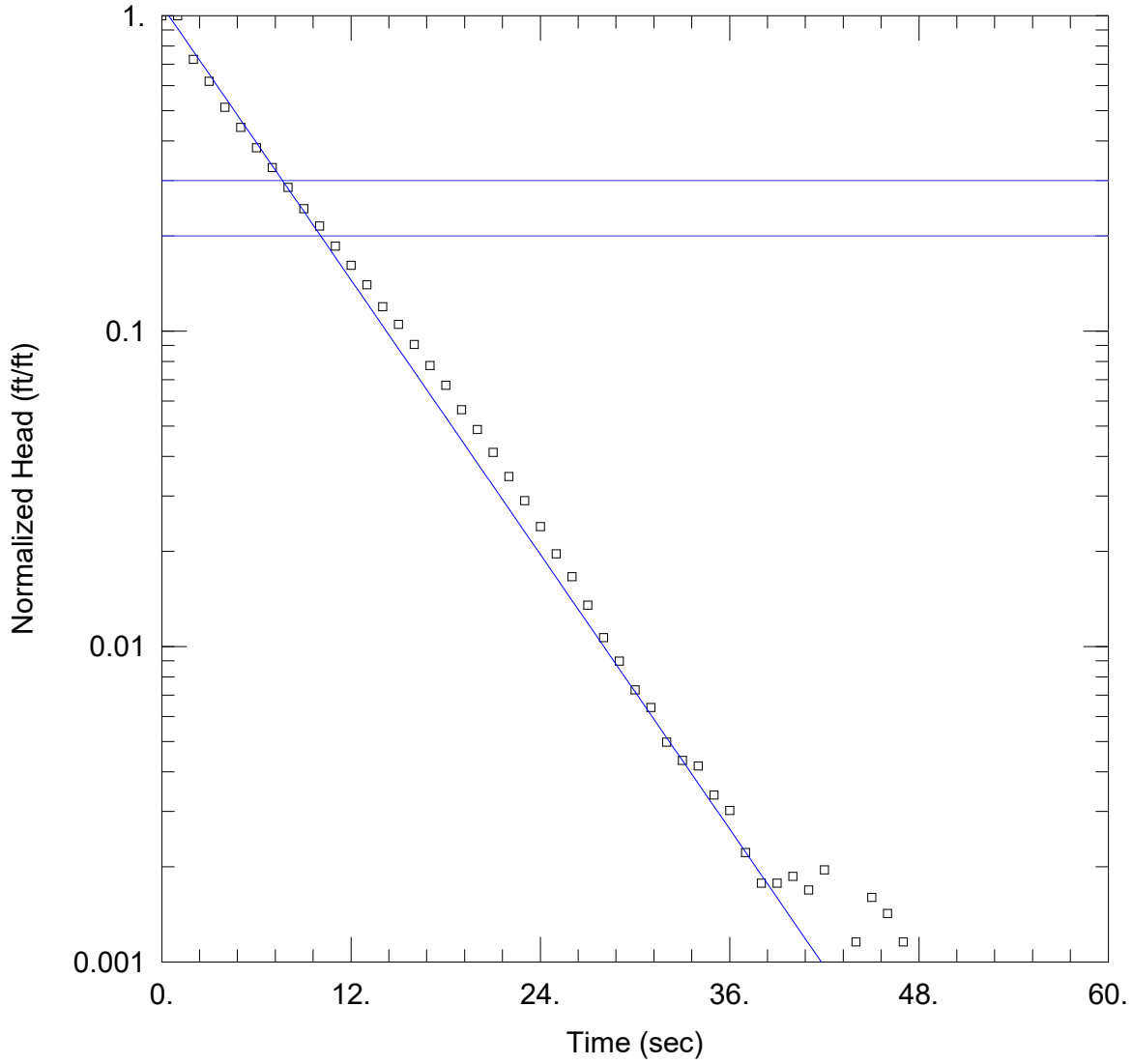
WELL DATA (New Well)

Initial Displacement: 11.01 ft
Total Well Penetration Depth: 32.92 ft
Casing Radius: 0.083 ft
Static Water Column Height: 33.25 ft
Screen Length: 10. ft
Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: KGS Model

Kr = 6.328 ft/day
Ss = 2.805E-6 ft^{-1}
Kz/Kr = 0.1



WELL TEST ANALYSIS

Data Set: \...\HGWC-12.aqt
Date: 08/11/20 Time: 17:38:00

PROJECT INFORMATION

Company: Geosyntec Consultants
Client: Southern Company Services
Project: GW6581B
Location: AP-1
Test Well: HGWC-12
Test Date: 7/27/2020

AQUIFER DATA

Saturated Thickness: 20.61 ft Anisotropy Ratio (Kz/Kr): 0.1

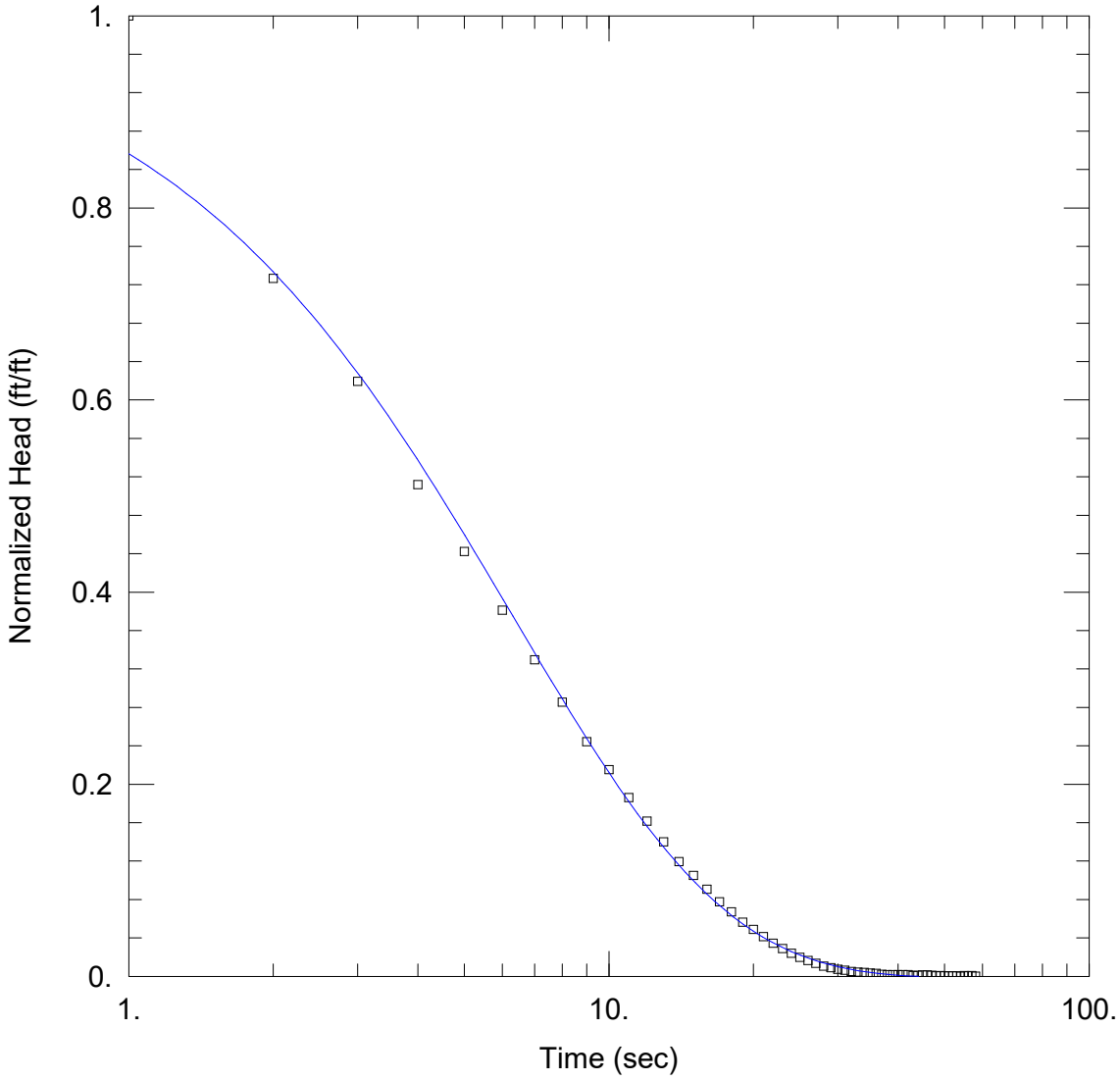
WELL DATA (New Well)

Initial Displacement: 11.25 ft
Total Well Penetration Depth: 20.28 ft
Casing Radius: 0.083 ft
Static Water Column Height: 20.61 ft
Screen Length: 10. ft
Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice

K = 21.91 ft/day y0 = 12.13 ft



WELL TEST ANALYSIS

Data Set: \...\HGWC-12.aqt
Date: 08/11/20 Time: 17:37:16

PROJECT INFORMATION

Company: Geosyntec Consultants
Client: Southern Company Services
Project: GW6581B
Location: AP-1
Test Well: HGWC-12
Test Date: 7/27/2020

AQUIFER DATA

Saturated Thickness: 20.61 ft

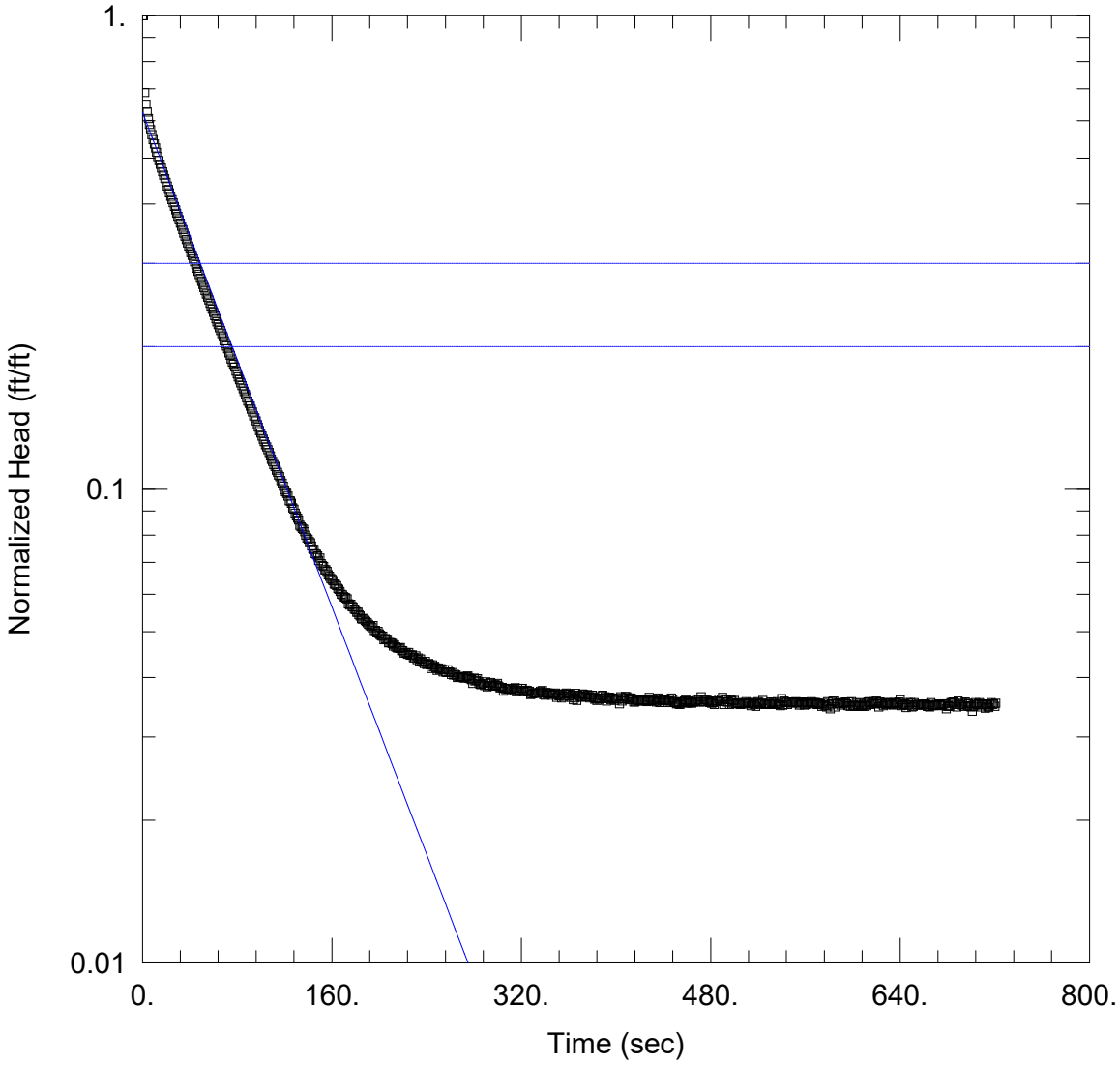
WELL DATA (New Well)

Initial Displacement: 11.25 ft
Total Well Penetration Depth: 20.28 ft
Casing Radius: 0.083 ft
Static Water Column Height: 20.61 ft
Screen Length: 10. ft
Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: KGS Model

Kr = 23.56 ft/day
Ss = 4.948E-12 ft^{-1}



WELL TEST ANALYSIS

Data Set: \...\HGWC-13.aqt
Date: 08/11/20 Time: 17:50:41

PROJECT INFORMATION

Company: Geosyntec Consultants
Client: Southern Company Services
Project: GW6581B
Location: AP-1
Test Well: HGWC-13
Test Date: 7/28/2020

AQUIFER DATA

Saturated Thickness: 26.32 ft Anisotropy Ratio (Kz/Kr): 0.1

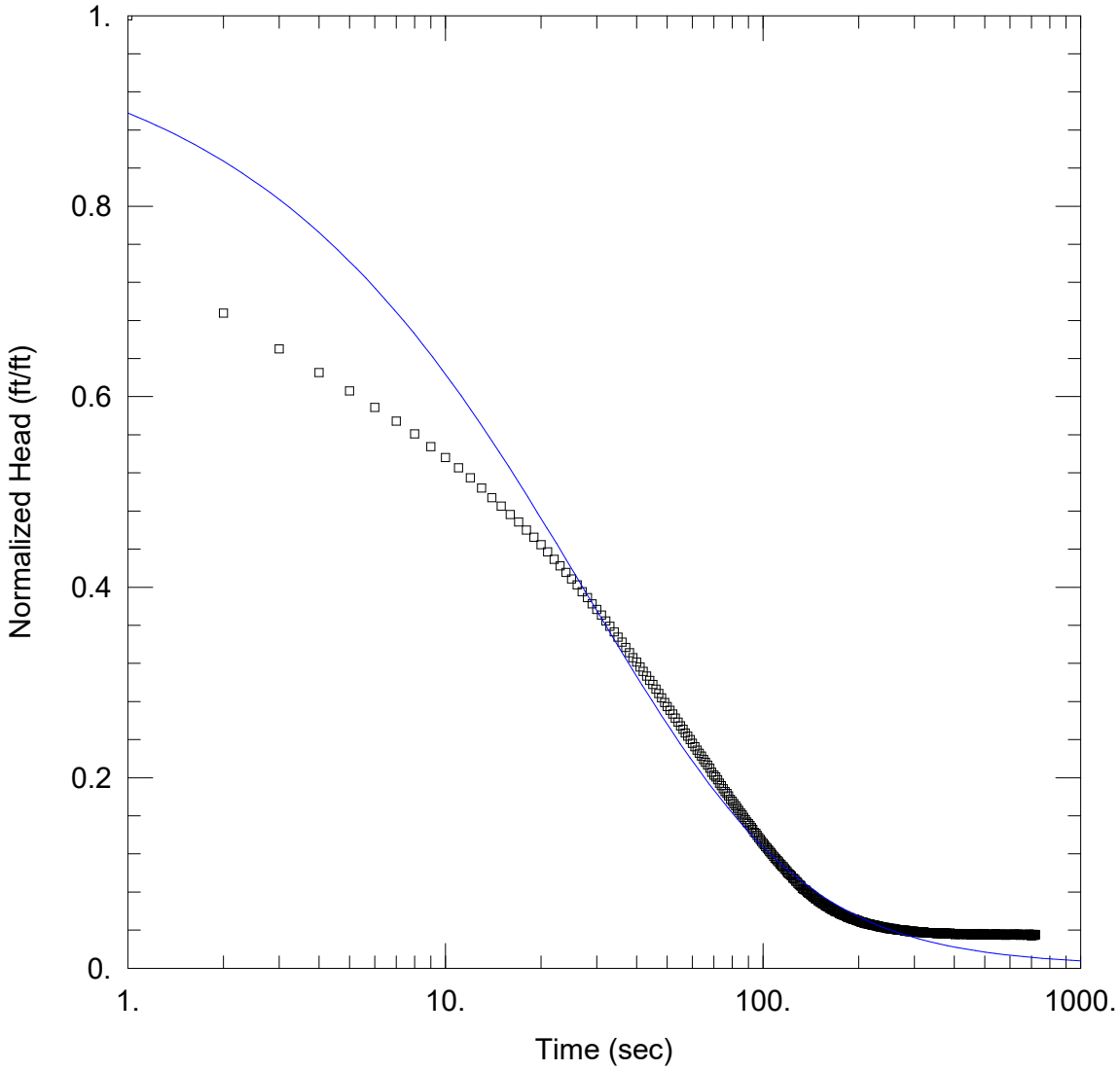
WELL DATA (New Well)

Initial Displacement: 9.8 ft
Total Well Penetration Depth: 24.34 ft
Casing Radius: 0.083 ft
Static Water Column Height: 26.32 ft
Screen Length: 10. ft
Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice

K = 2.223 ft/day y0 = 6.127 ft



WELL TEST ANALYSIS

Data Set: \...\HGWC-13.aqt
Date: 08/11/20 Time: 17:52:03

PROJECT INFORMATION

Company: Geosyntec Consultants
Client: Southern Company Services
Project: GW6581B
Location: AP-1
Test Well: HGWC-13
Test Date: 7/28/2020

AQUIFER DATA

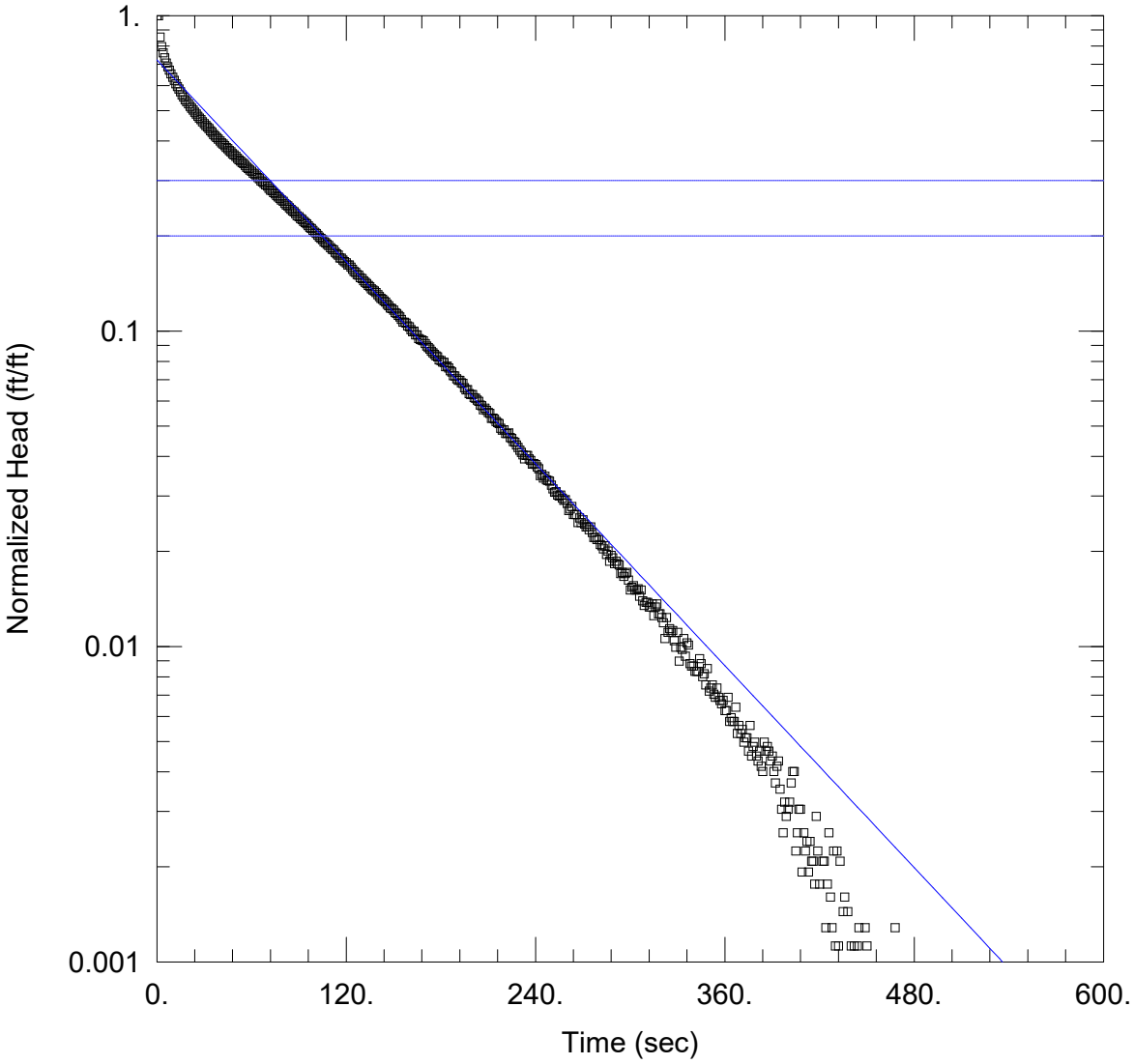
Saturated Thickness: 26.32 ft

WELL DATA (New Well)

Initial Displacement: 9.8 ft
Total Well Penetration Depth: 24.34 ft
Casing Radius: 0.083 ft
Static Water Column Height: 26.32 ft
Screen Length: 10. ft
Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: KGS Model
Kr = 1.98 ft/day
Ss = 0.003799 ft^{-1}



WELL TEST ANALYSIS

Data Set: \...\MW-19.aqt
Date: 08/11/20 Time: 17:54:30

PROJECT INFORMATION

Company: Geosyntec Consultants
Client: Southern Company Services
Project: GW6581B
Location: AP-1
Test Well: MW-19
Test Date: 7/28/2020

AQUIFER DATA

Saturated Thickness: 17.88 ft Anisotropy Ratio (Kz/Kr): 0.1

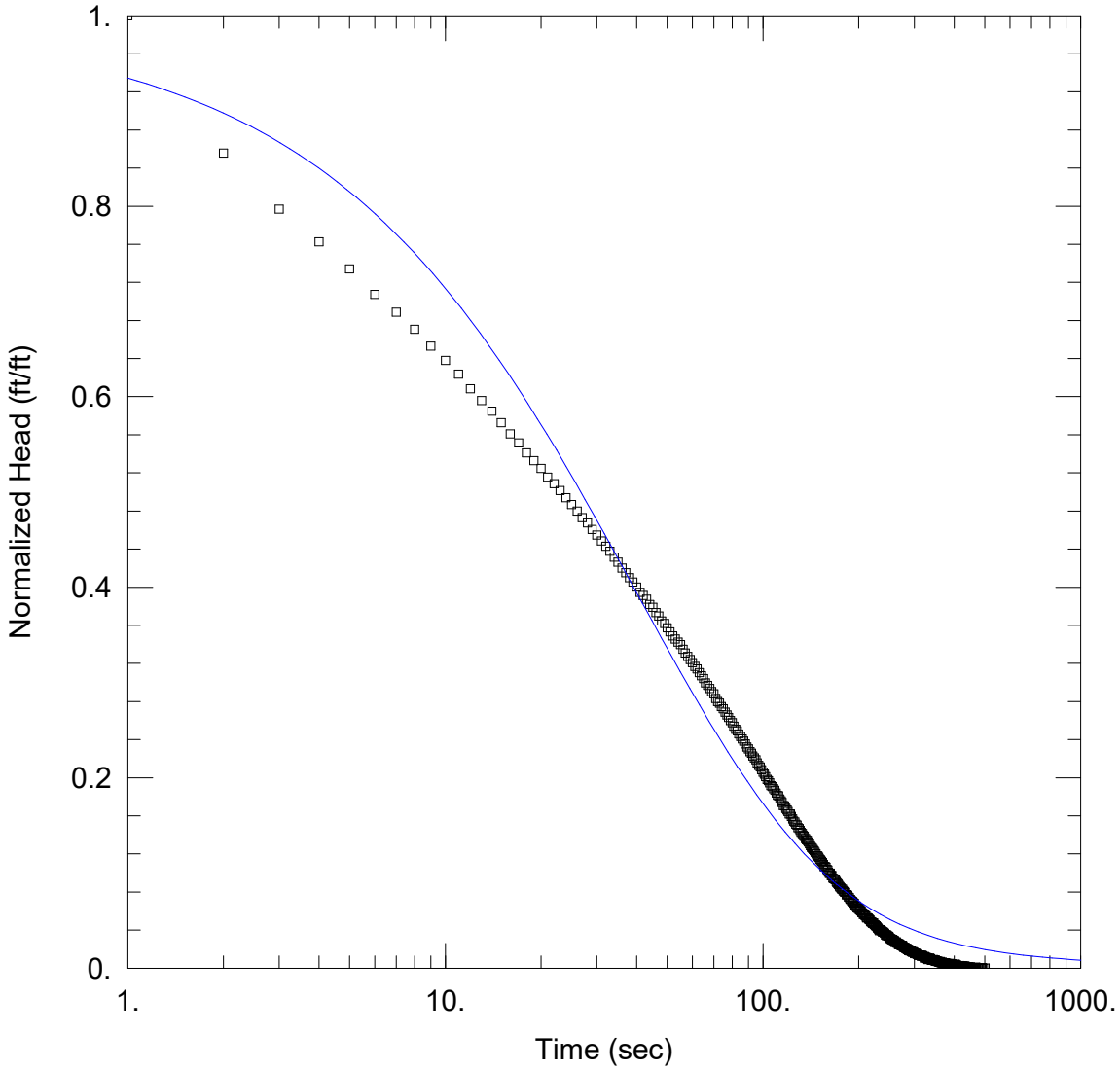
WELL DATA (New Well)

Initial Displacement: 6.23 ft
Total Well Penetration Depth: 17.55 ft
Casing Radius: 0.083 ft
Static Water Column Height: 17.88 ft
Screen Length: 10. ft
Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice

K = 1.582 ft/day y0 = 4.511 ft



WELL TEST ANALYSIS

Data Set: \...\MW-19.aqt
Date: 08/11/20 Time: 17:53:55

PROJECT INFORMATION

Company: Geosyntec Consultants
Client: Southern Company Services
Project: GW6581B
Location: AP-1
Test Well: MW-19
Test Date: 7/28/2020

AQUIFER DATA

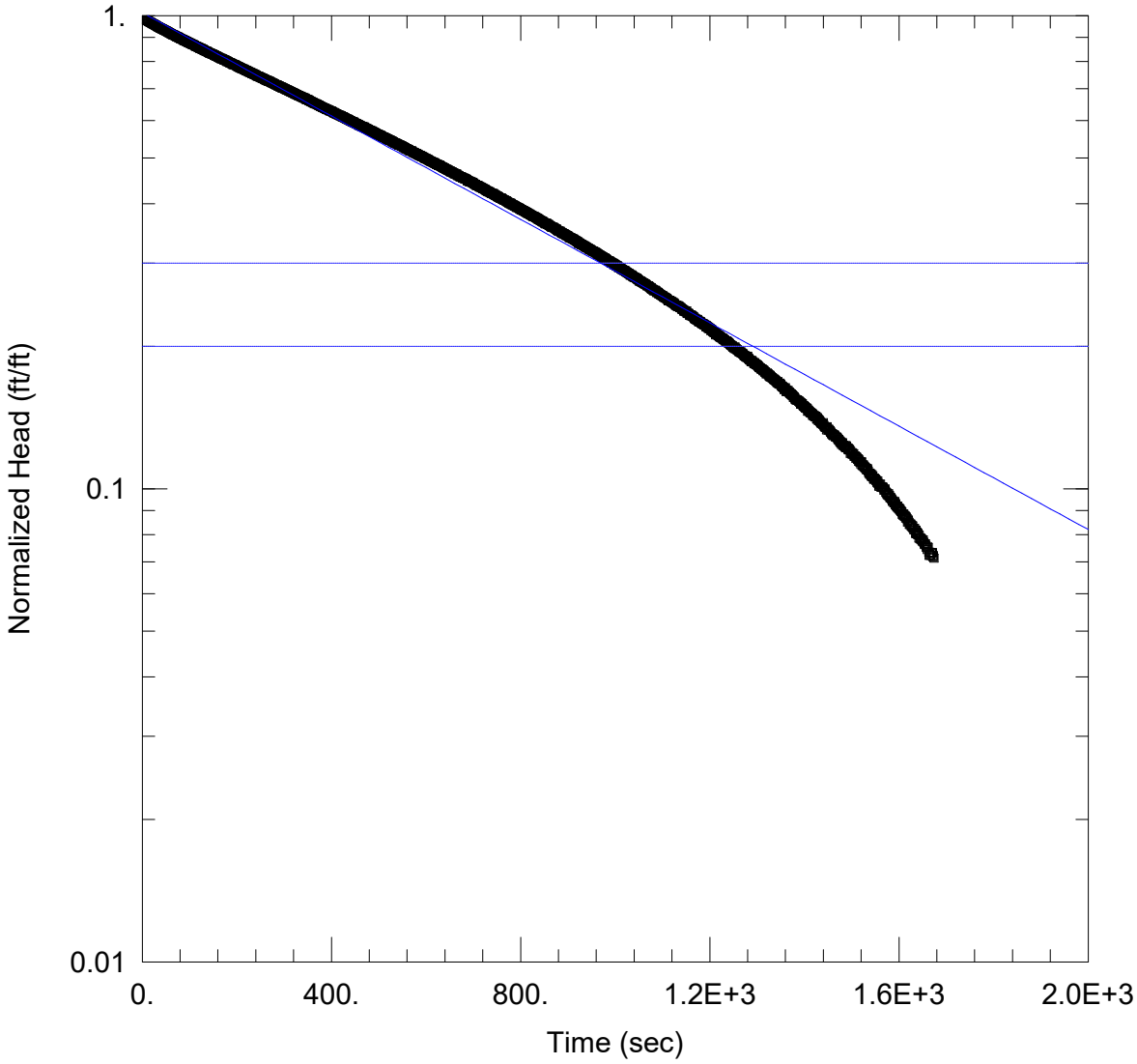
Saturated Thickness: 17.88 ft

WELL DATA (New Well)

Initial Displacement: 6.23 ft
Total Well Penetration Depth: 17.55 ft
Casing Radius: 0.083 ft
Static Water Column Height: 17.88 ft
Screen Length: 10. ft
Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: KGS Model
Kr = 1.582 ft/day
Ss = 0.001013 ft^{-1}



WELL TEST ANALYSIS

Data Set: \...\MW-25.aqt
Date: 08/11/20 Time: 17:55:42

PROJECT INFORMATION

Company: Geosyntec Consultants
Client: Southern Company Services
Project: GW6581B
Location: AP-1
Test Well: MW-25
Test Date: 7/29/2020

AQUIFER DATA

Saturated Thickness: 46.6 ft Anisotropy Ratio (Kz/Kr): 0.1

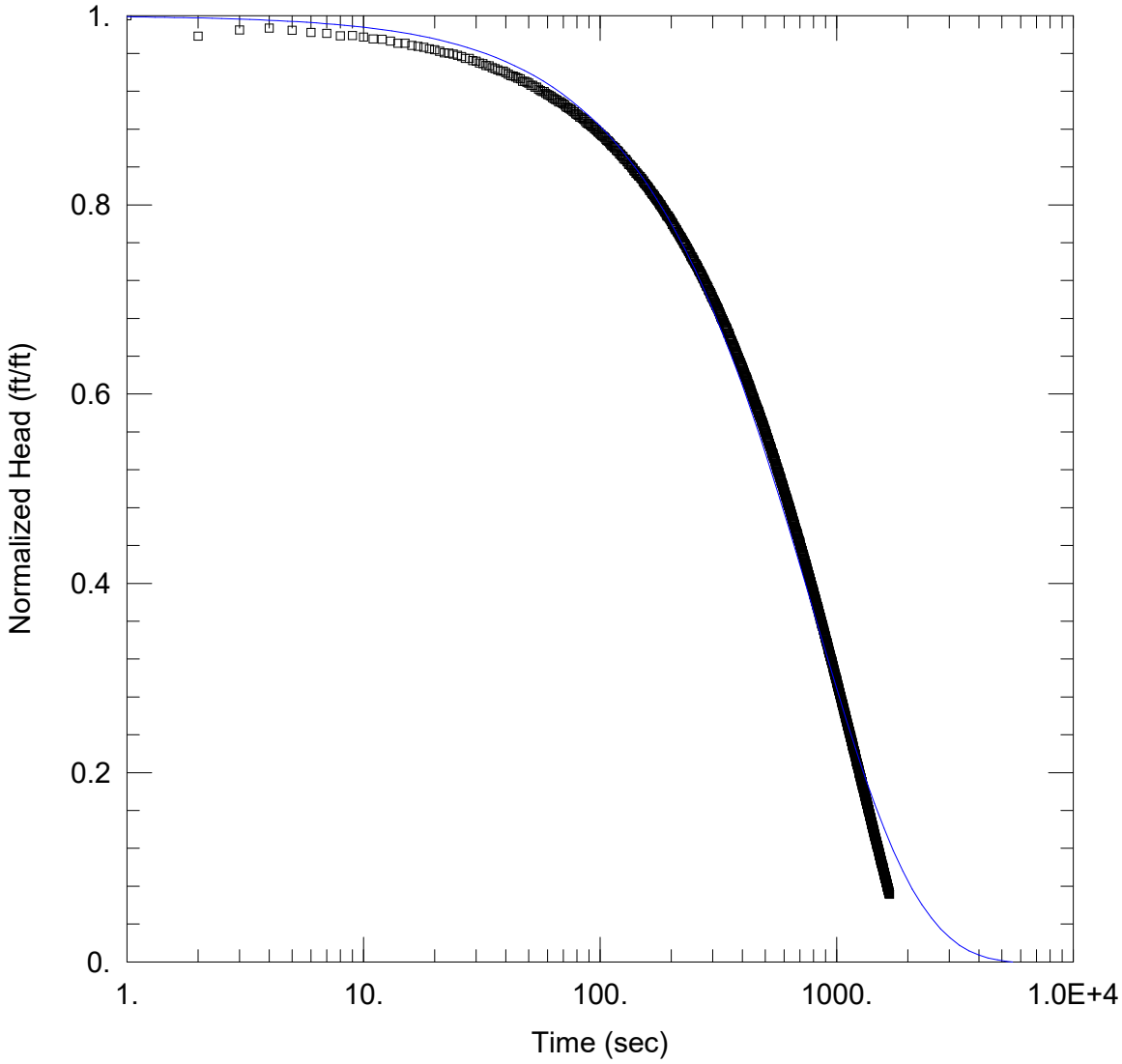
WELL DATA (New Well)

Initial Displacement: 6.65 ft
Total Well Penetration Depth: 46.27 ft
Casing Radius: 0.083 ft
Static Water Column Height: 46.6 ft
Screen Length: 10. ft
Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice

K = 0.1818 ft/day y0 = 6.745 ft



WELL TEST ANALYSIS

Data Set: \...\MW-25.aqt
Date: 08/11/20 Time: 17:56:23

PROJECT INFORMATION

Company: Geosyntec Consultants
Client: Southern Company Services
Project: GW6581B
Location: AP-1
Test Well: MW-25
Test Date: 7/29/2020

AQUIFER DATA

Saturated Thickness: 46.6 ft

WELL DATA (New Well)

Initial Displacement: 6.65 ft
Total Well Penetration Depth: 46.27 ft
Casing Radius: 0.083 ft
Static Water Column Height: 46.6 ft
Screen Length: 10. ft
Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: KGS Model

Kr = 0.1948 ft/day
Ss = 2.144E-12 ft^{-1}

APPENDIX D

Laboratory Analytical and Field Sampling Reports

APPENDIX D1
Laboratory Analytical Data Packages and Data Validation Reports

Laboratory Reports

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

March 23, 2020

Joju Abraham
Georgia Power - Coal Combustion Residuals
2480 Maner Road
Atlanta, GA 30339

RE: Project: PLANT HAMMOND APP IV AP-1
Pace Project No.: 2629703

Dear Joju Abraham:
Enclosed are the analytical results for sample(s) received by the laboratory between March 03, 2020 and March 05, 2020. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,

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

Enclosures

cc: Kristen Jurinko
Whitney Law, Geosyntec Consultants
Noelia Muskus, Geosyntec Consultants
Lauren Petty, Southern Company Services, Inc.

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

CERTIFICATIONS

Project: PLANT HAMMOND APP IV AP-1
Pace Project No.: 2629703

Pace Analytical Services Atlanta
110 Technology Parkway Peachtree Corners, GA 30092
Florida DOH Certification #: E87315
Georgia DW Inorganics Certification #: 812
Georgia DW Microbiology Certification #: 812
North Carolina Certification #: 381
South Carolina Certification #: 98011001
Virginia Certification #: 460204

Pace Analytical Services Asheville
2225 Riverside Drive, Asheville, NC 28804
Florida/NELAP Certification #: E87648
Massachusetts Certification #: M-NC030
North Carolina Drinking Water Certification #: 37712
North Carolina Wastewater Certification #: 40
South Carolina Certification #: 99030001
Virginia/VELAP Certification #: 460222

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

SAMPLE SUMMARY

Project: PLANT HAMMOND APP IV AP-1
Pace Project No.: 2629703

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2629703001	**MW-20**	Water	03/02/20 16:19	03/03/20 12:20
2629703002	**FB-01**	Water	03/02/20 17:10	03/03/20 12:20
2629703003	**MW-29**	Water	03/02/20 17:35	03/03/20 12:20
2629703004	**MW-5**	Water	03/02/20 16:21	03/03/20 12:20
2629714001	**HGWA-1**	Water	03/02/20 11:39	03/03/20 12:20
2629714002	**HGWA-2**	Water	03/02/20 11:10	03/03/20 12:20
2629714003	**HGWA-3**	Water	03/02/20 13:15	03/03/20 12:20
2629703008	**MW-6**	Water	03/03/20 10:12	03/04/20 10:05
2629703009	**MW-7**	Water	03/03/20 13:10	03/04/20 10:05
2629703010	**HGWC-10**	Water	03/03/20 13:20	03/04/20 10:05
2629703011	**HGWC-11**	Water	03/03/20 13:30	03/04/20 10:05
2629703012	**HGWC-12**	Water	03/03/20 14:15	03/04/20 10:05
2629703013	**MW-25D**	Water	03/03/20 15:15	03/04/20 10:05
2629703014	**HGWC-8**	Water	03/03/20 16:46	03/04/20 10:05
2629703015	**MW-30D**	Water	03/04/20 14:15	03/05/20 12:00
2629703016	**HGWC-7**	Water	03/04/20 11:50	03/05/20 12:00
2629703017	**MW-28D**	Water	03/04/20 10:05	03/05/20 12:00
2629703018	**MW-24D**	Water	03/04/20 12:27	03/05/20 12:00
2629703019	**FD-02**	Water	03/04/20 12:00	03/05/20 12:00
2629703020	**HGWC-13**	Water	03/04/20 13:25	03/05/20 12:00
2629703021	**MW-19**	Water	03/04/20 17:55	03/05/20 12:00
2629703022	**HGWC-9**	Water	03/04/20 10:26	03/05/20 12:00
2629703023	**MW-26D**	Water	03/04/20 13:41	03/05/20 12:00
2629703024	**MW-27D**	Water	03/04/20 16:27	03/05/20 12:00

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SAMPLE ANALYTE COUNT

Project: PLANT HAMMOND APP IV AP-1
Pace Project No.: 2629703

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
2629703001	**MW-20**	EPA 6020B	CSW	12	PASI-GA
		EPA 7470A	DRB	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	CDC	1	PASI-A
2629703002	**FB-01**	EPA 6020B	CSW	12	PASI-GA
		EPA 7470A	DRB	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	CDC	1	PASI-A
2629703003	**MW-29**	EPA 6020B	CSW	12	PASI-GA
		EPA 7470A	DRB	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	CDC	1	PASI-A
2629703004	**MW-5**	EPA 6020B	CSW	12	PASI-GA
		EPA 7470A	DRB	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	CDC	1	PASI-A
2629714001	**HGWA-1**	EPA 6020B	CSW	12	PASI-GA
		EPA 7470A	DRB	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	CDC	1	PASI-A
2629714002	**HGWA-2**	EPA 6020B	CSW	12	PASI-GA
		EPA 7470A	DRB	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	CDC	1	PASI-A
2629714003	**HGWA-3**	EPA 6020B	CSW	12	PASI-GA
		EPA 7470A	DRB	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	CDC	1	PASI-A
2629703008	**MW-6**	EPA 6020B	CSW	12	PASI-GA
		EPA 7470A	DRB	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	CDC	1	PASI-A
2629703009	**MW-7**	EPA 6020B	CSW	12	PASI-GA
		EPA 7470A	DRB	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	CDC	1	PASI-A
2629703010	**HGWC-10**	EPA 6020B	CSW	12	PASI-GA
		EPA 7470A	DRB	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	CDC	1	PASI-A
2629703011	**HGWC-11**	EPA 6020B	CSW	12	PASI-GA
		EPA 7470A	DRB	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	CDC	1	PASI-A
2629703012	**HGWC-12**	EPA 6020B	CSW	12	PASI-GA
		EPA 7470A	DRB	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	CDC	1	PASI-A
2629703013	**MW-25D**	EPA 6020B	CSW	12	PASI-GA

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SAMPLE ANALYTE COUNT

Project: PLANT HAMMOND APP IV AP-1
Pace Project No.: 2629703

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 7470A	DRB	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	CDC	1	PASI-A
2629703014	**HGWC-8**	EPA 6020B	CSW	12	PASI-GA
		EPA 7470A	DRB	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	CDC	1	PASI-A
2629703015	**MW-30D**	EPA 6020B	CSW	12	PASI-GA
		EPA 7470A	DRB	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	CDC	1	PASI-A
2629703016	**HGWC-7**	EPA 6020B	CSW	12	PASI-GA
		EPA 7470A	DRB	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	CDC	1	PASI-A
2629703017	**MW-28D**	EPA 6020B	CSW	12	PASI-GA
		EPA 7470A	DRB	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	CDC	1	PASI-A
2629703018	**MW-24D**	EPA 6020B	CSW	12	PASI-GA
		EPA 7470A	DRB	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	CDC	1	PASI-A
2629703019	**FD-02**	EPA 6020B	CSW	12	PASI-GA
		EPA 7470A	DRB	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	CDC	1	PASI-A
2629703020	**HGWC-13**	EPA 6020B	CSW	12	PASI-GA
		EPA 7470A	DRB	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	CDC	1	PASI-A
2629703021	**MW-19**	EPA 6020B	CSW	12	PASI-GA
		EPA 7470A	DRB	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	CDC	1	PASI-A
2629703022	**HGWC-9**	EPA 6020B	CSW	12	PASI-GA
		EPA 7470A	DRB	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	CDC	1	PASI-A
2629703023	**MW-26D**	EPA 6020B	CSW	12	PASI-GA
		EPA 7470A	DRB	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	CDC	1	PASI-A
2629703024	**MW-27D**	EPA 6020B	CSW	12	PASI-GA
		EPA 7470A	DRB	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	CDC	1	PASI-A

Pace Analytical Services, LLC
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SUMMARY OF DETECTION

Project: PLANT HAMMOND APP IV AP-1
Pace Project No.: 2629703

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
2629703001	**MW-20**					
	Field pH	6.98	Std. Units		03/16/20 16:27	
EPA 6020B	Arsenic	0.00038J	mg/L	0.0050	03/10/20 19:33	
EPA 6020B	Barium	0.099	mg/L	0.010	03/10/20 19:33	
EPA 6020B	Chromium	0.00071J	mg/L	0.010	03/10/20 19:33	
EPA 6020B	Lead	0.00017J	mg/L	0.0050	03/10/20 19:33	
EPA 6020B	Lithium	0.00082J	mg/L	0.030	03/10/20 19:33	
2629703003	**MW-29**					
	Field pH	7.13	Std. Units		03/16/20 16:27	
EPA 6020B	Barium	0.088	mg/L	0.010	03/10/20 19:56	
EPA 6020B	Cobalt	0.00067J	mg/L	0.0050	03/10/20 19:56	
EPA 6020B	Lead	0.000090J	mg/L	0.0050	03/10/20 19:56	
EPA 6020B	Lithium	0.0025J	mg/L	0.030	03/10/20 19:56	
EPA 6020B	Molybdenum	0.0025J	mg/L	0.010	03/10/20 19:56	
2629703004	**MW-5**					
	Field pH	6.12	Std. Units		03/16/20 16:27	
EPA 6020B	Barium	0.049	mg/L	0.010	03/10/20 20:01	
EPA 6020B	Chromium	0.0042J	mg/L	0.010	03/10/20 20:01	
EPA 6020B	Lead	0.000047J	mg/L	0.0050	03/10/20 20:01	
EPA 6020B	Selenium	0.0041J	mg/L	0.010	03/10/20 20:01	
EPA 300.0 Rev 2.1 1993	Fluoride	0.065J	mg/L	0.30	03/10/20 14:25	
2629714001	**HGWA-1**					
	Field pH	7.10	Std. Units		03/16/20 16:27	
EPA 6020B	Barium	0.034	mg/L	0.010	03/10/20 20:07	
EPA 6020B	Lead	0.000048J	mg/L	0.0050	03/10/20 20:07	
EPA 6020B	Lithium	0.0012J	mg/L	0.030	03/10/20 20:07	
EPA 300.0 Rev 2.1 1993	Fluoride	0.076J	mg/L	0.30	03/10/20 15:07	
2629714002	**HGWA-2**					
	Field pH	5.43	Std. Units		03/16/20 16:27	
EPA 6020B	Arsenic	0.00043J	mg/L	0.0050	03/10/20 20:13	
EPA 6020B	Barium	0.11	mg/L	0.010	03/10/20 20:13	
EPA 6020B	Beryllium	0.00014J	mg/L	0.0030	03/10/20 20:13	
EPA 6020B	Chromium	0.00041J	mg/L	0.010	03/10/20 20:13	
EPA 6020B	Cobalt	0.019	mg/L	0.0050	03/10/20 20:13	
EPA 6020B	Lead	0.000095J	mg/L	0.0050	03/10/20 20:13	
EPA 6020B	Lithium	0.0017J	mg/L	0.030	03/10/20 20:13	
2629714003	**HGWA-3**					
	Field pH	7.12	Std. Units		03/16/20 16:27	
EPA 6020B	Arsenic	0.00040J	mg/L	0.0050	03/10/20 20:18	
EPA 6020B	Barium	0.14	mg/L	0.010	03/10/20 20:18	
EPA 6020B	Lithium	0.0037J	mg/L	0.030	03/10/20 20:18	
2629703008	**MW-6**					
	Field pH	6.78	Std. Units		03/16/20 16:27	
EPA 6020B	Barium	0.090	mg/L	0.010	03/11/20 16:05	
EPA 6020B	Chromium	0.00044J	mg/L	0.010	03/11/20 16:05	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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SUMMARY OF DETECTION

Project: PLANT HAMMOND APP IV AP-1
Pace Project No.: 2629703

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
2629703008	**MW-6**					
EPA 6020B	Cobalt	0.00094J	mg/L	0.0050	03/11/20 16:05	
EPA 6020B	Lead	0.00013J	mg/L	0.0050	03/11/20 16:05	
EPA 6020B	Molybdenum	0.0022J	mg/L	0.010	03/11/20 16:05	
EPA 6020B	Thallium	0.000082J	mg/L	0.0010	03/11/20 16:05	
EPA 300.0 Rev 2.1 1993	Fluoride	0.062J	mg/L	0.30	03/11/20 01:44	
2629703009	**MW-7**					
	Field pH	6.10	Std. Units		03/16/20 16:27	
EPA 6020B	Antimony	0.0013J	mg/L	0.0030	03/11/20 16:28	
EPA 6020B	Barium	0.043	mg/L	0.010	03/11/20 16:28	
EPA 6020B	Chromium	0.0015J	mg/L	0.010	03/11/20 16:28	
EPA 6020B	Lead	0.000062J	mg/L	0.0050	03/11/20 16:28	
2629703010	**HGWC-10**					
	Field pH	6.67	Std. Units		03/16/20 16:27	
EPA 6020B	Barium	0.048	mg/L	0.010	03/11/20 16:34	
EPA 300.0 Rev 2.1 1993	Fluoride	0.11J	mg/L	0.30	03/11/20 02:13	
2629703011	**HGWC-11**					
	Field pH	5.95	Std. Units		03/16/20 16:27	
EPA 6020B	Arsenic	0.0022J	mg/L	0.0050	03/11/20 16:40	
EPA 6020B	Barium	0.022	mg/L	0.010	03/11/20 16:40	
EPA 6020B	Beryllium	0.00012J	mg/L	0.0030	03/11/20 16:40	
EPA 6020B	Chromium	0.00061J	mg/L	0.010	03/11/20 16:40	
EPA 6020B	Cobalt	0.00087J	mg/L	0.0050	03/11/20 16:40	
EPA 6020B	Lead	0.00021J	mg/L	0.0050	03/11/20 16:40	
EPA 6020B	Molybdenum	0.011	mg/L	0.010	03/11/20 16:40	
EPA 6020B	Selenium	0.016	mg/L	0.010	03/12/20 16:52	
EPA 300.0 Rev 2.1 1993	Fluoride	0.24J	mg/L	0.30	03/11/20 02:57	
2629703012	**HGWC-12**					
	Field pH	6.95	Std. Units		03/16/20 16:27	
EPA 6020B	Arsenic	0.0023J	mg/L	0.0050	03/11/20 16:45	
EPA 6020B	Barium	0.092	mg/L	0.010	03/11/20 16:45	
EPA 6020B	Cadmium	0.00015J	mg/L	0.0025	03/11/20 16:45	
EPA 6020B	Cobalt	0.0013J	mg/L	0.0050	03/11/20 16:45	
EPA 6020B	Lead	0.000056J	mg/L	0.0050	03/11/20 16:45	
EPA 6020B	Lithium	0.0063J	mg/L	0.030	03/11/20 16:45	
EPA 6020B	Molybdenum	0.045	mg/L	0.010	03/11/20 16:45	
EPA 6020B	Thallium	0.000066J	mg/L	0.0010	03/11/20 16:45	
EPA 300.0 Rev 2.1 1993	Fluoride	0.21J	mg/L	0.30	03/11/20 03:12	
2629703013	**MW-25D**					
	Field pH	7.59	Std. Units		03/16/20 16:27	
EPA 6020B	Arsenic	0.0010J	mg/L	0.0050	03/11/20 17:13	
EPA 6020B	Barium	0.42	mg/L	0.010	03/11/20 17:13	
EPA 6020B	Lithium	0.050	mg/L	0.030	03/11/20 17:13	
EPA 300.0 Rev 2.1 1993	Fluoride	1.4	mg/L	0.30	03/10/20 16:40	

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SUMMARY OF DETECTION

Project: PLANT HAMMOND APP IV AP-1
Pace Project No.: 2629703

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
2629703014	**HGWC-8**					
	Field pH	7.06	Std. Units		03/16/20 16:27	
EPA 6020B	Barium	0.052	mg/L	0.010	03/11/20 17:18	
EPA 6020B	Cadmium	0.00017J	mg/L	0.0025	03/11/20 17:18	
EPA 6020B	Chromium	0.00070J	mg/L	0.010	03/11/20 17:18	
EPA 6020B	Cobalt	0.0020J	mg/L	0.0050	03/11/20 17:18	
EPA 6020B	Lead	0.00013J	mg/L	0.0050	03/11/20 17:18	
EPA 6020B	Lithium	0.0028J	mg/L	0.030	03/11/20 17:18	
EPA 6020B	Molybdenum	0.44	mg/L	0.010	03/11/20 17:18	
EPA 6020B	Thallium	0.000061J	mg/L	0.0010	03/11/20 17:18	
EPA 300.0 Rev 2.1 1993	Fluoride	0.45	mg/L	0.30	03/10/20 17:22	
2629703015	**MW-30D**					
	Field pH	8.12	Std. Units		03/16/20 16:27	
EPA 6020B	Arsenic	0.0021J	mg/L	0.0050	03/11/20 21:23	
EPA 6020B	Barium	0.065	mg/L	0.010	03/11/20 21:23	
EPA 6020B	Chromium	0.0013J	mg/L	0.010	03/11/20 21:23	B
EPA 6020B	Lead	0.00041J	mg/L	0.0050	03/11/20 21:23	
EPA 6020B	Lithium	0.18	mg/L	0.030	03/11/20 21:23	
EPA 6020B	Molybdenum	0.021	mg/L	0.010	03/11/20 21:23	
EPA 300.0 Rev 2.1 1993	Fluoride	9.4	mg/L	1.2	03/11/20 07:50	
2629703016	**HGWC-7**					
	Field pH	7.17	Std. Units		03/16/20 16:27	
EPA 6020B	Barium	0.068	mg/L	0.010	03/11/20 21:28	
EPA 6020B	Beryllium	0.000077J	mg/L	0.0030	03/11/20 21:28	
EPA 6020B	Chromium	0.0016J	mg/L	0.010	03/11/20 21:28	B
EPA 6020B	Cobalt	0.0011J	mg/L	0.0050	03/11/20 21:28	
EPA 6020B	Lead	0.00051J	mg/L	0.0050	03/11/20 21:28	
EPA 6020B	Lithium	0.0034J	mg/L	0.030	03/11/20 21:28	
EPA 6020B	Molybdenum	0.045	mg/L	0.010	03/11/20 21:28	
EPA 300.0 Rev 2.1 1993	Fluoride	0.077J	mg/L	0.30	03/10/20 17:50	
2629703017	**MW-28D**					
	Field pH	7.55	Std. Units		03/16/20 16:27	
EPA 6020B	Barium	0.77	mg/L	0.010	03/12/20 20:06	M1
EPA 6020B	Beryllium	0.00014J	mg/L	0.0030	03/12/20 20:06	
EPA 6020B	Chromium	0.0027J	mg/L	0.010	03/12/20 20:06	
EPA 6020B	Cobalt	0.00093J	mg/L	0.0050	03/12/20 20:06	
EPA 6020B	Lead	0.0010J	mg/L	0.0050	03/12/20 20:06	
EPA 6020B	Lithium	0.015J	mg/L	0.030	03/12/20 20:06	
EPA 6020B	Molybdenum	0.0090J	mg/L	0.010	03/12/20 20:06	
EPA 6020B	Thallium	0.000092J	mg/L	0.0010	03/12/20 20:06	
EPA 300.0 Rev 2.1 1993	Fluoride	0.26J	mg/L	0.30	03/10/20 18:04	
2629703018	**MW-24D**					
	Field pH	7.47	Std. Units		03/16/20 16:27	
EPA 6020B	Antimony	0.0017J	mg/L	0.0030	03/12/20 20:28	B
EPA 6020B	Barium	0.081	mg/L	0.010	03/12/20 20:28	
EPA 6020B	Cobalt	0.00056J	mg/L	0.0050	03/12/20 20:28	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: PLANT HAMMOND APP IV AP-1
Pace Project No.: 2629703

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
2629703018	**MW-24D**					
EPA 6020B	Lead	0.00019J	mg/L	0.0050	03/12/20 20:28	
EPA 6020B	Lithium	0.0026J	mg/L	0.030	03/12/20 20:28	
EPA 300.0 Rev 2.1 1993	Fluoride	0.051J	mg/L	0.30	03/10/20 18:18	
2629703019	**FD-02**					
EPA 6020B	Antimony	0.00084J	mg/L	0.0030	03/12/20 20:34	B
EPA 6020B	Arsenic	0.49	mg/L	0.0050	03/12/20 20:34	
EPA 6020B	Barium	0.096	mg/L	0.010	03/12/20 20:34	
EPA 6020B	Beryllium	0.000086J	mg/L	0.0030	03/12/20 20:34	
EPA 6020B	Chromium	0.00045J	mg/L	0.010	03/12/20 20:34	
EPA 6020B	Cobalt	0.0063	mg/L	0.0050	03/12/20 20:34	
EPA 6020B	Lead	0.00012J	mg/L	0.0050	03/12/20 20:34	
EPA 6020B	Lithium	0.039	mg/L	0.030	03/12/20 20:34	
EPA 6020B	Molybdenum	0.029	mg/L	0.010	03/12/20 20:34	
EPA 6020B	Thallium	0.00053J	mg/L	0.0010	03/12/20 20:34	
EPA 300.0 Rev 2.1 1993	Fluoride	0.37	mg/L	0.30	03/10/20 19:14	
2629703020	**HGWC-13**					
	Field pH	7.16	Std. Units		03/16/20 16:27	
EPA 6020B	Antimony	0.00061J	mg/L	0.0030	03/12/20 20:40	B
EPA 6020B	Arsenic	0.52	mg/L	0.0050	03/12/20 20:40	
EPA 6020B	Barium	0.10	mg/L	0.010	03/12/20 20:40	
EPA 6020B	Beryllium	0.000093J	mg/L	0.0030	03/12/20 20:40	
EPA 6020B	Cobalt	0.0066	mg/L	0.0050	03/12/20 20:40	
EPA 6020B	Lead	0.00014J	mg/L	0.0050	03/12/20 20:40	
EPA 6020B	Lithium	0.041	mg/L	0.030	03/12/20 20:40	
EPA 6020B	Molybdenum	0.030	mg/L	0.010	03/12/20 20:40	
EPA 6020B	Thallium	0.00056J	mg/L	0.0010	03/12/20 20:40	
EPA 300.0 Rev 2.1 1993	Fluoride	0.37	mg/L	0.30	03/10/20 19:28	
2629703021	**MW-19**					
	Field pH	6.29	Std. Units		03/16/20 16:27	
EPA 6020B	Arsenic	0.00045J	mg/L	0.0050	03/12/20 20:46	
EPA 6020B	Barium	0.069	mg/L	0.010	03/12/20 20:46	
EPA 6020B	Cadmium	0.00026J	mg/L	0.0025	03/12/20 20:46	
EPA 6020B	Chromium	0.00066J	mg/L	0.010	03/12/20 20:46	
EPA 6020B	Cobalt	0.048	mg/L	0.0050	03/12/20 20:46	
EPA 6020B	Lead	0.00011J	mg/L	0.0050	03/12/20 20:46	
EPA 6020B	Lithium	0.010J	mg/L	0.030	03/12/20 20:46	
EPA 6020B	Molybdenum	0.032	mg/L	0.010	03/12/20 20:46	
EPA 6020B	Selenium	0.0044J	mg/L	0.010	03/12/20 20:46	
EPA 6020B	Thallium	0.00026J	mg/L	0.0010	03/12/20 20:46	
EPA 300.0 Rev 2.1 1993	Fluoride	0.096J	mg/L	0.30	03/10/20 19:42	
2629703022	**HGWC-9**					
	Field pH	6.97	Std. Units		03/16/20 16:27	
EPA 6020B	Antimony	0.00032J	mg/L	0.0030	03/12/20 21:03	B
EPA 6020B	Barium	0.11	mg/L	0.010	03/12/20 21:03	
EPA 6020B	Cobalt	0.00053J	mg/L	0.0050	03/12/20 21:03	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: PLANT HAMMOND APP IV AP-1
Pace Project No.: 2629703

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
2629703022	**HGWC-9**					
EPA 6020B	Lead	0.000084J	mg/L	0.0050	03/12/20 21:03	
EPA 6020B	Lithium	0.0040J	mg/L	0.030	03/12/20 21:03	
EPA 6020B	Molybdenum	0.031	mg/L	0.010	03/12/20 21:03	
EPA 300.0 Rev 2.1 1993	Fluoride	0.080J	mg/L	0.30	03/10/20 19:56	
2629703023	**MW-26D**					
	Field pH	7.14	Std. Units		03/16/20 16:27	
EPA 6020B	Antimony	0.0020J	mg/L	0.0030	03/12/20 21:09	B
EPA 6020B	Arsenic	0.00060J	mg/L	0.0050	03/12/20 21:09	
EPA 6020B	Barium	0.17	mg/L	0.010	03/12/20 21:09	
EPA 6020B	Chromium	0.0028J	mg/L	0.010	03/12/20 21:09	
EPA 6020B	Lithium	0.030J	mg/L	0.030	03/12/20 21:09	
EPA 6020B	Molybdenum	0.0074J	mg/L	0.010	03/12/20 21:09	
EPA 300.0 Rev 2.1 1993	Fluoride	0.052J	mg/L	0.30	03/10/20 20:10	
2629703024	**MW-27D**					
	Field pH	8.33	Std. Units		03/16/20 16:27	
EPA 6020B	Antimony	0.00037J	mg/L	0.0030	03/12/20 21:14	B
EPA 6020B	Arsenic	0.00069J	mg/L	0.0050	03/12/20 21:14	
EPA 6020B	Barium	0.95	mg/L	0.010	03/12/20 21:14	
EPA 6020B	Cobalt	0.00045J	mg/L	0.0050	03/12/20 21:14	
EPA 6020B	Lithium	0.0047J	mg/L	0.030	03/12/20 21:14	
EPA 6020B	Molybdenum	0.0058J	mg/L	0.010	03/12/20 21:14	
EPA 300.0 Rev 2.1 1993	Fluoride	0.25J	mg/L	0.30	03/10/20 20:52	

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ANALYTICAL RESULTS

Project: PLANT HAMMOND APP IV AP-1
Pace Project No.: 2629703

Sample: MW-20 **Lab ID: 2629703001** Collected: 03/02/20 16:19 Received: 03/03/20 12:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method:								
Field pH	**6.98**	Std. Units			1		03/16/20 16:27		
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00027	1	03/05/20 22:19	03/10/20 19:33	7440-36-0	
Arsenic	**0.00038J**	mg/L	0.0050	0.00035	1	03/05/20 22:19	03/10/20 19:33	7440-38-2	
Barium	**0.099**	mg/L	0.010	0.00049	1	03/05/20 22:19	03/10/20 19:33	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000074	1	03/05/20 22:19	03/10/20 19:33	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00011	1	03/05/20 22:19	03/10/20 19:33	7440-43-9	
Chromium	**0.00071J**	mg/L	0.010	0.00039	1	03/05/20 22:19	03/10/20 19:33	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00030	1	03/05/20 22:19	03/10/20 19:33	7440-48-4	
Lead	**0.00017J**	mg/L	0.0050	0.000046	1	03/05/20 22:19	03/10/20 19:33	7439-92-1	
Lithium	**0.00082J**	mg/L	0.030	0.00078	1	03/05/20 22:19	03/10/20 19:33	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00095	1	03/05/20 22:19	03/10/20 19:33	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	03/05/20 22:19	03/10/20 19:33	7782-49-2	
Thallium	ND	mg/L	0.0010	0.000052	1	03/05/20 22:19	03/10/20 19:33	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.00014	1	03/04/20 15:00	03/05/20 15:57	7439-97-6	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993								
Fluoride	ND	mg/L	0.30	0.050	1		03/10/20 13:43	16984-48-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: PLANT HAMMOND APP IV AP-1
Pace Project No.: 2629703

Sample: FB-01 **Lab ID: 2629703002** Collected: 03/02/20 17:10 Received: 03/03/20 12:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00027	1	03/05/20 22:19	03/10/20 19:38	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00035	1	03/05/20 22:19	03/10/20 19:38	7440-38-2	
Barium	ND	mg/L	0.010	0.00049	1	03/05/20 22:19	03/10/20 19:38	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000074	1	03/05/20 22:19	03/10/20 19:38	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00011	1	03/05/20 22:19	03/10/20 19:38	7440-43-9	
Chromium	ND	mg/L	0.010	0.00039	1	03/05/20 22:19	03/10/20 19:38	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00030	1	03/05/20 22:19	03/10/20 19:38	7440-48-4	
Lead	ND	mg/L	0.0050	0.000046	1	03/05/20 22:19	03/10/20 19:38	7439-92-1	
Lithium	ND	mg/L	0.030	0.00078	1	03/05/20 22:19	03/10/20 19:38	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00095	1	03/05/20 22:19	03/10/20 19:38	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	03/05/20 22:19	03/10/20 19:38	7782-49-2	
Thallium	ND	mg/L	0.0010	0.000052	1	03/05/20 22:19	03/10/20 19:38	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.00014	1	03/04/20 15:00	03/05/20 15:59	7439-97-6	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993								
Fluoride	ND	mg/L	0.30	0.050	1		03/10/20 13:57	16984-48-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: PLANT HAMMOND APP IV AP-1
Pace Project No.: 2629703

Sample: MW-29 **Lab ID: 2629703003** Collected: 03/02/20 17:35 Received: 03/03/20 12:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method:								
Field pH	**7.13**	Std. Units			1		03/16/20 16:27		
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00027	1	03/05/20 22:19	03/10/20 19:56	7440-36-0	B
Arsenic	ND	mg/L	0.0050	0.00035	1	03/05/20 22:19	03/10/20 19:56	7440-38-2	
Barium	**0.088**	mg/L	0.010	0.00049	1	03/05/20 22:19	03/10/20 19:56	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000074	1	03/05/20 22:19	03/10/20 19:56	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00011	1	03/05/20 22:19	03/10/20 19:56	7440-43-9	
Chromium	ND	mg/L	0.010	0.00039	1	03/05/20 22:19	03/10/20 19:56	7440-47-3	
Cobalt	**0.00067J**	mg/L	0.0050	0.00030	1	03/05/20 22:19	03/10/20 19:56	7440-48-4	
Lead	**0.000090J**	mg/L	0.0050	0.000046	1	03/05/20 22:19	03/10/20 19:56	7439-92-1	
Lithium	**0.0025J**	mg/L	0.030	0.00078	1	03/05/20 22:19	03/10/20 19:56	7439-93-2	
Molybdenum	**0.0025J**	mg/L	0.010	0.00095	1	03/05/20 22:19	03/10/20 19:56	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	03/05/20 22:19	03/10/20 19:56	7782-49-2	
Thallium	ND	mg/L	0.0010	0.000052	1	03/05/20 22:19	03/10/20 19:56	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.00014	1	03/04/20 15:00	03/05/20 16:02	7439-97-6	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993								
Fluoride	ND	mg/L	0.30	0.050	1		03/10/20 14:11	16984-48-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: PLANT HAMMOND APP IV AP-1
Pace Project No.: 2629703

Sample: MW-5 **Lab ID: 2629703004** Collected: 03/02/20 16:21 Received: 03/03/20 12:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method:								
Field pH	**6.12**	Std. Units			1		03/16/20 16:27		
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00027	1	03/05/20 22:19	03/10/20 20:01	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00035	1	03/05/20 22:19	03/10/20 20:01	7440-38-2	
Barium	**0.049**	mg/L	0.010	0.00049	1	03/05/20 22:19	03/10/20 20:01	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000074	1	03/05/20 22:19	03/10/20 20:01	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00011	1	03/05/20 22:19	03/10/20 20:01	7440-43-9	
Chromium	**0.0042J**	mg/L	0.010	0.00039	1	03/05/20 22:19	03/10/20 20:01	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00030	1	03/05/20 22:19	03/10/20 20:01	7440-48-4	
Lead	**0.000047J**	mg/L	0.0050	0.000046	1	03/05/20 22:19	03/10/20 20:01	7439-92-1	
Lithium	ND	mg/L	0.030	0.00078	1	03/05/20 22:19	03/10/20 20:01	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00095	1	03/05/20 22:19	03/10/20 20:01	7439-98-7	
Selenium	**0.0041J**	mg/L	0.010	0.0013	1	03/05/20 22:19	03/10/20 20:01	7782-49-2	
Thallium	ND	mg/L	0.0010	0.000052	1	03/05/20 22:19	03/10/20 20:01	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.00014	1	03/10/20 08:40	03/10/20 17:10	7439-97-6	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993								
Fluoride	**0.065J**	mg/L	0.30	0.050	1		03/10/20 14:25	16984-48-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: PLANT HAMMOND APP IV AP-1
Pace Project No.: 2629703

Sample: HGWA-1 **Lab ID: 2629714001** Collected: 03/02/20 11:39 Received: 03/03/20 12:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method:								
Field pH	**7.10**	Std. Units			1		03/16/20 16:27		
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00027	1	03/05/20 22:19	03/10/20 20:07	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00035	1	03/05/20 22:19	03/10/20 20:07	7440-38-2	
Barium	**0.034**	mg/L	0.010	0.00049	1	03/05/20 22:19	03/10/20 20:07	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000074	1	03/05/20 22:19	03/10/20 20:07	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00011	1	03/05/20 22:19	03/10/20 20:07	7440-43-9	
Chromium	ND	mg/L	0.010	0.00039	1	03/05/20 22:19	03/10/20 20:07	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00030	1	03/05/20 22:19	03/10/20 20:07	7440-48-4	
Lead	**0.000048J**	mg/L	0.0050	0.000046	1	03/05/20 22:19	03/10/20 20:07	7439-92-1	
Lithium	**0.0012J**	mg/L	0.030	0.00078	1	03/05/20 22:19	03/10/20 20:07	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00095	1	03/05/20 22:19	03/10/20 20:07	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	03/05/20 22:19	03/10/20 20:07	7782-49-2	
Thallium	ND	mg/L	0.0010	0.000052	1	03/05/20 22:19	03/10/20 20:07	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.00014	1	03/10/20 08:40	03/10/20 17:19	7439-97-6	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993								
Fluoride	**0.076J**	mg/L	0.30	0.050	1		03/10/20 15:07	16984-48-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: PLANT HAMMOND APP IV AP-1
Pace Project No.: 2629703

Sample: HGWA-2 **Lab ID: 2629714002** Collected: 03/02/20 11:10 Received: 03/03/20 12:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method:								
Field pH	**5.43**	Std. Units			1		03/16/20 16:27		
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00027	1	03/05/20 22:19	03/10/20 20:13	7440-36-0	
Arsenic	**0.00043J**	mg/L	0.0050	0.00035	1	03/05/20 22:19	03/10/20 20:13	7440-38-2	
Barium	**0.11**	mg/L	0.010	0.00049	1	03/05/20 22:19	03/10/20 20:13	7440-39-3	
Beryllium	**0.00014J**	mg/L	0.0030	0.000074	1	03/05/20 22:19	03/10/20 20:13	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00011	1	03/05/20 22:19	03/10/20 20:13	7440-43-9	
Chromium	**0.00041J**	mg/L	0.010	0.00039	1	03/05/20 22:19	03/10/20 20:13	7440-47-3	
Cobalt	**0.019**	mg/L	0.0050	0.00030	1	03/05/20 22:19	03/10/20 20:13	7440-48-4	
Lead	**0.000095J**	mg/L	0.0050	0.000046	1	03/05/20 22:19	03/10/20 20:13	7439-92-1	
Lithium	**0.0017J**	mg/L	0.030	0.00078	1	03/05/20 22:19	03/10/20 20:13	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00095	1	03/05/20 22:19	03/10/20 20:13	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	03/05/20 22:19	03/10/20 20:13	7782-49-2	
Thallium	ND	mg/L	0.0010	0.000052	1	03/05/20 22:19	03/10/20 20:13	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.00014	1	03/10/20 08:40	03/10/20 17:22	7439-97-6	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993								
Fluoride	ND	mg/L	0.30	0.050	1		03/10/20 15:21	16984-48-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: PLANT HAMMOND APP IV AP-1
Pace Project No.: 2629703

Sample: HGWA-3 **Lab ID: 2629714003** Collected: 03/02/20 13:15 Received: 03/03/20 12:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method:								
Field pH	**7.12**	Std. Units			1		03/16/20 16:27		
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00027	1	03/05/20 22:19	03/10/20 20:18	7440-36-0	
Arsenic	**0.00040J**	mg/L	0.0050	0.00035	1	03/05/20 22:19	03/10/20 20:18	7440-38-2	
Barium	**0.14**	mg/L	0.010	0.00049	1	03/05/20 22:19	03/10/20 20:18	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000074	1	03/05/20 22:19	03/10/20 20:18	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00011	1	03/05/20 22:19	03/10/20 20:18	7440-43-9	
Chromium	ND	mg/L	0.010	0.00039	1	03/05/20 22:19	03/10/20 20:18	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00030	1	03/05/20 22:19	03/10/20 20:18	7440-48-4	
Lead	ND	mg/L	0.0050	0.000046	1	03/05/20 22:19	03/10/20 20:18	7439-92-1	
Lithium	**0.0037J**	mg/L	0.030	0.00078	1	03/05/20 22:19	03/10/20 20:18	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00095	1	03/05/20 22:19	03/10/20 20:18	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	03/05/20 22:19	03/10/20 20:18	7782-49-2	
Thallium	ND	mg/L	0.0010	0.000052	1	03/05/20 22:19	03/10/20 20:18	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.00014	1	03/10/20 08:40	03/10/20 17:39	7439-97-6	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993								
Fluoride	ND	mg/L	0.30	0.050	1		03/10/20 15:35	16984-48-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: PLANT HAMMOND APP IV AP-1
Pace Project No.: 2629703

Sample: MW-6 **Lab ID: 2629703008** Collected: 03/03/20 10:12 Received: 03/04/20 10:05 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method:								
Field pH	**6.78**	Std. Units			1		03/16/20 16:27		
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00027	1	03/10/20 14:34	03/11/20 16:05	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00035	1	03/10/20 14:34	03/11/20 16:05	7440-38-2	
Barium	**0.090**	mg/L	0.010	0.00049	1	03/10/20 14:34	03/11/20 16:05	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000074	1	03/10/20 14:34	03/11/20 16:05	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00011	1	03/10/20 14:34	03/11/20 16:05	7440-43-9	
Chromium	**0.00044J**	mg/L	0.010	0.00039	1	03/10/20 14:34	03/11/20 16:05	7440-47-3	
Cobalt	**0.00094J**	mg/L	0.0050	0.00030	1	03/10/20 14:34	03/11/20 16:05	7440-48-4	
Lead	**0.00013J**	mg/L	0.0050	0.000046	1	03/10/20 14:34	03/11/20 16:05	7439-92-1	
Lithium	ND	mg/L	0.030	0.00078	1	03/10/20 14:34	03/11/20 16:05	7439-93-2	
Molybdenum	**0.0022J**	mg/L	0.010	0.00095	1	03/10/20 14:34	03/11/20 16:05	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	03/10/20 14:34	03/11/20 16:05	7782-49-2	
Thallium	**0.000082J**	mg/L	0.0010	0.000052	1	03/10/20 14:34	03/11/20 16:05	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.00014	1	03/10/20 08:40	03/10/20 17:42	7439-97-6	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993								
Fluoride	**0.062J**	mg/L	0.30	0.050	1		03/11/20 01:44	16984-48-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: PLANT HAMMOND APP IV AP-1
Pace Project No.: 2629703

Sample: MW-7 **Lab ID: 2629703009** Collected: 03/03/20 13:10 Received: 03/04/20 10:05 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method:								
Field pH	**6.10**	Std. Units			1		03/16/20 16:27		
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	**0.0013J**	mg/L	0.0030	0.00027	1	03/10/20 14:34	03/11/20 16:28	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00035	1	03/10/20 14:34	03/11/20 16:28	7440-38-2	
Barium	**0.043**	mg/L	0.010	0.00049	1	03/10/20 14:34	03/11/20 16:28	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000074	1	03/10/20 14:34	03/11/20 16:28	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00011	1	03/10/20 14:34	03/11/20 16:28	7440-43-9	
Chromium	**0.0015J**	mg/L	0.010	0.00039	1	03/10/20 14:34	03/11/20 16:28	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00030	1	03/10/20 14:34	03/11/20 16:28	7440-48-4	
Lead	**0.000062J**	mg/L	0.0050	0.000046	1	03/10/20 14:34	03/11/20 16:28	7439-92-1	
Lithium	ND	mg/L	0.030	0.00078	1	03/10/20 14:34	03/11/20 16:28	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00095	1	03/10/20 14:34	03/11/20 16:28	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	03/10/20 14:34	03/11/20 16:28	7782-49-2	
Thallium	ND	mg/L	0.0010	0.000052	1	03/10/20 14:34	03/11/20 16:28	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.00014	1	03/10/20 08:40	03/10/20 17:44	7439-97-6	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993								
Fluoride	ND	mg/L	0.30	0.050	1		03/11/20 01:59	16984-48-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: PLANT HAMMOND APP IV AP-1
Pace Project No.: 2629703

Sample: HGWC-10 **Lab ID: 2629703010** Collected: 03/03/20 13:20 Received: 03/04/20 10:05 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method:								
Field pH	**6.67**	Std. Units			1		03/16/20 16:27		
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00027	1	03/10/20 14:34	03/11/20 16:34	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00035	1	03/10/20 14:34	03/11/20 16:34	7440-38-2	
Barium	**0.048**	mg/L	0.010	0.00049	1	03/10/20 14:34	03/11/20 16:34	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000074	1	03/10/20 14:34	03/11/20 16:34	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00011	1	03/10/20 14:34	03/11/20 16:34	7440-43-9	
Chromium	ND	mg/L	0.010	0.00039	1	03/10/20 14:34	03/11/20 16:34	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00030	1	03/10/20 14:34	03/11/20 16:34	7440-48-4	
Lead	ND	mg/L	0.0050	0.000046	1	03/10/20 14:34	03/11/20 16:34	7439-92-1	
Lithium	ND	mg/L	0.030	0.00078	1	03/10/20 14:34	03/11/20 16:34	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00095	1	03/10/20 14:34	03/11/20 16:34	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	03/10/20 14:34	03/11/20 16:34	7782-49-2	
Thallium	ND	mg/L	0.0010	0.000052	1	03/10/20 14:34	03/11/20 16:34	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.00014	1	03/10/20 08:40	03/10/20 17:47	7439-97-6	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993								
Fluoride	**0.11J**	mg/L	0.30	0.050	1		03/11/20 02:13	16984-48-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: PLANT HAMMOND APP IV AP-1
Pace Project No.: 2629703

Sample: HGWC-11 **Lab ID: 2629703011** Collected: 03/03/20 13:30 Received: 03/04/20 10:05 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method:								
Field pH	**5.95**	Std. Units			1		03/16/20 16:27		
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00027	1	03/10/20 14:34	03/11/20 16:40	7440-36-0	
Arsenic	**0.0022J**	mg/L	0.0050	0.00035	1	03/10/20 14:34	03/11/20 16:40	7440-38-2	
Barium	**0.022**	mg/L	0.010	0.00049	1	03/10/20 14:34	03/11/20 16:40	7440-39-3	
Beryllium	**0.00012J**	mg/L	0.0030	0.000074	1	03/10/20 14:34	03/11/20 16:40	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00011	1	03/10/20 14:34	03/11/20 16:40	7440-43-9	
Chromium	**0.00061J**	mg/L	0.010	0.00039	1	03/10/20 14:34	03/11/20 16:40	7440-47-3	
Cobalt	**0.00087J**	mg/L	0.0050	0.00030	1	03/10/20 14:34	03/11/20 16:40	7440-48-4	
Lead	**0.00021J**	mg/L	0.0050	0.000046	1	03/10/20 14:34	03/11/20 16:40	7439-92-1	
Lithium	ND	mg/L	0.030	0.00078	1	03/10/20 14:34	03/11/20 16:40	7439-93-2	
Molybdenum	**0.011**	mg/L	0.010	0.00095	1	03/10/20 14:34	03/11/20 16:40	7439-98-7	
Selenium	**0.016**	mg/L	0.010	0.0013	1	03/10/20 14:34	03/12/20 16:52	7782-49-2	
Thallium	ND	mg/L	0.0010	0.000052	1	03/10/20 14:34	03/11/20 16:40	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.00014	1	03/10/20 08:40	03/10/20 17:49	7439-97-6	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993								
Fluoride	**0.24J**	mg/L	0.30	0.050	1		03/11/20 02:57	16984-48-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: PLANT HAMMOND APP IV AP-1
Pace Project No.: 2629703

Sample: HGWC-12 **Lab ID: 2629703012** Collected: 03/03/20 14:15 Received: 03/04/20 10:05 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method:								
Field pH	**6.95**	Std. Units			1		03/16/20 16:27		
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00027	1	03/10/20 14:34	03/11/20 16:45	7440-36-0	
Arsenic	**0.0023J**	mg/L	0.0050	0.00035	1	03/10/20 14:34	03/11/20 16:45	7440-38-2	
Barium	**0.092**	mg/L	0.010	0.00049	1	03/10/20 14:34	03/11/20 16:45	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000074	1	03/10/20 14:34	03/11/20 16:45	7440-41-7	
Cadmium	**0.00015J**	mg/L	0.0025	0.00011	1	03/10/20 14:34	03/11/20 16:45	7440-43-9	
Chromium	ND	mg/L	0.010	0.00039	1	03/10/20 14:34	03/11/20 16:45	7440-47-3	
Cobalt	**0.0013J**	mg/L	0.0050	0.00030	1	03/10/20 14:34	03/11/20 16:45	7440-48-4	
Lead	**0.000056J**	mg/L	0.0050	0.000046	1	03/10/20 14:34	03/11/20 16:45	7439-92-1	
Lithium	**0.0063J**	mg/L	0.030	0.00078	1	03/10/20 14:34	03/11/20 16:45	7439-93-2	
Molybdenum	**0.045**	mg/L	0.010	0.00095	1	03/10/20 14:34	03/11/20 16:45	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	03/10/20 14:34	03/11/20 16:45	7782-49-2	
Thallium	**0.000066J**	mg/L	0.0010	0.000052	1	03/10/20 14:34	03/11/20 16:45	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.00014	1	03/10/20 08:40	03/10/20 17:51	7439-97-6	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993								
Fluoride	**0.21J**	mg/L	0.30	0.050	1		03/11/20 03:12	16984-48-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: PLANT HAMMOND APP IV AP-1
Pace Project No.: 2629703

Sample: MW-25D **Lab ID: 2629703013** Collected: 03/03/20 15:15 Received: 03/04/20 10:05 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method:								
Field pH	**7.59**	Std. Units			1		03/16/20 16:27		
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00027	1	03/10/20 14:34	03/11/20 17:13	7440-36-0	
Arsenic	**0.0010J**	mg/L	0.0050	0.00035	1	03/10/20 14:34	03/11/20 17:13	7440-38-2	
Barium	**0.42**	mg/L	0.010	0.00049	1	03/10/20 14:34	03/11/20 17:13	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000074	1	03/10/20 14:34	03/11/20 17:13	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00011	1	03/10/20 14:34	03/11/20 17:13	7440-43-9	
Chromium	ND	mg/L	0.010	0.00039	1	03/10/20 14:34	03/11/20 17:13	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00030	1	03/10/20 14:34	03/11/20 17:13	7440-48-4	
Lead	ND	mg/L	0.0050	0.000046	1	03/10/20 14:34	03/11/20 17:13	7439-92-1	
Lithium	**0.050**	mg/L	0.030	0.00078	1	03/10/20 14:34	03/11/20 17:13	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00095	1	03/10/20 14:34	03/11/20 17:13	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	03/10/20 14:34	03/11/20 17:13	7782-49-2	
Thallium	ND	mg/L	0.0010	0.000052	1	03/10/20 14:34	03/11/20 17:13	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.00014	1	03/10/20 08:40	03/10/20 17:54	7439-97-6	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993								
Fluoride	**1.4**	mg/L	0.30	0.050	1		03/10/20 16:40	16984-48-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: PLANT HAMMOND APP IV AP-1
Pace Project No.: 2629703

Sample: HGWC-8 **Lab ID: 2629703014** Collected: 03/03/20 16:46 Received: 03/04/20 10:05 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method:								
Field pH	**7.06**	Std. Units			1		03/16/20 16:27		
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00027	1	03/10/20 14:34	03/11/20 17:18	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00035	1	03/10/20 14:34	03/11/20 17:18	7440-38-2	
Barium	**0.052**	mg/L	0.010	0.00049	1	03/10/20 14:34	03/11/20 17:18	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000074	1	03/10/20 14:34	03/11/20 17:18	7440-41-7	
Cadmium	**0.00017J**	mg/L	0.0025	0.00011	1	03/10/20 14:34	03/11/20 17:18	7440-43-9	
Chromium	**0.00070J**	mg/L	0.010	0.00039	1	03/10/20 14:34	03/11/20 17:18	7440-47-3	
Cobalt	**0.0020J**	mg/L	0.0050	0.00030	1	03/10/20 14:34	03/11/20 17:18	7440-48-4	
Lead	**0.00013J**	mg/L	0.0050	0.000046	1	03/10/20 14:34	03/11/20 17:18	7439-92-1	
Lithium	**0.0028J**	mg/L	0.030	0.00078	1	03/10/20 14:34	03/11/20 17:18	7439-93-2	
Molybdenum	**0.44**	mg/L	0.010	0.00095	1	03/10/20 14:34	03/11/20 17:18	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	03/10/20 14:34	03/11/20 17:18	7782-49-2	
Thallium	**0.000061J**	mg/L	0.0010	0.000052	1	03/10/20 14:34	03/11/20 17:18	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.00014	1	03/10/20 08:40	03/10/20 17:56	7439-97-6	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993								
Fluoride	**0.45**	mg/L	0.30	0.050	1		03/10/20 17:22	16984-48-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: PLANT HAMMOND APP IV AP-1
Pace Project No.: 2629703

Sample: MW-30D **Lab ID: 2629703015** Collected: 03/04/20 14:15 Received: 03/05/20 12:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method:								
Field pH	**8.12**	Std. Units			1		03/16/20 16:27		
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00027	1	03/10/20 20:52	03/11/20 21:23	7440-36-0	
Arsenic	**0.0021J**	mg/L	0.0050	0.00035	1	03/10/20 20:52	03/11/20 21:23	7440-38-2	
Barium	**0.065**	mg/L	0.010	0.00049	1	03/10/20 20:52	03/11/20 21:23	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000074	1	03/10/20 20:52	03/11/20 21:23	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00011	1	03/10/20 20:52	03/11/20 21:23	7440-43-9	
Chromium	**0.0013J**	mg/L	0.010	0.00039	1	03/10/20 20:52	03/11/20 21:23	7440-47-3	B
Cobalt	ND	mg/L	0.0050	0.00030	1	03/10/20 20:52	03/11/20 21:23	7440-48-4	
Lead	**0.00041J**	mg/L	0.0050	0.000046	1	03/10/20 20:52	03/11/20 21:23	7439-92-1	
Lithium	**0.18**	mg/L	0.030	0.00078	1	03/10/20 20:52	03/11/20 21:23	7439-93-2	
Molybdenum	**0.021**	mg/L	0.010	0.00095	1	03/10/20 20:52	03/11/20 21:23	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	03/10/20 20:52	03/11/20 21:23	7782-49-2	
Thallium	ND	mg/L	0.0010	0.000052	1	03/10/20 20:52	03/11/20 21:23	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.00014	1	03/10/20 08:40	03/10/20 19:17	7439-97-6	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993								
Fluoride	**9.4**	mg/L	1.2	0.20	4		03/11/20 07:50	16984-48-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: PLANT HAMMOND APP IV AP-1
Pace Project No.: 2629703

Sample: HGWC-7 **Lab ID: 2629703016** Collected: 03/04/20 11:50 Received: 03/05/20 12:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method:								
Field pH	**7.17**	Std. Units			1		03/16/20 16:27		
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00027	1	03/10/20 20:52	03/11/20 21:28	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00035	1	03/10/20 20:52	03/11/20 21:28	7440-38-2	
Barium	**0.068**	mg/L	0.010	0.00049	1	03/10/20 20:52	03/11/20 21:28	7440-39-3	
Beryllium	**0.000077J**	mg/L	0.0030	0.000074	1	03/10/20 20:52	03/11/20 21:28	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00011	1	03/10/20 20:52	03/11/20 21:28	7440-43-9	
Chromium	**0.0016J**	mg/L	0.010	0.00039	1	03/10/20 20:52	03/11/20 21:28	7440-47-3	B
Cobalt	**0.0011J**	mg/L	0.0050	0.00030	1	03/10/20 20:52	03/11/20 21:28	7440-48-4	
Lead	**0.00051J**	mg/L	0.0050	0.000046	1	03/10/20 20:52	03/11/20 21:28	7439-92-1	
Lithium	**0.0034J**	mg/L	0.030	0.00078	1	03/10/20 20:52	03/11/20 21:28	7439-93-2	
Molybdenum	**0.045**	mg/L	0.010	0.00095	1	03/10/20 20:52	03/11/20 21:28	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	03/10/20 20:52	03/11/20 21:28	7782-49-2	
Thallium	ND	mg/L	0.0010	0.000052	1	03/10/20 20:52	03/11/20 21:28	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.00014	1	03/10/20 08:40	03/10/20 19:19	7439-97-6	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993								
Fluoride	**0.077J**	mg/L	0.30	0.050	1		03/10/20 17:50	16984-48-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: PLANT HAMMOND APP IV AP-1
Pace Project No.: 2629703

Sample: MW-28D **Lab ID: 2629703017** Collected: 03/04/20 10:05 Received: 03/05/20 12:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method:								
Field pH	**7.55**	Std. Units			1		03/16/20 16:27		
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00027	1	03/11/20 19:35	03/12/20 20:06	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00035	1	03/11/20 19:35	03/12/20 20:06	7440-38-2	
Barium	**0.77**	mg/L	0.010	0.00049	1	03/11/20 19:35	03/12/20 20:06	7440-39-3	M1
Beryllium	**0.00014J**	mg/L	0.0030	0.000074	1	03/11/20 19:35	03/12/20 20:06	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00011	1	03/11/20 19:35	03/12/20 20:06	7440-43-9	
Chromium	**0.0027J**	mg/L	0.010	0.00039	1	03/11/20 19:35	03/12/20 20:06	7440-47-3	
Cobalt	**0.00093J**	mg/L	0.0050	0.00030	1	03/11/20 19:35	03/12/20 20:06	7440-48-4	
Lead	**0.0010J**	mg/L	0.0050	0.000046	1	03/11/20 19:35	03/12/20 20:06	7439-92-1	
Lithium	**0.015J**	mg/L	0.030	0.00078	1	03/11/20 19:35	03/12/20 20:06	7439-93-2	
Molybdenum	**0.0090J**	mg/L	0.010	0.00095	1	03/11/20 19:35	03/12/20 20:06	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	03/11/20 19:35	03/12/20 20:06	7782-49-2	
Thallium	**0.000092J**	mg/L	0.0010	0.000052	1	03/11/20 19:35	03/12/20 20:06	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.00014	1	03/10/20 08:40	03/10/20 19:22	7439-97-6	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993								
Fluoride	**0.26J**	mg/L	0.30	0.050	1		03/10/20 18:04	16984-48-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
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(770)734-4200

ANALYTICAL RESULTS

Project: PLANT HAMMOND APP IV AP-1
Pace Project No.: 2629703

Sample: MW-24D **Lab ID: 2629703018** Collected: 03/04/20 12:27 Received: 03/05/20 12:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method:								
Field pH	**7.47**	Std. Units			1		03/16/20 16:27		
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	**0.0017J**	mg/L	0.0030	0.00027	1	03/11/20 19:35	03/12/20 20:28	7440-36-0	B
Arsenic	ND	mg/L	0.0050	0.00035	1	03/11/20 19:35	03/12/20 20:28	7440-38-2	
Barium	**0.081**	mg/L	0.010	0.00049	1	03/11/20 19:35	03/12/20 20:28	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000074	1	03/11/20 19:35	03/12/20 20:28	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00011	1	03/11/20 19:35	03/12/20 20:28	7440-43-9	
Chromium	ND	mg/L	0.010	0.00039	1	03/11/20 19:35	03/12/20 20:28	7440-47-3	
Cobalt	**0.00056J**	mg/L	0.0050	0.00030	1	03/11/20 19:35	03/12/20 20:28	7440-48-4	
Lead	**0.00019J**	mg/L	0.0050	0.000046	1	03/11/20 19:35	03/12/20 20:28	7439-92-1	
Lithium	**0.0026J**	mg/L	0.030	0.00078	1	03/11/20 19:35	03/12/20 20:28	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00095	1	03/11/20 19:35	03/12/20 20:28	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	03/11/20 19:35	03/12/20 20:28	7782-49-2	
Thallium	ND	mg/L	0.0010	0.000052	1	03/11/20 19:35	03/12/20 20:28	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.00014	1	03/10/20 08:40	03/10/20 19:24	7439-97-6	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993								
Fluoride	**0.051J**	mg/L	0.30	0.050	1		03/10/20 18:18	16984-48-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: PLANT HAMMOND APP IV AP-1
Pace Project No.: 2629703

Sample: FD-02 **Lab ID: 2629703019** Collected: 03/04/20 12:00 Received: 03/05/20 12:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	**0.00084J**	mg/L	0.0030	0.00027	1	03/11/20 19:35	03/12/20 20:34	7440-36-0	B
Arsenic	**0.49**	mg/L	0.0050	0.00035	1	03/11/20 19:35	03/12/20 20:34	7440-38-2	
Barium	**0.096**	mg/L	0.010	0.00049	1	03/11/20 19:35	03/12/20 20:34	7440-39-3	
Beryllium	**0.000086J**	mg/L	0.0030	0.000074	1	03/11/20 19:35	03/12/20 20:34	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00011	1	03/11/20 19:35	03/12/20 20:34	7440-43-9	
Chromium	**0.00045J**	mg/L	0.010	0.00039	1	03/11/20 19:35	03/12/20 20:34	7440-47-3	
Cobalt	**0.0063**	mg/L	0.0050	0.00030	1	03/11/20 19:35	03/12/20 20:34	7440-48-4	
Lead	**0.00012J**	mg/L	0.0050	0.000046	1	03/11/20 19:35	03/12/20 20:34	7439-92-1	
Lithium	**0.039**	mg/L	0.030	0.00078	1	03/11/20 19:35	03/12/20 20:34	7439-93-2	
Molybdenum	**0.029**	mg/L	0.010	0.00095	1	03/11/20 19:35	03/12/20 20:34	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	03/11/20 19:35	03/12/20 20:34	7782-49-2	
Thallium	**0.00053J**	mg/L	0.0010	0.000052	1	03/11/20 19:35	03/12/20 20:34	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.00014	1	03/10/20 08:40	03/10/20 19:26	7439-97-6	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993								
Fluoride	**0.37**	mg/L	0.30	0.050	1		03/10/20 19:14	16984-48-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: PLANT HAMMOND APP IV AP-1
Pace Project No.: 2629703

Sample: HGWC-13 **Lab ID: 2629703020** Collected: 03/04/20 13:25 Received: 03/05/20 12:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method:								
Field pH	**7.16**	Std. Units			1		03/16/20 16:27		
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	**0.00061J**	mg/L	0.0030	0.00027	1	03/11/20 19:35	03/12/20 20:40	7440-36-0	B
Arsenic	**0.52**	mg/L	0.0050	0.00035	1	03/11/20 19:35	03/12/20 20:40	7440-38-2	
Barium	**0.10**	mg/L	0.010	0.00049	1	03/11/20 19:35	03/12/20 20:40	7440-39-3	
Beryllium	**0.000093J**	mg/L	0.0030	0.000074	1	03/11/20 19:35	03/12/20 20:40	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00011	1	03/11/20 19:35	03/12/20 20:40	7440-43-9	
Chromium	ND	mg/L	0.010	0.00039	1	03/11/20 19:35	03/12/20 20:40	7440-47-3	
Cobalt	**0.0066**	mg/L	0.0050	0.00030	1	03/11/20 19:35	03/12/20 20:40	7440-48-4	
Lead	**0.00014J**	mg/L	0.0050	0.000046	1	03/11/20 19:35	03/12/20 20:40	7439-92-1	
Lithium	**0.041**	mg/L	0.030	0.00078	1	03/11/20 19:35	03/12/20 20:40	7439-93-2	
Molybdenum	**0.030**	mg/L	0.010	0.00095	1	03/11/20 19:35	03/12/20 20:40	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	03/11/20 19:35	03/12/20 20:40	7782-49-2	
Thallium	**0.00056J**	mg/L	0.0010	0.000052	1	03/11/20 19:35	03/12/20 20:40	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.00014	1	03/11/20 09:30	03/12/20 18:20	7439-97-6	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993								
Fluoride	**0.37**	mg/L	0.30	0.050	1		03/10/20 19:28	16984-48-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: PLANT HAMMOND APP IV AP-1
Pace Project No.: 2629703

Sample: MW-19 **Lab ID: 2629703021** Collected: 03/04/20 17:55 Received: 03/05/20 12:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method:								
Field pH	**6.29**	Std. Units			1		03/16/20 16:27		
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00027	1	03/11/20 19:35	03/12/20 20:46	7440-36-0	
Arsenic	**0.00045J**	mg/L	0.0050	0.00035	1	03/11/20 19:35	03/12/20 20:46	7440-38-2	
Barium	**0.069**	mg/L	0.010	0.00049	1	03/11/20 19:35	03/12/20 20:46	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000074	1	03/11/20 19:35	03/12/20 20:46	7440-41-7	
Cadmium	**0.00026J**	mg/L	0.0025	0.00011	1	03/11/20 19:35	03/12/20 20:46	7440-43-9	
Chromium	**0.00066J**	mg/L	0.010	0.00039	1	03/11/20 19:35	03/12/20 20:46	7440-47-3	
Cobalt	**0.048**	mg/L	0.0050	0.00030	1	03/11/20 19:35	03/12/20 20:46	7440-48-4	
Lead	**0.00011J**	mg/L	0.0050	0.000046	1	03/11/20 19:35	03/12/20 20:46	7439-92-1	
Lithium	**0.010J**	mg/L	0.030	0.00078	1	03/11/20 19:35	03/12/20 20:46	7439-93-2	
Molybdenum	**0.032**	mg/L	0.010	0.00095	1	03/11/20 19:35	03/12/20 20:46	7439-98-7	
Selenium	**0.0044J**	mg/L	0.010	0.0013	1	03/11/20 19:35	03/12/20 20:46	7782-49-2	
Thallium	**0.00026J**	mg/L	0.0010	0.000052	1	03/11/20 19:35	03/12/20 20:46	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.00014	1	03/11/20 09:30	03/12/20 18:34	7439-97-6	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993								
Fluoride	**0.096J**	mg/L	0.30	0.050	1		03/10/20 19:42	16984-48-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: PLANT HAMMOND APP IV AP-1
Pace Project No.: 2629703

Sample: HGWC-9 **Lab ID: 2629703022** Collected: 03/04/20 10:26 Received: 03/05/20 12:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method:								
Field pH	**6.97**	Std. Units			1		03/16/20 16:27		
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	**0.00032J**	mg/L	0.0030	0.00027	1	03/11/20 19:35	03/12/20 21:03	7440-36-0	B
Arsenic	ND	mg/L	0.0050	0.00035	1	03/11/20 19:35	03/12/20 21:03	7440-38-2	
Barium	**0.11**	mg/L	0.010	0.00049	1	03/11/20 19:35	03/12/20 21:03	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000074	1	03/11/20 19:35	03/12/20 21:03	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00011	1	03/11/20 19:35	03/12/20 21:03	7440-43-9	
Chromium	ND	mg/L	0.010	0.00039	1	03/11/20 19:35	03/12/20 21:03	7440-47-3	
Cobalt	**0.00053J**	mg/L	0.0050	0.00030	1	03/11/20 19:35	03/12/20 21:03	7440-48-4	
Lead	**0.000084J**	mg/L	0.0050	0.000046	1	03/11/20 19:35	03/12/20 21:03	7439-92-1	
Lithium	**0.0040J**	mg/L	0.030	0.00078	1	03/11/20 19:35	03/12/20 21:03	7439-93-2	
Molybdenum	**0.031**	mg/L	0.010	0.00095	1	03/11/20 19:35	03/12/20 21:03	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	03/11/20 19:35	03/12/20 21:03	7782-49-2	
Thallium	ND	mg/L	0.0010	0.000052	1	03/11/20 19:35	03/12/20 21:03	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.00014	1	03/11/20 09:30	03/12/20 18:37	7439-97-6	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993								
Fluoride	**0.080J**	mg/L	0.30	0.050	1		03/10/20 19:56	16984-48-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: PLANT HAMMOND APP IV AP-1
Pace Project No.: 2629703

Sample: MW-26D **Lab ID: 2629703023** Collected: 03/04/20 13:41 Received: 03/05/20 12:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method:								
Field pH	**7.14**	Std. Units			1		03/16/20 16:27		
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	**0.0020J**	mg/L	0.0030	0.00027	1	03/11/20 19:35	03/12/20 21:09	7440-36-0	B
Arsenic	**0.00060J**	mg/L	0.0050	0.00035	1	03/11/20 19:35	03/12/20 21:09	7440-38-2	
Barium	**0.17**	mg/L	0.010	0.00049	1	03/11/20 19:35	03/12/20 21:09	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000074	1	03/11/20 19:35	03/12/20 21:09	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00011	1	03/11/20 19:35	03/12/20 21:09	7440-43-9	
Chromium	**0.0028J**	mg/L	0.010	0.00039	1	03/11/20 19:35	03/12/20 21:09	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00030	1	03/11/20 19:35	03/12/20 21:09	7440-48-4	
Lead	ND	mg/L	0.0050	0.000046	1	03/11/20 19:35	03/12/20 21:09	7439-92-1	
Lithium	**0.030J**	mg/L	0.030	0.00078	1	03/11/20 19:35	03/12/20 21:09	7439-93-2	
Molybdenum	**0.0074J**	mg/L	0.010	0.00095	1	03/11/20 19:35	03/12/20 21:09	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	03/11/20 19:35	03/12/20 21:09	7782-49-2	
Thallium	ND	mg/L	0.0010	0.000052	1	03/11/20 19:35	03/12/20 21:09	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.00014	1	03/11/20 09:30	03/12/20 18:39	7439-97-6	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993								
Fluoride	**0.052J**	mg/L	0.30	0.050	1		03/10/20 20:10	16984-48-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: PLANT HAMMOND APP IV AP-1
Pace Project No.: 2629703

Sample: MW-27D **Lab ID: 2629703024** Collected: 03/04/20 16:27 Received: 03/05/20 12:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method:								
Field pH	**8.33**	Std. Units			1		03/16/20 16:27		
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	**0.00037J**	mg/L	0.0030	0.00027	1	03/11/20 19:35	03/12/20 21:14	7440-36-0	B
Arsenic	**0.00069J**	mg/L	0.0050	0.00035	1	03/11/20 19:35	03/12/20 21:14	7440-38-2	
Barium	**0.95**	mg/L	0.010	0.00049	1	03/11/20 19:35	03/12/20 21:14	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000074	1	03/11/20 19:35	03/12/20 21:14	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00011	1	03/11/20 19:35	03/12/20 21:14	7440-43-9	
Chromium	ND	mg/L	0.010	0.00039	1	03/11/20 19:35	03/12/20 21:14	7440-47-3	
Cobalt	**0.00045J**	mg/L	0.0050	0.00030	1	03/11/20 19:35	03/12/20 21:14	7440-48-4	
Lead	ND	mg/L	0.0050	0.000046	1	03/11/20 19:35	03/12/20 21:14	7439-92-1	
Lithium	**0.0047J**	mg/L	0.030	0.00078	1	03/11/20 19:35	03/12/20 21:14	7439-93-2	
Molybdenum	**0.0058J**	mg/L	0.010	0.00095	1	03/11/20 19:35	03/12/20 21:14	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	03/11/20 19:35	03/12/20 21:14	7782-49-2	
Thallium	ND	mg/L	0.0010	0.000052	1	03/11/20 19:35	03/12/20 21:14	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.00014	1	03/11/20 09:30	03/12/20 18:41	7439-97-6	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993								
Fluoride	**0.25J**	mg/L	0.30	0.050	1		03/10/20 20:52	16984-48-8	

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QUALITY CONTROL DATA

Project: PLANT HAMMOND APP IV AP-1
Pace Project No.: 2629703

QC Batch: 44210 Analysis Method: EPA 7470A
QC Batch Method: EPA 7470A Analysis Description: 7470 Mercury
Associated Lab Samples: 2629703001, 2629703002, 2629703003

METHOD BLANK: 202602 Matrix: Water
Associated Lab Samples: 2629703001, 2629703002, 2629703003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00050	0.00014	03/05/20 14:53	

LABORATORY CONTROL SAMPLE: 202603

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	0.0025	0.0026	105	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 202604 202605

Parameter	Units	2629719006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	mg/L	ND	0.0025	0.0025	0.0026	0.0026	106	106	75-125	0	20	

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: PLANT HAMMOND APP IV AP-1
Pace Project No.: 2629703

QC Batch: 44366 Analysis Method: EPA 7470A
QC Batch Method: EPA 7470A Analysis Description: 7470 Mercury
Associated Lab Samples: 2629703004, 2629703008, 2629703009, 2629703010, 2629703011, 2629703012, 2629703013, 2629703014, 2629714001, 2629714002, 2629714003

METHOD BLANK: 203475 Matrix: Water
Associated Lab Samples: 2629703004, 2629703008, 2629703009, 2629703010, 2629703011, 2629703012, 2629703013, 2629703014, 2629714001, 2629714002, 2629714003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00050	0.00014	03/10/20 17:03	

LABORATORY CONTROL SAMPLE: 203476

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: 203477 203478

Parameter	Units	2629703004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	mg/L	ND	0.0025	0.0025	0.0024	0.0024	96	97	75-125	1	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: PLANT HAMMOND APP IV AP-1
Pace Project No.: 2629703

QC Batch: 44367 Analysis Method: EPA 7470A
QC Batch Method: EPA 7470A Analysis Description: 7470 Mercury
Associated Lab Samples: 2629703015, 2629703016, 2629703017, 2629703018, 2629703019

METHOD BLANK: 203479 Matrix: Water
Associated Lab Samples: 2629703015, 2629703016, 2629703017, 2629703018, 2629703019

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00050	0.00014	03/10/20 18:17	

LABORATORY CONTROL SAMPLE: 203480

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	0.0025	0.0025	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 203481 203482

Parameter	Units	2629786001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	mg/L	ND	0.0025	0.0025	0.0024	0.0025	98	101	75-125	4	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: PLANT HAMMOND APP IV AP-1
Pace Project No.: 2629703

QC Batch: 44416 Analysis Method: EPA 7470A
QC Batch Method: EPA 7470A Analysis Description: 7470 Mercury
Associated Lab Samples: 2629703020, 2629703021, 2629703022, 2629703023, 2629703024

METHOD BLANK: 203797 Matrix: Water
Associated Lab Samples: 2629703020, 2629703021, 2629703022, 2629703023, 2629703024

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00050	0.00014	03/12/20 18:15	

LABORATORY CONTROL SAMPLE: 203798

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 203799 203800

Parameter	Units	2629703020 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	mg/L	ND	0.0025	0.0025	0.0024	0.0025	97	102	75-125	4	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: PLANT HAMMOND APP IV AP-1
Pace Project No.: 2629703

QC Batch: 44279 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020B MET
Associated Lab Samples: 2629703001, 2629703002, 2629703003, 2629703004, 2629714001, 2629714002, 2629714003

METHOD BLANK: 202988 Matrix: Water
Associated Lab Samples: 2629703001, 2629703002, 2629703003, 2629703004, 2629714001, 2629714002, 2629714003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	0.00029J	0.0030	0.00027	03/10/20 17:38	
Arsenic	mg/L	ND	0.0050	0.00035	03/10/20 17:38	
Barium	mg/L	ND	0.010	0.00049	03/10/20 17:38	
Beryllium	mg/L	ND	0.0030	0.000074	03/10/20 17:38	
Cadmium	mg/L	ND	0.0025	0.00011	03/10/20 17:38	
Chromium	mg/L	ND	0.010	0.00039	03/10/20 17:38	
Cobalt	mg/L	ND	0.0050	0.00030	03/10/20 17:38	
Lead	mg/L	ND	0.0050	0.000046	03/10/20 17:38	
Lithium	mg/L	ND	0.030	0.00078	03/10/20 17:38	
Molybdenum	mg/L	ND	0.010	0.00095	03/10/20 17:38	
Selenium	mg/L	ND	0.010	0.0013	03/10/20 17:38	
Thallium	mg/L	ND	0.0010	0.000052	03/10/20 17:38	

LABORATORY CONTROL SAMPLE: 202989

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.11	109	80-120	
Arsenic	mg/L	0.1	0.099	99	80-120	
Barium	mg/L	0.1	0.10	102	80-120	
Beryllium	mg/L	0.1	0.11	105	80-120	
Cadmium	mg/L	0.1	0.10	102	80-120	
Chromium	mg/L	0.1	0.10	103	80-120	
Cobalt	mg/L	0.1	0.10	104	80-120	
Lead	mg/L	0.1	0.098	98	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	0.098	98	80-120	
Thallium	mg/L	0.1	0.098	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 202990 202991

Parameter	Units	2629679001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	mg/L	ND	0.1	0.1	0.11	0.11	107	111	75-125	3	20	
Arsenic	mg/L	ND	0.1	0.1	0.099	0.10	99	101	75-125	2	20	
Barium	mg/L	0.035	0.1	0.1	0.14	0.15	109	110	75-125	1	20	
Beryllium	mg/L	0.000096J	0.1	0.1	0.10	0.11	104	105	75-125	2	20	
Cadmium	mg/L	0.00041J	0.1	0.1	0.10	0.11	102	105	75-125	2	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: PLANT HAMMOND APP IV AP-1
Pace Project No.: 2629703

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 202990 202991

Parameter	Units	2629679001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chromium	mg/L	0.0013J	0.1	0.1	0.11	0.11	107	108	75-125	2	20	
Cobalt	mg/L	0.00037J	0.1	0.1	0.11	0.11	105	106	75-125	1	20	
Lead	mg/L	0.000074J	0.1	0.1	0.098	0.10	98	101	75-125	3	20	
Lithium	mg/L	ND	0.1	0.1	0.11	0.11	105	106	75-125	1	20	
Molybdenum	mg/L	ND	0.1	0.1	0.10	0.11	103	105	75-125	2	20	
Selenium	mg/L	ND	0.1	0.1	0.095	0.10	95	103	75-125	8	20	
Thallium	mg/L	0.000078J	0.1	0.1	0.10	0.10	100	100	75-125	1	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: PLANT HAMMOND APP IV AP-1
Pace Project No.: 2629703

QC Batch: 44398 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020B MET
Associated Lab Samples: 2629703008, 2629703009, 2629703010, 2629703011, 2629703012, 2629703013, 2629703014

METHOD BLANK: 203664 Matrix: Water
Associated Lab Samples: 2629703008, 2629703009, 2629703010, 2629703011, 2629703012, 2629703013, 2629703014

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00027	03/11/20 15:54	
Arsenic	mg/L	ND	0.0050	0.00035	03/11/20 15:54	
Barium	mg/L	ND	0.010	0.00049	03/11/20 15:54	
Beryllium	mg/L	ND	0.0030	0.000074	03/11/20 15:54	
Cadmium	mg/L	ND	0.0025	0.00011	03/11/20 15:54	
Chromium	mg/L	ND	0.010	0.00039	03/11/20 15:54	
Cobalt	mg/L	ND	0.0050	0.00030	03/11/20 15:54	
Lead	mg/L	ND	0.0050	0.000046	03/11/20 15:54	
Lithium	mg/L	ND	0.030	0.00078	03/11/20 15:54	
Molybdenum	mg/L	ND	0.010	0.00095	03/11/20 15:54	
Selenium	mg/L	ND	0.010	0.0013	03/11/20 15:54	
Thallium	mg/L	ND	0.0010	0.000052	03/11/20 15:54	

LABORATORY CONTROL SAMPLE: 203665

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.11	110	80-120	
Arsenic	mg/L	0.1	0.099	99	80-120	
Barium	mg/L	0.1	0.10	103	80-120	
Beryllium	mg/L	0.1	0.10	101	80-120	
Cadmium	mg/L	0.1	0.10	102	80-120	
Chromium	mg/L	0.1	0.11	105	80-120	
Cobalt	mg/L	0.1	0.10	104	80-120	
Lead	mg/L	0.1	0.10	101	80-120	
Lithium	mg/L	0.1	0.10	105	80-120	
Molybdenum	mg/L	0.1	0.10	103	80-120	
Selenium	mg/L	0.1	0.10	102	80-120	
Thallium	mg/L	0.1	0.11	106	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 203666 203667

Parameter	Units	2629703008 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	mg/L	ND	0.1	0.1	0.11	0.11	107	109	75-125	2	20	
Arsenic	mg/L	ND	0.1	0.1	0.10	0.10	103	102	75-125	1	20	
Barium	mg/L	0.090	0.1	0.1	0.19	0.19	98	98	75-125	0	20	
Beryllium	mg/L	ND	0.1	0.1	0.098	0.097	98	97	75-125	1	20	
Cadmium	mg/L	ND	0.1	0.1	0.099	0.10	99	101	75-125	2	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: PLANT HAMMOND APP IV AP-1
Pace Project No.: 2629703

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 203666 203667

Parameter	Units	2629703008 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chromium	mg/L	0.00044J	0.1	0.1	0.11	0.11	107	108	75-125	0	20	
Cobalt	mg/L	0.00094J	0.1	0.1	0.10	0.10	102	104	75-125	2	20	
Lead	mg/L	0.00013J	0.1	0.1	0.095	0.096	95	96	75-125	1	20	
Lithium	mg/L	ND	0.1	0.1	0.10	0.10	101	100	75-125	0	20	
Molybdenum	mg/L	0.0022J	0.1	0.1	0.10	0.10	99	102	75-125	2	20	
Selenium	mg/L	ND	0.1	0.1	0.10	0.11	100	105	75-125	5	20	
Thallium	mg/L	0.000082J	0.1	0.1	0.10	0.10	101	101	75-125	0	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: PLANT HAMMOND APP IV AP-1
Pace Project No.: 2629703

QC Batch: 44440 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020B MET
Associated Lab Samples: 2629703015, 2629703016

METHOD BLANK: 203914 Matrix: Water
Associated Lab Samples: 2629703015, 2629703016

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00027	03/11/20 18:48	
Arsenic	mg/L	ND	0.0050	0.00035	03/11/20 18:48	
Barium	mg/L	ND	0.010	0.00049	03/11/20 18:48	
Beryllium	mg/L	ND	0.0030	0.000074	03/11/20 18:48	
Cadmium	mg/L	ND	0.0025	0.00011	03/11/20 18:48	
Chromium	mg/L	0.00054J	0.010	0.00039	03/11/20 18:48	
Cobalt	mg/L	ND	0.0050	0.00030	03/11/20 18:48	
Lead	mg/L	ND	0.0050	0.000046	03/11/20 18:48	
Lithium	mg/L	ND	0.030	0.00078	03/11/20 18:48	
Molybdenum	mg/L	ND	0.010	0.00095	03/11/20 18:48	
Selenium	mg/L	ND	0.010	0.0013	03/11/20 18:48	
Thallium	mg/L	ND	0.0010	0.000052	03/11/20 18:48	

LABORATORY CONTROL SAMPLE: 203915

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.11	112	80-120	
Arsenic	mg/L	0.1	0.098	98	80-120	
Barium	mg/L	0.1	0.10	103	80-120	
Beryllium	mg/L	0.1	0.10	103	80-120	
Cadmium	mg/L	0.1	0.10	101	80-120	
Chromium	mg/L	0.1	0.11	105	80-120	
Cobalt	mg/L	0.1	0.10	103	80-120	
Lead	mg/L	0.1	0.10	104	80-120	
Lithium	mg/L	0.1	0.11	106	80-120	
Molybdenum	mg/L	0.1	0.098	98	80-120	
Selenium	mg/L	0.1	0.10	100	80-120	
Thallium	mg/L	0.1	0.11	108	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 203916 203917

Parameter	Units	2629786001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	mg/L	ND	0.1	0.1	0.11	0.11	107	107	75-125	0	20	
Arsenic	mg/L	0.00073J	0.1	0.1	0.099	0.099	99	98	75-125	1	20	
Barium	mg/L	0.017	0.1	0.1	0.12	0.12	100	100	75-125	1	20	
Beryllium	mg/L	ND	0.1	0.1	0.10	0.10	101	104	75-125	2	20	
Cadmium	mg/L	ND	0.1	0.1	0.10	0.099	100	99	75-125	1	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: PLANT HAMMOND APP IV AP-1
Pace Project No.: 2629703

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 203916 203917

Parameter	Units	2629786001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chromium	mg/L	ND	0.1	0.1	0.10	0.10	102	103	75-125	1	20	
Cobalt	mg/L	ND	0.1	0.1	0.098	0.099	98	99	75-125	2	20	
Lead	mg/L	0.000051J	0.1	0.1	0.096	0.096	96	96	75-125	0	20	
Lithium	mg/L	ND	0.1	0.1	0.10	0.10	104	105	75-125	0	20	
Molybdenum	mg/L	0.0064J	0.1	0.1	0.10	0.10	95	96	75-125	2	20	
Selenium	mg/L	0.0053J	0.1	0.1	0.10	0.11	98	104	75-125	6	20	
Thallium	mg/L	0.00012J	0.1	0.1	0.10	0.10	103	104	75-125	1	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: PLANT HAMMOND APP IV AP-1
Pace Project No.: 2629703

QC Batch: 44486 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020B MET
Associated Lab Samples: 2629703017, 2629703018, 2629703019, 2629703020, 2629703021, 2629703022, 2629703023, 2629703024

METHOD BLANK: 204134 Matrix: Water
Associated Lab Samples: 2629703017, 2629703018, 2629703019, 2629703020, 2629703021, 2629703022, 2629703023, 2629703024

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	0.00041J	0.0030	0.00027	03/12/20 19:54	
Arsenic	mg/L	ND	0.0050	0.00035	03/12/20 19:54	
Barium	mg/L	ND	0.010	0.00049	03/12/20 19:54	
Beryllium	mg/L	ND	0.0030	0.000074	03/12/20 19:54	
Cadmium	mg/L	ND	0.0025	0.00011	03/12/20 19:54	
Chromium	mg/L	ND	0.010	0.00039	03/12/20 19:54	
Cobalt	mg/L	ND	0.0050	0.00030	03/12/20 19:54	
Lead	mg/L	ND	0.0050	0.000046	03/12/20 19:54	
Lithium	mg/L	ND	0.030	0.00078	03/12/20 19:54	
Molybdenum	mg/L	ND	0.010	0.00095	03/12/20 19:54	
Selenium	mg/L	ND	0.010	0.0013	03/12/20 19:54	
Thallium	mg/L	ND	0.0010	0.000052	03/12/20 19:54	

LABORATORY CONTROL SAMPLE: 204135

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	0.10	101	80-120	
Barium	mg/L	0.1	0.10	101	80-120	
Beryllium	mg/L	0.1	0.10	102	80-120	
Cadmium	mg/L	0.1	0.10	103	80-120	
Chromium	mg/L	0.1	0.10	101	80-120	
Cobalt	mg/L	0.1	0.10	101	80-120	
Lead	mg/L	0.1	0.10	102	80-120	
Lithium	mg/L	0.1	0.10	100	80-120	
Molybdenum	mg/L	0.1	0.11	105	80-120	
Selenium	mg/L	0.1	0.096	96	80-120	
Thallium	mg/L	0.1	0.10	102	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 204136 204137

Parameter	Units	2629703017 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	mg/L	ND	0.1	0.1	0.11	0.11	109	110	75-125	1	20	
Arsenic	mg/L	ND	0.1	0.1	0.10	0.10	103	102	75-125	1	20	
Barium	mg/L	0.77	0.1	0.1	0.88	0.91	104	136	75-125	4	20	M1
Beryllium	mg/L	0.00014J	0.1	0.1	0.094	0.095	94	95	75-125	1	20	
Cadmium	mg/L	ND	0.1	0.1	0.11	0.11	107	105	75-125	1	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: PLANT HAMMOND APP IV AP-1
Pace Project No.: 2629703

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 204136 204137

Parameter	Units	2629703017 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chromium	mg/L	0.0027J	0.1	0.1	0.11	0.11	106	103	75-125	3	20	
Cobalt	mg/L	0.00093J	0.1	0.1	0.10	0.10	102	104	75-125	2	20	
Lead	mg/L	0.0010J	0.1	0.1	0.099	0.10	98	99	75-125	1	20	
Lithium	mg/L	0.015J	0.1	0.1	0.11	0.11	94	96	75-125	2	20	
Molybdenum	mg/L	0.0090J	0.1	0.1	0.11	0.12	105	106	75-125	1	20	
Selenium	mg/L	ND	0.1	0.1	0.079	0.078	79	77	75-125	2	20	
Thallium	mg/L	0.000092J	0.1	0.1	0.099	0.10	99	100	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

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

QUALITY CONTROL DATA

Project: PLANT HAMMOND APP IV AP-1
Pace Project No.: 2629703

QC Batch: 529175 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
Associated Lab Samples: 2629703001, 2629703002, 2629703003, 2629703004, 2629714001, 2629714002, 2629714003

METHOD BLANK: 2826400 Matrix: Water
Associated Lab Samples: 2629703001, 2629703002, 2629703003, 2629703004, 2629714001, 2629714002, 2629714003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Fluoride	mg/L	ND	0.10	0.050	03/10/20 12:19	

LABORATORY CONTROL SAMPLE: 2826401

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Fluoride	mg/L	2.5	2.7	107	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2826402 2826403

Parameter	Units	92468470002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Fluoride	mg/L	ND	2.5	2.5	2.5	2.5	96	99	90-110	3	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2826404 2826405

Parameter	Units	2629679002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Fluoride	mg/L	ND	2.5	2.5	2.5	2.7	99	108	90-110	8	10	

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

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: PLANT HAMMOND APP IV AP-1
Pace Project No.: 2629703

QC Batch: 529177 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
Associated Lab Samples: 2629703008, 2629703009, 2629703010, 2629703011, 2629703012

METHOD BLANK: 2826406 Matrix: Water
Associated Lab Samples: 2629703008, 2629703009, 2629703010, 2629703011, 2629703012

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Fluoride	mg/L	ND	0.10	0.050	03/10/20 19:28	

LABORATORY CONTROL SAMPLE: 2826407

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: 2826408 2826409

Parameter	Units	92468412012 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Fluoride	mg/L	ND	2.5	2.5	3.0	2.9	119	114	90-110	4	10	M1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2826410 2826411

Parameter	Units	2629734005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Fluoride	mg/L	ND	2.5	2.5	2.6	2.7	103	105	90-110	2	10	

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

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: PLANT HAMMOND APP IV AP-1
Pace Project No.: 2629703

QC Batch: 529390 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
Associated Lab Samples: 2629703013, 2629703014, 2629703015, 2629703016, 2629703017, 2629703018, 2629703019, 2629703020, 2629703021, 2629703022, 2629703023, 2629703024

METHOD BLANK: 2827590 Matrix: Water
Associated Lab Samples: 2629703013, 2629703014, 2629703015, 2629703016, 2629703017, 2629703018, 2629703019, 2629703020, 2629703021, 2629703022, 2629703023, 2629703024

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Fluoride	mg/L	ND	0.10	0.050	03/10/20 16:12	

LABORATORY CONTROL SAMPLE: 2827591

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: 2827592 2827593

Parameter	Units	2629703013 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Fluoride	mg/L	1.4	2.5	2.5	4.0	4.0	101	102	90-110	1	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2827594 2827595

Parameter	Units	2629703023 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Fluoride	mg/L	0.052J	2.5	2.5	2.6	2.6	103	103	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

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

QUALIFIERS

Project: PLANT HAMMOND APP IV AP-1
Pace Project No.: 2629703

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.

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.

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.

LABORATORIES

PASI-A	Pace Analytical Services - Asheville
PASI-GA	Pace Analytical Services - Atlanta, GA

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.

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

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: PLANT HAMMOND APP IV AP-1
Pace Project No.: 2629703

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2629703001	**MW-20**				
2629703003	**MW-29**				
2629703004	**MW-5**				
2629714001	**HGWA-1**				
2629714002	**HGWA-2**				
2629714003	**HGWA-3**				
2629703008	**MW-6**				
2629703009	**MW-7**				
2629703010	**HGWC-10**				
2629703011	**HGWC-11**				
2629703012	**HGWC-12**				
2629703013	**MW-25D**				
2629703014	**HGWC-8**				
2629703015	**MW-30D**				
2629703016	**HGWC-7**				
2629703017	**MW-28D**				
2629703018	**MW-24D**				
2629703020	**HGWC-13**				
2629703021	**MW-19**				
2629703022	**HGWC-9**				
2629703023	**MW-26D**				
2629703024	**MW-27D**				
2629703001	**MW-20**	EPA 3005A	44279	EPA 6020B	44313
2629703002	**FB-01**	EPA 3005A	44279	EPA 6020B	44313
2629703003	**MW-29**	EPA 3005A	44279	EPA 6020B	44313
2629703004	**MW-5**	EPA 3005A	44279	EPA 6020B	44313
2629714001	**HGWA-1**	EPA 3005A	44279	EPA 6020B	44313
2629714002	**HGWA-2**	EPA 3005A	44279	EPA 6020B	44313
2629714003	**HGWA-3**	EPA 3005A	44279	EPA 6020B	44313
2629703008	**MW-6**	EPA 3005A	44398	EPA 6020B	44434
2629703009	**MW-7**	EPA 3005A	44398	EPA 6020B	44434
2629703010	**HGWC-10**	EPA 3005A	44398	EPA 6020B	44434
2629703011	**HGWC-11**	EPA 3005A	44398	EPA 6020B	44434
2629703012	**HGWC-12**	EPA 3005A	44398	EPA 6020B	44434
2629703013	**MW-25D**	EPA 3005A	44398	EPA 6020B	44434
2629703014	**HGWC-8**	EPA 3005A	44398	EPA 6020B	44434
2629703015	**MW-30D**	EPA 3005A	44440	EPA 6020B	44463
2629703016	**HGWC-7**	EPA 3005A	44440	EPA 6020B	44463
2629703017	**MW-28D**	EPA 3005A	44486	EPA 6020B	44510
2629703018	**MW-24D**	EPA 3005A	44486	EPA 6020B	44510
2629703019	**FD-02**	EPA 3005A	44486	EPA 6020B	44510
2629703020	**HGWC-13**	EPA 3005A	44486	EPA 6020B	44510
2629703021	**MW-19**	EPA 3005A	44486	EPA 6020B	44510
2629703022	**HGWC-9**	EPA 3005A	44486	EPA 6020B	44510
2629703023	**MW-26D**	EPA 3005A	44486	EPA 6020B	44510
2629703024	**MW-27D**	EPA 3005A	44486	EPA 6020B	44510

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: PLANT HAMMOND APP IV AP-1
Pace Project No.: 2629703

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2629703001	MW-20	EPA 7470A	44210	EPA 7470A	44266
2629703002	FB-01	EPA 7470A	44210	EPA 7470A	44266
2629703003	MW-29	EPA 7470A	44210	EPA 7470A	44266
2629703004	MW-5	EPA 7470A	44366	EPA 7470A	44419
2629714001	HGWA-1	EPA 7470A	44366	EPA 7470A	44419
2629714002	HGWA-2	EPA 7470A	44366	EPA 7470A	44419
2629714003	HGWA-3	EPA 7470A	44366	EPA 7470A	44419
2629703008	MW-6	EPA 7470A	44366	EPA 7470A	44419
2629703009	MW-7	EPA 7470A	44366	EPA 7470A	44419
2629703010	HGWC-10	EPA 7470A	44366	EPA 7470A	44419
2629703011	HGWC-11	EPA 7470A	44366	EPA 7470A	44419
2629703012	HGWC-12	EPA 7470A	44366	EPA 7470A	44419
2629703013	MW-25D	EPA 7470A	44366	EPA 7470A	44419
2629703014	HGWC-8	EPA 7470A	44366	EPA 7470A	44419
2629703015	MW-30D	EPA 7470A	44367	EPA 7470A	44420
2629703016	HGWC-7	EPA 7470A	44367	EPA 7470A	44420
2629703017	MW-28D	EPA 7470A	44367	EPA 7470A	44420
2629703018	MW-24D	EPA 7470A	44367	EPA 7470A	44420
2629703019	FD-02	EPA 7470A	44367	EPA 7470A	44420
2629703020	HGWC-13	EPA 7470A	44416	EPA 7470A	44475
2629703021	MW-19	EPA 7470A	44416	EPA 7470A	44475
2629703022	HGWC-9	EPA 7470A	44416	EPA 7470A	44475
2629703023	MW-26D	EPA 7470A	44416	EPA 7470A	44475
2629703024	MW-27D	EPA 7470A	44416	EPA 7470A	44475
2629703001	MW-20	EPA 300.0 Rev 2.1 1993	529175		
2629703002	FB-01	EPA 300.0 Rev 2.1 1993	529175		
2629703003	MW-29	EPA 300.0 Rev 2.1 1993	529175		
2629703004	MW-5	EPA 300.0 Rev 2.1 1993	529175		
2629714001	HGWA-1	EPA 300.0 Rev 2.1 1993	529175		
2629714002	HGWA-2	EPA 300.0 Rev 2.1 1993	529175		
2629714003	HGWA-3	EPA 300.0 Rev 2.1 1993	529175		
2629703008	MW-6	EPA 300.0 Rev 2.1 1993	529177		
2629703009	MW-7	EPA 300.0 Rev 2.1 1993	529177		
2629703010	HGWC-10	EPA 300.0 Rev 2.1 1993	529177		
2629703011	HGWC-11	EPA 300.0 Rev 2.1 1993	529177		
2629703012	HGWC-12	EPA 300.0 Rev 2.1 1993	529177		
2629703013	MW-25D	EPA 300.0 Rev 2.1 1993	529390		
2629703014	HGWC-8	EPA 300.0 Rev 2.1 1993	529390		
2629703015	MW-30D	EPA 300.0 Rev 2.1 1993	529390		
2629703016	HGWC-7	EPA 300.0 Rev 2.1 1993	529390		
2629703017	MW-28D	EPA 300.0 Rev 2.1 1993	529390		
2629703018	MW-24D	EPA 300.0 Rev 2.1 1993	529390		
2629703019	FD-02	EPA 300.0 Rev 2.1 1993	529390		
2629703020	HGWC-13	EPA 300.0 Rev 2.1 1993	529390		
2629703021	MW-19	EPA 300.0 Rev 2.1 1993	529390		
2629703022	HGWC-9	EPA 300.0 Rev 2.1 1993	529390		

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: PLANT HAMMOND APP IV AP-1
Pace Project No.: 2629703

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2629703023	**MW-26D**	EPA 300.0 Rev 2.1 1993	529390		
2629703024	**MW-27D**	EPA 300.0 Rev 2.1 1993	529390		

Sample Condition Upon Receipt

Pace Analytical

Client Name: GA Power Project #: _____

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

Tracking #: _____

Optional: Proj. Due Date: Proj. Name:

Custody Seal on Cooler/Box Present: ☐ yes ☑ no Seals intact: ☐ yes ☐ no

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

Thermometer Used 233 Type of Ice: (Wet) Blue None ☐ Samples on ice, cooling process has begun

Cooler Temperature 1.0°C Biological Tissue is Frozen: Yes No

Date and Initials of person examining contents: 3/3/20 CdH

Temp should be above freezing to 6°C

		Comments:
Chain of Custody Present:	☑Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☑Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☑Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☑Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☑Yes ☐No ☐N/A	5.
Short Hold Time Analysis (<72hr):	☐Yes ☑No ☐N/A	6.
Rush Turn Around Time Requested:	☐Yes ☑No ☐N/A	7.
Sufficient Volume:	☑Yes ☐No ☐N/A	8.
Correct Containers Used:	☑Yes ☐No ☐N/A	9.
-Pace Containers Used:	☑Yes ☐No ☐N/A	
Containers Intact:	☑Yes ☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes ☐No ☑N/A	11.
Sample Labels match COC:	☑Yes ☐No ☐N/A	12.
-Includes date/time/ID/Analysis Matrix: W		
All containers needing preservation have been checked.	☐Yes ☐No ☐N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	☐Yes ☐No ☐N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	☐Yes ☑No	Initial when completed / Lot # of added preservative
Samples checked for dechlorination:	☐Yes ☐No ☑N/A	14.
Headspace in VOA Vials (>6mm):	☐Yes ☐No ☑N/A	15.
Trip Blank Present:	☐Yes ☐No ☑N/A	16.
Trip Blank Custody Seals Present	☐Yes ☐No ☑N/A	
Pace Trip Blank Lot # (if purchased): _____		

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ **Date:** _____

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

Pace Analytical

CHAIN-OF-CUSTODY / Analytical Request Document

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

Page: 1 of 2

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 App. IV Scan Event 1
Project Number: GW6581

Section C Invoice Information:
Attention: Southern Co.
Company Name:
Address:
Pace Quote Reference:
Pace Project Manager: Kevin Herring
Pace Profile #: 2912-4

REGULATORY AGENCY
NPDES | GROUND WATER | DRINKING WATER
UST | RCRA | OTHER CCR (checked)
Site Location STATE: GA

Section D Required Client Information

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

Valid Matrix Codes: DRINKING WATER DW; WATER WT; WASTE WATER WW; PRODUCT P; SOIL/SOLID SL; OIL OL; WIPE WP; AIR AR; OTHER OT; TISSUE TS

Requested Analysis Filtered (Y/N)

Pace Project No./ Lab I.D.: 2624703

ITEM #	SAMPLE ID	MATRIX CODE	SAMPLE TYPE	COLLECTED DATE	COLLECTED TIME	COMPOSITE DATE	COMPOSITE TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	Fluoride	Metals 6010/6020*	RAD 226/228	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	MW-10	WT	G	3.2.2020	1819			18	4	1		3							X	X	X		pH=6.98
2	FB-01	WT	G	3.2.2020	1910				4	1		3							X	X	X		
3									4	1		3							X	X	X		
4									4	1		3							X	X	X		
5									4	1		3							X	X	X		
6									4	1		3							X	X	X		
7									4	1		3							X	X	X		
8									4	1		3							X	X	X		
9									4	1		3							X	X	X		
10									4	1		3							X	X	X		
11									4	1		3							X	X	X		
12									4	1		3							X	X	X		

(Lines 3–12 struck through; annotated "SL 03.02.2020")

ADDITIONAL COMMENTS
Please note dry wells, strike thorough any wells not sampled, and note when the last sample for the event has been taken.
*Metals=As,Ba,Be,Cd,Co,Cr,Hg,Li,Mo,Pb,Sb,Se,Tl

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
Shawn Lin / Geosyntec	03.02.2020	17:32	Moelia Mendez / Geosyntec	03/02/2020	17:32				
Moelia Mendez / Geosyntec	3/3/20	1220	Pace	3/3/20	12:20				
			[illegible]	3/3/20	1430	0.0	Y	N	Y

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER: Shawn Lin
SIGNATURE of SAMPLER: [signature]
DATE Signed (MM/DD/YY): 03/02/2020

*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

Pace Analytical™
www.pacelabs.com

CHAIN-OF-CUSTODY / Analytical Request Document

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

Page: 2 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 To:	SCS Contacts
Copy To:	Geosyntec Contacts
Purchase Order No.:	
Project Name:	Plant Hammond App. IV Scan Event (A7-1)
Project Number:	GW6581

Section C Invoice Information:

Attention:	Southern Co.
Company Name:	
Address:	
Pace Quote Reference:	
Pace Project Manager:	Kevin Herring
Pace Profile #:	2912-4

REGULATORY AGENCY

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

Site Location STATE: GA

Section D Required Client Information

Valid Matrix Codes: MATRIX / CODE — DRINKING WATER DW, WATER WT, WASTE WATER WW, PRODUCT P, SOIL/SOLID SL, OIL OL, WIPE WP, AIR AR, OTHER OT, TISSUE TS

Requested Analysis Filtered (Y/N): Fluoride N, Metals 6010/6020* N, RAD 226/228 N

ITEM #	SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	TIME	COMPOSITE END/GRAB DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Fluoride	Metals 6010/6020*	RAD 226/228	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D. 2624703
1	MW-29	WT	G	3/2/2020	1725	3/2/2020	1735	17	4	1		3						X	X	X	N	pH = 7.13
2									4	1		3						X	X	X		
3									4	1		3						X	X	X		
4									4	1		3						X	X	X		
5									4	1		3						X	X	X		
6									4	1		3						X	X	X		
7									4	1		3						X	X	X		
8									4	1		3						X	X	X		
9									4	1		3						X	X	X		
10									4	1		3						X	X	X		
11									4	1		3						X	X	X		
12									4	1		3						X	X	X		

CK 3/2/2020

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
Please note dry wells, strike thorugh any wells not sampled, and note when the last sample for the event has been taken.	Chad Russo	3/2/2020	1755	Marlia M / Geosyntec	3/2/2020	1755				
	Marlia Mushing / Geosyntec	3/3/20	1220	Pace	3/3/20	1220				
*Metals=As,Ba,Be,Cd,Co,Cr,Hg,Li,Mo,Pb,Sb,Se,Tl				[signature]	3/3/20	1430	1.0	Y	N	Y
							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: Chad Russo

SIGNATURE of SAMPLER: Chad Russo — DATE Signed (MM/DD/YY): 03/02/2020

*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-C-020rev.07, 15-Feb-2007

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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: 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 To:	SCS Contacts
Copy To:	Geosyntec Contacts
Purchase Order No.:	
Project Name:	Plant Hammond App. IV Scan Event (AP-1)
Project Number:	GU6581

Section C Invoice Information:

Attention:	Southern Co.
Company Name:	
Address:	
Pace Quote Reference:	
Pace Project Manager:	Kevin Herring
Pace Profile #:	2912-4

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☑ OTHER OGR—

Site Location STATE: GA

Section D Required Client Information

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

Valid Matrix Codes: MATRIX / CODE — DRINKING WATER DW; WATER WT; WASTE WATER WW; PRODUCT P; SOIL/SOLID SL; OIL OL; WIPE WP; AIR AR; OTHER OT; TISSUE TS

Requested Analysis Filtered (Y/N): Fluoride N; Metals 6010/6020* N; RAD 226/228 N

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	TIME	COMPOSITE END/GRAB DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	Fluoride	Metals 6010/6020*	RAD 226/228	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	MW-5	WT	G	3-2-20	1621	—	—		4	1		3							X	X	X		pH 6.12
2									4	1		3							X	X	X		
3									4	1		3							X	X	X		
4									4	1		3							X	X	X		
5									4	1		3							X	X	X		
6									4	1		3							X	X	X		
7									4	1		3							X	X	X		
8									4	1		3							X	X	X		
9									4	1		3							X	X	X		
10									4	1		3							X	X	X		
11									4	1		3							X	X	X		
12									4	1		3							X	X	X		

Handwritten across rows 2–12: AR 3-2-2020

Pace Project No./Lab I.D.: 2624703

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
Please note dry wells, strike thorugh any wells not sampled, and note when the last sample for the event has been taken.	[signature] / Sampler	3-2-20	1757	Moilia [signature] / Geosyntec	3/2/20	1757				
	Moilia [signature] / Geosyntec	3/3/20	1220	[signature] / Pace	3/3/20	12:20				
*Metals=As,Ba,Be,Cd,Co,Cr,Hg,Li,Mo,Pb,Sb,Se,Tl				[signature]	3/3/20	1430	1.0	Y	N	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Aaron Reeder

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 03/02/2020

*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

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CHAIN-OF-CUSTODY / Analytical Request Document

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Page: 1 of 2

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	GA Power	Report To:	SCS Contacts	Attention	Southern Co.
Address:	Atlanta, GA	Copy To:	Geosyntec Contacts	Company Name:	
				Address:	
Email To:	SCS Contacts	Purchase Order No.:		Pace Quote Reference	
Phone:	Fax:	Project Name:	Plant Hammond App. IV Scan Event	Pace Project Manager	Kevin Herring
Requested Due Date/TAT:	10 Day	Project Number:	GW6581	Pace Profile #:	2912-4

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

Site Location STATE: GA

Section D Required Client Information

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

Valid Matrix Codes: MATRIX / CODE — DRINKING WATER DW; WATER WT; WASTE WATER WW; PRODUCT P; SOIL/SOLID SL; OIL OL; WIPE WP; AIR AR; OTHER OT; TISSUE TS

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED DATE	COLLECTED TIME	COMPOSITE DATE	COMPOSITE TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	Requested Analysis Filtered (Y/N): Fluoride	Metals 6010/6020*	RAD 226/228	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	HGWA-1	WT	G	3-2-20	1139				4	1		3							X	X	X		2624703 2624714
2									4	1		3							X	X	X		pH 7.10
3									4	1		3							X	X	X		
4									4	1		3							X	X	X		
5									4	1		3							X	X	X		
6									4	1		3							X	X	X		
7									4	1		3							X	X	X		
8									4	1		3							X	X	X		
9									4	1		3							X	X	X		
10									4	1		3							X	X	X		
11									4	1		3							X	X	X		
12									4	1		3							X	X	X		

AR 3-2-2020

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
Please note dry wells, strike thorugh any wells not sampled, and note when the last sample for the event has been taken.	Sampler	3-2-20	1751	Geosyntec	3/2/20	1731	
	Geosyntec	3/3/20	1220	Pace	3/3/20	12:20	
*Metals=As,Ba,Be,Cd,Co,Cr,Hg,Li,Mo,Pb,Sb,Se,Tl					3/3/20	1470	Temp in °C: 1.0; Received on Ice (Y/N): Y; Custody Sealed Cooler (Y/N): N; Samples Intact (Y/N): Y
Include in AP-1 and AP-2							

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Aaron Reeder

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 03/02/2020

*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.

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CHAIN-OF-CUSTODY / Analytical Request Document

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Page: 2 of 2

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 App. IV Scan Event
Project Number:	GW6581

Section C Invoice Information:

Attention:	Southern Co.
Company Name:	
Address:	
Pace Quote Reference:	
Pace Project Manager:	Kevin Herring
Pace Profile #:	2912-4

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☑ OTHER ~~CCR~~

Site Location STATE: GA

Section D Required Client Information

Valid Matrix Codes: MATRIX / CODE — DRINKING WATER DW; WATER WT; WASTE WATER WW; PRODUCT P; SOIL/SOLID SL; OIL OL; WIPE WP; AIR AR; OTHER OT; TISSUE TS

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

Requested Analysis Filtered (Y/N): Fluoride N; Metals 6010/6020* N; RAD 226/228 N

ITEM #	SAMPLE ID	MATRIX CODE	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	TIME	COMPOSITE END/GRAB DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	Fluoride	Metals 6010/6020*	RAD 226/228	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	HGWA-2	WT	G	3/2/2020	1047	3/2/2020	1110	16	4	1		3							X	X	X	N	pH=5.43
2	HGWA-3	WT	G	3/2/2020	1253	3/2/2020	1315	16	4	1		3							X	X	X	N	pH=7.12
3									4	1		3							X	X	X		
4									4	1		3							X	X	X		
5									4	1		3							X	X	X		
6									4	1		3							X	X	X		
7									4	1		3							X	X	X		
8									4	1		3							X	X	X		
9									4	1		3							X	X	X		
10									4	1		3							X	X	X		
11									4	1		3							X	X	X		
12									4	1		3							X	X	X		

Pace Project No./Lab I.D.: 2624907 ~~2624714~~

CR 3/2/2020

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
Please note dry wells, strike thorugh any wells not sampled, and note when the last sample for the event has been taken.	Chad Russo	3/2/2020	1800	Malia Markey/Geosyntec	3/2/20	1800				
*Metals=As,Ba,Be,Cd,Co,Cr,Hg,Li,Mo,Pb,Sb,Se,Tl	Malia Markey/Geosyntec	3/3/20	1220	Pace	3.3.20	12:20				
Include in AP-1 and AP-2				Charles Hawkins	3/3/20	1430	1.0	Y	N	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Chad Russo

SIGNATURE of SAMPLER: Chad Russo DATE Signed (MM/DD/YY): 03/02/2020

*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

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CHAIN-OF-CUSTODY / Analytical Request Document

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Page: 1 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 To: SCS Contacts
Copy To: Geosyntec Contacts
Purchase Order No.:
Project Name: Plant Hammond App. IV Scan Event (AP-1)
Project Number: GW6581

Section C Invoice Information:
Attention: Southern Co.
Company Name:
Address:
Pace Quote Reference:
Pace Project Manager: Kevin Herring
Pace Profile #: 2912-4

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

Section D Required Client Information

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

Valid Matrix Codes — MATRIX / CODE: DRINKING WATER DW; WATER WT; WASTE WATER WW; PRODUCT P; SOIL/SOLID SL; OIL OL; WIPE WP; AIR AR; OTHER OT; TISSUE TS

Requested Analysis Filtered (Y/N): Fluoride N; Metals 6010/6020* N; RAD 226/228 N

Pace Project No./ Lab I.D.: 2624703

ITEM #	SAMPLE ID	MATRIX CODE	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START / GRAB DATE	TIME	COMPOSITE END DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Fluoride	Metals 6010/6020*	RAD 226/228	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	MV-6	WT	G	3-3-20	1012	—	—	[illegible]	4	1		3						x	x	x		PH = 6.78 Temp 19.60 008
2	MW-7	WT	G	3-3-20	131	—	—	[illegible]	4	1		3						x	x	x		PH - 6.10 Temp 17.34 009
3									4	1		3						x	x	x		
4									4	1		3						x	x	x		
5									4	1		3						x	x	x		
6									4	1		3						x	x	x		
7									4	1		3						x	x	x		
8									4	1		3						x	x	x		
9									4	1		3						x	x	x		
10									4	1		3						x	x	x		
11									4	1		3						x	x	x		
12									4	1		3						x	x	x		

AR-3-3-2020

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
Please note dry wells, strike thorugh any wells not sampled, and note when the last sample for the event has been taken.	[signature] Sampler	3-3-20	1805	Chad Russo / Geosyntec	3/3/20	1805	
	Chad Russo / Geo	3/3/20	2015	Mallia Murden / Geosyntec	3/3/20	2015	
*Metals=As,Ba,Be,Cd,Co,Cr,Hg,Li,Mo,Pb,Sb,Se,Tl	Mallia Murden / Geosyntec	3/4/2020	1005	[signature] / Pace	3/4/20	1005	
	[signature] / Pace	3/4/20	15:16				

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER: Aaron Reeder
SIGNATURE of SAMPLER: [signature]
DATE Signed (MM/DD/YY): 03/03/2020

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

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Page: 2 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 To: SCS Contacts
Copy To: Geosyntec Contacts
Purchase Order No.:
Project Name: Plant Hammond App. IV Scan Event (AP-1)
Project Number: 6 W658

Section C Invoice Information:

Attention: Southern Co.
Company Name:
Address:
Pace Quote Reference:
Pace Project Manager: Kevin Herring
Pace Profile #: 2912-4

REGULATORY AGENCY

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

Site Location STATE: GA

Section D Required Client Information

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

Valid Matrix Codes

MATRIX	CODE
DRINKING WATER	DW
WATER	WT
WASTE WATER	WW
PRODUCT	P
SOIL/SOLID	SL
OIL	OL
WIPE	WP
AIR	AR
OTHER	OT
TISSUE	TS

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED DATE	COLLECTED TIME	COMPOSITE DATE	COMPOSITE TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	Fluoride	Metals 6010/6020*	RAD 226/228	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	MW-10	WT	G	3/3	12:20			17	4	1		3						Y	X	X	X		MW-10 pH=6.65 010
2	MW-11	WT	G	3/3	13:30			18	4	1		3						Y	X	X	X		MW-11 pH=5.95 011
3	MW-12	WT	G	3/3	14:55			19	4	1		3						Y	X	X	X		MW-12 pH=6.9 012
4	MW-20	WT	G	3/3	15:15			14	4	1		3						Y	X	X	X		MW-20 pH=7.55 013
5									4	1		3						Y	X	X	X		
6									4	1		3						Y	X	X	X		
7									4	1		3						Y	X	X	X		
8									4	1		3						Y	X	X	X		
9									4	1		3						Y	X	X	X		
10									4	1		3						Y	X	X	X		
11									4	1		3						Y	X	X	X		
12									4	1		3						Y	X	X	X		

Requested Analysis Filtered (Y/N)

Pace Project No./ Lab I.D. 26249203

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
Please note dry wells, strike thorugh any wells not sampled, and note when the last sample for the event has been taken.	Brad Rudd / GEO	3/3/20	1900	Brad Rudd / GEO	3/3/20	1900	
	Marlia Mumm / Geosyntec	3/3/20	2015	Marlia Mumm / Geosyntec	3/3/20	2015	
*Metals=As,Ba,Be,Cd,Co,Cr,Hg,Li,Mo,Pb,Sb,Se,Tl	Romero Dirk / Pace	3/4/20		Romero Dirk / Pace	3/4/20	1003	
	Romero Dirk / Pace	3/4/20	1516				

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Taylor Floyd
SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 3/3/20

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

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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 App. IV Scan Event (AP-1)
Project Number:	GW6581

Section C Invoice Information:

Attention:	Southern Co.
Company Name:	
Address:	
Pace Quote Reference:	
Pace Project Manager:	Kevin Herring
Pace Profile #:	2912-4

Page: of

REGULATORY AGENCY

- ☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
- ☐ UST ☐ RCRA ☑ OTHER CCR

Site Location STATE: GA

Section D Required Client Information

Valid Matrix Codes — MATRIX / CODE: DRINKING WATER DW; WATER WT; WASTE WATER WW; PRODUCT P; SOIL/SOLID SL; OIL OL; WIPE WP; AIR AR; OTHER OT; TISSUE TS

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

Requested Analysis Filtered (Y/N): Fluoride N; Metals 6010/6020* N; RAD 226/228 N

ITEM #	SAMPLE ID	MATRIX CODE	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	TIME	COMPOSITE END/GRAB DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test	Fluoride	Metals 6010/6020*	RAD 226/228	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D. 2624703
1	NGWC-8	GW	G	3/3/20	1617	3/3/20	1646	19	4	1		3							X	X	X	N	pH 7.06 014
2									4	1		3							X	X	X	N	
3									4	1		3							X	X	X		
4									4	1		3							X	X	X		
5									4	1		3							X	X	X		
6									4	1		3							X	X	X		
7									4	1		3							X	X	X		
8									4	1		3							X	X	X		
9									4	1		3							X	X	X		
10									4	1		3							X	X	X		
11									4	1		3							X	X	X		
12									4	1		3							X	X	X		

(CR) 3/3/2020

ADDITIONAL COMMENTS

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

*Metals=As,Ba,Be,Cd,Co,Cr,Hg,Li,Mo,Pb,Sb,Se,Tl

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
Chad Russo / GEO	3/3/20	2015	Mulia Munken / Geosyntec	3/3/20	2015
Mulia Munken / Geosyntec	3/4/2020	1005	Tomeka Hicks / Pace	3/4/20	1005
Tomeka Hicks / Pace	3/4/20	1516			

SAMPLE CONDITIONS

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: Chad Russo

SIGNATURE of SAMPLER: Chad Russo

DATE Signed (MM/DD/YY): 03/03/2020

*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-C-020rev.07, 15-Feb-2007

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Page: 1 of 2

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 App. IV Scan Event
Project Number:	6 W185J

Section C Invoice Information:

Attention:	Southern Co.
Company Name:	
Address:	
Pace Quote Reference:	
Pace Project Manager:	Kevin Herring
Pace Profile #:	2912-4

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☑ OTHER OGR

Site Location STATE: GA

Section D Required Client Information

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

Valid Matrix Codes

MATRIX	CODE
DRINKING WATER	DW
WATER	WT
WASTE WATER	WW
PRODUCT	P
SOIL/SOLID	SL
OIL	OL
WIPE	WP
AIR	AR
OTHER	OT
TISSUE	TS

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED DATE	COLLECTED TIME	COMPOSITE DATE	COMPOSITE TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	Fluoride	Metals 6010/6020*	RAD 226/228	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	MW-30D	WT	G	3/4	1415				4	1		3						X	X	X	N	2624703	015
2	MW-16D	WT	G	3/4	1157				4	1		3						X	X	X	N		016
3	MW-28D	WT	G	3/4	1015				4	1		3						X	X	X	N		017
4									4	1		3						X	X	X			
5									4	1		3						X	X	X			
6									4	1		3						X	X	X			
7									4	1		3						X	X	X			
8									4	1		3						X	X	X			
9									4	1		3						X	X	X			
10									4	1		3						X	X	X			
11									4	1		3						X	X	X			
12									4	1		3						X	X	X			

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
Please note dry wells, strike thorugh any wells not sampled, and note when the last sample for the event has been taken.		3/4	1835		3/4/20	1235	
		3/4/20	1945		3/4/20	1945	
*Metals=As,Ba,Be,Cd,Co,Cr,Hg,Li,Mo,Pb,Sb,Se,Tl		3/5/20	1045		3-4-20	1045	
					3/5/20	1200	2.5 / Y / N / Y

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:

SIGNATURE of SAMPLER: DATE Signed (MM/DD/YY): 3/4/20

*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.

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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: 2 of 3

Section A Required Client Information:	Section B Required Project Information:	Section C Invoice Information:
Company: GA Power	Report To: SCS Contacts	Attention: Southern Co.
Address: Atlanta, GA	Copy To: Geosyntec Contacts	Company Name:
		Address:
Email To: SCS Contacts	Purchase Order No.	Pace Quote Reference:
Phone: Fax:	Project Name: Plant Hammond App. IV Scan Event	Pace Project Manager: Kevin Herring
Requested Due Date/TAT: 10 Day	Project Number: GW6581	Pace Profile #: 2912-4

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☑ OTHER OGR

Site Location STATE: GA

Section D Required Client Information

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

Valid Matrix Codes

MATRIX	CODE
DRINKING WATER	DW
WATER	WT
WASTE WATER	WW
PRODUCT	P
SOIL/SOLID	SL
OIL	OL
WIPE	WP
AIR	AR
OTHER	OT
TISSUE	TS

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED DATE	COLLECTED TIME	COMPOSITE DATE	COMPOSITE TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	Fluoride	Metals 6010/6020*	RAD 226/228	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	MW-24D	GW	G	3/4/20	1216	3/4/20	1227	19	4	1		3							X	X	X		pH: 7.47 018
2	FD-02	GW	G	"	1200	"	1200	-	4	1		3							X	X	X		- 019
3	HGWC-13	GW	G	"	1457	"	1325	19	4	1		3							X	X	X		pH: 7.16 020
4	MW-19	GW	G	"	1743	"	1755	18	4	1		3							X	X	X		pH: 6.29 021
5									4	1		3							X	X	X		
6									4	1		3							X	X	X		
7									4	1		3							X	X	X		
8									4	1		3							X	X	X		
9									4	1		3							X	X	X		
10									4	1		3							X	X	X		
11									4	1		3							X	X	X		
12									4	1		3							X	X	X		

2629703

(CH) 03/4/2020

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
Please note dry wells, strike thorugh any wells not sampled, and note when the last sample for the event has been taken.	Chad Russo/geo	3/4/2020	1945	Shawn Lin/Geosyntec	3/4/20	1945	
	Shawn Lin/geosyntec	3/5/2020	1045	TELOC	3-4-20	1045	
*Metals=As,Ba,Be,Cd,Co,Cr,Hg,Li,Mo,Pb,Sb,Se,Tl				Anwarce/PACE	3/5/20	1200	2.1 Y N Y

SAMPLER NAME AND SIGNATURE				
PRINT Name of SAMPLER:	Chad Russo			
SIGNATURE of SAMPLER:	Chad Russo	DATE Signed (MM/DD/YY):	3/4/2020	

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.

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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: 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 To:	SCS Contacts
Copy To:	Geosyntec Contacts
Purchase Order No.:	
Project Name:	Plant Hammond App. IV Scan Event
Project Number:	GV6581

Section C Invoice Information:

Attention:	Southern Co.
Company Name:	
Address:	
Pace Quote Reference:	
Pace Project Manager:	Kevin Herring
Pace Profile #:	2912-4

REGULATORY AGENCY

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

Site Location STATE: GA

Section D Required Client Information

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

Valid Matrix Codes

MATRIX	CODE
DRINKING WATER	DW
WATER	WT
WASTE WATER	WW
PRODUCT	P
SOIL/SOLID	SL
OIL	OL
WIPE	WP
AIR	AR
OTHER	OT
TISSUE	TS

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED DATE	COLLECTED TIME	COMPOSITE DATE	COMPOSITE TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	Fluoride	Metals 6010/6020*	RAD 226/228	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
																		Requested Analysis Filtered (Y/N)	N	N	N		2629703
1	HGVC-9	WT	G	3-4-20	1026			16.28	4	1		3							X	X	X		PH 6.97 022
2	MV-26D	WT	G	3-4-20	1341			16.55	4	1		3							X	X	X		PH 7.14 023
3	MV-27D	WT	G	3-4-20	1627			16.25	4	1		3							X	X	X		PH 8.33 024
4									4	1		3							X	X	X		
5									4	1		3							X	X	X		
6									4	1		3							X	X	X		
7									4	1		3							X	X	X		
8									4	1		3							X	X	X		
9									4	1		3							X	X	X		
10									4	1		3							X	X	X		
11									4	1		3							X	X	X		
12									4	1		3							X	X	X		

AR 3-4-2020

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
Please note dry wells, strike thorugh any wells not sampled, and note when the last sample for the event has been taken.	Sampler	3-4-2020	1841	Brad Rubio / geo	3/4/20	1841
	Brad Rubio / GEO	3/4/20	1945	Shawna Lin / Geosyntec	3/4/20	1945
*Metals=As,Ba,Be,Cd,Co,Cr,Hg,Li,Mo,Pb,Sb,Se,Tl	Shawna Lin / Geosyntec	3/5/2020	1045	T Elrod	3-4-20	1045
				Jim Hazel/PACE	3/5/20	1200

SAMPLE CONDITIONS

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

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Aaron Beeler

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 03/04/2020

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

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

March 30, 2020

Mr. Joju Abraham
Georgia Power
2480 Maner Road
Atlanta, GA 30339

RE: Project: 2629703
Pace Project No.: 30353287

Dear Mr. Abraham:
Enclosed are the analytical results for sample(s) received by the laboratory between March 05, 2020 and March 07, 2020. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,

Jacquelyn Collins
jacquelyn.collins@pacelabs.com
(724)850-5612
Project Manager

Enclosures

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

CERTIFICATIONS

Project: 2629703
Pace Project No.: 30353287

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

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

SAMPLE SUMMARY

Project: 2629703
Pace Project No.: 30353287

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2629703001	**MW-20**	Water	03/02/20 16:19	03/05/20 09:15
2629703002	**FB-01**	Water	03/02/20 17:10	03/05/20 09:15
2629703003	**MW-29**	Water	03/02/20 17:35	03/05/20 09:15
2629703004	**MW-5**	Water	03/02/20 16:21	03/05/20 09:15
2629714001	**HGWA-1**	Water	03/02/20 11:39	03/05/20 09:15
2629714002	**HGWA-2**	Water	03/02/20 11:10	03/05/20 09:15
2629714003	**HGWA-3**	Water	03/02/20 13:15	03/05/20 09:15
2629703008	**MW-6**	Water	03/03/20 10:12	03/06/20 09:30
2629703009	**MW-7**	Water	03/03/20 13:10	03/06/20 09:30
2629703010	**HGWC-10**	Water	03/03/20 13:20	03/06/20 09:30
2629703011	**HGWC-11**	Water	03/03/20 13:30	03/06/20 09:30
2629703012	**HGWC-12**	Water	03/03/20 14:15	03/06/20 09:30
2629703013	**MW-25D**	Water	03/03/20 15:15	03/06/20 09:30
2629703014	**HGWC-8**	Water	03/03/20 16:46	03/06/20 09:30
2629703015	**MW-30D**	Water	03/04/20 14:15	03/07/20 10:30
2629703016	**HGWC-7**	Water	03/04/20 11:50	03/07/20 10:30
2629703017	**MW-28D**	Water	03/04/20 10:05	03/07/20 10:30
2629703018	**MW-24D**	Water	03/04/20 12:27	03/07/20 10:30
2629703019	**FD-02**	Water	03/04/20 12:00	03/07/20 10:30
2629703020	**HGWC-13**	Water	03/04/20 13:25	03/07/20 10:30
2629703021	**MW-19**	Water	03/04/20 17:55	03/07/20 10:30
2629703022	**HGWC-9**	Water	03/04/20 10:26	03/07/20 10:30
2629703023	**MW-26D**	Water	03/04/20 13:41	03/07/20 10:30
2629703024	**MW-27D**	Water	03/04/20 16:27	03/07/20 10:30

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

SAMPLE ANALYTE COUNT

Project: 2629703
Pace Project No.: 30353287

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
2629703001	**MW-20**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2629703002	**FB-01**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2629703003	**MW-29**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2629703004	**MW-5**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2629714001	**HGWA-1**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2629714002	**HGWA-2**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2629714003	**HGWA-3**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2629703008	**MW-6**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2629703009	**MW-7**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2629703010	**HGWC-10**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2629703011	**HGWC-11**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2629703012	**HGWC-12**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2629703013	**MW-25D**	EPA 9315	LAL	1	PASI-PA

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

SAMPLE ANALYTE COUNT

Project: 2629703
Pace Project No.: 30353287

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2629703014	**HGWC-8**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2629703015	**MW-30D**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2629703016	**HGWC-7**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2629703017	**MW-28D**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2629703018	**MW-24D**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2629703019	**FD-02**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2629703020	**HGWC-13**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2629703021	**MW-19**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2629703022	**HGWC-9**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2629703023	**MW-26D**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2629703024	**MW-27D**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 2629703
Pace Project No.: 30353287

Sample: MW-20 **Lab ID: 2629703001** Collected: 03/02/20 16:19 Received: 03/05/20 09:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.653 ± 0.214 (0.231) C:88% T:NA**	pCi/L	03/17/20 19:14	13982-63-3	
Radium-228	EPA 9320	**-0.0509 ± 0.301 (0.716) C:73% T:91%**	pCi/L	03/26/20 17:46	15262-20-1	
Total Radium	Total Radium Calculation	**0.653 ± 0.515 (0.947)**	pCi/L	03/27/20 14:39	7440-14-4	

Sample: FB-01 **Lab ID: 2629703002** Collected: 03/02/20 17:10 Received: 03/05/20 09:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.367 ± 0.185 (0.299) C:95% T:NA**	pCi/L	03/17/20 19:15	13982-63-3	
Radium-228	EPA 9320	**0.0818 ± 0.346 (0.789) C:72% T:81%**	pCi/L	03/26/20 17:46	15262-20-1	
Total Radium	Total Radium Calculation	**0.449 ± 0.531 (1.09)**	pCi/L	03/27/20 14:39	7440-14-4	

Sample: MW-29 **Lab ID: 2629703003** Collected: 03/02/20 17:35 Received: 03/05/20 09:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.413 ± 0.188 (0.281) C:84% T:NA**	pCi/L	03/17/20 19:16	13982-63-3	
Radium-228	EPA 9320	**-0.127 ± 0.329 (0.788) C:77% T:88%**	pCi/L	03/26/20 17:47	15262-20-1	
Total Radium	Total Radium Calculation	**0.413 ± 0.517 (1.07)**	pCi/L	03/27/20 14:39	7440-14-4	

Sample: MW-5 **Lab ID: 2629703004** Collected: 03/02/20 16:21 Received: 03/05/20 09:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.408 ± 0.206 (0.338) C:88% T:NA**	pCi/L	03/17/20 19:16	13982-63-3	
Radium-228	EPA 9320	**0.556 ± 0.374 (0.713) C:79% T:85%**	pCi/L	03/26/20 17:47	15262-20-1	
Total Radium	Total Radium Calculation	**0.964 ± 0.580 (1.05)**	pCi/L	03/27/20 14:39	7440-14-4	

Sample: HGWA-1 **Lab ID: 2629714001** Collected: 03/02/20 11:39 Received: 03/05/20 09:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.577 ± 0.324 (0.458) C:90% T:NA**	pCi/L	03/12/20 08:33	13982-63-3	
Radium-228	EPA 9320	**0.0334 ± 0.328 (0.762) C:72% T:85%**	pCi/L	03/24/20 19:44	15262-20-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 2629703
Pace Project No.: 30353287

Sample: HGWA-1 **Lab ID: 2629714001** Collected: 03/02/20 11:39 Received: 03/05/20 09:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Total Radium	Total Radium Calculation	**0.610 ± 0.652 (1.22)**	pCi/L	03/30/20 10:57	7440-14-4	

Sample: HGWA-2 **Lab ID: 2629714002** Collected: 03/02/20 11:10 Received: 03/05/20 09:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.903 ± 0.376 (0.345) C:93% T:NA**	pCi/L	03/12/20 08:33	13982-63-3	
Radium-228	EPA 9320	**0.680 ± 0.497 (0.984) C:71% T:86%**	pCi/L	03/24/20 19:44	15262-20-1	
Total Radium	Total Radium Calculation	**1.58 ± 0.873 (1.33)**	pCi/L	03/30/20 10:57	7440-14-4	

Sample: HGWA-3 **Lab ID: 2629714003** Collected: 03/02/20 13:15 Received: 03/05/20 09:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.230 ± 0.208 (0.350) C:87% T:NA**	pCi/L	03/12/20 08:33	13982-63-3	
Radium-228	EPA 9320	**0.0192 ± 0.394 (0.910) C:69% T:87%**	pCi/L	03/24/20 19:44	15262-20-1	
Total Radium	Total Radium Calculation	**0.249 ± 0.602 (1.26)**	pCi/L	03/30/20 10:57	7440-14-4	

Sample: MW-6 **Lab ID: 2629703008** Collected: 03/03/20 10:12 Received: 03/06/20 09:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.614 ± 0.214 (0.248) C:80% T:NA**	pCi/L	03/17/20 19:17	13982-63-3	
Radium-228	EPA 9320	**0.143 ± 0.300 (0.662) C:74% T:95%**	pCi/L	03/26/20 17:47	15262-20-1	
Total Radium	Total Radium Calculation	**0.757 ± 0.514 (0.910)**	pCi/L	03/30/20 10:57	7440-14-4	

Sample: MW-7 **Lab ID: 2629703009** Collected: 03/03/20 13:10 Received: 03/06/20 09:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.434 ± 0.170 (0.214) C:93% T:NA**	pCi/L	03/17/20 19:17	13982-63-3	
Radium-228	EPA 9320	**0.718 ± 0.458 (0.866) C:73% T:78%**	pCi/L	03/26/20 17:47	15262-20-1	
Total Radium	Total Radium Calculation	**1.15 ± 0.628 (1.08)**	pCi/L	03/30/20 10:57	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 2629703
Pace Project No.: 30353287

Sample: HGWC-10 **Lab ID: 2629703010** Collected: 03/03/20 13:20 Received: 03/06/20 09:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.310 ± 0.190 (0.331) C:92% T:NA**	pCi/L	03/17/20 19:18	13982-63-3	
Radium-228	EPA 9320	**0.357 ± 0.371 (0.770) C:72% T:91%**	pCi/L	03/26/20 17:47	15262-20-1	
Total Radium	Total Radium Calculation	**0.667 ± 0.561 (1.10)**	pCi/L	03/30/20 10:57	7440-14-4	

Sample: HGWC-11 **Lab ID: 2629703011** Collected: 03/03/20 13:30 Received: 03/06/20 09:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.523 ± 0.189 (0.212) C:89% T:NA**	pCi/L	03/17/20 19:18	13982-63-3	
Radium-228	EPA 9320	**0.193 ± 0.330 (0.720) C:76% T:85%**	pCi/L	03/26/20 17:47	15262-20-1	
Total Radium	Total Radium Calculation	**0.716 ± 0.519 (0.932)**	pCi/L	03/30/20 10:57	7440-14-4	

Sample: HGWC-12 **Lab ID: 2629703012** Collected: 03/03/20 14:15 Received: 03/06/20 09:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.631 ± 0.195 (0.136) C:91% T:NA**	pCi/L	03/17/20 18:26	13982-63-3	
Radium-228	EPA 9320	**0.340 ± 0.400 (0.846) C:77% T:87%**	pCi/L	03/26/20 17:46	15262-20-1	
Total Radium	Total Radium Calculation	**0.971 ± 0.595 (0.982)**	pCi/L	03/30/20 10:57	7440-14-4	

Sample: MW-25D **Lab ID: 2629703013** Collected: 03/03/20 15:15 Received: 03/06/20 09:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.663 ± 0.319 (0.368) C:87% T:NA**	pCi/L	03/18/20 09:01	13982-63-3	
Radium-228	EPA 9320	**0.694 ± 0.425 (0.796) C:79% T:82%**	pCi/L	03/27/20 11:41	15262-20-1	
Total Radium	Total Radium Calculation	**1.36 ± 0.744 (1.16)**	pCi/L	03/30/20 13:35	7440-14-4	

Sample: HGWC-8 **Lab ID: 2629703014** Collected: 03/03/20 16:46 Received: 03/06/20 09:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.493 ± 0.282 (0.367) C:83% T:NA**	pCi/L	03/18/20 09:01	13982-63-3	
Radium-228	EPA 9320	**0.342 ± 0.361 (0.749) C:78% T:89%**	pCi/L	03/27/20 11:41	15262-20-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 2629703
Pace Project No.: 30353287

Sample: HGWC-8 **Lab ID: 2629703014** Collected: 03/03/20 16:46 Received: 03/06/20 09:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Total Radium	Total Radium Calculation	**0.835 ± 0.643 (1.12)**	pCi/L	03/30/20 13:35	7440-14-4	

Sample: MW-30D **Lab ID: 2629703015** Collected: 03/04/20 14:15 Received: 03/07/20 10:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.332 ± 0.171 (0.262) C:78% T:NA**	pCi/L	03/17/20 19:34	13982-63-3	
Radium-228	EPA 9320	**0.260 ± 0.389 (0.840) C:75% T:79%**	pCi/L	03/26/20 17:45	15262-20-1	
Total Radium	Total Radium Calculation	**0.592 ± 0.560 (1.10)**	pCi/L	03/27/20 14:39	7440-14-4	

Sample: HGWC-7 **Lab ID: 2629703016** Collected: 03/04/20 11:50 Received: 03/07/20 10:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.510 ± 0.193 (0.228) C:77% T:NA**	pCi/L	03/17/20 19:34	13982-63-3	
Radium-228	EPA 9320	**0.114 ± 0.363 (0.819) C:73% T:83%**	pCi/L	03/26/20 17:45	15262-20-1	
Total Radium	Total Radium Calculation	**0.624 ± 0.556 (1.05)**	pCi/L	03/27/20 14:39	7440-14-4	

Sample: MW-28D **Lab ID: 2629703017** Collected: 03/04/20 10:05 Received: 03/07/20 10:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.904 ± 0.245 (0.205) C:94% T:NA**	pCi/L	03/17/20 19:34	13982-63-3	
Radium-228	EPA 9320	**0.404 ± 0.321 (0.637) C:90% T:84%**	pCi/L	03/26/20 17:45	15262-20-1	
Total Radium	Total Radium Calculation	**1.31 ± 0.566 (0.842)**	pCi/L	03/27/20 14:39	7440-14-4	

Sample: MW-24D **Lab ID: 2629703018** Collected: 03/04/20 12:27 Received: 03/07/20 10:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.255 ± 0.135 (0.202) C:92% T:NA**	pCi/L	03/17/20 19:34	13982-63-3	
Radium-228	EPA 9320	**0.0776 ± 0.355 (0.808) C:75% T:86%**	pCi/L	03/26/20 17:45	15262-20-1	
Total Radium	Total Radium Calculation	**0.333 ± 0.490 (1.01)**	pCi/L	03/27/20 14:39	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 2629703
Pace Project No.: 30353287

Sample: FD-02 **Lab ID: 2629703019** Collected: 03/04/20 12:00 Received: 03/07/20 10:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.650 ± 0.201 (0.194) C:94% T:NA**	pCi/L	03/17/20 19:34	13982-63-3	
Radium-228	EPA 9320	**0.519 ± 0.366 (0.709) C:78% T:90%**	pCi/L	03/26/20 17:45	15262-20-1	
Total Radium	Total Radium Calculation	**1.17 ± 0.567 (0.903)**	pCi/L	03/27/20 14:39	7440-14-4	

Sample: HGWC-13 **Lab ID: 2629703020** Collected: 03/04/20 13:25 Received: 03/07/20 10:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.486 ± 0.191 (0.267) C:93% T:NA**	pCi/L	03/17/20 19:34	13982-63-3	
Radium-228	EPA 9320	**0.222 ± 0.348 (0.754) C:74% T:90%**	pCi/L	03/26/20 17:45	15262-20-1	
Total Radium	Total Radium Calculation	**0.708 ± 0.539 (1.02)**	pCi/L	03/27/20 14:39	7440-14-4	

Sample: MW-19 **Lab ID: 2629703021** Collected: 03/04/20 17:55 Received: 03/07/20 10:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.542 ± 0.191 (0.223) C:95% T:NA**	pCi/L	03/17/20 19:34	13982-63-3	
Radium-228	EPA 9320	**0.496 ± 0.363 (0.709) C:80% T:84%**	pCi/L	03/26/20 17:45	15262-20-1	
Total Radium	Total Radium Calculation	**1.04 ± 0.554 (0.932)**	pCi/L	03/27/20 14:39	7440-14-4	

Sample: HGWC-9 **Lab ID: 2629703022** Collected: 03/04/20 10:26 Received: 03/07/20 10:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.557 ± 0.194 (0.204) C:81% T:NA**	pCi/L	03/17/20 19:34	13982-63-3	
Radium-228	EPA 9320	**0.477 ± 0.335 (0.640) C:73% T:92%**	pCi/L	03/26/20 17:45	15262-20-1	
Total Radium	Total Radium Calculation	**1.03 ± 0.529 (0.844)**	pCi/L	03/27/20 14:39	7440-14-4	

Sample: MW-26D **Lab ID: 2629703023** Collected: 03/04/20 13:41 Received: 03/07/20 10:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.933 ± 0.499 (0.615) C:88% T:NA**	pCi/L	03/23/20 10:28	13982-63-3	
Radium-228	EPA 9320	**0.333 ± 0.337 (0.692) C:73% T:87%**	pCi/L	03/26/20 17:46	15262-20-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 2629703
Pace Project No.: 30353287

Sample: MW-26D **Lab ID: 2629703023** Collected: 03/04/20 13:41 Received: 03/07/20 10:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Total Radium	Total Radium Calculation	**1.27 ± 0.836 (1.31)**	pCi/L	03/27/20 14:39	7440-14-4	

Sample: MW-27D **Lab ID: 2629703024** Collected: 03/04/20 16:27 Received: 03/07/20 10:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.904 ± 0.237 (0.187) C:98% T:NA**	pCi/L	03/17/20 19:34	13982-63-3	
Radium-228	EPA 9320	**0.220 ± 0.422 (0.927) C:71% T:78%**	pCi/L	03/26/20 17:46	15262-20-1	
Total Radium	Total Radium Calculation	**1.12 ± 0.659 (1.11)**	pCi/L	03/27/20 14:39	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: 2629703
Pace Project No.: 30353287

QC Batch: 387516 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 2629703001, 2629703002, 2629703003, 2629703004, 2629703008, 2629703009, 2629703010, 2629703011, 2629703012, 2629703015, 2629703016, 2629703017, 2629703018, 2629703019, 2629703020, 2629703021, 2629703022, 2629703023, 2629703024

METHOD BLANK: 1877158 Matrix: Water
Associated Lab Samples: 2629703001, 2629703002, 2629703003, 2629703004, 2629703008, 2629703009, 2629703010, 2629703011, 2629703012, 2629703015, 2629703016, 2629703017, 2629703018, 2629703019, 2629703020, 2629703021, 2629703022, 2629703023, 2629703024

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.0408 ± 0.333 (0.765) C:71% T:89%	pCi/L	03/26/20 17:45	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: 2629703
Pace Project No.: 30353287

QC Batch: 388320 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 2629703023

METHOD BLANK: 1881003 Matrix: Water
Associated Lab Samples: 2629703023

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.387 ± 0.205 (0.273) C:94% T:NA	pCi/L	03/23/20 10:25	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: 2629703
Pace Project No.: 30353287

QC Batch: 387666 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 2629703013, 2629703014

METHOD BLANK: 1877857 Matrix: Water
Associated Lab Samples: 2629703013, 2629703014

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.516 ± 0.299 (0.401) C:81% T:NA	pCi/L	03/18/20 09:01	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: 2629703
Pace Project No.: 30353287

QC Batch: 387205 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 2629714001, 2629714002, 2629714003

METHOD BLANK: 1875683 Matrix: Water
Associated Lab Samples: 2629714001, 2629714002, 2629714003

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.605 ± 0.326 (0.434) C:90% T:NA	pCi/L	03/12/20 08:26	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: 2629703
Pace Project No.: 30353287

QC Batch: 387515 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 2629703001, 2629703002, 2629703003, 2629703004, 2629703008, 2629703009, 2629703010, 2629703011, 2629703012, 2629703015, 2629703016, 2629703017, 2629703018, 2629703019, 2629703020, 2629703021, 2629703022, 2629703024

METHOD BLANK: 1877156 Matrix: Water
Associated Lab Samples: 2629703001, 2629703002, 2629703003, 2629703004, 2629703008, 2629703009, 2629703010, 2629703011, 2629703012, 2629703015, 2629703016, 2629703017, 2629703018, 2629703019, 2629703020, 2629703021, 2629703022, 2629703024

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.400 ± 0.158 (0.182) C:89% T:NA	pCi/L	03/17/20 19:34	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: 2629703
Pace Project No.: 30353287

QC Batch: 387667 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 2629703013, 2629703014

METHOD BLANK: 1877863 Matrix: Water
Associated Lab Samples: 2629703013, 2629703014

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.158 ± 0.316 (0.696) C:78% T:86%	pCi/L	03/27/20 11:43	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: 2629703
Pace Project No.: 30353287

QC Batch: 387208 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 2629714001, 2629714002, 2629714003

METHOD BLANK: 1875688 Matrix: Water
Associated Lab Samples: 2629714001, 2629714002, 2629714003

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.275 ± 0.357 (0.757) C:73% T:81%	pCi/L	03/24/20 19:45	

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: 2629703
Pace Project No.: 30353287

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.

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: For Safe Drinking Water Act (SDWA) analyses, the reported Unc. Is the calculated Count Uncertainty (95% confidence interval) using a coverage factor of 1.96. For all other matrices (non-SDWA), the reported Unc. is the calculated Expanded Uncertainty (aka Combined Standard Uncertainty, CSU), reported at the 95% confidence interval using a coverage factor of 1.96.

Gamma Spec: The Unc. reported for all gamma-spectroscopy analyses (EPA 901.1), is the calculated Expanded Uncertainty (CSU) at the 95.4% confidence interval, using a coverage factor of 2.0.

(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.

LABORATORIES

PASI-PA Pace Analytical Services - Greensburg

Chain of Custody

☐ Samples were sent directly to the Subcontracting Laboratory.

State Of Origin: GA
Cert. Needed: ☐ Yes ☐ No
Owner Received Date: 3/3/2020 Results Requested By: ~~3/17/2020~~ 21 days

Pace Analytical® www.pacelabs.com

Workorder: 2629703 **Workorder Name:** PLANT HAMMOND APP IV AP-1

Report To	Subcontract To
Kevin Herring Pace Analytical Charlotte 9800 Kincey Ave. Suite 100 Huntersville, NC 28078 Phone (704)875-9092	Pace Analytical Pittsburgh 1638 Roseytown Road Suites 2,3, & 4 Greensburg, PA 15601 Phone (724)850-5600

WO# : 30353287

30353287

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers HNO3						RAD 9315	RAD 9320	LAB USE ONLY
1	MW-20	PS	3/2/2020 16:19	2629703001	Water	X	2					X	X	001
2	FB-01	PS	3/2/2020 17:10	2629703002	Water	X	2					X	X	002
3	MW-29	PS	3/2/2020 17:35	2629703003	Water	X	2					X	X	003
4	MW-5	PS	3/2/2020 16:21	2629703004	Water	X	2					X	X	004
5	HGWA-1	PS	3/2/2020 11:39	2629714001	Water	X	2					X	X	001
6	HGWA-2	PS	3/2/2020 11:10	2629714002	Water	X	2					X	X	002
7	HGWA-3	PS	3/2/2020 13:15	2629714003	Water	X	2					X	X	003

Transfers	Released By	Date/Time	Received By	Date/Time
1			Brian Mullins	3-5-2020 0915
2				
3				

Comments

Cooler Temperature on Receipt N/A °C | **Custody Seal** Y or (N) | **Received on Ice** Y or (N) | **Samples Intact** (Y) or N

****In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document. This chain of custody is considered complete as is since this information is available in the owner laboratory.*

30353287

Chain of Custody

☐ Samples were sent directly to the Subcontracting Laboratory.

State Of Origin: GA
Cert. Needed: ☐ Yes ☐ No
Owner Received Date: 3/3/2020
Results Requested By: ~~3/17/2020~~ 7 days

Pace Analytical
www.pacelabs.com

Workorder: 2629703 **Workorder Name:** PLANT HAMMOND APP IV AP-1

Report To	Subcontract To
Kevin Herring Pace Analytical Charlotte 9800 Kincey Ave. Suite 100 Huntersville, NC 28078 Phone (704)875-9092	Pace Analytical Pittsburgh 1638 Roseytown Road Suites 2,3, & 4 Greensburg, PA 15601 Phone (724)850-5600

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers: HNO3						Requested Analysis: RAD 9315	RAD 9320											LAB USE ONLY
1	MW-20	PS	3/2/2020 16:19	2629703001	Water	1	2					X	X											CC1
2	FB-01	PS	3/2/2020 17:10	2629703002	Water	1	2					X	X											CC2
3	MW-29	PS	3/2/2020 17:35	2629703003	Water	1	2					X	X											CC3
4	MW-5	PS	3/2/2020 16:21	2629703004	Water	1	2					X	X											CC4
5																								

Transfers	Released By	Date/Time	Received By	Date/Time
1		3.4.20 1700		3-5-20 9:15
2				
3				

Comments:

Cooler Temperature on Receipt N/A °C | **Custody Seal** Y or N | **Received on Ice** Y or N | **Samples Intact** Y or N

****In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document. This chain of custody is considered complete as is since this information is available in the owner laboratory.*

Chain of Custody

Pace Analytical®
www.pacelabs.com

☐ Samples were sent directly to the Subcontracting Laboratory.

State Of Origin: GA
Cert. Needed: ☐ Yes ☐ No
Owner Received Date: 3/3/2020 **Results Requested By:** 3/17/2020

Workorder: 2629703 **Workorder Name:** PLANT HAMMOND APP IV AP-1

Report To	Subcontract To
Kevin Herring Pace Analytical Charlotte 9800 Kincey Ave. Suite 100 Huntersville, NC 28078 Phone (704)875-9092	Pace Analytical Pittsburgh 1638 Roseytown Road Suites 2,3, & 4 Greensburg, PA 15601 Phone (724)850-5600

Requested Analysis

WO# : 30353287
PM: JAC Due Date: 03/26/20
CLIENT: PACE_26_ATGA

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers HNO3						RAD 9315	RAD 9320										LAB USE ONLY
1	MW-20	PS	3/2/2020 16:19	2629703001	Water	1						X	X										
2	FB-01	PS	3/2/2020 17:10	2629703002	Water	1						X	X										
3	MW-29	PS	3/2/2020 17:35	2629703003	Water	1						X	X										
4	MW-5	PS	3/2/2020 16:21	2629703004	Water	1						X	X										
5	MW-6	PS	3/3/2020 10:12	2629703008	Water	1						X	X										005
6	MW-7	PS	3/3/2020 13:10	2629703009	Water	1						X	X										006
7	HGWC-10	PS	3/3/2020 13:20	2629703010	Water	1						X	X										007
8	HGWC-11	PS	3/3/2020 13:30	2629703011	Water	1						X	X										008
9	HGWC-12	PS	3/3/2020 14:15	2629703012	Water	1						X	X										009
10	MW-25D	PS	3/3/2020 15:15	2629703013	Water	1						X	X										010
11	HGWC-8	PS	3/3/2020 16:46	2629703014	Water	1						X	X										011
12	HGWA-1	PS	3/2/2020 11:39	2629714001	Water	1						X	X										~~0~~ mms
13	HGWA-2	PS	3/2/2020 11:10	2629714002	Water	1						X	X										3/4/2020
14	HGWA-3	PS	3/2/2020 13:15	2629714003	Water	1						X	X										

WO# : 30353287

PM: JAC **Due Date: 03/26/20**

CLIENT: PACE_26_ATGA

Transfers	Released By	Date/Time	Received By	Date/Time
1	[illegible] Pace	3/5/2017 08	[illegible]	3/6/20 0930
2				
3				

Cooler Temperature on Receipt ____°C	Custody Seal Y or (N)	Received on Ice Y or (N)	Samples Intact (Y) or N

****In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document. This chain of custody is considered complete as is since this information is available in the owner laboratory.*

Chain of Custody

☐ Samples were sent directly to the Subcontracting Laboratory.

State Of Origin: GA
Cert. Needed: ☐ Yes ☐ No

Pace Analytical®
www.pacelabs.com

Workorder: 2629703 **Workorder Name:** PLANT HAMMOND APP IV AP-1 **Owner Received Date:** 3/3/2020 **Results Requested By:** 3/17/2020

Report To

Kevin Herring
Pace Analytical Charlotte
9800 Kincey Ave.
Suite 100
Huntersville, NC 28078
Phone (704)875-9092

Subcontract To

Pace Analytical Pittsburgh
1638 Roseytown Road
Suites 2,3, & 4
Greensburg, PA 15601
Phone (724)850-5600

WO# : 30353287

PM: JAC Due Date: 03/26/20
CLIENT: PACE_26_ATGA

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers: HNO3						Requested Analysis: RAD 9315	RAD 9320	LAB USE ONLY
1	MW-20	PS	3/2/2020 16:19	2629703001	Water	1						X	X	
2	FB-01	PS	3/2/2020 17:10	2629703002	Water	1						X	X	
3	MW-29	PS	3/2/2020 17:35	2629703003	Water	1						X	X	
4	MW-5	PS	3/2/2020 16:21	2629703004	Water	1						X	X	
5	MW-6	PS	3/3/2020 10:12	2629703008	Water	1						X	X	
6	MW-7	PS	3/3/2020 13:10	2629703009	Water	1						X	X	
7	HGWC-10	PS	3/3/2020 13:20	2629703010	Water	1						X	X	
8	HGWC-11	PS	3/3/2020 13:30	2629703011	Water	1						X	X	
9	HGWC-12	PS	3/3/2020 14:15	2629703012	Water	1						X	X	
10	MW-25D	PS	3/3/2020 15:15	2629703013	Water	1						X	X	
11	HGWC-8	PS	3/3/2020 16:46	2629703014	Water	1						X	X	
12	MW-30D	PS	3/4/2020 14:15	2629703015	Water	1	2					X	X	015
13	HGWC-7	PS	3/4/2020 11:50	2629703016	Water	1	2					X	X	016
14	MW-28D	PS	3/4/2020 10:05	2629703017	Water	1	2					X	X	017
15	MW-24D	PS	3/4/2020 12:27	2629703018	Water	1	2					X	X	018
16	FD-02	PS	3/4/2020 12:00	2629703019	Water	1	2					X	X	019
17	HGWC-13	PS	3/4/2020 13:25	2629703020	Water	1	2					X	X	020
18	MW-19	PS	3/4/2020 17:55	2629703021	Water	1	2					X	X	021
19	HGWC-9	PS	3/4/2020 10:26	2629703022	Water	1	2					X	X	022

Chain of Custody

☐ Samples were sent directly to the Subcontracting Laboratory.

State Of Origin: GA
Cert. Needed: ☐ Yes ☐ No
Owner Received Date: 3/3/2020 Results Requested By: 3/17/2020

Pace Analytical®
www.pacelabs.com

Workorder: 2629703 **Workorder Name:** PLANT HAMMOND APP IV AP-1

Report To	Subcontract To
Kevin Herring Pace Analytical Charlotte 9800 Kincey Ave. Suite 100 Huntersville, NC 28078 Phone (704)875-9092	Pace Analytical Pittsburgh 1638 Roseytown Road Suites 2,3, & 4 Greensburg, PA 15601 Phone (724)850-5600

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers HNO3						Requested Analysis RAD 9315	RAD 9320											LAB USE ONLY
20	MW-26D	PS	3/4/2020 13:41	2629703023	Water	1	2					X	X											CRJ
21	MW-27D	PS	3/4/2020 16:27	2629703024	Water	1	2					X	X											CRJ
22	HGWA-1	PS	3/2/2020 11:39	2629714001	Water	1						X	X											
23	HGWA-2	PS	[illegible]	2629714002	Water	1						X	X											
24	HGWA-3	PS	3/2/2020 13:15	2629714003	Water	1						X	X											

Transfers	Released By	Date/Time	Received By	Date/Time
1			[signature]	3-7-20 10:30
2				
3				

Comments: Add on project

Cooler Temperature on Receipt N/A °C | Custody Seal Y or (N) | Received on Ice Y or (N) | Samples Intact (Y) or N

***In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document. This chain of custody is considered complete as is since this information is available in the owner laboratory.

Pittsburgh Lab Sample Condition Upon Receipt

Pace Analytical

Client Name: Pace NC

Project # 30353287

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

Label DK

Tracking #: 1857 9506 7400

LIMS Login MM

Custody Seal on Cooler/Box Present: ☐ yes ☑ no Seals intact: ☐ yes ☐ no

Thermometer Used N/A Type of Ice: Wet Blue (None)

Cooler Temperature Observed Temp ___ °C Correction Factor: ___ °C Final Temp: ___ °C

Temp should be above freezing to 6°C

Comments:	Yes	No	N/A	pH paper Lot# 10D219 / Date and Initials of person examining contents: DK 3-5-20
Chain of Custody Present:	✓			1.
Chain of Custody Filled Out:	✓			2.
Chain of Custody Relinquished:	✓			3.
Sampler Name & Signature on COC:		✓		4.
Sample Labels match COC: -Includes date/time/ID Matrix: WT	✓			5.
Samples Arrived within Hold Time:	✓			6.
Short Hold Time Analysis (<72hr remaining):		✓		7.
Rush Turn Around Time Requested:		✓		8.
Sufficient Volume:	✓			9.
Correct Containers Used: -Pace Containers Used:	✓			10.
Containers Intact:	✓			11.
Orthophosphate field filtered			✓	12.
Hex Cr Aqueous sample field filtered			✓	13.
Organic Samples checked for dechlorination:			✓	14.
Filtered volume received for Dissolved tests			✓	15.
All containers have been checked for preservation. exceptions: VOA, coliform, TOC, O&G, Phenolics, Radon, Non-aqueous matrix	✓			16. pH<2
All containers meet method preservation requirements.	✓			Initial when completed DK / Date/time of preservation / Lot # of added preservative
Headspace in VOA Vials (>6mm):			✓	17.
Trip Blank Present:		✓		18.
Trip Blank Custody Seals Present			✓	
Rad Samples Screened < 0.5 mrem/hr	✓			Initial when completed: DK / Date: 3-5-20

Client Notification/ Resolution:

Person Contacted: _____ Date/Time: _____ Contacted By: _____

Comments/ Resolution: _____

☐ **A check in this box indicates that additional information has been stored in ereports.**

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)

***PM review** is documented electronically in LIMS. When the Project Manager closes the SRF Review schedule in LIMS. The review is in the Status section of the Workorder Edit Screen.

Pittsburgh Lab Sample Condition Upon Receipt

Pace Analytical

Client Name: Pace NC

Project# 30353287 BM 3-6-2020

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

Label DLC

Tracking #: 1657 9506 7400

LIMS Login DLC

Custody Seal on Cooler/Box Present: ☐ yes ☑ no Seals intact: ☐ yes ☐ no

Thermometer Used N/A Type of Ice: Wet Blue (None)

Cooler Temperature Observed Temp — °C Correction Factor: — °C Final Temp: — °C

Temp should be above freezing to 6°C

Comments:	Yes	No	N/A	pH paper Lot# 10D219 / Date and Initials of person examining contents: DLC 3-5-20
Chain of Custody Present:	✓			1.
Chain of Custody Filled Out:	✓			2.
Chain of Custody Relinquished:	✓			3.
Sampler Name & Signature on COC:		✓		4.
Sample Labels match COC: -Includes date/time/ID Matrix: WT	✓			5.
Samples Arrived within Hold Time:	✓			6.
Short Hold Time Analysis (<72hr remaining):		✓		7.
Rush Turn Around Time Requested:		✓		8.
Sufficient Volume:	✓			9.
Correct Containers Used: -Pace Containers Used:	✓			10.
Containers Intact:	✓			11.
Orthophosphate field filtered			✓	12.
Hex Cr Aqueous sample field filtered			✓	13.
Organic Samples checked for dechlorination:			✓	14.
Filtered volume received for Dissolved tests			✓	15.
All containers have been checked for preservation. exceptions: VOA, coliform, TOC, O&G, Phenolics, Radon, Non-aqueous matrix	✓			16. pH<2
All containers meet method preservation requirements.	✓			Initial when completed: DLC / Date/time of preservation
				Lot # of added preservative
Headspace in VOA Vials (>6mm):			✓	17.
Trip Blank Present:		✓		18.
Trip Blank Custody Seals Present			✓	
Rad Samples Screened < 0.5 mrem/hr	✓			Initial when completed: DLC / Date: 3-5-20

Client Notification/ Resolution:

Person Contacted: _____ Date/Time: _____ Contacted By: _____

Comments/ Resolution: _____

☐ **A check in this box indicates that additional information has been stored in ereports.**

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)

***PM review** is documented electronically in LIMS. When the Project Manager closes the SRF Review schedule in LIMS. The review is in the Status section of the Workorder Edit Screen.

Pittsburgh Lab Sample Condition Upon Receipt

Pace Analytical

Client Name: Pace GH

Project # 30353287

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

Label JSM
LIMS Login NMR

Tracking #: 1687 9506 8083

Custody Seal on Cooler/Box Present: ☐ yes ☑ no Seals intact: ☐ yes ☐ no

Thermometer Used _____ Type of Ice: Wet Blue (None)

Cooler Temperature Observed Temp _____ °C Correction Factor: _____ °C Final Temp: _____ °C

Temp should be above freezing to 6°C

pH paper Lot# 1000391

Date and Initials of person examining contents: JSM 3/6/2020

Comments:	Yes	No	N/A	
Chain of Custody Present:	✓			1.
Chain of Custody Filled Out:	✓			2.
Chain of Custody Relinquished:	✓			3.
Sampler Name & Signature on COC:		✓		4.
Sample Labels match COC: -Includes date/time/ID Matrix: WT	✓			5.
Samples Arrived within Hold Time:	✓			6.
Short Hold Time Analysis (<72hr remaining):		✓		7.
Rush Turn Around Time Requested:		✓		8.
Sufficient Volume:	✓			9.
Correct Containers Used:	✓			10.
-Pace Containers Used:	✓			
Containers Intact:	✓			11.
Orthophosphate field filtered			✓	12.
Hex Cr Aqueous sample field filtered			✓	13.
Organic Samples checked for dechlorination:			✓	14.
Filtered volume received for Dissolved tests			✓	15.
All containers have been checked for preservation. exceptions: VOA, coliform, TOC, O&G, Phenolics, Radon, Non-aqueous matrix	✓			16. pH<2
All containers meet method preservation requirements.	✓			Initial when completed JSM Date/time of preservation
				Lot # of added preservative
Headspace in VOA Vials (>6mm):			✓	17.
Trip Blank Present:			✓	18.
Trip Blank Custody Seals Present			✓	
Rad Samples Screened < 0.5 mrem/hr	✓			Initial when completed: JSM Date: 3/6/2020

Client Notification/ Resolution:

Person Contacted: _____ Date/Time: _____ Contacted By: _____

Comments/ Resolution: _____

☐ **A check in this box indicates that additional information has been stored in ereports.**

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)

***PM review** is documented electronically in LIMS. When the Project Manager closes the SRF Review schedule in LIMS. The review is in the Status section of the Workorder Edit Screen.

WO# : 30353287

PM: JAC Due Date: 03/26/20
CLIENT: PACE_26_ATGA

Pittsburgh Lab Sample Condition Upon Receipt

Pace Analytical

Client Name: Pace NC F

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

Label NC
LIMS Login NM

Tracking #: 1657 9506 8598

Custody Seal on Cooler/Box Present: ☐ yes ☑ no Seals intact: ☐ yes ☐ no

Thermometer Used N/A Type of Ice: Wet Blue (None)

Cooler Temperature Observed Temp ✓ °C Correction Factor: ✓ °C Final Temp: ✓ °C

Temp should be above freezing to 6°C

Comments:	Yes	No	N/A	pH paper Lot# 10011391 / Date and Initials of person examining contents: DM 3-9-20
Chain of Custody Present:	✓			1.
Chain of Custody Filled Out:	✓			2.
Chain of Custody Relinquished:	✓	✓		3. DM 3-9-20
Sampler Name & Signature on COC:		✓		4.
Sample Labels match COC:	✓			5.
-Includes date/time/ID Matrix: WT				
Samples Arrived within Hold Time:	✓			6.
Short Hold Time Analysis (<72hr remaining):		✓		7.
Rush Turn Around Time Requested:		✓		8.
Sufficient Volume:	✓			9.
Correct Containers Used:	✓			10.
-Pace Containers Used:	✓			
Containers Intact:	✓			11.
Orthophosphate field filtered			✓	12.
Hex Cr Aqueous sample field filtered			✓	13.
Organic Samples checked for dechlorination:			✓	14.
Filtered volume received for Dissolved tests			✓	15.
All containers have been checked for preservation. exceptions: VOA, coliform, TOC, O&G, Phenolics, Radon, Non-aqueous matrix	✓			16. pH<2
All containers meet method preservation requirements.	✓			Initial when completed: NC Date/time of preservation
				Lot # of added preservative
Headspace in VOA Vials (>6mm):			✓	17.
Trip Blank Present:		✓		18.
Trip Blank Custody Seals Present			✓	
Rad Samples Screened < 0.5 mrem/hr	✓			Initial when completed: DM Date: 3-9-20

Client Notification/ Resolution:

Person Contacted: _____ Date/Time: _____ Contacted By: _____

Comments/ Resolution: _____

☐ **A check in this box indicates that additional information has been stored in ereports.**

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)

***PM review** is documented electronically in LIMS. When the Project Manager closes the SRF Review schedule in LIMS. The review is in the Status section of the Workorder Edit Screen.

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

May 27, 2020

Joju Abraham
Georgia Power - Coal Combustion Residuals
2480 Maner Road
Atlanta, GA 30339

RE: Project: HAMMOND AP-1 1ST SEMIANNUAL
Pace Project No.: 2630471

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory between March 26, 2020 and April 03, 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 - Atlanta, GA

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

Sincerely,

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

Enclosures

cc: Kristen Jurinko
Whitney Law, Geosyntec Consultants
Noelia Muskus, Geosyntec Consultants
Lauren Petty, Southern Company Services, Inc.

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

CERTIFICATIONS

Project: HAMMOND AP-1 1ST SEMIANNUAL
Pace Project No.: 2630471

Pace Analytical Services Atlanta
110 Technology Parkway Peachtree Corners, GA 30092
Florida DOH Certification #: E87315
Georgia DW Inorganics Certification #: 812
Georgia DW Microbiology Certification #: 812
North Carolina Certification #: 381
South Carolina Certification #: 98011001
Virginia Certification #: 460204

Pace Analytical Services Asheville
2225 Riverside Drive, Asheville, NC 28804
Florida/NELAP Certification #: E87648
Massachusetts Certification #: M-NC030
North Carolina Drinking Water Certification #: 37712
North Carolina Wastewater Certification #: 40
South Carolina Certification #: 99030001
Virginia/VELAP Certification #: 460222

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

SAMPLE SUMMARY

Project: HAMMOND AP-1 1ST SEMIANNUAL
Pace Project No.: 2630471

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2630471001	**HGWA-1**	Water	03/25/20 15:56	03/26/20 11:10
2630471002	**HGWA-3**	Water	03/25/20 15:17	03/26/20 11:10
2630471003	**HGWA-2**	Water	03/25/20 16:32	03/26/20 11:10
2630471004	**HGWC-12**	Water	03/26/20 08:50	03/27/20 13:00
2630471005	**MW-25D**	Water	03/26/20 10:45	03/27/20 13:00
2630471006	**MW-19**	Water	03/26/20 12:30	03/27/20 13:00
2630471007	**MW-5**	Water	03/26/20 14:10	03/27/20 13:00
2630471008	**HGWC-7**	Water	03/27/20 09:30	03/30/20 10:20
2630471009	**MW-28D**	Water	03/27/20 10:40	03/30/20 10:20
2630471010	**MW-20**	Water	03/27/20 09:30	03/30/20 10:20
2630471011	**HGWC-8**	Water	03/27/20 10:40	03/30/20 10:20
2630471012	**MW-6**	Water	03/27/20 13:00	03/30/20 10:20
2630471013	**FB-01**	Water	03/27/20 00:00	03/30/20 10:20
2630471014	**MW-7**	Water	03/30/20 09:05	03/31/20 11:35
2630471015	**MW-24D**	Water	03/30/20 10:30	03/31/20 11:35
2630471016	**HGWC-13**	Water	03/30/20 12:15	03/31/20 11:35
2630471017	**MW-29**	Water	03/30/20 15:35	03/31/20 11:35
2630471018	**HGWC-11**	Water	03/31/20 15:22	04/01/20 10:30
2630471019	**MW-26D**	Water	03/31/20 09:35	04/01/20 10:30
2630471020	**HGWC-9**	Water	03/31/20 12:00	04/01/20 10:30
2630471021	**MW-30D**	Water	03/31/20 10:00	04/01/20 10:30
2630471022	**FD-01**	Water	03/31/20 00:00	04/01/20 10:30
2630471023	**HGWC-10**	Water	04/01/20 09:47	04/02/20 10:25
2630471024	**MW-27D**	Water	04/02/20 10:48	04/03/20 11:50

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SAMPLE ANALYTE COUNT

Project: HAMMOND AP-1 1ST SEMIANNUAL
Pace Project No.: 2630471

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
2630471001	**HGWA-1**	EPA 6010D	DRB	1	PASI-GA
		EPA 6020B	CSW	13	PASI-GA
		SM 2540C	VHB	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
2630471002	**HGWA-3**	EPA 6010D	DRB	1	PASI-GA
		EPA 6020B	CSW	13	PASI-GA
		SM 2540C	VHB	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
2630471003	**HGWA-2**	EPA 6010D	DRB	1	PASI-GA
		EPA 6020B	CSW	13	PASI-GA
		SM 2540C	VHB	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
2630471004	**HGWC-12**	EPA 6010D	DRB	1	PASI-GA
		EPA 6020B	CSW	13	PASI-GA
		SM 2540C	TC1	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
2630471005	**MW-25D**	EPA 6010D	DRB	1	PASI-GA
		EPA 6020B	CSW	13	PASI-GA
		SM 2540C	TC1	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
2630471006	**MW-19**	EPA 6010D	DRB	1	PASI-GA
		EPA 6020B	CSW	13	PASI-GA
		SM 2540C	TC1	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
2630471007	**MW-5**	EPA 6010D	DRB	1	PASI-GA
		EPA 6020B	CSW	13	PASI-GA
		SM 2540C	TC1	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
2630471008	**HGWC-7**	EPA 6010D	DRB	1	PASI-GA
		EPA 6020B	CSW	13	PASI-GA
		SM 2540C	TC1	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
2630471009	**MW-28D**	EPA 6010D	DRB	1	PASI-GA
		EPA 6020B	CSW	13	PASI-GA
		SM 2540C	TC1	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
2630471010	**MW-20**	EPA 6010D	DRB	1	PASI-GA

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SAMPLE ANALYTE COUNT

Project: HAMMOND AP-1 1ST SEMIANNUAL
Pace Project No.: 2630471

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 6020B	CSW	13	PASI-GA
		SM 2540C	TC1	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
2630471011	**HGWC-8**	EPA 6010D	DRB	1	PASI-GA
		EPA 6020B	CSW	13	PASI-GA
		SM 2540C	TC1	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
2630471012	**MW-6**	EPA 6010D	DRB	1	PASI-GA
		EPA 6020B	CSW	13	PASI-GA
		SM 2540C	TC1	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
2630471013	**FB-01**	EPA 6010D	DRB	1	PASI-GA
		EPA 6020B	CSW	13	PASI-GA
		SM 2540C	TC1	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
2630471014	**MW-7**	EPA 6010D	DRB	1	PASI-GA
		EPA 6020B	CSW	13	PASI-GA
		SM 2540C	TC1	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	BRJ	3	PASI-A
2630471015	**MW-24D**	EPA 6010D	DRB	1	PASI-GA
		EPA 6020B	CSW	13	PASI-GA
		SM 2540C	TC1	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	BRJ	3	PASI-A
2630471016	**HGWC-13**	EPA 6010D	DRB	1	PASI-GA
		EPA 6020B	CSW	13	PASI-GA
		SM 2540C	TC1	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	BRJ	3	PASI-A
2630471017	**MW-29**	EPA 6010D	DRB	1	PASI-GA
		EPA 6020B	CSW	13	PASI-GA
		SM 2540C	TC1	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	BRJ	3	PASI-A
2630471018	**HGWC-11**	EPA 6010D	DRB	1	PASI-GA
		EPA 6020B	CSW	13	PASI-GA
		SM 2540C	JRS	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	BRJ	3	PASI-A
2630471019	**MW-26D**	EPA 6010D	DRB	1	PASI-GA
		EPA 6020B	CSW	13	PASI-GA

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SAMPLE ANALYTE COUNT

Project: HAMMOND AP-1 1ST SEMIANNUAL
Pace Project No.: 2630471

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		SM 2540C	JRS	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	BRJ	3	PASI-A
2630471020	**HGWC-9**	EPA 6010D	DRB	1	PASI-GA
		EPA 6020B	CSW	13	PASI-GA
		SM 2540C	JRS	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	BRJ	3	PASI-A
2630471021	**MW-30D**	EPA 6010D	DRB	1	PASI-GA
		EPA 6020B	CSW	13	PASI-GA
		SM 2540C	JRS	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	BRJ	3	PASI-A
2630471022	**FD-01**	EPA 6010D	DRB	1	PASI-GA
		EPA 6020B	CSW	13	PASI-GA
		SM 2540C	JRS	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	BRJ	3	PASI-A
2630471023	**HGWC-10**	EPA 6010D	DRB	1	PASI-GA
		EPA 6020B	CSW	13	PASI-GA
		SM 2540C	JRS	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	BRJ	3	PASI-A
2630471024	**MW-27D**	EPA 6010D	DRB	1	PASI-GA
		EPA 6020B	CSW	13	PASI-GA
		SM 2540C	JRS	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A

PASI-A = Pace Analytical Services - Asheville
PASI-GA = Pace Analytical Services - Atlanta, GA

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SUMMARY OF DETECTION

Project: HAMMOND AP-1 1ST SEMIANNUAL
Pace Project No.: 2630471

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
2630471001	**HGWA-1**					
	Field pH	6.95	Std. Units		04/07/20 14:38	
EPA 6010D	Calcium	127	mg/L	1.0	04/02/20 13:58	
EPA 6020B	Barium	0.043	mg/L	0.010	04/02/20 20:39	
EPA 6020B	Boron	0.025J	mg/L	0.10	04/02/20 20:39	
EPA 6020B	Chromium	0.00072J	mg/L	0.010	04/02/20 20:39	
EPA 6020B	Lithium	0.00083J	mg/L	0.030	04/02/20 20:39	
SM 2540C	Total Dissolved Solids	496	mg/L	10.0	04/01/20 15:05	
EPA 300.0 Rev 2.1 1993	Chloride	20.4	mg/L	1.0	04/03/20 00:17	
EPA 300.0 Rev 2.1 1993	Fluoride	0.098J	mg/L	0.30	04/03/20 00:17	
EPA 300.0 Rev 2.1 1993	Sulfate	85.9	mg/L	1.0	04/03/20 00:17	
2630471002	**HGWA-3**					
	Field pH	7.4	Std. Units		04/07/20 14:38	
EPA 6010D	Calcium	89.8	mg/L	1.0	04/02/20 14:01	
EPA 6020B	Barium	0.13	mg/L	0.010	04/02/20 20:56	
EPA 6020B	Boron	0.0096J	mg/L	0.10	04/02/20 20:56	
EPA 6020B	Lithium	0.0035J	mg/L	0.030	04/02/20 20:56	
SM 2540C	Total Dissolved Solids	284	mg/L	10.0	04/01/20 15:05	
EPA 300.0 Rev 2.1 1993	Chloride	6.1	mg/L	1.0	04/03/20 01:01	
EPA 300.0 Rev 2.1 1993	Sulfate	50.5	mg/L	1.0	04/03/20 01:01	
2630471003	**HGWA-2**					
	Field pH	5.36	Std. Units		04/07/20 14:38	
EPA 6010D	Calcium	23.0	mg/L	1.0	04/02/20 14:05	
EPA 6020B	Barium	0.12	mg/L	0.010	04/02/20 21:02	
EPA 6020B	Beryllium	0.00016J	mg/L	0.0030	04/02/20 21:02	
EPA 6020B	Boron	0.039J	mg/L	0.10	04/02/20 21:02	
EPA 6020B	Cadmium	0.00014J	mg/L	0.0025	04/02/20 21:02	
EPA 6020B	Cobalt	0.020	mg/L	0.0050	04/02/20 21:02	
EPA 6020B	Lead	0.00011J	mg/L	0.0050	04/02/20 21:02	
EPA 6020B	Lithium	0.0017J	mg/L	0.030	04/02/20 21:02	
SM 2540C	Total Dissolved Solids	138	mg/L	10.0	04/01/20 15:06	
EPA 300.0 Rev 2.1 1993	Chloride	5.2	mg/L	1.0	04/03/20 01:46	
EPA 300.0 Rev 2.1 1993	Sulfate	46.3	mg/L	1.0	04/03/20 01:46	
2630471004	**HGWC-12**					
	Field pH	6.99	Std. Units		04/07/20 14:38	
EPA 6010D	Calcium	145	mg/L	1.0	04/02/20 17:59	
EPA 6020B	Arsenic	0.0028J	mg/L	0.0050	04/02/20 22:30	
EPA 6020B	Barium	0.089	mg/L	0.010	04/02/20 22:30	
EPA 6020B	Boron	1.6	mg/L	0.10	04/02/20 22:30	
EPA 6020B	Cobalt	0.0012J	mg/L	0.0050	04/02/20 22:30	
EPA 6020B	Lead	0.00043J	mg/L	0.0050	04/02/20 22:30	
EPA 6020B	Lithium	0.0063J	mg/L	0.030	04/02/20 22:30	
EPA 6020B	Molybdenum	0.045	mg/L	0.010	04/02/20 22:30	
EPA 6020B	Thallium	0.000080J	mg/L	0.0010	04/02/20 22:30	
SM 2540C	Total Dissolved Solids	533	mg/L	10.0	04/02/20 15:00	
EPA 300.0 Rev 2.1 1993	Chloride	48.0	mg/L	1.0	04/03/20 03:23	
EPA 300.0 Rev 2.1 1993	Fluoride	0.17J	mg/L	0.30	04/03/20 03:23	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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SUMMARY OF DETECTION

Project: HAMMOND AP-1 1ST SEMIANNUAL
Pace Project No.: 2630471

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
2630471004	**HGWC-12**					
EPA 300.0 Rev 2.1 1993	Sulfate	182	mg/L	4.0	04/03/20 10:34	
2630471005	**MW-25D**					
	Field pH	7.57	Std. Units		04/07/20 14:38	
EPA 6010D	Calcium	27.0	mg/L	1.0	04/03/20 21:08	
EPA 6020B	Arsenic	0.00075J	mg/L	0.0050	04/02/20 22:47	
EPA 6020B	Barium	0.45	mg/L	0.010	04/02/20 22:47	
EPA 6020B	Boron	0.44	mg/L	0.10	04/02/20 22:47	
EPA 6020B	Chromium	0.00061J	mg/L	0.010	04/02/20 22:47	
EPA 6020B	Lithium	0.054	mg/L	0.030	04/02/20 22:47	
SM 2540C	Total Dissolved Solids	385	mg/L	10.0	04/02/20 15:00	
EPA 300.0 Rev 2.1 1993	Chloride	34.6	mg/L	1.0	04/03/20 03:37	
EPA 300.0 Rev 2.1 1993	Fluoride	1.6	mg/L	0.30	04/03/20 03:37	
EPA 300.0 Rev 2.1 1993	Sulfate	32.3	mg/L	1.0	04/03/20 03:37	
2630471006	**MW-19**					
	Field pH	6.28	Std. Units		04/07/20 14:38	
EPA 6010D	Calcium	171	mg/L	1.0	04/03/20 21:22	
EPA 6020B	Barium	0.067	mg/L	0.010	04/02/20 22:52	
EPA 6020B	Boron	1.0	mg/L	0.10	04/02/20 22:52	
EPA 6020B	Cadmium	0.00019J	mg/L	0.0025	04/02/20 22:52	
EPA 6020B	Chromium	0.00047J	mg/L	0.010	04/02/20 22:52	
EPA 6020B	Cobalt	0.045	mg/L	0.0050	04/02/20 22:52	
EPA 6020B	Lithium	0.013J	mg/L	0.030	04/02/20 22:52	
EPA 6020B	Molybdenum	0.033	mg/L	0.010	04/02/20 22:52	
EPA 6020B	Selenium	0.0053J	mg/L	0.010	04/02/20 22:52	
EPA 6020B	Thallium	0.00026J	mg/L	0.0010	04/02/20 22:52	
SM 2540C	Total Dissolved Solids	626	mg/L	10.0	04/02/20 15:00	
EPA 300.0 Rev 2.1 1993	Chloride	64.0	mg/L	1.0	04/03/20 03:52	
EPA 300.0 Rev 2.1 1993	Fluoride	0.12J	mg/L	0.30	04/03/20 03:52	
EPA 300.0 Rev 2.1 1993	Sulfate	310	mg/L	6.0	04/03/20 10:55	
2630471007	**MW-5**					
	Field pH	6.14	Std. Units		04/07/20 14:38	
EPA 6010D	Calcium	89.6	mg/L	1.0	04/03/20 21:26	
EPA 6020B	Barium	0.046	mg/L	0.010	04/02/20 22:58	
EPA 6020B	Boron	0.041J	mg/L	0.10	04/02/20 22:58	
EPA 6020B	Chromium	0.0044J	mg/L	0.010	04/02/20 22:58	
EPA 6020B	Selenium	0.0039J	mg/L	0.010	04/02/20 22:58	
SM 2540C	Total Dissolved Solids	385	mg/L	10.0	04/02/20 15:00	
EPA 300.0 Rev 2.1 1993	Chloride	0.73J	mg/L	1.0	04/03/20 04:07	M1
EPA 300.0 Rev 2.1 1993	Fluoride	0.082J	mg/L	0.30	04/03/20 04:07	
EPA 300.0 Rev 2.1 1993	Sulfate	176	mg/L	4.0	04/03/20 11:16	
2630471008	**HGWC-7**					
	Field pH	7.05	Std. Units		04/07/20 14:38	
EPA 6010D	Calcium	119	mg/L	1.0	04/03/20 22:40	
EPA 6020B	Barium	0.059	mg/L	0.010	04/03/20 17:05	
EPA 6020B	Boron	1.2	mg/L	0.10	04/03/20 17:05	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: HAMMOND AP-1 1ST SEMIANNUAL
Pace Project No.: 2630471

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
2630471008	**HGWC-7**					
EPA 6020B	Chromium	0.00040J	mg/L	0.010	04/03/20 17:05	
EPA 6020B	Cobalt	0.00074J	mg/L	0.0050	04/03/20 17:05	
EPA 6020B	Lead	0.000054J	mg/L	0.0050	04/03/20 17:05	
EPA 6020B	Lithium	0.0020J	mg/L	0.030	04/03/20 17:05	
EPA 6020B	Molybdenum	0.044	mg/L	0.010	04/03/20 17:05	
SM 2540C	Total Dissolved Solids	413	mg/L	10.0	04/02/20 17:56	
EPA 300.0 Rev 2.1 1993	Chloride	48.3	mg/L	1.0	04/02/20 18:44	
EPA 300.0 Rev 2.1 1993	Fluoride	0.059J	mg/L	0.30	04/02/20 18:44	
EPA 300.0 Rev 2.1 1993	Sulfate	109	mg/L	2.0	04/03/20 08:03	
2630471009	**MW-28D**					
	Field pH	7.42	Std. Units		04/07/20 14:38	
EPA 6010D	Calcium	53.0	mg/L	1.0	04/03/20 19:47	
EPA 6020B	Barium	0.64	mg/L	0.010	04/03/20 17:22	
EPA 6020B	Boron	0.14	mg/L	0.10	04/03/20 17:22	
EPA 6020B	Lead	0.000062J	mg/L	0.0050	04/03/20 17:22	
EPA 6020B	Lithium	0.014J	mg/L	0.030	04/03/20 17:22	
EPA 6020B	Molybdenum	0.0068J	mg/L	0.010	04/03/20 17:22	
SM 2540C	Total Dissolved Solids	287	mg/L	10.0	04/02/20 17:56	
EPA 300.0 Rev 2.1 1993	Chloride	33.0	mg/L	1.0	04/02/20 18:59	
EPA 300.0 Rev 2.1 1993	Fluoride	0.26J	mg/L	0.30	04/02/20 18:59	
EPA 300.0 Rev 2.1 1993	Sulfate	36.0	mg/L	1.0	04/02/20 18:59	
2630471010	**MW-20**					
	Field pH	6.75	Std. Units		04/07/20 14:38	
EPA 6010D	Calcium	126	mg/L	1.0	04/03/20 19:50	
EPA 6020B	Barium	0.093	mg/L	0.010	04/03/20 17:28	
EPA 6020B	Boron	0.12	mg/L	0.10	04/03/20 17:28	
EPA 6020B	Chromium	0.00051J	mg/L	0.010	04/03/20 17:28	
EPA 6020B	Lead	0.00013J	mg/L	0.0050	04/03/20 17:28	
EPA 6020B	Lithium	0.0012J	mg/L	0.030	04/03/20 17:28	
SM 2540C	Total Dissolved Solids	429	mg/L	10.0	04/02/20 17:56	
EPA 300.0 Rev 2.1 1993	Chloride	28.8	mg/L	1.0	04/02/20 19:43	
EPA 300.0 Rev 2.1 1993	Sulfate	114	mg/L	2.0	04/03/20 08:26	
2630471011	**HGWC-8**					
	Field pH	6.95	Std. Units		04/07/20 14:38	
EPA 6010D	Calcium	133	mg/L	1.0	04/03/20 19:54	
EPA 6020B	Barium	0.059	mg/L	0.010	04/03/20 17:33	
EPA 6020B	Boron	2.4	mg/L	0.10	04/03/20 17:33	
EPA 6020B	Cadmium	0.00014J	mg/L	0.0025	04/03/20 17:33	
EPA 6020B	Cobalt	0.0018J	mg/L	0.0050	04/03/20 17:33	
EPA 6020B	Lithium	0.0026J	mg/L	0.030	04/03/20 17:33	
EPA 6020B	Molybdenum	0.42	mg/L	0.010	04/03/20 17:33	
EPA 6020B	Thallium	0.000077J	mg/L	0.0010	04/03/20 17:33	
SM 2540C	Total Dissolved Solids	541	mg/L	10.0	04/02/20 17:56	
EPA 300.0 Rev 2.1 1993	Chloride	79.8	mg/L	1.0	04/02/20 19:58	
EPA 300.0 Rev 2.1 1993	Fluoride	0.46	mg/L	0.30	04/02/20 19:58	
EPA 300.0 Rev 2.1 1993	Sulfate	173	mg/L	4.0	04/03/20 08:48	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: HAMMOND AP-1 1ST SEMIANNUAL
Pace Project No.: 2630471

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
2630471012	**MW-6**					
	Field pH	6.82	Std. Units		04/07/20 14:38	
EPA 6010D	Calcium	186	mg/L	1.0	04/03/20 19:57	
EPA 6020B	Barium	0.086	mg/L	0.010	04/03/20 17:39	
EPA 6020B	Boron	0.77	mg/L	0.10	04/03/20 17:39	
EPA 6020B	Chromium	0.00059J	mg/L	0.010	04/03/20 17:39	
EPA 6020B	Cobalt	0.00059J	mg/L	0.0050	04/03/20 17:39	
EPA 6020B	Molybdenum	0.0026J	mg/L	0.010	04/03/20 17:39	
SM 2540C	Total Dissolved Solids	676	mg/L	10.0	04/02/20 17:57	
EPA 300.0 Rev 2.1 1993	Chloride	48.6	mg/L	1.0	04/02/20 20:13	
EPA 300.0 Rev 2.1 1993	Sulfate	204	mg/L	4.0	04/03/20 09:09	
2630471013	**FB-01**					
EPA 6020B	Lead	0.00019J	mg/L	0.0050	04/03/20 17:51	
2630471014	**MW-7**					
	Field pH	6.06	Std. Units		04/07/20 14:38	
EPA 6010D	Calcium	31.1	mg/L	1.0	04/03/20 20:04	
EPA 6020B	Barium	0.050	mg/L	0.010	04/02/20 15:28	
EPA 6020B	Boron	0.051J	mg/L	0.10	04/02/20 15:28	
EPA 6020B	Chromium	0.0021J	mg/L	0.010	04/02/20 15:28	
EPA 6020B	Selenium	0.0014J	mg/L	0.010	04/02/20 15:28	
SM 2540C	Total Dissolved Solids	142	mg/L	10.0	04/02/20 17:57	
EPA 300.0 Rev 2.1 1993	Chloride	1.5	mg/L	1.0	04/04/20 15:22	
EPA 300.0 Rev 2.1 1993	Sulfate	46.2	mg/L	1.0	04/04/20 15:22	
2630471015	**MW-24D**					
	Field pH	7.49	Std. Units		04/07/20 14:38	
EPA 6010D	Calcium	84.4	mg/L	1.0	04/03/20 20:08	
EPA 6020B	Barium	0.056	mg/L	0.010	04/02/20 15:34	
EPA 6020B	Boron	0.51	mg/L	0.10	04/02/20 15:34	
EPA 6020B	Lead	0.000064J	mg/L	0.0050	04/02/20 15:34	
EPA 6020B	Lithium	0.0027J	mg/L	0.030	04/02/20 15:34	
SM 2540C	Total Dissolved Solids	280	mg/L	10.0	04/02/20 17:58	
EPA 300.0 Rev 2.1 1993	Chloride	37.4	mg/L	1.0	04/04/20 16:35	
EPA 300.0 Rev 2.1 1993	Fluoride	0.064J	mg/L	0.30	04/04/20 16:35	
EPA 300.0 Rev 2.1 1993	Sulfate	84.9	mg/L	1.0	04/04/20 16:35	
2630471016	**HGWC-13**					
	Field pH	6.91	Std. Units		04/07/20 14:38	
EPA 6010D	Calcium	234	mg/L	1.0	04/03/20 20:11	
EPA 6020B	Antimony	0.00036J	mg/L	0.0030	04/02/20 15:52	
EPA 6020B	Arsenic	0.47	mg/L	0.0050	04/02/20 15:52	
EPA 6020B	Barium	0.080	mg/L	0.010	04/02/20 15:52	
EPA 6020B	Beryllium	0.000099J	mg/L	0.0030	04/02/20 15:52	
EPA 6020B	Boron	1.8	mg/L	0.10	04/02/20 15:52	
EPA 6020B	Chromium	0.00059J	mg/L	0.010	04/02/20 15:52	
EPA 6020B	Cobalt	0.0053	mg/L	0.0050	04/02/20 15:52	
EPA 6020B	Lead	0.00010J	mg/L	0.0050	04/02/20 15:52	
EPA 6020B	Lithium	0.038	mg/L	0.030	04/02/20 15:52	

REPORT OF LABORATORY ANALYSIS

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

Project: HAMMOND AP-1 1ST SEMIANNUAL
Pace Project No.: 2630471

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
2630471016	**HGWC-13**					
EPA 6020B	Molybdenum	0.029	mg/L	0.010	04/02/20 15:52	
EPA 6020B	Thallium	0.00048J	mg/L	0.0010	04/02/20 15:52	
SM 2540C	Total Dissolved Solids	895	mg/L	10.0	04/02/20 17:58	
EPA 300.0 Rev 2.1 1993	Chloride	75.1	mg/L	1.0	04/04/20 16:49	
EPA 300.0 Rev 2.1 1993	Fluoride	0.44	mg/L	0.30	04/04/20 16:49	
EPA 300.0 Rev 2.1 1993	Sulfate	393	mg/L	8.0	04/05/20 07:07	
2630471017	**MW-29**					
	Field pH	7.07	Std. Units		04/07/20 14:38	
EPA 6010D	Calcium	148	mg/L	1.0	04/03/20 20:15	
EPA 6020B	Arsenic	0.00037J	mg/L	0.0050	04/02/20 15:58	B
EPA 6020B	Barium	0.080	mg/L	0.010	04/02/20 15:58	
EPA 6020B	Boron	1.3	mg/L	0.10	04/02/20 15:58	
EPA 6020B	Chromium	0.0010J	mg/L	0.010	04/02/20 15:58	
EPA 6020B	Cobalt	0.00063J	mg/L	0.0050	04/02/20 15:58	
EPA 6020B	Lead	0.00011J	mg/L	0.0050	04/02/20 15:58	
EPA 6020B	Lithium	0.0023J	mg/L	0.030	04/02/20 15:58	
EPA 6020B	Molybdenum	0.0029J	mg/L	0.010	04/02/20 15:58	
SM 2540C	Total Dissolved Solids	552	mg/L	10.0	04/02/20 17:58	
EPA 300.0 Rev 2.1 1993	Chloride	71.2	mg/L	1.0	04/04/20 17:04	
EPA 300.0 Rev 2.1 1993	Sulfate	130	mg/L	3.0	04/05/20 07:23	
2630471018	**HGWC-11**					
	Field pH	5.7	Std. Units		04/07/20 14:38	
EPA 6010D	Calcium	124	mg/L	1.0	04/02/20 18:39	M1
EPA 6020B	Arsenic	0.0022J	mg/L	0.0050	04/08/20 17:09	B
EPA 6020B	Barium	0.026	mg/L	0.010	04/08/20 17:09	
EPA 6020B	Beryllium	0.00015J	mg/L	0.0030	04/08/20 17:09	
EPA 6020B	Boron	0.17	mg/L	0.10	04/08/20 17:09	
EPA 6020B	Cobalt	0.0014J	mg/L	0.0050	04/08/20 17:09	
EPA 6020B	Lead	0.00030J	mg/L	0.0050	04/08/20 17:09	
EPA 6020B	Molybdenum	0.0074J	mg/L	0.010	04/08/20 17:09	
EPA 6020B	Selenium	0.019	mg/L	0.010	04/08/20 17:09	
SM 2540C	Total Dissolved Solids	565	mg/L	10.0	04/07/20 12:16	
EPA 300.0 Rev 2.1 1993	Chloride	3.2	mg/L	1.0	04/04/20 16:58	
EPA 300.0 Rev 2.1 1993	Fluoride	0.19J	mg/L	0.30	04/04/20 16:58	
EPA 300.0 Rev 2.1 1993	Sulfate	283	mg/L	6.0	04/05/20 07:41	
2630471019	**MW-26D**					
	Field pH	7.20	Std. Units		04/07/20 14:38	
EPA 6010D	Calcium	155	mg/L	1.0	04/02/20 18:53	
EPA 6020B	Antimony	0.0013J	mg/L	0.0030	04/08/20 17:32	
EPA 6020B	Barium	0.11	mg/L	0.010	04/08/20 17:32	
EPA 6020B	Boron	1.8	mg/L	0.10	04/08/20 17:32	
EPA 6020B	Chromium	0.0010J	mg/L	0.010	04/08/20 17:32	
EPA 6020B	Cobalt	0.00030J	mg/L	0.0050	04/08/20 17:32	
EPA 6020B	Lead	0.00010J	mg/L	0.0050	04/08/20 17:32	
EPA 6020B	Lithium	0.0036J	mg/L	0.030	04/08/20 17:32	
EPA 6020B	Molybdenum	0.0093J	mg/L	0.010	04/08/20 17:32	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: HAMMOND AP-1 1ST SEMIANNUAL
Pace Project No.: 2630471

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
2630471019	**MW-26D**					
SM 2540C	Total Dissolved Solids	623	mg/L	10.0	04/07/20 12:16	
EPA 300.0 Rev 2.1 1993	Chloride	98.0	mg/L	1.0	04/04/20 17:54	
EPA 300.0 Rev 2.1 1993	Sulfate	129	mg/L	3.0	04/05/20 07:56	
2630471020	**HGWC-9**					
	Field pH	7.07	Std. Units		04/07/20 14:38	
EPA 6010D	Calcium	182	mg/L	1.0	04/02/20 18:56	
EPA 6020B	Antimony	0.00042J	mg/L	0.0030	04/08/20 17:37	
EPA 6020B	Barium	0.11	mg/L	0.010	04/08/20 17:37	
EPA 6020B	Boron	2.2	mg/L	0.10	04/08/20 17:37	
EPA 6020B	Chromium	0.00052J	mg/L	0.010	04/08/20 17:37	
EPA 6020B	Cobalt	0.00051J	mg/L	0.0050	04/08/20 17:37	
EPA 6020B	Lead	0.00014J	mg/L	0.0050	04/08/20 17:37	
EPA 6020B	Lithium	0.0043J	mg/L	0.030	04/08/20 17:37	
EPA 6020B	Molybdenum	0.031	mg/L	0.010	04/08/20 17:37	
SM 2540C	Total Dissolved Solids	1010	mg/L	10.0	04/07/20 12:16	
EPA 300.0 Rev 2.1 1993	Chloride	105	mg/L	4.0	04/05/20 08:52	
EPA 300.0 Rev 2.1 1993	Fluoride	0.074J	mg/L	0.30	04/04/20 18:08	
EPA 300.0 Rev 2.1 1993	Sulfate	185	mg/L	4.0	04/05/20 08:52	
2630471021	**MW-30D**					
	Field pH	7.95	Std. Units		04/07/20 14:38	
EPA 6010D	Calcium	7.1	mg/L	1.0	04/02/20 19:00	
EPA 6020B	Antimony	0.00032J	mg/L	0.0030	04/08/20 17:43	
EPA 6020B	Barium	0.29	mg/L	0.010	04/08/20 17:43	
EPA 6020B	Boron	0.90	mg/L	0.10	04/08/20 17:43	
EPA 6020B	Chromium	0.00070J	mg/L	0.010	04/08/20 17:43	
EPA 6020B	Lead	0.000067J	mg/L	0.0050	04/08/20 17:43	
EPA 6020B	Lithium	0.25	mg/L	0.030	04/08/20 17:43	
EPA 6020B	Molybdenum	0.015	mg/L	0.010	04/08/20 17:43	
SM 2540C	Total Dissolved Solids	1130	mg/L	10.0	04/07/20 12:17	
EPA 300.0 Rev 2.1 1993	Chloride	111	mg/L	4.0	04/05/20 09:06	
EPA 300.0 Rev 2.1 1993	Fluoride	10.5	mg/L	1.2	04/05/20 09:06	
EPA 300.0 Rev 2.1 1993	Sulfate	139	mg/L	4.0	04/05/20 09:06	
2630471022	**FD-01**					
EPA 6010D	Calcium	7.8	mg/L	1.0	04/02/20 19:04	
EPA 6020B	Barium	0.27	mg/L	0.010	04/08/20 17:49	
EPA 6020B	Boron	0.86	mg/L	0.10	04/08/20 17:49	
EPA 6020B	Chromium	0.0013J	mg/L	0.010	04/08/20 17:49	
EPA 6020B	Lead	0.00021J	mg/L	0.0050	04/08/20 17:49	
EPA 6020B	Lithium	0.24	mg/L	0.030	04/08/20 17:49	
EPA 6020B	Molybdenum	0.014	mg/L	0.010	04/08/20 17:49	
SM 2540C	Total Dissolved Solids	1080	mg/L	10.0	04/07/20 12:17	
EPA 300.0 Rev 2.1 1993	Chloride	104	mg/L	4.0	04/05/20 09:20	
EPA 300.0 Rev 2.1 1993	Fluoride	10.4	mg/L	1.2	04/05/20 09:20	
EPA 300.0 Rev 2.1 1993	Sulfate	166	mg/L	4.0	04/05/20 09:20	

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SUMMARY OF DETECTION

Project: HAMMOND AP-1 1ST SEMIANNUAL
Pace Project No.: 2630471

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
2630471023	**HGWC-10**					
	Field pH	6.84	Std. Units		04/07/20 14:38	
EPA 6010D	Calcium	96.2	mg/L	1.0	04/06/20 16:34	M1
EPA 6020B	Barium	0.058	mg/L	0.010	04/09/20 11:02	
EPA 6020B	Boron	0.23	mg/L	0.10	04/09/20 11:02	
EPA 6020B	Lead	0.000050J	mg/L	0.0050	04/09/20 11:02	
EPA 6020B	Selenium	0.0020J	mg/L	0.010	04/09/20 11:02	
SM 2540C	Total Dissolved Solids	290	mg/L	10.0	04/07/20 12:20	
EPA 300.0 Rev 2.1 1993	Chloride	5.4	mg/L	1.0	04/04/20 16:02	
EPA 300.0 Rev 2.1 1993	Fluoride	0.12J	mg/L	0.30	04/04/20 16:02	
EPA 300.0 Rev 2.1 1993	Sulfate	59.0	mg/L	1.0	04/04/20 16:02	
2630471024	**MW-27D**					
	Field pH	8.11	Std. Units		04/07/20 14:38	
EPA 6010D	Calcium	28.4	mg/L	1.0	04/07/20 19:35	
EPA 6020B	Antimony	0.00030J	mg/L	0.0030	04/07/20 17:13	
EPA 6020B	Barium	1.0	mg/L	0.010	04/07/20 17:13	
EPA 6020B	Boron	0.13	mg/L	0.10	04/07/20 17:13	
EPA 6020B	Lead	0.00013J	mg/L	0.0050	04/07/20 17:13	
EPA 6020B	Lithium	0.0068J	mg/L	0.030	04/07/20 17:13	
EPA 6020B	Molybdenum	0.0030J	mg/L	0.010	04/07/20 17:13	
SM 2540C	Total Dissolved Solids	224	mg/L	10.0	04/07/20 12:20	
EPA 300.0 Rev 2.1 1993	Chloride	27.9	mg/L	1.0	04/07/20 20:04	
EPA 300.0 Rev 2.1 1993	Fluoride	0.24J	mg/L	0.30	04/07/20 20:04	
EPA 300.0 Rev 2.1 1993	Sulfate	13.3	mg/L	1.0	04/07/20 20:04	

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ANALYTICAL RESULTS

Project: HAMMOND AP-1 1ST SEMIANNUAL
Pace Project No.: 2630471

Sample: HGWA-1 **Lab ID: 2630471001** Collected: 03/25/20 15:56 Received: 03/26/20 11:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Atlanta, GA								
Field pH	**6.95**	Std. Units			1		04/07/20 14:38		
6010D MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Atlanta, GA								
Calcium	**127**	mg/L	1.0	0.14	1	03/31/20 20:57	04/02/20 13:58	7440-70-2	
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA								
Antimony	ND	mg/L	0.0030	0.00027	1	03/31/20 21:03	04/02/20 20:39	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00035	1	03/31/20 21:03	04/02/20 20:39	7440-38-2	
Barium	**0.043**	mg/L	0.010	0.00049	1	03/31/20 21:03	04/02/20 20:39	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000074	1	03/31/20 21:03	04/02/20 20:39	7440-41-7	
Boron	**0.025J**	mg/L	0.10	0.0049	1	03/31/20 21:03	04/02/20 20:39	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00011	1	03/31/20 21:03	04/02/20 20:39	7440-43-9	
Chromium	**0.00072J**	mg/L	0.010	0.00039	1	03/31/20 21:03	04/02/20 20:39	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00030	1	03/31/20 21:03	04/02/20 20:39	7440-48-4	
Lead	ND	mg/L	0.0050	0.000046	1	03/31/20 21:03	04/02/20 20:39	7439-92-1	
Lithium	**0.00083J**	mg/L	0.030	0.00078	1	03/31/20 21:03	04/02/20 20:39	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00095	1	03/31/20 21:03	04/02/20 20:39	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	03/31/20 21:03	04/02/20 20:39	7782-49-2	
Thallium	ND	mg/L	0.0010	0.000052	1	03/31/20 21:03	04/02/20 20:39	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Atlanta, GA								
Total Dissolved Solids	**496**	mg/L	10.0	10.0	1		04/01/20 15:05		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**20.4**	mg/L	1.0	0.60	1		04/03/20 00:17	16887-00-6	
Fluoride	**0.098J**	mg/L	0.30	0.050	1		04/03/20 00:17	16984-48-8	
Sulfate	**85.9**	mg/L	1.0	0.50	1		04/03/20 00:17	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: HAMMOND AP-1 1ST SEMIANNUAL
Pace Project No.: 2630471

Sample: HGWA-3 **Lab ID: 2630471002** Collected: 03/25/20 15:17 Received: 03/26/20 11:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Atlanta, GA								
Field pH	**7.4**	Std. Units			1		04/07/20 14:38		
6010D MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Atlanta, GA								
Calcium	**89.8**	mg/L	1.0	0.14	1	03/31/20 20:57	04/02/20 14:01	7440-70-2	
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA								
Antimony	ND	mg/L	0.0030	0.00027	1	03/31/20 21:03	04/02/20 20:56	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00035	1	03/31/20 21:03	04/02/20 20:56	7440-38-2	
Barium	**0.13**	mg/L	0.010	0.00049	1	03/31/20 21:03	04/02/20 20:56	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000074	1	03/31/20 21:03	04/02/20 20:56	7440-41-7	
Boron	**0.0096J**	mg/L	0.10	0.0049	1	03/31/20 21:03	04/02/20 20:56	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00011	1	03/31/20 21:03	04/02/20 20:56	7440-43-9	
Chromium	ND	mg/L	0.010	0.00039	1	03/31/20 21:03	04/02/20 20:56	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00030	1	03/31/20 21:03	04/02/20 20:56	7440-48-4	
Lead	ND	mg/L	0.0050	0.000046	1	03/31/20 21:03	04/02/20 20:56	7439-92-1	
Lithium	**0.0035J**	mg/L	0.030	0.00078	1	03/31/20 21:03	04/02/20 20:56	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00095	1	03/31/20 21:03	04/02/20 20:56	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	03/31/20 21:03	04/02/20 20:56	7782-49-2	
Thallium	ND	mg/L	0.0010	0.000052	1	03/31/20 21:03	04/02/20 20:56	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Atlanta, GA								
Total Dissolved Solids	**284**	mg/L	10.0	10.0	1		04/01/20 15:05		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**6.1**	mg/L	1.0	0.60	1		04/03/20 01:01	16887-00-6	
Fluoride	ND	mg/L	0.30	0.050	1		04/03/20 01:01	16984-48-8	
Sulfate	**50.5**	mg/L	1.0	0.50	1		04/03/20 01:01	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: HAMMOND AP-1 1ST SEMIANNUAL
Pace Project No.: 2630471

Sample: HGWA-2 **Lab ID: 2630471003** Collected: 03/25/20 16:32 Received: 03/26/20 11:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Atlanta, GA								
Field pH	**5.36**	Std. Units			1		04/07/20 14:38		
6010D MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Atlanta, GA								
Calcium	**23.0**	mg/L	1.0	0.14	1	03/31/20 20:57	04/02/20 14:05	7440-70-2	
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA								
Antimony	ND	mg/L	0.0030	0.00027	1	03/31/20 21:03	04/02/20 21:02	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00035	1	03/31/20 21:03	04/02/20 21:02	7440-38-2	
Barium	**0.12**	mg/L	0.010	0.00049	1	03/31/20 21:03	04/02/20 21:02	7440-39-3	
Beryllium	**0.00016J**	mg/L	0.0030	0.000074	1	03/31/20 21:03	04/02/20 21:02	7440-41-7	
Boron	**0.039J**	mg/L	0.10	0.0049	1	03/31/20 21:03	04/02/20 21:02	7440-42-8	
Cadmium	**0.00014J**	mg/L	0.0025	0.00011	1	03/31/20 21:03	04/02/20 21:02	7440-43-9	
Chromium	ND	mg/L	0.010	0.00039	1	03/31/20 21:03	04/02/20 21:02	7440-47-3	
Cobalt	**0.020**	mg/L	0.0050	0.00030	1	03/31/20 21:03	04/02/20 21:02	7440-48-4	
Lead	**0.00011J**	mg/L	0.0050	0.000046	1	03/31/20 21:03	04/02/20 21:02	7439-92-1	
Lithium	**0.0017J**	mg/L	0.030	0.00078	1	03/31/20 21:03	04/02/20 21:02	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00095	1	03/31/20 21:03	04/02/20 21:02	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	03/31/20 21:03	04/02/20 21:02	7782-49-2	
Thallium	ND	mg/L	0.0010	0.000052	1	03/31/20 21:03	04/02/20 21:02	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Atlanta, GA								
Total Dissolved Solids	**138**	mg/L	10.0	10.0	1		04/01/20 15:06		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**5.2**	mg/L	1.0	0.60	1		04/03/20 01:46	16887-00-6	
Fluoride	ND	mg/L	0.30	0.050	1		04/03/20 01:46	16984-48-8	
Sulfate	**46.3**	mg/L	1.0	0.50	1		04/03/20 01:46	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: HAMMOND AP-1 1ST SEMIANNUAL
Pace Project No.: 2630471

Sample: HGWC-12 **Lab ID: 2630471004** Collected: 03/26/20 08:50 Received: 03/27/20 13:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Atlanta, GA								
Field pH	**6.99**	Std. Units			1		04/07/20 14:38		
6010D MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Atlanta, GA								
Calcium	**145**	mg/L	1.0	0.14	1	04/01/20 15:36	04/02/20 17:59	7440-70-2	
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA								
Antimony	ND	mg/L	0.0030	0.00027	1	04/01/20 15:40	04/02/20 22:30	7440-36-0	
Arsenic	**0.0028J**	mg/L	0.0050	0.00035	1	04/01/20 15:40	04/02/20 22:30	7440-38-2	
Barium	**0.089**	mg/L	0.010	0.00049	1	04/01/20 15:40	04/02/20 22:30	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000074	1	04/01/20 15:40	04/02/20 22:30	7440-41-7	
Boron	**1.6**	mg/L	0.10	0.0049	1	04/01/20 15:40	04/02/20 22:30	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00011	1	04/01/20 15:40	04/02/20 22:30	7440-43-9	
Chromium	ND	mg/L	0.010	0.00039	1	04/01/20 15:40	04/02/20 22:30	7440-47-3	
Cobalt	**0.0012J**	mg/L	0.0050	0.00030	1	04/01/20 15:40	04/02/20 22:30	7440-48-4	
Lead	**0.00043J**	mg/L	0.0050	0.000046	1	04/01/20 15:40	04/02/20 22:30	7439-92-1	
Lithium	**0.0063J**	mg/L	0.030	0.00078	1	04/01/20 15:40	04/02/20 22:30	7439-93-2	
Molybdenum	**0.045**	mg/L	0.010	0.00095	1	04/01/20 15:40	04/02/20 22:30	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	04/01/20 15:40	04/02/20 22:30	7782-49-2	
Thallium	**0.000080J**	mg/L	0.0010	0.000052	1	04/01/20 15:40	04/02/20 22:30	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Atlanta, GA								
Total Dissolved Solids	**533**	mg/L	10.0	10.0	1		04/02/20 15:00		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**48.0**	mg/L	1.0	0.60	1		04/03/20 03:23	16887-00-6	
Fluoride	**0.17J**	mg/L	0.30	0.050	1		04/03/20 03:23	16984-48-8	
Sulfate	**182**	mg/L	4.0	2.0	4		04/03/20 10:34	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: HAMMOND AP-1 1ST SEMIANNUAL
Pace Project No.: 2630471

Sample: MW-25D **Lab ID: 2630471005** Collected: 03/26/20 10:45 Received: 03/27/20 13:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Atlanta, GA								
Field pH	**7.57**	Std. Units			1		04/07/20 14:38		
6010D MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Atlanta, GA								
Calcium	**27.0**	mg/L	1.0	0.14	1	04/01/20 19:37	04/03/20 21:08	7440-70-2	
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA								
Antimony	ND	mg/L	0.0030	0.00027	1	04/01/20 15:40	04/02/20 22:47	7440-36-0	
Arsenic	**0.00075J**	mg/L	0.0050	0.00035	1	04/01/20 15:40	04/02/20 22:47	7440-38-2	
Barium	**0.45**	mg/L	0.010	0.00049	1	04/01/20 15:40	04/02/20 22:47	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000074	1	04/01/20 15:40	04/02/20 22:47	7440-41-7	
Boron	**0.44**	mg/L	0.10	0.0049	1	04/01/20 15:40	04/02/20 22:47	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00011	1	04/01/20 15:40	04/02/20 22:47	7440-43-9	
Chromium	**0.00061J**	mg/L	0.010	0.00039	1	04/01/20 15:40	04/02/20 22:47	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00030	1	04/01/20 15:40	04/02/20 22:47	7440-48-4	
Lead	ND	mg/L	0.0050	0.000046	1	04/01/20 15:40	04/02/20 22:47	7439-92-1	
Lithium	**0.054**	mg/L	0.030	0.00078	1	04/01/20 15:40	04/02/20 22:47	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00095	1	04/01/20 15:40	04/02/20 22:47	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	04/01/20 15:40	04/02/20 22:47	7782-49-2	
Thallium	ND	mg/L	0.0010	0.000052	1	04/01/20 15:40	04/02/20 22:47	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Atlanta, GA								
Total Dissolved Solids	**385**	mg/L	10.0	10.0	1		04/02/20 15:00		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**34.6**	mg/L	1.0	0.60	1		04/03/20 03:37	16887-00-6	
Fluoride	**1.6**	mg/L	0.30	0.050	1		04/03/20 03:37	16984-48-8	
Sulfate	**32.3**	mg/L	1.0	0.50	1		04/03/20 03:37	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: HAMMOND AP-1 1ST SEMIANNUAL
Pace Project No.: 2630471

Sample: MW-19 **Lab ID: 2630471006** Collected: 03/26/20 12:30 Received: 03/27/20 13:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Atlanta, GA								
Field pH	**6.28**	Std. Units			1		04/07/20 14:38		
6010D MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Atlanta, GA								
Calcium	**171**	mg/L	1.0	0.14	1	04/01/20 19:37	04/03/20 21:22	7440-70-2	
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA								
Antimony	ND	mg/L	0.0030	0.00027	1	04/01/20 15:40	04/02/20 22:52	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00035	1	04/01/20 15:40	04/02/20 22:52	7440-38-2	
Barium	**0.067**	mg/L	0.010	0.00049	1	04/01/20 15:40	04/02/20 22:52	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000074	1	04/01/20 15:40	04/02/20 22:52	7440-41-7	
Boron	**1.0**	mg/L	0.10	0.0049	1	04/01/20 15:40	04/02/20 22:52	7440-42-8	
Cadmium	**0.00019J**	mg/L	0.0025	0.00011	1	04/01/20 15:40	04/02/20 22:52	7440-43-9	
Chromium	**0.00047J**	mg/L	0.010	0.00039	1	04/01/20 15:40	04/02/20 22:52	7440-47-3	
Cobalt	**0.045**	mg/L	0.0050	0.00030	1	04/01/20 15:40	04/02/20 22:52	7440-48-4	
Lead	ND	mg/L	0.0050	0.000046	1	04/01/20 15:40	04/02/20 22:52	7439-92-1	
Lithium	**0.013J**	mg/L	0.030	0.00078	1	04/01/20 15:40	04/02/20 22:52	7439-93-2	
Molybdenum	**0.033**	mg/L	0.010	0.00095	1	04/01/20 15:40	04/02/20 22:52	7439-98-7	
Selenium	**0.0053J**	mg/L	0.010	0.0013	1	04/01/20 15:40	04/02/20 22:52	7782-49-2	
Thallium	**0.00026J**	mg/L	0.0010	0.000052	1	04/01/20 15:40	04/02/20 22:52	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Atlanta, GA								
Total Dissolved Solids	**626**	mg/L	10.0	10.0	1		04/02/20 15:00		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**64.0**	mg/L	1.0	0.60	1		04/03/20 03:52	16887-00-6	
Fluoride	**0.12J**	mg/L	0.30	0.050	1		04/03/20 03:52	16984-48-8	
Sulfate	**310**	mg/L	6.0	3.0	6		04/03/20 10:55	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: HAMMOND AP-1 1ST SEMIANNUAL
Pace Project No.: 2630471

Sample: MW-5 **Lab ID: 2630471007** Collected: 03/26/20 14:10 Received: 03/27/20 13:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Atlanta, GA								
Field pH	**6.14**	Std. Units			1		04/07/20 14:38		
6010D MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Atlanta, GA								
Calcium	**89.6**	mg/L	1.0	0.14	1	04/01/20 19:37	04/03/20 21:26	7440-70-2	
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA								
Antimony	ND	mg/L	0.0030	0.00027	1	04/01/20 15:40	04/02/20 22:58	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00035	1	04/01/20 15:40	04/02/20 22:58	7440-38-2	
Barium	**0.046**	mg/L	0.010	0.00049	1	04/01/20 15:40	04/02/20 22:58	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000074	1	04/01/20 15:40	04/02/20 22:58	7440-41-7	
Boron	**0.041J**	mg/L	0.10	0.0049	1	04/01/20 15:40	04/02/20 22:58	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00011	1	04/01/20 15:40	04/02/20 22:58	7440-43-9	
Chromium	**0.0044J**	mg/L	0.010	0.00039	1	04/01/20 15:40	04/02/20 22:58	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00030	1	04/01/20 15:40	04/02/20 22:58	7440-48-4	
Lead	ND	mg/L	0.0050	0.000046	1	04/01/20 15:40	04/02/20 22:58	7439-92-1	
Lithium	ND	mg/L	0.030	0.00078	1	04/01/20 15:40	04/02/20 22:58	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00095	1	04/01/20 15:40	04/02/20 22:58	7439-98-7	
Selenium	**0.0039J**	mg/L	0.010	0.0013	1	04/01/20 15:40	04/02/20 22:58	7782-49-2	
Thallium	ND	mg/L	0.0010	0.000052	1	04/01/20 15:40	04/02/20 22:58	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Atlanta, GA								
Total Dissolved Solids	**385**	mg/L	10.0	10.0	1		04/02/20 15:00		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**0.73J**	mg/L	1.0	0.60	1		04/03/20 04:07	16887-00-6	M1
Fluoride	**0.082J**	mg/L	0.30	0.050	1		04/03/20 04:07	16984-48-8	
Sulfate	**176**	mg/L	4.0	2.0	4		04/03/20 11:16	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: HAMMOND AP-1 1ST SEMIANNUAL
Pace Project No.: 2630471

Sample: HGWC-7 **Lab ID: 2630471008** Collected: 03/27/20 09:30 Received: 03/30/20 10:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Atlanta, GA								
Field pH	**7.05**	Std. Units			1		04/07/20 14:38		
6010D MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Atlanta, GA								
Calcium	**119**	mg/L	1.0	0.14	1	04/01/20 19:37	04/03/20 22:40	7440-70-2	
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA								
Antimony	ND	mg/L	0.0030	0.00027	1	04/01/20 18:37	04/03/20 17:05	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00035	1	04/01/20 18:37	04/03/20 17:05	7440-38-2	
Barium	**0.059**	mg/L	0.010	0.00049	1	04/01/20 18:37	04/03/20 17:05	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000074	1	04/01/20 18:37	04/03/20 17:05	7440-41-7	
Boron	**1.2**	mg/L	0.10	0.0049	1	04/01/20 18:37	04/03/20 17:05	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00011	1	04/01/20 18:37	04/03/20 17:05	7440-43-9	
Chromium	**0.00040J**	mg/L	0.010	0.00039	1	04/01/20 18:37	04/03/20 17:05	7440-47-3	
Cobalt	**0.00074J**	mg/L	0.0050	0.00030	1	04/01/20 18:37	04/03/20 17:05	7440-48-4	
Lead	**0.000054J**	mg/L	0.0050	0.000046	1	04/01/20 18:37	04/03/20 17:05	7439-92-1	
Lithium	**0.0020J**	mg/L	0.030	0.00078	1	04/01/20 18:37	04/03/20 17:05	7439-93-2	
Molybdenum	**0.044**	mg/L	0.010	0.00095	1	04/01/20 18:37	04/03/20 17:05	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	04/01/20 18:37	04/03/20 17:05	7782-49-2	
Thallium	ND	mg/L	0.0010	0.000052	1	04/01/20 18:37	04/03/20 17:05	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Atlanta, GA								
Total Dissolved Solids	**413**	mg/L	10.0	10.0	1		04/02/20 17:56		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**48.3**	mg/L	1.0	0.60	1		04/02/20 18:44	16887-00-6	
Fluoride	**0.059J**	mg/L	0.30	0.050	1		04/02/20 18:44	16984-48-8	
Sulfate	**109**	mg/L	2.0	1.0	2		04/03/20 08:03	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: HAMMOND AP-1 1ST SEMIANNUAL
Pace Project No.: 2630471

Sample: MW-28D **Lab ID: 2630471009** Collected: 03/27/20 10:40 Received: 03/30/20 10:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Atlanta, GA								
Field pH	**7.42**	Std. Units			1		04/07/20 14:38		
6010D MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Atlanta, GA								
Calcium	**53.0**	mg/L	1.0	0.14	1	04/01/20 18:00	04/03/20 19:47	7440-70-2	
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA								
Antimony	ND	mg/L	0.0030	0.00027	1	04/01/20 18:37	04/03/20 17:22	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00035	1	04/01/20 18:37	04/03/20 17:22	7440-38-2	
Barium	**0.64**	mg/L	0.010	0.00049	1	04/01/20 18:37	04/03/20 17:22	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000074	1	04/01/20 18:37	04/03/20 17:22	7440-41-7	
Boron	**0.14**	mg/L	0.10	0.0049	1	04/01/20 18:37	04/03/20 17:22	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00011	1	04/01/20 18:37	04/03/20 17:22	7440-43-9	
Chromium	ND	mg/L	0.010	0.00039	1	04/01/20 18:37	04/03/20 17:22	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00030	1	04/01/20 18:37	04/03/20 17:22	7440-48-4	
Lead	**0.000062J**	mg/L	0.0050	0.000046	1	04/01/20 18:37	04/03/20 17:22	7439-92-1	
Lithium	**0.014J**	mg/L	0.030	0.00078	1	04/01/20 18:37	04/03/20 17:22	7439-93-2	
Molybdenum	**0.0068J**	mg/L	0.010	0.00095	1	04/01/20 18:37	04/03/20 17:22	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	04/01/20 18:37	04/03/20 17:22	7782-49-2	
Thallium	ND	mg/L	0.0010	0.000052	1	04/01/20 18:37	04/03/20 17:22	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Atlanta, GA								
Total Dissolved Solids	**287**	mg/L	10.0	10.0	1		04/02/20 17:56		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**33.0**	mg/L	1.0	0.60	1		04/02/20 18:59	16887-00-6	
Fluoride	**0.26J**	mg/L	0.30	0.050	1		04/02/20 18:59	16984-48-8	
Sulfate	**36.0**	mg/L	1.0	0.50	1		04/02/20 18:59	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: HAMMOND AP-1 1ST SEMIANNUAL
Pace Project No.: 2630471

Sample: MW-20 **Lab ID: 2630471010** Collected: 03/27/20 09:30 Received: 03/30/20 10:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Atlanta, GA								
Field pH	**6.75**	Std. Units			1		04/07/20 14:38		
6010D MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Atlanta, GA								
Calcium	**126**	mg/L	1.0	0.14	1	04/01/20 18:00	04/03/20 19:50	7440-70-2	
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA								
Antimony	ND	mg/L	0.0030	0.00027	1	04/01/20 18:37	04/03/20 17:28	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00035	1	04/01/20 18:37	04/03/20 17:28	7440-38-2	
Barium	**0.093**	mg/L	0.010	0.00049	1	04/01/20 18:37	04/03/20 17:28	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000074	1	04/01/20 18:37	04/03/20 17:28	7440-41-7	
Boron	**0.12**	mg/L	0.10	0.0049	1	04/01/20 18:37	04/03/20 17:28	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00011	1	04/01/20 18:37	04/03/20 17:28	7440-43-9	
Chromium	**0.00051J**	mg/L	0.010	0.00039	1	04/01/20 18:37	04/03/20 17:28	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00030	1	04/01/20 18:37	04/03/20 17:28	7440-48-4	
Lead	**0.00013J**	mg/L	0.0050	0.000046	1	04/01/20 18:37	04/03/20 17:28	7439-92-1	
Lithium	**0.0012J**	mg/L	0.030	0.00078	1	04/01/20 18:37	04/03/20 17:28	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00095	1	04/01/20 18:37	04/03/20 17:28	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	04/01/20 18:37	04/03/20 17:28	7782-49-2	
Thallium	ND	mg/L	0.0010	0.000052	1	04/01/20 18:37	04/03/20 17:28	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Atlanta, GA								
Total Dissolved Solids	**429**	mg/L	10.0	10.0	1		04/02/20 17:56		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**28.8**	mg/L	1.0	0.60	1		04/02/20 19:43	16887-00-6	
Fluoride	ND	mg/L	0.30	0.050	1		04/02/20 19:43	16984-48-8	
Sulfate	**114**	mg/L	2.0	1.0	2		04/03/20 08:26	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: HAMMOND AP-1 1ST SEMIANNUAL
Pace Project No.: 2630471

Sample: HGWC-8 **Lab ID: 2630471011** Collected: 03/27/20 10:40 Received: 03/30/20 10:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Atlanta, GA								
Field pH	**6.95**	Std. Units			1		04/07/20 14:38		
6010D MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Atlanta, GA								
Calcium	**133**	mg/L	1.0	0.14	1	04/01/20 18:00	04/03/20 19:54	7440-70-2	
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA								
Antimony	ND	mg/L	0.0030	0.00027	1	04/01/20 18:37	04/03/20 17:33	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00035	1	04/01/20 18:37	04/03/20 17:33	7440-38-2	
Barium	**0.059**	mg/L	0.010	0.00049	1	04/01/20 18:37	04/03/20 17:33	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000074	1	04/01/20 18:37	04/03/20 17:33	7440-41-7	
Boron	**2.4**	mg/L	0.10	0.0049	1	04/01/20 18:37	04/03/20 17:33	7440-42-8	
Cadmium	**0.00014J**	mg/L	0.0025	0.00011	1	04/01/20 18:37	04/03/20 17:33	7440-43-9	
Chromium	ND	mg/L	0.010	0.00039	1	04/01/20 18:37	04/03/20 17:33	7440-47-3	
Cobalt	**0.0018J**	mg/L	0.0050	0.00030	1	04/01/20 18:37	04/03/20 17:33	7440-48-4	
Lead	ND	mg/L	0.0050	0.000046	1	04/01/20 18:37	04/03/20 17:33	7439-92-1	
Lithium	**0.0026J**	mg/L	0.030	0.00078	1	04/01/20 18:37	04/03/20 17:33	7439-93-2	
Molybdenum	**0.42**	mg/L	0.010	0.00095	1	04/01/20 18:37	04/03/20 17:33	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	04/01/20 18:37	04/03/20 17:33	7782-49-2	
Thallium	**0.000077J**	mg/L	0.0010	0.000052	1	04/01/20 18:37	04/03/20 17:33	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Atlanta, GA								
Total Dissolved Solids	**541**	mg/L	10.0	10.0	1		04/02/20 17:56		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**79.8**	mg/L	1.0	0.60	1		04/02/20 19:58	16887-00-6	
Fluoride	**0.46**	mg/L	0.30	0.050	1		04/02/20 19:58	16984-48-8	
Sulfate	**173**	mg/L	4.0	2.0	4		04/03/20 08:48	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: HAMMOND AP-1 1ST SEMIANNUAL
Pace Project No.: 2630471

Sample: MW-6 **Lab ID: 2630471012** Collected: 03/27/20 13:00 Received: 03/30/20 10:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Atlanta, GA								
Field pH	**6.82**	Std. Units			1		04/07/20 14:38		
6010D MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Atlanta, GA								
Calcium	**186**	mg/L	1.0	0.14	1	04/01/20 18:00	04/03/20 19:57	7440-70-2	
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA								
Antimony	ND	mg/L	0.0030	0.00027	1	04/01/20 18:37	04/03/20 17:39	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00035	1	04/01/20 18:37	04/03/20 17:39	7440-38-2	
Barium	**0.086**	mg/L	0.010	0.00049	1	04/01/20 18:37	04/03/20 17:39	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000074	1	04/01/20 18:37	04/03/20 17:39	7440-41-7	
Boron	**0.77**	mg/L	0.10	0.0049	1	04/01/20 18:37	04/03/20 17:39	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00011	1	04/01/20 18:37	04/03/20 17:39	7440-43-9	
Chromium	**0.00059J**	mg/L	0.010	0.00039	1	04/01/20 18:37	04/03/20 17:39	7440-47-3	
Cobalt	**0.00059J**	mg/L	0.0050	0.00030	1	04/01/20 18:37	04/03/20 17:39	7440-48-4	
Lead	ND	mg/L	0.0050	0.000046	1	04/01/20 18:37	04/03/20 17:39	7439-92-1	
Lithium	ND	mg/L	0.030	0.00078	1	04/01/20 18:37	04/03/20 17:39	7439-93-2	
Molybdenum	**0.0026J**	mg/L	0.010	0.00095	1	04/01/20 18:37	04/03/20 17:39	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	04/01/20 18:37	04/03/20 17:39	7782-49-2	
Thallium	ND	mg/L	0.0010	0.000052	1	04/01/20 18:37	04/03/20 17:39	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Atlanta, GA								
Total Dissolved Solids	**676**	mg/L	10.0	10.0	1		04/02/20 17:57		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**48.6**	mg/L	1.0	0.60	1		04/02/20 20:13	16887-00-6	
Fluoride	ND	mg/L	0.30	0.050	1		04/02/20 20:13	16984-48-8	
Sulfate	**204**	mg/L	4.0	2.0	4		04/03/20 09:09	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: HAMMOND AP-1 1ST SEMIANNUAL
Pace Project No.: 2630471

Sample: FB-01 **Lab ID: 2630471013** Collected: 03/27/20 00:00 Received: 03/30/20 10:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Atlanta, GA								
Calcium	ND	mg/L	1.0	0.14	1	04/01/20 18:00	04/03/20 20:01	7440-70-2	
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA								
Antimony	ND	mg/L	0.0030	0.00027	1	04/01/20 18:37	04/03/20 17:51	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00035	1	04/01/20 18:37	04/03/20 17:51	7440-38-2	
Barium	ND	mg/L	0.010	0.00049	1	04/01/20 18:37	04/03/20 17:51	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000074	1	04/01/20 18:37	04/03/20 17:51	7440-41-7	
Boron	ND	mg/L	0.10	0.0049	1	04/01/20 18:37	04/03/20 17:51	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00011	1	04/01/20 18:37	04/03/20 17:51	7440-43-9	
Chromium	ND	mg/L	0.010	0.00039	1	04/01/20 18:37	04/03/20 17:51	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00030	1	04/01/20 18:37	04/03/20 17:51	7440-48-4	
Lead	**0.00019J**	mg/L	0.0050	0.000046	1	04/01/20 18:37	04/03/20 17:51	7439-92-1	
Lithium	ND	mg/L	0.030	0.00078	1	04/01/20 18:37	04/03/20 17:51	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00095	1	04/01/20 18:37	04/03/20 17:51	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	04/01/20 18:37	04/03/20 17:51	7782-49-2	
Thallium	ND	mg/L	0.0010	0.000052	1	04/01/20 18:37	04/03/20 17:51	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Atlanta, GA								
Total Dissolved Solids	ND	mg/L	10.0	10.0	1		04/02/20 17:57		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	ND	mg/L	1.0	0.60	1		04/02/20 20:28	16887-00-6	
Fluoride	ND	mg/L	0.30	0.050	1		04/02/20 20:28	16984-48-8	
Sulfate	ND	mg/L	1.0	0.50	1		04/02/20 20:28	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: HAMMOND AP-1 1ST SEMIANNUAL
Pace Project No.: 2630471

Sample: MW-7 **Lab ID: 2630471014** Collected: 03/30/20 09:05 Received: 03/31/20 11:35 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Atlanta, GA								
Field pH	**6.06**	Std. Units			1		04/07/20 14:38		
6010D MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Atlanta, GA								
Calcium	**31.1**	mg/L	1.0	0.14	1	04/01/20 18:00	04/03/20 20:04	7440-70-2	
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA								
Antimony	ND	mg/L	0.0030	0.00027	1	04/01/20 18:00	04/02/20 15:28	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00035	1	04/01/20 18:00	04/02/20 15:28	7440-38-2	
Barium	**0.050**	mg/L	0.010	0.00049	1	04/01/20 18:00	04/02/20 15:28	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000074	1	04/01/20 18:00	04/02/20 15:28	7440-41-7	
Boron	**0.051J**	mg/L	0.10	0.0049	1	04/01/20 18:00	04/02/20 15:28	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00011	1	04/01/20 18:00	04/02/20 15:28	7440-43-9	
Chromium	**0.0021J**	mg/L	0.010	0.00039	1	04/01/20 18:00	04/02/20 15:28	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00030	1	04/01/20 18:00	04/02/20 15:28	7440-48-4	
Lead	ND	mg/L	0.0050	0.000046	1	04/01/20 18:00	04/02/20 15:28	7439-92-1	
Lithium	ND	mg/L	0.030	0.00078	1	04/01/20 18:00	04/02/20 15:28	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00095	1	04/01/20 18:00	04/02/20 15:28	7439-98-7	
Selenium	**0.0014J**	mg/L	0.010	0.0013	1	04/01/20 18:00	04/02/20 15:28	7782-49-2	
Thallium	ND	mg/L	0.0010	0.000052	1	04/01/20 18:00	04/02/20 15:28	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Atlanta, GA								
Total Dissolved Solids	**142**	mg/L	10.0	10.0	1		04/02/20 17:57		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**1.5**	mg/L	1.0	0.60	1		04/04/20 15:22	16887-00-6	
Fluoride	ND	mg/L	0.30	0.050	1		04/04/20 15:22	16984-48-8	
Sulfate	**46.2**	mg/L	1.0	0.50	1		04/04/20 15:22	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
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ANALYTICAL RESULTS

Project: HAMMOND AP-1 1ST SEMIANNUAL
Pace Project No.: 2630471

Sample: MW-24D **Lab ID: 2630471015** Collected: 03/30/20 10:30 Received: 03/31/20 11:35 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Atlanta, GA								
Field pH	**7.49**	Std. Units			1		04/07/20 14:38		
6010D MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Atlanta, GA								
Calcium	**84.4**	mg/L	1.0	0.14	1	04/01/20 18:00	04/03/20 20:08	7440-70-2	
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA								
Antimony	ND	mg/L	0.0030	0.00027	1	04/01/20 18:00	04/02/20 15:34	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00035	1	04/01/20 18:00	04/02/20 15:34	7440-38-2	
Barium	**0.056**	mg/L	0.010	0.00049	1	04/01/20 18:00	04/02/20 15:34	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000074	1	04/01/20 18:00	04/02/20 15:34	7440-41-7	
Boron	**0.51**	mg/L	0.10	0.0049	1	04/01/20 18:00	04/02/20 15:34	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00011	1	04/01/20 18:00	04/02/20 15:34	7440-43-9	
Chromium	ND	mg/L	0.010	0.00039	1	04/01/20 18:00	04/02/20 15:34	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00030	1	04/01/20 18:00	04/02/20 15:34	7440-48-4	
Lead	**0.000064J**	mg/L	0.0050	0.000046	1	04/01/20 18:00	04/02/20 15:34	7439-92-1	
Lithium	**0.0027J**	mg/L	0.030	0.00078	1	04/01/20 18:00	04/02/20 15:34	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00095	1	04/01/20 18:00	04/02/20 15:34	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	04/01/20 18:00	04/02/20 15:34	7782-49-2	
Thallium	ND	mg/L	0.0010	0.000052	1	04/01/20 18:00	04/02/20 15:34	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Atlanta, GA								
Total Dissolved Solids	**280**	mg/L	10.0	10.0	1		04/02/20 17:58		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**37.4**	mg/L	1.0	0.60	1		04/04/20 16:35	16887-00-6	
Fluoride	**0.064J**	mg/L	0.30	0.050	1		04/04/20 16:35	16984-48-8	
Sulfate	**84.9**	mg/L	1.0	0.50	1		04/04/20 16:35	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: HAMMOND AP-1 1ST SEMIANNUAL
Pace Project No.: 2630471

Sample: HGWC-13 **Lab ID: 2630471016** Collected: 03/30/20 12:15 Received: 03/31/20 11:35 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Atlanta, GA								
Field pH	**6.91**	Std. Units			1		04/07/20 14:38		
6010D MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Atlanta, GA								
Calcium	**234**	mg/L	1.0	0.14	1	04/01/20 18:00	04/03/20 20:11	7440-70-2	
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA								
Antimony	**0.00036J**	mg/L	0.0030	0.00027	1	04/01/20 18:00	04/02/20 15:52	7440-36-0	
Arsenic	**0.47**	mg/L	0.0050	0.00035	1	04/01/20 18:00	04/02/20 15:52	7440-38-2	
Barium	**0.080**	mg/L	0.010	0.00049	1	04/01/20 18:00	04/02/20 15:52	7440-39-3	
Beryllium	**0.000099J**	mg/L	0.0030	0.000074	1	04/01/20 18:00	04/02/20 15:52	7440-41-7	
Boron	**1.8**	mg/L	0.10	0.0049	1	04/01/20 18:00	04/02/20 15:52	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00011	1	04/01/20 18:00	04/02/20 15:52	7440-43-9	
Chromium	**0.00059J**	mg/L	0.010	0.00039	1	04/01/20 18:00	04/02/20 15:52	7440-47-3	
Cobalt	**0.0053**	mg/L	0.0050	0.00030	1	04/01/20 18:00	04/02/20 15:52	7440-48-4	
Lead	**0.00010J**	mg/L	0.0050	0.000046	1	04/01/20 18:00	04/02/20 15:52	7439-92-1	
Lithium	**0.038**	mg/L	0.030	0.00078	1	04/01/20 18:00	04/02/20 15:52	7439-93-2	
Molybdenum	**0.029**	mg/L	0.010	0.00095	1	04/01/20 18:00	04/02/20 15:52	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	04/01/20 18:00	04/02/20 15:52	7782-49-2	
Thallium	**0.00048J**	mg/L	0.0010	0.000052	1	04/01/20 18:00	04/02/20 15:52	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Atlanta, GA								
Total Dissolved Solids	**895**	mg/L	10.0	10.0	1		04/02/20 17:58		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**75.1**	mg/L	1.0	0.60	1		04/04/20 16:49	16887-00-6	
Fluoride	**0.44**	mg/L	0.30	0.050	1		04/04/20 16:49	16984-48-8	
Sulfate	**393**	mg/L	8.0	4.0	8		04/05/20 07:07	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: HAMMOND AP-1 1ST SEMIANNUAL
Pace Project No.: 2630471

Sample: MW-29 **Lab ID: 2630471017** Collected: 03/30/20 15:35 Received: 03/31/20 11:35 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Atlanta, GA								
Field pH	**7.07**	Std. Units			1		04/07/20 14:38		
6010D MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Atlanta, GA								
Calcium	**148**	mg/L	1.0	0.14	1	04/01/20 18:00	04/03/20 20:15	7440-70-2	
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA								
Antimony	ND	mg/L	0.0030	0.00027	1	04/01/20 18:00	04/02/20 15:58	7440-36-0	
Arsenic	**0.00037J**	mg/L	0.0050	0.00035	1	04/01/20 18:00	04/02/20 15:58	7440-38-2	B
Barium	**0.080**	mg/L	0.010	0.00049	1	04/01/20 18:00	04/02/20 15:58	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000074	1	04/01/20 18:00	04/02/20 15:58	7440-41-7	
Boron	**1.3**	mg/L	0.10	0.0049	1	04/01/20 18:00	04/02/20 15:58	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00011	1	04/01/20 18:00	04/02/20 15:58	7440-43-9	
Chromium	**0.0010J**	mg/L	0.010	0.00039	1	04/01/20 18:00	04/02/20 15:58	7440-47-3	
Cobalt	**0.00063J**	mg/L	0.0050	0.00030	1	04/01/20 18:00	04/02/20 15:58	7440-48-4	
Lead	**0.00011J**	mg/L	0.0050	0.000046	1	04/01/20 18:00	04/02/20 15:58	7439-92-1	
Lithium	**0.0023J**	mg/L	0.030	0.00078	1	04/01/20 18:00	04/02/20 15:58	7439-93-2	
Molybdenum	**0.0029J**	mg/L	0.010	0.00095	1	04/01/20 18:00	04/02/20 15:58	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	04/01/20 18:00	04/02/20 15:58	7782-49-2	
Thallium	ND	mg/L	0.0010	0.000052	1	04/01/20 18:00	04/02/20 15:58	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Atlanta, GA								
Total Dissolved Solids	**552**	mg/L	10.0	10.0	1		04/02/20 17:58		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**71.2**	mg/L	1.0	0.60	1		04/04/20 17:04	16887-00-6	
Fluoride	ND	mg/L	0.30	0.050	1		04/04/20 17:04	16984-48-8	
Sulfate	**130**	mg/L	3.0	1.5	3		04/05/20 07:23	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: HAMMOND AP-1 1ST SEMIANNUAL
Pace Project No.: 2630471

Sample: HGWC-11 **Lab ID: 2630471018** Collected: 03/31/20 15:22 Received: 04/01/20 10:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Atlanta, GA								
Field pH	**5.7**	Std. Units			1		04/07/20 14:38		
6010D MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Atlanta, GA								
Calcium	**124**	mg/L	1.0	0.14	1	04/02/20 14:30	04/02/20 18:39	7440-70-2	M1
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA								
Antimony	ND	mg/L	0.0030	0.00027	1	04/02/20 19:04	04/08/20 17:09	7440-36-0	
Arsenic	**0.0022J**	mg/L	0.0050	0.00035	1	04/02/20 19:04	04/08/20 17:09	7440-38-2	B
Barium	**0.026**	mg/L	0.010	0.00049	1	04/02/20 19:04	04/08/20 17:09	7440-39-3	
Beryllium	**0.00015J**	mg/L	0.0030	0.000074	1	04/02/20 19:04	04/08/20 17:09	7440-41-7	
Boron	**0.17**	mg/L	0.10	0.0049	1	04/02/20 19:04	04/08/20 17:09	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00011	1	04/02/20 19:04	04/08/20 17:09	7440-43-9	
Chromium	ND	mg/L	0.010	0.00039	1	04/02/20 19:04	04/08/20 17:09	7440-47-3	
Cobalt	**0.0014J**	mg/L	0.0050	0.00030	1	04/02/20 19:04	04/08/20 17:09	7440-48-4	
Lead	**0.00030J**	mg/L	0.0050	0.000046	1	04/02/20 19:04	04/08/20 17:09	7439-92-1	
Lithium	ND	mg/L	0.030	0.00078	1	04/02/20 19:04	04/08/20 17:09	7439-93-2	
Molybdenum	**0.0074J**	mg/L	0.010	0.00095	1	04/02/20 19:04	04/08/20 17:09	7439-98-7	
Selenium	**0.019**	mg/L	0.010	0.0013	1	04/02/20 19:04	04/08/20 17:09	7782-49-2	
Thallium	ND	mg/L	0.0010	0.000052	1	04/02/20 19:04	04/08/20 17:09	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Atlanta, GA								
Total Dissolved Solids	**565**	mg/L	10.0	10.0	1		04/07/20 12:16		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**3.2**	mg/L	1.0	0.60	1		04/04/20 16:58	16887-00-6	
Fluoride	**0.19J**	mg/L	0.30	0.050	1		04/04/20 16:58	16984-48-8	
Sulfate	**283**	mg/L	6.0	3.0	6		04/05/20 07:41	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
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ANALYTICAL RESULTS

Project: HAMMOND AP-1 1ST SEMIANNUAL
Pace Project No.: 2630471

Sample: MW-26D **Lab ID: 2630471019** Collected: 03/31/20 09:35 Received: 04/01/20 10:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Atlanta, GA								
Field pH	**7.20**	Std. Units			1		04/07/20 14:38		
6010D MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Atlanta, GA								
Calcium	**155**	mg/L	1.0	0.14	1	04/02/20 14:30	04/02/20 18:53	7440-70-2	
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA								
Antimony	**0.0013J**	mg/L	0.0030	0.00027	1	04/02/20 19:04	04/08/20 17:32	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00035	1	04/02/20 19:04	04/08/20 17:32	7440-38-2	
Barium	**0.11**	mg/L	0.010	0.00049	1	04/02/20 19:04	04/08/20 17:32	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000074	1	04/02/20 19:04	04/08/20 17:32	7440-41-7	
Boron	**1.8**	mg/L	0.10	0.0049	1	04/02/20 19:04	04/08/20 17:32	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00011	1	04/02/20 19:04	04/08/20 17:32	7440-43-9	
Chromium	**0.0010J**	mg/L	0.010	0.00039	1	04/02/20 19:04	04/08/20 17:32	7440-47-3	
Cobalt	**0.00030J**	mg/L	0.0050	0.00030	1	04/02/20 19:04	04/08/20 17:32	7440-48-4	
Lead	**0.00010J**	mg/L	0.0050	0.000046	1	04/02/20 19:04	04/08/20 17:32	7439-92-1	
Lithium	**0.0036J**	mg/L	0.030	0.00078	1	04/02/20 19:04	04/08/20 17:32	7439-93-2	
Molybdenum	**0.0093J**	mg/L	0.010	0.00095	1	04/02/20 19:04	04/08/20 17:32	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	04/02/20 19:04	04/08/20 17:32	7782-49-2	
Thallium	ND	mg/L	0.0010	0.000052	1	04/02/20 19:04	04/08/20 17:32	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Atlanta, GA								
Total Dissolved Solids	**623**	mg/L	10.0	10.0	1		04/07/20 12:16		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**98.0**	mg/L	1.0	0.60	1		04/04/20 17:54	16887-00-6	
Fluoride	ND	mg/L	0.30	0.050	1		04/04/20 17:54	16984-48-8	
Sulfate	**129**	mg/L	3.0	1.5	3		04/05/20 07:56	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
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ANALYTICAL RESULTS

Project: HAMMOND AP-1 1ST SEMIANNUAL
Pace Project No.: 2630471

Sample: HGWC-9 **Lab ID: 2630471020** Collected: 03/31/20 12:00 Received: 04/01/20 10:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Atlanta, GA								
Field pH	**7.07**	Std. Units			1		04/07/20 14:38		
6010D MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Atlanta, GA								
Calcium	**182**	mg/L	1.0	0.14	1	04/02/20 14:30	04/02/20 18:56	7440-70-2	
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA								
Antimony	**0.00042J**	mg/L	0.0030	0.00027	1	04/02/20 19:04	04/08/20 17:37	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00035	1	04/02/20 19:04	04/08/20 17:37	7440-38-2	
Barium	**0.11**	mg/L	0.010	0.00049	1	04/02/20 19:04	04/08/20 17:37	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000074	1	04/02/20 19:04	04/08/20 17:37	7440-41-7	
Boron	**2.2**	mg/L	0.10	0.0049	1	04/02/20 19:04	04/08/20 17:37	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00011	1	04/02/20 19:04	04/08/20 17:37	7440-43-9	
Chromium	**0.00052J**	mg/L	0.010	0.00039	1	04/02/20 19:04	04/08/20 17:37	7440-47-3	
Cobalt	**0.00051J**	mg/L	0.0050	0.00030	1	04/02/20 19:04	04/08/20 17:37	7440-48-4	
Lead	**0.00014J**	mg/L	0.0050	0.000046	1	04/02/20 19:04	04/08/20 17:37	7439-92-1	
Lithium	**0.0043J**	mg/L	0.030	0.00078	1	04/02/20 19:04	04/08/20 17:37	7439-93-2	
Molybdenum	**0.031**	mg/L	0.010	0.00095	1	04/02/20 19:04	04/08/20 17:37	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	04/02/20 19:04	04/08/20 17:37	7782-49-2	
Thallium	ND	mg/L	0.0010	0.000052	1	04/02/20 19:04	04/08/20 17:37	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Atlanta, GA								
Total Dissolved Solids	**1010**	mg/L	10.0	10.0	1		04/07/20 12:16		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**105**	mg/L	4.0	2.4	4		04/05/20 08:52	16887-00-6	
Fluoride	**0.074J**	mg/L	0.30	0.050	1		04/04/20 18:08	16984-48-8	
Sulfate	**185**	mg/L	4.0	2.0	4		04/05/20 08:52	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: HAMMOND AP-1 1ST SEMIANNUAL
Pace Project No.: 2630471

Sample: MW-30D **Lab ID: 2630471021** Collected: 03/31/20 10:00 Received: 04/01/20 10:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Atlanta, GA								
Field pH	**7.95**	Std. Units			1		04/07/20 14:38		
6010D MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Atlanta, GA								
Calcium	**7.1**	mg/L	1.0	0.14	1	04/02/20 14:30	04/02/20 19:00	7440-70-2	
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA								
Antimony	**0.00032J**	mg/L	0.0030	0.00027	1	04/02/20 19:04	04/08/20 17:43	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00035	1	04/02/20 19:04	04/08/20 17:43	7440-38-2	
Barium	**0.29**	mg/L	0.010	0.00049	1	04/02/20 19:04	04/08/20 17:43	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000074	1	04/02/20 19:04	04/08/20 17:43	7440-41-7	
Boron	**0.90**	mg/L	0.10	0.0049	1	04/02/20 19:04	04/08/20 17:43	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00011	1	04/02/20 19:04	04/08/20 17:43	7440-43-9	
Chromium	**0.00070J**	mg/L	0.010	0.00039	1	04/02/20 19:04	04/08/20 17:43	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00030	1	04/02/20 19:04	04/08/20 17:43	7440-48-4	
Lead	**0.000067J**	mg/L	0.0050	0.000046	1	04/02/20 19:04	04/08/20 17:43	7439-92-1	
Lithium	**0.25**	mg/L	0.030	0.00078	1	04/02/20 19:04	04/08/20 17:43	7439-93-2	
Molybdenum	**0.015**	mg/L	0.010	0.00095	1	04/02/20 19:04	04/08/20 17:43	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	04/02/20 19:04	04/08/20 17:43	7782-49-2	
Thallium	ND	mg/L	0.0010	0.000052	1	04/02/20 19:04	04/08/20 17:43	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Atlanta, GA								
Total Dissolved Solids	**1130**	mg/L	10.0	10.0	1		04/07/20 12:17		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**111**	mg/L	4.0	2.4	4		04/05/20 09:06	16887-00-6	
Fluoride	**10.5**	mg/L	1.2	0.20	4		04/05/20 09:06	16984-48-8	
Sulfate	**139**	mg/L	4.0	2.0	4		04/05/20 09:06	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
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ANALYTICAL RESULTS

Project: HAMMOND AP-1 1ST SEMIANNUAL
Pace Project No.: 2630471

Sample: FD-01 **Lab ID: 2630471022** Collected: 03/31/20 00:00 Received: 04/01/20 10:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Atlanta, GA								
Calcium	**7.8**	mg/L	1.0	0.14	1	04/02/20 14:30	04/02/20 19:04	7440-70-2	
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA								
Antimony	ND	mg/L	0.0030	0.00027	1	04/02/20 19:04	04/08/20 17:49	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00035	1	04/02/20 19:04	04/08/20 17:49	7440-38-2	
Barium	**0.27**	mg/L	0.010	0.00049	1	04/02/20 19:04	04/08/20 17:49	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000074	1	04/02/20 19:04	04/08/20 17:49	7440-41-7	
Boron	**0.86**	mg/L	0.10	0.0049	1	04/02/20 19:04	04/08/20 17:49	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00011	1	04/02/20 19:04	04/08/20 17:49	7440-43-9	
Chromium	**0.0013J**	mg/L	0.010	0.00039	1	04/02/20 19:04	04/08/20 17:49	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00030	1	04/02/20 19:04	04/08/20 17:49	7440-48-4	
Lead	**0.00021J**	mg/L	0.0050	0.000046	1	04/02/20 19:04	04/08/20 17:49	7439-92-1	
Lithium	**0.24**	mg/L	0.030	0.00078	1	04/02/20 19:04	04/08/20 17:49	7439-93-2	
Molybdenum	**0.014**	mg/L	0.010	0.00095	1	04/02/20 19:04	04/08/20 17:49	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	04/02/20 19:04	04/08/20 17:49	7782-49-2	
Thallium	ND	mg/L	0.0010	0.000052	1	04/02/20 19:04	04/08/20 17:49	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Atlanta, GA								
Total Dissolved Solids	**1080**	mg/L	10.0	10.0	1		04/07/20 12:17		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**104**	mg/L	4.0	2.4	4		04/05/20 09:20	16887-00-6	
Fluoride	**10.4**	mg/L	1.2	0.20	4		04/05/20 09:20	16984-48-8	
Sulfate	**166**	mg/L	4.0	2.0	4		04/05/20 09:20	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: HAMMOND AP-1 1ST SEMIANNUAL
Pace Project No.: 2630471

Sample: HGWC-10 **Lab ID: 2630471023** Collected: 04/01/20 09:47 Received: 04/02/20 10:25 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Atlanta, GA								
Field pH	**6.84**	Std. Units			1		04/07/20 14:38		
6010D MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Atlanta, GA								
Calcium	**96.2**	mg/L	1.0	0.14	1	04/03/20 15:15	04/06/20 16:34	7440-70-2	M1
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA								
Antimony	ND	mg/L	0.0030	0.00027	1	04/02/20 19:04	04/09/20 11:02	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00035	1	04/02/20 19:04	04/09/20 11:02	7440-38-2	
Barium	**0.058**	mg/L	0.010	0.00049	1	04/02/20 19:04	04/09/20 11:02	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000074	1	04/02/20 19:04	04/09/20 11:02	7440-41-7	
Boron	**0.23**	mg/L	0.10	0.0049	1	04/02/20 19:04	04/09/20 11:02	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00011	1	04/02/20 19:04	04/09/20 11:02	7440-43-9	
Chromium	ND	mg/L	0.010	0.00039	1	04/02/20 19:04	04/09/20 11:02	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00030	1	04/02/20 19:04	04/09/20 11:02	7440-48-4	
Lead	**0.000050J**	mg/L	0.0050	0.000046	1	04/02/20 19:04	04/09/20 11:02	7439-92-1	
Lithium	ND	mg/L	0.030	0.00078	1	04/02/20 19:04	04/09/20 11:02	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00095	1	04/02/20 19:04	04/09/20 11:02	7439-98-7	
Selenium	**0.0020J**	mg/L	0.010	0.0013	1	04/02/20 19:04	04/09/20 11:02	7782-49-2	
Thallium	ND	mg/L	0.0010	0.000052	1	04/02/20 19:04	04/09/20 11:02	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Atlanta, GA								
Total Dissolved Solids	**290**	mg/L	10.0	10.0	1		04/07/20 12:20		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**5.4**	mg/L	1.0	0.60	1		04/04/20 16:02	16887-00-6	
Fluoride	**0.12J**	mg/L	0.30	0.050	1		04/04/20 16:02	16984-48-8	
Sulfate	**59.0**	mg/L	1.0	0.50	1		04/04/20 16:02	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: HAMMOND AP-1 1ST SEMIANNUAL
Pace Project No.: 2630471

Sample: MW-27D **Lab ID: 2630471024** Collected: 04/02/20 10:48 Received: 04/03/20 11:50 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Atlanta, GA								
Field pH	**8.11**	Std. Units			1		04/07/20 14:38		
6010D MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Atlanta, GA								
Calcium	**28.4**	mg/L	1.0	0.14	1	04/06/20 13:13	04/07/20 19:35	7440-70-2	
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA								
Antimony	**0.00030J**	mg/L	0.0030	0.00027	1	04/06/20 13:09	04/07/20 17:13	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00035	1	04/06/20 13:09	04/07/20 17:13	7440-38-2	
Barium	**1.0**	mg/L	0.010	0.00049	1	04/06/20 13:09	04/07/20 17:13	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000074	1	04/06/20 13:09	04/07/20 17:13	7440-41-7	
Boron	**0.13**	mg/L	0.10	0.0049	1	04/06/20 13:09	04/07/20 17:13	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00011	1	04/06/20 13:09	04/07/20 17:13	7440-43-9	
Chromium	ND	mg/L	0.010	0.00039	1	04/06/20 13:09	04/07/20 17:13	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00030	1	04/06/20 13:09	04/07/20 17:13	7440-48-4	
Lead	**0.00013J**	mg/L	0.0050	0.000046	1	04/06/20 13:09	04/07/20 17:13	7439-92-1	
Lithium	**0.0068J**	mg/L	0.030	0.00078	1	04/06/20 13:09	04/07/20 17:13	7439-93-2	
Molybdenum	**0.0030J**	mg/L	0.010	0.00095	1	04/06/20 13:09	04/07/20 17:13	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	04/06/20 13:09	04/07/20 17:13	7782-49-2	
Thallium	ND	mg/L	0.0010	0.000052	1	04/06/20 13:09	04/07/20 17:13	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Atlanta, GA								
Total Dissolved Solids	**224**	mg/L	10.0	10.0	1		04/07/20 12:20		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**27.9**	mg/L	1.0	0.60	1		04/07/20 20:04	16887-00-6	
Fluoride	**0.24J**	mg/L	0.30	0.050	1		04/07/20 20:04	16984-48-8	
Sulfate	**13.3**	mg/L	1.0	0.50	1		04/07/20 20:04	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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QUALITY CONTROL DATA

Project: HAMMOND AP-1 1ST SEMIANNUAL
Pace Project No.: 2630471

QC Batch: 45121
QC Batch Method: EPA 3010A
Analysis Method: EPA 6010D
Analysis Description: 6010D MET
Laboratory: Pace Analytical Services - Atlanta, GA
Associated Lab Samples: 2630471001, 2630471002, 2630471003

METHOD BLANK: 207982 Matrix: Water
Associated Lab Samples: 2630471001, 2630471002, 2630471003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	0.14	04/02/20 13:05	

LABORATORY CONTROL SAMPLE: 207983

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	mg/L	1	1.1	108	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 207984 207985

Parameter	Units	2630449007 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Calcium	mg/L	157	1	1	158	157	93	15	75-125	0	20	M1

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: HAMMOND AP-1 1ST SEMIANNUAL
Pace Project No.: 2630471

QC Batch: 45172
QC Batch Method: EPA 3010A
Analysis Method: EPA 6010D
Analysis Description: 6010D MET
Laboratory: Pace Analytical Services - Atlanta, GA
Associated Lab Samples: 2630471004

METHOD BLANK: 208108 Matrix: Water
Associated Lab Samples: 2630471004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	0.14	04/02/20 16:01	

LABORATORY CONTROL SAMPLE: 208109

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: 208110 208111

Parameter	Units	2630435022 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Calcium	mg/L	107	1	1	110	108	372	91	75-125	3	20	M1

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: HAMMOND AP-1 1ST SEMIANNUAL
Pace Project No.: 2630471

QC Batch: 45185
QC Batch Method: EPA 3010A
Analysis Method: EPA 6010D
Analysis Description: 6010D MET
Laboratory: Pace Analytical Services - Atlanta, GA
Associated Lab Samples: 2630471005, 2630471006, 2630471007, 2630471008

METHOD BLANK: 208195 Matrix: Water
Associated Lab Samples: 2630471005, 2630471006, 2630471007, 2630471008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	0.14	04/03/20 20:54	

LABORATORY CONTROL SAMPLE: 208196

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 208197 208198

Parameter	Units	2630471005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Calcium	mg/L	27.0	1	1	27.9	28.3	89	125	75-125	1	20	

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QUALITY CONTROL DATA

Project: HAMMOND AP-1 1ST SEMIANNUAL
Pace Project No.: 2630471

QC Batch: 45190
QC Batch Method: EPA 3010A
Analysis Method: EPA 6010D
Analysis Description: 6010D MET
Laboratory: Pace Analytical Services - Atlanta, GA
Associated Lab Samples: 2630471009, 2630471010, 2630471011, 2630471012, 2630471013, 2630471014, 2630471015, 2630471016, 2630471017

METHOD BLANK: 208222 Matrix: Water
Associated Lab Samples: 2630471009, 2630471010, 2630471011, 2630471012, 2630471013, 2630471014, 2630471015, 2630471016, 2630471017

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	0.14	04/03/20 19:19	

LABORATORY CONTROL SAMPLE: 208223

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 208224 208225

Parameter	Units	2630623001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Calcium	mg/L	7420 ug/L	1	1	8.7	8.6	124	119	75-125	1	20	

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QUALITY CONTROL DATA

Project: HAMMOND AP-1 1ST SEMIANNUAL
Pace Project No.: 2630471

QC Batch: 45218
QC Batch Method: EPA 3010A
Analysis Method: EPA 6010D
Analysis Description: 6010D MET
Laboratory: Pace Analytical Services - Atlanta, GA
Associated Lab Samples: 2630471018, 2630471019, 2630471020, 2630471021, 2630471022

METHOD BLANK: 208341 Matrix: Water
Associated Lab Samples: 2630471018, 2630471019, 2630471020, 2630471021, 2630471022

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	0.14	04/02/20 18:14	

LABORATORY CONTROL SAMPLE: 208342

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: 208343 208344

Parameter	Units	2630471018 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Calcium	mg/L	124	1	1	128	131	368	710	75-125	3	20	M1

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QUALITY CONTROL DATA

Project: HAMMOND AP-1 1ST SEMIANNUAL
Pace Project No.: 2630471

QC Batch: 45249
QC Batch Method: EPA 3010A
Analysis Method: EPA 6010D
Analysis Description: 6010D MET
Laboratory: Pace Analytical Services - Atlanta, GA
Associated Lab Samples: 2630471023

METHOD BLANK: 208586 Matrix: Water
Associated Lab Samples: 2630471023

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	0.14	04/06/20 16:20	

LABORATORY CONTROL SAMPLE: 208587

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	mg/L	1	1.0	102	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 208588 208589

Parameter	Units	2630471023 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Calcium	mg/L	96.2	1	1	97.8	98.3	156	209	75-125	1	20	M1

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QUALITY CONTROL DATA

Project: HAMMOND AP-1 1ST SEMIANNUAL
Pace Project No.: 2630471

QC Batch: 45281
QC Batch Method: EPA 3010A
Analysis Method: EPA 6010D
Analysis Description: 6010D MET
Laboratory: Pace Analytical Services - Atlanta, GA
Associated Lab Samples: 2630471024

METHOD BLANK: 208760 Matrix: Water
Associated Lab Samples: 2630471024

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	0.14	04/07/20 18:12	

LABORATORY CONTROL SAMPLE: 208761

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: 208762 208763

Parameter	Units	2630683017 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Calcium	mg/L	2310 ug/L	1	1	3.4	3.3	113	100	75-125	4	20	

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QUALITY CONTROL DATA

Project: HAMMOND AP-1 1ST SEMIANNUAL
Pace Project No.: 2630471

QC Batch: 45112
QC Batch Method: EPA 3005A
Analysis Method: EPA 6020B
Analysis Description: 6020B MET
Laboratory: Pace Analytical Services - Atlanta, GA
Associated Lab Samples: 2630471001, 2630471002, 2630471003

METHOD BLANK: 207955 Matrix: Water
Associated Lab Samples: 2630471001, 2630471002, 2630471003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00027	04/02/20 18:39	
Arsenic	mg/L	ND	0.0050	0.00035	04/02/20 18:39	
Barium	mg/L	ND	0.010	0.00049	04/02/20 18:39	
Beryllium	mg/L	ND	0.0030	0.000074	04/02/20 18:39	
Boron	mg/L	ND	0.10	0.0049	04/02/20 18:39	
Cadmium	mg/L	ND	0.0025	0.00011	04/02/20 18:39	
Chromium	mg/L	ND	0.010	0.00039	04/02/20 18:39	
Cobalt	mg/L	ND	0.0050	0.00030	04/02/20 18:39	
Lead	mg/L	ND	0.0050	0.000046	04/02/20 18:39	
Lithium	mg/L	ND	0.030	0.00078	04/02/20 18:39	
Molybdenum	mg/L	ND	0.010	0.00095	04/02/20 18:39	
Selenium	mg/L	ND	0.010	0.0013	04/02/20 18:39	
Thallium	mg/L	ND	0.0010	0.000052	04/02/20 18:39	

LABORATORY CONTROL SAMPLE: 207956

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	0.10	100	80-120	
Barium	mg/L	0.1	0.098	98	80-120	
Beryllium	mg/L	0.1	0.10	101	80-120	
Boron	mg/L	1	1.1	105	80-120	
Cadmium	mg/L	0.1	0.10	102	80-120	
Chromium	mg/L	0.1	0.099	99	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	104	80-120	
Molybdenum	mg/L	0.1	0.098	98	80-120	
Selenium	mg/L	0.1	0.099	99	80-120	
Thallium	mg/L	0.1	0.096	96	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 207957 207958

Parameter	Units	2630435012 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	mg/L	0.00031J	0.1	0.1	0.11	0.11	106	105	75-125	1	20	
Arsenic	mg/L	0.00070J	0.1	0.1	0.10	0.10	99	101	75-125	1	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: HAMMOND AP-1 1ST SEMIANNUAL
Pace Project No.: 2630471

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 207957 207958

Parameter	Units	2630435012 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Barium	mg/L	0.033	0.1	0.1	0.14	0.13	102	99	75-125	2	20	
Beryllium	mg/L	0.00034J	0.1	0.1	0.096	0.099	95	99	75-125	4	20	
Boron	mg/L	2.4	1	1	3.4	3.4	97	102	75-125	2	20	
Cadmium	mg/L	ND	0.1	0.1	0.10	0.10	102	103	75-125	1	20	
Chromium	mg/L	ND	0.1	0.1	0.11	0.10	107	102	75-125	4	20	
Cobalt	mg/L	0.0016J	0.1	0.1	0.10	0.10	102	101	75-125	1	20	
Lead	mg/L	0.000075J	0.1	0.1	0.10	0.10	100	101	75-125	1	20	
Lithium	mg/L	0.016J	0.1	0.1	0.12	0.12	101	103	75-125	2	20	
Molybdenum	mg/L	0.0015J	0.1	0.1	0.11	0.11	105	104	75-125	1	20	
Selenium	mg/L	ND	0.1	0.1	0.10	0.10	99	100	75-125	1	20	
Thallium	mg/L	ND	0.1	0.1	0.099	0.10	99	100	75-125	0	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: HAMMOND AP-1 1ST SEMIANNUAL
Pace Project No.: 2630471

QC Batch: 45171
QC Batch Method: EPA 3005A
Analysis Method: EPA 6020B
Analysis Description: 6020B MET
Laboratory: Pace Analytical Services - Atlanta, GA
Associated Lab Samples: 2630471004, 2630471005, 2630471006, 2630471007

METHOD BLANK: 208104 Matrix: Water
Associated Lab Samples: 2630471004, 2630471005, 2630471006, 2630471007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00027	04/02/20 20:29	
Arsenic	mg/L	ND	0.0050	0.00035	04/02/20 20:29	
Barium	mg/L	ND	0.010	0.00049	04/02/20 20:29	
Beryllium	mg/L	ND	0.0030	0.000074	04/02/20 20:29	
Boron	mg/L	ND	0.10	0.0049	04/02/20 20:29	
Cadmium	mg/L	ND	0.0025	0.00011	04/02/20 20:29	
Chromium	mg/L	ND	0.010	0.00039	04/02/20 20:29	
Cobalt	mg/L	ND	0.0050	0.00030	04/02/20 20:29	
Lead	mg/L	ND	0.0050	0.000046	04/02/20 20:29	
Lithium	mg/L	ND	0.030	0.00078	04/02/20 20:29	
Molybdenum	mg/L	ND	0.010	0.00095	04/02/20 20:29	
Selenium	mg/L	ND	0.010	0.0013	04/02/20 20:29	
Thallium	mg/L	ND	0.0010	0.000052	04/02/20 20:29	

LABORATORY CONTROL SAMPLE: 208105

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.10	104	80-120	
Arsenic	mg/L	0.1	0.096	96	80-120	
Barium	mg/L	0.1	0.099	99	80-120	
Beryllium	mg/L	0.1	0.099	99	80-120	
Boron	mg/L	1	1.0	101	80-120	
Cadmium	mg/L	0.1	0.099	99	80-120	
Chromium	mg/L	0.1	0.099	99	80-120	
Cobalt	mg/L	0.1	0.099	99	80-120	
Lead	mg/L	0.1	0.096	96	80-120	
Lithium	mg/L	0.1	0.10	103	80-120	
Molybdenum	mg/L	0.1	0.099	99	80-120	
Selenium	mg/L	0.1	0.093	93	80-120	
Thallium	mg/L	0.1	0.094	94	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 208106 208107

Parameter	Units	2630449011 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	mg/L	0.00042J	0.1	0.1	0.10	0.10	104	104	75-125	0	20	
Arsenic	mg/L	ND	0.1	0.1	0.10	0.10	101	102	75-125	1	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: HAMMOND AP-1 1ST SEMIANNUAL
Pace Project No.: 2630471

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 208106 208107

Parameter	Units	2630449011 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Barium	mg/L	0.0072J	0.1	0.1	0.11	0.11	101	101	75-125	0	20	
Beryllium	mg/L	ND	0.1	0.1	0.096	0.097	96	97	75-125	1	20	
Boron	mg/L	0.24	1	1	1.2	1.2	94	97	75-125	3	20	
Cadmium	mg/L	ND	0.1	0.1	0.099	0.10	99	100	75-125	1	20	
Chromium	mg/L	0.0016J	0.1	0.1	0.10	0.10	101	102	75-125	1	20	
Cobalt	mg/L	ND	0.1	0.1	0.099	0.10	99	101	75-125	2	20	
Lead	mg/L	ND	0.1	0.1	0.094	0.094	94	93	75-125	0	20	
Lithium	mg/L	0.0031J	0.1	0.1	0.10	0.10	98	97	75-125	0	20	
Molybdenum	mg/L	ND	0.1	0.1	0.098	0.099	98	99	75-125	1	20	
Selenium	mg/L	ND	0.1	0.1	0.096	0.097	95	96	75-125	2	20	
Thallium	mg/L	0.000085J	0.1	0.1	0.094	0.095	94	95	75-125	1	20	

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QUALITY CONTROL DATA

Project: HAMMOND AP-1 1ST SEMIANNUAL
Pace Project No.: 2630471

QC Batch: 45184
QC Batch Method: EPA 3005A
Analysis Method: EPA 6020B
Analysis Description: 6020B MET
Laboratory: Pace Analytical Services - Atlanta, GA
Associated Lab Samples: 2630471008, 2630471009, 2630471010, 2630471011, 2630471012, 2630471013

METHOD BLANK: 208191 Matrix: Water
Associated Lab Samples: 2630471008, 2630471009, 2630471010, 2630471011, 2630471012, 2630471013

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00027	04/03/20 15:05	
Arsenic	mg/L	ND	0.0050	0.00035	04/03/20 15:05	
Barium	mg/L	ND	0.010	0.00049	04/03/20 15:05	
Beryllium	mg/L	ND	0.0030	0.000074	04/03/20 15:05	
Boron	mg/L	ND	0.10	0.0049	04/03/20 15:05	
Cadmium	mg/L	ND	0.0025	0.00011	04/03/20 15:05	
Chromium	mg/L	ND	0.010	0.00039	04/03/20 15:05	
Cobalt	mg/L	ND	0.0050	0.00030	04/03/20 15:05	
Lead	mg/L	ND	0.0050	0.000046	04/03/20 15:05	
Lithium	mg/L	ND	0.030	0.00078	04/03/20 15:05	
Molybdenum	mg/L	ND	0.010	0.00095	04/03/20 15:05	
Selenium	mg/L	ND	0.010	0.0013	04/03/20 15:05	
Thallium	mg/L	ND	0.0010	0.000052	04/03/20 15:05	

LABORATORY CONTROL SAMPLE: 208192

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	102	80-120	
Cadmium	mg/L	0.1	0.10	100	80-120	
Chromium	mg/L	0.1	0.099	99	80-120	
Cobalt	mg/L	0.1	0.10	100	80-120	
Lead	mg/L	0.1	0.097	97	80-120	
Lithium	mg/L	0.1	0.099	99	80-120	
Molybdenum	mg/L	0.1	0.099	99	80-120	
Selenium	mg/L	0.1	0.10	101	80-120	
Thallium	mg/L	0.1	0.098	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 208193 208194

Parameter	Units	2630325039 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	mg/L	ND	0.1	0.1	0.10	0.10	103	102	75-125	0	20	
Arsenic	mg/L	0.00051J	0.1	0.1	0.10	0.10	99	100	75-125	1	20	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: HAMMOND AP-1 1ST SEMIANNUAL
Pace Project No.: 2630471

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 208193 208194

Parameter	Units	2630325039 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Barium	mg/L	0.046	0.1	0.1	0.15	0.14	100	98	75-125	1	20	
Beryllium	mg/L	ND	0.1	0.1	0.098	0.10	98	100	75-125	2	20	
Boron	mg/L	1.9	1	1	2.9	2.9	91	92	75-125	1	20	
Cadmium	mg/L	ND	0.1	0.1	0.099	0.097	99	97	75-125	2	20	
Chromium	mg/L	0.00058J	0.1	0.1	0.10	0.10	101	103	75-125	2	20	
Cobalt	mg/L	0.00056J	0.1	0.1	0.10	0.10	100	101	75-125	1	20	
Lead	mg/L	0.00017J	0.1	0.1	0.092	0.092	91	92	75-125	0	20	
Lithium	mg/L	0.00079J	0.1	0.1	0.099	0.10	98	100	75-125	2	20	
Molybdenum	mg/L	0.0012J	0.1	0.1	0.10	0.10	102	102	75-125	0	20	
Selenium	mg/L	0.0039J	0.1	0.1	0.10	0.11	100	104	75-125	4	20	
Thallium	mg/L	0.00014J	0.1	0.1	0.093	0.095	93	95	75-125	2	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: HAMMOND AP-1 1ST SEMIANNUAL
Pace Project No.: 2630471

QC Batch: 45189
QC Batch Method: EPA 3005A
Analysis Method: EPA 6020B
Analysis Description: 6020B MET
Laboratory: Pace Analytical Services - Atlanta, GA
Associated Lab Samples: 2630471014, 2630471015, 2630471016, 2630471017

METHOD BLANK: 208216 Matrix: Water
Associated Lab Samples: 2630471014, 2630471015, 2630471016, 2630471017

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00027	04/02/20 14:43	
Arsenic	mg/L	0.00071J	0.0050	0.00035	04/02/20 14:43	
Barium	mg/L	ND	0.010	0.00049	04/02/20 14:43	
Beryllium	mg/L	ND	0.0030	0.000074	04/02/20 14:43	
Boron	mg/L	ND	0.10	0.0049	04/02/20 14:43	
Cadmium	mg/L	ND	0.0025	0.00011	04/02/20 14:43	
Chromium	mg/L	ND	0.010	0.00039	04/02/20 14:43	
Cobalt	mg/L	ND	0.0050	0.00030	04/02/20 14:43	
Lead	mg/L	ND	0.0050	0.000046	04/02/20 14:43	
Lithium	mg/L	ND	0.030	0.00078	04/02/20 14:43	
Molybdenum	mg/L	ND	0.010	0.00095	04/02/20 14:43	
Selenium	mg/L	ND	0.010	0.0013	04/02/20 14:43	
Thallium	mg/L	ND	0.0010	0.000052	04/02/20 14:43	

LABORATORY CONTROL SAMPLE: 208217

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.10	100	80-120	
Arsenic	mg/L	0.1	0.097	97	80-120	
Barium	mg/L	0.1	0.097	97	80-120	
Beryllium	mg/L	0.1	0.10	104	80-120	
Boron	mg/L	1	1.1	105	80-120	
Cadmium	mg/L	0.1	0.10	101	80-120	
Chromium	mg/L	0.1	0.10	100	80-120	
Cobalt	mg/L	0.1	0.097	97	80-120	
Lead	mg/L	0.1	0.099	99	80-120	
Lithium	mg/L	0.1	0.10	104	80-120	
Molybdenum	mg/L	0.1	0.098	98	80-120	
Selenium	mg/L	0.1	0.098	98	80-120	
Thallium	mg/L	0.1	0.098	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 208218 208219

Parameter	Units	2630600001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	mg/L	ND	0.1	0.1	0.10	0.10	100	102	75-125	2	20	
Arsenic	mg/L	ND	0.1	0.1	0.099	0.098	98	96	75-125	2	20	

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REPORT OF LABORATORY ANALYSIS

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Peachtree Corners, GA 30092
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QUALITY CONTROL DATA

Project: HAMMOND AP-1 1ST SEMIANNUAL
Pace Project No.: 2630471

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 208218 208219

Parameter	Units	2630600001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Barium	mg/L	0.021	0.1	0.1	0.12	0.12	97	98	75-125	1	20	
Beryllium	mg/L	ND	0.1	0.1	0.099	0.098	99	98	75-125	1	20	
Boron	mg/L	ND	1	1	1.0	1.0	100	98	75-125	1	20	
Cadmium	mg/L	ND	0.1	0.1	0.099	0.097	99	97	75-125	2	20	
Chromium	mg/L	ND	0.1	0.1	0.10	0.099	99	98	75-125	1	20	
Cobalt	mg/L	ND	0.1	0.1	0.097	0.095	97	95	75-125	2	20	
Lead	mg/L	ND	0.1	0.1	0.096	0.096	96	96	75-125	0	20	
Lithium	mg/L	ND	0.1	0.1	0.098	0.099	97	99	75-125	1	20	
Molybdenum	mg/L	ND	0.1	0.1	0.10	0.10	99	99	75-125	0	20	
Selenium	mg/L	ND	0.1	0.1	0.097	0.096	96	95	75-125	1	20	
Thallium	mg/L	ND	0.1	0.1	0.096	0.094	96	94	75-125	2	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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QUALITY CONTROL DATA

Project: HAMMOND AP-1 1ST SEMIANNUAL
Pace Project No.: 2630471

QC Batch: 45226
QC Batch Method: EPA 3005A
Analysis Method: EPA 6020B
Analysis Description: 6020B MET
Laboratory: Pace Analytical Services - Atlanta, GA
Associated Lab Samples: 2630471018, 2630471019, 2630471020, 2630471021, 2630471022, 2630471023

METHOD BLANK: 208424 Matrix: Water
Associated Lab Samples: 2630471018, 2630471019, 2630471020, 2630471021, 2630471022, 2630471023

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00027	04/08/20 16:57	
Arsenic	mg/L	0.00095J	0.0050	0.00035	04/08/20 16:57	
Barium	mg/L	ND	0.010	0.00049	04/08/20 16:57	
Beryllium	mg/L	ND	0.0030	0.000074	04/08/20 16:57	
Boron	mg/L	ND	0.10	0.0049	04/08/20 16:57	
Cadmium	mg/L	ND	0.0025	0.00011	04/08/20 16:57	
Chromium	mg/L	ND	0.010	0.00039	04/08/20 16:57	
Cobalt	mg/L	ND	0.0050	0.00030	04/08/20 16:57	
Lead	mg/L	ND	0.0050	0.000046	04/08/20 16:57	
Lithium	mg/L	ND	0.030	0.00078	04/08/20 16:57	
Molybdenum	mg/L	ND	0.010	0.00095	04/08/20 16:57	
Selenium	mg/L	ND	0.010	0.0013	04/08/20 16:57	
Thallium	mg/L	ND	0.0010	0.000052	04/08/20 16:57	

LABORATORY CONTROL SAMPLE: 208425

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.10	104	80-120	
Arsenic	mg/L	0.1	0.10	102	80-120	
Barium	mg/L	0.1	0.10	104	80-120	
Beryllium	mg/L	0.1	0.10	101	80-120	
Boron	mg/L	1	1.1	105	80-120	
Cadmium	mg/L	0.1	0.099	99	80-120	
Chromium	mg/L	0.1	0.10	102	80-120	
Cobalt	mg/L	0.1	0.10	100	80-120	
Lead	mg/L	0.1	0.10	100	80-120	
Lithium	mg/L	0.1	0.10	103	80-120	
Molybdenum	mg/L	0.1	0.11	105	80-120	
Selenium	mg/L	0.1	0.10	101	80-120	
Thallium	mg/L	0.1	0.098	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 208426 208427

Parameter	Units	2630471018 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	mg/L	ND	0.1	0.1	0.11	0.10	106	103	75-125	2	20	
Arsenic	mg/L	0.0022J	0.1	0.1	0.10	0.10	101	101	75-125	0	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: HAMMOND AP-1 1ST SEMIANNUAL
Pace Project No.: 2630471

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 208426 208427

Parameter	Units	2630471018 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Barium	mg/L	0.026	0.1	0.1	0.13	0.13	107	108	75-125	0	20	
Beryllium	mg/L	0.00015J	0.1	0.1	0.097	0.098	97	97	75-125	0	20	
Boron	mg/L	0.17	1	1	1.2	1.2	102	106	75-125	3	20	
Cadmium	mg/L	ND	0.1	0.1	0.10	0.098	100	98	75-125	2	20	
Chromium	mg/L	ND	0.1	0.1	0.10	0.10	100	101	75-125	2	20	
Cobalt	mg/L	0.0014J	0.1	0.1	0.099	0.10	97	99	75-125	1	20	
Lead	mg/L	0.00030J	0.1	0.1	0.092	0.094	92	93	75-125	2	20	
Lithium	mg/L	ND	0.1	0.1	0.10	0.10	100	105	75-125	5	20	
Molybdenum	mg/L	0.0074J	0.1	0.1	0.11	0.11	105	105	75-125	0	20	
Selenium	mg/L	0.019	0.1	0.1	0.12	0.12	102	99	75-125	2	20	
Thallium	mg/L	ND	0.1	0.1	0.093	0.094	93	94	75-125	1	20	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: HAMMOND AP-1 1ST SEMIANNUAL
Pace Project No.: 2630471

QC Batch: 45280
QC Batch Method: EPA 3005A
Analysis Method: EPA 6020B
Analysis Description: 6020B MET
Laboratory: Pace Analytical Services - Atlanta, GA
Associated Lab Samples: 2630471024

METHOD BLANK: 208755 Matrix: Water
Associated Lab Samples: 2630471024

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00027	04/07/20 14:39	
Arsenic	mg/L	ND	0.0050	0.00035	04/07/20 14:39	
Barium	mg/L	ND	0.010	0.00049	04/07/20 14:39	
Beryllium	mg/L	ND	0.0030	0.000074	04/07/20 14:39	
Boron	mg/L	ND	0.10	0.0049	04/07/20 14:39	
Cadmium	mg/L	ND	0.0025	0.00011	04/07/20 14:39	
Chromium	mg/L	ND	0.010	0.00039	04/07/20 14:39	
Cobalt	mg/L	ND	0.0050	0.00030	04/07/20 14:39	
Lead	mg/L	ND	0.0050	0.000046	04/07/20 14:39	
Lithium	mg/L	ND	0.030	0.00078	04/07/20 14:39	
Molybdenum	mg/L	ND	0.010	0.00095	04/07/20 14:39	
Selenium	mg/L	ND	0.010	0.0013	04/07/20 14:39	
Thallium	mg/L	ND	0.0010	0.000052	04/07/20 14:39	

LABORATORY CONTROL SAMPLE: 208756

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.097	97	80-120	
Arsenic	mg/L	0.1	0.093	93	80-120	
Barium	mg/L	0.1	0.095	95	80-120	
Beryllium	mg/L	0.1	0.097	97	80-120	
Boron	mg/L	1	0.98	98	80-120	
Cadmium	mg/L	0.1	0.095	95	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	0.096	96	80-120	
Lithium	mg/L	0.1	0.098	98	80-120	
Molybdenum	mg/L	0.1	0.095	95	80-120	
Selenium	mg/L	0.1	0.093	93	80-120	
Thallium	mg/L	0.1	0.096	96	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 208757 208758

Parameter	Units	92471969008 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	mg/L	ND	0.1	0.1	0.098	0.097	98	97	75-125	1	20	
Arsenic	mg/L	ND	0.1	0.1	0.093	0.093	92	93	75-125	1	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
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(770)734-4200

QUALITY CONTROL DATA

Project: HAMMOND AP-1 1ST SEMIANNUAL
Pace Project No.: 2630471

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 208757 208758

Parameter	Units	92471969008 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Barium	mg/L	59.9 ug/L	0.1	0.1	0.15	0.15	95	92	75-125	2	20	
Beryllium	mg/L	ND	0.1	0.1	0.094	0.096	94	96	75-125	1	20	
Boron	mg/L	ND	1	1	0.94	0.97	94	96	75-125	2	20	
Cadmium	mg/L	ND	0.1	0.1	0.097	0.096	97	96	75-125	2	20	
Chromium	mg/L	ND	0.1	0.1	0.10	0.10	100	100	75-125	0	20	
Cobalt	mg/L	ND	0.1	0.1	0.099	0.098	99	98	75-125	0	20	
Lead	mg/L	ND	0.1	0.1	0.096	0.096	96	96	75-125	0	20	
Lithium	mg/L	ND	0.1	0.1	0.097	0.097	95	96	75-125	0	20	
Molybdenum	mg/L	ND	0.1	0.1	0.097	0.097	97	97	75-125	0	20	
Selenium	mg/L	ND	0.1	0.1	0.094	0.092	94	92	75-125	3	20	
Thallium	mg/L	ND	0.1	0.1	0.096	0.096	96	96	75-125	1	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: HAMMOND AP-1 1ST SEMIANNUAL
Pace Project No.: 2630471

QC Batch: 45160
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Atlanta, GA
Associated Lab Samples: 2630471001, 2630471002, 2630471003

LABORATORY CONTROL SAMPLE: 208030

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	371	93	84-108	

SAMPLE DUPLICATE: 208031

Parameter	Units	2630449005 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	278	272	2	10	

SAMPLE DUPLICATE: 208032

Parameter	Units	2630472002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	281	277	1	10	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: HAMMOND AP-1 1ST SEMIANNUAL
Pace Project No.: 2630471

QC Batch: 45207
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Atlanta, GA
Associated Lab Samples: 2630471004, 2630471005, 2630471006, 2630471007

LABORATORY CONTROL SAMPLE: 208287

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	341	85	84-108	

SAMPLE DUPLICATE: 208288

Parameter	Units	2630482003 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	79.0	57.0	32	10	D6

SAMPLE DUPLICATE: 208289

Parameter	Units	2630472006 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	69.0	80.0	15	10	D6

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: HAMMOND AP-1 1ST SEMIANNUAL
Pace Project No.: 2630471

QC Batch: 45209
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Atlanta, GA
Associated Lab Samples: 2630471008, 2630471009, 2630471010, 2630471011, 2630471012, 2630471013, 2630471014, 2630471015, 2630471016, 2630471017

LABORATORY CONTROL SAMPLE: 208290

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	375	94	84-108	

SAMPLE DUPLICATE: 208291

Parameter	Units	2630525003 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	193	188	3	10	

SAMPLE DUPLICATE: 208292

Parameter	Units	2630471008 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	413	422	2	10	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(770)734-4200

QUALITY CONTROL DATA

Project: HAMMOND AP-1 1ST SEMIANNUAL
Pace Project No.: 2630471

QC Batch: 45302
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Atlanta, GA
Associated Lab Samples: 2630471018, 2630471019, 2630471020, 2630471021, 2630471022, 2630471023, 2630471024

LABORATORY CONTROL SAMPLE: 208859

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	368	92	84-108	

SAMPLE DUPLICATE: 208860

Parameter	Units	2630471018 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	565	535	5	10	

SAMPLE DUPLICATE: 208861

Parameter	Units	2630525018 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	267	269	1	10	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: HAMMOND AP-1 1ST SEMIANNUAL
Pace Project No.: 2630471

QC Batch: 533983
QC Batch Method: EPA 300.0 Rev 2.1 1993
Analysis Method: EPA 300.0 Rev 2.1 1993
Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 2630471008, 2630471009, 2630471010, 2630471011, 2630471012, 2630471013

METHOD BLANK: 2849870 Matrix: Water
Associated Lab Samples: 2630471008, 2630471009, 2630471010, 2630471011, 2630471012, 2630471013

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	04/02/20 16:46	
Fluoride	mg/L	ND	0.10	0.050	04/02/20 16:46	
Sulfate	mg/L	ND	1.0	0.50	04/02/20 16:46	

LABORATORY CONTROL SAMPLE: 2849871

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	50.8	102	90-110	
Fluoride	mg/L	2.5	2.7	107	90-110	
Sulfate	mg/L	50	50.5	101	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2849872 2849873

Parameter	Units	2630525010 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	1.2	50	50	56.1	56.3	110	110	90-110	0	10	
Fluoride	mg/L	ND	2.5	2.5	2.6	2.7	103	105	90-110	2	10	
Sulfate	mg/L	10.8	50	50	65.8	66.0	110	110	90-110	0	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2849874 2849875

Parameter	Units	92471182001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	3.2	50	50	57.8	59.5	109	113	90-110	3	10	M1
Fluoride	mg/L	0.12	2.5	2.5	2.8	2.9	109	113	90-110	4	10	M1
Sulfate	mg/L	ND	50	50	54.8	56.8	109	112	90-110	3	10	M1

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: HAMMOND AP-1 1ST SEMIANNUAL
Pace Project No.: 2630471

QC Batch: 533985
QC Batch Method: EPA 300.0 Rev 2.1 1993
Analysis Method: EPA 300.0 Rev 2.1 1993
Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 2630471001, 2630471002, 2630471003, 2630471004, 2630471005, 2630471006, 2630471007

METHOD BLANK: 2849882 Matrix: Water
Associated Lab Samples: 2630471001, 2630471002, 2630471003, 2630471004, 2630471005, 2630471006, 2630471007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	04/02/20 23:48	
Fluoride	mg/L	ND	0.10	0.050	04/02/20 23:48	
Sulfate	mg/L	ND	1.0	0.50	04/02/20 23:48	

LABORATORY CONTROL SAMPLE: 2849883

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	49.8	100	90-110	
Fluoride	mg/L	2.5	2.5	102	90-110	
Sulfate	mg/L	50	49.7	99	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2849884 2849885

Parameter	Units	2630472001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	20.4	50	50	75.6	76.0	110	111	90-110	1	10	M1
Fluoride	mg/L	0.098J	2.5	2.5	2.7	2.8	104	106	90-110	2	10	
Sulfate	mg/L	85.9	50	50	138	138	103	104	90-110	0	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2849886 2849887

Parameter	Units	2630471007 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	0.73J	50	50	58.0	58.4	114	115	90-110	1	10	M1
Fluoride	mg/L	0.082J	2.5	2.5	2.8	2.8	109	109	90-110	0	10	
Sulfate	mg/L	176	50	50	227	231	102	109	90-110	2	10	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: HAMMOND AP-1 1ST SEMIANNUAL
Pace Project No.: 2630471

QC Batch: 534237
QC Batch Method: EPA 300.0 Rev 2.1 1993
Analysis Method: EPA 300.0 Rev 2.1 1993
Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 2630471014, 2630471015, 2630471016, 2630471017

METHOD BLANK: 2851088 Matrix: Water
Associated Lab Samples: 2630471014, 2630471015, 2630471016, 2630471017

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	04/04/20 14:53	
Fluoride	mg/L	ND	0.10	0.050	04/04/20 14:53	
Sulfate	mg/L	ND	1.0	0.50	04/04/20 14:53	

LABORATORY CONTROL SAMPLE: 2851089

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	48.6	97	90-110	
Fluoride	mg/L	2.5	2.5	99	90-110	
Sulfate	mg/L	50	48.6	97	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2851147 2851148

Parameter	Units	2630471014 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	1.5	50	50	50.2	50.4	97	98	90-110	0	10	
Fluoride	mg/L	ND	2.5	2.5	2.6	2.7	104	105	90-110	0	10	
Sulfate	mg/L	46.2	50	50	93.5	93.5	95	95	90-110	0	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2851149 2851150

Parameter	Units	92471612001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	391	50	50	392	404	0	25	90-110	3	10	M6
Fluoride	mg/L	0.27	2.5	2.5	2.6	2.6	93	94	90-110	1	10	
Sulfate	mg/L	119	50	50	161	166	83	93	90-110	3	10	M6

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: HAMMOND AP-1 1ST SEMIANNUAL
Pace Project No.: 2630471

QC Batch: 534425
QC Batch Method: EPA 300.0 Rev 2.1 1993
Analysis Method: EPA 300.0 Rev 2.1 1993
Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 2630471018, 2630471019, 2630471020, 2630471021, 2630471022, 2630471023

METHOD BLANK: 2852105 Matrix: Water
Associated Lab Samples: 2630471018, 2630471019, 2630471020, 2630471021, 2630471022, 2630471023

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	04/04/20 14:52	
Fluoride	mg/L	ND	0.10	0.050	04/04/20 14:52	
Sulfate	mg/L	ND	1.0	0.50	04/04/20 14:52	

LABORATORY CONTROL SAMPLE: 2852106

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	2.4	96	90-110	
Sulfate	mg/L	50	51.1	102	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2852107 2852108

Parameter	Units	2630491001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	124	50	50	177	178	105	109	90-110	1	10	
Fluoride	mg/L	0.59	2.5	2.5	3.2	3.3	106	110	90-110	3	10	
Sulfate	mg/L	118	50	50	170	171	103	107	90-110	1	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2852109 2852110

Parameter	Units	2630472013 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	161	50	50	215	216	107	109	90-110	0	10	
Fluoride	mg/L	ND	2.5	2.5	2.9	3.0	116	120	90-110	3	10	M1
Sulfate	mg/L	484	50	50	534	536	100	103	90-110	0	10	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: HAMMOND AP-1 1ST SEMIANNUAL
Pace Project No.: 2630471

QC Batch: 534656
QC Batch Method: EPA 300.0 Rev 2.1 1993
Analysis Method: EPA 300.0 Rev 2.1 1993
Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 2630471024

METHOD BLANK: 2853372 Matrix: Water
Associated Lab Samples: 2630471024

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	04/07/20 19:36	
Fluoride	mg/L	ND	0.10	0.050	04/07/20 19:36	
Sulfate	mg/L	ND	1.0	0.50	04/07/20 19:36	

LABORATORY CONTROL SAMPLE: 2853373

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	101	90-110	
Sulfate	mg/L	50	50.2	100	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2853374 2853375

Parameter	Units	2630471024 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	27.9	50	50	77.4	78.8	99	102	90-110	2	10	
Fluoride	mg/L	0.24J	2.5	2.5	2.7	2.8	98	103	90-110	4	10	
Sulfate	mg/L	13.3	50	50	62.0	63.5	98	100	90-110	2	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2853376 2853377

Parameter	Units	92472309013 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	7.5	50	50	59.3	59.7	104	104	90-110	1	10	
Fluoride	mg/L	ND	2.5	2.5	2.5	2.6	100	102	90-110	1	10	
Sulfate	mg/L	ND	50	50	51.0	51.4	102	102	90-110	1	10	

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: HAMMOND AP-1 1ST SEMIANNUAL
Pace Project No.: 2630471

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.

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.

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

Pace Analytical Services, LLC
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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: HAMMOND AP-1 1ST SEMIANNUAL
Pace Project No.: 2630471

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2630471001	HGWA-1				
2630471002	HGWA-3				
2630471003	HGWA-2				
2630471004	HGWC-12				
2630471005	MW-25D				
2630471006	MW-19				
2630471007	MW-5				
2630471008	HGWC-7				
2630471009	MW-28D				
2630471010	MW-20				
2630471011	HGWC-8				
2630471012	MW-6				
2630471014	MW-7				
2630471015	MW-24D				
2630471016	HGWC-13				
2630471017	MW-29				
2630471018	HGWC-11				
2630471019	MW-26D				
2630471020	HGWC-9				
2630471021	MW-30D				
2630471023	HGWC-10				
2630471024	MW-27D				
2630471001	HGWA-1	EPA 3010A	45121	EPA 6010D	45135
2630471002	HGWA-3	EPA 3010A	45121	EPA 6010D	45135
2630471003	HGWA-2	EPA 3010A	45121	EPA 6010D	45135
2630471004	HGWC-12	EPA 3010A	45172	EPA 6010D	45193
2630471005	MW-25D	EPA 3010A	45185	EPA 6010D	45196
2630471006	MW-19	EPA 3010A	45185	EPA 6010D	45196
2630471007	MW-5	EPA 3010A	45185	EPA 6010D	45196
2630471008	HGWC-7	EPA 3010A	45185	EPA 6010D	45196
2630471009	MW-28D	EPA 3010A	45190	EPA 6010D	45194
2630471010	MW-20	EPA 3010A	45190	EPA 6010D	45194
2630471011	HGWC-8	EPA 3010A	45190	EPA 6010D	45194
2630471012	MW-6	EPA 3010A	45190	EPA 6010D	45194
2630471013	FB-01	EPA 3010A	45190	EPA 6010D	45194
2630471014	MW-7	EPA 3010A	45190	EPA 6010D	45194
2630471015	MW-24D	EPA 3010A	45190	EPA 6010D	45194
2630471016	HGWC-13	EPA 3010A	45190	EPA 6010D	45194
2630471017	MW-29	EPA 3010A	45190	EPA 6010D	45194
2630471018	HGWC-11	EPA 3010A	45218	EPA 6010D	45223
2630471019	MW-26D	EPA 3010A	45218	EPA 6010D	45223
2630471020	HGWC-9	EPA 3010A	45218	EPA 6010D	45223
2630471021	MW-30D	EPA 3010A	45218	EPA 6010D	45223
2630471022	FD-01	EPA 3010A	45218	EPA 6010D	45223
2630471023	HGWC-10	EPA 3010A	45249	EPA 6010D	45263

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: HAMMOND AP-1 1ST SEMIANNUAL
Pace Project No.: 2630471

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2630471024	MW-27D	EPA 3010A	45281	EPA 6010D	45288
2630471001	HGWA-1	EPA 3005A	45112	EPA 6020B	45137
2630471002	HGWA-3	EPA 3005A	45112	EPA 6020B	45137
2630471003	HGWA-2	EPA 3005A	45112	EPA 6020B	45137
2630471004	HGWC-12	EPA 3005A	45171	EPA 6020B	45192
2630471005	MW-25D	EPA 3005A	45171	EPA 6020B	45192
2630471006	MW-19	EPA 3005A	45171	EPA 6020B	45192
2630471007	MW-5	EPA 3005A	45171	EPA 6020B	45192
2630471008	HGWC-7	EPA 3005A	45184	EPA 6020B	45197
2630471009	MW-28D	EPA 3005A	45184	EPA 6020B	45197
2630471010	MW-20	EPA 3005A	45184	EPA 6020B	45197
2630471011	HGWC-8	EPA 3005A	45184	EPA 6020B	45197
2630471012	MW-6	EPA 3005A	45184	EPA 6020B	45197
2630471013	FB-01	EPA 3005A	45184	EPA 6020B	45197
2630471014	MW-7	EPA 3005A	45189	EPA 6020B	45195
2630471015	MW-24D	EPA 3005A	45189	EPA 6020B	45195
2630471016	HGWC-13	EPA 3005A	45189	EPA 6020B	45195
2630471017	MW-29	EPA 3005A	45189	EPA 6020B	45195
2630471018	HGWC-11	EPA 3005A	45226	EPA 6020B	45233
2630471019	MW-26D	EPA 3005A	45226	EPA 6020B	45233
2630471020	HGWC-9	EPA 3005A	45226	EPA 6020B	45233
2630471021	MW-30D	EPA 3005A	45226	EPA 6020B	45233
2630471022	FD-01	EPA 3005A	45226	EPA 6020B	45233
2630471023	HGWC-10	EPA 3005A	45226	EPA 6020B	45233
2630471024	MW-27D	EPA 3005A	45280	EPA 6020B	45289
2630471001	HGWA-1	SM 2540C	45160		
2630471002	HGWA-3	SM 2540C	45160		
2630471003	HGWA-2	SM 2540C	45160		
2630471004	HGWC-12	SM 2540C	45207		
2630471005	MW-25D	SM 2540C	45207		
2630471006	MW-19	SM 2540C	45207		
2630471007	MW-5	SM 2540C	45207		
2630471008	HGWC-7	SM 2540C	45209		
2630471009	MW-28D	SM 2540C	45209		
2630471010	MW-20	SM 2540C	45209		
2630471011	HGWC-8	SM 2540C	45209		
2630471012	MW-6	SM 2540C	45209		
2630471013	FB-01	SM 2540C	45209		
2630471014	MW-7	SM 2540C	45209		
2630471015	MW-24D	SM 2540C	45209		
2630471016	HGWC-13	SM 2540C	45209		
2630471017	MW-29	SM 2540C	45209		
2630471018	HGWC-11	SM 2540C	45302		
2630471019	MW-26D	SM 2540C	45302		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: HAMMOND AP-1 1ST SEMIANNUAL
Pace Project No.: 2630471

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2630471020	**HGWC-9**	SM 2540C	45302		
2630471021	**MW-30D**	SM 2540C	45302		
2630471022	**FD-01**	SM 2540C	45302		
2630471023	**HGWC-10**	SM 2540C	45302		
2630471024	**MW-27D**	SM 2540C	45302		
2630471001	**HGWA-1**	EPA 300.0 Rev 2.1 1993	533985		
2630471002	**HGWA-3**	EPA 300.0 Rev 2.1 1993	533985		
2630471003	**HGWA-2**	EPA 300.0 Rev 2.1 1993	533985		
2630471004	**HGWC-12**	EPA 300.0 Rev 2.1 1993	533985		
2630471005	**MW-25D**	EPA 300.0 Rev 2.1 1993	533985		
2630471006	**MW-19**	EPA 300.0 Rev 2.1 1993	533985		
2630471007	**MW-5**	EPA 300.0 Rev 2.1 1993	533985		
2630471008	**HGWC-7**	EPA 300.0 Rev 2.1 1993	533983		
2630471009	**MW-28D**	EPA 300.0 Rev 2.1 1993	533983		
2630471010	**MW-20**	EPA 300.0 Rev 2.1 1993	533983		
2630471011	**HGWC-8**	EPA 300.0 Rev 2.1 1993	533983		
2630471012	**MW-6**	EPA 300.0 Rev 2.1 1993	533983		
2630471013	**FB-01**	EPA 300.0 Rev 2.1 1993	533983		
2630471014	**MW-7**	EPA 300.0 Rev 2.1 1993	534237		
2630471015	**MW-24D**	EPA 300.0 Rev 2.1 1993	534237		
2630471016	**HGWC-13**	EPA 300.0 Rev 2.1 1993	534237		
2630471017	**MW-29**	EPA 300.0 Rev 2.1 1993	534237		
2630471018	**HGWC-11**	EPA 300.0 Rev 2.1 1993	534425		
2630471019	**MW-26D**	EPA 300.0 Rev 2.1 1993	534425		
2630471020	**HGWC-9**	EPA 300.0 Rev 2.1 1993	534425		
2630471021	**MW-30D**	EPA 300.0 Rev 2.1 1993	534425		
2630471022	**FD-01**	EPA 300.0 Rev 2.1 1993	534425		
2630471023	**HGWC-10**	EPA 300.0 Rev 2.1 1993	534425		
2630471024	**MW-27D**	EPA 300.0 Rev 2.1 1993	534656		

Pace Analytical™
www.pacelabs.com

CHAIN-OF-CUSTODY / Analytical Request Document

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

WO# : 2630471

2630471

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	GA Power	Report To:	SCS Contacts	Attention:	Southern Co.
Address:	Atlanta, GA	Copy To:	Geosyntec Contacts	Company Name:	
				Address:	
Email To:	SCS Contacts	Purchase Order No.:		Pace Quote Reference:	
Phone:	Fax:	Project Name:	Plant Hammond AP-1 Semiannual	Pace Project Manager:	Kevin Herring
Requested Due Date/TAT:	10 Day	Project Number:	GW6581B	Pace Profile #:	2912-4

REGULATORY AGENCY

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

Site Location STATE: GA

Section D Required Client Information

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

Valid Matrix Codes MATRIX	CODE
DRINKING WATER	DW
WATER	WT
WASTE WATER	WW
PRODUCT	P
SOIL/SOLID	SL
OIL	OL
WIPE	WP
AIR	AR
OTHER	OT
TISSUE	TS

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	TIME	COMPOSITE END/GRAB DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	Chloride, Fluoride, Sulfate (N)	TDS (N)	Metals 6010/6020* (N)	RAD 226/228 (N)	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	MW-27D	WT	G	4/2	1048	–	–	18	5	2		3							X	X	X	X	N	pH = 8.11 Last sample
2		WT	G						5	2		3							X	X	X	X	N	pH =
3		WT	G						5	2		3							X	X	X	X	N	pH =
4		WT	G						5	2		3							X	X	X	X	N	pH =
5		WT	G						5	2		3							X	X	X	X	N	pH =
6		WT	G						5	2		3							X	X	X	X	N	pH =
7		WT	G						5	2		3							X	X	X	X	N	pH =
8		WT	G						5	2		3							X	X	X	X	N	pH =
9		WT	G						5	2		3							X	X	X	X	N	pH =
10		WT	G						5	2		3							X	X	X	X	N	pH =
11		WT	G						5	2		3							X	X	X	X	N	pH =
12		WT	G						5	2		3							X	X	X	X	N	pH =

CR 4/2/2020

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
Please note dry wells, strike thorugh any wells not sampled, and note when the last sample for the event has been taken.	Chad Russo / GEO	4/2/20	1415	Marlia Marlan / Geosyntec	4/2/20	1415				
	Marlia Marlan / Geosyntec	4/3/20	1150	[illegible] Hicks / Pace	4/3/20	1150				
*Metals=Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Pb, Li, Mo, Se, Tl	[illegible] Hicks / Pace	4/3/20	1441	K. Wellington / PACE	4/3/20	1441	2.8	Y	N	Y
							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: Chad Russo

SIGNATURE of SAMPLER: Chad Russo DATE Signed (MM/DD/YY): 4/2/2020

*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.

Sample Condition Upon Receipt

Pace Analytical

Client Name: GA Power

WO#: 2630471

PM: KH Due Date: 04/09/20

CLIENT: 26-GA Power

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

Tracking #: _____

Custody Seal on Cooler/Box Present: ☐ yes ☑ no Seals intact: ☐ yes ☐ no

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

Thermometer Used THR214 Type of Ice: ☑ Wet ☐ Blue ☐ None ☐ Samples on ice, cooling process has begun

Cooler Temperature 2.8 Biological Tissue is Frozen: Yes No

Temp should be above freezing to 6°C

Comments:

Date and Initials of person examining contents: KRN 4/3/20

Chain of Custody Present:	☑Yes ☐No ☐N/A	1.	
Chain of Custody Filled Out:	☑Yes ☐No ☐N/A	2.	
Chain of Custody Relinquished:	☑Yes ☐No ☐N/A	3.	
Sampler Name & Signature on COC:	☑Yes ☐No ☐N/A	4.	
Samples Arrived within Hold Time:	☑Yes ☐No ☐N/A	5.	
Short Hold Time Analysis (<72hr):	☐Yes ☑No ☐N/A	6.	
Rush Turn Around Time Requested:	☐Yes ☑No ☐N/A	7.	10 Day TAT
Sufficient Volume:	☑Yes ☐No ☐N/A	8.	
Correct Containers Used:	☑Yes ☐No ☐N/A	9.	
-Pace Containers Used:	☑Yes ☐No ☐N/A		
Containers Intact:	☑Yes ☐No ☐N/A	10.	
Filtered volume received for Dissolved tests	☐Yes ☐No ☑N/A	11.	
Sample Labels match COC:	☑Yes ☐No ☐N/A	12.	
-Includes date/time/ID/Analysis Matrix: WT			
All containers needing preservation have been checked.	☑Yes ☐No ☐N/A	13.	
All containers needing preservation are found to be in compliance with EPA recommendation.	☑Yes ☐No ☐N/A		
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	☑Yes ☐No	Initial when completed: 4/3/20 KRN	Lot # of added preservative:
Samples checked for dechlorination:	☐Yes ☐No ☑N/A	14.	
Headspace in VOA Vials (>6mm):	☐Yes ☐No ☑N/A	15.	
Trip Blank Present:	☐Yes ☐No ☑N/A	16.	
Trip Blank Custody Seals Present	☐Yes ☐No ☑N/A		
Pace Trip Blank Lot # (if purchased): _____			

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ **Date:** _____

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

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

April 24, 2020

Mr. Joju Abraham
Georgia Power
2480 Maner Road
Atlanta, GA 30339

RE: Project: 2630471
Pace Project No.: 30356790

Dear Mr. Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory between March 27, 2020 and April 04, 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,

Jacquelyn Collins
jacquelyn.collins@pacelabs.com
(724)850-5612
Project Manager

Enclosures

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

CERTIFICATIONS

Project: 2630471
Pace Project No.: 30356790

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

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

SAMPLE SUMMARY

Project: 2630471
Pace Project No.: 30356790

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2630471001	**HGWA-1**	Water	03/25/20 15:56	03/27/20 10:35
2630471002	**HGWA-3**	Water	03/25/20 15:17	03/27/20 10:35
2630471003	**HGWA-2**	Water	03/25/20 16:32	03/27/20 10:35
2630471004	**HGWC-12**	Water	03/26/20 08:50	03/31/20 09:00
2630471005	**MW-25D**	Water	03/26/20 10:45	03/31/20 09:00
2630471006	**MW-19**	Water	03/26/20 12:30	03/31/20 09:00
2630471007	**MW-5**	Water	03/26/20 14:10	03/31/20 09:00
2630471008	**HGWC-7**	Water	03/27/20 09:30	03/31/20 09:00
2630471009	**MW-28D**	Water	03/27/20 10:40	03/31/20 09:00
2630471010	**MW-20**	Water	03/27/20 09:30	03/31/20 09:00
2630471011	**HGWC-8**	Water	03/27/20 10:40	03/31/20 09:00
2630471012	**MW-6**	Water	03/27/20 13:00	03/31/20 09:00
2630471013	**FB-01**	Water	03/27/20 00:01	03/31/20 09:00
2630471018	**HGWC-11**	Water	03/31/20 15:22	04/02/20 09:20
2630471019	**MW-26D**	Water	03/31/20 09:35	04/02/20 09:20
2630471020	**HGWC-9**	Water	03/31/20 12:00	04/02/20 09:20
2630471021	**MW-30D**	Water	03/31/20 10:00	04/02/20 09:20
2630471022	**FD-01**	Water	03/31/20 00:01	04/02/20 09:20
2630471023	**HGWC-10**	Water	04/01/20 09:47	04/03/20 09:20
2630471014	**MW-7**	Water	03/30/20 09:05	04/03/20 09:20
2630471015	**MW-24D**	Water	03/30/20 10:30	04/03/20 09:20
2630471016	**HGWC-13**	Water	03/30/20 12:15	04/03/20 09:20
2630471017	**MW-29**	Water	03/30/20 15:35	04/03/20 09:20
2630471024	**MW-27D**	Water	04/02/20 10:48	04/04/20 10:00

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

SAMPLE ANALYTE COUNT

Project: 2630471
Pace Project No.: 30356790

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
2630471001	HGWA-1	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2630471002	HGWA-3	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2630471003	HGWA-2	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2630471004	HGWC-12	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2630471005	MW-25D	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2630471006	MW-19	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2630471007	MW-5	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2630471008	HGWC-7	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2630471009	MW-28D	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2630471010	MW-20	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2630471011	HGWC-8	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2630471012	MW-6	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2630471013	FB-01	EPA 9315	LAL	1	PASI-PA

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

SAMPLE ANALYTE COUNT

Project: 2630471
Pace Project No.: 30356790

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2630471018	**HGWC-11**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2630471019	**MW-26D**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2630471020	**HGWC-9**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2630471021	**MW-30D**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2630471022	**FD-01**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2630471023	**HGWC-10**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2630471014	**MW-7**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2630471015	**MW-24D**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2630471016	**HGWC-13**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2630471017	**MW-29**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2630471024	**MW-27D**	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

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 2630471
Pace Project No.: 30356790

Sample: HGWA-1 **Lab ID: 2630471001** Collected: 03/25/20 15:56 Received: 03/27/20 10:35 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.221 ± 0.110 (0.164) C:93% T:NA**	pCi/L	04/07/20 19:26	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**4.14 ± 0.967 (0.705) C:78% T:84%**	pCi/L	04/15/20 14:46	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**4.36 ± 1.08 (0.869)**	pCi/L	04/22/20 10:22	7440-14-4	

Sample: HGWA-3 **Lab ID: 2630471002** Collected: 03/25/20 15:17 Received: 03/27/20 10:35 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.377 ± 0.123 (0.132) C:95% T:NA**	pCi/L	04/07/20 19:26	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.456 ± 0.433 (0.892) C:80% T:80%**	pCi/L	04/16/20 14:15	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.833 ± 0.556 (1.02)**	pCi/L	04/22/20 10:22	7440-14-4	

Sample: HGWA-2 **Lab ID: 2630471003** Collected: 03/25/20 16:32 Received: 03/27/20 10:35 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.621 ± 0.163 (0.126) C:95% T:NA**	pCi/L	04/07/20 19:13	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**-0.0793 ± 0.309 (0.742) C:82% T:81%**	pCi/L	04/16/20 14:15	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.621 ± 0.472 (0.868)**	pCi/L	04/22/20 10:22	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 2630471
Pace Project No.: 30356790

Sample: HGWC-12 **Lab ID: 2630471004** Collected: 03/26/20 08:50 Received: 03/31/20 09:00 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	**0.209 ± 0.217 (0.413) C:85% T:NA**	pCi/L	04/09/20 08:10	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**-0.0203 ± 0.317 (0.741) C:81% T:83%**	pCi/L	04/21/20 11:01	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.209 ± 0.534 (1.15)**	pCi/L	04/23/20 10:00	7440-14-4	

Sample: MW-25D **Lab ID: 2630471005** Collected: 03/26/20 10:45 Received: 03/31/20 09:00 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	**0.522 ± 0.311 (0.451) C:83% T:NA**	pCi/L	04/09/20 08:10	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.271 ± 0.347 (0.738) C:82% T:80%**	pCi/L	04/21/20 11:01	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.793 ± 0.658 (1.19)**	pCi/L	04/23/20 10:00	7440-14-4	

Sample: MW-19 **Lab ID: 2630471006** Collected: 03/26/20 12:30 Received: 03/31/20 09:00 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	**0.243 ± 0.255 (0.494) C:78% T:NA**	pCi/L	04/09/20 08:10	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.856 ± 0.415 (0.731) C:81% T:89%**	pCi/L	04/21/20 11:01	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.10 ± 0.670 (1.23)**	pCi/L	04/23/20 10:00	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
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(724)850-5600

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 2630471
Pace Project No.: 30356790

Sample: MW-5 **Lab ID: 2630471007** Collected: 03/26/20 14:10 Received: 03/31/20 09:00 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	**0.307 ± 0.235 (0.353) C:80% T:NA**	pCi/L	04/09/20 08:10	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.790 ± 0.401 (0.714) C:82% T:89%**	pCi/L	04/21/20 11:02	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.10 ± 0.636 (1.07)**	pCi/L	04/23/20 10:00	7440-14-4	

Sample: HGWC-7 **Lab ID: 2630471008** Collected: 03/27/20 09:30 Received: 03/31/20 09:00 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	**0.205 ± 0.240 (0.479) C:74% T:NA**	pCi/L	04/09/20 08:10	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.280 ± 0.342 (0.725) C:82% T:83%**	pCi/L	04/21/20 11:02	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.485 ± 0.582 (1.20)**	pCi/L	04/23/20 10:00	7440-14-4	

Sample: MW-28D **Lab ID: 2630471009** Collected: 03/27/20 10:40 Received: 03/31/20 09:00 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	**0.669 ± 0.354 (0.511) C:88% T:NA**	pCi/L	04/09/20 08:10	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.923 ± 0.415 (0.697) C:82% T:84%**	pCi/L	04/21/20 11:02	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.59 ± 0.769 (1.21)**	pCi/L	04/23/20 10:00	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 2630471
Pace Project No.: 30356790

Sample: MW-20 **Lab ID: 2630471010** Collected: 03/27/20 09:30 Received: 03/31/20 09:00 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	**0.0343 ± 0.173 (0.456) C:80% T:NA**	pCi/L	04/09/20 08:10	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.0659 ± 0.322 (0.734) C:78% T:85%**	pCi/L	04/21/20 11:02	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.100 ± 0.495 (1.19)**	pCi/L	04/23/20 10:00	7440-14-4	

Sample: HGWC-8 **Lab ID: 2630471011** Collected: 03/27/20 10:40 Received: 03/31/20 09:00 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	**0.360 ± 0.263 (0.406) C:78% T:NA**	pCi/L	04/09/20 08:10	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.676 ± 0.408 (0.759) C:73% T:86%**	pCi/L	04/21/20 11:02	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.04 ± 0.671 (1.17)**	pCi/L	04/23/20 10:00	7440-14-4	

Sample: MW-6 **Lab ID: 2630471012** Collected: 03/27/20 13:00 Received: 03/31/20 09:00 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	**0.0945 ± 0.223 (0.533) C:68% T:NA**	pCi/L	04/09/20 08:10	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.663 ± 0.395 (0.732) C:78% T:82%**	pCi/L	04/21/20 11:02	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.758 ± 0.618 (1.27)**	pCi/L	04/23/20 10:00	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 2630471
Pace Project No.: 30356790

Sample: FB-01 **Lab ID: 2630471013** Collected: 03/27/20 00:01 Received: 03/31/20 09:00 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	**0.0560 ± 0.144 (0.352) C:94% T:NA**	pCi/L	04/09/20 07:51	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.727 ± 0.451 (0.851) C:75% T:83%**	pCi/L	04/21/20 14:05	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.783 ± 0.595 (1.20)**	pCi/L	04/23/20 10:00	7440-14-4	

Sample: HGWC-11 **Lab ID: 2630471018** Collected: 03/31/20 15:22 Received: 04/02/20 09:20 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.338 ± 0.276 (0.488) C:87% T:NA**	pCi/L	04/10/20 07:38	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.959 ± 0.508 (0.909) C:75% T:84%**	pCi/L	04/22/20 14:09	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.30 ± 0.784 (1.40)**	pCi/L	04/23/20 13:56	7440-14-4	

Sample: MW-26D **Lab ID: 2630471019** Collected: 03/31/20 09:35 Received: 04/02/20 09:20 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.551 ± 0.339 (0.536) C:87% T:NA**	pCi/L	04/10/20 07:38	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**1.10 ± 0.491 (0.816) C:79% T:80%**	pCi/L	04/22/20 14:10	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.65 ± 0.830 (1.35)**	pCi/L	04/23/20 13:56	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 2630471
Pace Project No.: 30356790

Sample: HGWC-9 **Lab ID: 2630471020** Collected: 03/31/20 12:00 Received: 04/02/20 09:20 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
		Pace Analytical Services - Greensburg				
Radium-226	EPA 9315	**0.464 ± 0.297 (0.452) C:89% T:NA**	pCi/L	04/10/20 07:38	13982-63-3	
		Pace Analytical Services - Greensburg				
Radium-228	EPA 9320	**0.735 ± 0.504 (0.977) C:72% T:80%**	pCi/L	04/22/20 14:10	15262-20-1	
		Pace Analytical Services - Greensburg				
Total Radium	Total Radium Calculation	**1.20 ± 0.801 (1.43)**	pCi/L	04/23/20 13:56	7440-14-4	

Sample: MW-30D **Lab ID: 2630471021** Collected: 03/31/20 10:00 Received: 04/02/20 09:20 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
		Pace Analytical Services - Greensburg				
Radium-226	EPA 9315	**0.321 ± 0.238 (0.369) C:94% T:NA**	pCi/L	04/10/20 07:39	13982-63-3	
		Pace Analytical Services - Greensburg				
Radium-228	EPA 9320	**0.946 ± 0.507 (0.908) C:77% T:74%**	pCi/L	04/22/20 14:10	15262-20-1	
		Pace Analytical Services - Greensburg				
Total Radium	Total Radium Calculation	**1.27 ± 0.745 (1.28)**	pCi/L	04/23/20 13:56	7440-14-4	

Sample: FD-01 **Lab ID: 2630471022** Collected: 03/31/20 00:01 Received: 04/02/20 09:20 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
		Pace Analytical Services - Greensburg				
Radium-226	EPA 9315	**0.659 ± 0.312 (0.272) C:90% T:NA**	pCi/L	04/10/20 07:46	13982-63-3	
		Pace Analytical Services - Greensburg				
Radium-228	EPA 9320	**0.675 ± 0.428 (0.800) C:75% T:80%**	pCi/L	04/22/20 14:10	15262-20-1	
		Pace Analytical Services - Greensburg				
Total Radium	Total Radium Calculation	**1.33 ± 0.740 (1.07)**	pCi/L	04/23/20 13:56	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 2630471
Pace Project No.: 30356790

Sample: HGWC-10 **Lab ID: 2630471023** Collected: 04/01/20 09:47 Received: 04/03/20 09:20 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.0646 ± 0.210 (0.524) C:88% T:NA**	pCi/L	04/09/20 20:09	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.170 ± 0.286 (0.622) C:79% T:87%**	pCi/L	04/22/20 11:02	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.235 ± 0.496 (1.15)**	pCi/L	04/23/20 09:27	7440-14-4	

Sample: MW-7 **Lab ID: 2630471014** Collected: 03/30/20 09:05 Received: 04/03/20 09:20 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.373 ± 0.270 (0.390) C:84% T:NA**	pCi/L	04/09/20 20:09	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.457 ± 0.358 (0.709) C:80% T:83%**	pCi/L	04/22/20 11:03	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.830 ± 0.628 (1.10)**	pCi/L	04/23/20 09:27	7440-14-4	

Sample: MW-24D **Lab ID: 2630471015** Collected: 03/30/20 10:30 Received: 04/03/20 09:20 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.107 ± 0.207 (0.477) C:86% T:NA**	pCi/L	04/09/20 20:09	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**-0.249 ± 0.287 (0.729) C:78% T:82%**	pCi/L	04/22/20 11:03	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.107 ± 0.494 (1.21)**	pCi/L	04/23/20 09:27	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 2630471
Pace Project No.: 30356790

Sample: HGWC-13 **Lab ID: 2630471016** Collected: 03/30/20 12:15 Received: 04/03/20 09:20 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.490 ± 0.337 (0.566) C:90% T:NA**	pCi/L	04/09/20 20:09	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.112 ± 0.313 (0.703) C:81% T:82%**	pCi/L	04/22/20 11:03	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.602 ± 0.650 (1.27)**	pCi/L	04/23/20 09:27	7440-14-4	

Sample: MW-29 **Lab ID: 2630471017** Collected: 03/30/20 15:35 Received: 04/03/20 09:20 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.323 ± 0.284 (0.503) C:85% T:NA**	pCi/L	04/09/20 20:09	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.562 ± 0.484 (0.989) C:79% T:83%**	pCi/L	04/22/20 11:03	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.885 ± 0.768 (1.49)**	pCi/L	04/23/20 09:27	7440-14-4	

Sample: MW-27D **Lab ID: 2630471024** Collected: 04/02/20 10:48 Received: 04/04/20 10:00 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	**0.676 ± 0.331 (0.366) C:91% T:NA**	pCi/L	04/10/20 07:38	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**1.80 ± 0.650 (1.01) C:77% T:87%**	pCi/L	04/22/20 14:09	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**2.48 ± 0.981 (1.38)**	pCi/L	04/23/20 09:34	7440-14-4	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: 2630471
Pace Project No.: 30356790

QC Batch: 391022
QC Batch Method: EPA 9315
Analysis Method: EPA 9315
Analysis Description: 9315 Total Radium
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 2630471004, 2630471005, 2630471006, 2630471007, 2630471008, 2630471009, 2630471010, 2630471011, 2630471012, 2630471013

METHOD BLANK: 1893294 Matrix: Water
Associated Lab Samples: 2630471004, 2630471005, 2630471006, 2630471007, 2630471008, 2630471009, 2630471010, 2630471011, 2630471012, 2630471013

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0953 ± 0.154 (0.334) C:90% T:NA	pCi/L	04/09/20 08:10	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: 2630471
Pace Project No.: 30356790

QC Batch: 390592
QC Batch Method: EPA 9315
Analysis Method: EPA 9315
Analysis Description: 9315 Total Radium
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 2630471001, 2630471002, 2630471003

METHOD BLANK: 1891464 Matrix: Water
Associated Lab Samples: 2630471001, 2630471002, 2630471003

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.444 ± 0.130 (0.104) C:98% T:NA	pCi/L	04/07/20 18:26	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: 2630471
Pace Project No.: 30356790

QC Batch: 390595
QC Batch Method: EPA 9320
Analysis Method: EPA 9320
Analysis Description: 9320 Radium 228
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 2630471001, 2630471002, 2630471003

METHOD BLANK: 1891467 Matrix: Water
Associated Lab Samples: 2630471001, 2630471002, 2630471003

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.544 ± 0.340 (0.632) C:84% T:88%	pCi/L	04/16/20 14:15	

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REPORT OF LABORATORY ANALYSIS

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(724)850-5600

QUALITY CONTROL - RADIOCHEMISTRY

Project: 2630471
Pace Project No.: 30356790

QC Batch: 391344
QC Batch Method: EPA 9320
Analysis Method: EPA 9320
Analysis Description: 9320 Radium 228
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 2630471014, 2630471015, 2630471016, 2630471017, 2630471018, 2630471019, 2630471020, 2630471021, 2630471022, 2630471023, 2630471024

METHOD BLANK: 1894737
Matrix: Water
Associated Lab Samples: 2630471014, 2630471015, 2630471016, 2630471017, 2630471018, 2630471019, 2630471020, 2630471021, 2630471022, 2630471023, 2630471024

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.423 ± 0.298 (0.570) C:82% T:90%	pCi/L	04/22/20 11:02	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: 2630471
Pace Project No.: 30356790

QC Batch: 391023
QC Batch Method: EPA 9320
Analysis Method: EPA 9320
Analysis Description: 9320 Radium 228
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 2630471004, 2630471005, 2630471006, 2630471007, 2630471008, 2630471009, 2630471010, 2630471011, 2630471012, 2630471013

METHOD BLANK: 1893295 Matrix: Water
Associated Lab Samples: 2630471004, 2630471005, 2630471006, 2630471007, 2630471008, 2630471009, 2630471010, 2630471011, 2630471012, 2630471013

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.258 ± 0.334 (0.711) C:83% T:83%	pCi/L	04/21/20 11:02	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: 2630471
Pace Project No.: 30356790

QC Batch: 391343
QC Batch Method: EPA 9315
Analysis Method: EPA 9315
Analysis Description: 9315 Total Radium
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 2630471014, 2630471015, 2630471016, 2630471017, 2630471018, 2630471019, 2630471020, 2630471021, 2630471022, 2630471023, 2630471024

METHOD BLANK: 1894734
Matrix: Water
Associated Lab Samples: 2630471014, 2630471015, 2630471016, 2630471017, 2630471018, 2630471019, 2630471020, 2630471021, 2630471022, 2630471023, 2630471024

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.103 ± 0.0985 (0.172) C:82% T:NA	pCi/L	04/09/20 15:48	

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REPORT OF LABORATORY ANALYSIS

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Greensburg, PA 15601
(724)850-5600

QUALIFIERS

Project: 2630471
Pace Project No.: 30356790

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.

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: For Safe Drinking Water Act (SDWA) analyses, the reported Unc. Is the calculated Count Uncertainty (95% confidence interval) using a coverage factor of 1.96. For all other matrices (non-SDWA), the reported Unc. is the calculated Expanded Uncertainty (aka Combined Standard Uncertainty, CSU), reported at the 95% confidence interval using a coverage factor of 1.96.

Gamma Spec: The Unc. reported for all gamma-spectroscopy analyses (EPA 901.1), is the calculated Expanded Uncertainty (CSU) at the 95.4% confidence interval, using a coverage factor of 2.0.

(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.

Chain of Custody

☐ Samples were sent directly to the Subcontracting Laboratory.

State Of Origin: GA
Cert. Needed: ☐ Yes ☐ No
Owner Received Date: 3/26/2020 Results Requested By: 4/9/2020

Pace Analytical
www.pacelabs.com

Workorder: 2630471 **Workorder Name:** AP-1 1ST SEMIANNUAL COMPLIANCE

Report To

Kevin Herring
Pace Analytical Charlotte
9800 Kincey Ave.
Suite 100
Huntersville, NC 28078
Phone (704)875-9092

Subcontract To

Pace Analytical Pittsburgh
1638 Roseytown Road
Suites 2,3, & 4
Greensburg, PA 15601
Phone (724)850-5600

Requested Analysis

WO# : 30356790

30356790

Item	Sample ID	Sample Type	Collected Date/Time	Lab ID	Matrix	Preserved Containers: HNO3						RAD 9315	RAD 9320											LAB USE ONLY
1	HGWA-1	PS	3/25/2020 15:56	2630471001	Water	1						X	X											001
2	HGWA-3	PS	3/25/2020 15:17	2630471002	Water	1						X	X											002
3	HGWA-2	PS	3/25/2020 16:32	2630471003	Water	1						X	X											003
4																								
5																								

Transfers	Released By	Date/Time	Received By	Date/Time
1				3-27-2020 10:15
2				
3				

Comments

Upload results from 2630472-001, 002, 003 for these samples

Cooler Temperature on Receipt N/A °C | **Custody Seal** Y or N | **Received on Ice** Y or N | **Samples Intact** Y or N

****In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document. This chain of custody is considered complete as is since this information is available in the owner laboratory.*

Chain of Custody

☐ Samples were sent directly to the Subcontracting Laboratory.

State Of Origin: GA

Cert. Needed: ☐ Yes ☐ No

Pace Analytical® www.pacelabs.com

21 days

Workorder: 2630471 **Workorder Name:** AP-1 1ST SEMIANNUAL COMPLIANCE **Owner Received Date:** 3/26/2020 **Results Requested By:** ~~4/9/2020~~

Report To

Kevin Herring
Pace Analytical Charlotte
9800 Kincey Ave.
Suite 100
Huntersville, NC 28078
Phone (704)875-9092

Subcontract To

Pace Analytical Pittsburgh
1638 Roseytown Road
Suites 2,3, & 4
Greensburg, PA 15601
Phone (724)850-5600

Requested Analysis

WO# : 30356790
PM: JAC Due Date: 04/17/20
CLIENT: PACE_26_ATGA

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers: HNO3						RAD 9315	RAD 9320	LAB USE ONLY
1	~~HGWA-1~~	PS	3/25/2020 15:56	2630471001	~~Water~~	1						X	X	
2	HGWA-3	PS	3/25/2020 15:17	2630471002	Water	1						X	X	
3	~~HGWA-2~~	PS	3/25/2020 16:32	2630471003	~~Water~~	1						X	X	
4	HGWC-12	PS	3/26/2020 08:50	2630471004	Water	1	2					X	X	COY
5	MW-25D	PS	3/26/2020 10:45	2630471005	Water	1	2					X	X	COS
6	MW-19	PS	3/26/2020 12:30	2630471006	Water	1	2					X	X	COL
7	MW-5	PS	3/26/2020 14:10	2630471007	Water	1	2					X	X	CO7

Transfers	Released By	Date/Time	Received By	Date/Time
1	[illegible]	3/30/20 1700	[illegible]	3-31-20 9:50
2				
3				

Comments: Add on project

Cooler Temperature on Receipt N/A °C | **Custody Seal** Y or N | **Received on Ice** Y or (N) | **Samples Intact** (Y) or N

****In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document. This chain of custody is considered complete as is since this information is available in the owner laboratory.*

Chain of Custody

☐ Samples were sent directly to the Subcontracting Laboratory.

State Of Origin: GA
Cert. Needed: ☐ Yes ☐ No
Owner Received Date: 3/26/2020
Results Requested By: ~~4/9/2020~~ 7 days

Pace Analytical
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Workorder: 2630471 **Workorder Name:** AP-1 1ST SEMIANNUAL COMPLIANCE

WO# : 30356790

PM: JAC **Due Date: 04/17/20**

CLIENT: PACE_26_ATGA

Report To	Subcontract To
Kevin Herring Pace Analytical Charlotte 9800 Kincey Ave. Suite 100 Huntersville, NC 28078 Phone (704)875-9092	Pace Analytical Pittsburgh 1638 Roseytown Road Suites 2,3, & 4 Greensburg, PA 15601 Phone (724)850-5600

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers: HNO3						Requested Analysis: RAD 9315	RAD 9320											LAB USE ONLY
1	HGWA-1	PS	3/25/2020 15:56	2630471001	Water	1						X	X											
2	HGWA-3	PS	3/25/2020 15:17	2630471002	Water	1						X	X											
3	HGWA-2	PS	3/25/2020 16:30	2630471003	Water	1						X	X											
4	HGWC-12	PS	3/26/2020 08:50	2630471004	Water	1						X	X											
5	MW-25D	PS	3/26/2020 10:45	2630471005	Water	1						X	X											
6	MW-19	PS	3/26/2020 12:30	2630471006	Water	1						X	X											
7	MW-5	PS	3/26/2020 14:10	2630471007	Water	1						X	X											
8	HGWC-7	PS	3/27/2020 09:30	2630471008	Water	1	2					X	X											ACS
9	MW-28D	PS	3/27/2020 10:40	2630471009	Water	1	2					X	X											ACS
10	MW-20	PS	3/27/2020 09:30	2630471010	Water	1	2					X	X											CLP
11	HGWC-8	PS	3/27/2020 10:40	2630471011	Water	1	2					X	X											CLP
12	MW-6	PS	3/27/2020 13:00	2630471012	Water	1	2					X	X											CLP
13	FB-01	PS	3/27/2020 00:00	2630471013	Water	1	2					X	X											CLP

Transfers	Released By	Date/Time	Received By	Date/Time	Comments
1					Add on project
2					
3					

Cooler Temperature on Receipt °C	Custody Seal Y or N	Received on Ice Y or N	Samples Intact Y or N

****In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document. This chain of custody is considered complete as is since this information is available in the owner laboratory.*

Chain of Custody

☐ Samples were sent directly to the Subcontracting Laboratory.

State Of Origin: GA
Cert. Needed: ☐ Yes ☐ No
Owner Received Date: 3/26/2020

Pace Analytical® www.pacelabs.com

21 days

Workorder: 2630471 Workorder Name: HAMMOND AP-1 1ST SEMIANNUAL Results Requested By: ~~4/9/2020~~

Report To

Kevin Herring
Pace Analytical Charlotte
9800 Kincey Ave.
Suite 100
Huntersville, NC 28078
Phone (704)875-9092

Subcontract To

Pace Analytical Pittsburgh
1638 Roseytown Road
Suites 2,3, & 4
Greensburg, PA 15601
Phone (724)850-5600

Requested Analysis

WO# : 30356790

PM: JAC Due Date: 04/17/20
CLIENT: PACE_26_ATGA

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers: HNO3						RAD 9315	RAD 9320											LAB USE ONLY
1	HGWA-1	PS	3/25/2020 15:56	2630471001	Water							X	X											
2	HGWA-3	PS	3/25/2020 15:17	2630471002	Water	1						X	X											
3	HGWA-2	PS	3/25/2020 16:32	2630471003	Water	1						X	X											
4	HGWC-12	PS	3/26/2020 08:50	2630471004	Water	1						X	X											
5	MW-25D	PS	3/26/2020 10:45	2630471005	Water	1						X	X											
6	MW-19	PS	3/26/2020 12:30	2630471006	Water	1						X	X											
7	MW-5	PS	3/26/2020 14:00	2630471007	Water	1						X	X											
8	HGWC-7	PS	3/27/2020 09:30	2630471008	Water	1						X	X											
9	MW-28D	PS	3/27/2020 10:40	2630471009	Water	1						X	X											
10	MW-20	PS	3/27/2020 09:30	2630471010	Water	1						X	X											
11	HGWC-8	PS	3/27/2020 10:40	2630471011	Water	1						X	X											
12	MW-6	PS	3/27/2020 13:00	2630471012	Water	1						X	X											
13	FB-01	PS	3/27/2020 00:00	2630471013	Water	1						X	X											
14	MW-7	PS	3/30/2020 09:05	2630471014	Water	1						X	X											
15	MW-24D	PS	3/30/2020 10:30	2630471015	Water	1						X	X											
16	HGWC-13	PS	3/30/2020 12:15	2630471016	Water	1						X	X											
17	MW-29	PS	3/30/2020 15:35	2630471017	Water							X	X											
18	HGWC-11	PS	3/31/2020 15:22	2630471018	Water	1	2					X	X											018
19	MW-26D	PS	3/31/2020 09:35	2630471019	Water	1	2					X	X											019

Chain of Custody

☐ Samples were sent directly to the Subcontracting Laboratory.

State Of Origin: GA

Cert. Needed: ☐ Yes ☐ No

Pace Analytical
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Workorder: 2630471 **Workorder Name:** HAMMOND AP-1 1ST SEMIANNUAL **Owner Received Date:** 3/26/2020 **Results Requested By:** 4/9/2020

Report To	Subcontract To
Kevin Herring Pace Analytical Charlotte 9800 Kincey Ave. Suite 100 Huntersville, NC 28078 Phone (704)875-9092	Pace Analytical Pittsburgh 1638 Roseytown Road Suites 2,3, & 4 Greensburg, PA 15601 Phone (724)850-5600

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers: HNO3						Requested Analysis: RAD 9315	RAD 9320											LAB USE ONLY
20	HGWC-9	PS	3/31/2020 12:00	2630471020	Water	X	2					X	X											020
21	MW-30D	PS	3/31/2020 10:00	2630471021	Water	1	2					X	X											021
22	FD-01	PS	3/31/2020 00:00	2630471022	Water	1	2					X	X											022
23																								
24																								

Transfers	Released By	Date/Time	Received By	Date/Time
1	[signature]	4/1/2020	[signature]	4/2/2020
2				
3			mg 4/2/2020	

Comments: 920

Cooler Temperature on Receipt NA °C | **Custody Seal** Y or N | **Received on Ice** Y or N | **Samples Intact** Y or N

****In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document. This chain of custody is considered complete as is since this information is available in the owner laboratory.*

30356790

Chain of Custody

☐ Samples were sent directly to the Subcontracting Laboratory.

State Of Origin: GA
Cert. Needed: ☐ Yes ☐ No
Owner Received Date: 3/26/2020
Results Requested By: ~~4/9/2020~~ 21 days

Pace Analytical®
www.pacelabs.com

Workorder: 2630471 **Workorder Name: AP-1 1ST SEMIANNUAL COMPLIANCE**

Report To

Kevin Herring
Pace Analytical Charlotte
9800 Kincey Ave.
Suite 100
Huntersville, NC 28078
Phone (704)875-9092

Subcontract To

Pace Analytical Pittsburgh
1638 Roseytown Road
Suites 2,3, & 4
Greensburg, PA 15601
Phone (724)850-5600

WO# : 30356790

PM: JAC Due Date: 04/23/20
CLIENT: PACE_26_ATGA

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers: HNO3						Requested Analysis: RAD 9315	RAD 9320	LAB USE ONLY
1	HGWA-1	PS	3/25/2020 15:56	2630471001	Water	1						X	X	
2	HGWA-3	PS	3/25/2020 15:17	2630471002	Water	1						X	X	
3	HGWA-2	PS	3/25/2020 16:32	2630471003	Water	1						X	X	
4	HGWC-12	PS	3/26/2020 08:50	2630471004	Water	1						X	X	
5	MW-25D	PS	3/26/2020 10:45	2630471005	Water	1						X	X	
6	MW-19	PS	3/26/2020 12:30	2630471006	Water	1						X	X	
7	MW-5	PS	3/26/2020 14:10	2630471007	Water	1						X	X	
8	HGWC-7	PS	3/27/2020 09:30	2630471008	Water	1						X	X	
9	MW-28D	PS	3/27/2020 10:40	2630471009	Water	1						X	X	
10	MW-20	PS	3/27/2020 09:30	2630471010	Water	1						X	X	
11	HGWC-8	PS	3/27/2020 10:40	2630471011	Water	1						X	X	
12	MW-6	PS	3/27/2020 13:00	2630471012	Water	1						X	X	
13	FB-01	PS	3/27/2020 00:00	2630471013	Water							X	X	
14	MW-7	PS	3/30/2020 09:05	2630471014	Water	X	2					X	X	014
15	MW-24D	PS	3/30/2020 10:30	2630471015	Water	X	2					X	X	015
16	HGWC-13	PS	3/30/2020 12:15	2630471016	Water	X	2					X	X	016
17	MW-29	PS	3/30/2020 15:35	2630471017	Water	X	2					X	X	017

Transfers	Released By	Date/Time	Received By	Date/Time	Comments
1	Chris Price	4/1/20 700	William Face	4/3/2020 920	Add on project
2					
3					

Cooler Temperature on Receipt N/A °C	Custody Seal Y or N	Received on Ice Y or N	Samples Intact Y or N

***In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document. This chain of custody is considered complete as is since this information is available in the owner laboratory.

300570140

Pittsburgh Lab Sample Condition Upon Receipt

Pace Analytical

Client Name: Pace GA

Project # 30356790

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

Label DK

Tracking #: 1657 9507 1789

LIMS Login DK

Custody Seal on Cooler/Box Present: ☐ yes ☑ no Seals intact: ☐ yes ☐ no

Thermometer Used N/A Type of Ice: Wet Blue (None)

Cooler Temperature Observed Temp — °C Correction Factor: — °C Final Temp: — °C

Temp should be above freezing to 6°C

pH paper Lot# 100219L

Date and Initials of person examining contents: DK 3-30-20

Comments:	Yes	No	N/A	
Chain of Custody Present:	✓			1.
Chain of Custody Filled Out:	✓			2.
Chain of Custody Relinquished:		✓		3.
Sampler Name & Signature on COC:		✓		4.
Sample Labels match COC: -Includes date/time/ID Matrix: WT	✓			5.
Samples Arrived within Hold Time:	✓			6.
Short Hold Time Analysis (<72hr remaining):		✓		7.
Rush Turn Around Time Requested:		✓		8.
Sufficient Volume:	✓			9.
Correct Containers Used: -Pace Containers Used:	✓			10.
Containers Intact:	✓			11.
Orthophosphate field filtered			✓	12.
Hex Cr Aqueous sample field filtered			✓	13.
Organic Samples checked for dechlorination:			✓	14.
Filtered volume received for Dissolved tests			✓	15.
All containers have been checked for preservation. exceptions: VOA, coliform, TOC, O&G, Phenolics, Radon, Non-aqueous matrix	✓			16. pH<2
All containers meet method preservation requirements.	✓			Initial when completed DK Date/time of preservation
				Lot # of added preservative
Headspace in VOA Vials (>6mm):			✓	17.
Trip Blank Present:		✓		18.
Trip Blank Custody Seals Present			✓	
Rad Samples Screened < 0.5 mrem/hr	✓			Initial when completed: DK Date: 3-30-20

Client Notification/ Resolution:

Person Contacted: _____ Date/Time: _____ Contacted By: _____

Comments/ Resolution: _____

☐ **A check in this box indicates that additional information has been stored in ereports.**

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)

***PM review** is documented electronically in LIMS. When the Project Manager closes the SRF Review schedule in LIMS. The review is in the Status section of the Workorder Edit Screen.

Pittsburgh Lab Sample Condition Upon Receipt

WO# : 30356790

PM: JAC Due Date: 04/17/20

CLIENT: PACE_26_ATGA

Pace Analytical

Client Name: Pace GA

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

Label DN

Tracking #: 1657 9507 2167

LIMS Login DN

Custody Seal on Cooler/Box Present: ☑ yes ☐ no Seals intact: ☑ yes ☐ no

Thermometer Used N/A Type of Ice: Wet Blue (None)

Cooler Temperature Observed Temp — °C Correction Factor: — °C Final Temp: — °C

Temp should be above freezing to 6°C

pH paper Lot# 10DZ191 Date and Initials of person examining contents: DN 3-31-20

Comments:	Yes	No	N/A	
Chain of Custody Present:				1.
Chain of Custody Filled Out:				2.
Chain of Custody Relinquished:				3.
Sampler Name & Signature on COC:				4.
Sample Labels match COC: -Includes date/time/ID Matrix: WT				5.
Samples Arrived within Hold Time:	✓			6.
Short Hold Time Analysis (<72hr remaining):		✓		7.
Rush Turn Around Time Requested:		✓		8.
Sufficient Volume:	✓			9.
Correct Containers Used: -Pace Containers Used:	✓ ✓			10.
Containers Intact:	✓			11.
Orthophosphate field filtered			✓	12.
Hex Cr Aqueous sample field filtered			✓	13.
Organic Samples checked for dechlorination:			✓	14.
Filtered volume received for Dissolved tests			✓	15.
All containers have been checked for preservation. exceptions: VOA, coliform, TOC, O&G, Phenolics, Radon, Non-aqueous matrix	✓			16. pH<2
All containers meet method preservation requirements.	✓			Initial when completed: DN Date/time of preservation
				Lot # of added preservative
Headspace in VOA Vials (>6mm):			✓	17.
Trip Blank Present:		✓		18.
Trip Blank Custody Seals Present			✓	
Rad Samples Screened < 0.5 mrem/hr	✓			Initial when completed: DN Date:

Client Notification/ Resolution:

Person Contacted: _____ Date/Time: _____ Contacted By: _____

Comments/ Resolution: _____

☐ **A check in this box indicates that additional information has been stored in ereports.**

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)

***PM review** is documented electronically in LIMS. When the Project Manager closes the SRF Review schedule in LIMS. The review is in the Status section of the Workorder Edit Screen.

Pittsburgh Lab Sample Condition Upon Receipt

Pace Analytical — Client Name: Pace-Indy — Project # #30356790

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

Tracking #: 1657 9507 2936 / 1657 9507 2914

Label: NG — LIMS Login: NG

Custody Seal on Cooler/Box Present: ☑ yes ☐ no Seals intact: ☑ yes ☐ no

Thermometer Used N/A **Type of Ice:** Wet Blue (None)

Cooler Temperature **Observed Temp** — °C Correction Factor: — °C Final Temp: — °C

Temp should be above freezing to 6°C

pH paper Lot# 1002191

Date and Initials of person examining contents: NG 4/2/2020

Comments:	Yes	No	N/A	
Chain of Custody Present:	/			1.
Chain of Custody Filled Out:	/			2.
Chain of Custody Relinquished:	/			3.
Sampler Name & Signature on COC:		/		4.
Sample Labels match COC:	/			5.
-Includes date/time/ID Matrix: WT				
Samples Arrived within Hold Time:	/			6.
Short Hold Time Analysis (<72hr remaining):		/		7.
Rush Turn Around Time Requested:		/		8.
Sufficient Volume:	/			9.
Correct Containers Used:	/			10.
-Pace Containers Used:	/			
Containers Intact:	/			11.
Orthophosphate field filtered			/	12.
Hex Cr Aqueous sample field filtered			/	13.
Organic Samples checked for dechlorination:			/	14.
Filtered volume received for Dissolved tests			/	15.
All containers have been checked for preservation. exceptions: VOA, coliform, TOC, O&G, Phenolics, Radon, Non-aqueous matrix	/			16. pH<2
All containers meet method preservation requirements.	/			Initial when completed: NG — Date/time of preservation:
				Lot # of added preservative
Headspace in VOA Vials (>6mm):		/		17.
Trip Blank Present:		/		18.
Trip Blank Custody Seals Present			/	
Rad Samples Screened < 0.5 mrem/hr	/			Initial when completed: NG — Date: 4/2/2020

Client Notification/ Resolution:

~~Person Contacted:~~ ________ ~~Date/Time:~~ ________ ~~Contacted By:~~ ________

Comments/ Resolution: ________

☐ **A check in this box indicates that additional information has been stored in ereports.**

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)

***PM review** is documented electronically in LIMS. When the Project Manager closes the SRF Review schedule in LIMS. The review is in the Status section of the Workorder Edit Screen.

Pittsburgh Lab Sample Condition Upon Receipt

Pace Analytical

Client Name: Pace - NC Project # #30356790

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

Label LIMS Login

Tracking #: 1057 9501 2985

Custody Seal on Cooler/Box Present: ☐ yes ☐ no Seals intact: ☑ yes ☐ no

Thermometer Used NA Type of Ice: Wet Blue (None)

Cooler Temperature Observed Temp ___ °C Correction Factor: ___ °C Final Temp: ___ °C

Temp should be above freezing to 6°C

pH paper Lot# 165291 Date and Initials of person examining contents: MG 4/3/2020

Comments:	Yes	No	N/A	
Chain of Custody Present:	✓			1.
Chain of Custody Filled Out:	✓			2.
Chain of Custody Relinquished:	✓			3.
Sampler Name & Signature on COC:		✓		4.
Sample Labels match COC: -Includes date/time/ID Matrix: WT	✓			5.
Samples Arrived within Hold Time:	✓			6.
Short Hold Time Analysis (<72hr remaining):		✓		7.
Rush Turn Around Time Requested:		✓		8.
Sufficient Volume:	✓			9.
Correct Containers Used: -Pace Containers Used:	✓ ✓			10.
Containers Intact:	✓			11.
Orthophosphate field filtered			✓	12.
Hex Cr Aqueous sample field filtered			✓	13.
Organic Samples checked for dechlorination:			✓	14.
Filtered volume received for Dissolved tests			✓	15.
All containers have been checked for preservation. exceptions: VOA, coliform, TOC, O&G, Phenolics, Radon, Non-aqueous matrix	✓			16. pH<2
All containers meet method preservation requirements.	✓			Initial when completed: MG Date/time of preservation Lot # of added preservative
Headspace in VOA Vials (>6mm):		✓		17.
Trip Blank Present:		✓		18.
Trip Blank Custody Seals Present			✓	
Rad Samples Screened < 0.5 mrem/hr	✓			Initial when completed: MG Date: 4/3/2020

Client Notification/ Resolution:

Person Contacted: _____ Date/Time: _____ Contacted By: _____

Comments/ Resolution: _____

☐ **A check in this box indicates that additional information has been stored in ereports.**

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)

***PM review** is documented electronically in LIMS. When the Project Manager closes the SRF Review schedule in LIMS. The review is in the Status section of the Workorder Edit Screen.

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

May 11, 2020

Joju Abraham
Georgia Power - Coal Combustion Residuals
2480 Maner Road
Atlanta, GA 30339

RE: Project: HAMMOND AP-1 NON ROUTINE
Pace Project No.: 2630907

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on April 10, 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 - Atlanta, GA

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

Sincerely,

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

Enclosures

cc: Kristen Jurinko
Whitney Law, Geosyntec Consultants
Noelia Muskus, Geosyntec Consultants
Lauren Petty, Southern Company Services, Inc.

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

CERTIFICATIONS

Project: HAMMOND AP-1 NON ROUTINE
Pace Project No.: 2630907

Pace Analytical Services Atlanta
110 Technology Parkway Peachtree Corners, GA 30092
Florida DOH Certification #: E87315
Georgia DW Inorganics Certification #: 812
Georgia DW Microbiology Certification #: 812
North Carolina Certification #: 381
South Carolina Certification #: 98011001
Virginia Certification #: 460204

Pace Analytical Services Asheville
2225 Riverside Drive, Asheville, NC 28804
Florida/NELAP Certification #: E87648
Massachusetts Certification #: M-NC030
North Carolina Drinking Water Certification #: 37712
North Carolina Wastewater Certification #: 40
South Carolina Certification #: 99030001
Virginia/VELAP Certification #: 460222

REPORT OF LABORATORY ANALYSIS

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

SAMPLE SUMMARY

Project: HAMMOND AP-1 NON ROUTINE
Pace Project No.: 2630907

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2630907001	**MW-30D**	Water	04/09/20 11:35	04/10/20 11:35

REPORT OF LABORATORY ANALYSIS

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

SAMPLE ANALYTE COUNT

Project: HAMMOND AP-1 NON ROUTINE
Pace Project No.: 2630907

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
2630907001	**MW-30D**	EPA 6010D	DRB	5	PASI-GA
		EPA 6020B	CSW	1	PASI-GA
		SM 2320B-2011	ECH	2	PASI-A
		SM 4500-S2D-2011	MDW	1	PASI-A
		EPA 300.0 Rev 2.1 1993	BRJ	2	PASI-A

PASI-A = Pace Analytical Services - Asheville
PASI-GA = Pace Analytical Services - Atlanta, GA

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SUMMARY OF DETECTION

Project: HAMMOND AP-1 NON ROUTINE
Pace Project No.: 2630907

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
2630907001	**MW-30D**					
	Field pH	8.27	Std. Units		04/10/20 17:02	
EPA 6010D	Calcium	13.4	mg/L	1.0	04/16/20 17:29	
EPA 6010D	Magnesium	4.0	mg/L	0.050	04/16/20 17:29	
EPA 6010D	Manganese	0.0073J	mg/L	0.040	04/16/20 17:29	
EPA 6010D	Potassium	2.1	mg/L	0.20	04/16/20 17:29	
EPA 6010D	Sodium	512	mg/L	100	04/17/20 14:48	
EPA 6020B	Iron	0.10J	mg/L	0.20	04/14/20 15:56	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	544	mg/L	5.0	04/16/20 21:51	
SM 2320B-2011	Alkalinity, Total as CaCO3	544	mg/L	5.0	04/16/20 21:51	
EPA 300.0 Rev 2.1 1993	Chloride	96.0	mg/L	1.0	04/16/20 04:19	
EPA 300.0 Rev 2.1 1993	Sulfate	399	mg/L	8.0	04/16/20 19:47	

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ANALYTICAL RESULTS

Project: HAMMOND AP-1 NON ROUTINE
Pace Project No.: 2630907

Sample: MW-30D **Lab ID: 2630907001** Collected: 04/09/20 11:35 Received: 04/10/20 11:35 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Atlanta, GA								
Field pH	**8.27**	Std. Units			1		04/10/20 17:02		
6010D MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Atlanta, GA								
Calcium	**13.4**	mg/L	1.0	0.14	1	04/16/20 13:14	04/16/20 17:29	7440-70-2	
Magnesium	**4.0**	mg/L	0.050	0.011	1	04/16/20 13:14	04/16/20 17:29	7439-95-4	
Manganese	**0.0073J**	mg/L	0.040	0.0061	1	04/16/20 13:14	04/16/20 17:29	7439-96-5	
Potassium	**2.1**	mg/L	0.20	0.026	1	04/16/20 13:14	04/16/20 17:29	7440-09-7	
Sodium	**512**	mg/L	100	18.5	100	04/16/20 13:14	04/17/20 14:48	7440-23-5	
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA								
Iron	**0.10J**	mg/L	0.20	0.049	5	04/13/20 13:00	04/14/20 15:56	7439-89-6	
2320B Alkalinity	Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville								
Alkalinity,Bicarbonate (CaCO3)	**544**	mg/L	5.0	5.0	1		04/16/20 21:51		
Alkalinity, Total as CaCO3	**544**	mg/L	5.0	5.0	1		04/16/20 21:51		
4500S2D Sulfide Water	Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville								
Sulfide	ND	mg/L	0.10	0.050	1		04/15/20 19:40	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**96.0**	mg/L	1.0	0.60	1		04/16/20 04:19	16887-00-6	
Sulfate	**399**	mg/L	8.0	4.0	8		04/16/20 19:47	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
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QUALITY CONTROL DATA

Project: HAMMOND AP-1 NON ROUTINE
Pace Project No.: 2630907

QC Batch: 45592
QC Batch Method: EPA 3010A
Analysis Method: EPA 6010D
Analysis Description: 6010D MET
Laboratory: Pace Analytical Services - Atlanta, GA
Associated Lab Samples: 2630907001

METHOD BLANK: 210512 Matrix: Water
Associated Lab Samples: 2630907001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	0.14	04/16/20 17:18	
Magnesium	mg/L	ND	0.050	0.011	04/16/20 17:18	
Manganese	mg/L	ND	0.040	0.0061	04/16/20 17:18	
Potassium	mg/L	ND	0.20	0.026	04/16/20 17:18	
Sodium	mg/L	ND	1.0	0.19	04/16/20 17:18	

LABORATORY CONTROL SAMPLE: 210513

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	mg/L	1	1.0	101	80-120	
Magnesium	mg/L	1	1.0	103	80-120	
Manganese	mg/L	1	0.97	97	80-120	
Potassium	mg/L	1	0.97	97	80-120	
Sodium	mg/L	1	1.0	102	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 210528 210529

Parameter	Units	2630908002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Calcium	mg/L	258	1	1	262	265	333	619	75-125	1	20	M1
Magnesium	mg/L	25.6	1	1	27.0	27.4	138	171	75-125	1	20	M1
Manganese	mg/L	1.1	1	1	2.0	2.1	96	99	75-125	2	20	
Potassium	mg/L	8.1	1	1	9.1	9.2	107	118	75-125	1	20	
Sodium	mg/L	43.7	1	1	45.1	45.6	134	185	75-125	1	20	M1

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: HAMMOND AP-1 NON ROUTINE
Pace Project No.: 2630907

QC Batch: 45464
QC Batch Method: EPA 3005A
Analysis Method: EPA 6020B
Analysis Description: 6020B MET
Laboratory: Pace Analytical Services - Atlanta, GA
Associated Lab Samples: 2630907001

METHOD BLANK: 209861 Matrix: Water
Associated Lab Samples: 2630907001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Iron	mg/L	ND	0.040	0.0097	04/13/20 16:42	

LABORATORY CONTROL SAMPLE: 209862

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 209904 209905

Parameter	Units	2630907001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Iron	mg/L	0.10J	1	1	1.1	1.1	103	99	75-125	4	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: HAMMOND AP-1 NON ROUTINE
Pace Project No.: 2630907

QC Batch: 536610
QC Batch Method: SM 2320B-2011
Analysis Method: SM 2320B-2011
Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 2630907001

METHOD BLANK: 2862347 Matrix: Water
Associated Lab Samples: 2630907001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	ND	5.0	5.0	04/16/20 15:18	
Alkalinity,Bicarbonate (CaCO3)	mg/L	ND	5.0	5.0	04/16/20 15:18	

LABORATORY CONTROL SAMPLE: 2862348

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	50	51.3	103	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2862349 2862350

Parameter	Units	92472992089 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	12.5	50	50	65.0	65.2	105	105	80-120	0	25	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2862351 2862352

Parameter	Units	92472992093 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	84.2	50	50	137	139	105	109	80-120	1	25	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: HAMMOND AP-1 NON ROUTINE
Pace Project No.: 2630907

QC Batch: 536450
QC Batch Method: SM 4500-S2D-2011
Analysis Method: SM 4500-S2D-2011
Analysis Description: 4500S2D Sulfide Water
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 2630907001

METHOD BLANK: 2861626 Matrix: Water
Associated Lab Samples: 2630907001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide	mg/L	ND	0.10	0.050	04/15/20 19:34	

LABORATORY CONTROL SAMPLE: 2861627

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2861628 2861629

Parameter	Units	92473867001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfide	mg/L	ND	0.5	0.5	0.53	0.53	106	106	80-120	0	10	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: HAMMOND AP-1 NON ROUTINE
Pace Project No.: 2630907

QC Batch: 536461
QC Batch Method: EPA 300.0 Rev 2.1 1993
Analysis Method: EPA 300.0 Rev 2.1 1993
Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 2630907001

METHOD BLANK: 2861738 Matrix: Water
Associated Lab Samples: 2630907001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	04/16/20 02:52	
Sulfate	mg/L	ND	1.0	0.50	04/16/20 02:52	

LABORATORY CONTROL SAMPLE: 2861739

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	50.9	102	90-110	
Sulfate	mg/L	50	51.3	103	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2861740 2861741

Parameter	Units	2630908001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	69.5	50	50	102	101	64	64	90-110	0	10	M6
Sulfate	mg/L	1160	50	50	1200	1200	71	73	90-110	0	10	M6

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2861742 2861743

Parameter	Units	92473637001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	66.4	50	50	104	106	74	78	90-110	2	10	M1
Sulfate	mg/L	51.7	50	50	91.7	98.3	80	93	90-110	7	10	M1

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REPORT OF LABORATORY ANALYSIS

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

QUALIFIERS

Project: HAMMOND AP-1 NON ROUTINE
Pace Project No.: 2630907

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.

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.

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.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: HAMMOND AP-1 NON ROUTINE
Pace Project No.: 2630907

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2630907001	**MW-30D**				
2630907001	**MW-30D**	EPA 3010A	45592	EPA 6010D	45599
2630907001	**MW-30D**	EPA 3005A	45464	EPA 6020B	45489
2630907001	**MW-30D**	SM 2320B-2011	536610		
2630907001	**MW-30D**	SM 4500-S2D-2011	536450		
2630907001	**MW-30D**	EPA 300.0 Rev 2.1 1993	536461		

CHAIN-OF-CUSTODY / Analytical Request Document

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

Pace Analytical
www.pacelabs.com

WO# : 2630907

2630907

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	GA Power	Report To:	SCS Contacts	Attention:	Southern Co.
Address:	Atlanta, GA	Copy To:	Geosyntec Contacts	Company Name:	
				Address:	
Email To:	SCS Contacts	Purchase Order No.:		Pace Quote Reference:	
Phone:	Fax:	Project Name:	AP-1 Non-Routine Sampling	Pace Project Manager:	Kevin Herring
Requested Due Date/TAT:	~~10-Day~~ 5-Day	Project Number:	GW6581B	Pace Profile #:	2928-6

Regulatory: NPDES | GROUND WATER | DRINKING WATER | ☐ UST | ☐ RCRA | ☑ OTHER ~~CCR~~

Site Location STATE: GA

Section D Required Client Information

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

Valid Matrix Codes

MATRIX	CODE
DRINKING WATER	DW
WATER	WT
WASTE WATER	WW
PRODUCT	P
SOIL/SOLID	SL
OIL	OL
WIPE	WP
AIR	AR
OTHER	OT
TISSUE	TS

Requested Analysis Filtered (Y/N): N N N N

ITEM #	SAMPLE ID	MATRIX CODE	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED DATE	COLLECTED TIME	COMPOSITE DATE	COMPOSITE TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	Chloride, Sulfate	Metals 6010/6020*	Sulfide 4500S2D	Total Alkalinity, Bicarbonate 2320B	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	MW-30D	WT	G	4/9	1135	—	—	21	4	2		1					1		X	X	X	X	N	pH = 8.27 Last sample
2																								
3																								
4																								
5																								
6																								
7																								
8																								
9																								
10																								
11																								
12																								

CR 4/9 Russo

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
Please note dry wells, strike thorugh any wells not sampled, and note when the last sample for the event has been taken.	Chad Russo / Geo	4/9/20	2020	Meelia Mustard / Geosyntec	4/9/20	2020				
	Meelia Mustard / Geosyntec	4/10/20	1135	Ramona Waite / Pace	4/10/20	1135				
*Metals= Ca, Fe, Mg, Mn, Na, K	[illegible] / Pace	4/10/20	1245	K. Wellington / Pace	4/10/20	1245	1.3	Y	N	Y
							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: Chad Russo

SIGNATURE of SAMPLER: Chad Russo

DATE Signed (MM/DD/YY): 4/9/2020

*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

Sample Condition Upon Receipt

Pace Analytical

Client Name: GA Power

Project #

WO#: 2630907

PM: KH **Due Date: 04/17/20**

CLIENT: 26-GA Power

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

Tracking #: _____

Custody Seal on Cooler/Box Present: ☐ yes ☑ no Seals intact: ☐ yes

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

Thermometer Used THR214 **Type of Ice:** ~~Wet~~ Blue None ☐ Samples on ice, cooling process has begun

Cooler Temperature 1.3 **Biological Tissue is Frozen:** Yes No

Temp should be above freezing to 6°C

Date and Initials of person examining contents: KRW 4/10/20

Comments:

Chain of Custody Present:	☑Yes	☐No	☐N/A
Chain of Custody Filled Out:	☑Yes	☐No	☐N/A
Chain of Custody Relinquished:	☑Yes	☐No	☐N/A
Sampler Name & Signature on COC:	☑Yes	☐No	☐N/A
Samples Arrived within Hold Time:	☑Yes	☐No	☐N/A
Short Hold Time Analysis (<72hr):	☐Yes	☑No	☐N/A
Rush Turn Around Time Requested:	☐Yes	☑No	☐N/A
Sufficient Volume:	☑Yes	☐No	☐N/A
Correct Containers Used:	☑Yes	☐No	☐N/A
-Pace Containers Used:	☑Yes	☐No	☐N/A
Containers Intact:	☑Yes	☐No	☐N/A
Filtered volume received for Dissolved tests	☐Yes	☐No	☑N/A
Sample Labels match COC:	☑Yes	☐No	☐N/A
-Includes date/time/ID/Analysis Matrix: WT			
All containers needing preservation have been checked.	☑Yes	☐No	☐N/A
All containers needing preservation are found to be in compliance with EPA recommendation.	☑Yes	☐No	☐N/A
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	☑Yes	☐No	
Samples checked for dechlorination:	☐Yes	☐No	☑N/A
Headspace in VOA Vials (>6mm):	☐Yes	☐No	☑N/A
Trip Blank Present:	☐Yes	☐No	☑N/A
Trip Blank Custody Seals Present	☐Yes	☐No	☑N/A
Pace Trip Blank Lot # (if purchased): _____			

1.
2.
3.
4.
5.
6.
7.
8.
9.
10.
11.
12.
13.

Initial when completed: 4/10/20 KRW — Lot # of added preservative:

14.
15.
16.

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ **Date:** _____

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

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

May 14, 2020

Joju Abraham
Georgia Power - Coal Combustion Residuals
2480 Maner Road
Atlanta, GA 30339

RE: Project: PLANT HAMMOND MW-40D
Pace Project No.: 2631804

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on May 12, 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 - Atlanta, GA

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

Sincerely,

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

Enclosures

cc: Kristen Jurinko
Whitney Law, Geosyntec Consultants
Noelia Muskus, Geosyntec Consultants
Lauren Petty, Southern Company Services, Inc.

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

CERTIFICATIONS

Project: PLANT HAMMOND MW-40D
Pace Project No.: 2631804

Pace Analytical Services Atlanta
110 Technology Parkway Peachtree Corners, GA 30092
Florida DOH Certification #: E87315
Georgia DW Inorganics Certification #: 812
Georgia DW Microbiology Certification #: 812
North Carolina Certification #: 381
South Carolina Certification #: 98011001
Virginia Certification #: 460204

Pace Analytical Services Asheville
2225 Riverside Drive, Asheville, NC 28804
Florida/NELAP Certification #: E87648
Massachusetts Certification #: M-NC030
North Carolina Drinking Water Certification #: 37712
North Carolina Wastewater Certification #: 40
South Carolina Certification #: 99030001
Virginia/VELAP Certification #: 460222

REPORT OF LABORATORY ANALYSIS

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

SAMPLE SUMMARY

Project: PLANT HAMMOND MW-40D
Pace Project No.: 2631804

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2631804001	**MW-40D**	Water	05/11/20 14:05	05/12/20 12:21
2631804002	**MW-40D FILTERED**	Water	05/11/20 14:10	05/12/20 12:21

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SAMPLE ANALYTE COUNT

Project: PLANT HAMMOND MW-40D
Pace Project No.: 2631804

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
2631804001	**MW-40D**	EPA 6010D	DRB	1	PASI-GA
		EPA 6020B	CSW	2	PASI-GA
		SM 2540C	JRS	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
2631804002	**MW-40D FILTERED**	EPA 6010D	DRB	1	PASI-GA
		EPA 6020B	KLH	2	PASI-GA
		SM 2540C	JRS	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A

PASI-A = Pace Analytical Services - Asheville
PASI-GA = Pace Analytical Services - Atlanta, GA

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SUMMARY OF DETECTION

Project: PLANT HAMMOND MW-40D
Pace Project No.: 2631804

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
2631804001	**MW-40D**					
	Field pH	7.77	Std. Units		05/12/20 14:57	
EPA 6010D	Calcium	62.6	mg/L	1.0	05/13/20 10:57	M1
EPA 6020B	Boron	0.093J	mg/L	0.10	05/12/20 18:03	
EPA 6020B	Molybdenum	0.014	mg/L	0.010	05/12/20 18:03	
SM 2540C	Total Dissolved Solids	350	mg/L	10.0	05/12/20 17:15	
EPA 300.0 Rev 2.1 1993	Chloride	51.2	mg/L	1.0	05/13/20 02:46	
EPA 300.0 Rev 2.1 1993	Fluoride	0.88	mg/L	0.30	05/13/20 02:46	
EPA 300.0 Rev 2.1 1993	Sulfate	58.9	mg/L	1.0	05/13/20 02:46	
2631804002	**MW-40D FILTERED**					
	Field pH	7.77	Std. Units		05/12/20 14:59	
EPA 6010D	Calcium	19.3	mg/L	1.0	05/14/20 11:24	M1
EPA 6020B	Boron	0.084J	mg/L	0.10	05/13/20 17:53	
EPA 6020B	Molybdenum	0.015	mg/L	0.010	05/13/20 17:53	
SM 2540C	Total Dissolved Solids	353	mg/L	10.0	05/12/20 17:15	
EPA 300.0 Rev 2.1 1993	Chloride	52.2	mg/L	1.0	05/13/20 03:47	
EPA 300.0 Rev 2.1 1993	Fluoride	0.93	mg/L	0.30	05/13/20 03:47	
EPA 300.0 Rev 2.1 1993	Sulfate	56.8	mg/L	1.0	05/13/20 03:47	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: PLANT HAMMOND MW-40D
Pace Project No.: 2631804

Sample: MW-40D **Lab ID: 2631804001** Collected: 05/11/20 14:05 Received: 05/12/20 12:21 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Atlanta, GA								
Field pH	**7.77**	Std. Units			1		05/12/20 14:57		
6010D MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Atlanta, GA								
Calcium	**62.6**	mg/L	1.0	0.14	1	05/12/20 15:12	05/13/20 10:57	7440-70-2	M1
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA								
Boron	**0.093J**	mg/L	0.10	0.0049	1	05/12/20 14:46	05/12/20 18:03	7440-42-8	
Molybdenum	**0.014**	mg/L	0.010	0.00095	1	05/12/20 14:46	05/12/20 18:03	7439-98-7	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Atlanta, GA								
Total Dissolved Solids	**350**	mg/L	10.0	10.0	1		05/12/20 17:15		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**51.2**	mg/L	1.0	0.60	1		05/13/20 02:46	16887-00-6	
Fluoride	**0.88**	mg/L	0.30	0.050	1		05/13/20 02:46	16984-48-8	
Sulfate	**58.9**	mg/L	1.0	0.50	1		05/13/20 02:46	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: PLANT HAMMOND MW-40D
Pace Project No.: 2631804

Sample: MW-40D FILTERED **Lab ID: 2631804002** Collected: 05/11/20 14:10 Received: 05/12/20 12:21 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
	Analytical Method: Pace Analytical Services - Atlanta, GA								
Field pH	**7.77**	Std. Units			1		05/12/20 14:59		
6010D MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Atlanta, GA								
Calcium	**19.3**	mg/L	1.0	0.14	1	05/13/20 14:30	05/14/20 11:24	7440-70-2	M1
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA								
Boron	**0.084J**	mg/L	0.10	0.0049	1	05/13/20 14:29	05/13/20 17:53	7440-42-8	
Molybdenum	**0.015**	mg/L	0.010	0.00095	1	05/13/20 14:29	05/13/20 17:53	7439-98-7	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Atlanta, GA								
Total Dissolved Solids	**353**	mg/L	10.0	10.0	1		05/12/20 17:15		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**52.2**	mg/L	1.0	0.60	1		05/13/20 03:47	16887-00-6	
Fluoride	**0.93**	mg/L	0.30	0.050	1		05/13/20 03:47	16984-48-8	
Sulfate	**56.8**	mg/L	1.0	0.50	1		05/13/20 03:47	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: PLANT HAMMOND MW-40D
Pace Project No.: 2631804

QC Batch: 46303
QC Batch Method: EPA 3010A
Analysis Method: EPA 6010D
Analysis Description: 6010D MET
Laboratory: Pace Analytical Services - Atlanta, GA
Associated Lab Samples: 2631804001

METHOD BLANK: 214824 Matrix: Water
Associated Lab Samples: 2631804001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	0.14	05/13/20 10:49	

LABORATORY CONTROL SAMPLE: 214825

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: 214826 214827

Parameter	Units	2631804001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Calcium	mg/L	62.6	1	1	62.7	64.5	12	197	75-125	3	20	M1

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: PLANT HAMMOND MW-40D
Pace Project No.: 2631804

QC Batch: 46336
QC Batch Method: EPA 3010A
Analysis Method: EPA 6010D
Analysis Description: 6010D MET
Laboratory: Pace Analytical Services - Atlanta, GA
Associated Lab Samples: 2631804002

METHOD BLANK: 214977 Matrix: Water
Associated Lab Samples: 2631804002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	0.14	05/14/20 11:17	

LABORATORY CONTROL SAMPLE: 214978

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: 214979 214980

Parameter	Units	2631804002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Calcium	mg/L	19.3	1	1	19.9	20.4	66	116	75-125	2	20	M1

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: PLANT HAMMOND MW-40D
Pace Project No.: 2631804

QC Batch: 46300
QC Batch Method: EPA 3005A
Analysis Method: EPA 6020B
Analysis Description: 6020B MET
Laboratory: Pace Analytical Services - Atlanta, GA
Associated Lab Samples: 2631804001

METHOD BLANK: 214814 Matrix: Water
Associated Lab Samples: 2631804001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Boron	mg/L	ND	0.10	0.0049	05/12/20 17:51	
Molybdenum	mg/L	ND	0.010	0.00095	05/12/20 17:51	

LABORATORY CONTROL SAMPLE: 214815

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron	mg/L	1	1.1	105	80-120	
Molybdenum	mg/L	0.1	0.10	100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 214816 214817

Parameter	Units	2631804001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron	mg/L	0.093J	1	1	1.0	1.0	95	91	75-125	4	20	
Molybdenum	mg/L	0.014	0.1	0.1	0.11	0.11	97	96	75-125	1	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: PLANT HAMMOND MW-40D
Pace Project No.: 2631804

QC Batch: 46335
QC Batch Method: EPA 3005A
Analysis Method: EPA 6020B
Analysis Description: 6020B MET
Laboratory: Pace Analytical Services - Atlanta, GA
Associated Lab Samples: 2631804002

METHOD BLANK: 214971 Matrix: Water
Associated Lab Samples: 2631804002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Boron	mg/L	ND	0.10	0.0049	05/13/20 17:42	
Molybdenum	mg/L	ND	0.010	0.00095	05/13/20 17:42	

LABORATORY CONTROL SAMPLE: 214972

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron	mg/L	1	1.0	100	80-120	
Molybdenum	mg/L	0.1	0.10	104	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 214973 214974

Parameter	Units	92476873026 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron	mg/L	ND	1	1	1.0	0.97	100	96	75-125	4	20	
Molybdenum	mg/L	ND	0.1	0.1	0.10	0.10	103	102	75-125	1	20	

SAMPLE DUPLICATE: 214975

Parameter	Units	92476873026 Result	Dup Result	RPD	Max RPD	Qualifiers
Boron	mg/L	ND	0.010J		20	
Molybdenum	mg/L	ND	ND		20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: PLANT HAMMOND MW-40D
Pace Project No.: 2631804

QC Batch: 46308
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Atlanta, GA
Associated Lab Samples: 2631804001, 2631804002

LABORATORY CONTROL SAMPLE: 214850

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	406	102	84-108	

SAMPLE DUPLICATE: 214851

Parameter	Units	2631761001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	57.0	80.0	34	10	D6

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: PLANT HAMMOND MW-40D
Pace Project No.: 2631804

QC Batch: 541019
QC Batch Method: EPA 300.0 Rev 2.1 1993
Analysis Method: EPA 300.0 Rev 2.1 1993
Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 2631804001, 2631804002

METHOD BLANK: 2883307 Matrix: Water
Associated Lab Samples: 2631804001, 2631804002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	05/13/20 00:46	
Fluoride	mg/L	ND	0.10	0.050	05/13/20 00:46	
Sulfate	mg/L	ND	1.0	0.50	05/13/20 00:46	

LABORATORY CONTROL SAMPLE: 2883308

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	51.1	102	90-110	
Fluoride	mg/L	2.5	2.7	107	90-110	
Sulfate	mg/L	50	50.9	102	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2883309 2883310

Parameter	Units	92476997001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	50.7	50	50	92.3	92.8	83	84	90-110	1	10	M1
Fluoride	mg/L	ND	2.5	2.5	2.9	2.9	115	117	90-110	2	10	M1
Sulfate	mg/L	9.0	50	50	63.3	63.9	109	110	90-110	1	10	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
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QUALIFIERS

Project: PLANT HAMMOND MW-40D
Pace Project No.: 2631804

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.

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.

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

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

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: PLANT HAMMOND MW-40D
Pace Project No.: 2631804

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2631804001	**MW-40D**				
2631804001	**MW-40D**	EPA 3010A	46303	EPA 6010D	46306
2631804002	**MW-40D FILTERED**	EPA 3010A	46336	EPA 6010D	46345
2631804001	**MW-40D**	EPA 3005A	46300	EPA 6020B	46302
2631804002	**MW-40D FILTERED**	EPA 3005A	46335	EPA 6020B	46344
2631804001	**MW-40D**	SM 2540C	46308		
2631804002	**MW-40D FILTERED**	SM 2540C	46308		
2631804001	**MW-40D**	EPA 300.0 Rev 2.1 1993	541019		
2631804002	**MW-40D FILTERED**	EPA 300.0 Rev 2.1 1993	541019		

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CHAIN-OF-CUSTODY / Analytical Request Document

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

Page : 1 Of 1

Section A Required Client Information:	Section B Required Project Information:	Section C Invoice Information:
Company: Georgia Power - Coal Combustion Residuals	Report To: Muskus, Noelia	Attention:
Address: 1255 Roberts Blvd, NW	Copy To:	Company Name:
Suite 200, Kennesaw, GA 30144		Address:
Email: nmuskus@geosyntec.com	Purchase Order #:	Pace Quote:
Phone: (770)820-6838 Fax:	Project Name: Plant Hammond MW-40D	Pace Project Manager: kevin.herring@pacelabs.com,
Requested Due Date: 24 hr	Project #: GW6581B	Pace Profile #:

Regulatory Agency:
State / Location: GA

SAMPLE ID
One Character per box.
(A-Z, 0-9 / , -)
Sample Ids must be unique

MATRIX	CODE
Drinking Water	DW
Water	WT
Waste Water	WW
Product	P
Soil/Solid	SL
Oil	OL
Wipe	WP
Air	AR
Other	OT
Tissue	TS

Requested Analysis Filtered (Y/N): N N N

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test Y/N	Cl, F, SO4	B, Ca, Mo	TDS	Residual Chlorine (Y/N)	2631804
1	MW-40D	GW	G	5/11	1405	—	—	17	3	2		1							Y	Y	Y		pH: 7.77 on both
2	MW-40D Filtered	GW	G	5/11	1410	—	—	19	3	2		1							Y	Y	Y		Filter @ lab
3																							
4																							
5																							
6																							
7																							
8																							
9																							
10																							
11																							
12																							

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
Filter "MW-40D filtered" at the lab.	Chad Russo / geo	5/11/20	1635	Noelia Muskus / Geosyntec	5/11/20	1635				
	Noelia Muskus / Geosyntec	5/12/20	1040	[illegible] - 834	5/12/20	10:40				
				K. Wellington / Pace	5/12/20	1221	3.0	Y	N	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Chad Russo

SIGNATURE of SAMPLER: Chad Russo

DATE Signed: 5/11/2020

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

Sample Condition Upon Receipt

Pace Analytical

Client Name: Georgia Power Project #

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

Optional: Proj. Due Date: Proj. Name:

Tracking #:

Custody Seal on Cooler/Box Present: ☐ yes ☑ no Seals intact: ☐ yes ☐ no

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

Thermometer Used THR214 Type of Ice: ☑ Wet Blue None ☐ Samples on ice, cooling process has begun

Cooler Temperature 3.0 Biological Tissue is Frozen: Yes No

Date and Initials of person examining contents: KRW 5/12/08

Temp should be above freezing to 6°C

		Comments:
Chain of Custody Present:	☑Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☑Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☑Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☑Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☑Yes ☐No ☐N/A	5.
Short Hold Time Analysis (<72hr):	☐Yes ☑No ☐N/A	6.
Rush Turn Around Time Requested:	☑Yes ☐No ☐N/A	7. 24 hr
Sufficient Volume:	☑Yes ☐No ☐N/A	8.
Correct Containers Used:	☑Yes ☐No ☐N/A	9.
-Pace Containers Used:	☑Yes ☐No ☐N/A	
Containers Intact:	☑Yes ☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes ☐No ☑N/A	11.
Sample Labels match COC:	☑Yes ☐No ☐N/A	12.
-Includes date/time/ID/Analysis Matrix: GW		
All containers needing preservation have been checked.	☑Yes ☐No ☐N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	☑Yes ☐No ☐N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	☐Yes ☐No	Initial when completed 5/12/08 KRW / Lot # of added preservative
Samples checked for dechlorination:	☐Yes ☐No ☑N/A	14.
Headspace in VOA Vials (>6mm):	☐Yes ☐No ☑N/A	15.
Trip Blank Present:	☐Yes ☐No ☑N/A	16.
Trip Blank Custody Seals Present	☐Yes ☐No ☑N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: Date/Time:

Comments/ Resolution:

Project Manager Review: **Date:**

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)

F-ALLC003rev.3, 11September2006

Pace Analytical	Document Name: Bottle Identification Form (BIF)	Document Issued: March 14, 2019 Page 1 of 1
	Document No.: F-CAR-CS-043-Rev.00	Issuing Authority: Pace Carolinas Quality Office

Project #

*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 bottle

Matrix	Items#	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)	AGBA(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)	DG8P-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 (NH4)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved vials (N/A)	VSGU-20 mL Scintillation vials (N/A)
	1																											
	2																											
	3																											
	4																											
	5																											
	6																											
	7																											
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	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. Out of hold, incorrect preservative, out of temp, incorrect containers.

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

May 27, 2020

Joju Abraham
Georgia Power - Coal Combustion Residuals
2480 Maner Road
Atlanta, GA 30339

RE: Project: HAMMOND AP-1 NON ROUTINE
Pace Project No.: 2632070

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on May 20, 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 - Atlanta, GA

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

Sincerely,

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

Enclosures

cc: Kristen Jurinko
Whitney Law, Geosyntec Consultants
Noelia Muskus, Geosyntec Consultants
Lauren Petty, Southern Company Services, Inc.

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

CERTIFICATIONS

Project: HAMMOND AP-1 NON ROUTINE
Pace Project No.: 2632070

Pace Analytical Services Atlanta
110 Technology Parkway Peachtree Corners, GA 30092
Florida DOH Certification #: E87315
Georgia DW Inorganics Certification #: 812
Georgia DW Microbiology Certification #: 812
North Carolina Certification #: 381
South Carolina Certification #: 98011001
Virginia Certification #: 460204

Pace Analytical Services Asheville
2225 Riverside Drive, Asheville, NC 28804
Florida/NELAP Certification #: E87648
Massachusetts Certification #: M-NC030
North Carolina Drinking Water Certification #: 37712
North Carolina Wastewater Certification #: 40
South Carolina Certification #: 99030001
Virginia/VELAP Certification #: 460222

REPORT OF LABORATORY ANALYSIS

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

SAMPLE SUMMARY

Project: HAMMOND AP-1 NON ROUTINE
Pace Project No.: 2632070

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2632070001	**MW-40D**	Water	05/19/20 14:15	05/20/20 12:30

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(770)734-4200

SAMPLE ANALYTE COUNT

Project: HAMMOND AP-1 NON ROUTINE
Pace Project No.: 2632070

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
2632070001	**MW-40D**	EPA 6020B	CSW	3	PASI-GA
		SM 2540C	VHB	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A

PASI-A = Pace Analytical Services - Asheville
PASI-GA = Pace Analytical Services - Atlanta, GA

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Peachtree Corners, GA 30092
(770)734-4200

SUMMARY OF DETECTION

Project: HAMMOND AP-1 NON ROUTINE
Pace Project No.: 2632070

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
2632070001	**MW-40D**					
EPA 6020B	Boron	0.13	mg/L	0.10	05/21/20 10:02	
EPA 6020B	Calcium	65.9	mg/L	0.10	05/21/20 10:02	
EPA 6020B	Molybdenum	0.014	mg/L	0.010	05/21/20 10:02	
SM 2540C	Total Dissolved Solids	621	mg/L	10.0	05/20/20 17:49	
EPA 300.0 Rev 2.1 1993	Chloride	47.3	mg/L	1.0	05/22/20 12:56	
EPA 300.0 Rev 2.1 1993	Fluoride	1.3	mg/L	0.30	05/22/20 12:56	
EPA 300.0 Rev 2.1 1993	Sulfate	54.0	mg/L	1.0	05/22/20 12:56	

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ANALYTICAL RESULTS

Project: HAMMOND AP-1 NON ROUTINE
Pace Project No.: 2632070

Sample: MW-40D **Lab ID: 2632070001** Collected: 05/19/20 14:15 Received: 05/20/20 12:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Atlanta, GA								
Boron	**0.13**	mg/L	0.10	0.0049	1	05/20/20 17:35	05/21/20 10:02	7440-42-8	
Calcium	**65.9**	mg/L	0.10	0.011	1	05/20/20 17:35	05/21/20 10:02	7440-70-2	
Molybdenum	**0.014**	mg/L	0.010	0.00095	1	05/20/20 17:35	05/21/20 10:02	7439-98-7	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Atlanta, GA								
Total Dissolved Solids	**621**	mg/L	10.0	10.0	1		05/20/20 17:49		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**47.3**	mg/L	1.0	0.60	1		05/22/20 12:56	16887-00-6	
Fluoride	**1.3**	mg/L	0.30	0.050	1		05/22/20 12:56	16984-48-8	
Sulfate	**54.0**	mg/L	1.0	0.50	1		05/22/20 12:56	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
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(770)734-4200

QUALITY CONTROL DATA

Project: HAMMOND AP-1 NON ROUTINE
Pace Project No.: 2632070

QC Batch: 46536
QC Batch Method: EPA 3005A
Analysis Method: EPA 6020B
Analysis Description: 6020B MET
Laboratory: Pace Analytical Services - Atlanta, GA
Associated Lab Samples: 2632070001

METHOD BLANK: 216487 Matrix: Water
Associated Lab Samples: 2632070001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Boron	mg/L	ND	0.10	0.0049	05/21/20 09:51	
Calcium	mg/L	ND	0.10	0.011	05/21/20 09:51	
Molybdenum	mg/L	ND	0.010	0.00095	05/21/20 09:51	

LABORATORY CONTROL SAMPLE: 216488

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron	mg/L	1	1.0	101	80-120	
Calcium	mg/L	1	1.0	102	80-120	
Molybdenum	mg/L	0.1	0.10	105	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 216489 216490

Parameter	Units	2632070001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron	mg/L	0.13	1	1	1.0	1.1	90	95	75-125	4	20	
Molybdenum	mg/L	0.014	0.1	0.1	0.12	0.12	106	108	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.

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: HAMMOND AP-1 NON ROUTINE
Pace Project No.: 2632070

QC Batch: 46515
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Atlanta, GA

Associated Lab Samples: 2632070001

LABORATORY CONTROL SAMPLE: 216260

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	411	103	84-108	

SAMPLE DUPLICATE: 216261

Parameter	Units	2631951001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	382	389	2	10	

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

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: HAMMOND AP-1 NON ROUTINE
Pace Project No.: 2632070

QC Batch: 542996
QC Batch Method: EPA 300.0 Rev 2.1 1993
Analysis Method: EPA 300.0 Rev 2.1 1993
Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 2632070001

METHOD BLANK: 2892663 Matrix: Water
Associated Lab Samples: 2632070001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	05/22/20 11:29	
Fluoride	mg/L	ND	0.10	0.050	05/22/20 11:29	
Sulfate	mg/L	ND	1.0	0.50	05/22/20 11:29	

LABORATORY CONTROL SAMPLE: 2892664

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	2.6	103	90-110	
Sulfate	mg/L	50	51.9	104	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2892665 2892666

Parameter	Units	2632072001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	73.4	50	50	116	116	84	85	90-110	0	10	M1
Fluoride	mg/L	0.40	2.5	2.5	2.8	2.9	96	98	90-110	2	10	
Sulfate	mg/L	118	50	50	167	167	97	98	90-110	0	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2892667 2892668

Parameter	Units	92478700003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	11.1	50	50	64.5	65.4	107	109	90-110	1	10	
Fluoride	mg/L	ND	2.5	2.5	2.7	2.7	105	105	90-110	0	10	
Sulfate	mg/L	37.4	50	50	90.3	91.2	106	108	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

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

QUALIFIERS

Project: HAMMOND AP-1 NON ROUTINE
Pace Project No.: 2632070

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.

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.

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.

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

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: HAMMOND AP-1 NON ROUTINE
Pace Project No.: 2632070

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2632070001	**MW-40D**	EPA 3005A	46536	EPA 6020B	46540
2632070001	**MW-40D**	SM 2540C	46515		
2632070001	**MW-40D**	EPA 300.0 Rev 2.1 1993	542996		

Pace Analytical™ www.pacelabs.com

CHAIN-OF-CUSTODY / Analytical Request Document

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

Section A Required Client Information:

Company:	GA Power
Address:	Atlanta, GA
Email To:	SCS Contacts
Phone:	Fax
Requested Due Date/TAT:	~~2-Day~~ 24 Hr

Section B Required Project Information:

Report To:	SCS Contacts
Copy To:	Geosyntec Contacts
Purchase Order No.:	
Project Name:	AP-1 Non-Routine Sampling
Project Number:	GW6581B

Section C Invoice Information:

Attention:	Southern Co.
Company Name:	
Address:	
Pace Quote Reference:	
Pace Project Manager:	Kevin Herring
Pace Profile #:	

Page: 1 of 1

REGULATORY AGENCY

NPDES | GROUND WATER | DRINKING WATER | UST | RCRA | OTHER CCR (checked)

Site Location STATE: GA

Section D Required Client Information

Valid Matrix Codes: MATRIX / CODE — DRINKING WATER DW; WATER WT; WASTE WATER WW; PRODUCT P; SOIL/SOLID SL; OIL OL; WIPE WP; AIR AR; OTHER OT; TISSUE TS

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

ITEM #	SAMPLE ID	MATRIX CODE	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	TIME	COMPOSITE END/GRAB DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	Chloride, Fluoride, Sulfate (N)	Metals 6010/6020* (N)	TDS	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D. 2632070
1	MW-40D ~~(filtered)~~ (Pa/)	WT	G	5/19/20	1415	—	—		3	2		1							X	X	X	N	~~pH~~ last sample
2																							
3																							
4																							
5																							
6																							
7																							
8																							
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12																							

ADDITIONAL COMMENTS

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

*Metals= B, Ca, Mo

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
Ben W.	5/19/20	1617	Malia Marker / Geosyntec	5/19/20	1617				
Malia Marker / Geosyntec	5/20/20	1230	[signature] / Pace	5/20/20	1230				
[signature] / Pace	5.20.20	1339	K. [signature] / PACE	5/20/20	1335	4.0	Y	N	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Ben Weinmann

SIGNATURE of SAMPLER: [signature]

DATE Signed (MM/DD/YY): 5/19/20

*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

Pace Analytical	Document Name: Bottle Identification Form (BIF)	Document Issued: March 14, 2019 Page 1 of 1
	Document No.: F-CAR-CS-043-Rev.00	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 bottle**

Project #

Matrix	Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH <2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)	BP4C-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	AG3A(DG3A)-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unp (N/A)	DG9P-40 mL VOA H3PO4 (N/A)	VOAK (6 vials per kit)-5035 kit (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SPST-125 mL Sterile Plastic (N/A – lab)	SP2T-250 mL Sterile Plastic (N/A – lab)		BP3X-250 mL Plastic (NH4)2SO4 (9.3-9.7)	AGDU-100 mL Amber Unpreserved vials (N/A)	VSGU-20 mL Scintillation vials (N/A)
	1																											
	2																											
	3																											
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	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 Offic
Out of hold, incorrect preservative, out of temp, incorrect containers.

Pace Analytical

Sample Condition Upon Receipt

Client Name: GA POWER Project # _____

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

Tracking #: _____

Optional
Proj. Due Date:
Proj. Name:

Custody Seal on Cooler/Box Present: ☐ yes ☑ no Seals intact: ☐ yes ☐ no

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☐ None ☑ Other 2P10C

Thermometer Used THR230 Type of Ice: ☑ Wet Blue None ☐ Samples on ice, cooling process has begun

Cooler Temperature 4.0 Biological Tissue is Frozen: Yes No

Temp should be above freezing to 6°C

Date and Initials of person examining contents: RDW 5/20/20

		Comments:
Chain of Custody Present:	☑Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☑Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☑Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☑Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☑Yes ☐No ☐N/A	5.
Short Hold Time Analysis (<72hr):	☐Yes ☑No ☐N/A	6.
Rush Turn Around Time Requested:	☑Yes ☐No ☐N/A	7. 24 hr
Sufficient Volume:	☑Yes ☐No ☐N/A	8.
Correct Containers Used:	☑Yes ☐No ☐N/A	9.
-Pace Containers Used:	☑Yes ☐No ☐N/A	
Containers Intact:	☑Yes ☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes ☐No ☑N/A	11.
Sample Labels match COC:	☑Yes ☐No ☐N/A	12.
-Includes date/time/ID/Analysis Matrix: WT		
All containers needing preservation have been checked.	☑Yes ☐No ☐N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	☑Yes ☐No ☐N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	☐Yes ☐No	Initial when completed / Lot # of added preservative
Samples checked for dechlorination:	☐Yes ☐No ☑N/A	14.
Headspace in VOA Vials (>6mm):	☐Yes ☐No ☑N/A	15.
Trip Blank Present:	☐Yes ☐No ☑N/A	16.
Trip Blank Custody Seals Present	☐Yes ☐No ☑N/A	
Pace Trip Blank Lot # (if purchased): _____		

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ **Date:** _____

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)

F-ALLC003rev.3, 11September2006

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

July 01, 2020

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

RE: Project: HAMMOND AP-1 NON ROUTINE
Pace Project No.: 92482346

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory between June 17, 2020 and June 22, 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: Kristen Jurinko
Whitney Law, Geosyntec Consultants
Noelia Muskus, Geosyntec Consultants
Ms. Lauren Petty, Southern Co. Services

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

CERTIFICATIONS

Project: HAMMOND AP-1 NON ROUTINE
Pace Project No.: 92482346

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

Pace Analytical Services Asheville
2225 Riverside Drive, Asheville, NC 28804
Florida/NELAP Certification #: E87648
Massachusetts Certification #: M-NC030
North Carolina Drinking Water Certification #: 37712
North Carolina Wastewater Certification #: 40
South Carolina Certification #: 99030001
Virginia/VELAP Certification #: 460222

Pace Analytical Services Peachtree Corners
110 Technology Pkwy, Peachtree Corners, GA 30092
Florida DOH Certification #: E87315
Georgia DW Inorganics Certification #: 812
Georgia DW Microbiology Certification #: 812
North Carolina Certification #: 381
South Carolina Certification #: 98011001
Virginia Certification #: 460204

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SAMPLE SUMMARY

Project: HAMMOND AP-1 NON ROUTINE
Pace Project No.: 92482346

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92482346001	**HGWC-8**	Water	06/16/20 15:15	06/17/20 10:57
92482346002	**MW-1**	Water	06/16/20 14:10	06/17/20 10:57
92482346003	**HGWA-1**	Water	06/16/20 09:48	06/17/20 10:57
92482346004	**HGWA-3**	Water	06/16/20 11:16	06/17/20 10:57
92482346005	**HGWC-7**	Water	06/17/20 13:00	06/18/20 10:37
92482346006	**MW-30D**	Water	06/17/20 13:44	06/18/20 10:37
92482346007	**FB-01**	Water	06/17/20 17:05	06/18/20 10:37
92482346008	**MW-30D FILTERED**	Water	06/17/20 13:49	06/18/20 10:37
92482346009	**MW-40D**	Water	06/19/20 10:25	06/22/20 10:45

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SAMPLE ANALYTE COUNT

Project: HAMMOND AP-1 NON ROUTINE
Pace Project No.: 92482346

Lab ID	Sample ID	Method	Analysts	Analytes Reported
92482346001	**HGWC-8**	EPA 6010D	DRB	6
		EPA 6020B	CW1	2
		SM 2450C-2011	VB	1
		SM 2320B-2011	ECH	3
		SM 4500-S2D-2011	LMS1	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92482346002	**MW-1**	EPA 6010D	DRB	6
		EPA 6020B	CW1	2
		SM 2450C-2011	VB	1
		SM 2320B-2011	ECH	3
		SM 4500-S2D-2011	LMS1	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92482346003	**HGWA-1**	EPA 6010D	DRB	6
		EPA 6020B	CW1	2
		SM 2450C-2011	VB	1
		SM 2320B-2011	ECH	3
		SM 4500-S2D-2011	LMS1	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92482346004	**HGWA-3**	EPA 6010D	DRB	6
		EPA 6020B	CW1	2
		SM 2450C-2011	VB	1
		SM 2320B-2011	ECH	3
		SM 4500-S2D-2011	LMS1	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92482346005	**HGWC-7**	EPA 6010D	DRB	6
		EPA 6020B	CW1	2
		SM 2450C-2011	JRS	1
		SM 2320B-2011	ECH	3
		SM 4500-S2D-2011	LMS1	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92482346006	**MW-30D**	EPA 6010D	DRB	6
		EPA 6020B	CW1	18
		SM 2450C-2011	JRS	1
		SM 2320B-2011	ECH	3
		SM 4500-S2D-2011	LMS1	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92482346007	**FB-01**	EPA 6010D	DRB	6

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: HAMMOND AP-1 NON ROUTINE
Pace Project No.: 92482346

Lab ID	Sample ID	Method	Analysts	Analytes Reported
		EPA 6020B	CW1	2
		SM 2450C-2011	JRS	1
		SM 2320B-2011	ECH	3
		SM 4500-S2D-2011	LMS1	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92482346008	**MW-30D FILTERED**	EPA 6010D	DRB	6
		EPA 6020B	CW1	2
		SM 2450C-2011	JRS	1
		SM 2320B-2011	ECH	3
		SM 4500-S2D-2011	LMS1	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92482346009	**MW-40D**	EPA 6010D	DRB	6
		EPA 6020B	CW1	2
		SM 2450C-2011	JRS	1
		SM 2320B-2011	ECH	3
		SM 4500-S2D-2011	LMS1	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-1 NON ROUTINE
Pace Project No.: 92482346

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92482346001	**HGWC-8**					
	pH	6.97	Std. Units		06/30/20 17:10	
EPA 6010D	Calcium	120	mg/L	1.0	06/19/20 16:47	
EPA 6010D	Iron	0.057	mg/L	0.040	06/19/20 16:47	
EPA 6010D	Magnesium	16.4	mg/L	0.050	06/19/20 16:47	
EPA 6010D	Manganese	0.23	mg/L	0.040	06/19/20 16:47	
EPA 6010D	Potassium	7.2	mg/L	0.20	06/19/20 16:47	
EPA 6010D	Sodium	9.2	mg/L	1.0	06/19/20 16:47	
EPA 6020B	Boron	2.2	mg/L	0.10	06/19/20 15:21	
EPA 6020B	Molybdenum	0.45	mg/L	0.010	06/19/20 15:21	
SM 2450C-2011	Total Dissolved Solids	573	mg/L	10.0	06/18/20 11:23	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	126	mg/L	5.0	06/29/20 16:48	
SM 2320B-2011	Alkalinity, Total as CaCO3	126	mg/L	5.0	06/29/20 16:48	
EPA 300.0 Rev 2.1 1993	Chloride	67.9	mg/L	1.0	06/24/20 22:13	
EPA 300.0 Rev 2.1 1993	Fluoride	0.45	mg/L	0.10	06/24/20 22:13	
EPA 300.0 Rev 2.1 1993	Sulfate	157	mg/L	3.0	06/25/20 07:57	
92482346002	**MW-1**					
	pH	6.86	Std. Units		06/30/20 17:10	
EPA 6010D	Calcium	157	mg/L	1.0	06/19/20 16:51	
EPA 6010D	Iron	0.78	mg/L	0.040	06/19/20 16:51	
EPA 6010D	Magnesium	23.7	mg/L	0.050	06/19/20 16:51	
EPA 6010D	Manganese	0.36	mg/L	0.040	06/19/20 16:51	
EPA 6010D	Potassium	0.39	mg/L	0.20	06/19/20 16:51	
EPA 6010D	Sodium	12.5	mg/L	1.0	06/19/20 16:51	
EPA 6020B	Boron	0.19	mg/L	0.10	06/19/20 15:27	
SM 2450C-2011	Total Dissolved Solids	653	mg/L	10.0	06/18/20 11:24	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	376	mg/L	5.0	06/29/20 19:20	
SM 2320B-2011	Alkalinity, Total as CaCO3	376	mg/L	5.0	06/29/20 19:20	
EPA 300.0 Rev 2.1 1993	Chloride	29.6	mg/L	1.0	06/24/20 22:28	
EPA 300.0 Rev 2.1 1993	Fluoride	0.20	mg/L	0.10	06/24/20 22:28	
EPA 300.0 Rev 2.1 1993	Sulfate	114	mg/L	2.0	06/25/20 08:13	
92482346003	**HGWA-1**					
	pH	6.97	Std. Units		06/30/20 17:10	
EPA 6010D	Calcium	130	mg/L	1.0	06/19/20 17:07	
EPA 6010D	Magnesium	4.7	mg/L	0.050	06/19/20 17:07	
EPA 6010D	Manganese	0.034J	mg/L	0.040	06/19/20 17:07	
EPA 6010D	Potassium	0.32	mg/L	0.20	06/19/20 17:07	
EPA 6010D	Sodium	58.5	mg/L	1.0	06/19/20 17:07	
EPA 6020B	Boron	0.021J	mg/L	0.10	06/19/20 15:33	
SM 2450C-2011	Total Dissolved Solids	632	mg/L	10.0	06/18/20 11:25	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	345	mg/L	5.0	06/30/20 12:34	
SM 2320B-2011	Alkalinity, Total as CaCO3	345	mg/L	5.0	06/30/20 12:34	
EPA 300.0 Rev 2.1 1993	Chloride	41.1	mg/L	1.0	06/24/20 22:42	
EPA 300.0 Rev 2.1 1993	Fluoride	0.071J	mg/L	0.10	06/24/20 22:42	
EPA 300.0 Rev 2.1 1993	Sulfate	88.2	mg/L	1.0	06/24/20 22:42	
92482346004	**HGWA-3**					
	pH	7.31	Std. Units		06/30/20 17:10	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: HAMMOND AP-1 NON ROUTINE
Pace Project No.: 92482346

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92482346004	**HGWA-3**					
EPA 6010D	Calcium	85.1	mg/L	1.0	06/19/20 17:11	
EPA 6010D	Iron	1.3	mg/L	0.040	06/19/20 17:11	
EPA 6010D	Magnesium	5.2	mg/L	0.050	06/19/20 17:11	
EPA 6010D	Manganese	0.24	mg/L	0.040	06/19/20 17:11	
EPA 6010D	Potassium	0.44	mg/L	0.20	06/19/20 17:11	
EPA 6010D	Sodium	5.9	mg/L	1.0	06/19/20 17:11	
EPA 6020B	Boron	0.010J	mg/L	0.10	06/19/20 15:38	
SM 2450C-2011	Total Dissolved Solids	448	mg/L	10.0	06/18/20 11:25	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	195	mg/L	5.0	06/29/20 17:23	
SM 2320B-2011	Alkalinity, Total as CaCO3	195	mg/L	5.0	06/29/20 17:23	
EPA 300.0 Rev 2.1 1993	Chloride	5.8	mg/L	1.0	06/24/20 22:56	
EPA 300.0 Rev 2.1 1993	Sulfate	49.5	mg/L	1.0	06/24/20 22:56	
92482346005	**HGWC-7**					
	pH	7.2	Std. Units		06/30/20 17:10	
EPA 6010D	Calcium	112	mg/L	1.0	06/22/20 15:01	M1
EPA 6010D	Iron	0.56	mg/L	0.040	06/22/20 15:01	
EPA 6010D	Magnesium	10.3	mg/L	0.050	06/22/20 15:01	M1
EPA 6010D	Manganese	0.22	mg/L	0.040	06/22/20 15:01	
EPA 6010D	Potassium	2.7	mg/L	0.20	06/22/20 15:01	
EPA 6010D	Sodium	10.3	mg/L	1.0	06/22/20 15:01	M1
EPA 6020B	Boron	1.0	mg/L	0.10	06/19/20 19:33	
EPA 6020B	Molybdenum	0.048	mg/L	0.010	06/19/20 19:33	
SM 2450C-2011	Total Dissolved Solids	423	mg/L	10.0	06/19/20 18:06	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	171	mg/L	5.0	06/29/20 18:03	
SM 2320B-2011	Alkalinity, Total as CaCO3	171	mg/L	5.0	06/29/20 18:03	
EPA 300.0 Rev 2.1 1993	Chloride	45.2	mg/L	1.0	06/25/20 04:43	
EPA 300.0 Rev 2.1 1993	Fluoride	0.077J	mg/L	0.10	06/25/20 04:43	
EPA 300.0 Rev 2.1 1993	Sulfate	102	mg/L	2.0	06/25/20 09:31	
92482346006	**MW-30D**					
	pH	8.33	Std. Units		06/30/20 17:10	
EPA 6010D	Calcium	8.3	mg/L	1.0	06/22/20 15:53	
EPA 6010D	Iron	0.32	mg/L	0.040	06/22/20 15:53	
EPA 6010D	Magnesium	2.3	mg/L	0.050	06/22/20 15:53	
EPA 6010D	Manganese	0.013J	mg/L	0.040	06/22/20 15:53	
EPA 6010D	Potassium	1.4	mg/L	0.20	06/22/20 15:53	
EPA 6010D	Sodium	376	mg/L	10.0	06/23/20 12:29	
EPA 6020B	Arsenic	0.00054J	mg/L	0.0050	06/19/20 20:07	
EPA 6020B	Barium	0.26	mg/L	0.010	06/19/20 20:07	
EPA 6020B	Boron	0.77	mg/L	0.10	06/19/20 20:07	
EPA 6020B	Chromium	0.0010J	mg/L	0.010	06/19/20 20:07	
EPA 6020B	Copper	0.00051J	mg/L	0.0050	06/19/20 20:07	
EPA 6020B	Lead	0.00034J	mg/L	0.0050	06/19/20 20:07	
EPA 6020B	Lithium	0.21	mg/L	0.030	06/19/20 20:07	
EPA 6020B	Molybdenum	0.0062J	mg/L	0.010	06/19/20 20:07	
EPA 6020B	Nickel	0.00045J	mg/L	0.0050	06/19/20 20:07	
EPA 6020B	Thallium	0.000058J	mg/L	0.0010	06/19/20 20:07	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: HAMMOND AP-1 NON ROUTINE
Pace Project No.: 92482346

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92482346006	**MW-30D**					
EPA 6020B	Zinc	0.0029J	mg/L	0.010	06/19/20 20:07	
92482346007	**FB-01**					
EPA 6010D	Iron	0.20	mg/L	0.040	06/22/20 15:49	
SM 2450C-2011	Total Dissolved Solids	1040	mg/L	10.0	06/19/20 18:07	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	654	mg/L	5.0	06/30/20 12:45	
SM 2320B-2011	Alkalinity, Total as CaCO3	654	mg/L	5.0	06/30/20 12:45	
SM 4500-S2D-2011	Sulfide	0.051J	mg/L	0.10	06/24/20 18:52	
EPA 300.0 Rev 2.1 1993	Chloride	92.5	mg/L	3.0	06/25/20 09:47	
EPA 300.0 Rev 2.1 1993	Fluoride	10.9	mg/L	0.30	06/25/20 09:47	
EPA 300.0 Rev 2.1 1993	Sulfate	104	mg/L	3.0	06/25/20 09:47	
92482346008	**MW-30D FILTERED**					
	pH	8.33	Std. Units		06/30/20 17:10	
EPA 6010D	Calcium	4.2	mg/L	1.0	06/22/20 15:57	
EPA 6010D	Iron	0.043	mg/L	0.040	06/22/20 15:57	
EPA 6010D	Magnesium	1.7	mg/L	0.050	06/22/20 15:57	
EPA 6010D	Potassium	1.2	mg/L	0.20	06/22/20 15:57	
EPA 6010D	Sodium	325	mg/L	10.0	06/23/20 12:33	
EPA 6020B	Boron	0.73	mg/L	0.10	06/19/20 20:13	
EPA 6020B	Molybdenum	0.0093J	mg/L	0.010	06/19/20 20:13	
SM 2450C-2011	Total Dissolved Solids	850	mg/L	10.0	06/19/20 18:08	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	582	mg/L	5.0	06/30/20 12:57	
SM 2320B-2011	Alkalinity, Total as CaCO3	583	mg/L	5.0	06/30/20 12:57	
EPA 300.0 Rev 2.1 1993	Chloride	85.1	mg/L	1.0	06/25/20 05:27	
EPA 300.0 Rev 2.1 1993	Fluoride	10.3	mg/L	0.30	06/25/20 10:02	
EPA 300.0 Rev 2.1 1993	Sulfate	92.3	mg/L	3.0	06/25/20 10:02	
92482346009	**MW-40D**					
	pH	7.4	Std. Units		06/30/20 17:10	
EPA 6010D	Calcium	109	mg/L	1.0	06/29/20 16:50	
EPA 6010D	Iron	8.8	mg/L	0.040	06/29/20 16:50	
EPA 6010D	Magnesium	14.7	mg/L	0.050	06/29/20 16:50	
EPA 6010D	Manganese	0.31	mg/L	0.040	06/29/20 16:50	
EPA 6010D	Potassium	9.3	mg/L	0.20	06/29/20 16:50	
EPA 6010D	Sodium	464	mg/L	10.0	06/30/20 12:14	
EPA 6020B	Boron	0.19	mg/L	0.10	06/25/20 16:35	
EPA 6020B	Molybdenum	0.015	mg/L	0.010	06/25/20 16:35	
SM 2450C-2011	Total Dissolved Solids	1420	mg/L	10.0	06/22/20 17:40	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	955	mg/L	5.0	06/30/20 16:50	
SM 2320B-2011	Alkalinity, Total as CaCO3	955	mg/L	5.0	06/30/20 16:50	
EPA 300.0 Rev 2.1 1993	Chloride	145	mg/L	9.0	06/26/20 09:14	
EPA 300.0 Rev 2.1 1993	Sulfate	435	mg/L	9.0	06/26/20 09:14	

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ANALYTICAL RESULTS

Project: HAMMOND AP-1 NON ROUTINE
Pace Project No.: 92482346

Sample: HGWC-8 **Lab ID: 92482346001** Collected: 06/16/20 15:15 Received: 06/17/20 10:57 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Charlotte								
pH	**6.97**	Std. Units			1		06/30/20 17:10		
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Calcium	**120**	mg/L	1.0	0.14	1	06/18/20 16:00	06/19/20 16:47	7440-70-2	
Iron	**0.057**	mg/L	0.040	0.015	1	06/18/20 16:00	06/19/20 16:47	7439-89-6	
Magnesium	**16.4**	mg/L	0.050	0.011	1	06/18/20 16:00	06/19/20 16:47	7439-95-4	
Manganese	**0.23**	mg/L	0.040	0.0061	1	06/18/20 16:00	06/19/20 16:47	7439-96-5	
Potassium	**7.2**	mg/L	0.20	0.026	1	06/18/20 16:00	06/19/20 16:47	7440-09-7	
Sodium	**9.2**	mg/L	1.0	0.19	1	06/18/20 16:00	06/19/20 16:47	7440-23-5	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Boron	**2.2**	mg/L	0.10	0.0049	1	06/18/20 13:00	06/19/20 15:21	7440-42-8	
Molybdenum	**0.45**	mg/L	0.010	0.00095	1	06/18/20 13:00	06/19/20 15:21	7439-98-7	
2540C Total Dissolved Solids	Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	**573**	mg/L	10.0	10.0	1		06/18/20 11:23		
2320B Alkalinity	Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville								
Alkalinity,Bicarbonate (CaCO3)	**126**	mg/L	5.0	5.0	1		06/29/20 16:48		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		06/29/20 16:48		
Alkalinity, Total as CaCO3	**126**	mg/L	5.0	5.0	1		06/29/20 16:48		
4500S2D Sulfide Water	Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville								
Sulfide	ND	mg/L	0.10	0.050	1		06/19/20 18:57	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**67.9**	mg/L	1.0	0.60	1		06/24/20 22:13	16887-00-6	
Fluoride	**0.45**	mg/L	0.10	0.050	1		06/24/20 22:13	16984-48-8	
Sulfate	**157**	mg/L	3.0	1.5	3		06/25/20 07:57	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: HAMMOND AP-1 NON ROUTINE
Pace Project No.: 92482346

Sample: MW-1 **Lab ID: 92482346002** Collected: 06/16/20 14:10 Received: 06/17/20 10:57 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Charlotte								
pH	**6.86**	Std. Units			1		06/30/20 17:10		
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Calcium	**157**	mg/L	1.0	0.14	1	06/18/20 16:00	06/19/20 16:51	7440-70-2	
Iron	**0.78**	mg/L	0.040	0.015	1	06/18/20 16:00	06/19/20 16:51	7439-89-6	
Magnesium	**23.7**	mg/L	0.050	0.011	1	06/18/20 16:00	06/19/20 16:51	7439-95-4	
Manganese	**0.36**	mg/L	0.040	0.0061	1	06/18/20 16:00	06/19/20 16:51	7439-96-5	
Potassium	**0.39**	mg/L	0.20	0.026	1	06/18/20 16:00	06/19/20 16:51	7440-09-7	
Sodium	**12.5**	mg/L	1.0	0.19	1	06/18/20 16:00	06/19/20 16:51	7440-23-5	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Boron	**0.19**	mg/L	0.10	0.0049	1	06/18/20 13:00	06/19/20 15:27	7440-42-8	
Molybdenum	ND	mg/L	0.010	0.00095	1	06/18/20 13:00	06/19/20 15:27	7439-98-7	
2540C Total Dissolved Solids	Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	**653**	mg/L	10.0	10.0	1		06/18/20 11:24		
2320B Alkalinity	Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville								
Alkalinity,Bicarbonate (CaCO3)	**376**	mg/L	5.0	5.0	1		06/29/20 19:20		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		06/29/20 19:20		
Alkalinity, Total as CaCO3	**376**	mg/L	5.0	5.0	1		06/29/20 19:20		
4500S2D Sulfide Water	Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville								
Sulfide	ND	mg/L	0.10	0.050	1		06/19/20 18:57	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**29.6**	mg/L	1.0	0.60	1		06/24/20 22:28	16887-00-6	
Fluoride	**0.20**	mg/L	0.10	0.050	1		06/24/20 22:28	16984-48-8	
Sulfate	**114**	mg/L	2.0	1.0	2		06/25/20 08:13	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: HAMMOND AP-1 NON ROUTINE
Pace Project No.: 92482346

Sample: HGWA-1 **Lab ID: 92482346003** Collected: 06/16/20 09:48 Received: 06/17/20 10:57 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Charlotte								
pH	**6.97**	Std. Units			1		06/30/20 17:10		
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Calcium	**130**	mg/L	1.0	0.14	1	06/18/20 16:00	06/19/20 17:07	7440-70-2	
Iron	ND	mg/L	0.040	0.015	1	06/18/20 16:00	06/19/20 17:07	7439-89-6	
Magnesium	**4.7**	mg/L	0.050	0.011	1	06/18/20 16:00	06/19/20 17:07	7439-95-4	
Manganese	**0.034J**	mg/L	0.040	0.0061	1	06/18/20 16:00	06/19/20 17:07	7439-96-5	
Potassium	**0.32**	mg/L	0.20	0.026	1	06/18/20 16:00	06/19/20 17:07	7440-09-7	
Sodium	**58.5**	mg/L	1.0	0.19	1	06/18/20 16:00	06/19/20 17:07	7440-23-5	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Boron	**0.021J**	mg/L	0.10	0.0049	1	06/18/20 13:00	06/19/20 15:33	7440-42-8	
Molybdenum	ND	mg/L	0.010	0.00095	1	06/18/20 13:00	06/19/20 15:33	7439-98-7	
2540C Total Dissolved Solids	Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	**632**	mg/L	10.0	10.0	1		06/18/20 11:25		
2320B Alkalinity	Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville								
Alkalinity,Bicarbonate (CaCO3)	**345**	mg/L	5.0	5.0	1		06/30/20 12:34		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		06/30/20 12:34		
Alkalinity, Total as CaCO3	**345**	mg/L	5.0	5.0	1		06/30/20 12:34		
4500S2D Sulfide Water	Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville								
Sulfide	ND	mg/L	0.10	0.050	1		06/19/20 18:57	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**41.1**	mg/L	1.0	0.60	1		06/24/20 22:42	16887-00-6	
Fluoride	**0.071J**	mg/L	0.10	0.050	1		06/24/20 22:42	16984-48-8	
Sulfate	**88.2**	mg/L	1.0	0.50	1		06/24/20 22:42	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
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ANALYTICAL RESULTS

Project: HAMMOND AP-1 NON ROUTINE
Pace Project No.: 92482346

Sample: HGWA-3 **Lab ID: 92482346004** Collected: 06/16/20 11:16 Received: 06/17/20 10:57 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Charlotte								
pH	**7.31**	Std. Units			1		06/30/20 17:10		
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Calcium	**85.1**	mg/L	1.0	0.14	1	06/18/20 16:00	06/19/20 17:11	7440-70-2	
Iron	**1.3**	mg/L	0.040	0.015	1	06/18/20 16:00	06/19/20 17:11	7439-89-6	
Magnesium	**5.2**	mg/L	0.050	0.011	1	06/18/20 16:00	06/19/20 17:11	7439-95-4	
Manganese	**0.24**	mg/L	0.040	0.0061	1	06/18/20 16:00	06/19/20 17:11	7439-96-5	
Potassium	**0.44**	mg/L	0.20	0.026	1	06/18/20 16:00	06/19/20 17:11	7440-09-7	
Sodium	**5.9**	mg/L	1.0	0.19	1	06/18/20 16:00	06/19/20 17:11	7440-23-5	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Boron	**0.010J**	mg/L	0.10	0.0049	1	06/18/20 13:00	06/19/20 15:38	7440-42-8	
Molybdenum	ND	mg/L	0.010	0.00095	1	06/18/20 13:00	06/19/20 15:38	7439-98-7	
2540C Total Dissolved Solids	Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	**448**	mg/L	10.0	10.0	1		06/18/20 11:25		
2320B Alkalinity	Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville								
Alkalinity,Bicarbonate (CaCO3)	**195**	mg/L	5.0	5.0	1		06/29/20 17:23		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		06/29/20 17:23		
Alkalinity, Total as CaCO3	**195**	mg/L	5.0	5.0	1		06/29/20 17:23		
4500S2D Sulfide Water	Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville								
Sulfide	ND	mg/L	0.10	0.050	1		06/19/20 18:58	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**5.8**	mg/L	1.0	0.60	1		06/24/20 22:56	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		06/24/20 22:56	16984-48-8	
Sulfate	**49.5**	mg/L	1.0	0.50	1		06/24/20 22:56	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: HAMMOND AP-1 NON ROUTINE
Pace Project No.: 92482346

Sample: HGWC-7 **Lab ID: 92482346005** Collected: 06/17/20 13:00 Received: 06/18/20 10:37 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Charlotte								
pH	**7.2**	Std. Units			1		06/30/20 17:10		
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Calcium	**112**	mg/L	1.0	0.14	1	06/19/20 14:00	06/22/20 15:01	7440-70-2	M1
Iron	**0.56**	mg/L	0.040	0.015	1	06/19/20 14:00	06/22/20 15:01	7439-89-6	
Magnesium	**10.3**	mg/L	0.050	0.011	1	06/19/20 14:00	06/22/20 15:01	7439-95-4	M1
Manganese	**0.22**	mg/L	0.040	0.0061	1	06/19/20 14:00	06/22/20 15:01	7439-96-5	
Potassium	**2.7**	mg/L	0.20	0.026	1	06/19/20 14:00	06/22/20 15:01	7440-09-7	
Sodium	**10.3**	mg/L	1.0	0.19	1	06/19/20 14:00	06/22/20 15:01	7440-23-5	M1
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Boron	**1.0**	mg/L	0.10	0.0049	1	06/19/20 12:30	06/19/20 19:33	7440-42-8	
Molybdenum	**0.048**	mg/L	0.010	0.00095	1	06/19/20 12:30	06/19/20 19:33	7439-98-7	
2540C Total Dissolved Solids	Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	**423**	mg/L	10.0	10.0	1		06/19/20 18:06		
2320B Alkalinity	Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville								
Alkalinity,Bicarbonate (CaCO3)	**171**	mg/L	5.0	5.0	1		06/29/20 18:03		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		06/29/20 18:03		
Alkalinity, Total as CaCO3	**171**	mg/L	5.0	5.0	1		06/29/20 18:03		
4500S2D Sulfide Water	Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville								
Sulfide	ND	mg/L	0.10	0.050	1		06/24/20 18:51	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**45.2**	mg/L	1.0	0.60	1		06/25/20 04:43	16887-00-6	
Fluoride	**0.077J**	mg/L	0.10	0.050	1		06/25/20 04:43	16984-48-8	
Sulfate	**102**	mg/L	2.0	1.0	2		06/25/20 09:31	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: HAMMOND AP-1 NON ROUTINE
Pace Project No.: 92482346

Sample: MW-30D **Lab ID: 92482346006** Collected: 06/17/20 13:44 Received: 06/18/20 10:37 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Charlotte								
pH	**8.33**	Std. Units			1		06/30/20 17:10		
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Calcium	**8.3**	mg/L	1.0	0.14	1	06/19/20 14:00	06/22/20 15:53	7440-70-2	
Iron	**0.32**	mg/L	0.040	0.015	1	06/19/20 14:00	06/22/20 15:53	7439-89-6	
Magnesium	**2.3**	mg/L	0.050	0.011	1	06/19/20 14:00	06/22/20 15:53	7439-95-4	
Manganese	**0.013J**	mg/L	0.040	0.0061	1	06/19/20 14:00	06/22/20 15:53	7439-96-5	
Potassium	**1.4**	mg/L	0.20	0.026	1	06/19/20 14:00	06/22/20 15:53	7440-09-7	
Sodium	**376**	mg/L	10.0	1.9	10	06/19/20 14:00	06/23/20 12:29	7440-23-5	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00027	1	06/19/20 12:30	06/19/20 20:07	7440-36-0	
Arsenic	**0.00054J**	mg/L	0.0050	0.00035	1	06/19/20 12:30	06/19/20 20:07	7440-38-2	
Barium	**0.26**	mg/L	0.010	0.00049	1	06/19/20 12:30	06/19/20 20:07	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000074	1	06/19/20 12:30	06/19/20 20:07	7440-41-7	
Boron	**0.77**	mg/L	0.10	0.0049	1	06/19/20 12:30	06/19/20 20:07	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00011	1	06/19/20 12:30	06/19/20 20:07	7440-43-9	
Chromium	**0.0010J**	mg/L	0.010	0.00039	1	06/19/20 12:30	06/19/20 20:07	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00030	1	06/19/20 12:30	06/19/20 20:07	7440-48-4	
Copper	**0.00051J**	mg/L	0.0050	0.00019	1	06/19/20 12:30	06/19/20 20:07	7440-50-8	
Lead	**0.00034J**	mg/L	0.0050	0.000046	1	06/19/20 12:30	06/19/20 20:07	7439-92-1	
Lithium	**0.21**	mg/L	0.030	0.00078	1	06/19/20 12:30	06/19/20 20:07	7439-93-2	
Molybdenum	**0.0062J**	mg/L	0.010	0.00095	1	06/19/20 12:30	06/19/20 20:07	7439-98-7	
Nickel	**0.00045J**	mg/L	0.0050	0.00031	1	06/19/20 12:30	06/19/20 20:07	7440-02-0	
Selenium	ND	mg/L	0.010	0.0013	1	06/19/20 12:30	06/19/20 20:07	7782-49-2	
Silver	ND	mg/L	0.0050	0.00028	1	06/19/20 12:30	06/19/20 20:07	7440-22-4	
Thallium	**0.000058J**	mg/L	0.0010	0.000052	1	06/19/20 12:30	06/19/20 20:07	7440-28-0	
Vanadium	ND	mg/L	0.010	0.00071	1	06/19/20 12:30	06/19/20 20:07	7440-62-2	
Zinc	**0.0029J**	mg/L	0.010	0.0015	1	06/19/20 12:30	06/19/20 20:07	7440-66-6	
2540C Total Dissolved Solids	Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	ND	mg/L	10.0	10.0	1		06/19/20 18:07		
2320B Alkalinity	Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville								
Alkalinity,Bicarbonate (CaCO3)	ND	mg/L	5.0	5.0	1		06/29/20 18:14		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		06/29/20 18:14		
Alkalinity, Total as CaCO3	ND	mg/L	5.0	5.0	1		06/29/20 18:14		

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: HAMMOND AP-1 NON ROUTINE
Pace Project No.: 92482346

Sample: MW-30D **Lab ID: 92482346006** Collected: 06/17/20 13:44 Received: 06/18/20 10:37 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
4500S2D Sulfide Water	Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville								
Sulfide	ND	mg/L	0.10	0.050	1		06/24/20 18:52	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	ND	mg/L	1.0	0.60	1		06/25/20 04:58	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		06/25/20 04:58	16984-48-8	
Sulfate	ND	mg/L	1.0	0.50	1		06/25/20 04:58	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
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ANALYTICAL RESULTS

Project: HAMMOND AP-1 NON ROUTINE
Pace Project No.: 92482346

Sample: FB-01 **Lab ID: 92482346007** Collected: 06/17/20 17:05 Received: 06/18/20 10:37 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Calcium	ND	mg/L	1.0	0.14	1	06/19/20 14:00	06/22/20 15:49	7440-70-2	
Iron	**0.20**	mg/L	0.040	0.015	1	06/19/20 14:00	06/22/20 15:49	7439-89-6	
Magnesium	ND	mg/L	0.050	0.011	1	06/19/20 14:00	06/22/20 15:49	7439-95-4	
Manganese	ND	mg/L	0.040	0.0061	1	06/19/20 14:00	06/22/20 15:49	7439-96-5	
Potassium	ND	mg/L	0.20	0.026	1	06/19/20 14:00	06/22/20 15:49	7440-09-7	
Sodium	ND	mg/L	1.0	0.19	1	06/19/20 14:00	06/22/20 15:49	7440-23-5	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Boron	ND	mg/L	0.10	0.0049	1	06/19/20 12:30	06/19/20 19:50	7440-42-8	
Molybdenum	ND	mg/L	0.010	0.00095	1	06/19/20 12:30	06/19/20 19:50	7439-98-7	
2540C Total Dissolved Solids	Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	**1040**	mg/L	10.0	10.0	1		06/19/20 18:07		
2320B Alkalinity	Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville								
Alkalinity,Bicarbonate (CaCO3)	**654**	mg/L	5.0	5.0	1		06/30/20 12:45		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		06/30/20 12:45		
Alkalinity, Total as CaCO3	**654**	mg/L	5.0	5.0	1		06/30/20 12:45		
4500S2D Sulfide Water	Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville								
Sulfide	**0.051J**	mg/L	0.10	0.050	1		06/24/20 18:52	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**92.5**	mg/L	3.0	1.8	3		06/25/20 09:47	16887-00-6	
Fluoride	**10.9**	mg/L	0.30	0.15	3		06/25/20 09:47	16984-48-8	
Sulfate	**104**	mg/L	3.0	1.5	3		06/25/20 09:47	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
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ANALYTICAL RESULTS

Project: HAMMOND AP-1 NON ROUTINE
Pace Project No.: 92482346

Sample: MW-30D FILTERED **Lab ID: 92482346008** Collected: 06/17/20 13:49 Received: 06/18/20 10:37 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Charlotte								
pH	**8.33**	Std. Units			1		06/30/20 17:10		
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Calcium	**4.2**	mg/L	1.0	0.14	1	06/19/20 14:00	06/22/20 15:57	7440-70-2	
Iron	**0.043**	mg/L	0.040	0.015	1	06/19/20 14:00	06/22/20 15:57	7439-89-6	
Magnesium	**1.7**	mg/L	0.050	0.011	1	06/19/20 14:00	06/22/20 15:57	7439-95-4	
Manganese	ND	mg/L	0.040	0.0061	1	06/19/20 14:00	06/22/20 15:57	7439-96-5	
Potassium	**1.2**	mg/L	0.20	0.026	1	06/19/20 14:00	06/22/20 15:57	7440-09-7	
Sodium	**325**	mg/L	10.0	1.9	10	06/19/20 14:00	06/23/20 12:33	7440-23-5	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Boron	**0.73**	mg/L	0.10	0.0049	1	06/19/20 12:30	06/19/20 20:13	7440-42-8	
Molybdenum	**0.0093J**	mg/L	0.010	0.00095	1	06/19/20 12:30	06/19/20 20:13	7439-98-7	
2540C Total Dissolved Solids	Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	**850**	mg/L	10.0	10.0	1		06/19/20 18:08		
2320B Alkalinity	Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville								
Alkalinity,Bicarbonate (CaCO3)	**582**	mg/L	5.0	5.0	1		06/30/20 12:57		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		06/30/20 12:57		
Alkalinity, Total as CaCO3	**583**	mg/L	5.0	5.0	1		06/30/20 12:57		
4500S2D Sulfide Water	Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville								
Sulfide	ND	mg/L	0.10	0.050	1		06/24/20 18:53	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**85.1**	mg/L	1.0	0.60	1		06/25/20 05:27	16887-00-6	
Fluoride	**10.3**	mg/L	0.30	0.15	3		06/25/20 10:02	16984-48-8	
Sulfate	**92.3**	mg/L	3.0	1.5	3		06/25/20 10:02	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: HAMMOND AP-1 NON ROUTINE
Pace Project No.: 92482346

Sample: MW-40D **Lab ID: 92482346009** Collected: 06/19/20 10:25 Received: 06/22/20 10:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Charlotte								
pH	**7.4**	Std. Units			1		06/30/20 17:10		
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Calcium	**109**	mg/L	1.0	0.14	1	06/29/20 12:40	06/29/20 16:50	7440-70-2	
Iron	**8.8**	mg/L	0.040	0.015	1	06/29/20 12:40	06/29/20 16:50	7439-89-6	
Magnesium	**14.7**	mg/L	0.050	0.011	1	06/29/20 12:40	06/29/20 16:50	7439-95-4	
Manganese	**0.31**	mg/L	0.040	0.0061	1	06/29/20 12:40	06/29/20 16:50	7439-96-5	
Potassium	**9.3**	mg/L	0.20	0.026	1	06/29/20 12:40	06/29/20 16:50	7440-09-7	
Sodium	**464**	mg/L	10.0	1.9	10	06/29/20 12:40	06/30/20 12:14	7440-23-5	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Boron	**0.19**	mg/L	0.10	0.0049	1	06/24/20 13:30	06/25/20 16:35	7440-42-8	
Molybdenum	**0.015**	mg/L	0.010	0.00095	1	06/24/20 13:30	06/25/20 16:35	7439-98-7	
2540C Total Dissolved Solids	Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	**1420**	mg/L	10.0	10.0	1		06/22/20 17:40		
2320B Alkalinity	Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville								
Alkalinity,Bicarbonate (CaCO3)	**955**	mg/L	5.0	5.0	1		06/30/20 16:50		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		06/30/20 16:50		
Alkalinity, Total as CaCO3	**955**	mg/L	5.0	5.0	1		06/30/20 16:50		
4500S2D Sulfide Water	Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville								
Sulfide	ND	mg/L	1.0	0.50	10		06/24/20 19:01	18496-25-8	D3
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**145**	mg/L	9.0	5.4	9		06/26/20 09:14	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		06/26/20 02:27	16984-48-8	
Sulfate	**435**	mg/L	9.0	4.5	9		06/26/20 09:14	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: HAMMOND AP-1 NON ROUTINE
Pace Project No.: 92482346

QC Batch: 548325
QC Batch Method: EPA 3010A
Analysis Method: EPA 6010D
Analysis Description: 6010D ATL
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92482346001, 92482346002, 92482346003, 92482346004

METHOD BLANK: 2917356 Matrix: Water
Associated Lab Samples: 92482346001, 92482346002, 92482346003, 92482346004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	0.14	06/19/20 15:48	
Iron	mg/L	ND	0.040	0.015	06/19/20 15:48	
Magnesium	mg/L	ND	0.050	0.011	06/19/20 15:48	
Manganese	mg/L	ND	0.040	0.0061	06/19/20 15:48	
Potassium	mg/L	ND	0.20	0.026	06/22/20 12:08	
Sodium	mg/L	ND	1.0	0.19	06/22/20 12:08	

LABORATORY CONTROL SAMPLE: 2917357

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	mg/L	1	1.0	102	80-120	
Iron	mg/L	1	1.0	104	80-120	
Magnesium	mg/L	1	1.1	106	80-120	
Manganese	mg/L	1	1.0	101	80-120	
Potassium	mg/L	1	0.98	98	80-120	
Sodium	mg/L	1	1.0	104	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2917358 2917359

Parameter	Units	92482102001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Calcium	mg/L	174	1	1	174	182	-20	757	75-125	4	20	M1
Iron	mg/L	0.20	1	1	1.2	1.3	103	108	75-125	4	20	
Magnesium	mg/L	23.4	1	1	24.3	25.4	94	206	75-125	5	20	M1
Manganese	mg/L	0.88	1	1	1.9	1.9	98	104	75-125	3	20	
Potassium	mg/L	6.5	1	1	7.5	7.8	101	134	75-125	4	20	M1
Sodium	mg/L	9.6	1	1	10.6	11.0	100	140	75-125	4	20	M1

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
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QUALITY CONTROL DATA

Project: HAMMOND AP-1 NON ROUTINE
Pace Project No.: 92482346

QC Batch: 548539
QC Batch Method: EPA 3010A
Analysis Method: EPA 6010D
Analysis Description: 6010D ATL
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92482346005, 92482346006, 92482346007, 92482346008

METHOD BLANK: 2918225 Matrix: Water
Associated Lab Samples: 92482346005, 92482346006, 92482346007, 92482346008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	0.14	06/22/20 14:53	
Iron	mg/L	ND	0.040	0.015	06/22/20 14:53	
Magnesium	mg/L	ND	0.050	0.011	06/22/20 14:53	
Manganese	mg/L	ND	0.040	0.0061	06/22/20 14:53	
Potassium	mg/L	ND	0.20	0.026	06/22/20 14:53	
Sodium	mg/L	ND	1.0	0.19	06/22/20 14:53	

LABORATORY CONTROL SAMPLE: 2918226

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	mg/L	1	0.99J	99	80-120	
Iron	mg/L	1	1.0	102	80-120	
Magnesium	mg/L	1	1.0	104	80-120	
Manganese	mg/L	1	0.99	99	80-120	
Potassium	mg/L	1	0.97	97	80-120	
Sodium	mg/L	1	1.1	113	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2918227 2918228

Parameter	Units	92482346005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Calcium	mg/L	112	1	1	110	114	-256	180	75-125	4	20	M1
Iron	mg/L	0.56	1	1	1.6	1.6	103	108	75-125	3	20	
Magnesium	mg/L	10.3	1	1	11.0	11.4	74	117	75-125	4	20	M1
Manganese	mg/L	0.22	1	1	1.2	1.2	96	100	75-125	3	20	
Potassium	mg/L	2.7	1	1	3.7	3.8	95	107	75-125	3	20	
Sodium	mg/L	10.3	1	1	11.0	11.4	68	109	75-125	4	20	M1

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(770)734-4200

QUALITY CONTROL DATA

Project: HAMMOND AP-1 NON ROUTINE
Pace Project No.: 92482346

QC Batch: 550184
QC Batch Method: EPA 3010A
Analysis Method: EPA 6010D
Analysis Description: 6010D ATL
Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92482346009

METHOD BLANK: 2925536 Matrix: Water
Associated Lab Samples: 92482346009

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	0.14	06/29/20 16:20	
Iron	mg/L	ND	0.040	0.015	06/29/20 16:20	
Magnesium	mg/L	ND	0.050	0.011	06/29/20 16:20	
Manganese	mg/L	ND	0.040	0.0061	06/29/20 16:20	
Potassium	mg/L	0.039J	0.20	0.026	06/29/20 16:20	
Sodium	mg/L	ND	1.0	0.19	06/29/20 16:20	

LABORATORY CONTROL SAMPLE: 2925537

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	mg/L	1	0.97J	97	80-120	
Iron	mg/L	1	1.0	102	80-120	
Magnesium	mg/L	1	1.0	104	80-120	
Manganese	mg/L	1	0.99	99	80-120	
Potassium	mg/L	1	1.1	105	80-120	
Sodium	mg/L	1	1.1	113	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2925538 2925539

Parameter	Units	92482800004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Calcium	mg/L	41.3	1	1	41.9	41.8	60	49	75-125	0	20	M1
Iron	mg/L	0.12	1	1	1.1	1.1	102	100	75-125	2	20	
Magnesium	mg/L	10.8	1	1	11.7	11.6	86	78	75-125	1	20	
Manganese	mg/L	0.026J	1	1	0.99	0.99	97	97	75-125	0	20	
Potassium	mg/L	0.53	1	1	1.5	1.5	97	95	75-125	1	20	
Sodium	mg/L	27.0	1	1	27.6	27.6	61	61	75-125	0	20	M1

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(770)734-4200

QUALITY CONTROL DATA

Project: HAMMOND AP-1 NON ROUTINE
Pace Project No.: 92482346

QC Batch: 548037
QC Batch Method: EPA 3005A
Analysis Method: EPA 6020B
Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92482346001, 92482346002, 92482346003, 92482346004

METHOD BLANK: 2915983 Matrix: Water
Associated Lab Samples: 92482346001, 92482346002, 92482346003, 92482346004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Boron	mg/L	ND	0.10	0.0049	06/19/20 14:13	
Molybdenum	mg/L	ND	0.010	0.00095	06/19/20 14:13	

LABORATORY CONTROL SAMPLE: 2915984

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron	mg/L	1	1.1	106	80-120	
Molybdenum	mg/L	0.1	0.11	107	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2915985 2915986

Parameter	Units	92482102001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron	mg/L	1.2	1	1	2.2	2.2	97	98	75-125	1	20	
Molybdenum	mg/L	0.035	0.1	0.1	0.14	0.14	107	102	75-125	3	20	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: HAMMOND AP-1 NON ROUTINE
Pace Project No.: 92482346

QC Batch: 548509
QC Batch Method: EPA 3005A
Analysis Method: EPA 6020B
Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92482346005, 92482346006, 92482346007, 92482346008

METHOD BLANK: 2918043 Matrix: Water
Associated Lab Samples: 92482346005, 92482346006, 92482346007, 92482346008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0050	0.00027	06/19/20 17:32	
Arsenic	mg/L	ND	0.0050	0.00035	06/19/20 17:32	
Barium	mg/L	ND	0.010	0.00049	06/19/20 17:32	
Beryllium	mg/L	ND	0.0030	0.000074	06/19/20 17:32	
Boron	mg/L	ND	0.10	0.0049	06/19/20 17:32	
Cadmium	mg/L	ND	0.0025	0.00011	06/19/20 17:32	
Chromium	mg/L	ND	0.010	0.00039	06/19/20 17:32	
Cobalt	mg/L	ND	0.0050	0.00030	06/19/20 17:32	
Copper	mg/L	ND	0.0050	0.00019	06/19/20 17:32	
Lead	mg/L	ND	0.0050	0.000046	06/19/20 17:32	
Lithium	mg/L	ND	0.030	0.00078	06/19/20 17:32	
Molybdenum	mg/L	ND	0.010	0.00095	06/19/20 17:32	
Nickel	mg/L	ND	0.0050	0.00031	06/19/20 17:32	
Selenium	mg/L	ND	0.010	0.0013	06/19/20 17:32	
Silver	mg/L	ND	0.0050	0.00028	06/19/20 17:32	
Thallium	mg/L	ND	0.0010	0.000052	06/19/20 17:32	
Vanadium	mg/L	ND	0.010	0.00071	06/19/20 17:32	
Zinc	mg/L	ND	0.010	0.0015	06/19/20 17:32	

LABORATORY CONTROL SAMPLE: 2918044

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.10	100	80-120	
Arsenic	mg/L	0.1	0.095	95	80-120	
Barium	mg/L	0.1	0.098	98	80-120	
Beryllium	mg/L	0.1	0.099	99	80-120	
Boron	mg/L	1	1.0	102	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	0.099	99	80-120	
Copper	mg/L	0.1	0.099	99	80-120	
Lead	mg/L	0.1	0.099	99	80-120	
Lithium	mg/L	0.1	0.10	101	80-120	
Molybdenum	mg/L	0.1	0.10	102	80-120	
Nickel	mg/L	0.1	0.099	99	80-120	
Selenium	mg/L	0.1	0.094	94	80-120	
Silver	mg/L	0.1	0.10	102	80-120	
Thallium	mg/L	0.1	0.10	100	80-120	
Vanadium	mg/L	0.1	0.10	101	80-120	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: HAMMOND AP-1 NON ROUTINE
Pace Project No.: 92482346

LABORATORY CONTROL SAMPLE: 2918044

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Zinc	mg/L	0.1	0.10	103	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2918045 2918046

Parameter	Units	92482427001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	mg/L	ND	0.1	0.1	0.096	0.095	96	95	75-125	1	20	
Arsenic	mg/L	ND	0.1	0.1	0.094	0.094	93	93	75-125	0	20	
Barium	mg/L	9.3 ug/L	0.1	0.1	0.10	0.10	95	95	75-125	0	20	
Beryllium	mg/L	ND	0.1	0.1	0.097	0.096	97	96	75-125	0	20	
Boron	mg/L	54.3 ug/L	1	1	1.0	1.0	96	96	75-125	0	20	
Cadmium	mg/L	ND	0.1	0.1	0.093	0.094	93	94	75-125	1	20	
Chromium	mg/L	ND	0.1	0.1	0.097	0.098	96	97	75-125	1	20	
Cobalt	mg/L	ND	0.1	0.1	0.096	0.094	96	94	75-125	1	20	
Copper	mg/L	ND	0.1	0.1	0.095	0.095	95	95	75-125	0	20	
Lead	mg/L	ND	0.1	0.1	0.095	0.095	95	95	75-125	0	20	
Lithium	mg/L	ND	0.1	0.1	0.097	0.096	97	96	75-125	1	20	
Molybdenum	mg/L	ND	0.1	0.1	0.099	0.097	99	97	75-125	2	20	
Nickel	mg/L	ND	0.1	0.1	0.094	0.093	93	92	75-125	1	20	
Selenium	mg/L	ND	0.1	0.1	0.097	0.092	97	92	75-125	5	20	
Silver	mg/L	ND	0.1	0.1	0.097	0.097	97	97	75-125	0	20	
Thallium	mg/L	ND	0.1	0.1	0.097	0.096	97	96	75-125	1	20	
Vanadium	mg/L	ND	0.1	0.1	0.098	0.098	98	98	75-125	0	20	
Zinc	mg/L	ND	0.1	0.1	0.098	0.10	96	100	75-125	4	20	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: HAMMOND AP-1 NON ROUTINE
Pace Project No.: 92482346

QC Batch: 549351
QC Batch Method: EPA 3005A
Analysis Method: EPA 6020B
Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92482346009

METHOD BLANK: 2921563 Matrix: Water
Associated Lab Samples: 92482346009

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Boron	mg/L	ND	0.10	0.0049	06/25/20 16:01	
Molybdenum	mg/L	ND	0.010	0.00095	06/25/20 16:01	

LABORATORY CONTROL SAMPLE: 2921564

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron	mg/L	1	0.97	97	80-120	
Molybdenum	mg/L	0.1	0.097	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2921565 2921566

Parameter	Units	92482800006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron	mg/L	0.086J	1	1	0.96	0.96	87	87	75-125	0	20	
Molybdenum	mg/L	ND	0.1	0.1	0.094	0.090	93	90	75-125	4	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(770)734-4200

QUALITY CONTROL DATA

Project: HAMMOND AP-1 NON ROUTINE
Pace Project No.: 92482346

QC Batch: 548159
QC Batch Method: SM 2450C-2011
Analysis Method: SM 2450C-2011
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92482346001, 92482346002, 92482346003, 92482346004

METHOD BLANK: 2916338 Matrix: Water
Associated Lab Samples: 92482346001, 92482346002, 92482346003, 92482346004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	06/18/20 10:55	

LABORATORY CONTROL SAMPLE: 2916339

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	418	104	84-108	

SAMPLE DUPLICATE: 2916340

Parameter	Units	92482102004 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	665	818	21	10	D6

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(770)734-4200

QUALITY CONTROL DATA

Project: HAMMOND AP-1 NON ROUTINE
Pace Project No.: 92482346

QC Batch: 548606 | 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: 92482346005, 92482346006, 92482346007, 92482346008

METHOD BLANK: 2918729 Matrix: Water
Associated Lab Samples: 92482346005, 92482346006, 92482346007, 92482346008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	06/19/20 17:58	

LABORATORY CONTROL SAMPLE: 2918730

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	419	105	84-108	

SAMPLE DUPLICATE: 2918731

Parameter	Units	92482647001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	18.0	15.0	18	10	D6

SAMPLE DUPLICATE: 2918732

Parameter	Units	92482647005 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	28.0	43.0	42	10	D6

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: HAMMOND AP-1 NON ROUTINE
Pace Project No.: 92482346

QC Batch: 548907
QC Batch Method: SM 2450C-2011
Analysis Method: SM 2450C-2011
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92482346009

METHOD BLANK: 2919762 Matrix: Water
Associated Lab Samples: 92482346009

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	06/22/20 17:30	

LABORATORY CONTROL SAMPLE: 2919763

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

SAMPLE DUPLICATE: 2919764

Parameter	Units	92482662002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	163	182	11	10	D6

SAMPLE DUPLICATE: 2919765

Parameter	Units	92482737002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	97.0	86.0	12	10	D6

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: HAMMOND AP-1 NON ROUTINE
Pace Project No.: 92482346

QC Batch: 549851
QC Batch Method: SM 2320B-2011
Analysis Method: SM 2320B-2011
Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92482346001, 92482346002, 92482346003, 92482346004, 92482346005, 92482346006, 92482346007, 92482346008

METHOD BLANK: 2923886 Matrix: Water
Associated Lab Samples: 92482346001, 92482346002, 92482346003, 92482346004, 92482346005, 92482346006, 92482346007, 92482346008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	ND	5.0	5.0	06/29/20 15:57	
Alkalinity,Bicarbonate (CaCO3)	mg/L	ND	5.0	5.0	06/29/20 15:57	
Alkalinity,Carbonate (CaCO3)	mg/L	ND	5.0	5.0	06/29/20 15:57	

LABORATORY CONTROL SAMPLE: 2923887

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	50	52.7	105	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2923888 2923889

Parameter	Units	92482268001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	ND	50	50	54.3	54.2	109	108	80-120	0	25	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2923890 2923891

Parameter	Units	92482880003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	8.3	50	50	63.0	63.9	109	111	80-120	2	25	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: HAMMOND AP-1 NON ROUTINE
Pace Project No.: 92482346

QC Batch: 550396
QC Batch Method: SM 2320B-2011
Analysis Method: SM 2320B-2011
Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92482346009

METHOD BLANK: 2926273 Matrix: Water
Associated Lab Samples: 92482346009

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	ND	5.0	5.0	06/30/20 13:53	
Alkalinity,Bicarbonate (CaCO3)	mg/L	ND	5.0	5.0	06/30/20 13:53	
Alkalinity,Carbonate (CaCO3)	mg/L	ND	5.0	5.0	06/30/20 13:53	

LABORATORY CONTROL SAMPLE: 2926274

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	50	49.6	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2926275 2926276

Parameter	Units	92483174015 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	ND	50	50	50.7	50.1	101	100	80-120	1	25	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2926277 2926278

Parameter	Units	92482649003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	ND	50	50	57.1	57.5	104	105	80-120	1	25	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: HAMMOND AP-1 NON ROUTINE
Pace Project No.: 92482346

QC Batch: 548296
QC Batch Method: SM 4500-S2D-2011
Analysis Method: SM 4500-S2D-2011
Analysis Description: 4500S2D Sulfide Water
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92482346001, 92482346002, 92482346003, 92482346004

METHOD BLANK: 2917145 Matrix: Water
Associated Lab Samples: 92482346001, 92482346002, 92482346003, 92482346004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide	mg/L	ND	0.10	0.050	06/19/20 18:51	

LABORATORY CONTROL SAMPLE: 2917146

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide	mg/L	0.5	0.53	105	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2917149 2917150

Parameter	Units	92482295001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfide	mg/L	ND	0.5	0.5	0.51	0.51	99	98	80-120	1	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2918737 2918738

Parameter	Units	92482295007 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfide	mg/L	ND	0.5	0.5	0.81	0.81	152	152	80-120	0	10	M1

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: HAMMOND AP-1 NON ROUTINE
Pace Project No.: 92482346

QC Batch: 549379
QC Batch Method: SM 4500-S2D-2011
Analysis Method: SM 4500-S2D-2011
Analysis Description: 4500S2D Sulfide Water
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92482346005, 92482346006, 92482346007, 92482346008

METHOD BLANK: 2921729 Matrix: Water
Associated Lab Samples: 92482346005, 92482346006, 92482346007, 92482346008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide	mg/L	ND	0.10	0.050	06/24/20 18:37	

LABORATORY CONTROL SAMPLE: 2921730

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide	mg/L	0.5	0.54	108	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2921731 2921732

Parameter	Units	92482441001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfide	mg/L	<0.050	0.5	0.5	0.54	0.54	107	107	80-120	0	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2921733 2921734

Parameter	Units	92482441002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfide	mg/L	<0.050	0.5	0.5	0.25	0.25	49	49	80-120	0	10	M1

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: HAMMOND AP-1 NON ROUTINE
Pace Project No.: 92482346

QC Batch: 549382
QC Batch Method: SM 4500-S2D-2011
Analysis Method: SM 4500-S2D-2011
Analysis Description: 4500S2D Sulfide Water
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92482346009

METHOD BLANK: 2921743 Matrix: Water
Associated Lab Samples: 92482346009

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide	mg/L	ND	0.10	0.050	06/24/20 18:53	

LABORATORY CONTROL SAMPLE: 2921744

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide	mg/L	0.5	0.55	109	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2921745 2921746

Parameter	Units	92482649001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfide	mg/L	ND	0.5	0.5	0.55	0.54	110	109	80-120	1	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2921747 2921748

Parameter	Units	92482649002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfide	mg/L	ND	0.5	0.5	0.34	0.34	67	67	80-120	1	10	M1

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: HAMMOND AP-1 NON ROUTINE
Pace Project No.: 92482346

QC Batch: 548965
QC Batch Method: EPA 300.0 Rev 2.1 1993
Analysis Method: EPA 300.0 Rev 2.1 1993
Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92482346001, 92482346002, 92482346003, 92482346004

METHOD BLANK: 2919910 Matrix: Water
Associated Lab Samples: 92482346001, 92482346002, 92482346003, 92482346004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	06/24/20 15:56	
Fluoride	mg/L	ND	0.10	0.050	06/24/20 15:56	
Sulfate	mg/L	ND	1.0	0.50	06/24/20 15:56	

LABORATORY CONTROL SAMPLE: 2919911

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	2.7	106	90-110	
Sulfate	mg/L	50	51.0	102	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2919912 2919913

Parameter	Units	92482711001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	8.2	50	50	56.6	56.6	97	97	90-110	0	10	
Fluoride	mg/L	0.57	2.5	2.5	2.7	2.8	86	88	90-110	1	10	M1
Sulfate	mg/L	13.6	50	50	62.3	62.3	98	97	90-110	0	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2919914 2919915

Parameter	Units	92482268001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	14.5	50	50	62.7	63.0	96	97	90-110	1	10	
Fluoride	mg/L	ND	2.5	2.5	2.6	2.7	104	107	90-110	3	10	
Sulfate	mg/L	ND	50	50	48.8	49.1	98	98	90-110	1	10	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(770)734-4200

QUALITY CONTROL DATA

Project: HAMMOND AP-1 NON ROUTINE
Pace Project No.: 92482346

QC Batch: 549186
QC Batch Method: EPA 300.0 Rev 2.1 1993
Analysis Method: EPA 300.0 Rev 2.1 1993
Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92482346005, 92482346006, 92482346007, 92482346008

METHOD BLANK: 2920985 Matrix: Water
Associated Lab Samples: 92482346005, 92482346006, 92482346007, 92482346008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	06/24/20 23:11	
Fluoride	mg/L	ND	0.10	0.050	06/24/20 23:11	
Sulfate	mg/L	ND	1.0	0.50	06/24/20 23:11	

LABORATORY CONTROL SAMPLE: 2920986

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	51.2	102	90-110	
Fluoride	mg/L	2.5	2.4	97	90-110	
Sulfate	mg/L	50	51.9	104	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2920987 2920988

Parameter	Units	92482762001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	1.2	50	50	49.9	49.9	97	97	90-110	0	10	
Fluoride	mg/L	ND	2.5	2.5	2.4	2.5	97	97	90-110	1	10	
Sulfate	mg/L	ND	50	50	48.9	48.9	97	97	90-110	0	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2920989 2920990

Parameter	Units	92483147008 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	2.7	50	50	55.2	57.4	105	110	90-110	4	10	
Fluoride	mg/L	ND	2.5	2.5	2.5	2.6	97	102	90-110	5	10	
Sulfate	mg/L	0.74J	50	50	53.3	55.4	105	109	90-110	4	10	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: HAMMOND AP-1 NON ROUTINE
Pace Project No.: 92482346

QC Batch: 549586
QC Batch Method: EPA 300.0 Rev 2.1 1993
Analysis Method: EPA 300.0 Rev 2.1 1993
Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92482346009

METHOD BLANK: 2922599 Matrix: Water
Associated Lab Samples: 92482346009

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	06/25/20 23:34	
Fluoride	mg/L	ND	0.10	0.050	06/25/20 23:34	
Sulfate	mg/L	ND	1.0	0.50	06/25/20 23:34	

LABORATORY CONTROL SAMPLE: 2922600

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	51.0	102	90-110	
Fluoride	mg/L	2.5	2.6	105	90-110	
Sulfate	mg/L	50	51.7	103	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2922601 2922602

Parameter	Units	92483177002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	3.9	50	50	55.0	54.3	102	101	90-110	1	10	
Fluoride	mg/L	ND	2.5	2.5	2.5	2.7	99	107	90-110	8	10	
Sulfate	mg/L	ND	50	50	52.6	51.6	103	101	90-110	2	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2922603 2922604

Parameter	Units	92483187001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	15.7	50	50	67.7	65.2	104	99	90-110	4	10	
Fluoride	mg/L	ND	2.5	2.5	2.6	2.5	104	100	90-110	4	10	
Sulfate	mg/L	88.7	50	50	128	126	78	75	90-110	1	10	M1

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: HAMMOND AP-1 NON ROUTINE
Pace Project No.: 92482346

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

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

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: HAMMOND AP-1 NON ROUTINE
Pace Project No.: 92482346

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92482346001	**HGWC-8**				
92482346002	**MW-1**				
92482346003	**HGWA-1**				
92482346004	**HGWA-3**				
92482346005	**HGWC-7**				
92482346006	**MW-30D**				
92482346008	**MW-30D FILTERED**				
92482346009	**MW-40D**				
92482346001	**HGWC-8**	EPA 3010A	548325	EPA 6010D	548371
92482346002	**MW-1**	EPA 3010A	548325	EPA 6010D	548371
92482346003	**HGWA-1**	EPA 3010A	548325	EPA 6010D	548371
92482346004	**HGWA-3**	EPA 3010A	548325	EPA 6010D	548371
92482346005	**HGWC-7**	EPA 3010A	548539	EPA 6010D	548601
92482346006	**MW-30D**	EPA 3010A	548539	EPA 6010D	548601
92482346007	**FB-01**	EPA 3010A	548539	EPA 6010D	548601
92482346008	**MW-30D FILTERED**	EPA 3010A	548539	EPA 6010D	548601
92482346009	**MW-40D**	EPA 3010A	550184	EPA 6010D	550253
92482346001	**HGWC-8**	EPA 3005A	548037	EPA 6020B	548275
92482346002	**MW-1**	EPA 3005A	548037	EPA 6020B	548275
92482346003	**HGWA-1**	EPA 3005A	548037	EPA 6020B	548275
92482346004	**HGWA-3**	EPA 3005A	548037	EPA 6020B	548275
92482346005	**HGWC-7**	EPA 3005A	548509	EPA 6020B	548546
92482346006	**MW-30D**	EPA 3005A	548509	EPA 6020B	548546
92482346007	**FB-01**	EPA 3005A	548509	EPA 6020B	548546
92482346008	**MW-30D FILTERED**	EPA 3005A	548509	EPA 6020B	548546
92482346009	**MW-40D**	EPA 3005A	549351	EPA 6020B	549398
92482346001	**HGWC-8**	SM 2450C-2011	548159		
92482346002	**MW-1**	SM 2450C-2011	548159		
92482346003	**HGWA-1**	SM 2450C-2011	548159		
92482346004	**HGWA-3**	SM 2450C-2011	548159		
92482346005	**HGWC-7**	SM 2450C-2011	548606		
92482346006	**MW-30D**	SM 2450C-2011	548606		
92482346007	**FB-01**	SM 2450C-2011	548606		
92482346008	**MW-30D FILTERED**	SM 2450C-2011	548606		
92482346009	**MW-40D**	SM 2450C-2011	548907		
92482346001	**HGWC-8**	SM 2320B-2011	549851		
92482346002	**MW-1**	SM 2320B-2011	549851		
92482346003	**HGWA-1**	SM 2320B-2011	549851		
92482346004	**HGWA-3**	SM 2320B-2011	549851		
92482346005	**HGWC-7**	SM 2320B-2011	549851		
92482346006	**MW-30D**	SM 2320B-2011	549851		
92482346007	**FB-01**	SM 2320B-2011	549851		
92482346008	**MW-30D FILTERED**	SM 2320B-2011	549851		

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: HAMMOND AP-1 NON ROUTINE
Pace Project No.: 92482346

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92482346009	**MW-40D**	SM 2320B-2011	550396		
92482346001	**HGWC-8**	SM 4500-S2D-2011	548296		
92482346002	**MW-1**	SM 4500-S2D-2011	548296		
92482346003	**HGWA-1**	SM 4500-S2D-2011	548296		
92482346004	**HGWA-3**	SM 4500-S2D-2011	548296		
92482346005	**HGWC-7**	SM 4500-S2D-2011	549379		
92482346006	**MW-30D**	SM 4500-S2D-2011	549379		
92482346007	**FB-01**	SM 4500-S2D-2011	549379		
92482346008	**MW-30D FILTERED**	SM 4500-S2D-2011	549379		
92482346009	**MW-40D**	SM 4500-S2D-2011	549382		
92482346001	**HGWC-8**	EPA 300.0 Rev 2.1 1993	548965		
92482346002	**MW-1**	EPA 300.0 Rev 2.1 1993	548965		
92482346003	**HGWA-1**	EPA 300.0 Rev 2.1 1993	548965		
92482346004	**HGWA-3**	EPA 300.0 Rev 2.1 1993	548965		
92482346005	**HGWC-7**	EPA 300.0 Rev 2.1 1993	549186		
92482346006	**MW-30D**	EPA 300.0 Rev 2.1 1993	549186		
92482346007	**FB-01**	EPA 300.0 Rev 2.1 1993	549186		
92482346008	**MW-30D FILTERED**	EPA 300.0 Rev 2.1 1993	549186		
92482346009	**MW-40D**	EPA 300.0 Rev 2.1 1993	549586		

WO# : 92482346

92482346

Pace Analytical

CHAIN-OF-CUSTODY / Analytical Request Docu

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Page: 1 of 2

Section A Required Client Information		Section B Required Project Information		Section C Invoice Information	
Company:	GA Power	Report To:	SCS Contacts	Attention:	Southern Co.
Address:	Atlanta, GA	Copy To:	Geosyntec Contacts	Company Name:	
				Address:	
Email To:	SCS Contacts	Purchase Order No.:		Pace Quote Reference:	
Phone:	Fax:	Project Name:	Plant Hammond AP-1 Non-Routine	Pace Project Manager:	Kevin Herring
Requested Due Date/TAT:	5 Day	Project Number:	GW6581B	Pace Profile #:	

REGULATORY AGENCY

NPDES | GROUND WATE | DRINKING WATER

UST | RCRA | OTHER CCR

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 (DRINKING WATER DW; WATER WT; WASTE WATER WW; PRODUCT P; SOIL/SOLID SL; OIL OL; WIPE WP; AIR AR; OTHER OT; TISSUE TS)	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED DATE	COLLECTED TIME	COMPOSITE DATE	COMPOSITE TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	Requested Analysis Filtered (Y/N): Chloride, Fluoride, Sulfate	TDS	Metals*	Alkalinity, Bicarbonate	Sulfide	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	~~HGWA-1~~		WT	G						5	3		1				1		X	X	X	X	X	N	~~pH =~~
2	~~HGWA-3~~		WT	G						5	3		1				1		X	X	X	X	X	N	~~pH =~~
3	~~HGWC-7~~		WT	G						5	3		1				1		X	X	X	X	X	N	~~pH =~~
4	HGWC-8		WT	G	6/16/2020	1515			21	5	3		1				1		X	X	X	X	X	N	pH = 6.97
5	MW-1		WT	G	6/16/2020	1410			20	5	3		1				1		X	X	X	X	X	N	pH = 6.86
6	~~MW-30D~~		WT	G						5	3		1				1		X	X	X	X	X	N	~~pH =~~
7	~~MW-40D~~		WT	G						5	3		1				1		X	X	X	X	X	N	pH =
8																										
9																										
10																										
11																		(2)		6/16/2020						
12																										

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS: Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
Please note dry wells, strike through any wells not sampled, and note when the last sample for the event has been taken.	Shawn Lin, Geosyntec	6/16/2020	1620	Chad Rugg / Geo	6/16/20	1620				
	Chad Rugg / Geo	6/16/20	1755	Nadia Munteanu / Geo	6/16/20	1755				
*Metals=B, Ca, Fe, Mg, Mn, Mo, K, Na	Nadia Munteanu / Geo	6/17/20	1056	/ Pace	6.17.20	1057				
	/ Pace	6.17.20	1411	Pace	6/17/20	1411	3.3	Y	N	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Shawn Lin

SIGNATURE of SAMPLER: Shawn Lin DATE Signed (MM/DD/YY): 6/16/2020

*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.

WO# : 92482346
PM: KLH1 Due Date: 07/01/20
CLIENT: GA-GA Power

Pace Analytical

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Page: 2 of 2

Section A Required Client Information

Company	GA Power
Address	Atlanta, GA
Email To	SCS Contacts
Phone	Fax
Requested Due Date/TAT:	5 Day

Section B Required Project Information

Report To	SCS Contacts
Copy To	Geosyntec Contacts
Purchase Order No.	
Project Name	Plant Hammond AP-1 Non-Routine
Project Number	GW6581B

Section C Invoice Information

Attention	Southern Co.
Company Name	
Address	
Pace Quote Reference	
Pace Project Manager	Kevin Herring
Pace Profile #	

REGULATORY AGENCY

NPDES / GROUND WATER / DRINKING WATER / UST / RCRA / ✓ OTHER ~~CCR~~

Site Location STATE: GA

Section D Required Client Information

Valid Matrix Codes: MATRIX / CODE — DRINKING WATER DW, WATER WT, WASTE WATER WW, PRODUCT P, SOIL/SOLID SL, OIL OL, WIPE WP, AIR AR, OTHER OT, TISSUE TS

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

Requested Analysis Filtered (Y/N): Chloride, Fluoride, Sulfate (N); TDS (N); Metals* (N); Alkalinity, Bicarbonate (N); Sulfide (N)

ITEM #	SAMPLE ID	MATRIX CODE	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	TIME	COMPOSITE END/GRAB DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test	Chloride, Fluoride, Sulfate	TDS	Metals*	Alkalinity, Bicarbonate	Sulfide	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	HGWA-1	WT	G	6/16/20	0948	—	—	17	5	3		1					1		X	X	X	X	X	N	pH = 6.97
2	HGWA-3	WT	G	6/16/20	1116	—	—	18	5	3		1					1		X	X	X	X	X	N	pH = 7.31
3	~~HGWC-7~~	WT	G			—	—		5	3		1					1		X	X	X	X	X	N	pH =
4	~~HGWC-8~~	WT	G			—	—		5	3		1					1		X	X	X	X	X	N	pH =
5	~~MW-1~~	WT	G			—	—		5	3		1					1		X	X	X	X	X	N	pH =
6	~~MW-30D~~	WT	G			—	—		5	3		1					1		X	X	X	X	X	N	pH =
7	~~MW-40D~~	WT	G			—	—		5	3		1					1		X	X	X	X	X	N	pH =
8																									
9																									
10																									
11																									
12																									

CR 6/16/2020

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
Please note dry wells, strike thorugh any wells not sampled, and note when the last sample for the event has been taken	Chad Russ / Geo	6/16/2020	1755	Nalia Munkus / Geo	6/16/20	1755				
	Nalia Munkus / Geosyntec	6/17/20	1056	[illegible] / Pace	6.17.20	1057				
*Metals=B, Ca, Fe, Mg, Mn, Mo, K, Na	[illegible] / Pace	6.17.20	1411	K. Willifa / Pace	6/17/20	1411	3.3	Y	N	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Chad Russ

SIGNATURE of SAMPLER: Chad Russ — DATE Signed (MM/DD/YY): 6/16/2020

*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.

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www.pacelabs.com

CHAIN-OF-CUSTODY / Analytical Request Do

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WO# : 92482346
PM: KLH1 Due Date: 07/01/20
CLIENT: GA-GA Power

Section A Required Client Information		Section B Required Project Information		Section C Invoice Information	
Company	GA Power	Report To	SCS Contacts	Attention	Southern Co.
Address	Atlanta, GA	Copy To	Geosyntec Contacts	Company Name	
				Address	
Email To	SCS Contacts	Purchase Order No.		Pace Quote Reference	
Phone / Fax		Project Name	Plant Hammond AP-1 Non-Routine	Pace Project Manager	Kevin Herring
Requested Due Date/TAT:	5 Day	Project Number	GW6581B	Pace Profile #	

REGULATORY AGENCY
NPDES — GROUND WATER — DRINKING WATER
UST — RCRA — ☑ OTHER ~~CCR~~
Site Location STATE: GA

Section D Required Client Information
SAMPLE ID (A-Z, 0-9 / -) Sample IDs MUST BE UNIQUE

Valid Matrix Codes: MATRIX / CODE — DRINKING WATER DW; WATER WT; WASTE WATER WW; PRODUCT P; SOIL/SOLID SL; OIL OL; WIPE WP; AIR AR; OTHER OT; TISSUE TS

Requested Analysis Filtered (Y/N): Chloride, Fluoride, Sulfate N; TDS N; Metals* N; Alkalinity, Bicarbonate N; Sulfide N

ITEM #	SAMPLE ID	MATRIX CODE	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED DATE	COLLECTED TIME	COMPOSITE DATE	COMPOSITE TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test	Chloride, Fluoride, Sulfate	TDS	Metals*	Alkalinity, Bicarbonate	Sulfide	Residual Chlorine (Y/N)	Pace Project No./Lab I.D.
1	~~HGWA-1~~	WT	G			—	—		5	3		1					1		X	X	X	X	X	N	pH =
2	~~HGWA-3~~	WT	G			—			5	3		1					1		X	X	X	X	X	N	pH =
3	HGWC-7	WT	G	6/17/20	1300	—	—	20	5	3		1					1		X	X	X	X	X	N	pH = 7.2
4	~~HGWC-8~~	WT	G						5	3		1					1		X	X	X	X	X	N	pH =
5	~~MW-1~~	WT	G						5	3		1					1		X	X	X	X	X	N	pH =
6	MW-30D	WT	G	6/17/20	1347	—	—	21	5	3		1					1		X	X	X	X	X	N	pH = 8.33
7	~~MW-40D~~	WT	G			—			5	3		1					1		X	X	X	X	X	N	pH =
8	(CG) ~~EB-01~~ FB-01	WT	G	6/17/20	1705	—	—		5	3		1					1		X	X	X	X	X	N	
9	MW-30D Filtered	WT	G	6/17/20	1349	—	—	21	5	3		1					1		X	X	X	X	X	N	pH = 8.33
10																		(CG)							
11																		6/17/2020							
12																									

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
Please note dry wells, strike thorough any wells not sampled, and note when the last sample for the event has been taken.	Chad Russo / GEO	6/17/2020	1845	Nadia Whelan / Geosyntec	6/17/20	1845				
	Nadia Whelan / Geosyntec	6/18/20	1037	[illegible] / Pace	6/18/20	1037				
*Metals=B, Ca, Fe, Mg, Mn, Mo, K, Na	[illegible] / Pace	6/18/20	1443	R. Wellington / Pace	6/18/20	1443	3.2	Y	N	Y

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER: Chad Russo
SIGNATURE of SAMPLER: Chad Russo
DATE Signed (MM/DD/YY): 6/17/2020

*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.

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CHAIN-OF-CUSTODY / Analytical Request Docu

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

WO#: 92482346
PM: KLH1 Due Date: 07/01/20
CLIENT: GA-GA Power

Section A Required Client Information:

Company:	GA Power
Address:	Atlanta, GA
Email To:	SCS Contacts
Phone:	Fax:
Requested Due Date/TAT:	5 Day

Section B Required Project Information:

Report To:	SCS Contacts
Copy To:	Geosyntec Contacts
Purchase Order No.:	
Project Name:	Plant Hammond AP-1 Non-Routine
Project Number:	GW6581B

Section C Invoice Information:

Attention:	Southern Co.
Company Name:	
Address:	
Pace Quote Reference:	
Pace Project Manager:	Kevin Herring
Pace Profile #:	

REGULATORY AGENCY

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

Site Location STATE: GA

Section D Required Client Information

Valid Matrix Codes: MATRIX / CODE — DRINKING WATER DW, WATER WT, WASTE WATER WW, PRODUCT P, SOIL/SOLID SL, OIL OL, WIPE WP, AIR AR, OTHER OT, TISSUE TS

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

Requested Analysis Filtered (Y/N): Chloride, Fluoride, Sulfate N; TDS N; Metals* N; Alkalinity, Bicarbonate N; Sulfide N

ITEM #	SAMPLE ID	MATRIX CODE	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED DATE	COLLECTED TIME	COMPOSITE DATE	COMPOSITE TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test	Chloride, Fluoride, Sulfate	TDS	Metals*	Alkalinity, Bicarbonate	Sulfide	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	~~HGWA-1~~	WT	G			—	—		5	3		1					1		X	X	X	X	X	N	pH=
2	~~HGWA-3~~	WT	G			—	—		5	3		1					1		X	X	X	X	X	N	pH=
3	~~HGWC-7~~	WT	G			—	—		5	3		1					1		X	X	X	X	X	N	pH=
4	~~HGWC-8~~	WT	G			—	—		5	3		1					1		X	X	X	X	X	N	pH=
5	~~MW-1~~	WT	G			—	—		5	3		1					1		X	X	X	X	X	N	pH=
6	~~MW-30D~~	WT	G			—	—		5	3		1					1		X	X	X	X	X	N	pH=
7	MW-40D	WT	G	6/19/20	1825	—	—	2.5	5	3		1					1		X	X	X	X	X	N	pH= 7.4/ Last sample
8	~~EB-01~~	WT	G			—	—		5	3		1					1		X	X	X	X	X	N	
9																									
10																									
11																									
12																									

CR 6/19/2020

Pace Project No./Lab I.D.: 92482346

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
Please note dry wells, strike thorough any wells not sampled, and note when the last sample for the event has been taken.	Chad Russo / GEO	6/19/20	1745	Nadia Muntean / Geosyntec	6/19/20	1745				
	Nadia Muntean / Geosyntec	6/22/20	1045	[illegible] / Pace	6/22/20	1045				
*Metals=B, Ca, Fe, Mg, Mn, Mo, K, Na	[illegible] / Pace	6-22-20	1353	[illegible]	6/22/20	1353	3.8	Y	N	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Chad Russo

SIGNATURE of SAMPLER: Chad Russo DATE Signed (MM/DD/YY): 6/19/2020

*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

Data Validation Reports

Geosyntec consultants

180A Market Place Boulevard
Knoxville, TN 37922
PH 865.330.0037
www.geosyntec.com

Memorandum

Date: August 11, 2020

To: Whitney Law

From: Kristoffer Henderson

CC: J. Caprio

Subject: Stage 2A Data Validation - Level II Data Deliverables – Pace Analytical Services, LLC Project Numbers 2629703 and 30353287

SITE: Plant Hammond AP-1

INTRODUCTION

This report summarizes the findings of the Stage 2A data validation of twenty-two aqueous samples, one field duplicate sample and one field blank, collected March 2-4, 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:

- Metals by United States (US) Environmental Protection Agency (EPA) 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. The qualified data should be used within the limitations 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, 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
2629703001	MW-20
2629703002	FB-01
2629703003	MW-29
2629703004	MW-5
2629703008	MW-6
2629703009	MW-7
2629703010	HGWC-10
2629703011	HGWC-11
2629703012	HGWC-12
2629703013	MW-25D
2629703014	HGWC-8
2629703015	MW-30D

Laboratory ID	Client ID
2629703016	HGWC-7
2629703017	MW-28D
2629703018	MW-24D
2629703019	FD-02
2629703020	HGWC-13
2629703021	MW-19
2629703022	HGWC-9
2629703023	MW-26D
2629703024	MW-27D
2629714001	HGWA-1
2629714002	HGWA-2
2629714003	HGWA-3

The samples in laboratory report 2629703 were received within 0-6 degrees Celsius (ºC). No sample preservation issues were noted by the laboratory.

The following issues were noted with the chain of custody (COC) forms:

- 2629703: Incorrect error corrections were observed on the COC, instead of the proper procedure of a single strike through, correction, and initials and date of person making the corrections.
- 2629703: The relinquished by signatures, dates and times were not documented for the third sample transfer on the pages 1- 5, 8 and 10 of the COC.

- 2629703: The received by signature, date and time were not documented for the fourth sample transfer on page 6 of the COC.
- 2629703: The relinquished by year was not documented for the third sample transfer, the received by signature, date and time were not documented for the fourth sample transfer, and the year was not documented for the collection times for the samples listed on page 7 of the COC. The samples were logged in with the collection year of 2020.
- 2629703: The relinquished by signature, date and time were not documented for the fourth sample transfer and the year was not documented for the collection times for the samples listed on page 9 of the COC. The samples were logged in with the collection year of 2020.
- 2629703: The relinquished by signature, date and time were not documented for the fourth sample transfer on page 10 of the COC.
- 30353287: The relinquished by signature, date and time were not documented on page 1 of the COC.
- 30353287: The signatures, dates and times for the sample transfers for pages 3-4 of the COC were documented on separate pages.
- 30353287: The relinquished by signature, date and time were not documented on page 4 of the COC.

The field pH data included with laboratory report 2629703 were not validated.

1.0 METALS

The samples were analyzed for metals by USEPA methods 3005A/6020B (Mercury 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 these packages are considered usable for meeting project objectives. The results are considered valid; the analytical completeness defined as the ratio of the number of valid analytical results (valid analytical results include values qualified as estimated) to the total number of analytical results requested on samples submitted for this analysis, for this dataset is 100%.

1.2 Holding Time

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

1.3 Method Blank

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Four method blanks were reported (batches 44279, 44398, 44440 and 44486). Metals were not detected in the method blanks above the method detection limits (MDLs), with the following exceptions.

Antimony was detected at estimated concentrations greater than the MDL and less than the reporting limit (RL) in the method blanks in batches 44279 and 44486. Therefore, the estimated antimony concentrations in the associated samples were U qualified as not detected at the RL.

Chromium was detected at an estimated concentration greater than the MDL and less than the RL in the method blank in batch 44440. Therefore, the estimated chromium 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**
MW-24D	Antimony	0.0017	J B	0.0030	U	3
FD-02	Antimony	0.00084	J B	0.0030	U	3
HGWC-13	Antimony	0.00061	J B	0.0030	U	3
HGWC-9	Antimony	0.00032	J B	0.0030	U	3
MW-26D	Antimony	0.0020	J B	0.0030	U	3
MW-27D	Antimony	0.00037	J B	0.0030	U	3
MW-30D	Chromium	0.0013	J B	0.010	U	3
HGWC-7	Chromium	0.0016	J B	0.010	U	3

mg/L- milligram per liter
J- estimated concentration greater than the MDL and less than the RL
B-laboratory flag indicating 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). Two sample set specific MS/MSD pairs were reported using samples MW-6 and MW-28D. The recovery and relative percent difference (RPD) results were within the laboratory specified acceptance criteria, with the following exception.

The recovery of barium in the MSD using sample MW-28D was high and outside the laboratory specified acceptance criteria. Since the barium concentration in sample MW-28D was greater than four times the spiked concentration, no qualifications were applied to the data.

Two 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). Four LCSs were reported. The recovery results were within the laboratory specified acceptance criteria.

1.6 Equipment Blank

An equipment blank was not collected with the sample set.

1.7 Field Blank

One field blank was collected with the sample set, FB-01. 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, FD-02. Acceptable precision (RPD $\leq$ 20% or the difference between the concentrations < RL) was demonstrated between the field duplicate and the original sample, HGWC-13.

1.9 Sensitivity

The samples were reported to the MDLs. Elevated nondetect results were not reported.

1.10 Electronic Data Deliverable (EDD) Review

The results and sample IDs in the EDD were reviewed against the information provided by the associated level II report at a minimum of 20% as part of the data validation process. The

laboratory flags B and M1 used in the level II report were not included in the EDD. No other 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 these packages are considered usable for meeting project objectives. The results are considered valid; the analytical completeness defined as the ratio of the number of valid analytical results (valid analytical results include values qualified as estimated) to the total number of analytical results requested on samples submitted for this analysis, for this dataset is 100%.

2.2 Holding Time

The holding time for 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). Four method blanks were reported (batches 44210, 44366, 44367 and 44416). 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 MW-5 and HGWC-13. The recovery and RPD results were within the laboratory specified acceptance criteria.

Two 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.

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

2.6 Equipment Blank

An equipment blank was not collected with the sample set.

2.7 Field Blank

One field blank was collected with the sample set, FB-01. 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, FD-02. Acceptable precision (RPD $\leq$ 20% or the difference between the concentrations < RL) was demonstrated between the field duplicate and the original sample, HGWC-13.

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 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 these packages 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 dataset 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 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 (batches 529175, 529177 and 529390). 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). Two sample set specific MS/MSD pairs were reported, using

samples MW-25D and HGWC-9. The recovery and RPD results were within the laboratory specified acceptance criteria.

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

3.5 Laboratory Control Sample

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

3.6 Equipment Blank

An equipment blank was not collected with the sample set.

3.7 Field Blank

One field blank was collected with the sample set, FB-01. 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, FD-02. Acceptable precision (RPD $\leq$ 20% or the difference between the concentrations < RL) was demonstrated between the field duplicate and the original sample, HGWC-13.

3.9 Sensitivity

The samples were reported to the MDL. No elevated nondetect 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 these packages are considered usable for meeting project objectives. The results are considered valid; the analytical completeness defined as the ratio of the number of valid analytical results (valid analytical results include values qualified as estimated) to the total number of analytical results requested on samples submitted for this analysis, for this dataset is 100%.

4.2 Holding Times

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

4.3 Method Blank

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Three method blanks were reported for the radium-228 data (batches 387516, 387667 and 387208). Four method blanks were reported for the radium-226 data (batches 388320, 387666, 387205 and 387515). Radium-226 and radium-228 were not detected in the method blanks above the minimum detectable concentrations (MDCs), with the following exceptions.

Radium-226 was detected above the MDCs in the method blanks in batches 388320 (0.387 pCi/L), 387666 (0.516 pCi/L), 387205 (0.605 pCi/L) and 387515 (0.400 pCi/L). Therefore, the

radium-226 concentrations in the associated samples less than the method blank concentrations were U qualified as not detected at the reported concentrations and the radium-226 concentrations in the associated samples greater than the method blank concentrations were J+ qualified as estimated with high bias.

In addition, the combined radium-226 + 228 concentrations in samples MW-7, MW-25D, MW-28D, FD-02, MW-19, HGWC-9, MW-27D and HGWA-2 were J+ qualified as estimated with high bias, based on professional and technical judgment.

Sample	Analyte	Laboratory Result (pCi/L)	Laboratory Flag	Validation Result (pCi/L)	Validation Qualifier	Reason Code
MW-20	Radium-226	0.653	NA	0.653	J+	3
FB-01	Radium-226	0.367	NA	0.367	U	3
MW-29	Radium-226	0.413	NA	0.413	J+	3
MW-5	Radium-226	0.408	NA	0.408	J+	3
MW-6	Radium-226	0.614	NA	0.614	J+	3
MW-7	Radium-226	0.434	NA	0.434	J+	3
MW-7	Combined Radium 226 + 228	1.15	NA	1.15	J+	3
HGWC-11	Radium-226	0.523	NA	0.523	J+	3
HGWC-12	Radium-226	0.631	NA	0.631	J+	3
MW-25D	Radium-226	0.663	NA	0.663	J+	3
MW-25D	Combined Radium 226 + 228	1.36	NA	1.36	J+	3
HGWC-8	Radium-226	0.493	NA	0.493	U	3
MW-30D	Radium-226	0.332	NA	0.332	U	3
HGWC-7	Radium-226	0.510	NA	0.510	J+	3
MW-28D	Radium-226	0.904	NA	0.904	J+	3
MW-28D	Combined Radium 226 + 228	1.31	NA	1.31	J+	3
MW-24D	Radium-226	0.255	NA	0.255	U	3
FD-02	Radium-226	0.650	NA	0.650	J+	3
FD-02	Combined Radium 226 + 228	1.17	NA	1.17	J+	3
HGWC-13	Radium-226	0.486	NA	0.486	J+	3
MW-19	Radium-226	0.542	NA	0.542	J+	3
MW-19	Combined Radium 226 + 228	1.04	NA	1.04	J+	3
HGWC-9	Radium-226	0.557	NA	0.557	J+	3
HGWC-9	Combined Radium 226 + 228	1.03	NA	1.03	J+	3
MW-26D	Radium-226	0.933	NA	0.933	J+	3
MW-27D	Radium-226	0.904	NA	0.904	J+	3
MW-27D	Combined Radium 226 + 228	1.12	NA	1.12	J+	3
HGWA-1	Radium-226	0.577	NA	0.577	U	3
HGWA-2	Radium-226	0.903	NA	0.903	J+	3
HGWA-2	Combined Radium 226 + 228	1.58	NA	1.58	J+	3

pCi/L- picocuries per liter
NA-not applicable

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. Three LCS/LCSD pairs were reported for radium-228. The recovery and replicate error ratio (RER) [2 sigma (2σ)] results were within the laboratory specified acceptance criteria, with the following exception.

The recovery of radium-228 in the LCS in the batch 387208 was low and outside the laboratory specified acceptance criteria. Therefore, the non-detect radium-228 results in the associated samples were UJ qualified as estimated less than the MDC. Also, the non-detect combined radium 226 + 228 results in samples HGWA-1 and HGWA-3 were UJ qualified as estimated less than the MDC and the combined radium 226 + 228 concentration in sample HGWA-2 was J qualified as estimated.

Sample	Analyte	Laboratory Result (pCi/L)	Laboratory Flag	Validation Result (pCi/L)	Validation Qualifier	Reason Code
HGWA-1	Radium-228	0.0334	U	0.0334	UJ	5
HGWA-1	Combined Radium 226 + 228	0.610	U	0.610	UJ	5
HGWA-2	Radium-228	0.680	U	0.680	UJ	5
HGWA-2	Combined Radium 226 + 228	1.58	NA	1.58	J	5
HGWA-3	Radium-228	0.0192	U	0.0192	UJ	5
HGWA-3	Combined Radium 226 + 228	0.249	U	0.249	UJ	5

pCi/L- picocuries per liter
U-not detected at or above the MDC
NA-not applicable

4.6 Laboratory Duplicate

Three sample set specific laboratory duplicates were reported for radium-226 using samples MW-28D, HGWC-8 and MW-28D. The RER (2σ) results were within the laboratory specified acceptance criteria.

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

4.7 Tracers and Carriers

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

4.8 Equipment Blank

An equipment blank was not collected with the sample set.

4.9 Field Blank

One field blank was collected with the sample set, FB-01. Radium--228 was not detected in the field blank above the MDC.

Radium-226 (0.367 pCi/L) was detected in FB-01 at a concentration greater than the MDC. Since the radium-226 concentration in FB-01 was U qualified as not detected due to method blank contamination, no additional qualifications were applied to the data, based on professional and technical judgment.

4.10 Field Duplicate

One field duplicate sample was collected with the sample set, FD-02. Acceptable precision (RER (2σ) < 3) was demonstrated between the field duplicate and the original sample, HGWC-13.

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

Valid Value	Description
1	Preservation requirement not met
2	Analysis holding time exceeded
3	Blank contamination (i.e., method, trip, equipment, etc.)
4	Matrix spike/matrix spike duplicate recovery or RPD outside limits
5	LCS recovery outside limits
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

RPD-relative percent difference

Geosyntec consultants

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Memorandum

Date: August 11, 2020

To: Whitney Law

From: Kristoffer Henderson

CC: J. Caprio

Subject: Stage 2A Data Validations - Level II Data Deliverables – Pace Analytical Services, LLC Project Numbers 2630471 and 30356790

SITE: Plant Hammond AP-1

INTRODUCTION

This report summarizes the findings of the Stage 2A data validation of twenty-two aqueous samples, one field duplicate sample and one field blank, collected 25 March - 2 April 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
- 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. The qualified data should be used within the limitations 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, 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
2630471001	HGWA-1
2630471002	HGWA-3
2630471003	HGWA-2
2630471004	HGWC-12
2630471005	MW-25D
2630471006	MW-19
2630471007	MW-5
2630471008	HGWC-7
2630471009	MW-28D
2630471010	MW-20
2630471011	HGWC-8
2630471012	MW-6

Laboratory ID	Client ID
2630471013	FB-01
2630471014	MW-7
2630471015	MW-24D
2630471016	HGWC-13
2630471017	MW-29
2630471018	HGWC-11
2630471019	MW-26D
2630471020	HGWC-9
2630471021	MW-30D
2630471022	FD-01
2630471023	HGWC-10
2630471024	MW-27D

The samples in laboratory report 2630471 and 30356790 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:

- 2630471: The year was documented for the collection times for the samples listed on pages 1,4-5 of the COC. The samples were logged in with the collection year 2020.
- 30356790: The relinquished by signature, date and time were not documented on page 1 of the COC.
- 30356790: The signatures, dates and times for the sample transfer for page 3 of the COC were not documented.

- 30356790: The signature, date and time for the sample transfers for pages 4-5 of the COC were only documented on page 5 and the signature, date and time for the sample transfer for pages 6-7 were only documented on page 7 of the COC.

The field pH data included with laboratory report 2629703 were not validated.

1.0 METALS

The samples were analyzed for calcium by USEPA methods 3010A/6010D and 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 these packages are considered usable for meeting project objectives. The results are considered valid; the analytical completeness defined as the ratio of the number of valid analytical results (valid analytical results include values qualified as estimated) to the total number of analytical results requested on samples submitted for this analysis, for this dataset is 100%.

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). Thirteen method blanks were reported (batches 45121,

45172, 45185, 45190, 45218, 45249, 45281, 45112, 45171, 45184, 45189, 45226 and 45280). Metals were not detected in the method blanks above the method detection limits (MDLs), with the following exceptions.

Arsenic was detected in the method blanks in batches 45189 and 45226 at estimated concentrations 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.

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	Validation Result (mg/L)	Validation Qualifier*	Reason Code**
MW-29	Arsenic	0.00037	J B	0.005	U	3
HGWC-11	Arsenic	0.0022	J B	0.005	U	3

mg/L- milligram per liter
J- estimated concentration greater than the MDL and less than the RL
B-laboratory flag indicating 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 for calcium using samples MW-25D, HGWC-11 and HGWC-10 and one sample set specific MS/MSD pair was reported for metals using sample HGWC-11. The recovery and relative percent difference (RPD) results were within the laboratory specified acceptance criteria, with the following exceptions.

The recoveries of calcium in the MS/MSD pairs using samples HGWC-11 and HGWC-10 were high and outside the laboratory specified acceptance criteria. Since the calcium concentrations in samples HGWC-11 and HGWC-10 were greater than four times the spiked concentration, no qualifications were applied to the data.

Two 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). Thirteen LCSs were reported. The recovery results were within the laboratory specified acceptance criteria.

1.6 Equipment Blank

An equipment blank was not collected with the sample set.

1.7 Field Blank

One field blank was collected with the sample set, FB-01. Metals were not detected in the field blank above the MDLs, with the following exception.

Lead was detected in FB-01 at an estimated concentration greater than the MDL and less than the RL. Therefore, the estimated lead 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-2	Lead	0.00011	J	0.0050	U	3
HGWC-12	Lead	0.00043	J	0.0050	U	3
HGWC-7	Lead	0.000054	J	0.0050	U	3
MW-28D	Lead	0.000062	J	0.0050	U	3
MW-20	Lead	0.00013	J	0.0050	U	3
MW-24D	Lead	0.000064	J	0.0050	U	3
HGWC-13	Lead	0.00010	J	0.0050	U	3
MW-29	Lead	0.00011	J	0.0050	U	3
HGWC-11	Lead	0.00030	J	0.0050	U	3
MW-26D	Lead	0.00010	J	0.0050	U	3
HGWC-9	Lead	0.00014	J	0.0050	U	3
MW-30D	Lead	0.000067	J	0.0050	U	3
FD-01	Lead	0.00021	J	0.0050	U	3
HGWC-10	Lead	0.000050	J	0.0050	U	3
MW-27D	Lead	0.00013	J	0.0050	U	3

mg/L- milligram 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, FD-01. Acceptable precision (RPD $\leq$ 20% or the difference between the concentrations < RL) was demonstrated between the field duplicate and the original sample, MW-30D.

1.9 Sensitivity

The samples were reported to the MDLs. Elevated nondetect results were not reported.

1.10 Electronic Data Deliverable (EDD) Review

The results and sample IDs in the EDD were reviewed against the information provided by the associated level II report at a minimum of 20% as part of the data validation process. The laboratory flags B and M1 used in the level II report were not included in the EDD. No other discrepancies were identified between the level II report and the EDD.

2.0 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

2.1 Overall Assessment

The wet chemistry data reported in these packages 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 dataset is 100%.

2.2 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 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). Five method blanks were reported for the anions (batches 533983, 533985, 534237, 534425 and 534656). The anions were not detected in the method blanks above the MDLs.

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). Three sample set specific MS/MSD pairs were reported for the anions, using samples MW-5, MW-7 and MW-27D. The recovery and RPD results were within the laboratory specified acceptance criteria, with the following exception.

The recovery of chloride in the MSD using sample MW-5 was high and outside the laboratory specified acceptance criteria. Therefore, the estimated chloride concentration in sample MW-5 was J qualified as estimated.

Seven 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
MW-5	Chloride	0.73	J	0.73	J	4

mg/L- milligram per liter
J- estimated concentration greater than the MDL and less than the RL

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). Four LCSs were reported for TDS and five LCSs were reported for the anions. The recovery results were within the laboratory specified acceptance criteria.

2.6 Laboratory Duplicate

Two sample set specific laboratory duplicates were reported for TDS using samples HGWC-7 and HGWC-11. The RPD results were within the laboratory specified acceptance criteria.

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

2.7 Equipment Blank

An equipment blank was not collected with the sample set.

2.8 Field Blank

One field blank was collected with the sample set, FB-01. The wet chemistry parameters were not detected in the field blank above the MDL.

2.9 Field Duplicate

One field duplicate sample was collected with the sample set, FD-01. Acceptable precision (RPD $\leq$ 20% or the difference between the concentrations < RL) was demonstrated between the field duplicate and the original sample, MW-30D.

2.10 Sensitivity

The samples were reported to the MDL. No elevated nondetect 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 these packages are considered usable for meeting project objectives. The results are considered valid; the analytical completeness defined as the ratio of the number of valid analytical results (valid analytical results include values qualified as estimated) to the total number of analytical results requested on samples submitted for this analysis, for this dataset is 100%.

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 390595, 391344 and 391023). Three method blanks were reported for the radium-226 data (batches 391022, 390592 and 391343). Radium-226 and radium-228 were not detected in the method blanks above the minimum detectable concentrations (MDCs), with the following exception.

Radium-226 was detected above the MDC in the method blank in batch 390592 (0.444 pCi/L). Therefore, the radium-226 concentrations in the associated samples less than the method blank concentration were U qualified as not detected at the reported concentrations and the radium-226 concentration in the associated sample greater than the 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-1	Radium-226	0.221	NA	0.221	U	3
HGWA-3	Radium-226	0.377	NA	0.377	U	3
HGWA-2	Radium-226	0.621	NA	0.621	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). Three 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) [2 sigma (2σ)] results were within the laboratory specified acceptance criteria.

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

An equipment blank was not collected with the sample set.

3.9 Field Blank

One field blank was collected with the sample set, FB-01. 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, FD-01. Acceptable precision (RER (2σ) < 3) was demonstrated between the field duplicate and the original sample, MW-30D.

3.11 Sensitivity

The samples were reported to the MDCs. No elevated nondetect 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

Valid Value	Description
1	Preservation requirement not met
2	Analysis holding time exceeded
3	Blank contamination (i.e., method, trip, equipment, etc.)
4	Matrix spike/matrix spike duplicate recovery or RPD outside limits
5	LCS recovery outside limits
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

RPD-relative percent difference

Geosyntec consultants

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Memorandum

Date: August 11, 2020

To: Whitney Law

From: Kristoffer Henderson

CC: J. Caprio

Subject: Stage 2A Data Validation - Level II Data Deliverable – Pace Analytical Services, LLC Project Number 2630907

SITE: Plant Hammond AP-1

INTRODUCTION

This report summarizes the findings of the Stage 2A data validation of one aqueous sample, collected 9 April 2020, as part of the Plant Hammond AP on-site sampling event.

The sample was analyzed at Pace Analytical Services Atlanta, Peachtree Corners, Georgia, for the following analytical tests:

- Metals by United States (US) Environmental Protection Agency (EPA) Methods 3010A/6010D
- Iron by USEPA Methods 3005A/6020B

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

- Alkalinity by Standard Method 2320B
- Sulfide by Standard Method 4500-S2D
- Anions (Chloride and Sulfate) by USEPA Method 300.0

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 sample was analyzed and reported in the laboratory report:

Laboratory ID	Client ID
2630907001	MW-30D

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

The year was not documented for the collection time. The sample was logged in with the collection year 2020.

The field pH data was not validated.

1.0 METALS

The sample was analyzed for metals by USEPA methods 3010A/6010D and iron 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 package are considered usable for meeting project objectives. The results are considered valid; the analytical completeness defined as the ratio of the number of valid analytical results (valid analytical results include values qualified as estimated) to the total number of analytical results requested on samples submitted for this analysis, for this dataset is 100%.

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 45592 and 45464). 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). One sample set specific MS/MSD pair was reported for iron using sample MW-30D. 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

An equipment blank was not collected with the sample set.

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 sample was reported to the MDLs. Elevated nondetect results were not reported.

1.10 Electronic Data Deliverable (EDD) Review

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

2.0 WET CHEMISTRY

The sample was analyzed for alkalinity by Standard Method 2320B, sulfide by Standard Method 4500 S2D 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

2.1 Overall Assessment

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

2.2 Holding Times

The holding time for the alkalinity analysis of a water sample is 14 days from sample collection to analysis. The holding time for the sulfide 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). Method blanks were reported for the alkalinity (batch 536610), sulfide (batch 536450) and anions (batch 536461). The wet chemistry parameters were not detected in the method blanks above the MDLs.

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). Three sample set specific MS/MSD pairs were reported for the anions, using samples MW-5, MW-7 and MW-27D. The recovery and RPD results were within the laboratory specified acceptance criteria.

Two batch MS/MSD pairs were also reported for alkalinity, one batch MS/MSD pair was reported for sulfide and 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.

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 for alkalinity, one LCS was reported for sulfide and one LCS was reported for the anions. The recovery results were within the laboratory specified acceptance criteria.

2.6 Laboratory Duplicate

Two sample set specific laboratory duplicates were reported for TDS using samples HGWC-7 and HGWC-11. The RPD results were within the laboratory specified acceptance criteria.

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

2.7 Equipment Blank

An equipment blank was not collected with the sample set.

2.8 Field Blank

A field blank was not collected with the sample set.

2.9 Field Duplicate

A field duplicate was not collected with the sample set.

2.10 Sensitivity

The sample was reported to the MDL. No elevated nondetect 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.

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

DATA QUALIFIER DEFINITIONS

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

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

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

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

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

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

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

Valid Value	Description
1	Preservation requirement not met
2	Analysis holding time exceeded
3	Blank contamination (i.e., method, trip, equipment, etc.)
4	Matrix spike/matrix spike duplicate recovery or RPD outside limits
5	LCS recovery outside limits
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

RPD-relative percent difference

Geosyntec consultants

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Memorandum

Date: August 11, 2020

To: Whitney Law

From: Kristoffer Henderson

CC: J. Caprio

Subject: Stage 2A Data Validation - Level II Data Deliverable – Pace Analytical Services, LLC Project Number 2631804

SITE: Plant Hammond AP-1

INTRODUCTION

This report summarizes the findings of the Stage 2A data validation of one unfiltered aqueous sample and one filtered aqueous sample, collected 11 May 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:

- Total and Dissolved Calcium by United States (US) Environmental Protection Agency (EPA) Methods 3010A/6010D
- Total and Dissolved Boron and Molybdenum by USEPA Methods 3005A/6020B
- Total Dissolved Solids (TDS) and Field Filtered TDS by Standard Method 300.0

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

- Total and Dissolved Anions (Chloride, Fluoride and Sulfate) by USEPA Method 300.0

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
2631804001	MW-40D

Laboratory ID	Client ID
2631804002	MW-40D FILTERED

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

The year was not documented on the chain of custody (COC) for the collection times. The samples were logged in with the collection year 2020. The relinquished by signature, date and time were not documented on the COC for the third sample transfer.

The field pH data was not validated.

1.0 METALS

The samples were analyzed for total and dissolved calcium by USEPA methods 3010A/6010D and total and dissolved boron and molybdenum 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
✓ Laboratory Duplicate
✓ Equipment Blank
✓ Field Blank
✓ Field Duplicate
✓ Sensitivity
✓ Total vs Dissolved Metals Assessment
⊗ Electronic Data Deliverables Review

1.1 Overall Assessment

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

1.2 Holding Time

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

1.3 Method Blank

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Four method blanks were reported (batches 46303, 46336, 46300 and 46335). 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 sample set specific MS/MSD pairs were reported for calcium using samples MW-40D and MW-40D FILTERED and one sample set specific MS/MSD pair was reported for boron and molybdenum using sample MW-40D. The recovery and relative percent difference (RPD) results were within the laboratory specified acceptance criteria, with the following exceptions.

The MS recovery was low, and the MSD recovery was high for calcium, both outside the laboratory specified acceptance criteria in the MS/MSD pair using sample MW-40D. Since the calcium concentration in sample MW-40D was greater than four times the spiked concentration, no qualifications were applied to the data.

The recovery of calcium in the MS using sample MW-40D FILTERED was low and outside the laboratory specified acceptance criteria. Since the calcium concentration in sample MW-40D FILTERED was greater than four times the spiked concentration, no qualifications were applied to the data.

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

1.6 Laboratory Duplicate

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

1.7 Equipment Blank

An equipment blank was not collected with the sample set.

1.8 Field Blank

A field blank was not collected with the sample set.

1.9 Field Duplicate

A field duplicate was not collected with the sample set.

1.10 Sensitivity

The samples were reported to the MDLs. Elevated nondetect results were not reported.

1.11 Total vs Dissolved Metals Assessment

The sample was collected as both an unfiltered and filtered sample to report total and dissolved metals, respectively. The total calcium concentration was greater than the dissolved calcium concentration and total and dissolved boron were detected at estimated concentrations greater than the MDL and less than the reporting limit (RL). However, the dissolved molybdenum concentration was greater than the total molybdenum concentration. Since the RPD between the total and dissolved molybdenum concentrations was less than 30%, no qualifications were applied to the data, based on professional and technical judgment.

1.12 Electronic Data Deliverable (EDD) Review

The results and sample IDs in the EDD were reviewed against the information provided by the associated level II report at a minimum of 20% as part of the data validation process. The

laboratory flag M1 reported in the level II report was not included in the EDD. No other discrepancies were identified between the level II report and the EDD.

2.0 WET CHEMISTRY

The samples were analyzed for TDS and field filtered TDS by Standard Method 2540C and total and dissolved anions by Standard 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
- ✓ Total vs Dissolved Wet Chemistry Assessment
- ✓ Electronic Data Deliverables Review

2.1 Overall Assessment

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

2.2 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 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 for the anions (batch 536461). The anions were not detected in the method blank above the MDLs.

2.4 Matrix Spike/Matrix Spike Duplicate

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

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 for TDS and one LCS was reported for the anions. The recovery results were within the laboratory specified acceptance criteria.

2.6 Laboratory Duplicate

One batch laboratory duplicate was 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.

2.7 Equipment Blank

An equipment blank was not collected with the sample set.

2.8 Field Blank

A field blank was not collected with the sample set.

2.9 Field Duplicate

A field duplicate was not collected with the sample set.

2.10 Sensitivity

The samples were reported to the MDL. No elevated nondetect results were reported.

2.11 Total vs Dissolved Wet Chemistry Assessment

The sample was collected as both an unfiltered and filtered sample to report total and dissolved anions and unfiltered and field filtered TDS, respectively. The wet chemistry concentrations in the filtered sample (dissolved) were greater than the wet chemistry concentrations in the unfiltered sample (total). Since the RPDs between the total and dissolved wet chemistry concentrations were less than 30%, no qualifications were applied to the data, based on professional and technical judgment.

2.12 Electronic Data Deliverable Review

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

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

DATA QUALIFIER DEFINITIONS

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

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

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

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

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

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

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

Valid Value	Description
1	Preservation requirement not met
2	Analysis holding time exceeded
3	Blank contamination (i.e., method, trip, equipment, etc.)
4	Matrix spike/matrix spike duplicate recovery or RPD outside limits
5	LCS recovery outside limits
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

RPD-relative percent difference

Geosyntec consultants

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Memorandum

Date: August 4, 2020

To: Whitney Law

From: Kristoffer Henderson

CC: J. Caprio

Subject: Stage 2A Data Validation - Level II Data Deliverable – Pace Analytical Services, LLC Project Number 2632070

SITE: Plant Hammond AP-1

INTRODUCTION

This report summarizes the findings of the Stage 2A data validation of one aqueous sample, collected 19 May 2020, as part of the Plant Hammond AP on-site sampling event.

The sample was analyzed at Pace Analytical Services Atlanta, Peachtree Corners, Georgia, for the following analytical tests:

- Boron, Calcium and Molybdenum by USEPA Methods 3005A/6020B
- Total Dissolved Solids (TDS) by Standard Method 300.0

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

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

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 sample was analyzed and reported in the laboratory report:

Laboratory ID	Client ID
2632070001	MW-40D

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

The year was not documented on the chain of custody (COC) for the collection time. The sample was logged in with the collection year 2020. The relinquished by signature, date and time were not documented on the COC for the third sample transfer.

1.0 METALS

The sample was analyzed for boron, calcium and molybdenum 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 package are considered usable for meeting project objectives. The results are considered valid; the analytical completeness defined as the ratio of the number of valid analytical results (valid analytical results include values qualified as estimated) to the total number of analytical results requested on samples submitted for this analysis, for this dataset is 100%.

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). One method blank was reported (batch 46536). Metals were not detected in the method blank 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). One sample set specific MS/MSD pair was reported using sample MW-40D. The recovery and relative percent difference (RPD) results were within the laboratory specified acceptance criteria.

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). One LCS was reported. The recovery results were within the laboratory specified acceptance criteria.

1.6 Equipment Blank

An equipment blank was not collected with the sample set.

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 sample was reported to the MDLs. Elevated nondetect results were not reported.

1.10 Electronic Data Deliverable (EDD) Review

The results and sample IDs in the EDD were reviewed against the information provided by the associated level II report at a minimum of 20% as part of the data validation process. The laboratory flag M1 reported in the level II report was not included in the EDD. No other discrepancies were identified between the level II report and the EDD.

2.0 WET CHEMISTRY

The sample was analyzed for TDS by Standard Method 2540C and anions by Standard 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 package are considered usable for meeting project objectives. The results are considered valid; the analytical completeness defined as the ratio of the number of valid analytical results (valid analytical results include values qualified as estimated) to the total number of analytical results requested on samples submitted for these analyses, for this dataset is 100%.

2.2 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 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 for the anions (batch 542996). The anions were not detected in the method blank above the MDLs.

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 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.

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 for TDS and one LCS was reported for the anions. The recovery results were within the laboratory specified acceptance criteria.

2.6 Laboratory Duplicate

One batch laboratory duplicate was 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.

2.7 Equipment Blank

An equipment blank was not collected with the sample set.

2.8 Field Blank

A field blank was not collected with the sample set.

2.9 Field Duplicate

A field duplicate was not collected with the sample set.

2.10 Sensitivity

The sample was reported to the MDL. No elevated nondetect 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.

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* * * * *

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

DATA QUALIFIER DEFINITIONS

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

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

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

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

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

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

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

Valid Value	Description
1	Preservation requirement not met
2	Analysis holding time exceeded
3	Blank contamination (i.e., method, trip, equipment, etc.)
4	Matrix spike/matrix spike duplicate recovery or RPD outside limits
5	LCS recovery outside limits
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

RPD-relative percent difference

Geosyntec consultants

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Memorandum

Date: August 11, 2020

To: Whitney Law

From: Kristoffer Henderson

CC: J. Caprio

Subject: Stage 2A Data Validation - Level II Data Deliverable – Pace Analytical Services, LLC Project Number 92482346

SITE: Plant Hammond AP-1

INTRODUCTION

This report summarizes the findings of the Stage 2A data validation of seven aqueous samples, one filtered aqueous sample and one field blank, collected 16-19 June 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:

- Metals by United States (US) Environmental Protection Agency (EPA) Methods 3010A/6010D
- Boron and Molybdenum by USEPA Methods 3005A/6020B
- Total Dissolved Solids (TDS) by Standard Method 2540C

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

- Alkalinity by Standard Method 2320B
- Sulfide by Standard Method 4500S2D
- Anions (Chloride, Fluoride and Sulfate) by USEPA Method 300.0

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
92482346001	HGWC-8
92482346002	MW-1
92482346003	HGWA-1
92482346004	HGWA-3
92482346005	HGWC-7

Laboratory ID	Client ID
92482346006	MW-30D
92482346007	FB-01
92482346008	MW-30D FILTERED
92482346009	MW-40D

The samples in laboratory report 2630471 were received within 0-6 degrees Celsius (ºC). No sample preservation issues were noted by the laboratory.

The following issues were noted with the chain of custody (COC) forms:

- There were time discrepancies for the third sample transfer on page one of the COC. The relinquished by time was documented as 6/17/20 1056 and the received by time was documented as 6/17/20 1057.
- There were time discrepancies for the second sample transfer on page two of the COC. The relinquished by time was documented as 6/17/20 1056 and the received by time was documented as 6/17/20 1057.

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

The report was revised twice. The report was revised on August 5, 2020 to remove extra metals reported for sample MW-30D. The report was revised a second time to correct the results for FB-01.

1.0 METALS

The samples were analyzed for metals by USEPA methods 3010A/6010D and boron and molybdenum 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
✓ Total vs Dissolved Metals Assessment
⊗ Electronic Data Deliverables Review

1.1 Overall Assessment

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

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 548325, 548539, 550184, 548037, 548509 and 549351). Metals were not detected in the method blanks above the method detection limits (MDLs), with the following exception.

Potassium was detected in the method blank in batch 550184 at an estimated concentration greater than the MDL and less than the reporting limit (RL). Since potassium was either not detected or detected above the RL in the associated samples, no qualifications were applied to the data.

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

MS/MSDs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). One sample set specific MS/MSD pair was reported by USEPA method 6010D using samples HGWC-7. The recovery and relative percent difference (RPD) results were within the laboratory specified acceptance criteria, with the following exceptions.

The MS recoveries of calcium, magnesium and sodium were low, and the MSD recovery of calcium was high, all outside the laboratory specified acceptance criteria. Since calcium, magnesium and sodium concentrations in sample HGWC-7 were greater than four times the spiked concentrations, no qualifications were applied to the data.

Five 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

An equipment blank was not collected with the sample set.

1.7 Field Blank

One field blank was collected with the sample set, FB-01. 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, FD-01. Acceptable precision (RPD $\leq$ 20% or the difference between the concentrations < RL) was demonstrated between the field duplicate and the original sample, MW-30D.

1.9 Sensitivity

The samples were reported to the MDLs. Elevated nondetect results were not reported.

1.10 Total vs Dissolved Metals Assessment

Sample MW-30D was collected as both an unfiltered and filtered sample to report total and dissolved metals, respectively. The estimated dissolved molybdenum concentration greater than the MDL and less than the RL was greater than the estimated total molybdenum concentration greater than the MDL and less than the RL. Since these were estimated concentrations, no qualifications were applied to the data, based on professional and technical judgment.

1.11 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. The laboratory flag M1 used in the level II report were not included in the EDD. No other discrepancies were identified between the level II report and the EDD.

2.0 WET CHEMISTRY

The samples were analyzed for TDS by Standard method 2540C, alkalinity by Standard Method 2320B, sulfide by Standard Method 4500-S2D 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
✓ Total vs Dissolved Wet Chemistry Assessment
⊗ Electronic Data Deliverables Review

2.1 Overall Assessment

The wet chemistry data reported in this data package are considered usable for meeting project objectives. The results are considered valid; the analytical completeness defined as the ratio of the number of valid analytical results (valid analytical results include values qualified as

estimated) to the total number of analytical results requested on samples submitted for these analyses, for this dataset is 100%.

2.2 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 alkalinity analysis of a water sample is 14 days from sample collection to analysis. The holding time for the sulfide 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). Three method blanks were reported for TDS (batches 548159, 548606 and 548907), two method blanks were reported for alkalinity (batches 549851 and 550396), three method blanks were reported for sulfide (batches 548296, 549379 and 549382) and three method blanks were reported for the anions (batches 548965, 549186 and 549586). The wet chemistry parameters were not detected in the method blanks above the MDLs.

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). Six batch MS/MSD pairs were reported for alkalinity, six batch MS/MSD pairs were reported for sulfide and six 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.

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 for TDS, two LCSs were reported for alkalinity, three LCSs were reported for sulfide and three LCSs were reported for the anions. The recovery results were within the laboratory specified acceptance criteria.

2.6 Laboratory Duplicate

Five 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.

2.7 Equipment Blank

An equipment blank was not collected with the sample set.

2.8 Field Blank

One field blank was collected with the sample set, FB-01. The wet chemistry parameters were not detected in the field blank above the MDL.

2.9 Field Duplicate

One field duplicate sample was collected with the sample set, FD-01. Acceptable precision (RPD $\leq$ 20% or the difference between the concentrations < RL) was demonstrated between the field duplicate and the original sample, MW-30D.

2.10 Sensitivity

The samples were reported to the MDL. No elevated nondetect results were reported.

2.11 Total vs Dissolved Wet Chemistry Assessment

Sample MW-30D was collected as both an unfiltered and filtered sample to report total and dissolved metals, respectively. The wet chemistry concentrations in the filtered sample (dissolved) were greater than the wet chemistry concentrations in the unfiltered sample (total). Since the RPDs between the total and dissolved wet chemistry concentrations were less than 30%, no qualifications were applied to the data, based on professional and technical judgment.

2.12 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. The laboratory flag D3 used in the level II report were not included in the EDD. No other discrepancies were identified between the level II report and the EDD.

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

DATA QUALIFIER DEFINITIONS

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

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

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

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

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

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

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

Valid Value	Description
1	Preservation requirement not met
2	Analysis holding time exceeded
3	Blank contamination (i.e., method, trip, equipment, etc.)
4	Matrix spike/matrix spike duplicate recovery or RPD outside limits
5	LCS recovery outside limits
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

RPD-relative percent difference

APPENDIX D2
Field Data Sheets

Product Name: Low-Flow System

Date: 2020-03-02 11:42:55

Project Information:		Pump Information:	
Operator Name	Aaron Reeder	Pump Model/Type	QED MP50
Company Name	Geosyntec Consultants	Tubing Type	polyethylene
Project Name	GP-Plant Hammond	Tubing Diameter	0.17 in
Site Name	Plant Hammond	Tubing Length	27 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	339797		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	1 ft

Well Information:		Pumping Information:	
Well ID	HGWA-1	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.6055124 L
Well Total Depth	32.50 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	3.6 in
Depth to Water	7.40 ft	Total Volume Pumped	6 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	11:19:03	600.02	15.93	7.11	666.53	7.60	8.00	0.41	51.90
Last 5	11:24:03	900.02	15.93	7.10	661.30	1.47	7.90	0.65	48.56
Last 5	11:29:03	1200.02	15.93	7.10	658.39	1.47	8.00	0.44	45.57
Last 5	11:34:03	1500.02	15.93	7.10	655.91	0.97	7.90	0.42	47.31
Last 5	11:39:03	1800.02	15.95	7.10	653.55	1.11	7.90	0.41	45.43
Variance 0			0.00	-0.00	-2.91			-0.20	-2.98
Variance 1			0.00	-0.00	-2.47			-0.02	1.74
Variance 2			0.02	0.00	-2.36			-0.01	-1.88

Notes

Four bottles: Two 1-L plastic bottles with HNO3 for radium (EPA 9315/9320); one 250-mL plastic bottle for F (EPA 300.0); and one 250-mL plastic bottle with HNO3 for App. IV metals (EPA 6020B/7470A).

Grab Samples

HGWA-1

Grab

Product Name: Low-Flow System

Date: 2020-03-02 10:43:51

Project Information:		Pump Information:	
Operator Name	Chad Russo	Pump Model/Type	QED MP50
Company Name	Geosyntec Consultants	Tubing Type	polyethylene
Project Name	GP-Plant Hammond	Tubing Diameter	0.17 in
Site Name	Plant Hammond	Tubing Length	22 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	538243		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	22 ft

Well Information:		Pumping Information:	
Well ID	HGWA-2	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.5831953 L
Well Total Depth	27.95 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	3.6 in
Depth to Water	4.91 ft	Total Volume Pumped	8 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	10:22:31	900.03	15.33	5.53	174.25	20.70	4.97	0.35	173.35
Last 5	10:27:31	1200.02	15.23	5.49	173.83	7.23	4.97	0.33	176.62
Last 5	10:32:31	1500.02	15.29	5.46	172.25	7.37	4.97	0.30	180.37
Last 5	10:37:31	1800.02	15.35	5.44	173.27	5.01	4.97	0.31	182.67
Last 5	10:42:31	2100.02	15.54	5.43	172.56	4.96	4.97	0.33	181.74
Variance 0			0.06	-0.03	-1.59			-0.03	3.76
Variance 1			0.06	-0.02	1.02			0.01	2.30
Variance 2			0.19	-0.01	-0.71			0.02	-0.93

Notes

Four bottles: Two 1-L plastic bottles with HNO3 for radium (EPA 9315/9320); one 250-mL plastic bottle for F (EPA 300.0); and one 250-mL plastic bottle with HNO3 for App. IV metals (EPA 6020B/7470A).

Grab Samples

HGWA-2

Grab

Product Name: Low-Flow System

Date: 2020-03-02 12:31:45

Project Information:		Pump Information:	
Operator Name	Chad Russo	Pump Model/Type	QED MP50
Company Name	Geosyntec Consultants	Tubing Type	polyethylene
Project Name	GP-Plant Hammond	Tubing Diameter	0.17 in
Site Name	Plant Hammond	Tubing Length	39 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	538243		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	39 ft

Well Information:		Pumping Information:	
Well ID	HGWA-3	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.6590735 L
Well Total Depth	44.87 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	3.6 in
Depth to Water	4.47 ft	Total Volume Pumped	0 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	12:10:12	300.03	15.84	6.55	402.51	8.72	4.48	0.87	-43.77
Last 5	12:15:12	600.02	16.03	6.67	404.12	3.34	4.48	0.40	-63.37
Last 5	12:20:13	900.80	16.09	6.78	403.85	2.17	4.78	0.33	-71.73
Last 5	12:25:13	1200.80	16.13	6.86	403.76	1.76	4.78	0.31	-76.43
Last 5	12:30:13	1500.80	16.17	6.94	403.39	0.86	4.78	0.33	-79.32
Variance 0			0.06	0.11	-0.28			-0.07	-8.36
Variance 1			0.04	0.09	-0.08			-0.02	-4.70
Variance 2			0.04	0.08	-0.37			0.02	-2.90

Notes

SmarTroll malfunctioned. Restarting Low-Flow purge.

Product Name: Low-Flow System

Date: 2020-03-02 12:49:48

Project Information:		Pump Information:	
Operator Name	Chad Russo	Pump Model/Type	QED MP50
Company Name	Geosyntec Consultants	Tubing Type	polyethylene
Project Name	GP-Plant Hammond	Tubing Diameter	0.17 in
Site Name	Plant Hammond	Tubing Length	ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	538243		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	ft

Well Information:		Pumping Information:	
Well ID	HGWA-3	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.485 L
Well Total Depth	44.87 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	3.6 in
Depth to Water	4.47 ft	Total Volume Pumped	12.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	12:38:16	300.02	16.22	7.03	403.19	0.71	4.78	0.31	-83.40
Last 5	12:43:16	600.02	16.22	7.08	403.23	0.62	4.78	0.29	-84.82
Last 5	12:48:16	900.02	16.21	7.12	402.38	0.62	4.78	0.30	-86.31
Last 5									
Last 5									
Variance 0			nan	nan	nan			nan	nan
Variance 1			-0.01	0.05	0.04			-0.02	-1.42
Variance 2			-0.01	0.04	-0.85			0.00	-1.49

Notes

Four bottles: Two 1-L plastic bottles with HNO3 for radium (EPA 9315/9320); one 250-mL plastic bottle for F (EPA 300.0); and one 250-mL plastic bottle with HNO3 for App. IV metals (EPA 6020B/7470A).

Grab Samples

HGWA-3

Grab

Product Name: Low-Flow System

Date: 2020-03-04 11:44:48

Project Information:		Pump Information:	
Operator Name	Taylor Payne	Pump Model/Type	QED MP50
Company Name	Geosyntec Consultants	Tubing Type	polyethylene
Project Name	GP-Plant Hammond	Tubing Diameter	0.17 in
Site Name	Plant Hammond	Tubing Length	25 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	505592		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	23.17 ft

Well Information:		Pumping Information:	
Well ID	HGWC-7	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.5965856 L
Well Total Depth	28.17 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	1.32 in
Depth to Water	3.42 ft	Total Volume Pumped	15 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	11:22:40	3001.02	18.19	7.17	674.49	11.90	3.53	0.56	-37.34
Last 5	11:27:40	3301.02	18.21	7.17	683.28	9.66	3.53	0.57	-36.37
Last 5	11:32:40	3600.92	18.21	7.17	670.80	7.39	3.53	0.46	-35.53
Last 5	11:37:40	3900.92	18.25	7.17	664.79	5.49	3.53	0.41	-34.64
Last 5	11:42:40	4200.92	18.25	7.17	672.74	4.84	3.53	0.41	-33.71
Variance 0			-0.00	0.00	-12.48			-0.11	0.84
Variance 1			0.04	-0.00	-6.02			-0.06	0.89
Variance 2			0.00	-0.00	7.96			0.01	0.93

Notes

Four bottles: Two 1-L plastic bottles with HNO3 for radium (EPA 9315/9320); one 120-mL plastic bottle for F (EPA 300.0); and one 250-mL plastic bottle with HNO3 for App. IV metals (EPA 6020B/7470A).

Grab Samples

HGWC-7

Grab

Product Name: Low-Flow System

Date: 2020-03-03 16:17:37

Project Information:		Pump Information:	
Operator Name	Chad Russo	Pump Model/Type	QED MP50
Company Name	Geosyntec Consultants	Tubing Type	polyethylene
Project Name	GP-Plant Hammond	Tubing Diameter	0.17 in
Site Name	Plant Hammond	Tubing Length	21 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	538243		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	21 ft

Well Information:		Pumping Information:	
Well ID	HGWC-8	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.5787319 L
Well Total Depth	26.65 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	3.6 in
Depth to Water	1.79 ft	Total Volume Pumped	14 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	15:52:26	1508.15	18.59	7.05	752.06	12.20	1.80	0.13	295.08
Last 5	15:57:26	1808.15	18.52	7.06	752.38	8.51	1.80	0.12	292.17
Last 5	16:02:26	2108.15	18.51	7.06	752.69	7.29	1.80	0.12	285.60
Last 5	16:07:26	2408.15	18.50	7.06	753.33	5.37	1.80	0.12	278.11
Last 5	16:12:26	2708.15	18.51	7.06	753.68	4.99	1.80	0.11	273.14
Variance 0			-0.01	0.00	0.31			-0.01	-6.57
Variance 1			-0.01	-0.00	0.65			0.00	-7.49
Variance 2			0.01	0.00	0.34			-0.01	-4.97

Notes

Four bottles: Two 1-L plastic bottles with HNO3 for radium (EPA 9315/9320); one 120-mL plastic bottle for F (EPA 300.0); and one 250-mL plastic bottle with HNO3 for App. IV metals (EPA 6020B/7470A).

Grab Samples

HGWC-8

Grab

Product Name: Low-Flow System

Date: 2020-03-04 10:21:30

Project Information:		Pump Information:	
Operator Name	Aaron Reeder	Pump Model/Type	QED MP50
Company Name	Geosyntec Consultants	Tubing Type	polyethylene
Project Name	GP-Plant Hammond	Tubing Diameter	0.17 in
Site Name	Plant Hammond	Tubing Length	40 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	339797		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	2 ft

Well Information:		Pumping Information:	
Well ID	HGWC-9	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.6635369 L
Well Total Depth	46.98ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	3.6 in
Depth to Water	7.08 ft	Total Volume Pumped	17 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	09:59:23	3931.77	16.74	6.96	1093.09	2.01	7.20	0.39	31.75
Last 5	10:04:23	4231.77	16.74	6.96	1093.14	1.93	7.20	0.35	30.98
Last 5	10:09:23	4531.77	16.78	6.96	1093.11	1.78	7.20	0.34	30.40
Last 5	10:14:23	4831.77	16.79	6.96	1093.19	1.57	7.20	0.31	30.37
Last 5	10:19:23	5131.83	16.76	6.97	1093.06	1.77	7.20	0.31	29.63
Variance 0			0.04	0.00	-0.04			-0.02	-0.59
Variance 1			0.01	0.00	0.09			-0.02	-0.02
Variance 2			-0.03	0.00	-0.13			-0.01	-0.74

Notes

Four bottles: Two 1-L plastic bottles with HNO3 for radium (EPA 9315/9320); one 120-mL plastic bottle for F (EPA 300.0); and one 250-mL plastic bottle with HNO3 for App. IV metals (EPA 6020B/7470A).

Grab Samples

HGWC-9

Grab

Product Name: Low-Flow System

Date: 2020-03-03 18:17:35

Project Information:		Pump Information:	
Operator Name	Taylor Payne	Pump Model/Type	Alexis
Company Name	Geosyntec Consultants	Tubing Type	polyethylene
Project Name	GP-Plant Hammond	Tubing Diameter	0.17 in
Site Name	Plant Hammond	Tubing Length	24 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	505592		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	18 ft

Well Information:		Pumping Information:	
Well ID	HGWC-10	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.1971222 L
Well Total Depth	23 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.72 in
Depth to Water	5.45 ft	Total Volume Pumped	28 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	17:55:30	7207.84	16.55	6.71	566.50	1.15	5.52	2.38	16.36
Last 5	18:00:30	7507.84	16.82	6.72	595.08	0.97	5.52	2.38	18.20
Last 5	18:05:30	7807.84	16.69	6.71	610.40	0.88	5.52	2.76	17.68
Last 5	18:10:30	8107.84	17.27	6.72	604.44	0.76	5.52	2.72	19.85
Last 5	18:15:30	8407.84	17.49	6.76	603.43	0.97	5.52	2.85	24.19
Variance 0			-0.14	-0.00	15.31			0.38	-0.52
Variance 1			0.58	0.01	-5.95			-0.05	2.17
Variance 2			0.22	0.04	-1.01			0.14	4.34

Notes

Four bottles: Two 1-L plastic bottles with HNO3 for radium (EPA 9315/9320); one 120-mL plastic bottle for F (EPA 300.0); and one 250-mL plastic bottle with HNO3 for App. IV metals (EPA 6020B/7470A).

Grab Samples

HGWC-10

Grab

Product Name: Low-Flow System

Date: 2020-03-03 13:27:27

Project Information:		Pump Information:	
Operator Name	Taylor Payne	Pump Model/Type	Alexis
Company Name	Geosyntec Consultants	Tubing Type	polyethylene
Project Name	GP-Plant Hammond	Tubing Diameter	0.17 in
Site Name	Plant Hammond	Tubing Length	28 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	505592		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	20.75 ft

Well Information:		Pumping Information:	
Well ID	HGWC-11	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.2149758 L
Well Total Depth	25.78 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	1.44 in
Depth to Water	8.93 ft	Total Volume Pumped	6 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	13:05:35	600.03	17.72	5.65	698.61	36.90	9.05	4.54	118.93
Last 5	13:10:35	900.02	17.61	5.82	650.99	8.13	9.05	3.51	95.63
Last 5	13:15:35	1200.02	17.67	5.88	647.95	4.51	9.05	3.50	85.45
Last 5	13:20:35	1500.02	17.76	5.93	630.20	2.78	9.05	3.40	79.23
Last 5	13:25:35	1800.02	17.76	5.95	630.64	2.30	9.05	3.39	75.10
Variance 0			0.07	0.06	-3.04			-0.01	-10.18
Variance 1			0.09	0.05	-17.74			-0.10	-6.22
Variance 2			0.00	0.02	0.44			-0.01	-4.13

Notes

Four bottles: Two 1-L plastic bottles with HNO3 for radium (EPA 9315/9320); one 120-mL plastic bottle for F (EPA 300.0); and one 250-mL plastic bottle with HNO3 for App. IV metals (EPA 6020B/7470A).

Grab Samples

HGWC-11

Grab

Product Name: Low-Flow System

Date: 2020-03-03 14:16:46

Project Information:		Pump Information:	
Operator Name	Taylor Payne	Pump Model/Type	QED MP50
Company Name	Geosyntec Consultants	Tubing Type	polyethylene
Project Name	GP-Plant Hammond	Tubing Diameter	0.17 in
Site Name	Plant Hammond	Tubing Length	33 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	505592		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	30.68 ft

Well Information:		Pumping Information:	
Well ID	HGWC-12	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.632293 L
Well Total Depth	35.68 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0 in
Depth to Water	9.01 ft	Total Volume Pumped	4 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	14:00:29	300.15	18.81	6.75	841.30	4.30	9.01	0.22	-10.09
Last 5	14:05:29	600.02	18.85	6.87	842.09	3.95	9.01	0.14	5.48
Last 5	14:10:29	900.02	18.89	6.92	842.15	2.45	9.01	0.13	10.03
Last 5	14:15:29	1200.02	18.96	6.95	841.50	1.08	9.01	0.14	11.72
Last 5									
Variance 0			0.04	0.12	0.79			-0.08	15.57
Variance 1			0.05	0.06	0.06			-0.01	4.55
Variance 2			0.07	0.02	-0.65			0.00	1.69

Notes

Four bottles: Two 1-L plastic bottles with HNO3 for radium (EPA 9315/9320); one 120-mL plastic bottle for F (EPA 300.0); and one 250-mL plastic bottle with HNO3 for App. IV metals (EPA 6020B/7470A).

Grab Samples

HGWC-12

Grab

Product Name: Low-Flow System

Date: 2020-03-04 14:54:27

Project Information:		Pump Information:	
Operator Name	Chad Russo	Pump Model/Type	QED MP50
Company Name	Geosyntec Consultants	Tubing Type	polyethylene
Project Name	GP-Plant Hammond	Tubing Diameter	0.17 in
Site Name	Plant Hammond	Tubing Length	40 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	538243		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	40 ft

Well Information:		Pumping Information:	
Well ID	HGWC-13	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.6635369 L
Well Total Depth	45.07 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	3.6 in
Depth to Water	17.12 ft	Total Volume Pumped	23 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	14:32:20	4799.87	18.85	7.16	1350.13	5.63	17.20	0.15	-52.04
Last 5	14:37:20	5099.87	18.82	7.16	1350.16	5.48	17.20	0.15	-51.85
Last 5	14:42:20	5399.87	18.88	7.16	1348.60	5.13	17.20	0.15	-51.19
Last 5	14:47:20	5699.87	18.85	7.16	1348.87	6.83	17.20	0.15	-50.94
Last 5	14:52:20	5999.73	18.86	7.16	1349.81	4.71	17.20	0.15	-50.86
Variance 0			0.06	0.00	-1.57			0.00	0.65
Variance 1			-0.03	0.00	0.27			0.00	0.25
Variance 2			0.01	0.00	0.95			-0.00	0.09

Notes

Four bottles: Two 1-L plastic bottles with HNO3 for radium (EPA 9315/9320); one 120-mL plastic bottle for F (EPA 300.0); and one 250-mL plastic bottle with HNO3 for App. IV metals (EPA 6020B/7470A).

Grab Samples

HGWC-13

Grab

FD-02

Grab

Product Name: Low-Flow System

Date: 2020-03-02 16:22:43

Project Information:		Pump Information:	
Operator Name	Aaron Reeder	Pump Model/Type	QED MP50
Company Name	Geosyntec Consultants	Tubing Type	polyethylene
Project Name	GP-Plant Hammond	Tubing Diameter	0.17 in
Site Name	Plant Hammond	Tubing Length	25 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	339797		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	2 ft

Well Information:		Pumping Information:	
Well ID	MW-5	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.5965856 L
Well Total Depth	30.82ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	3.6 in
Depth to Water	11.23 ft	Total Volume Pumped	0 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	16:00:27	600.45	16.37	6.11	531.10	6.80	11.32	3.80	87.91
Last 5	16:05:27	900.44	16.43	6.11	529.45	3.71	11.37	3.97	85.59
Last 5	16:10:27	1200.44	16.45	6.11	528.10	2.89	11.36	3.59	84.90
Last 5	16:15:27	1500.45	16.45	6.11	527.79	2.73	11.36	3.74	81.74
Last 5	16:20:27	1800.44	16.50	6.12	528.02	2.17	11.37	3.51	81.66
Variance 0			0.03	0.00	-1.34			-0.38	-0.69
Variance 1			-0.00	0.00	-0.32			0.15	-3.16
Variance 2			0.05	0.00	0.23			-0.23	-0.08

Notes

Four bottles: Two 1-L plastic bottles with HNO3 for radium (EPA 9315/9320); one 120-mL plastic bottle for F (EPA 300.0); and one 250-mL plastic bottle with HNO3 for App. IV metals (EPA 6020B/7470A).

Grab Samples

MW-5

Grab

Product Name: Low-Flow System

Date: 2020-03-03 10:12:14

Project Information:		Pump Information:	
Operator Name	Aaron Reeder	Pump Model/Type	QED MP50
Company Name	Geosyntec Consultants	Tubing Type	polyethylene
Project Name	GP-Plant Hammond	Tubing Diameter	0.17 in
Site Name	Plant Hammond	Tubing Length	26 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	339797		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	28.0 ft

Well Information:		Pumping Information:	
Well ID	MW-6	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.601049 L
Well Total Depth	33.00ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	3.6 in
Depth to Water	10.20 ft	Total Volume Pumped	0 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	09:50:18	2100.50	18.88	6.77	989.63	7.17	10.25	0.17	0.71
Last 5	09:55:18	2400.50	18.92	6.77	987.63	5.96	10.25	0.17	0.94
Last 5	10:00:18	2700.50	19.17	6.78	985.59	5.08	10.26	0.17	1.96
Last 5	10:05:18	3000.50	19.46	6.78	983.35	5.28	10.20	0.16	2.22
Last 5	10:10:18	3300.50	19.60	6.78	981.49	4.32	10.20	0.17	2.11
Variance 0			0.24	0.00	-2.05			-0.00	1.02
Variance 1			0.29	0.00	-2.24			-0.00	0.26
Variance 2			0.14	-0.00	-1.86			0.00	-0.10

Notes

Four bottles: Two 1-L plastic bottles with HNO3 for radium (EPA 9315/9320); one 120-mL plastic bottle for F (EPA 300.0); and one 250-mL plastic bottle with HNO3 for App. IV metals (EPA 6020B/7470A).

Grab Samples

MW-6

Grab

Product Name: Low-Flow System

Date: 2020-03-03 13:18:59

Project Information:		Pump Information:	
Operator Name	Aaron Reeder	Pump Model/Type	QED MP50
Company Name	Geosyntec Consultants	Tubing Type	polyethylene
Project Name	GP-Plant Hammond	Tubing Diameter	0.17 in
Site Name	Plant Hammond	Tubing Length	20 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	339797		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	2 ft

Well Information:		Pumping Information:	
Well ID	MW-7	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.5742685 L
Well Total Depth	26.80 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	3.6 in
Depth to Water	8.40 ft	Total Volume Pumped	6 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	13:02:20	300.02	16.92	6.11	201.01	1.35	7.34	4.30	82.47
Last 5	13:07:20	600.02	17.01	6.10	202.03	1.28	7.32	4.25	79.43
Last 5	13:12:20	900.02	17.19	6.10	208.53	1.20	7.32	4.19	76.99
Last 5	13:17:20	1200.02	17.34	6.10	209.30	1.65	7.30	4.14	75.75
Last 5									
Variance 0			0.09	-0.01	1.03			-0.05	-3.05
Variance 1			0.17	-0.00	6.50			-0.06	-2.43
Variance 2			0.16	0.01	0.77			-0.05	-1.24

Notes

Four bottles: Two 1-L plastic bottles with HNO3 for radium (EPA 9315/9320); one 120-mL plastic bottle for F (EPA 300.0); and one 250-mL plastic bottle with HNO3 for App. IV metals (EPA 6020B/7470A).

Grab Samples

MW-7

Grab

Product Name: Low-Flow System

Date: 2020-03-04 17:40:44

Project Information:		Pump Information:	
Operator Name	Chad Russo	Pump Model/Type	QED MP50
Company Name	Geosyntec Consultants	Tubing Type	polyethylene
Project Name	GP-Plant Hammond	Tubing Diameter	0.17 in
Site Name	Plant Hammond	Tubing Length	25 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	538243		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	25 ft

Well Information:		Pumping Information:	
Well ID	MW-19	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.5965856 L
Well Total Depth	29.87 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	3.6 in
Depth to Water	6.08 ft	Total Volume Pumped	19 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	17:17:52	3299.87	17.57	6.24	843.88	8.27	6.11	0.17	157.65
Last 5	17:22:52	3599.87	17.61	6.24	846.14	7.29	6.11	0.17	159.30
Last 5	17:27:52	3899.87	17.59	6.24	852.78	7.13	6.11	0.16	157.37
Last 5	17:32:52	4199.94	17.59	6.24	855.68	5.72	6.11	0.17	155.18
Last 5	17:37:52	4499.89	17.66	6.24	860.66	4.80	6.11	0.17	164.22
Variance 0			-0.02	-0.00	6.64			-0.00	-1.93
Variance 1			0.00	0.00	2.90			0.00	-2.18
Variance 2			0.06	-0.00	4.98			-0.00	9.04

Notes

Four bottles: Two 1-L plastic bottles with HNO3 for radium (EPA 9315/9320); one 120-mL plastic bottle for F (EPA 300.0); and one 250-mL plastic bottle with HNO3 for App. IV metals (EPA 6020B/7470A).

Grab Samples

MW-19

Grab

Geosyntec consultants

GROUNDWATER SAMPLING LOG SHEET

Client: SCS
Site: Hammond AP1
Well ID: MW-20
Total Depth (ft): 34.36
Depth to Water (ft): 8.65
Well Diameter (in): 2
Well Volume (gal) = 0.041d²h: 4.32
Well Volume (L) = gal * 3.785: 15.99
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

Project No.: GW0581
Location: Plant, Hammond
Pump Type/Model: Bladder / QED MP-50
Tubing Material: Polyethylene
Pump Intake Depth (ft): 29.36
Start/Stop Purge Time: 15:05 / 16:19 (4) / 16:30
Purge Rate (mL/min): 200 (5)
Total Purge Volume (L): 16.25 / 19.25
Purge Method: (Low-Flow) / Well Volume / Other:
Sampling Method: (Pump Discharge) / Other:

Sampling Date: 03.02.22
Sampler's Name: Shawn Lin
Sample Collection Time: 16:19
Sample Purge Rate (mL/min): 200
Sample ID: MW-20
Laboratory Analyses: App. IV

QA/QC Collected? No
QA/QC I.D.:

All sample containers requiring chemical preservation properly preserved prior to demob from well? (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.)
15:26	6.89	661.30	-26.50	0.18	16.92	11.3	8.98	200	6.25	Clear, no odor, pre-purged
15:31	6.91	662.70	-32.70	0.18	17.06	13.2	8.98	200	7.25	Clear, no odor
15:36	6.93	662.90	-37.20	0.18	17.19	12.0	8.98	200	8.25	"
15:41	6.94	665.20	-41.20	0.18	17.16	11.4	9.04	200	9.25	"
15:46	6.95	664.40	-44.30	0.18	17.28	11.0	9.04	200	10.25	"
15:51	6.96	664.50	-47.50	0.17	17.32	9.15	9.04	200	11.25	"
15:56	6.96	665.10	-49.80	0.17	17.32	7.86	9.04	200	12.25	"
16:01	6.97	664.50	-51.60	0.17	17.48	6.98	9.04	200	13.25	"
16:06	6.97	664.90	-54.30	0.17	17.46	6.64	9.04	200	14.25	"
16:11	6.99	664.90	-55.80	0.17	17.61	5.76	9.04	200	15.25	"
16:16	6.98	664.10	-57.90	0.17	17.58	4.95	9.04	200	16.25	"
							(5)			
Stabilizing Criteria	**+/- 0.1 SU**	**+/- 5%**		0.2 mg/L or 10% for DO > 0.5 mg/L (whichever is greater)		**< 5 NTUs**	**< 0.3 ft**	**> 100 mL < 250 mL**	**> 3L**	

Product Name: Low-Flow System

Date: 2020-03-04 12:07:52

Project Information:		Pump Information:	
Operator Name	Chad Russo	Pump Model/Type	QED MP50
Company Name	Geosyntec Consultants	Tubing Type	polyethylene
Project Name	GP-Plant Hammond	Tubing Diameter	0.17 in
Site Name	Plant Hammond	Tubing Length	68 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	538243		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	68 ft

Well Information:		Pumping Information:	
Well ID	MW-24D	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.7885128 L
Well Total Depth	73.11 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	3.6 in
Depth to Water	20.89 ft	Total Volume Pumped	15.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	11:45:18	3000.02	18.64	7.38	504.99	7.00	20.86	0.26	103.43
Last 5	11:50:18	3300.02	18.64	7.41	505.27	6.49	20.86	0.27	105.49
Last 5	11:55:18	3599.87	18.59	7.43	504.83	5.93	20.86	0.27	109.84
Last 5	12:00:18	3899.87	18.64	7.45	504.34	5.72	20.86	0.28	108.95
Last 5	12:05:18	4199.87	18.68	7.47	504.19	4.73	20.86	0.27	108.96
Variance 0			-0.04	0.02	-0.43			0.00	4.34
Variance 1			0.04	0.02	-0.49			0.00	-0.89
Variance 2			0.05	0.02	-0.16			-0.00	0.02

Notes

Four bottles: Two 1-L plastic bottles with HNO3 for radium (EPA 9315/9320); one 120-mL plastic bottle for F (EPA 300.0); and one 250-mL plastic bottle with HNO3 for App. IV metals (EPA 6020B/7470A).

Grab Samples

MW-24D

Grab

Product Name: Low-Flow System

Date: 2020-03-03 15:14:30

Project Information:		Pump Information:	
Operator Name	Taylor Payne	Pump Model/Type	QED MP50
Company Name	Geosyntec Consultants	Tubing Type	polyethylene
Project Name	GP-Plant Hammond	Tubing Diameter	0.17 in
Site Name	Plant Hammond	Tubing Length	60 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	505592		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	58.03 ft

Well Information:		Pumping Information:	
Well ID	MW-25D	Final Pumping Rate	150 mL/min
Well diameter	2 in	Total System Volume	0.7528054 L
Well Total Depth	63.03 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	37.68 in
Depth to Water	8.95 ft	Total Volume Pumped	4.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	14:52:50	600.02	18.70	7.54	715.18	2.41	11.33	0.42	-238.77
Last 5	14:57:50	900.02	18.76	7.54	713.09	2.72	11.68	0.48	-234.20
Last 5	15:02:50	1200.02	18.87	7.55	704.61	1.99	11.84	0.49	-230.22
Last 5	15:07:50	1500.02	18.92	7.56	673.69	2.40	11.99	0.59	-232.27
Last 5	15:12:50	1800.02	19.00	7.56	705.24	1.56	12.09	0.57	-230.56
Variance 0			0.11	0.01	-8.48			0.01	3.97
Variance 1			0.05	0.01	-30.92			0.10	-2.04
Variance 2			0.07	0.01	31.55			-0.01	1.70

Notes

Four bottles: Two 1-L plastic bottles with HNO3 for radium (EPA 9315/9320); one 120-mL plastic bottle for F (EPA 300.0); and one 250-mL plastic bottle with HNO3 for App. IV metals (EPA 6020B/7470A).

Grab Samples
MW-25D

Grab

Product Name: Low-Flow System

Date: 2020-03-04 12:42:24

Project Information:		Pump Information:	
Operator Name	Aaron Reeder	Pump Model/Type	QED MP50
Company Name	Geosyntec Consultants	Tubing Type	polyethylene
Project Name	GP-Plant Hammond	Tubing Diameter	0.17 in
Site Name	Plant Hammond	Tubing Length	72 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	339797		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	1 ft

Well Information:		Pumping Information:	
Well ID	MW-26D	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.8063664 L
Well Total Depth	77.91 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	3.6 in
Depth to Water	7.20 ft	Total Volume Pumped	13.25 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	12:18:26	3300.85	16.65	7.16	920.73	6.41	7.30	1.99	-41.91
Last 5	12:23:26	3600.85	16.48	7.15	924.39	4.95	7.30	3.99	-42.17
Last 5	12:28:26	3900.85	16.47	7.14	924.17	4.21	7.30	2.88	-41.30
Last 5	12:33:26	4200.85	16.49	7.13	925.34	3.94	7.30	3.88	-41.83
Last 5	12:38:26	4500.85	16.50	7.14	926.53	--	--	4.20	-42.12
Variance 0			-0.01	-0.01	-0.23			-1.11	0.88
Variance 1			0.02	-0.00	1.17			1.00	-0.53
Variance 2			0.00	0.00	1.20			0.32	-0.29

Notes

Stopped pumping, Bladder pump in well needs to be pulled because air is being released into pump discharge tubing.

Product Name: Low-Flow System

Date: 2020-03-04 13:41:56

Project Information:		Pump Information:	
Operator Name	Aaron Reeder	Pump Model/Type	Alexis
Company Name	Geosyntec Consultants	Tubing Type	polyethylene
Project Name	GP-Plant Hammond	Tubing Diameter	0.17 in
Site Name	Plant Hammond	Tubing Length	75 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	339797		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	2.5 ft

Well Information:		Pumping Information:	
Well ID	MW-26D	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.4247567 L
Well Total Depth	77.91 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	3.6 in
Depth to Water	7.09 ft	Total Volume Pumped	18.25 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	13:29:10	300.03	16.68	11.09	678.64	1.45	7.21	3.96	-22.51
Last 5	13:34:10	600.02	16.65	11.11	679.04	0.97	7.21	3.93	-18.40
Last 5	13:39:10	900.02	16.65	11.12	678.51	0.77	7.20	3.90	-15.89
Last 5									
Last 5									
Variance 0			nan	nan	nan			nan	nan
Variance 1			-0.03	0.02	0.40			-0.03	4.11
Variance 2			-0.00	0.01	-0.53			-0.03	2.51

Notes

Four bottles: Two 1-L plastic bottles with HNO3 for radium (EPA 9315/9320); one 120-mL plastic bottle for F (EPA 300.0); and one 250-mL plastic bottle with HNO3 for App. IV metals (EPA 6020B/7470A).

Grab Samples

MW-26D

Grab

Product Name: Low-Flow System

Date: 2020-03-04 16:26:45

Project Information:		Pump Information:	
Operator Name	Aaron Reeder	Pump Model/Type	Alexis
Company Name	Geosyntec Consultants	Tubing Type	polyethylene
Project Name	GP-Plant Hammond	Tubing Diameter	0.17 in
Site Name	Plant Hammond	Tubing Length	61 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	339797		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	4 ft

Well Information:		Pumping Information:	
Well ID	MW-27D	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.3622688 L
Well Total Depth	62.97 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	3.6 in
Depth to Water	1.30 ft	Total Volume Pumped	6.75 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	16:01:25	1200.02	16.69	8.50	515.22	4.41	9.66	0.17	-93.01
Last 5	16:06:25	1500.02	16.67	8.46	497.69	2.60	10.10	0.17	-86.60
Last 5	16:11:25	1800.02	16.43	8.41	472.33	3.54	11.00	0.18	-82.12
Last 5	16:16:25	2100.03	16.42	8.37	466.38	1.67	11.56	0.19	-82.14
Last 5	16:21:25	2400.02	16.25	8.33	463.87	3.09	12.42	0.20	-79.69
Variance 0			-0.25	-0.05	-25.36			0.01	4.48
Variance 1			-0.01	-0.05	-5.95			0.01	-0.01
Variance 2			-0.17	-0.04	-2.50			0.01	2.44

Notes

Four bottles: Two 1-L plastic bottles with HNO3 for radium (EPA 9315/9320); one 120-mL plastic bottle for F (EPA 300.0); and one 250-mL plastic bottle with HNO3 for App. IV metals (EPA 6020B/7470A).

Grab Samples

MW-27D

Grab

Product Name: Low-Flow System

Date: 2020-03-04 10:03:54

Project Information:		Pump Information:	
Operator Name	Taylor Payne	Pump Model/Type	QED MP50
Company Name	Geosyntec Consultants	Tubing Type	polyethylene
Project Name	GP-Plant Hammond	Tubing Diameter	0.17 in
Site Name	Plant Hammond	Tubing Length	55 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	505592		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	53.14 ft

Well Information:		Pumping Information:	
Well ID	MW-28D	Final Pumping Rate	100 mL/min
Well diameter	2 in	Total System Volume	0.7304883 L
Well Total Depth	58.14 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	2.76 in
Depth to Water	3.31 ft	Total Volume Pumped	10.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	09:40:53	3599.92	16.24	7.54	485.10	8.77	3.54	0.76	-219.08
Last 5	09:45:55	3901.92	16.20	7.54	492.82	4.79	3.54	0.79	-218.50
Last 5	09:50:55	4201.92	16.29	7.55	547.18	5.10	3.54	0.80	-219.05
Last 5	09:55:55	4501.92	16.31	7.54	557.26	4.42	3.54	0.79	-218.44
Last 5	10:00:55	4801.92	16.24	7.55	546.61	3.80	3.54	0.80	-218.59
Variance 0			0.09	0.01	54.36			0.01	-0.55
Variance 1			0.02	-0.01	10.08			-0.01	0.60
Variance 2			-0.08	0.01	-10.65			0.01	-0.15

Notes

Four bottles: Two 1-L plastic bottles with HNO3 for radium (EPA 9315/9320); one 120-mL plastic bottle for F (EPA 300.0); and one 250-mL plastic bottle with HNO3 for App. IV metals (EPA 6020B/7470A). Lowered purge rate at 0905 from 200 to 100 ml/min.

Grab Samples
MW-28D

Grab

Product Name: Low-Flow System

Date: 2020-03-02 15:54:21

Project Information:		Pump Information:	
Operator Name	Chad Russo	Pump Model/Type	QED MP50
Company Name	Geosyntec Consultants	Tubing Type	polyethylene
Project Name	GP-Plant Hammond	Tubing Diameter	0.17 in
Site Name	Plant Hammond	Tubing Length	23 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	538243		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	23 ft

Well Information:		Pumping Information:	
Well ID	MW-29	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.5876587 L
Well Total Depth	28.21 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	3.6 in
Depth to Water	3.30 ft	Total Volume Pumped	16.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	15:32:03	2400.02	16.23	7.04	778.77	9.66	3.37	0.23	125.78
Last 5	15:37:03	2700.02	16.31	7.04	778.25	9.39	3.37	0.21	125.30
Last 5	15:42:03	3000.02	16.36	7.04	779.15	7.00	3.37	0.19	124.02
Last 5	15:47:03	3300.02	16.36	7.04	778.78	6.14	3.37	0.20	122.51
Last 5	15:52:02	3599.87	16.39	7.05	778.52	4.79	3.37	0.21	120.90
Variance 0			0.05	-0.00	0.90			-0.02	-1.28
Variance 1			-0.00	0.00	-0.37			0.01	-1.51
Variance 2			0.03	0.00	-0.26			0.01	-1.61

Notes

Bladder pump controller malfunctioned before filling bottles. Restarting purge.

Product Name: Low-Flow System

Date: 2020-03-02 17:23:27

Project Information:		Pump Information:	
Operator Name	Chad Russo	Pump Model/Type	QED MP50
Company Name	Geosyntec Consultants	Tubing Type	polyethylene
Project Name	GP-Plant Hammond	Tubing Diameter	0.17 in
Site Name	Plant Hammond	Tubing Length	23 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	538243		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	23 ft

Well Information:		Pumping Information:	
Well ID	MW-29	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.5876587 L
Well Total Depth	28.21 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	3.6 in
Depth to Water	3.3 ft	Total Volume Pumped	5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	17:11:05	300.02	16.58	7.22	779.00	5.69	3.46	0.33	111.77
Last 5	17:16:05	600.02	16.68	7.17	778.76	3.11	3.46	0.22	113.16
Last 5	17:21:05	900.02	16.76	7.13	778.79	2.78	3.46	0.18	113.79
Last 5									
Last 5									
Variance 0			nan	nan	nan			nan	nan
Variance 1			0.09	-0.06	-0.24			-0.12	1.39
Variance 2			0.08	-0.03	0.03			-0.04	0.62

Notes

Four bottles: Two 1-L plastic bottles with HNO3 for radium (EPA 9315/9320); one 120-mL plastic bottle for F (EPA 300.0); and one 250-mL plastic bottle with HNO3 for App. IV metals (EPA 6020B/7470A).

Grab Samples

MW-29

Grab

Product Name: Low-Flow System

Date: 2020-03-04 14:22:52

Project Information:		Pump Information:	
Operator Name	Taylor Payne	Pump Model/Type	QED MP50
Company Name	Geosyntec Consultants	Tubing Type	polyethylene
Project Name	GP-Plant Hammond	Tubing Diameter	0.17 in
Site Name	Plant Hammond	Tubing Length	104 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	505592		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	102.5 ft

Well Information:		Pumping Information:	
Well ID	MW-30D	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.949196 L
Well Total Depth	107.5 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	98.04 in
Depth to Water	1.45 ft	Total Volume Pumped	9 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	14:01:35	1500.02	16.51	8.10	2446.57	7.79	9.08	0.42	-241.23
Last 5	14:06:35	1800.02	16.57	8.11	2441.64	6.12	9.26	0.46	-242.46
Last 5	14:11:35	2100.02	16.72	8.11	2405.13	5.88	9.41	0.45	-243.09
Last 5	14:16:35	2400.02	16.78	8.12	2399.19	5.23	9.51	0.47	-241.69
Last 5	14:21:35	2700.02	16.74	8.12	2384.33	4.40	9.51	0.52	-237.66
Variance 0			0.16	0.01	-36.51			-0.01	-0.63
Variance 1			0.06	0.00	-5.95			0.03	1.41
Variance 2			-0.05	0.00	-14.86			0.04	4.02

Notes

Four bottles: Two 1-L plastic bottles with HNO3 for radium (EPA 9315/9320); one 120-mL plastic bottle for F (EPA 300.0); and one 250-mL plastic bottle with HNO3 for App. IV metals (EPA 6020B/7470A).

Grab Samples

MW-30D

Grab

Product Name: Low-Flow System

Date: 2020-03-25 15:53:22

Project Information:		Pump Information:	
Operator Name	Aaron Reeder	Pump Model/Type	QED MP50
Company Name	Geosyntec Consultants	Tubing Type	polyethylene
Project Name	GP-Plant Hammond	Tubing Diameter	0.17 in
Site Name	Plant Hammond	Tubing Length	20 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	440279		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	27 ft

Well Information:		Pumping Information:	
Well ID	HGWA-1	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.5742685 L
Well Total Depth	ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	3.6 in
Depth to Water	5.50 ft	Total Volume Pumped	4 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	15:36:15	300.05	16.64	6.94	909.49	15.70	6.60	0.43	18.74
Last 5	15:41:15	600.02	16.65	6.94	914.07	0.42	6.30	0.18	16.90
Last 5	15:46:15	900.02	17.12	6.94	903.54	0.78	6.15	0.18	17.40
Last 5	15:51:15	1200.02	17.28	6.95	890.79	0.87	5.91	0.18	18.21
Last 5									
Variance 0			0.01	-0.00	4.58			-0.25	-1.84
Variance 1			0.47	0.01	-10.52			-0.01	0.50
Variance 2			0.16	0.00	-12.75			0.00	0.80

Notes

Five bottles: Two 1-L plastic bottles with HNO3 for radium (EPA 9315/9320); one 500-mL plastic bottle for TDS (EPA 2540C); one 250-mL plastic bottle for Cl, F, SO4 (EPA 300.0); and one 250-mL plastic bottle with HNO3 for App. III and IV metals (EPA 6020B).

Grab Samples

HGWA-1

Grab

Low-Flow Test Report:

Test Date / Time: 3/25/2020 3:59:10 PM
Project: Plant Hammond
Operator Name: Chad Russo

Location Name: HGWA-2 **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 18 ft** **Total Depth: 27.95 ft** **Initial Depth to Water: 4.49 ft**	**Pump Type: Bladder** **Tubing Type: Poly ethylene** **Pump Intake From TOC: 23 ft** **Estimated Total Volume Pumped: 7 liter** **Flow Cell Volume: 90 ml** **Final Flow Rate: 200 ml/min** **Final Draw Down: 0.05 ft**	**Instrument Used: SmarTROLL MP** **Serial Number: 364452**

Test Notes:
Five bottles: Two 1-L plastic bottles with HNO3 for radium (EPA 9315/9320); one 500-mL plastic bottle for TDS (EPA 2540C); one 250-mL plastic bottle for Cl, F, SO4 (EPA 300.0); and one 250-mL plastic bottle with HNO3 for App. III and IV metals (EPA 6020B).

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 10 %	+/- 10	+/- 10	+/- 0.3	
3/25/2020 3:59 PM	00:00	5.48 pH	17.01 °C	219.18 µS/cm	0.61 mg/L		179.8 mV	4.49 ft	200.00 ml/min
3/25/2020 4:04 PM	05:00	5.48 pH	17.01 °C	221.17 µS/cm	0.30 mg/L	11.76 NTU	95.9 mV	4.54 ft	200.00 ml/min
3/25/2020 4:09 PM	10:00	5.41 pH	16.94 °C	213.88 µS/cm	0.19 mg/L	10.03 NTU	85.7 mV	4.54 ft	200.00 ml/min
3/25/2020 4:14 PM	15:00	5.39 pH	16.92 °C	212.43 µS/cm	0.16 mg/L	7.86 NTU	82.3 mV	4.54 ft	200.00 ml/min
3/25/2020 4:19 PM	20:00	5.37 pH	16.86 °C	209.59 µS/cm	0.14 mg/L	6.48 NTU	75.6 mV	4.54 ft	200.00 ml/min
3/25/2020 4:24 PM	25:00	5.36 pH	16.87 °C	207.91 µS/cm	0.13 mg/L	5.03 NTU	73.0 mV	4.54 ft	200.00 ml/min
3/25/2020 4:29 PM	30:00	5.36 pH	16.87 °C	207.69 µS/cm	0.12 mg/L	4.45 NTU	64.9 mV	4.54 ft	200.00 ml/min

Samples

Sample ID:	Description:
HGWA-2	Grab

Low-Flow Test Report:

Test Date / Time: 3/25/2020 2:59:21 PM
Project: Plant Hammond
Operator Name: Chad Russo

Location Name: HGWA-3 **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 35 ft** **Total Depth: 44.87 ft** **Initial Depth to Water: 4.09 ft**	**Pump Type: Bladder** **Tubing Type: Poly ethylene** **Pump Intake From TOC: 40 ft** **Estimated Total Volume Pumped: 4 liter** **Flow Cell Volume: 90 ml** **Final Flow Rate: 200 ml/min** **Final Draw Down: 0 ft**	**Instrument Used: SmarTROLL MP** **Serial Number: 364452**

Test Notes:
Five bottles: Two 1-L plastic bottles with HNO3 for radium (EPA 9315/9320); one 500-mL plastic bottle for TDS (EPA 2540C); one 250-mL plastic bottle for Cl, F, SO4 (EPA 300.0); and one 250-mL plastic bottle with HNO3 for App. III and IV metals (EPA 6020B).

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 10 %	+/- 10	+/- 10	+/- 0.3	
3/25/2020 2:59 PM	00:00	7.39 pH	17.25 °C	507.85 µS/cm	0.92 mg/L		-50.1 mV	4.09 ft	200.00 ml/min
3/25/2020 3:04 PM	05:00	7.39 pH	17.10 °C	509.15 µS/cm	0.38 mg/L	2.05 NTU	-54.6 mV	4.09 ft	200.00 ml/min
3/25/2020 3:09 PM	10:00	7.40 pH	17.10 °C	508.82 µS/cm	0.22 mg/L	1.47 NTU	-62.9 mV	4.09 ft	200.00 ml/min
3/25/2020 3:14 PM	15:00	7.40 pH	17.11 °C	508.34 µS/cm	0.18 mg/L	1.39 NTU	-64.5 mV	4.09 ft	200.00 ml/min

Samples

Sample ID:	Description:
HGWA-3	Grab

Product Name: Low-Flow System

Date: 2020-03-27 09:28:50

Project Information:		Pump Information:	
Operator Name	Shawn Lin	Pump Model/Type	QED MP50
Company Name	Geosyntec Consultants	Tubing Type	polyethylene
Project Name	GP-Plant Hammond	Tubing Diameter	0.17 in
Site Name	Plant Hammond	Tubing Length	ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	646777		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	ft

Well Information:		Pumping Information:	
Well ID	HGWC-7	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.485 L
Well Total Depth	27.8 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	3.6 in
Depth to Water	3.30 ft	Total Volume Pumped	7 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	09:06:49	300.05	18.03	7.08	712.77	3.09	3.37	0.27	95.33
Last 5	09:11:49	600.03	18.08	7.06	712.72	1.98	3.37	0.15	76.14
Last 5	09:16:49	900.02	18.12	7.04	712.79	1.36	3.37	0.12	64.31
Last 5	09:21:49	1200.02	18.17	7.05	713.02	1.35	3.37	0.12	57.79
Last 5	09:26:49	1500.02	18.21	7.05	712.97	1.31	3.37	0.11	53.15
Variance 0			0.04	-0.01	0.07			-0.03	-11.83
Variance 1			0.04	0.00	0.23			-0.01	-6.52
Variance 2			0.05	0.00	-0.05			-0.00	-4.64

Notes

Five bottles: Two 1-L plastic bottles with HNO3 for radium (EPA 9315/9320); one 500-mL plastic bottle for TDS (EPA 2540C); one 250-mL plastic bottle for Cl, F, SO4 (EPA 300.0); and one 250-mL plastic bottle with HNO3 for App. III and IV metals (EPA 6020B).

Grab Samples

HGWC-7

Grab

Product Name: Low-Flow System

Date: 2020-03-27 10:32:55

Project Information:		Pump Information:	
Operator Name	Nelson Gunby	Pump Model/Type	QED MP50
Company Name	Geosyntec Consultants	Tubing Type	polyethylene
Project Name	GP-Plant Hammond	Tubing Diameter	0.17 in
Site Name	Plant Hammond	Tubing Length	ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	364456		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	ft

Well Information:		Pumping Information:	
Well ID	HGWC-8	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.485 L
Well Total Depth	26.65 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	3.6 in
Depth to Water	1.51 ft	Total Volume Pumped	7 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	10:11:01	600.02	13.03	6.98	871.16	1.79	1.52	0.33	46.91
Last 5	10:16:01	900.02	13.04	6.96	873.03	1.13	1.53	0.26	48.11
Last 5	10:21:01	1200.03	13.21	6.95	872.02	0.83	1.53	0.23	48.75
Last 5	10:26:01	1500.03	13.24	6.95	872.87	1.32	1.52	0.22	50.01
Last 5	10:31:01	1800.03	13.48	6.95	870.58	1.00	1.54	0.21	52.26
Variance 0			0.17	-0.01	-1.02			-0.03	0.64
Variance 1			0.02	-0.00	0.86			-0.01	1.26
Variance 2			0.25	-0.00	-2.30			-0.01	2.25

Notes

Five bottles: Two 1-L plastic bottles with HNO3 for radium (EPA 9315/9320); one 500-mL plastic bottle for TDS (EPA 2540C); one 250-mL plastic bottle for Cl, F, SO4 (EPA 300.0); and one 250-mL plastic bottle with HNO3 for App. III and IV metals (EPA 6020B).

Grab Samples

HGWC-8

Grab

Product Name: Low-Flow System

Date: 2020-03-31 11:55:16

Project Information:		Pump Information:	
Operator Name	Nelson Gunby	Pump Model/Type	QED MP50
Company Name	Geosyntec Consultants	Tubing Type	polyethylene
Project Name	GP-Plant Hammond	Tubing Diameter	0.17 in
Site Name	Plant Hammond	Tubing Length	ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	364456		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	ft

Well Information:		Pumping Information:	
Well ID	HGWC-9	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.485 L
Well Total Depth	46.98 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	3.6 in
Depth to Water	8.75 ft	Total Volume Pumped	8 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	11:33:40	1200.03	11.47	7.09	1076.38	8.82	8.81	0.21	30.90
Last 5	11:38:40	1500.03	11.60	7.08	1076.26	7.04	8.81	0.19	30.74
Last 5	11:43:40	1800.03	11.67	7.07	1076.18	6.02	8.81	0.19	30.68
Last 5	11:48:40	2100.03	11.74	7.07	1073.29	5.83	8.81	0.18	30.73
Last 5	11:53:40	2400.03	11.71	7.07	1075.31	4.92	8.81	0.17	30.58
Variance 0			0.07	-0.01	-0.08			-0.00	-0.06
Variance 1			0.08	-0.00	-2.89			-0.01	0.05
Variance 2			-0.04	-0.00	2.03			-0.01	-0.15

Notes

Five bottles: Two 1-L plastic bottles with HNO3 for radium (EPA 9315/9320); one 500-mL plastic bottle for TDS (EPA 2540C); one 250-mL plastic bottle for Cl, F, SO4 (EPA 300.0); and one 250-mL plastic bottle with HNO3 for App. III and IV metals (EPA 6020B).

Grab Samples

HGWC-9

Grab

Low-Flow Test Report:

Test Date / Time: 4/1/2020 9:32:30 AM
Project: Plant Hammond (2)
Operator Name: Aaron Reeder

Location Name: HGWC-10 **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 13 ft** **Total Depth: 23 ft** **Initial Depth to Water: 7.26 ft**	**Pump Type: Alexis Peri** **Tubing Type: Poly** **Pump Intake From TOC: 18 ft** **Estimated Total Volume Pumped: 4000 ml** **Flow Cell Volume: 90 ml** **Final Flow Rate: 200 ml/min** **Final Draw Down: 0.05 ft**	**Instrument Used: Aqua TROLL 400** **Serial Number: 728550**

Test Notes:
Five bottles: Two 1-L plastic bottles with HNO3 for radium (EPA 9315/9320); one 500-mL plastic bottle for TDS (EPA 2540C); one 250-mL plastic bottle for Cl, F, SO4 (EPA 300.0); and one 250-mL plastic bottle with HNO3 for App. III and IV metals (EPA 6020B).

Weather Conditions:
Sunny and cool

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 10 %	+/- 5	+/- 10	+/- 5	
4/1/2020 9:32 AM	00:00	6.86 pH	15.17 °C	389.12 µS/cm	3.32 mg/L	2.72 NTU	96.0 mV	7.26 ft	200.00 ml/min
4/1/2020 9:37 AM	05:00	6.86 pH	15.80 °C	399.53 µS/cm	3.11 mg/L	2.52 NTU	84.1 mV	7.30 ft	200.00 ml/min
4/1/2020 9:42 AM	10:00	6.85 pH	15.98 °C	402.43 µS/cm	3.01 mg/L	2.74 NTU	38.0 mV	7.31 ft	200.00 ml/min
4/1/2020 9:47 AM	15:00	6.84 pH	15.98 °C	416.84 µS/cm	2.93 mg/L	2.48 NTU	35.2 mV	7.31 ft	200.00 ml/min

Samples

Sample ID:	Description:
HGWC-10	Grab

Low-Flow Test Report:

Test Date / Time: 3/31/2020 3:04:32 PM
Project: Plant Hammond
Operator Name: Chad Russo

Location Name: HGWC-11 **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 16 ft** **Total Depth: 25.78 ft** **Initial Depth to Water: 9.55 ft**	**Pump Type: Peristaltic** **Tubing Type: Poly ethylene** **Pump Intake From TOC: 21 ft** **Estimated Total Volume Pumped: 4 liter** **Flow Cell Volume: 90 ml** **Final Flow Rate: 200 ml/min** **Final Draw Down: 0.1 ft**	**Instrument Used: SmarTROLL MP** **Serial Number: 364452**

Test Notes:
Five bottles: Two 1-L plastic bottles with HNO3 for radium (EPA 9315/9320); one 500-mL plastic bottle for TDS (EPA 2540C); one 250-mL plastic bottle for Cl, F, SO4 (EPA 300.0); and one 250-mL plastic bottle with HNO3 for App. III and IV metals (EPA 6020B).

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 10 %	+/- 10	+/- 10	+/- 0.3	
3/31/2020 3:04 PM	00:00	5.61 pH	16.51 °C	732.83 µS/cm	4.97 mg/L		242.9 mV	9.55 ft	200.00 ml/min
3/31/2020 3:09 PM	05:00	5.66 pH	16.38 °C	741.76 µS/cm	4.81 mg/L	5.63 NTU	115.1 mV	9.65 ft	200.00 ml/min
3/31/2020 3:14 PM	10:00	5.68 pH	16.34 °C	740.83 µS/cm	4.74 mg/L	4.11 NTU	105.0 mV	9.65 ft	200.00 ml/min
3/31/2020 3:19 PM	15:00	5.70 pH	16.29 °C	737.68 µS/cm	4.68 mg/L	2.86 NTU	103.9 mV	9.65 ft	200.00 ml/min

Samples

Sample ID:	Description:
HGWC-11	Grab

Product Name: Low-Flow System

Date: 2020-03-26 08:45:31

Project Information:		Pump Information:	
Operator Name	Nelson Gunby	Pump Model/Type	QED MP50
Company Name	Geosyntec Consultants	Tubing Type	polyethylene
Project Name	GP-Plant Hammond	Tubing Diameter	0.17 in
Site Name	Plant Hammond	Tubing Length	ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	364456		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	ft

Well Information:		Pumping Information:	
Well ID	HGWC-12	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.485 L
Well Total Depth	25.78 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	3.6 in
Depth to Water	6.47 ft	Total Volume Pumped	6.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	08:21:53	300.06	10.96	6.76	851.77	1.23	6.46	0.34	34.78
Last 5	08:26:53	600.03	11.22	6.88	850.62	0.90	6.47	0.29	36.55
Last 5	08:31:53	900.03	11.33	6.94	850.17	1.66	6.48	0.25	36.63
Last 5	08:36:53	1200.03	11.47	6.97	848.76	0.60	6.49	0.25	36.48
Last 5	08:41:53	1500.03	11.63	6.99	847.33	0.60	6.48	0.25	36.30
Variance 0			0.10	0.06	-0.45			-0.04	0.07
Variance 1			0.14	0.03	-1.41			-0.00	-0.14
Variance 2			0.17	0.02	-1.42			0.00	-0.18

Notes

Five bottles: Two 1-L plastic bottles with HNO3 for radium (EPA 9315/9320); one 500-mL plastic bottle for TDS (EPA 2540C); one 250-mL plastic bottle for Cl, F, SO4 (EPA 300.0); and one 250-mL plastic bottle with HNO3 for App. III and IV metals (EPA 6020B).

Grab Samples

HGWC-12

Grab

Product Name: Low-Flow System

Date: 2020-03-30 12:09:16

Project Information:		Pump Information:	
Operator Name	Nelson Gunby	Pump Model/Type	QED MP50
Company Name	Geosyntec Consultants	Tubing Type	polyethylene
Project Name	GP-Plant Hammond	Tubing Diameter	0.17 in
Site Name	Plant Hammond	Tubing Length	ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	364456		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	ft

Well Information:		Pumping Information:	
Well ID	HGWC-13	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.485 L
Well Total Depth	45.07 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	3.6 in
Depth to Water	17.18 ft	Total Volume Pumped	11 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	11:47:48	2400.04	14.84	6.91	1247.09	6.40	17.19	0.24	-46.02
Last 5	11:52:48	2700.04	14.84	6.91	1246.51	5.25	17.18	0.24	-46.29
Last 5	11:57:49	3001.04	14.94	6.90	1247.23	5.15	17.17	0.22	-46.51
Last 5	12:02:49	3301.04	14.92	6.91	1246.14	3.76	17.17	0.21	-46.17
Last 5	12:07:49	3601.05	15.12	6.91	1244.17	4.06	17.17	0.21	-46.07
Variance 0			0.11	-0.00	0.72			-0.02	-0.23
Variance 1			-0.03	0.00	-1.09			-0.01	0.34
Variance 2			0.20	0.00	-1.97			0.00	0.10

Notes

Five bottles: Two 1-L plastic bottles with HNO3 for radium (EPA 9315/9320); one 500-mL plastic bottle for TDS (EPA 2540C); one 250-mL plastic bottle for Cl, F, SO4 (EPA 300.0); and one 250-mL plastic bottle with HNO3 for App. III and IV metals (EPA 6020B).

Grab Samples

HGWC-13

Grab

Product Name: Low-Flow System

Date: 2020-03-26 14:05:04

Project Information:		Pump Information:	
Operator Name	Nelson Gunby	Pump Model/Type	QED MP50
Company Name	Geosyntec Consultants	Tubing Type	polyethylene
Project Name	GP-Plant Hammond	Tubing Diameter	0.17 in
Site Name	Plant Hammond	Tubing Length	ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	364456		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	ft

Well Information:		Pumping Information:	
Well ID	MW-5	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.485 L
Well Total Depth	30.82 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	3.6 in
Depth to Water	7.01 ft	Total Volume Pumped	4.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	13:47:55	300.03	14.32	6.33	571.64	0.53	7.11	3.57	64.99
Last 5	13:52:55	600.03	13.94	6.20	573.83	0.38	7.12	3.05	67.46
Last 5	13:57:55	900.03	13.85	6.16	570.06	0.40	7.11	2.90	70.54
Last 5	14:02:55	1200.03	13.76	6.14	572.48	0.36	7.11	2.84	74.43
Last 5									
Variance 0			-0.38	-0.13	2.19			-0.52	2.47
Variance 1			-0.09	-0.05	-3.78			-0.15	3.08
Variance 2			-0.09	-0.02	2.43			-0.06	3.89

Notes

Five bottles: Two 1-L plastic bottles with HNO3 for radium (EPA 9315/9320); one 500-mL plastic bottle for TDS (EPA 2540C); one 250-mL plastic bottle for Cl, F, SO4 (EPA 300.0); and one 250-mL plastic bottle with HNO3 for App. III and IV metals (EPA 6020B).

Grab Samples

MW-5

Grab

Product Name: Low-Flow System

Date: 2020-03-27 12:53:12

Project Information:		Pump Information:	
Operator Name	Nelson Gunby	Pump Model/Type	QED MP50
Company Name	Geosyntec Consultants	Tubing Type	polyethylene
Project Name	GP-Plant Hammond	Tubing Diameter	0.17 in
Site Name	Plant Hammond	Tubing Length	ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	364456		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	ft

Well Information:		Pumping Information:	
Well ID	MW-6	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.485 L
Well Total Depth	33.0 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	3.6 in
Depth to Water	7.55 ft	Total Volume Pumped	11.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	12:30:07	1800.03	14.91	6.82	994.69	4.07	7.57	0.37	65.70
Last 5	12:35:07	2100.03	15.07	6.82	994.74	3.83	7.57	0.34	69.13
Last 5	12:40:07	2400.03	15.05	6.82	995.16	2.81	7.57	0.29	70.93
Last 5	12:45:07	2700.03	15.06	6.82	994.72	2.37	7.57	0.29	73.21
Last 5	12:50:07	3000.03	15.16	6.82	991.56	2.55	7.57	0.28	77.97
Variance 0			-0.02	-0.00	0.42			-0.04	1.80
Variance 1			0.01	-0.01	-0.44			0.00	2.29
Variance 2			0.10	0.00	-3.16			-0.01	4.75

Notes

Five bottles: Two 1-L plastic bottles with HNO3 for radium (EPA 9315/9320); one 500-mL plastic bottle for TDS (EPA 2540C); one 250-mL plastic bottle for Cl, F, SO4 (EPA 300.0); and one 250-mL plastic bottle with HNO3 for App. III and IV metals (EPA 6020B).

Grab Samples

MW-6

Grab

Product Name: Low-Flow System

Date: 2020-03-30 08:31:12

Project Information:		Pump Information:	
Operator Name	Nelson Gunby	Pump Model/Type	QED MP50
Company Name	Geosyntec Consultants	Tubing Type	polyethylene
Project Name	GP-Plant Hammond	Tubing Diameter	0.17 in
Site Name	Plant Hammond	Tubing Length	ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	364456		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	ft

Well Information:		Pumping Information:	
Well ID	MW-7	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.485 L
Well Total Depth	26.80 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	3.6 in
Depth to Water	6.38 ft	Total Volume Pumped	0 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	08:25:35	300.07	10.82	6.29	175.68	3.37	6.44	5.69	113.80
Last 5	08:30:35	600.01	10.91	6.12	175.67	--	--	5.51	106.64
Last 5									
Last 5									
Last 5									
Variance 0			nan	nan	nan			nan	nan
Variance 1			0.10	-0.17	-0.01			-0.18	-7.16
Variance 2			0.00	0.00	0.00			0.00	0.00

Notes

iPad malfunctioned. Restarting inSitu app.

Product Name: Low-Flow System

Date: 2020-03-30 08:58:52

Project Information:		Pump Information:	
Operator Name	Nelson Gunby	Pump Model/Type	QED MP50
Company Name	Geosyntec Consultants	Tubing Type	polyethylene
Project Name	GP-Plant Hammond	Tubing Diameter	0.17 in
Site Name	Plant Hammond	Tubing Length	ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	364456		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	ft

Well Information:		Pumping Information:	
Well ID	MW-7	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.485 L
Well Total Depth	26.80 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	3.6 in
Depth to Water	6.38 ft	Total Volume Pumped	8.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	08:37:18	300.03	10.94	6.04	178.84	1.72	6.45	5.36	101.44
Last 5	08:42:18	600.03	10.97	6.02	182.83	1.34	6.44	5.29	99.25
Last 5	08:47:18	900.03	11.01	6.04	186.98	0.89	6.45	5.25	95.94
Last 5	08:52:18	1200.03	11.05	6.05	191.48	1.41	6.44	5.19	94.24
Last 5	08:57:18	1500.03	11.11	6.06	196.14	0.91	6.44	5.13	92.50
Variance 0			0.04	0.02	4.14			-0.04	-3.31
Variance 1			0.04	0.01	4.50			-0.06	-1.71
Variance 2			0.06	0.01	4.66			-0.06	-1.74

Notes

Five bottles: Two 1-L plastic bottles with HNO3 for radium (EPA 9315/9320); one 500-mL plastic bottle for TDS (EPA 2540C); one 250-mL plastic bottle for Cl, F, SO4 (EPA 300.0); and one 250-mL plastic bottle with HNO3 for App. III and IV metals (EPA 6020B).

Grab Samples

MW-7

Grab

Product Name: Low-Flow System

Date: 2020-03-26 12:22:19

Project Information:		Pump Information:	
Operator Name	Nelson Gunby	Pump Model/Type	QED MP50
Company Name	Geosyntec Consultants	Tubing Type	polyethylene
Project Name	GP-Plant Hammond	Tubing Diameter	0.17 in
Site Name	Plant Hammond	Tubing Length	ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	364456		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	ft

Well Information:		Pumping Information:	
Well ID	MW-19	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.485 L
Well Total Depth	29.87 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	3.6 in
Depth to Water	5.09 ft	Total Volume Pumped	7 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	12:00:51	900.03	13.98	6.35	971.70	1.65	5.09	0.35	41.96
Last 5	12:05:51	1200.03	13.99	6.32	972.40	1.20	5.10	0.29	40.14
Last 5	12:10:51	1500.03	13.98	6.30	967.86	1.19	5.10	0.26	39.84
Last 5	12:15:51	1800.04	14.07	6.29	967.41	1.57	5.10	0.25	37.67
Last 5	12:21:03	2112.04	14.22	6.28	966.52	1.01	5.09	0.24	36.83
Variance 0			-0.00	-0.02	-4.54			-0.03	-0.30
Variance 1			0.08	-0.01	-0.45			-0.01	-2.16
Variance 2			0.15	-0.01	-0.90			-0.01	-0.85

Notes

Five bottles: Two 1-L plastic bottles with HNO3 for radium (EPA 9315/9320); one 500-mL plastic bottle for TDS (EPA 2540C); one 250-mL plastic bottle for Cl, F, SO4 (EPA 300.0); and one 250-mL plastic bottle with HNO3 for App. III and IV metals (EPA 6020B).

Grab Samples

MW-19

Grab

Product Name: Low-Flow System

Date: 2020-03-27 09:22:47

Project Information:		Pump Information:	
Operator Name	Nelson Gunby	Pump Model/Type	QED MP50
Company Name	Geosyntec Consultants	Tubing Type	polyethylene
Project Name	GP-Plant Hammond	Tubing Diameter	0.17 in
Site Name	Plant Hammond	Tubing Length	ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	364456		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	ft

Well Information:		Pumping Information:	
Well ID	MW-20	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.485 L
Well Total Depth	34.36 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	3.6 in
Depth to Water	5.24 ft	Total Volume Pumped	8 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	09:00:03	900.03	12.13	6.65	714.43	5.29	5.54	0.36	-51.55
Last 5	09:05:03	1200.03	12.16	6.69	715.65	4.81	5.57	0.30	-53.98
Last 5	09:10:03	1500.03	12.16	6.72	716.23	4.21	5.58	0.28	-54.80
Last 5	09:15:03	1800.03	12.21	6.74	716.32	3.64	5.58	0.27	-55.50
Last 5	09:20:03	2100.03	12.25	6.75	716.91	3.65	5.58	0.27	-56.05
Variance 0			-0.00	0.03	0.58			-0.02	-0.83
Variance 1			0.05	0.02	0.09			-0.01	-0.70
Variance 2			0.05	0.01	0.59			-0.00	-0.54

Notes

Five bottles: Two 1-L plastic bottles with HNO3 for radium (EPA 9315/9320); one 500-mL plastic bottle for TDS (EPA 2540C); one 250-mL plastic bottle for Cl, F, SO4 (EPA 300.0); and one 250-mL plastic bottle with HNO3 for App. III and IV metals (EPA 6020B).

Grab Samples

MW-20

Grab

Product Name: Low-Flow System

Date: 2020-03-30 10:23:08

Project Information:		Pump Information:	
Operator Name	Nelson Gunby	Pump Model/Type	QED MP50
Company Name	Geosyntec Consultants	Tubing Type	polyethylene
Project Name	GP-Plant Hammond	Tubing Diameter	0.17 in
Site Name	Plant Hammond	Tubing Length	ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	364456		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	ft

Well Information:		Pumping Information:	
Well ID	MW-24D	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.485 L
Well Total Depth	73.11 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	3.6 in
Depth to Water	21.01 ft	Total Volume Pumped	8 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	10:01:27	900.03	13.76	7.34	524.85	3.00	21.05	0.40	9.30
Last 5	10:06:27	1200.03	13.85	7.40	523.53	3.72	21.06	0.33	9.28
Last 5	10:11:27	1500.03	13.80	7.44	523.57	2.85	21.05	0.31	7.87
Last 5	10:16:27	1800.03	13.76	7.47	523.06	2.47	21.06	0.30	5.23
Last 5	10:21:27	2100.03	13.76	7.49	523.39	2.44	21.04	0.29	1.99
Variance 0			-0.05	0.04	0.04			-0.03	-1.41
Variance 1			-0.04	0.02	-0.51			-0.00	-2.64
Variance 2			0.00	0.02	0.33			-0.01	-3.24

Notes

Five bottles: Two 1-L plastic bottles with HNO3 for radium (EPA 9315/9320); one 500-mL plastic bottle for TDS (EPA 2540C); one 250-mL plastic bottle for Cl, F, SO4 (EPA 300.0); and one 250-mL plastic bottle with HNO3 for App. III and IV metals (EPA 6020B).

Grab Samples

MW-24D

Grab

Product Name: Low-Flow System

Date: 2020-03-26 10:41:27

Project Information:		Pump Information:	
Operator Name	Nelson Gunby	Pump Model/Type	QED MP50
Company Name	Geosyntec Consultants	Tubing Type	polyethylene
Project Name	GP-Plant Hammond	Tubing Diameter	0.17 in
Site Name	Plant Hammond	Tubing Length	ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	364456		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	ft

Well Information:		Pumping Information:	
Well ID	MW-25D	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.485 L
Well Total Depth	63.05 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	3.6 in
Depth to Water	6.47 ft	Total Volume Pumped	11 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	10:19:23	2700.04	12.58	7.55	651.79	0.84	12.45	0.24	-187.83
Last 5	10:24:23	3000.05	12.85	7.56	648.84	1.84	12.51	0.27	-185.92
Last 5	10:29:23	3300.05	13.08	7.57	642.75	1.21	12.65	0.23	-184.87
Last 5	10:34:23	3600.05	13.30	7.57	638.52	1.20	12.74	0.22	-183.89
Last 5	10:39:23	3900.05	13.30	7.57	645.17	0.90	12.89	0.24	-184.01
Variance 0			0.23	0.00	-6.08			-0.04	1.06
Variance 1			0.22	-0.00	-4.23			-0.01	0.98
Variance 2			-0.00	0.01	6.64			0.02	-0.12

Notes

Five bottles: Two 1-L plastic bottles with HNO3 for radium (EPA 9315/9320); one 500-mL plastic bottle for TDS (EPA 2540C); one 250-mL plastic bottle for Cl, F, SO4 (EPA 300.0); and one 250-mL plastic bottle with HNO3 for App. III and IV metals (EPA 6020B).

Grab Samples

MW-25D

Grab

Product Name: Low-Flow System

Date: 2020-03-31 09:28:30

Project Information:		Pump Information:	
Operator Name	Nelson Gunby	Pump Model/Type	QED MP50
Company Name	Geosyntec Consultants	Tubing Type	polyethylene
Project Name	GP-Plant Hammond	Tubing Diameter	0.17 in
Site Name	Plant Hammond	Tubing Length	ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	364456		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	ft

Well Information:		Pumping Information:	
Well ID	MW-26D	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.485 L
Well Total Depth	77.91 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	3.6 in
Depth to Water	8.66 ft	Total Volume Pumped	10.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	09:06:41	2400.04	11.38	7.20	877.37	7.94	8.81	0.33	-58.07
Last 5	09:11:41	2700.04	11.42	7.19	880.94	7.87	8.81	0.32	-57.64
Last 5	09:16:41	3000.02	10.86	7.20	885.48	5.68	8.81	0.34	-55.54
Last 5	09:21:41	3300.04	11.02	7.20	885.69	5.94	8.82	0.38	-55.21
Last 5	09:26:41	3600.04	10.91	7.20	888.54	4.89	8.82	0.38	-53.83
Variance 0			-0.56	0.01	4.54			0.02	2.09
Variance 1			0.16	-0.01	0.21			0.04	0.34
Variance 2			-0.11	0.00	2.85			-0.00	1.38

Notes

Five bottles: Two 1-L plastic bottles with HNO3 for radium (EPA 9315/9320); one 500-mL plastic bottle for TDS (EPA 2540C); one 250-mL plastic bottle for Cl, F, SO4 (EPA 300.0); and one 250-mL plastic bottle with HNO3 for App. III and IV metals (EPA 6020B).

Grab Samples

MW-26D

Grab

Product Name: Low-Flow System

Date: 2020-04-01 09:56:30

Project Information:		Pump Information:	
Operator Name	Shawn Lin	Pump Model/Type	QED MP50
Company Name	Geosyntec Consultants	Tubing Type	polyethylene
Project Name	GP-Plant Hammond	Tubing Diameter	0.17 in
Site Name	Plant Hammond	Tubing Length	ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	646777		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	ft

Well Information:		Pumping Information:	
Well ID	MW-27D	Final Pumping Rate	100 mL/min
Well diameter	2 in	Total System Volume	0.485 L
Well Total Depth	62.97 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	3.6 in
Depth to Water	2.13 ft	Total Volume Pumped	18.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	09:34:13	3299.99	15.18	7.84	464.95	0.82	16.34	1.71	-26.41
Last 5	09:39:13	3599.99	14.94	7.85	465.98	0.97	16.72	1.95	-26.69
Last 5	09:44:13	3899.99	15.27	7.85	470.79	0.65	17.18	2.15	-29.78
Last 5	09:49:13	4199.98	15.03	7.86	470.18	1.69	17.54	2.19	-28.84
Last 5	09:54:13	4499.98	15.08	7.87	466.70	1.75	17.93	2.42	-28.10
Variance 0			0.32	0.00	4.81			0.20	-3.10
Variance 1			-0.23	0.01	-0.61			0.04	0.94
Variance 2			0.04	0.01	-3.48			0.23	0.74

Notes

Water level was dropping too fast. Attempted to purge the well dry and will sample tomorrow.

Low-Flow Test Report:

Test Date / Time: 4/2/2020 10:36:39 AM
Project: Plant Hammond (2)
Operator Name: Chad Russo

Location Name: MW-27D **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 53 ft** **Total Depth: 62.97 ft** **Initial Depth to Water: 3.53 ft**	**Pump Type: Peristaltic** **Tubing Type: Poly ethylene** **Pump Intake From TOC: 58 ft** **Estimated Total Volume Pumped: 2 liter** **Flow Cell Volume: 90 ml** **Final Flow Rate: 200 ml/min** **Final Draw Down: 2.52 ft**	**Instrument Used: SmarTROLL MP** **Serial Number: 364452**

Test Notes:

Five bottles: Two 1-L plastic bottles with HNO3 for radium (EPA 9315/9320); one 500-mL plastic bottle for TDS (EPA 2540C); one 250-mL plastic bottle for Cl, F, SO4 (EPA 300.0); and one 250-mL plastic bottle with HNO3 for App. III and IV metals (EPA 6020B).

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 10 %	+/- 10	+/- 10	+/- 0.3	
4/2/2020 10:36 AM	00:00	8.10 pH	17.19 °C	427.18 µS/cm	4.45 mg/L		163.8 mV	3.53 ft	200.00 ml/min
4/2/2020 10:41 AM	05:00	8.11 pH	18.03 °C	420.78 µS/cm	4.41 mg/L	3.50 NTU	27.3 mV	6.05 ft	200.00 ml/min

Samples

Sample ID:	Description:
MW-27D	Grab

Product Name: Low-Flow System

Date: 2020-03-27 10:36:35

Project Information:		Pump Information:	
Operator Name	Shawn Lin	Pump Model/Type	QED MP50
Company Name	Geosyntec Consultants	Tubing Type	polyethylene
Project Name	GP-Plant Hammond	Tubing Diameter	0.17 in
Site Name	Plant Hammond	Tubing Length	ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	646777		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	ft

Well Information:		Pumping Information:	
Well ID	MW-28D	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.485 L
Well Total Depth	58.14 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	3.6 in
Depth to Water	3.25 ft	Total Volume Pumped	10 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	10:14:43	900.02	18.35	7.38	570.63	2.80	3.35	0.13	-134.71
Last 5	10:19:43	1200.02	18.36	7.39	571.09	2.22	3.35	0.12	-144.48
Last 5	10:24:43	1500.02	18.43	7.40	571.25	1.86	3.35	0.11	-153.05
Last 5	10:29:43	1800.02	18.56	7.41	571.62	1.57	3.35	0.12	-159.53
Last 5	10:34:43	2100.01	18.53	7.42	572.28	1.43	3.35	0.11	-164.29
Variance 0			0.07	0.01	0.16			-0.01	-8.57
Variance 1			0.13	0.01	0.37			0.01	-6.48
Variance 2			-0.03	0.01	0.66			-0.00	-4.76

Notes

Five bottles: Two 1-L plastic bottles with HNO3 for radium (EPA 9315/9320); one 500-mL plastic bottle for TDS (EPA 2540C); one 250-mL plastic bottle for Cl, F, SO4 (EPA 300.0); and one 250-mL plastic bottle with HNO3 for App. III and IV metals (EPA 6020B).

Grab Samples

MW-28D

Grab

Product Name: Low-Flow System

Date: 2020-03-30 15:28:03

Project Information:		Pump Information:	
Operator Name	Nelson Gunby	Pump Model/Type	QED MP50
Company Name	Geosyntec Consultants	Tubing Type	polyethylene
Project Name	GP-Plant Hammond	Tubing Diameter	0.17 in
Site Name	Plant Hammond	Tubing Length	ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	364456		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	ft

Well Information:		Pumping Information:	
Well ID	MW-29	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.485 L
Well Total Depth	28.21 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	3.6 in
Depth to Water	3.65 ft	Total Volume Pumped	9.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	15:05:02	1200.03	13.49	7.09	862.34	3.56	3.72	0.29	46.63
Last 5	15:10:02	1500.03	13.30	7.08	861.61	2.68	3.71	0.25	49.19
Last 5	15:15:02	1800.03	13.28	7.08	862.35	2.65	3.71	0.23	46.04
Last 5	15:20:02	2100.03	13.39	7.07	862.31	1.88	3.71	0.21	46.60
Last 5	15:25:02	2400.04	13.25	7.07	863.09	2.00	3.71	0.23	44.91
Variance 0			-0.02	-0.01	0.75			-0.02	-3.15
Variance 1			0.11	-0.01	-0.04			-0.01	0.56
Variance 2			-0.13	-0.00	0.77			0.01	-1.69

Notes

Five bottles: Two 1-L plastic bottles with HNO3 for radium (EPA 9315/9320); one 500-mL plastic bottle for TDS (EPA 2540C); one 250-mL plastic bottle for Cl, F, SO4 (EPA 300.0); and one 250-mL plastic bottle with HNO3 for App. III and IV metals (EPA 6020B).

Grab Samples
MW-29
Grab

Product Name: Low-Flow System

Date: 2020-03-27 12:15:43

Project Information:		Pump Information:	
Operator Name	Shawn Lin	Pump Model/Type	QED MP50
Company Name	Geosyntec Consultants	Tubing Type	polyethylene
Project Name	GP-Plant Hammond	Tubing Diameter	0.17 in
Site Name	Plant Hammond	Tubing Length	ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	646777		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	ft

Well Information:		Pumping Information:	
Well ID	MW-30D	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.485 L
Well Total Depth	107.5 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	3.6 in
Depth to Water	2.90 ft	Total Volume Pumped	8.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	11:44:50	300.03	18.65	8.01	2435.73	2.72	8.25	0.01	-205.64
Last 5	11:49:50	600.03	18.77	8.03	2381.57	2.72	9.30	0.01	-212.22
Last 5	11:54:55	905.03	18.79	8.04	2352.79	4.26	10.60	0.02	-217.53
Last 5	11:59:55	1205.02	18.92	8.03	2345.63	4.59	11.97	0.02	-225.32
Last 5	12:04:55	1505.02	18.99	8.07	2339.69	--	--	0.03	-257.21
Variance 0			0.02	0.00	-28.78			0.01	-5.30
Variance 1			0.13	-0.00	-7.16			0.01	-7.79
Variance 2			0.07	0.04	-5.94			0.01	-31.89

Notes

iPad malfunctioned. Restarting inSitu app.

Product Name: Low-Flow System

Date: 2020-03-27 13:03:32

Project Information:		Pump Information:	
Operator Name	Shawn Lin	Pump Model/Type	QED MP50
Company Name	Geosyntec Consultants	Tubing Type	polyethylene
Project Name	GP-Plant Hammond	Tubing Diameter	0.17 in
Site Name	Plant Hammond	Tubing Length	ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	646777		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	ft

Well Information:		Pumping Information:	
Well ID	MW-30D	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.485 L
Well Total Depth	107.5 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	3.6 in
Depth to Water	2.90 ft	Total Volume Pumped	14 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	12:39:45	1203.03	19.37	8.07	2313.59	3.53	19.22	0.10	-297.40
Last 5	12:44:45	1503.02	19.48	8.11	2310.74	2.48	20.34	0.11	-301.27
Last 5	12:49:47	1805.02	19.59	8.10	2307.12	2.73	21.00	0.11	-301.99
Last 5	12:54:47	2105.02	19.73	8.10	2317.03	3.14	21.95	0.10	-302.67
Last 5	12:59:49	2407.01	19.70	8.09	2315.44	3.16	22.90	0.12	-302.05
Variance 0			0.11	-0.01	-3.62			-0.00	-0.72
Variance 1			0.14	-0.01	9.91			-0.00	-0.68
Variance 2			-0.02	-0.01	-1.58			0.02	0.62

Notes

Water level was not stabilizing. Stopped purging and will resume on Monday morning.

Product Name: Low-Flow System

Date: 2020-03-30 13:37:14

Project Information:		Pump Information:	
Operator Name	Shawn Lin	Pump Model/Type	QED MP50
Company Name	Geosyntec Consultants	Tubing Type	polyethylene
Project Name	GP-Plant Hammond	Tubing Diameter	0.17 in
Site Name	Plant Hammond	Tubing Length	ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	646777		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	ft

Well Information:		Pumping Information:	
Well ID	MW-30D	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.485 L
Well Total Depth	107.5 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	3.6 in
Depth to Water	14.70 ft	Total Volume Pumped	12 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	13:14:29	5702.95	19.50	8.19	2146.11	1.12	30.90	0.10	-208.97
Last 5	13:19:29	6002.95	19.73	8.19	2150.13	1.00	32.14	0.11	-210.15
Last 5	13:24:29	6302.95	19.68	8.19	2147.77	1.03	32.73	0.10	-209.89
Last 5	13:29:29	6602.94	19.91	8.20	2146.81	0.95	33.32	0.11	-210.31
Last 5	13:34:29	6902.94	20.00	8.20	2141.70	--	--	0.11	-211.23
Variance 0			-0.05	0.00	-2.36			-0.01	0.26
Variance 1			0.23	0.00	-0.96			0.01	-0.42
Variance 2			0.09	0.00	-5.11			0.00	-0.92

Notes

Water level was dropping too fast. Attempted to purge the well dry and wil l try to sample tomorrow. Complete purged volume: 49 L.

Product Name: Low-Flow System

Date: 2020-03-31 09:59:38

Project Information:		Pump Information:	
Operator Name	Shawn Lin	Pump Model/Type	QED MP50
Company Name	Geosyntec Consultants	Tubing Type	polyethylene
Project Name	GP-Plant Hammond	Tubing Diameter	0.17 in
Site Name	Plant Hammond	Tubing Length	ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	646777		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	ft

Well Information:		Pumping Information:	
Well ID	MW-30D	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.485 L
Well Total Depth	107.5 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	3.6 in
Depth to Water	82.88 ft	Total Volume Pumped	1 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	09:56:38	300.03	16.87	8.27	2038.40	4.41	84.07	0.81	-8.43
Last 5									
Last 5									
Last 5									
Last 5									
Variance 0			nan	nan	nan			nan	nan
Variance 1			0.00	0.00	0.00			0.00	0.00
Variance 2			0.00	0.00	0.00			0.00	0.00

Notes

Five bottles: Two 1-L plastic bottles with HNO3 for radium (EPA 9315/9320); one 500-mL plastic bottle for TDS (EPA 2540C); one 250-mL plastic bottle for Cl, F, SO4 (EPA 300.0); and one 250-mL plastic bottle with HNO3 for App. III and IV metals (EPA 6020B).

Grab Samples

MW-30D

Grab

FD-01

Grab

Product Name: Low-Flow System

Date: 2020-04-08 18:08:49

Project Information:		Pump Information:	
Operator Name	Chad Russo	Pump Model/Type	QED MP50
Company Name	Geosyntec Consultants	Tubing Type	polyethylene
Project Name	GP-Plant Hammond	Tubing Diameter	0.17 in
Site Name	Plant Hammond	Tubing Length	102 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	647057		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	102 ft

Well Information:		Pumping Information:	
Well ID	MW-30D	Final Pumping Rate	100 mL/min
Well diameter	2 in	Total System Volume	0.9402692 L
Well Total Depth	107.5 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	3.6 in
Depth to Water	45.42 ft	Total Volume Pumped	94 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	13:42:16	300.05	20.84	7.97	1939.69	0.83	46.87	0.26	-1.34
Last 5	13:52:15	900.01	21.52	8.03	2377.51	2.61	47.93	0.15	9.88
Last 5									
Last 5									
Last 5									
Variance 0			nan	nan	nan			nan	nan
Variance 1			0.68	0.06	437.82			-0.11	11.21
Variance 2			0.00	0.00	0.00			0.00	0.00

Notes

Drawdown too high. Purged dry.

Product Name: Low-Flow System

Date: 2020-04-09 11:33:49

Project Information:		Pump Information:	
Operator Name	Chad Russo	Pump Model/Type	QED MP50
Company Name	Geosyntec Consultants	Tubing Type	polyethylene
Project Name	GP-Plant Hammond	Tubing Diameter	0.17 in
Site Name	Plant Hammond	Tubing Length	102 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	647057		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	102 ft

Well Information:		Pumping Information:	
Well ID	MW-30D	Final Pumping Rate	100 mL/min
Well diameter	2 in	Total System Volume	0.9402692 L
Well Total Depth	107.5 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	3.6 in
Depth to Water	73.8 ft	Total Volume Pumped	2 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	11:20:34	300.05	19.93	8.28	1860.06	7.47	74.89	0.13	27.48
Last 5	11:25:34	600.01	20.29	8.31	2029.56	7.40	75.14	0.56	10.16
Last 5	11:30:34	900.01	21.03	8.27	2149.40	4.35	75.36	1.30	3.31
Last 5									
Last 5									
Variance 0			nan	nan	nan			nan	nan
Variance 1			0.36	0.03	169.50			0.43	-17.33
Variance 2			0.74	-0.04	119.84			0.74	-6.85

Notes

Four bottles: One 250-mL plastic bottle for alkalinity/bicarbonate (SM 2320B); one 250-mL plastic bottle for Cl, and SO4 (EPA 300.0); one 250-mL plastic bottle with HNO3 for metals (EPA 6010/6020B), and one 125-mL plastic bottle with for sulfide (SM 4500).

Grab Samples

MW-30D

Grab

Geosyntec consultants

GROUNDWATER SAMPLING LOG SHEET

Client: SCS
Site: Hammond
Well ID: MW-40D
Total Depth (ft): 141.6
Depth to Water (ft): 135.85
Well Diameter (in): 2
Well Volume (gal) = 0.041d²h: 0.94
Well Volume (L) = gal * 3.785: 3.57
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

Project No.: GW6581
Location: AP-1
Pump Type/Model: bladder
Tubing Material: poly
Pump Intake Depth (ft): 140
Start/Stop Purge Time: 1335/
Purge Rate (mL/min): —
Total Purge Volume (L): —
Purge Method: Low-Flow / Well Volume / Other: Dry purge with bailer previously ~~Low-Flow~~ (WA)
Sampling Method: Pump Discharge / Other: Bailer ~~Pump Discharge~~ (WA)

Sampling Date: 5/11/2020
Sampler's Name: Chad Russo
Sample Collection Time: 1405
Sample Purge Rate (mL/min): —
Sample ID: MW-40D
Laboratory Analyses: App. III + Mo
QA/QC Collected? No
QA/QC I.D. —

All sample containers requiring chemical preservation properly preserved prior to demob from well? 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.)
1405	7.77	578.9	413.1	3.05	19.14	97.1	135.85	—	—	grab sample w/ bailer
						CR				
						5/12/2020				
Stabilizing Criteria	**+/- 0.1 SU**	**+/- 5%**		0.2 mg/L or 10% for DO > 0.5 mg/L (whichever is greater)		**< 5 NTUs**	**< 0.3 ft**	**> 100 mL < 250 mL**	**> 3L**	

Product Name: Low-Flow System

Date: 2020-06-16 09:44:44

Project Information:		Pump Information:	
Operator Name	Chad Russo	Pump Model/Type	QED MP50
Company Name	Geosyntec Consultants	Tubing Type	polyethylene
Project Name	GP-Plant Hammond	Tubing Diameter	0.17 in
Site Name	Plant Hammond	Tubing Length	27 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	643819		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	27 ft

Well Information:		Pumping Information:	
Well ID	HGWA-1	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.6055124 L
Well Total Depth	32.5 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	3.6 in
Depth to Water	17.81 ft	Total Volume Pumped	7 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	09:23:13	600.02	16.95	6.92	872.40	0.01	18.42	0.94	79.88
Last 5	09:28:13	900.02	16.95	6.94	873.60	0.00	18.42	0.80	72.33
Last 5	09:33:13	1200.03	16.97	6.95	871.90	0.00	18.42	0.79	66.63
Last 5	09:38:13	1500.02	16.96	6.96	866.33	0.00	18.44	0.71	62.19
Last 5	09:43:13	1800.02	17.01	6.97	862.15	0.00	18.48	0.73	58.88
Variance 0			0.02	0.02	-1.69			-0.01	-5.70
Variance 1			-0.00	0.01	-5.57			-0.08	-4.44
Variance 2			0.04	0.01	-4.18			0.01	-3.32

Notes

Five bottles: One 500-mL plastic bottle for TDS (EPA 2540C); one 250-mL plastic bottle for Cl, F, SO4 (EPA 300.0); one 250-mL plastic bottle with HNO3 for App. III and IV metals (EPA 6020B), one 250-mL plastic bottle for Alkalinity (2320B); and one 125-mL plastic bottle with ZnAc + NaOH for sulfide (4500S2D).

Grab Samples

HGWA-1

Grab

Product Name: Low-Flow System

Date: 2020-06-16 11:13:33

Project Information:		Pump Information:	
Operator Name	Chad Russo	Pump Model/Type	QED MP50
Company Name	Geosyntec Consultants	Tubing Type	polyethylene
Project Name	GP-Plant Hammond	Tubing Diameter	0.17 in
Site Name	Plant Hammond	Tubing Length	40 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	643819		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	40 ft

Well Information:		Pumping Information:	
Well ID	HGWA-3	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.6635369 L
Well Total Depth	44.87 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	3.6 in
Depth to Water	8.64 ft	Total Volume Pumped	8 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	10:50:57	900.02	17.99	7.27	452.79	8.14	8.64	0.32	19.36
Last 5	10:55:57	1200.02	17.99	7.28	451.76	7.36	8.64	0.29	16.90
Last 5	11:00:57	1500.03	17.93	7.30	450.79	7.05	8.64	0.24	15.34
Last 5	11:05:57	1800.02	17.90	7.30	450.49	6.21	8.64	0.21	13.65
Last 5	11:10:57	2100.02	17.93	7.31	449.79	3.43	8.64	0.20	12.49
Variance 0			-0.06	0.01	-0.96			-0.05	-1.56
Variance 1			-0.02	0.01	-0.31			-0.02	-1.69
Variance 2			0.03	0.01	-0.70			-0.01	-1.16

Notes

Five bottles: One 500-mL plastic bottle for TDS (EPA 2540C); one 250-mL plastic bottle for Cl, F, SO4 (EPA 300.0); one 250-mL plastic bottle with HNO3 for App. III and IV metals (EPA 6020B), one 250-mL plastic bottle for Alkalinity (2320B); and one 125-mL plastic bottle with ZnAc + NaOH for sulfide (4500S2D).

Grab Samples

HGWA-3

Grab

Product Name: Low-Flow System

Date: 2020-06-17 12:57:22

Project Information:		Pump Information:	
Operator Name	Chad Russo	Pump Model/Type	QED MP50
Company Name	Geosyntec Consultants	Tubing Type	polyethylene
Project Name	GP-Plant Hammond	Tubing Diameter	0.17 in
Site Name	Plant Hammond	Tubing Length	23 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	643819		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	23 ft

Well Information:		Pumping Information:	
Well ID	HGWC-7	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.5876587 L
Well Total Depth	28.17 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	3.6 in
Depth to Water	4.86 ft	Total Volume Pumped	37 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	12:35:49	9599.99	19.96	7.20	653.09	10.26	4.90	0.13	12.47
Last 5	12:40:49	9900.05	20.08	7.19	652.71	11.24	4.90	0.12	12.49
Last 5	12:45:49	10200.02	20.22	7.19	652.36	9.31	4.90	0.12	12.31
Last 5	12:50:49	10499.99	20.17	7.19	652.19	8.43	4.90	0.12	12.41
Last 5	12:55:49	10799.99	20.08	7.20	652.71	7.39	4.90	0.12	12.45
Variance 0			0.14	0.00	-0.35			-0.00	-0.17
Variance 1			-0.05	0.00	-0.17			-0.00	0.10
Variance 2			-0.09	0.00	0.52			-0.00	0.03

Notes

Five bottles: One 500-mL plastic bottle for TDS (EPA 2540C); one 250-mL plastic bottle for Cl, F, SO4 (EPA 300.0); one 250-mL plastic bottle with HNO3 for App. III and IV metals (EPA 6020B), one 250-mL plastic bottle for Alkalinity (2320B); and one 125-mL plastic bottle with ZnAc + NaOH for sulfide (4500S2D).

Grab Samples

HGWC-7

Grab

Product Name: Low-Flow System

Date: 2020-06-16 15:12:06

Project Information:		Pump Information:	
Operator Name	Shawn Lin	Pump Model/Type	QED MP50
Company Name	Geosyntec Consultants	Tubing Type	polyethylene
Project Name	GP-Plant Hammond	Tubing Diameter	0.17 in
Site Name	Plant Hammond	Tubing Length	ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	597519		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	ft

Well Information:		Pumping Information:	
Well ID	HGWC-8	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.485 L
Well Total Depth	25.06 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	3.6 in
Depth to Water	4.21 ft	Total Volume Pumped	5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	14:59:20	300.02	21.25	6.99	813.02	1.58	4.21	0.11	129.75
Last 5	15:04:20	600.02	21.33	6.98	814.06	1.50	4.21	0.11	135.38
Last 5	15:09:20	900.02	20.71	6.97	813.90	1.37	4.21	0.11	139.72
Last 5									
Last 5									
Variance 0			nan	nan	nan			nan	nan
Variance 1			0.08	-0.01	1.04			0.00	5.63
Variance 2			-0.63	-0.00	-0.16			-0.00	4.34

Notes

Five bottles: One 500-mL plastic bottle for TDS (EPA 2540C); one 250-mL plastic bottle for Cl, F, SO4 (EPA 300.0); one 250-mL plastic bottle with HNO3 for App. III and IV metals (EPA 6020B), one 250-mL plastic bottle for Alkalinity (2320B); and one 125-mL plastic bottle with ZnAc + NaOH for sulfide (4500S2D).

Grab Samples

HGWC-8

Grab

Product Name: Low-Flow System

Date: 2020-06-16 14:07:01

Project Information:		Pump Information:	
Operator Name	Shawn Lin	Pump Model/Type	Alexis
Company Name	Geosyntec Consultants	Tubing Type	polyethylene
Project Name	GP-Plant Hammond	Tubing Diameter	0.17 in
Site Name	Plant Hammond	Tubing Length	ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	597519		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	ft

Well Information:		Pumping Information:	
Well ID	MW-1	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.09 L
Well Total Depth	31.21 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	3.6 in
Depth to Water	9.9 ft	Total Volume Pumped	8.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	13:40:37	600.02	20.00	6.87	914.59	9.51	10.19	0.24	59.64
Last 5	13:45:37	900.02	20.22	6.86	911.02	6.32	10.19	0.19	69.80
Last 5	13:55:37	1500.02	20.22	6.86	913.78	4.79	10.19	0.12	82.28
Last 5	14:00:37	1800.02	20.40	6.86	911.07	4.41	10.19	0.11	86.41
Last 5	14:05:37	2100.02	20.47	6.86	908.89	2.91	10.19	0.09	88.95
Variance 0			0.00	-0.01	2.76			-0.07	12.48
Variance 1			0.18	0.00	-2.71			-0.01	4.13
Variance 2			0.07	-0.00	-2.18			-0.02	2.55

Notes

Five bottles: One 500-mL plastic bottle for TDS (EPA 2540C); one 250-mL plastic bottle for Cl, F, SO4 (EPA 300.0); one 250-mL plastic bottle with HNO3 for App. III and IV metals (EPA 6020B), one 250-mL plastic bottle for Alkalinity (2320B); and one 125-mL plastic bottle with ZnAc + NaOH for sulfide (4500S2D).

Grab Samples

MW-1

Grab

Product Name: Low-Flow System

Date: 2020-06-16 13:37:21

Project Information:		Pump Information:	
Operator Name	Chad Russo	Pump Model/Type	QED MP50
Company Name	Geosyntec Consultants	Tubing Type	polyethylene
Project Name	GP-Plant Hammond	Tubing Diameter	0.17 in
Site Name	Plant Hammond	Tubing Length	102.5 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	643819		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	102.5 ft

Well Information:		Pumping Information:	
Well ID	MW-30D	Final Pumping Rate	100 mL/min
Well diameter	2 in	Total System Volume	0.9425008 L
Well Total Depth	107.5 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	3.6 in
Depth to Water	2.89 ft	Total Volume Pumped	54 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	13:15:49	2400.02	21.29	8.29	1423.39	2.29	9.51	0.04	-287.73
Last 5	13:20:49	2700.02	20.86	8.35	1398.42	2.19	10.67	0.04	-288.58
Last 5	13:25:49	3000.02	20.40	8.39	1377.43	2.80	12.50	0.05	-288.77
Last 5	13:30:49	3300.02	20.09	8.42	1378.76	2.21	13.62	0.08	-289.19
Last 5	13:35:49	3600.02	19.94	8.45	1374.90	2.78	14.90	0.10	-288.29
Variance 0			-0.45	0.04	-20.99			0.01	-0.19
Variance 1			-0.32	0.03	1.33			0.02	-0.43
Variance 2			-0.14	0.03	-3.86			0.02	0.90

Notes

Purge dry

Product Name: Low-Flow System

Date: 2020-06-17 13:42:31

Project Information:		Pump Information:	
Operator Name	Chad Russo	Pump Model/Type	QED MP50
Company Name	Geosyntec Consultants	Tubing Type	polyethylene
Project Name	GP-Plant Hammond	Tubing Diameter	0.17 in
Site Name	Plant Hammond	Tubing Length	102.5 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	643819		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	102.5 ft

Well Information:		Pumping Information:	
Well ID	MW-30D	Final Pumping Rate	100 mL/min
Well diameter	2 in	Total System Volume	0.9425008 L
Well Total Depth	107.5 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	3.6 in
Depth to Water	68.6 ft	Total Volume Pumped	1 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	13:39:43	300.05	20.92	8.33	1479.02	19.10	69.61	0.23	16.84
Last 5									
Last 5									
Last 5									
Last 5									
Variance 0			nan	nan	nan			nan	nan
Variance 1			0.00	0.00	0.00			0.00	0.00
Variance 2			0.00	0.00	0.00			0.00	0.00

Notes

Five bottles: One 500-mL plastic bottle for TDS (EPA 2540C); one 250-mL plastic bottle for Cl, F, SO4 (EPA 300.0); one 250-mL plastic bottle with HNO3 for App. III and IV metals (EPA 6020B), one 250-mL plastic bottle for Alkalinity (2320B); and one 125-mL plastic bottle with ZnAc + NaOH for sulfide (4500S2D).

Grab Samples

MW-30D

Grab

MW-30D Filtered

Grab

Geosyntec consultants

GROUNDWATER SAMPLING LOG SHEET

Client: SES
Site: Hammond
Well ID: MW-40D
Total Depth (ft): 136.85
Depth to Water (ft): 140.64
Well Diameter (in): 2
Well Volume (gal) = 0.041d²h: 0.62
Well Volume (L) = gal * 3.785: 2.35
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

Project No.: GW6581
Location: AP-1
Pump Type/Model: Bailer
Tubing Material: N/A
Pump Intake Depth (ft): 140
Start/Stop Purge Time: —
Purge Rate (mL/min): —
Total Purge Volume (L): —
Purge Method: Low-Flow Well Volume Other: Bailer
Sampling Method: Pump Discharge Other: Bailer

Sampling Date: 6/19/2026
Sampler's Name: Chad Bo~~x~~
Sample Collection Time: ~~1020~~ 1025
Sample Purge Rate (mL/min): —
Sample ID: MW-40D
Laboratory Analyses: App III + Mo + ions
QA/QC Collected? —
QA/QC I.D. —

All sample containers requiring chemical preservation properly preserved prior to demob from well? (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.)
1020	7.4	2117	98.4	3.1	28.27	22.3	136.85	—	—	
1025										grab sample
						CR				
						6/19/2026				
Stabilizing Criteria	**+/- 0.1 SU**	**+/- 5%**		0.2 mg/L or 10% for DO > 0.5 mg/L (whichever is greater)		**< 5 NTUs**	**< 0.3 ft**	**> 100 mL < 250 mL**	**> 3L**	

APPENDIX E

Statistical Analyses

GROUNDWATER STATS CONSULTING

August 26, 2020

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

Re: Plant Hammond Ash Pond 1 (AP-1)
Statistical Analysis – March 2020 Sample Event

Dear Ms. Jurinko,

Groundwater Stats Consulting, formerly the statistical consulting division of Sanitas Technologies, is pleased to provide the March 2020 Semi-Annual Groundwater Monitoring and Corrective Action Statistical summary of the analysis of groundwater quality for Georgia Power Company's Plant Hammond AP-1. 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 Rules for Solid Waste Management Chapter 391-3-4-.10, and follows the USEPA Unified Guidance (2009).

Sampling began for the CCR program in 2016, and at least 8 background samples have been collected at each of the groundwater monitoring wells. The monitoring well network, as provided by Southern Company Services, consists of the following:

- **Upgradient wells:** HGWA-1, HGWA-2, HGWA-3
- **Downgradient wells:** HGWC-7, HGWC-8, HGWC-9, HGWC-10, HGWC-11, HGWC-12, HGWC-13

Additionally, sampling began in March 2019 for the majority of the following delineation wells, which are analyzed in an addendum report. Exceptions to this include well MW-30D where sampling began in September 2019 and wells MW-40D with the first sample event conducted in May 2020. The results of those findings are discussed in the Groundwater Monitoring Report prepared by Geosyntec:

- **Delineation wells:** MW-5, MW-6, MW-7, MW-19, MW-20, MW-24D, MW-25D, MW-26D, MW-27D, MW-28D, MW-29, MW-30D, MW-40D

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 CCR program consists of the following constituents:

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

Note that when there are no detections present in downgradient wells for a given constituent, statistical analyses are not required. A summary of well/constituent pairs with 100% nondetects follows this letter. A substitution of the most recent reporting limit is used for nondetect data. Mercury was not detected during the Scan event in March 2020; therefore, no statistical analyses were required for these constituents.

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

- Interwell Prediction Limits combined with 1-of-2 resamples for: 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 nondetects, 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% nondetects (USEPA Unified Guidance, 2009, Chapter 6).
- When data contain <15% nondetects in background, simple substitution of one-half the reporting limit is utilized in the statistical analysis. The reporting limit utilized for nondetects is the practical quantification limit (PQL) as reported by the laboratory.
- When data contain between 15-50% nondetects, the Kaplan-Meier nondetect 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% nondetects.

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 Analysis of Appendix III Parameters – March 2020

Interwell prediction limits, combined with a 1-of-2 resample plan, were constructed using all historical upgradient well data through March 2020 (Figure D). Interwell prediction limits pool upgradient well data to establish a background limit for an individual constituent. The most recent sample from each downgradient well is compared to the background limit to determine whether there are 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 a resample confirms the initial exceedance, a statistically significant increase is identified and further research would be required to identify the cause of the exceedance (i.e. impact from the site, natural variation, or an off-site source). If the resample falls within the statistical limit, the initial exceedance is considered to be a false positive result and, therefore, no exceedance is noted and no further action is necessary. If no resample is collected, the original result is considered a confirmed exceedance.

When the March 2020 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 wells are included in the trend analyses for all parameters found to exceed their prediction limit in downgradient wells to identify whether similar patterns exist upgradient of the site which is an indication of natural variability in groundwater unrelated to practices at the site. A summary of the trend test results follows this letter. Statistically significant trends were noted for the following well/constituent pairs:

Increasing trends:

- Boron: HGWC-8 and HGWC-9
- Sulfate: HGWA-3 (upgradient)

Decreasing trends:

- Calcium: HGWC-12
- Chloride: HGWC-12
- Sulfate: HGWC-12
- TDS: HGWC-12

Statistical Analysis of Appendix IV Parameters – March 2020

Interwell tolerance limits were used to calculate the site-specific background limits from pooled upgradient well data for Appendix IV constituents (Figure F). Note that the tolerance limit for combined radium 226 + 228 increased slightly during this event compared to the Fall 2019 event due to the most recent reported concentration in upgradient well HGWA-1. The background limit, however, remains below the established maximum contaminant level of 5 pCi/L which is used as the Groundwater Protection Standard as discussed below. If the radium concentrations at this well do not remain at the current reported concentration, this value may be flagged as an outlier in the future and deselected prior to construction of tolerance limits.

Parametric tolerance limits are used when data follow a normal or transformed-normal distribution. When data contained greater than 50% nondetects 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).

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 2020 sample event (Figures G and H, respectively).

To complete the statistical comparison to GWPS, State and Federal confidence intervals were constructed for the Appendix IV constituents in accordance with the federal and state requirements in each downgradient well (Figures I and J, respectively). The Sanitas software was used to calculate the tolerance limits and the confidence intervals. The confidence intervals were compared to the GWPS established using the CCR Rules for the Federal requirements and the Georgia EPD Rules 391-3-4-.10(6)(a) for the State requirements. Only when the entire confidence interval is above a GWPS is the downgradient well/constituent pair considered to exceed its respective standard. Summaries of the confidence intervals follow this letter. If there is an exceedance of the GWPS, a statistically significant level (SSL) exceedance is identified. Exceedances were noted for the following well/constituent pairs:

Federal:

- Arsenic: HGWC-13
- Molybdenum: HGWC-8

State:

- Arsenic: HGWC-13
- Lithium: HGWC-13
- Molybdenum: HGWC-7, HGWC-8, HGWC-9, HGWC-11, HGWC-12, and HGWC-13

Thank you for the opportunity to assist you in the statistical analysis of groundwater quality for Hammond AP-1. 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% Nondetect Well-Constituent Pairs

Date: 6/2/2020 6:03 PM

Plant Hammond Client: Southern Company Data: Hammond AP-1

Antimony (mg/L)

HGWA-2, HGWC-10, HGWC-11, HGWC-12, HGWC-7, HGWC-8

Arsenic (mg/L)

HGWC-10, HGWC-8

Beryllium (mg/L)

HGWA-1, HGWA-3, HGWC-10, HGWC-12, HGWC-9

Cadmium (mg/L)

HGWA-1, HGWA-3, HGWC-13

Cobalt (mg/L)

HGWA-3

Lithium (mg/L)

HGWC-10, HGWC-11

Mercury (mg/L)

HGWA-3, HGWC-12, HGWC-7, HGWC-8

Molybdenum (mg/L)

HGWA-1, HGWA-2, HGWA-3

Selenium (mg/L)

HGWA-1, HGWA-2, HGWA-3, HGWC-7

Thallium (mg/L)

HGWA-1, HGWA-3, HGWC-10, HGWC-7, HGWC-9

Interwell Prediction Limits - Significant Results

Plant Hammond Client: Southern Company Data: Hammond AP-1 Printed 6/2/2020, 4:35 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Boron (mg/L)	HGWC-10	0.0592	n/a	4/1/2020	0.23	Yes	42	0.1482	0.04839	4.762	None	sqrt(x)	0.001075	Param Inter 1 of 2
Boron (mg/L)	HGWC-11	0.0592	n/a	3/31/2020	0.17	Yes	42	0.1482	0.04839	4.762	None	sqrt(x)	0.001075	Param Inter 1 of 2
Boron (mg/L)	HGWC-12	0.0592	n/a	3/26/2020	1.6	Yes	42	0.1482	0.04839	4.762	None	sqrt(x)	0.001075	Param Inter 1 of 2
Boron (mg/L)	HGWC-13	0.0592	n/a	3/30/2020	1.8	Yes	42	0.1482	0.04839	4.762	None	sqrt(x)	0.001075	Param Inter 1 of 2
Boron (mg/L)	HGWC-7	0.0592	n/a	3/27/2020	1.2	Yes	42	0.1482	0.04839	4.762	None	sqrt(x)	0.001075	Param Inter 1 of 2
Boron (mg/L)	HGWC-8	0.0592	n/a	3/27/2020	2.4	Yes	42	0.1482	0.04839	4.762	None	sqrt(x)	0.001075	Param Inter 1 of 2
Boron (mg/L)	HGWC-9	0.0592	n/a	3/31/2020	2.2	Yes	42	0.1482	0.04839	4.762	None	sqrt(x)	0.001075	Param Inter 1 of 2
Calcium (mg/L)	HGWC-12	138	n/a	3/26/2020	145	Yes	42	n/a	n/a	0	n/a	n/a	0.001046	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-13	138	n/a	3/30/2020	234	Yes	42	n/a	n/a	0	n/a	n/a	0.001046	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-9	138	n/a	3/31/2020	182	Yes	42	n/a	n/a	0	n/a	n/a	0.001046	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-12	20.4	n/a	3/26/2020	48	Yes	42	n/a	n/a	0	n/a	n/a	0.001046	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-13	20.4	n/a	3/30/2020	75.1	Yes	42	n/a	n/a	0	n/a	n/a	0.001046	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-7	20.4	n/a	3/27/2020	48.3	Yes	42	n/a	n/a	0	n/a	n/a	0.001046	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-8	20.4	n/a	3/27/2020	79.8	Yes	42	n/a	n/a	0	n/a	n/a	0.001046	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-9	20.4	n/a	3/31/2020	105	Yes	42	n/a	n/a	0	n/a	n/a	0.001046	NP Inter (normality) 1 of 2
Fluoride (mg/L)	HGWC-13	0.36	n/a	3/30/2020	0.44	Yes	51	n/a	n/a	35.29	n/a	n/a	0.0007158	NP Inter (normality) 1 of 2
Fluoride (mg/L)	HGWC-8	0.36	n/a	3/27/2020	0.46	Yes	51	n/a	n/a	35.29	n/a	n/a	0.0007158	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-11	85.9	n/a	3/31/2020	283	Yes	42	n/a	n/a	0	n/a	n/a	0.001046	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-12	85.9	n/a	3/26/2020	182	Yes	42	n/a	n/a	0	n/a	n/a	0.001046	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-13	85.9	n/a	3/30/2020	393	Yes	42	n/a	n/a	0	n/a	n/a	0.001046	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-7	85.9	n/a	3/27/2020	109	Yes	42	n/a	n/a	0	n/a	n/a	0.001046	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-8	85.9	n/a	3/27/2020	173	Yes	42	n/a	n/a	0	n/a	n/a	0.001046	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-9	85.9	n/a	3/31/2020	185	Yes	42	n/a	n/a	0	n/a	n/a	0.001046	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-11	483.4	n/a	3/31/2020	565	Yes	42	267.4	109.9	0	None	No	0.001075	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	HGWC-12	483.4	n/a	3/26/2020	533	Yes	42	267.4	109.9	0	None	No	0.001075	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	HGWC-13	483.4	n/a	3/30/2020	895	Yes	42	267.4	109.9	0	None	No	0.001075	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	HGWC-8	483.4	n/a	3/27/2020	541	Yes	42	267.4	109.9	0	None	No	0.001075	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	HGWC-9	483.4	n/a	3/31/2020	1010	Yes	42	267.4	109.9	0	None	No	0.001075	Param Inter 1 of 2

Interwell Prediction Limits - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-1 Printed 6/2/2020, 4:35 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Boron (mg/L)	**HGWC-10**	**0.0592**	**n/a**	**4/1/2020**	**0.23**	**Yes**	**42**	**0.1482**	**0.04839**	**4.762**	**None**	**sqrt(x)**	**0.001075**	**Param Inter 1 of 2**
Boron (mg/L)	**HGWC-11**	**0.0592**	**n/a**	**3/31/2020**	**0.17**	**Yes**	**42**	**0.1482**	**0.04839**	**4.762**	**None**	**sqrt(x)**	**0.001075**	**Param Inter 1 of 2**
Boron (mg/L)	**HGWC-12**	**0.0592**	**n/a**	**3/26/2020**	**1.6**	**Yes**	**42**	**0.1482**	**0.04839**	**4.762**	**None**	**sqrt(x)**	**0.001075**	**Param Inter 1 of 2**
Boron (mg/L)	**HGWC-13**	**0.0592**	**n/a**	**3/30/2020**	**1.8**	**Yes**	**42**	**0.1482**	**0.04839**	**4.762**	**None**	**sqrt(x)**	**0.001075**	**Param Inter 1 of 2**
Boron (mg/L)	**HGWC-7**	**0.0592**	**n/a**	**3/27/2020**	**1.2**	**Yes**	**42**	**0.1482**	**0.04839**	**4.762**	**None**	**sqrt(x)**	**0.001075**	**Param Inter 1 of 2**
Boron (mg/L)	**HGWC-8**	**0.0592**	**n/a**	**3/27/2020**	**2.4**	**Yes**	**42**	**0.1482**	**0.04839**	**4.762**	**None**	**sqrt(x)**	**0.001075**	**Param Inter 1 of 2**
Boron (mg/L)	**HGWC-9**	**0.0592**	**n/a**	**3/31/2020**	**2.2**	**Yes**	**42**	**0.1482**	**0.04839**	**4.762**	**None**	**sqrt(x)**	**0.001075**	**Param Inter 1 of 2**
Calcium (mg/L)	HGWC-10	138	n/a	4/1/2020	96.2	No	42	n/a	n/a	0	n/a	n/a	0.001046	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-11	138	n/a	3/31/2020	124	No	42	n/a	n/a	0	n/a	n/a	0.001046	NP Inter (normality) 1 of 2
Calcium (mg/L)	**HGWC-12**	**138**	**n/a**	**3/26/2020**	**145**	**Yes**	**42**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.001046**	**NP Inter (normality) 1 of 2**
Calcium (mg/L)	**HGWC-13**	**138**	**n/a**	**3/30/2020**	**234**	**Yes**	**42**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.001046**	**NP Inter (normality) 1 of 2**
Calcium (mg/L)	HGWC-7	138	n/a	3/27/2020	119	No	42	n/a	n/a	0	n/a	n/a	0.001046	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-8	138	n/a	3/27/2020	133	No	42	n/a	n/a	0	n/a	n/a	0.001046	NP Inter (normality) 1 of 2
Calcium (mg/L)	**HGWC-9**	**138**	**n/a**	**3/31/2020**	**182**	**Yes**	**42**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.001046**	**NP Inter (normality) 1 of 2**
Chloride (mg/L)	HGWC-10	20.4	n/a	4/1/2020	5.4	No	42	n/a	n/a	0	n/a	n/a	0.001046	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-11	20.4	n/a	3/31/2020	3.2	No	42	n/a	n/a	0	n/a	n/a	0.001046	NP Inter (normality) 1 of 2
Chloride (mg/L)	**HGWC-12**	**20.4**	**n/a**	**3/26/2020**	**48**	**Yes**	**42**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.001046**	**NP Inter (normality) 1 of 2**
Chloride (mg/L)	**HGWC-13**	**20.4**	**n/a**	**3/30/2020**	**75.1**	**Yes**	**42**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.001046**	**NP Inter (normality) 1 of 2**
Chloride (mg/L)	**HGWC-7**	**20.4**	**n/a**	**3/27/2020**	**48.3**	**Yes**	**42**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.001046**	**NP Inter (normality) 1 of 2**
Chloride (mg/L)	**HGWC-8**	**20.4**	**n/a**	**3/27/2020**	**79.8**	**Yes**	**42**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.001046**	**NP Inter (normality) 1 of 2**
Chloride (mg/L)	**HGWC-9**	**20.4**	**n/a**	**3/31/2020**	**105**	**Yes**	**42**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.001046**	**NP Inter (normality) 1 of 2**
Fluoride (mg/L)	HGWC-10	0.36	n/a	4/1/2020	0.12	No	51	n/a	n/a	35.29	n/a	n/a	0.0007158	NP Inter (normality) 1 of 2
Fluoride (mg/L)	HGWC-11	0.36	n/a	3/31/2020	0.19	No	51	n/a	n/a	35.29	n/a	n/a	0.0007158	NP Inter (normality) 1 of 2
Fluoride (mg/L)	HGWC-12	0.36	n/a	3/26/2020	0.17	No	51	n/a	n/a	35.29	n/a	n/a	0.0007158	NP Inter (normality) 1 of 2
Fluoride (mg/L)	**HGWC-13**	**0.36**	**n/a**	**3/30/2020**	**0.44**	**Yes**	**51**	**n/a**	**n/a**	**35.29**	**n/a**	**n/a**	**0.0007158**	**NP Inter (normality) 1 of 2**
Fluoride (mg/L)	HGWC-7	0.36	n/a	3/27/2020	0.059	No	51	n/a	n/a	35.29	n/a	n/a	0.0007158	NP Inter (normality) 1 of 2
Fluoride (mg/L)	**HGWC-8**	**0.36**	**n/a**	**3/27/2020**	**0.46**	**Yes**	**51**	**n/a**	**n/a**	**35.29**	**n/a**	**n/a**	**0.0007158**	**NP Inter (normality) 1 of 2**
Fluoride (mg/L)	HGWC-9	0.36	n/a	3/31/2020	0.074	No	51	n/a	n/a	35.29	n/a	n/a	0.0007158	NP Inter (normality) 1 of 2
pH (s.u.)	HGWC-10	7.47	4.9	4/1/2020	6.84	No	51	n/a	n/a	0	n/a	n/a	0.001432	NP Inter (normality) 1 of 2
pH (s.u.)	HGWC-11	7.47	4.9	3/31/2020	5.7	No	51	n/a	n/a	0	n/a	n/a	0.001432	NP Inter (normality) 1 of 2
pH (s.u.)	HGWC-12	7.47	4.9	3/26/2020	6.99	No	51	n/a	n/a	0	n/a	n/a	0.001432	NP Inter (normality) 1 of 2
pH (s.u.)	HGWC-13	7.47	4.9	3/30/2020	6.91	No	51	n/a	n/a	0	n/a	n/a	0.001432	NP Inter (normality) 1 of 2
pH (s.u.)	HGWC-7	7.47	4.9	3/27/2020	7.05	No	51	n/a	n/a	0	n/a	n/a	0.001432	NP Inter (normality) 1 of 2
pH (s.u.)	HGWC-8	7.47	4.9	3/27/2020	6.95	No	51	n/a	n/a	0	n/a	n/a	0.001432	NP Inter (normality) 1 of 2
pH (s.u.)	HGWC-9	7.47	4.9	3/31/2020	7.07	No	51	n/a	n/a	0	n/a	n/a	0.001432	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-10	85.9	n/a	4/1/2020	59	No	42	n/a	n/a	0	n/a	n/a	0.001046	NP Inter (normality) 1 of 2
Sulfate (mg/L)	**HGWC-11**	**85.9**	**n/a**	**3/31/2020**	**283**	**Yes**	**42**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.001046**	**NP Inter (normality) 1 of 2**
Sulfate (mg/L)	**HGWC-12**	**85.9**	**n/a**	**3/26/2020**	**182**	**Yes**	**42**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.001046**	**NP Inter (normality) 1 of 2**
Sulfate (mg/L)	**HGWC-13**	**85.9**	**n/a**	**3/30/2020**	**393**	**Yes**	**42**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.001046**	**NP Inter (normality) 1 of 2**
Sulfate (mg/L)	**HGWC-7**	**85.9**	**n/a**	**3/27/2020**	**109**	**Yes**	**42**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.001046**	**NP Inter (normality) 1 of 2**
Sulfate (mg/L)	**HGWC-8**	**85.9**	**n/a**	**3/27/2020**	**173**	**Yes**	**42**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.001046**	**NP Inter (normality) 1 of 2**
Sulfate (mg/L)	**HGWC-9**	**85.9**	**n/a**	**3/31/2020**	**185**	**Yes**	**42**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.001046**	**NP Inter (normality) 1 of 2**
Total Dissolved Solids (mg/L)	HGWC-10	483.4	n/a	4/1/2020	290	No	42	267.4	109.9	0	None	No	0.001075	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	**HGWC-11**	**483.4**	**n/a**	**3/31/2020**	**565**	**Yes**	**42**	**267.4**	**109.9**	**0**	**None**	**No**	**0.001075**	**Param Inter 1 of 2**
Total Dissolved Solids (mg/L)	**HGWC-12**	**483.4**	**n/a**	**3/26/2020**	**533**	**Yes**	**42**	**267.4**	**109.9**	**0**	**None**	**No**	**0.001075**	**Param Inter 1 of 2**
Total Dissolved Solids (mg/L)	**HGWC-13**	**483.4**	**n/a**	**3/30/2020**	**895**	**Yes**	**42**	**267.4**	**109.9**	**0**	**None**	**No**	**0.001075**	**Param Inter 1 of 2**
Total Dissolved Solids (mg/L)	HGWC-7	483.4	n/a	3/27/2020	413	No	42	267.4	109.9	0	None	No	0.001075	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	**HGWC-8**	**483.4**	**n/a**	**3/27/2020**	**541**	**Yes**	**42**	**267.4**	**109.9**	**0**	**None**	**No**	**0.001075**	**Param Inter 1 of 2**
Total Dissolved Solids (mg/L)	**HGWC-9**	**483.4**	**n/a**	**3/31/2020**	**1010**	**Yes**	**42**	**267.4**	**109.9**	**0**	**None**	**No**	**0.001075**	**Param Inter 1 of 2**

Appendix III Trend Tests - Significant Results

Plant Hammond Client: Southern Company Data: Hammond AP-1 Printed 6/2/2020, 4:39 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Boron (mg/L)	**HGWA-2 (bg)**	**0.001791**	**45**	**44**	**Yes**	**14**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Boron (mg/L)	**HGWC-7**	**0.06141**	**48**	**44**	**Yes**	**14**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Boron (mg/L)	**HGWC-8**	**0.3688**	**66**	**44**	**Yes**	**14**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Boron (mg/L)	**HGWC-9**	**0.2649**	**60**	**44**	**Yes**	**14**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Calcium (mg/L)	**HGWC-12**	**-24.12**	**-64**	**-44**	**Yes**	**14**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Chloride (mg/L)	**HGWC-12**	**-32.73**	**-63**	**-44**	**Yes**	**14**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Sulfate (mg/L)	**HGWA-3 (bg)**	**2.216**	**57**	**44**	**Yes**	**14**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Sulfate (mg/L)	**HGWC-12**	**-41.21**	**-67**	**-44**	**Yes**	**14**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Total Dissolved Solids (mg/L)	**HGWC-12**	**-150.4**	**-73**	**-44**	**Yes**	**14**	**0**	**n/a**	**n/a**	**0.02**	**NP**

Appendix III Trend Tests - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-1 Printed 6/2/2020, 4:39 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Boron (mg/L)	HGWA-1 (bg)	0.0007668	9	44	No	14	0	n/a	n/a	0.02	NP
Boron (mg/L)	**HGWA-2 (bg)**	**0.001791**	**45**	**44**	**Yes**	**14**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Boron (mg/L)	HGWA-3 (bg)	-0.0007135	-19	-44	No	14	14.29	n/a	n/a	0.02	NP
Boron (mg/L)	HGWC-10	0.03857	7	44	No	14	0	n/a	n/a	0.02	NP
Boron (mg/L)	HGWC-11	-0.3864	-35	-44	No	14	0	n/a	n/a	0.02	NP
Boron (mg/L)	HGWC-12	-0.2033	-25	-44	No	14	0	n/a	n/a	0.02	NP
Boron (mg/L)	HGWC-13	-0.3844	-43	-44	No	14	0	n/a	n/a	0.02	NP
Boron (mg/L)	**HGWC-7**	**0.06141**	**48**	**44**	**Yes**	**14**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Boron (mg/L)	**HGWC-8**	**0.3688**	**66**	**44**	**Yes**	**14**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Boron (mg/L)	**HGWC-9**	**0.2649**	**60**	**44**	**Yes**	**14**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Calcium (mg/L)	HGWA-1 (bg)	6.687	43	44	No	14	0	n/a	n/a	0.02	NP
Calcium (mg/L)	HGWA-2 (bg)	-0.1393	-1	-44	No	14	0	n/a	n/a	0.02	NP
Calcium (mg/L)	HGWA-3 (bg)	3.531	39	44	No	14	0	n/a	n/a	0.02	NP
Calcium (mg/L)	**HGWC-12**	**-24.12**	**-64**	**-44**	**Yes**	**14**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Calcium (mg/L)	HGWC-13	-5.685	-14	-44	No	14	0	n/a	n/a	0.02	NP
Calcium (mg/L)	HGWC-9	1.628	15	44	No	14	0	n/a	n/a	0.02	NP
Chloride (mg/L)	HGWA-1 (bg)	1.469	22	44	No	14	0	n/a	n/a	0.02	NP
Chloride (mg/L)	HGWA-2 (bg)	-0.1372	-27	-44	No	14	0	n/a	n/a	0.02	NP
Chloride (mg/L)	HGWA-3 (bg)	0	-4	-44	No	14	0	n/a	n/a	0.02	NP
Chloride (mg/L)	**HGWC-12**	**-32.73**	**-63**	**-44**	**Yes**	**14**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Chloride (mg/L)	HGWC-13	-15.35	-27	-44	No	14	0	n/a	n/a	0.02	NP
Chloride (mg/L)	HGWC-7	0.6016	9	44	No	14	0	n/a	n/a	0.02	NP
Chloride (mg/L)	HGWC-8	-7.504	-26	-44	No	14	0	n/a	n/a	0.02	NP
Chloride (mg/L)	HGWC-9	-10.22	-42	-44	No	14	0	n/a	n/a	0.02	NP
Fluoride (mg/L)	HGWA-1 (bg)	-0.002837	-12	-58	No	17	11.76	n/a	n/a	0.02	NP
Fluoride (mg/L)	HGWA-2 (bg)	0	29	58	No	17	58.82	n/a	n/a	0.02	NP
Fluoride (mg/L)	HGWA-3 (bg)	0.04945	43	58	No	17	35.29	n/a	n/a	0.02	NP
Fluoride (mg/L)	HGWC-13	0.01508	9	58	No	17	0	n/a	n/a	0.02	NP
Fluoride (mg/L)	HGWC-8	-0.05579	-47	-58	No	17	0	n/a	n/a	0.02	NP
Sulfate (mg/L)	HGWA-1 (bg)	8.572	44	44	No	14	0	n/a	n/a	0.02	NP
Sulfate (mg/L)	HGWA-2 (bg)	1.136	35	44	No	14	0	n/a	n/a	0.02	NP
Sulfate (mg/L)	**HGWA-3 (bg)**	**2.216**	**57**	**44**	**Yes**	**14**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Sulfate (mg/L)	HGWC-11	-25.17	-29	-44	No	14	7.143	n/a	n/a	0.02	NP
Sulfate (mg/L)	**HGWC-12**	**-41.21**	**-67**	**-44**	**Yes**	**14**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Sulfate (mg/L)	HGWC-13	-21.73	-15	-44	No	14	0	n/a	n/a	0.02	NP
Sulfate (mg/L)	HGWC-7	5.935	40	44	No	14	0	n/a	n/a	0.02	NP
Sulfate (mg/L)	HGWC-8	-17.75	-29	-44	No	14	0	n/a	n/a	0.02	NP
Sulfate (mg/L)	HGWC-9	-5.703	-23	-44	No	14	0	n/a	n/a	0.02	NP
Total Dissolved Solids (mg/L)	HGWA-1 (bg)	19.47	27	44	No	14	0	n/a	n/a	0.02	NP
Total Dissolved Solids (mg/L)	HGWA-2 (bg)	-3.376	-14	-44	No	14	0	n/a	n/a	0.02	NP
Total Dissolved Solids (mg/L)	HGWA-3 (bg)	2.137	9	44	No	14	0	n/a	n/a	0.02	NP
Total Dissolved Solids (mg/L)	HGWC-11	-48.64	-37	-44	No	14	0	n/a	n/a	0.02	NP
Total Dissolved Solids (mg/L)	**HGWC-12**	**-150.4**	**-73**	**-44**	**Yes**	**14**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Total Dissolved Solids (mg/L)	HGWC-13	-76.14	-19	-44	No	14	0	n/a	n/a	0.02	NP
Total Dissolved Solids (mg/L)	HGWC-8	-48.91	-33	-44	No	14	0	n/a	n/a	0.02	NP
Total Dissolved Solids (mg/L)	HGWC-9	-43.42	-13	-44	No	14	0	n/a	n/a	0.02	NP

Tolerance Limit Summary Table - Appendix IV

Plant Hammond Client: Southern Company Data: Hammond AP-1 Printed 6/3/2020, 3:06 PM

Constituent	Well	Upper Lim.	Lower Lim.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Antimony (mg/L)	n/a	0.003	n/a	42	n/a	n/a	95.24	n/a	n/a	0.116	NP Inter(NDs)
Arsenic (mg/L)	n/a	0.005	n/a	48	n/a	n/a	62.5	n/a	n/a	0.08526	NP Inter(normality)
Barium (mg/L)	n/a	0.14	n/a	48	n/a	n/a	0	n/a	n/a	0.08526	NP Inter(normality)
Beryllium (mg/L)	n/a	0.003	n/a	42	n/a	n/a	73.81	n/a	n/a	0.116	NP Inter(normality)
Cadmium (mg/L)	n/a	0.0025	n/a	42	n/a	n/a	85.71	n/a	n/a	0.116	NP Inter(NDs)
Chromium (mg/L)	n/a	0.01	n/a	42	n/a	n/a	85.71	n/a	n/a	0.116	NP Inter(NDs)
Cobalt (mg/L)	n/a	0.038	n/a	42	n/a	n/a	64.29	n/a	n/a	0.116	NP Inter(normality)
Combined Radium 226 + 228 (pCi/L)	n/a	4.36	n/a	48	n/a	n/a	0	n/a	n/a	0.08526	NP Inter(normality)
Fluoride (mg/L)	n/a	0.36	n/a	51	n/a	n/a	35.29	n/a	n/a	0.0731	NP Inter(normality)
Lead (mg/L)	n/a	0.005	n/a	39	n/a	n/a	76.92	n/a	n/a	0.1353	NP Inter(NDs)
Lithium (mg/L)	n/a	0.03	n/a	48	n/a	n/a	33.33	n/a	n/a	0.08526	NP Inter(normality)
Mercury (mg/L)	n/a	0.0005	n/a	33	n/a	n/a	93.94	n/a	n/a	0.184	NP Inter(NDs)
Molybdenum (mg/L)	n/a	0.01	n/a	48	n/a	n/a	100	n/a	n/a	0.08526	NP Inter(NDs)
Selenium (mg/L)	n/a	0.01	n/a	48	n/a	n/a	100	n/a	n/a	0.08526	NP Inter(NDs)
Thallium (mg/L)	n/a	0.001	n/a	48	n/a	n/a	97.92	n/a	n/a	0.08526	NP Inter(NDs)

PLANT HAMMOND AP-1 GWPS - FEDERAL				
Constituent Name	**MCL**	**CCR-Rule Specified**	**Background Limit**	**GWPS**
Antimony, Total (mg/L)	0.006		0.003	0.006
Arsenic, Total (mg/L)	0.01		0.005	0.01
Barium, Total (mg/L)	2		0.14	2
Beryllium, Total (mg/L)	0.004		0.003	0.004
Cadmium, Total (mg/L)	0.005		0.0025	0.005
Chromium, Total (mg/L)	0.1		0.01	0.1
Cobalt, Total (mg/L)	n/a	0.006	0.038	0.038
Combined Radium, Total (pCi/L)	5		4.36	5
Fluoride, Total (mg/L)	4		0.36	4
Lead, Total (mg/L)	n/a	0.015	0.005	0.015
Lithium, Total (mg/L)	n/a	0.04	0.03	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		0.01	0.05
Thallium, Total (mg/L)	0.002		0.001	0.002

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

**MCL = Maximum Contaminant Level*

**CCR = Coal Combustion Residuals*

**GWPS = Groundwater Protection Statard*

PLANT HAMMOND AP-1 GWPS - STATE				
Constituent Name	**MCL**	**CCR-Rule Specified**	**Background Limit**	**GWPS**
Antimony, Total (mg/L)	0.006		0.003	0.006
Arsenic, Total (mg/L)	0.01		0.005	0.01
Barium, Total (mg/L)	2		0.14	2
Beryllium, Total (mg/L)	0.004		0.003	0.004
Cadmium, Total (mg/L)	0.005		0.0025	0.005
Chromium, Total (mg/L)	0.1		0.01	0.1
Cobalt, Total (mg/L)	n/a	0.006	0.038	0.038
Combined Radium, Total (pCi/L)	5		4.36	5
Fluoride, Total (mg/L)	4		0.36	4
Lead, Total (mg/L)	n/a	0.015	0.005	0.005
Lithium, Total (mg/L)	n/a	0.04	0.03	0.03
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		0.01	0.05
Thallium, Total (mg/L)	0.002		0.001	0.002

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

**MCL = Maximum Contaminant Level*

**CCR = Coal Combustion Residuals*

**GWPS = Groundwater Protection Statard*

Federal Confidence Intervals - Significant Results

Plant Hammond Client: Southern Company Data: Hammond AP-1 Printed 6/2/2020, 5:52 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Arsenic (mg/L)	**HGWC-13**	**0.4353**	**0.3497**	**0.01**	**Yes**	**16**	**0.3925**	**0.06582**	**0**	**None**	**No**	**0.01**	**Param.**
Molybdenum (mg/L)	**HGWC-8**	**0.5034**	**0.4567**	**0.1**	**Yes**	**16**	**0.4801**	**0.03591**	**0**	**None**	**No**	**0.01**	**Param.**

Federal Confidence Intervals - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-1 Printed 6/2/2020, 5:52 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Antimony (mg/L)	HGWC-13	0.003	0.00036	0.006	No	14	0.002249	0.001236	71.43	None	No	0.01	NP (NDs)
Antimony (mg/L)	HGWC-9	0.003	0.00042	0.006	No	14	0.002624	0.0009553	85.71	None	No	0.01	NP (NDs)
Arsenic (mg/L)	HGWC-11	0.005	0.0015	0.01	No	16	0.003596	0.001721	50	None	No	0.01	NP (normality)
Arsenic (mg/L)	HGWC-12	0.004743	0.003007	0.01	No	16	0.003875	0.001334	12.5	None	No	0.01	Param.
Arsenic (mg/L)	**HGWC-13**	**0.4353**	**0.3497**	**0.01**	**Yes**	**16**	**0.3925**	**0.06582**	**0**	**None**	**No**	**0.01**	**Param.**
Arsenic (mg/L)	HGWC-7	0.005	0.0019	0.01	No	16	0.004806	0.000775	93.75	None	No	0.01	NP (NDs)
Arsenic (mg/L)	HGWC-9	0.005	0.0008	0.01	No	16	0.004182	0.00176	81.25	None	No	0.01	NP (NDs)
Barium (mg/L)	HGWC-10	0.09345	0.06746	2	No	16	0.08046	0.01998	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-11	0.0567	0.03003	2	No	16	0.04464	0.02253	0	None	sqrt(x)	0.01	Param.
Barium (mg/L)	HGWC-12	0.1191	0.09136	2	No	16	0.106	0.02153	0	None	x^(1/3)	0.01	Param.
Barium (mg/L)	HGWC-13	0.09723	0.07422	2	No	16	0.08573	0.01768	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-7	0.0763	0.06833	2	No	16	0.07231	0.006127	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-8	0.083	0.059	2	No	16	0.07094	0.01183	0	None	No	0.01	NP (normality)
Barium (mg/L)	HGWC-9	0.1251	0.1057	2	No	16	0.1154	0.01489	0	None	No	0.01	Param.
Beryllium (mg/L)	HGWC-11	0.003	0.0001	0.004	No	14	0.001765	0.00148	57.14	None	No	0.01	NP (NDs)
Beryllium (mg/L)	HGWC-13	0.003	0.000099	0.004	No	14	0.002169	0.001364	71.43	None	No	0.01	NP (NDs)
Beryllium (mg/L)	HGWC-7	0.003	0.000077	0.004	No	14	0.002791	0.0007812	92.86	None	No	0.01	NP (NDs)
Beryllium (mg/L)	HGWC-8	0.003	0.000074	0.004	No	14	0.002791	0.000782	92.86	None	No	0.01	NP (NDs)
Cadmium (mg/L)	HGWC-10	0.0025	0.0001	0.005	No	14	0.001308	0.001237	50	None	No	0.01	NP (normality)
Cadmium (mg/L)	HGWC-11	0.0025	0.0001	0.005	No	14	0.001985	0.001023	78.57	None	No	0.01	NP (NDs)
Cadmium (mg/L)	HGWC-12	0.0025	0.0002	0.005	No	14	0.001839	0.001086	71.43	None	No	0.01	NP (NDs)
Cadmium (mg/L)	HGWC-7	0.0025	0.0002	0.005	No	14	0.001836	0.00109	71.43	None	No	0.01	NP (NDs)
Cadmium (mg/L)	HGWC-8	0.00032	0.00014	0.005	No	14	0.0004693	0.0007112	7.143	None	No	0.01	NP (normality)
Cadmium (mg/L)	HGWC-9	0.0025	0.0002	0.005	No	14	0.001991	0.001012	78.57	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-10	0.02	0.01	0.1	No	14	0.01071	0.002673	92.86	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-11	0.01	0.00061	0.1	No	14	0.008636	0.003467	85.71	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-12	0.01	0.0025	0.1	No	14	0.008779	0.003132	85.71	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-13	0.01	0.00059	0.1	No	14	0.008642	0.003452	85.71	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-7	0.071	0.0016	0.1	No	14	0.01307	0.01699	78.57	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-8	0.01	0.0007	0.1	No	14	0.008657	0.003414	85.71	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-9	0.01	0.00052	0.1	No	14	0.009323	0.002534	92.86	None	No	0.01	NP (NDs)
Cobalt (mg/L)	HGWC-10	0.005	0.0006	0.038	No	14	0.003186	0.002179	57.14	None	No	0.01	NP (NDs)
Cobalt (mg/L)	HGWC-11	0.002981	0.001145	0.038	No	14	0.002154	0.001439	14.29	None	sqrt(x)	0.01	Param.
Cobalt (mg/L)	HGWC-12	0.0021	0.0012	0.038	No	14	0.002	0.001305	14.29	None	No	0.01	NP (normality)
Cobalt (mg/L)	HGWC-13	0.004525	0.002576	0.038	No	14	0.003551	0.001376	7.143	None	No	0.01	Param.
Cobalt (mg/L)	HGWC-7	0.005	0.0005	0.038	No	14	0.001736	0.001851	21.43	None	No	0.01	NP (normality)
Cobalt (mg/L)	HGWC-8	0.0026	0.0018	0.038	No	14	0.002262	0.0008313	7.143	None	No	0.01	NP (normality)
Cobalt (mg/L)	HGWC-9	0.002	0.00053	0.038	No	14	0.001361	0.00159	14.29	None	No	0.01	NP (normality)
Combined Radium 226 + 228 (pCi/L)	HGWC-10	1.073	0.6078	5	No	16	0.8403	0.3572	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-11	1.177	0.5568	5	No	16	0.8669	0.4767	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-12	1.193	0.5889	5	No	16	0.8911	0.4645	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-13	0.9448	0.5122	5	No	16	0.7285	0.3325	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-7	1.095	0.5383	5	No	16	0.8466	0.4901	0	None	sqrt(x)	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-8	0.992	0.6657	5	No	16	0.8288	0.2507	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-9	0.9154	0.4914	5	No	16	0.7034	0.3259	0	None	No	0.01	Param.
Fluoride (mg/L)	HGWC-10	0.2769	0.1136	4	No	17	0.2077	0.1438	11.76	None	sqrt(x)	0.01	Param.
Fluoride (mg/L)	HGWC-11	0.4908	0.2966	4	No	17	0.3937	0.155	0	None	No	0.01	Param.
Fluoride (mg/L)	HGWC-12	0.4613	0.1992	4	No	17	0.3584	0.2623	5.882	None	x^(1/3)	0.01	Param.
Fluoride (mg/L)	HGWC-13	0.7524	0.4945	4	No	17	0.6235	0.2058	0	None	No	0.01	Param.
Fluoride (mg/L)	HGWC-7	0.2219	0.1016	4	No	17	0.1738	0.1211	11.76	None	x^(1/3)	0.01	Param.
Fluoride (mg/L)	HGWC-8	0.7057	0.4885	4	No	17	0.6041	0.1872	0	None	sqrt(x)	0.01	Param.
Fluoride (mg/L)	HGWC-9	0.329	0.1203	4	No	17	0.2246	0.1665	11.76	None	No	0.01	Param.
Lead (mg/L)	HGWC-10	0.005	0.00005	0.015	No	12	0.004587	0.001429	91.67	None	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-11	0.005	0.00021	0.015	No	12	0.003408	0.002352	66.67	None	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-12	0.005	0.00043	0.015	No	12	0.004207	0.001853	83.33	None	No	0.01	NP (NDs)

Federal Confidence Intervals - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-1 Printed 6/2/2020, 5:52 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Lead (mg/L)	HGWC-13	0.005	0.0001	0.015	No	12	0.003776	0.002215	75	None	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-7	0.005	0.00008	0.015	No	12	0.002578	0.002533	50	None	No	0.01	NP (normality)
Lead (mg/L)	HGWC-8	0.005	0.00013	0.015	No	12	0.004594	0.001406	91.67	None	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-9	0.005	0.0001	0.015	No	12	0.002969	0.002511	58.33	None	No	0.01	NP (NDs)
Lithium (mg/L)	HGWC-12	0.01122	0.00787	0.04	No	16	0.009544	0.002573	0	None	No	0.01	Param.
Lithium (mg/L)	HGWC-13	0.03965	0.03113	0.04	No	16	0.03539	0.006548	0	None	No	0.01	Param.
Lithium (mg/L)	HGWC-7	0.003	0.002	0.04	No	16	0.003819	0.005662	6.25	None	No	0.01	NP (normality)
Lithium (mg/L)	HGWC-8	0.0029	0.0024	0.04	No	16	0.004038	0.005595	6.25	None	No	0.01	NP (normality)
Lithium (mg/L)	HGWC-9	0.0048	0.004	0.04	No	16	0.005481	0.005228	6.25	None	No	0.01	NP (normality)
Molybdenum (mg/L)	HGWC-10	0.005	0.0014	0.1	No	16	0.003906	0.001685	68.75	None	No	0.01	NP (NDs)
Molybdenum (mg/L)	HGWC-11	0.02519	0.01381	0.1	No	16	0.0195	0.008742	0	None	No	0.01	Param.
Molybdenum (mg/L)	HGWC-12	0.05044	0.0457	0.1	No	16	0.04807	0.003647	0	None	No	0.01	Param.
Molybdenum (mg/L)	HGWC-13	0.03625	0.02928	0.1	No	16	0.03277	0.005358	0	None	No	0.01	Param.
Molybdenum (mg/L)	HGWC-7	0.04021	0.03218	0.1	No	16	0.03619	0.006173	0	None	No	0.01	Param.
Molybdenum (mg/L)	**HGWC-8**	**0.5034**	**0.4567**	**0.1**	**Yes**	**16**	**0.4801**	**0.03591**	**0**	**None**	**No**	**0.01**	**Param.**
Molybdenum (mg/L)	HGWC-9	0.031	0.0229	0.1	No	16	0.05429	0.1128	0	None	No	0.01	NP (normality)
Selenium (mg/L)	HGWC-10	0.01	0.0023	0.05	No	16	0.008119	0.003403	75	None	No	0.01	NP (NDs)
Selenium (mg/L)	HGWC-11	0.01666	0.006477	0.05	No	16	0.01157	0.007826	0	None	No	0.01	Param.
Selenium (mg/L)	HGWC-12	0.01	0.0011	0.05	No	16	0.009444	0.002225	93.75	None	No	0.01	NP (NDs)
Selenium (mg/L)	HGWC-13	0.01	0.00018	0.05	No	16	0.009386	0.002455	93.75	None	No	0.01	NP (NDs)
Selenium (mg/L)	HGWC-8	0.01	0.0024	0.05	No	16	0.009525	0.0019	93.75	None	No	0.01	NP (NDs)
Selenium (mg/L)	HGWC-9	0.01	0.0037	0.05	No	16	0.009606	0.001575	93.75	None	No	0.01	NP (NDs)
Thallium (mg/L)	HGWC-11	0.001	0.00008	0.002	No	16	0.000885	0.0003142	87.5	None	No	0.01	NP (NDs)
Thallium (mg/L)	HGWC-12	0.001	0.000088	0.002	No	16	0.000664	0.0004489	62.5	None	No	0.01	NP (NDs)
Thallium (mg/L)	HGWC-13	0.0004405	0.0003417	0.002	No	16	0.0003911	0.00007591	0	None	No	0.01	Param.
Thallium (mg/L)	HGWC-8	0.001	0.000077	0.002	No	16	0.0006555	0.0004594	62.5	None	No	0.01	NP (NDs)

Confidence Interval Summary Table (State) - Significant Results

Plant Hammond Client: Southern Company Data: Hammond AP-1 Printed 6/3/2020, 3:10 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Arsenic (mg/L)	**HGWC-13**	**0.4353**	**0.3497**	**0.01**	**Yes**	**16**	**0.3925**	**0.06582**	**0**	**None**	**No**	**0.01**	**Param.**
Lithium (mg/L)	**HGWC-13**	**0.03965**	**0.03113**	**0.03**	**Yes**	**16**	**0.03539**	**0.006548**	**0**	**None**	**No**	**0.01**	**Param.**
Molybdenum (mg/L)	**HGWC-11**	**0.02519**	**0.01381**	**0.01**	**Yes**	**16**	**0.0195**	**0.008742**	**0**	**None**	**No**	**0.01**	**Param.**
Molybdenum (mg/L)	**HGWC-12**	**0.05044**	**0.0457**	**0.01**	**Yes**	**16**	**0.04807**	**0.003647**	**0**	**None**	**No**	**0.01**	**Param.**
Molybdenum (mg/L)	**HGWC-13**	**0.03625**	**0.02928**	**0.01**	**Yes**	**16**	**0.03277**	**0.005358**	**0**	**None**	**No**	**0.01**	**Param.**
Molybdenum (mg/L)	**HGWC-7**	**0.04021**	**0.03218**	**0.01**	**Yes**	**16**	**0.03619**	**0.006173**	**0**	**None**	**No**	**0.01**	**Param.**
Molybdenum (mg/L)	**HGWC-8**	**0.5034**	**0.4567**	**0.01**	**Yes**	**16**	**0.4801**	**0.03591**	**0**	**None**	**No**	**0.01**	**Param.**
Molybdenum (mg/L)	**HGWC-9**	**0.031**	**0.0229**	**0.01**	**Yes**	**16**	**0.05429**	**0.1128**	**0**	**None**	**No**	**0.01**	**NP (normality)**

Confidence Interval Summary Table (State) - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-1 Printed 6/3/2020, 3:10 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Antimony (mg/L)	HGWC-10	0.003	0.003	0.006	No	14	0.003	0	100	None	No	0.01	NP (NDs)
Antimony (mg/L)	HGWC-11	0.003	0.003	0.006	No	14	0.003	0	100	None	No	0.01	NP (NDs)
Antimony (mg/L)	HGWC-12	0.003	0.003	0.006	No	14	0.003	0	100	None	No	0.01	NP (NDs)
Antimony (mg/L)	HGWC-13	0.003	0.00036	0.006	No	14	0.002249	0.001236	71.43	None	No	0.01	NP (normality)
Antimony (mg/L)	HGWC-7	0.003	0.003	0.006	No	14	0.003	0	100	None	No	0.01	NP (NDs)
Antimony (mg/L)	HGWC-8	0.003	0.003	0.006	No	14	0.003	0	100	None	No	0.01	NP (NDs)
Antimony (mg/L)	HGWC-9	0.003	0.00042	0.006	No	14	0.002624	0.0009553	85.71	None	No	0.01	NP (NDs)
Arsenic (mg/L)	HGWC-10	0.005	0.005	0.01	No	16	0.005	0	100	None	No	0.01	NP (NDs)
Arsenic (mg/L)	HGWC-11	0.005	0.0015	0.01	No	16	0.003596	0.001721	50	None	No	0.01	NP (normality)
Arsenic (mg/L)	HGWC-12	0.004743	0.003007	0.01	No	16	0.003875	0.001334	12.5	None	No	0.01	Param.
Arsenic (mg/L)	**HGWC-13**	**0.4353**	**0.3497**	**0.01**	**Yes**	**16**	**0.3925**	**0.06582**	**0**	**None**	**No**	**0.01**	**Param.**
Arsenic (mg/L)	HGWC-7	0.005	0.0019	0.01	No	16	0.004806	0.000775	93.75	None	No	0.01	NP (NDs)
Arsenic (mg/L)	HGWC-8	0.005	0.005	0.01	No	16	0.005	0	100	None	No	0.01	NP (NDs)
Arsenic (mg/L)	HGWC-9	0.005	0.0008	0.01	No	16	0.004182	0.00176	81.25	None	No	0.01	NP (NDs)
Barium (mg/L)	HGWC-10	0.09345	0.06746	2	No	16	0.08046	0.01998	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-11	0.0567	0.03003	2	No	16	0.04464	0.02253	0	None	sqrt(x)	0.01	Param.
Barium (mg/L)	HGWC-12	0.1191	0.09136	2	No	16	0.106	0.02153	0	None	x^(1/3)	0.01	Param.
Barium (mg/L)	HGWC-13	0.09723	0.07422	2	No	16	0.08573	0.01768	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-7	0.0763	0.06833	2	No	16	0.07231	0.006127	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-8	0.083	0.059	2	No	16	0.07094	0.01183	0	None	No	0.01	NP (normality)
Barium (mg/L)	HGWC-9	0.1251	0.1057	2	No	16	0.1154	0.01489	0	None	No	0.01	Param.
Beryllium (mg/L)	HGWC-10	0.003	0.003	0.004	No	14	0.003	0	100	None	No	0.01	NP (NDs)
Beryllium (mg/L)	HGWC-11	0.003	0.0001	0.004	No	14	0.001765	0.00148	57.14	None	No	0.01	NP (normality)
Beryllium (mg/L)	HGWC-12	0.003	0.003	0.004	No	14	0.003	0	100	None	No	0.01	NP (NDs)
Beryllium (mg/L)	HGWC-13	0.003	0.000099	0.004	No	14	0.002169	0.001364	71.43	None	No	0.01	NP (normality)
Beryllium (mg/L)	HGWC-7	0.003	0.000077	0.004	No	14	0.002791	0.0007812	92.86	None	No	0.01	NP (NDs)
Beryllium (mg/L)	HGWC-8	0.003	0.000074	0.004	No	14	0.002791	0.000782	92.86	None	No	0.01	NP (NDs)
Beryllium (mg/L)	HGWC-9	0.003	0.003	0.004	No	14	0.003	0	100	None	No	0.01	NP (NDs)
Cadmium (mg/L)	HGWC-10	0.0025	0.0001	0.005	No	14	0.001308	0.001237	50	None	No	0.01	NP (normality)
Cadmium (mg/L)	HGWC-11	0.0025	0.0001	0.005	No	14	0.001985	0.001023	78.57	None	No	0.01	NP (NDs)
Cadmium (mg/L)	HGWC-12	0.0025	0.0002	0.005	No	14	0.001839	0.001086	71.43	None	No	0.01	NP (normality)
Cadmium (mg/L)	HGWC-13	0.0025	0.0025	0.005	No	14	0.0025	0	100	None	No	0.01	NP (NDs)
Cadmium (mg/L)	HGWC-7	0.0025	0.0002	0.005	No	14	0.001836	0.00109	71.43	None	No	0.01	NP (normality)
Cadmium (mg/L)	HGWC-8	0.00032	0.00014	0.005	No	14	0.0004693	0.0007112	7.143	None	No	0.01	NP (normality)
Cadmium (mg/L)	HGWC-9	0.0025	0.0002	0.005	No	14	0.001991	0.001012	78.57	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-10	0.02	0.01	0.1	No	14	0.01071	0.002673	92.86	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-11	0.01	0.00061	0.1	No	14	0.008636	0.003467	85.71	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-12	0.01	0.0025	0.1	No	14	0.008779	0.003132	85.71	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-13	0.01	0.00059	0.1	No	14	0.008642	0.003452	85.71	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-7	0.071	0.0016	0.1	No	14	0.01307	0.01699	78.57	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-8	0.01	0.0007	0.1	No	14	0.008657	0.003414	85.71	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-9	0.01	0.00052	0.1	No	14	0.009323	0.002534	92.86	None	No	0.01	NP (NDs)
Cobalt (mg/L)	HGWC-10	0.005	0.0006	0.038	No	14	0.003186	0.002179	57.14	None	No	0.01	NP (normality)
Cobalt (mg/L)	HGWC-11	0.002981	0.001145	0.038	No	14	0.002154	0.001439	14.29	None	sqrt(x)	0.01	Param.
Cobalt (mg/L)	HGWC-12	0.0021	0.0012	0.038	No	14	0.002	0.001305	14.29	None	No	0.01	NP (normality)
Cobalt (mg/L)	HGWC-13	0.004525	0.002576	0.038	No	14	0.003551	0.001376	7.143	None	No	0.01	Param.
Cobalt (mg/L)	HGWC-7	0.005	0.0005	0.038	No	14	0.001736	0.001851	21.43	None	No	0.01	NP (normality)
Cobalt (mg/L)	HGWC-8	0.0026	0.0018	0.038	No	14	0.002262	0.0008313	7.143	None	No	0.01	NP (normality)
Cobalt (mg/L)	HGWC-9	0.002	0.00053	0.038	No	14	0.001361	0.00159	14.29	None	No	0.01	NP (normality)
Combined Radium 226 + 228 (pCi/L)	HGWC-10	1.073	0.6078	5	No	16	0.8403	0.3572	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-11	1.177	0.5568	5	No	16	0.8669	0.4767	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-12	1.193	0.5889	5	No	16	0.8911	0.4645	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-13	0.9448	0.5122	5	No	16	0.7285	0.3325	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-7	1.095	0.5383	5	No	16	0.8466	0.4901	0	None	sqrt(x)	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-8	0.992	0.6657	5	No	16	0.8288	0.2507	0	None	No	0.01	Param.

Confidence Interval Summary Table (State) - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-1 Printed 6/3/2020, 3:10 PM

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-9	0.9154	0.4914	5	No	16	0.7034	0.3259	0	None	No	0.01	Param.
Fluoride (mg/L)	HGWC-10	0.3162	0.1346	4	No	17	0.2254	0.1449	11.76	None	No	0.01	Param.
Fluoride (mg/L)	HGWC-11	0.4908	0.2966	4	No	17	0.3937	0.155	0	None	No	0.01	Param.
Fluoride (mg/L)	HGWC-12	0.4843	0.211	4	No	17	0.3672	0.2574	5.882	None	sqrt(x)	0.01	Param.
Fluoride (mg/L)	HGWC-13	0.7524	0.4945	4	No	17	0.6235	0.2058	0	None	No	0.01	Param.
Fluoride (mg/L)	HGWC-7	0.2525	0.11	4	No	17	0.1915	0.1275	11.76	None	sqrt(x)	0.01	Param.
Fluoride (mg/L)	HGWC-8	0.7057	0.4885	4	No	17	0.6041	0.1872	0	None	sqrt(x)	0.01	Param.
Fluoride (mg/L)	HGWC-9	0.346	0.1386	4	No	17	0.2423	0.1655	11.76	None	No	0.01	Param.
Lead (mg/L)	HGWC-10	0.005	0.00005	0.005	No	12	0.004587	0.001429	91.67	None	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-11	0.005	0.00021	0.005	No	12	0.003408	0.002352	66.67	None	No	0.01	NP (normality)
Lead (mg/L)	HGWC-12	0.005	0.00043	0.005	No	12	0.004207	0.001853	83.33	None	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-13	0.005	0.0001	0.005	No	12	0.003776	0.002215	75	None	No	0.01	NP (normality)
Lead (mg/L)	HGWC-7	0.005	0.00008	0.005	No	12	0.002578	0.002533	50	None	No	0.01	NP (normality)
Lead (mg/L)	HGWC-8	0.005	0.00013	0.005	No	12	0.004594	0.001406	91.67	None	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-9	0.005	0.0001	0.005	No	12	0.002969	0.002511	58.33	None	No	0.01	NP (normality)
Lithium (mg/L)	HGWC-10	0.03	0.03	0.03	No	16	0.03	0	100	None	No	0.01	NP (NDs)
Lithium (mg/L)	HGWC-11	0.03	0.03	0.03	No	16	0.03	0	100	None	No	0.01	NP (NDs)
Lithium (mg/L)	HGWC-12	0.01122	0.00787	0.03	No	16	0.009544	0.002573	0	None	No	0.01	Param.
Lithium (mg/L)	**HGWC-13**	**0.03965**	**0.03113**	**0.03**	**Yes**	**16**	**0.03539**	**0.006548**	**0**	**None**	**No**	**0.01**	**Param.**
Lithium (mg/L)	HGWC-7	0.003	0.002	0.03	No	16	0.004131	0.006909	6.25	None	No	0.01	NP (normality)
Lithium (mg/L)	HGWC-8	0.0029	0.0024	0.03	No	16	0.00435	0.006844	6.25	None	No	0.01	NP (normality)
Lithium (mg/L)	HGWC-9	0.0048	0.004	0.03	No	16	0.005794	0.006473	6.25	None	No	0.01	NP (normality)
Mercury (mg/L)	HGWC-10	0.0005	0.0005	0.002	No	11	0.0004591	0.0001357	90.91	None	No	0.006	NP (NDs)
Mercury (mg/L)	HGWC-11	0.0005	0.0005	0.002	No	11	0.0004591	0.0001357	90.91	None	No	0.006	NP (NDs)
Mercury (mg/L)	HGWC-12	0.0005	0.0005	0.002	No	11	0.0005	0	100	None	No	0.006	NP (NDs)
Mercury (mg/L)	HGWC-13	0.0005	0.00005	0.002	No	11	0.0004173	0.0001841	81.82	None	No	0.006	NP (NDs)
Mercury (mg/L)	HGWC-7	0.0005	0.0005	0.002	No	11	0.0005	0	100	None	No	0.006	NP (NDs)
Mercury (mg/L)	HGWC-8	0.0005	0.0005	0.002	No	11	0.0005	0	100	None	No	0.006	NP (NDs)
Mercury (mg/L)	HGWC-9	0.0005	0.0005	0.002	No	11	0.0004582	0.0001387	90.91	None	No	0.006	NP (NDs)
Molybdenum (mg/L)	HGWC-10	0.01	0.0014	0.01	No	16	0.007344	0.004073	68.75	None	No	0.01	NP (normality)
Molybdenum (mg/L)	**HGWC-11**	**0.02519**	**0.01381**	**0.01**	**Yes**	**16**	**0.0195**	**0.008742**	**0**	**None**	**No**	**0.01**	**Param.**
Molybdenum (mg/L)	**HGWC-12**	**0.05044**	**0.0457**	**0.01**	**Yes**	**16**	**0.04807**	**0.003647**	**0**	**None**	**No**	**0.01**	**Param.**
Molybdenum (mg/L)	**HGWC-13**	**0.03625**	**0.02928**	**0.01**	**Yes**	**16**	**0.03277**	**0.005358**	**0**	**None**	**No**	**0.01**	**Param.**
Molybdenum (mg/L)	**HGWC-7**	**0.04021**	**0.03218**	**0.01**	**Yes**	**16**	**0.03619**	**0.006173**	**0**	**None**	**No**	**0.01**	**Param.**
Molybdenum (mg/L)	**HGWC-8**	**0.5034**	**0.4567**	**0.01**	**Yes**	**16**	**0.4801**	**0.03591**	**0**	**None**	**No**	**0.01**	**Param.**
Molybdenum (mg/L)	**HGWC-9**	**0.031**	**0.0229**	**0.01**	**Yes**	**16**	**0.05429**	**0.1128**	**0**	**None**	**No**	**0.01**	**NP (normality)**
Selenium (mg/L)	HGWC-10	0.01	0.0023	0.05	No	16	0.008119	0.003403	75	None	No	0.01	NP (normality)
Selenium (mg/L)	HGWC-11	0.01666	0.006477	0.05	No	16	0.01157	0.007826	0	None	No	0.01	Param.
Selenium (mg/L)	HGWC-12	0.01	0.0011	0.05	No	16	0.009444	0.002225	93.75	None	No	0.01	NP (NDs)
Selenium (mg/L)	HGWC-13	0.01	0.00018	0.05	No	16	0.009386	0.002455	93.75	None	No	0.01	NP (NDs)
Selenium (mg/L)	HGWC-7	0.01	0.01	0.05	No	16	0.01	0	100	None	No	0.01	NP (NDs)
Selenium (mg/L)	HGWC-8	0.01	0.0024	0.05	No	16	0.009525	0.0019	93.75	None	No	0.01	NP (NDs)
Selenium (mg/L)	HGWC-9	0.01	0.0037	0.05	No	16	0.009606	0.001575	93.75	None	No	0.01	NP (NDs)
Thallium (mg/L)	HGWC-10	0.001	0.001	0.002	No	16	0.001	0	100	None	No	0.01	NP (NDs)
Thallium (mg/L)	HGWC-11	0.001	0.00008	0.002	No	16	0.000885	0.0003142	87.5	None	No	0.01	NP (NDs)
Thallium (mg/L)	HGWC-12	0.001	0.000088	0.002	No	16	0.000664	0.0004489	62.5	None	No	0.01	NP (normality)
Thallium (mg/L)	HGWC-13	0.0004405	0.0003417	0.002	No	16	0.0003911	0.00007591	0	None	No	0.01	Param.
Thallium (mg/L)	HGWC-7	0.001	0.001	0.002	No	16	0.001	0	100	None	No	0.01	NP (NDs)
Thallium (mg/L)	HGWC-8	0.001	0.000077	0.002	No	16	0.0006555	0.0004594	62.5	None	No	0.01	NP (normality)
Thallium (mg/L)	HGWC-9	0.001	0.001	0.002	No	16	0.001	0	100	None	No	0.01	NP (NDs)

FIGURE A.

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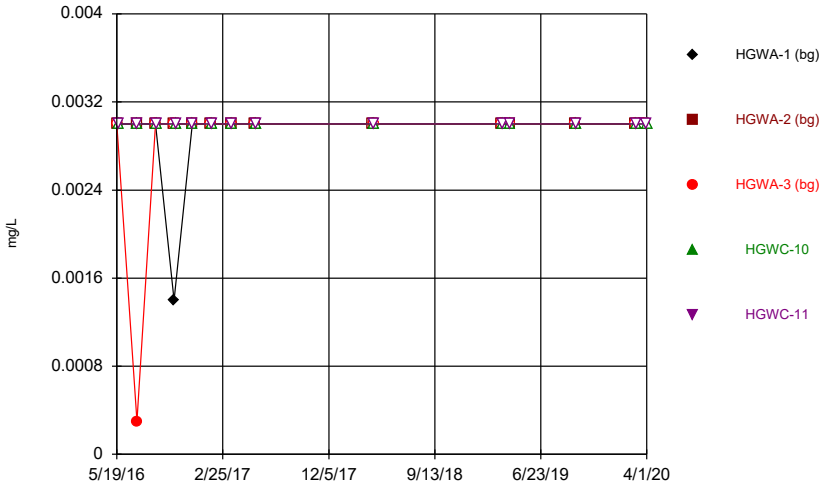
Hollow symbols indicate censored values.

Time Series



Constituent: Antimony Analysis Run 6/2/2020 4:07 PM
Plant Hammond Client: Southern Company Data: Hammond AP-1

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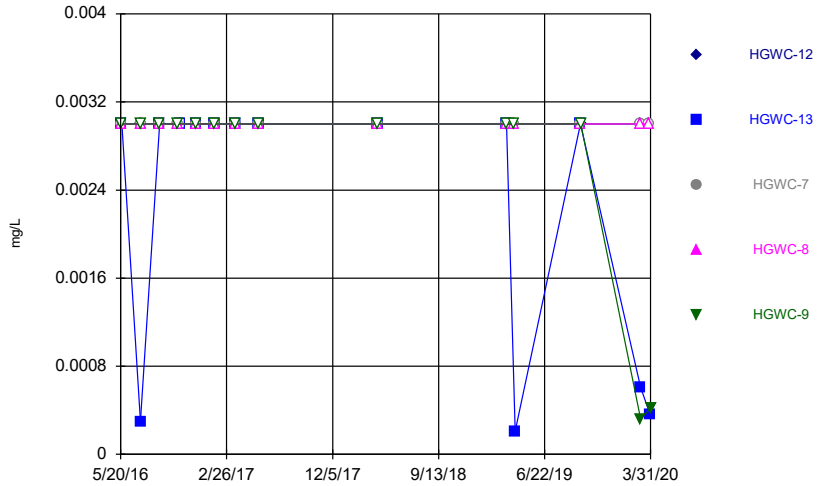

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Plant Hammond Client: Southern Company Data: Hammond AP-1

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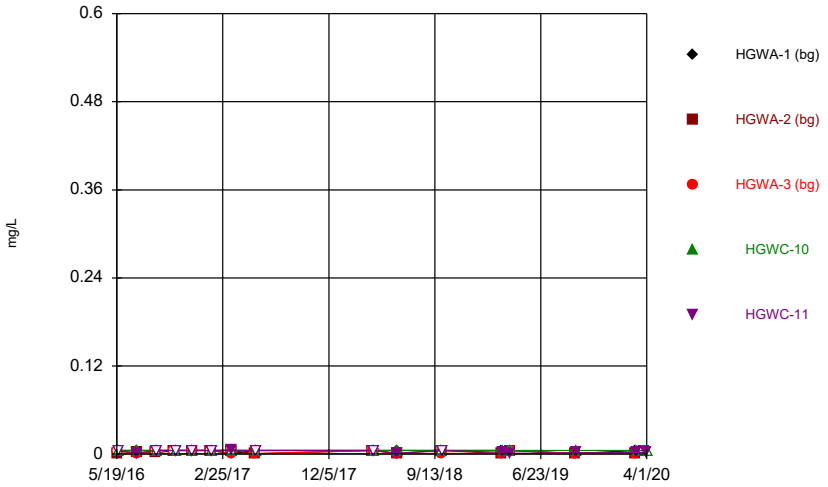

Constituent: Arsenic Analysis Run 6/2/2020 4:07 PM
Plant Hammond Client: Southern Company Data: Hammond AP-1

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Hollow symbols indicate censored values.

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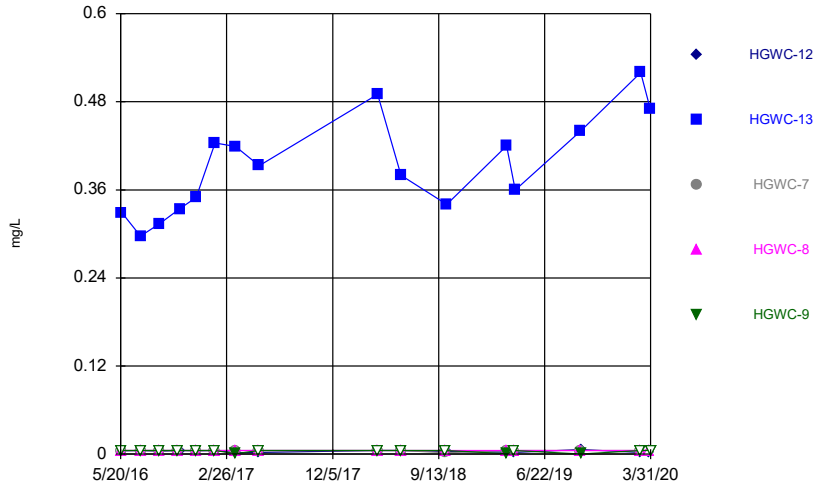

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Plant Hammond Client: Southern Company Data: Hammond AP-1

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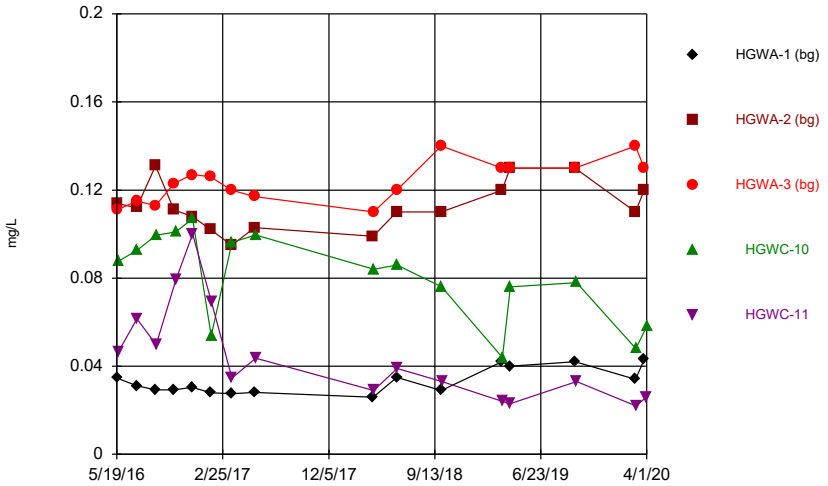
Time Series



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Plant Hammond Client: Southern Company Data: Hammond AP-1

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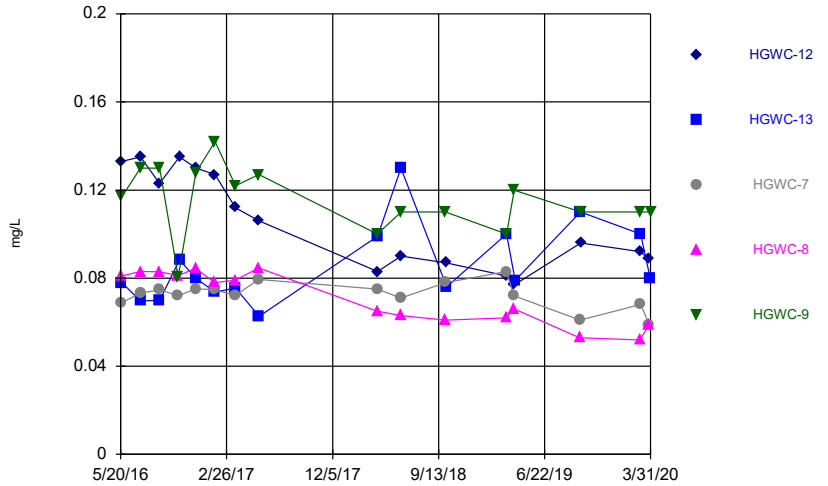
Time Series



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Plant Hammond Client: Southern Company Data: Hammond AP-1

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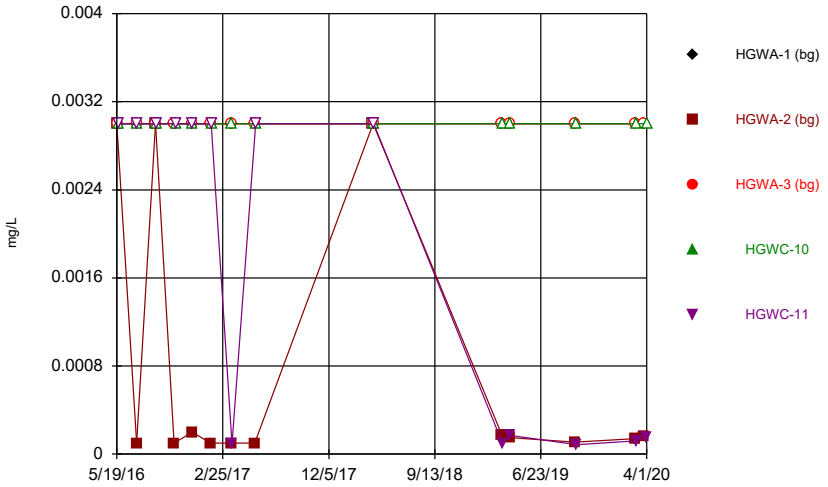

Constituent: Beryllium Analysis Run 6/2/2020 4:07 PM

Plant Hammond Client: Southern Company Data: Hammond AP-1

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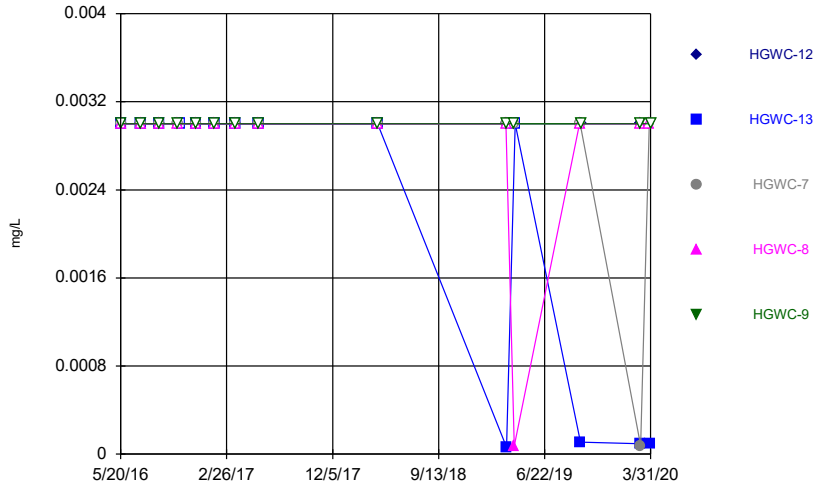

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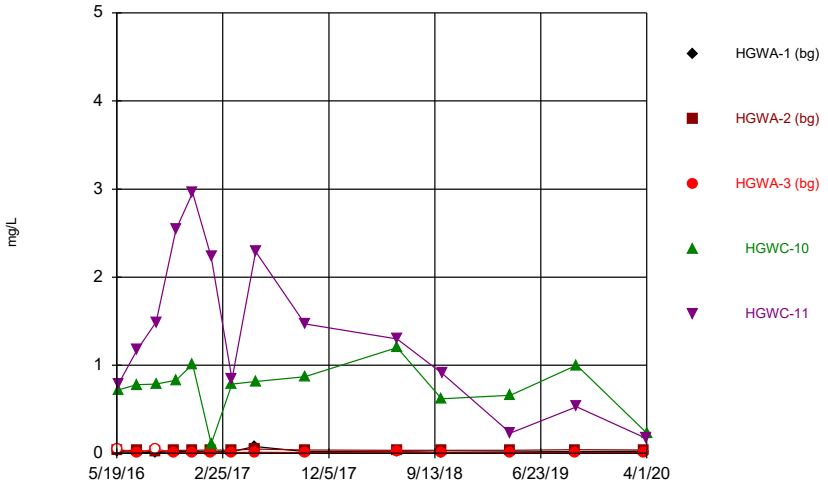

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Plant Hammond Client: Southern Company Data: Hammond AP-1

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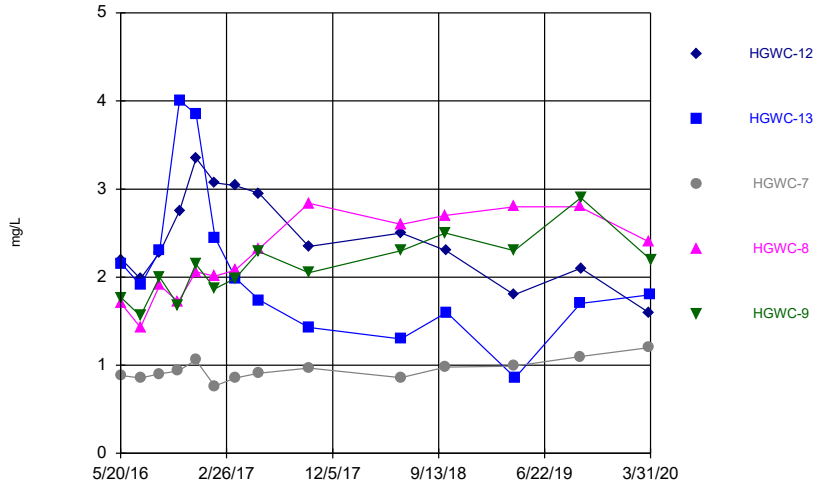
Time Series



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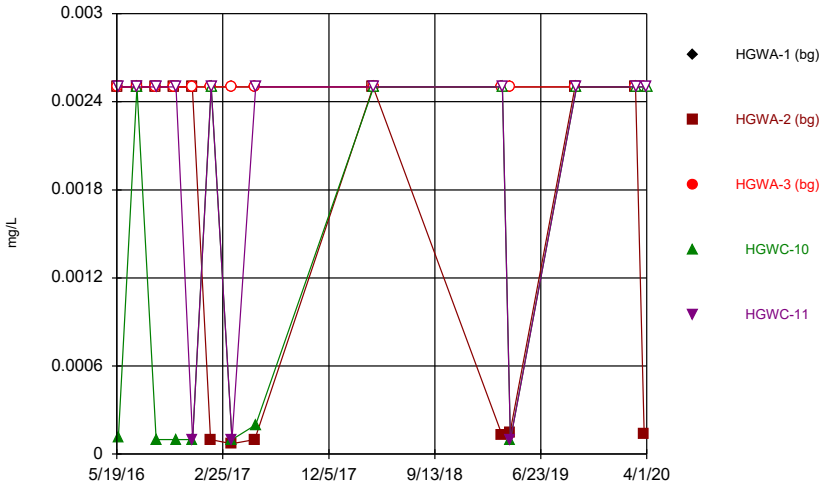

Constituent: Cadmium Analysis Run 6/2/2020 4:07 PM
Plant Hammond Client: Southern Company Data: Hammond AP-1

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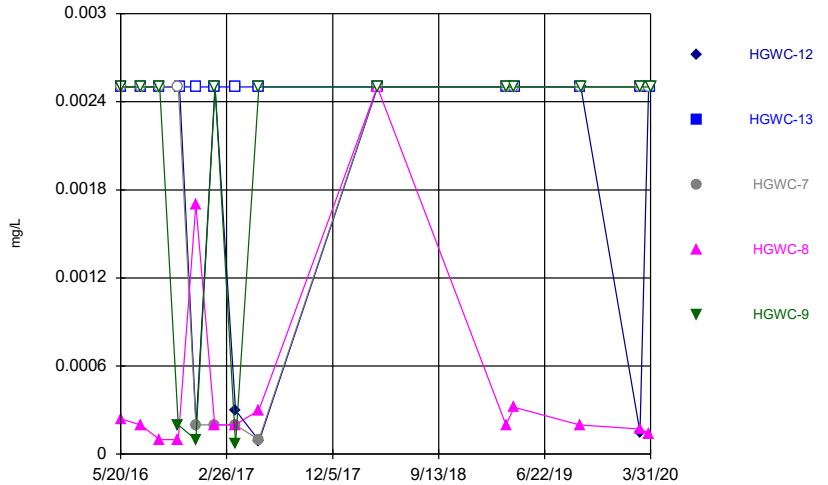
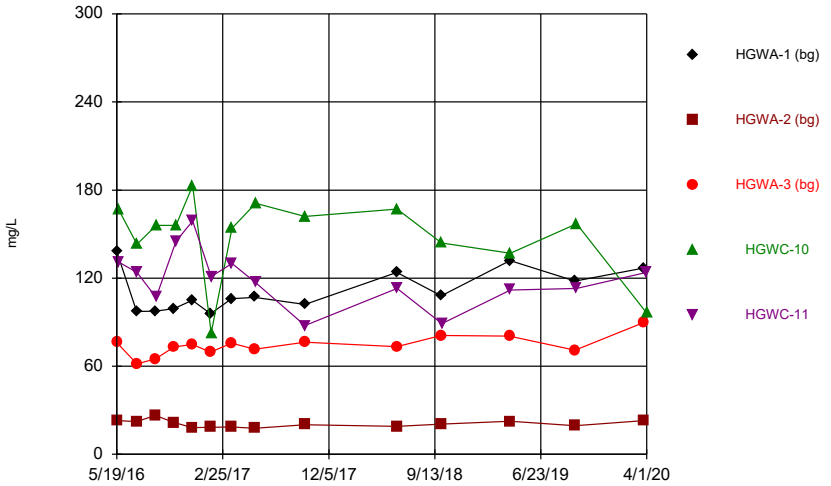


Constituent: Cadmium Analysis Run 6/2/2020 4:08 PM
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

Time Series

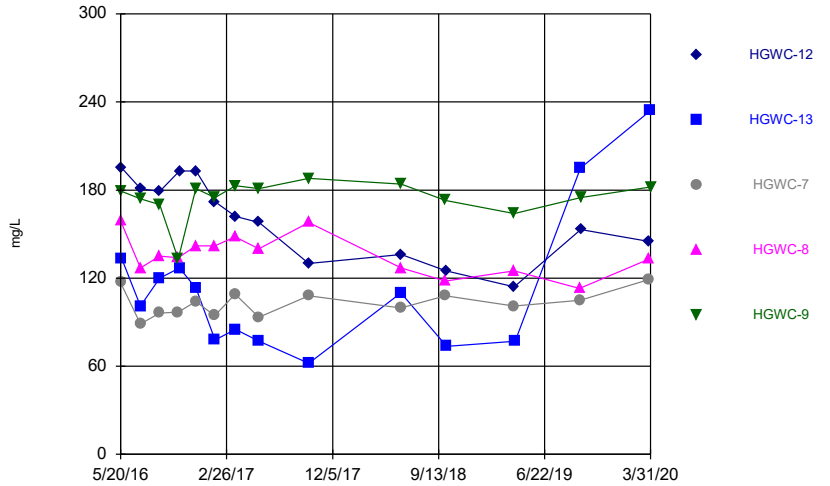


Constituent: Calcium Analysis Run 6/2/2020 4:08 PM

Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

Time Series



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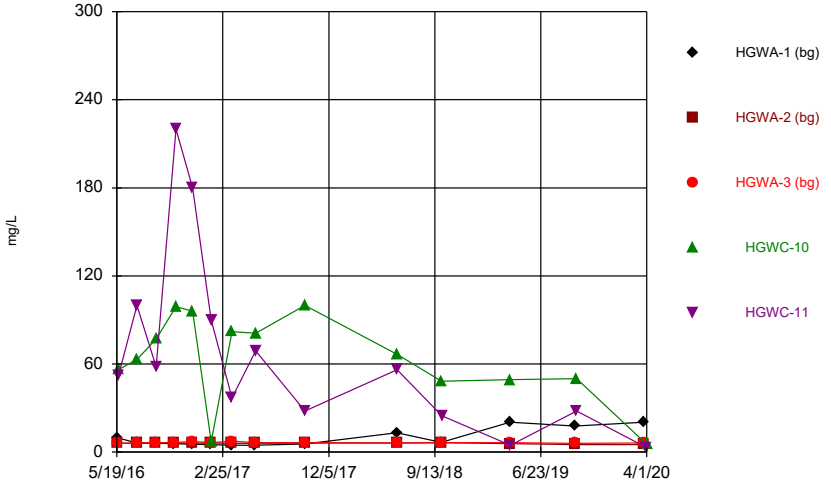
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

Time Series

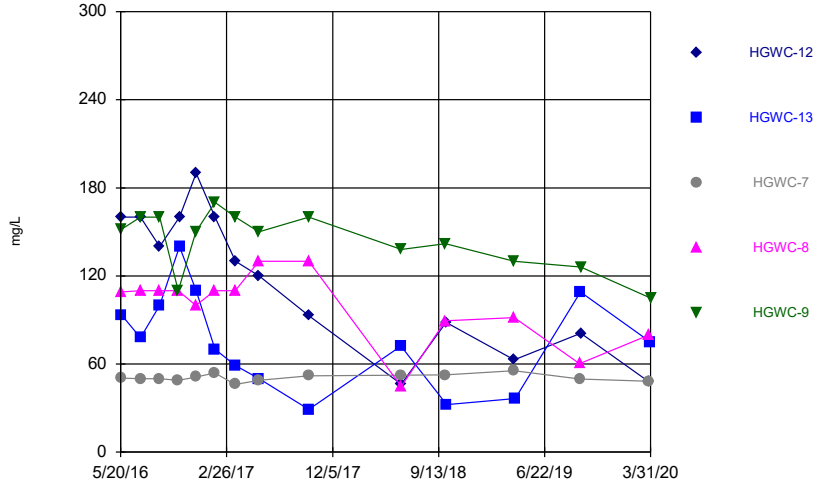


Constituent: Chloride Analysis Run 6/2/2020 4:08 PM

Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

Time Series



Constituent: Chloride Analysis Run 6/2/2020 4:08 PM

Plant Hammond Client: Southern Company Data: Hammond AP-1

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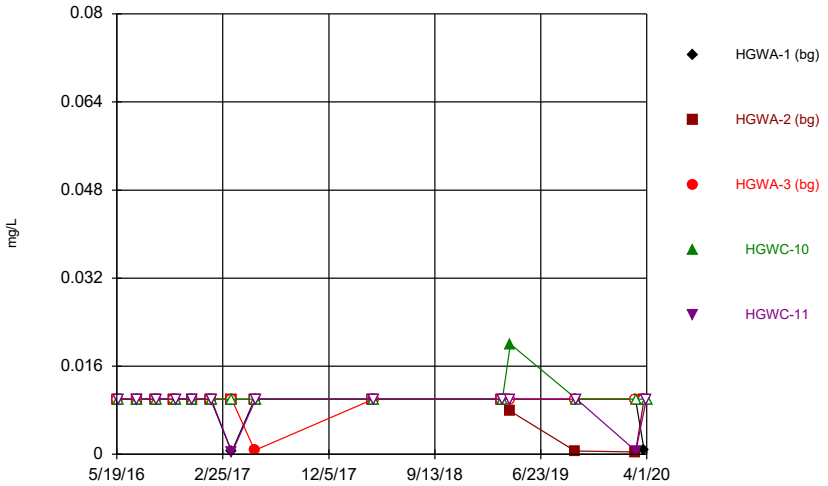
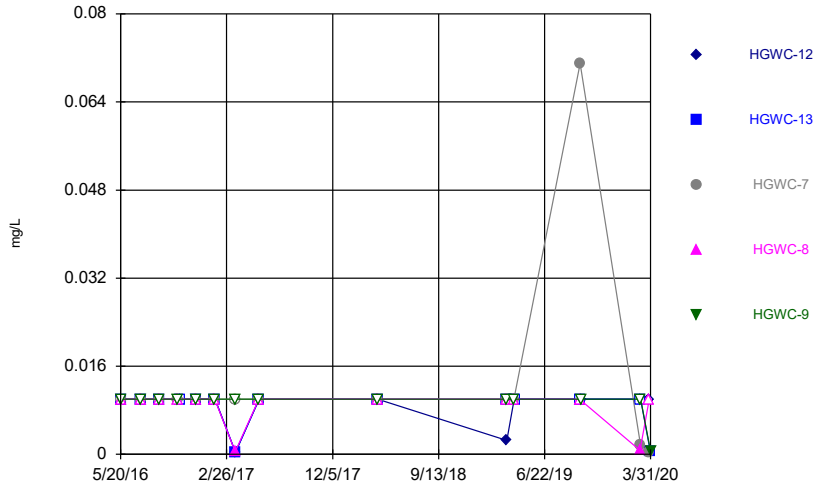


Constituent: Chromium Analysis Run 6/2/2020 4:08 PM
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

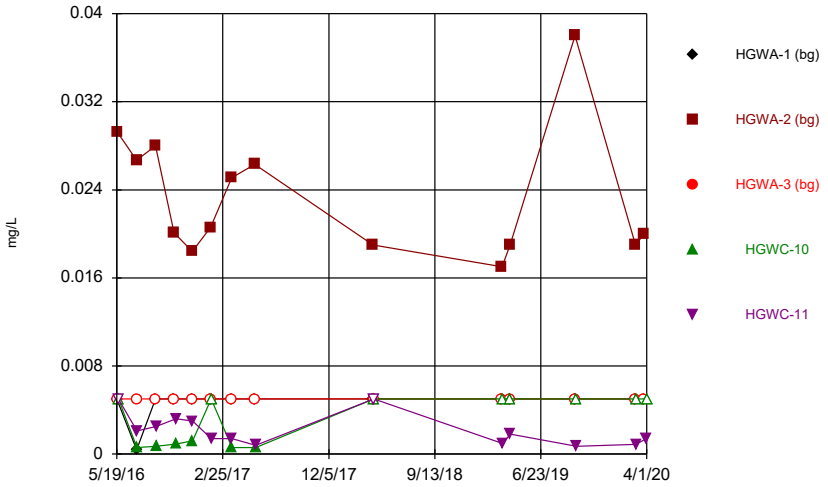
Time Series



Constituent: Chromium Analysis Run 6/2/2020 4:08 PM
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

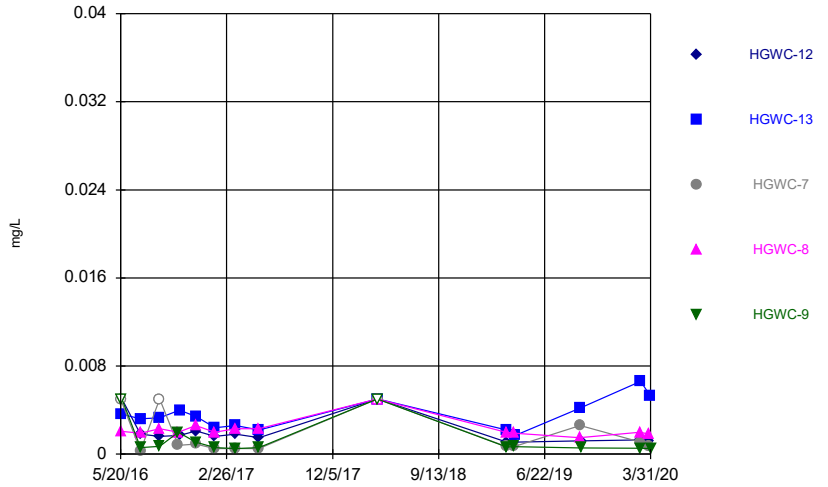
Time Series



Constituent: Cobalt Analysis Run 6/2/2020 4:08 PM
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

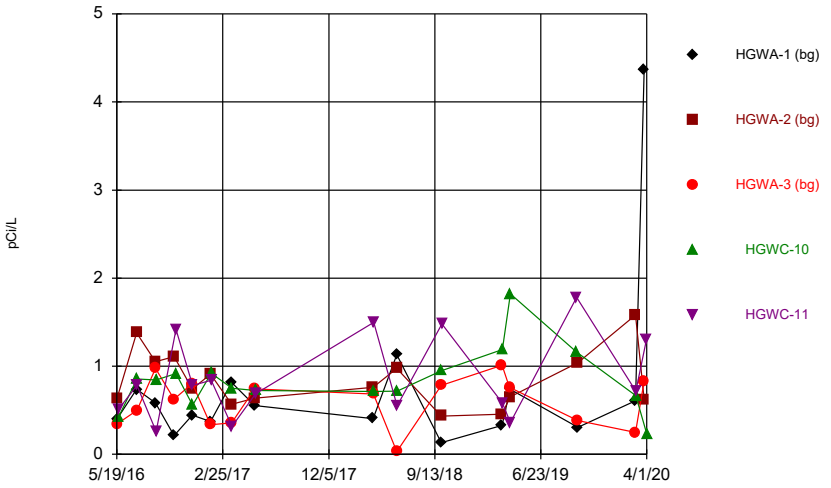
Time Series



Constituent: Cobalt Analysis Run 6/2/2020 4:08 PM
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

Time Series

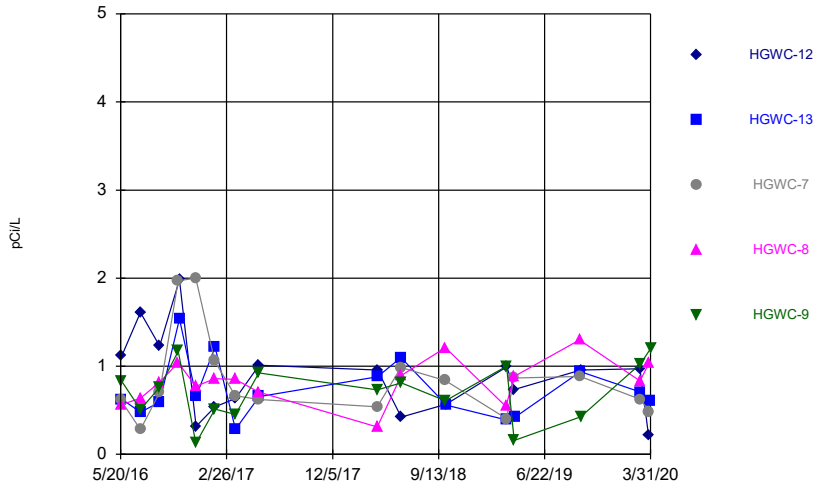


Constituent: Combined Radium 226 + 228 Analysis Run 6/2/2020 4:08 PM

Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

Time Series



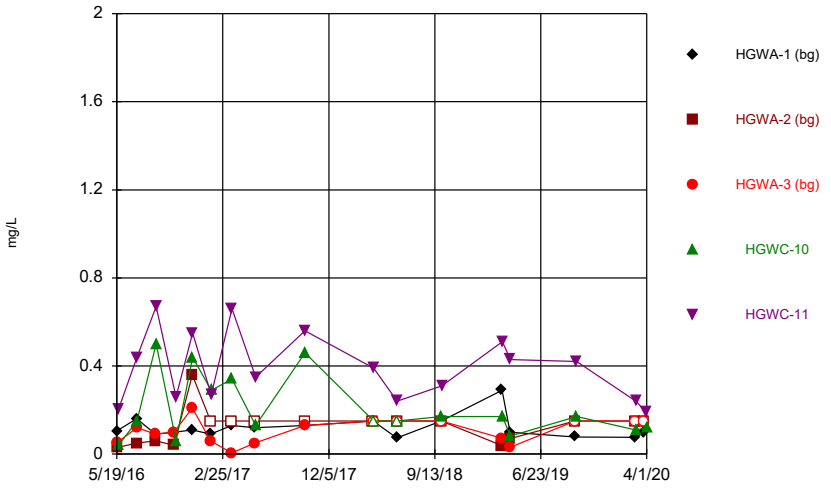
Constituent: Combined Radium 226 + 228 Analysis Run 6/2/2020 4:08 PM

Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

Hollow symbols indicate censored values.

Time Series



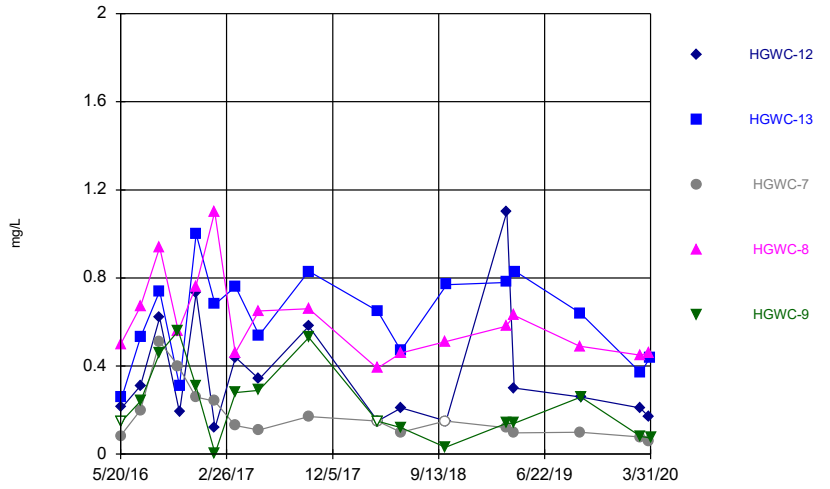
Constituent: Fluoride Analysis Run 6/2/2020 4:08 PM

Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

Hollow symbols indicate censored values.

Time Series

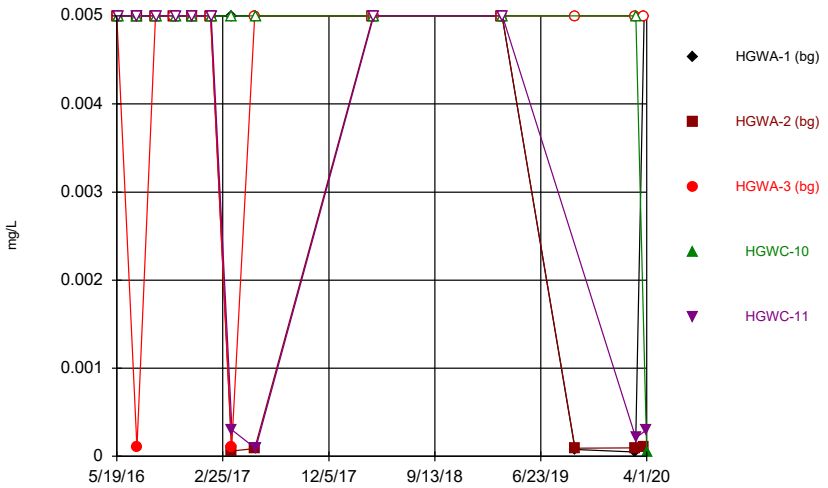


Constituent: Fluoride Analysis Run 6/2/2020 4:08 PM

Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

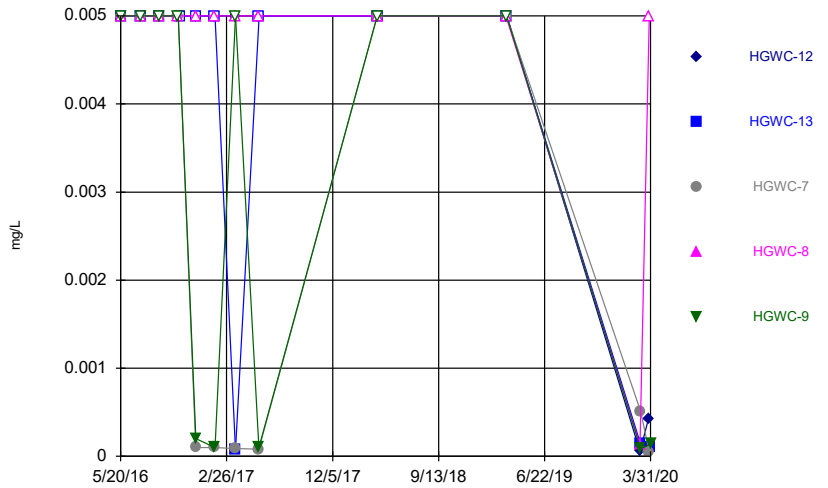
Time Series



Constituent: Lead Analysis Run 6/2/2020 4:08 PM
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

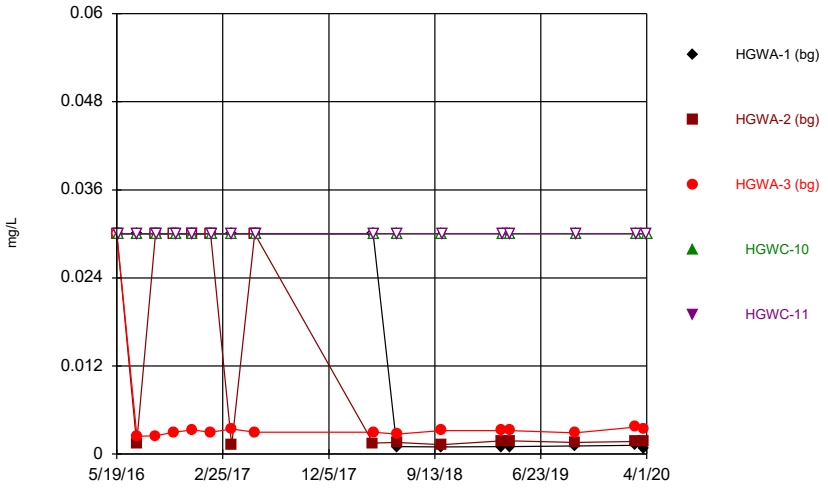
Time Series



Constituent: Lead Analysis Run 6/2/2020 4:08 PM
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

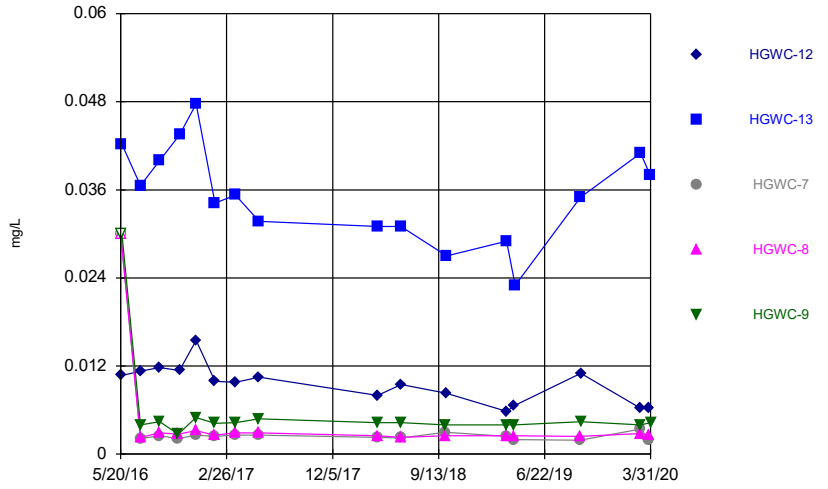
Time Series



Constituent: Lithium Analysis Run 6/2/2020 4:08 PM
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

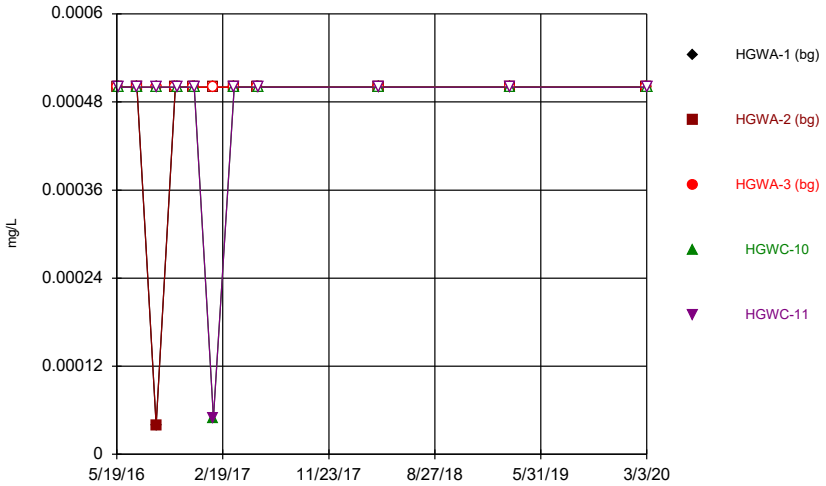
Time Series



Constituent: Lithium Analysis Run 6/2/2020 4:08 PM
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

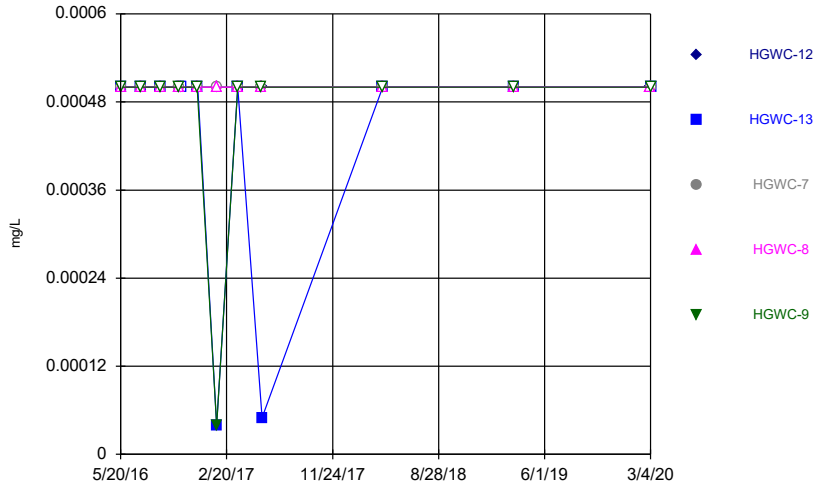
Time Series



Constituent: Mercury Analysis Run 6/2/2020 4:08 PM
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

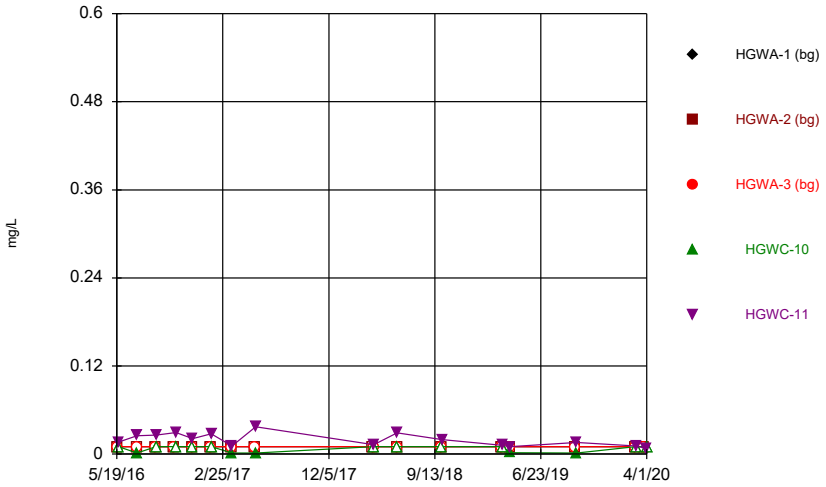
Time Series



Constituent: Mercury Analysis Run 6/2/2020 4:08 PM
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

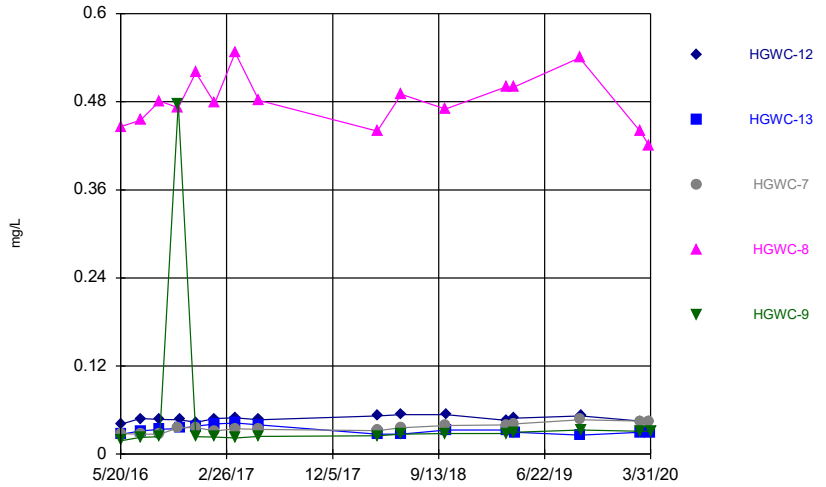
Time Series



Constituent: Molybdenum Analysis Run 6/2/2020 4:08 PM
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

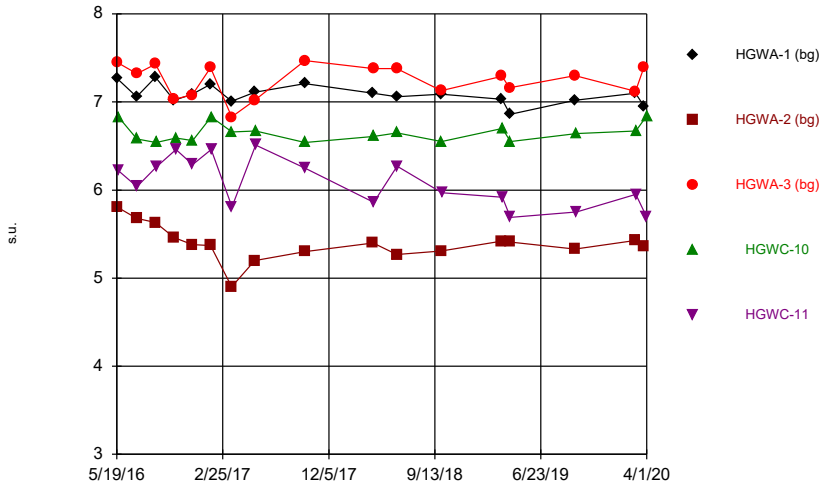
Time Series



Constituent: Molybdenum Analysis Run 6/2/2020 4:08 PM
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

Time Series

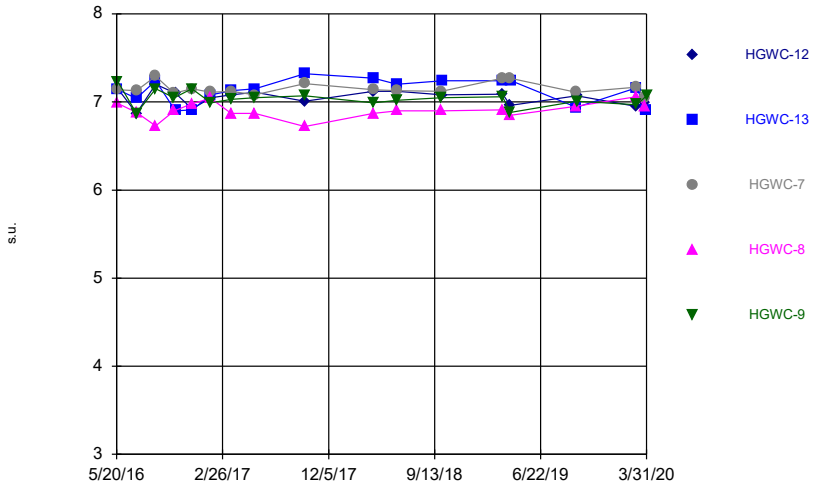


Constituent: pH Analysis Run 6/2/2020 4:08 PM

Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

Time Series

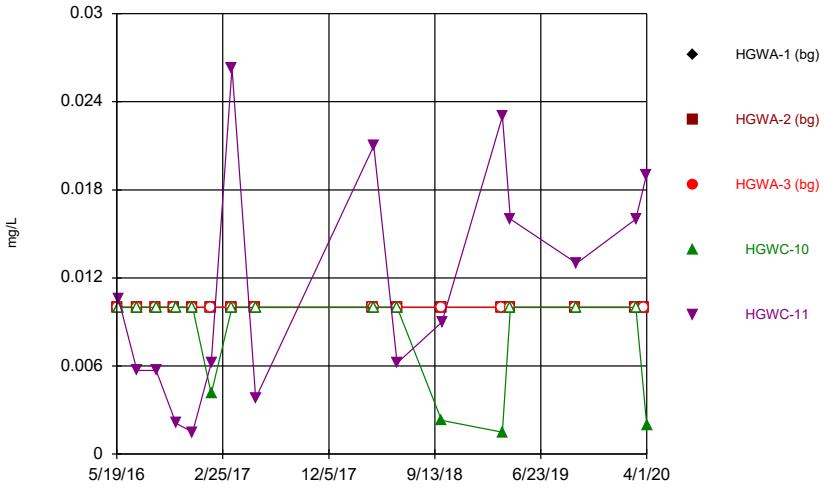


Constituent: pH Analysis Run 6/2/2020 4:08 PM

Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

Time Series

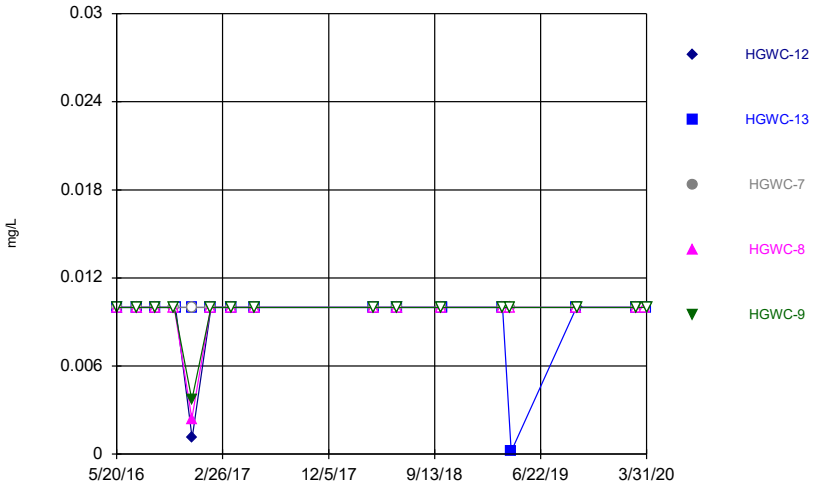


Constituent: Selenium Analysis Run 6/2/2020 4:08 PM

Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

Time Series

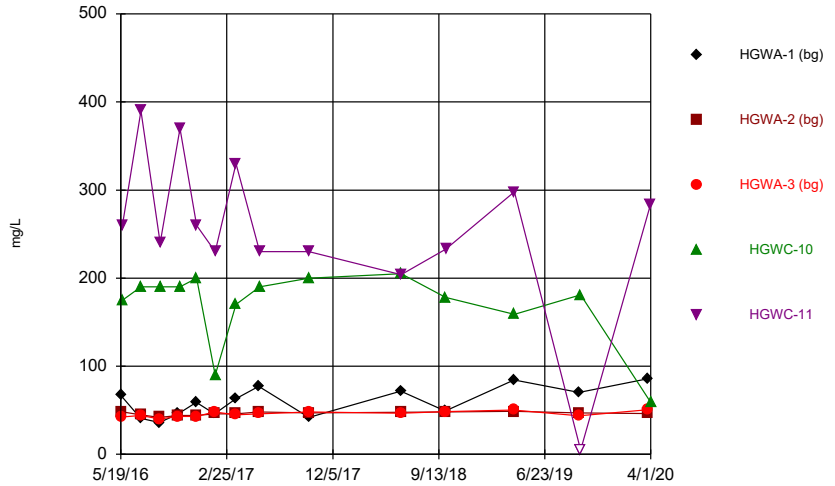


Constituent: Selenium Analysis Run 6/2/2020 4:08 PM

Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

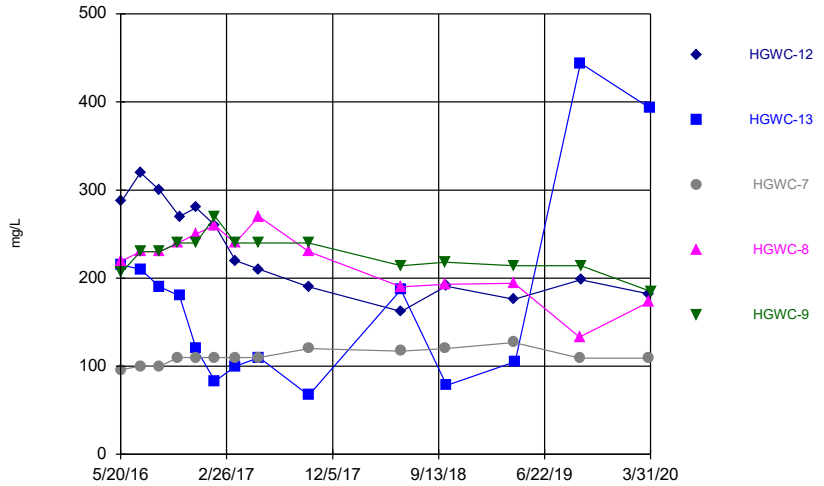
Time Series



Constituent: Sulfate Analysis Run 6/2/2020 4:08 PM
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

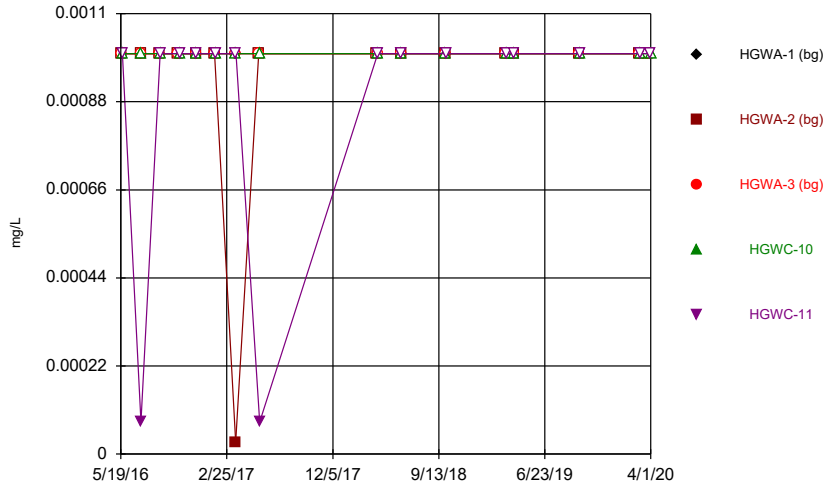
Time Series



Constituent: Sulfate Analysis Run 6/2/2020 4:08 PM
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

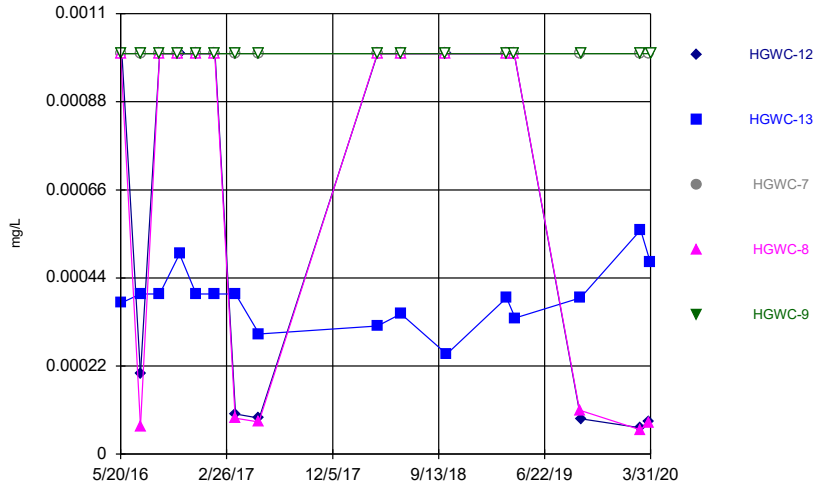
Time Series



Constituent: Thallium Analysis Run 6/2/2020 4:08 PM
Plant Hammond Client: Southern Company Data: Hammond AP-1

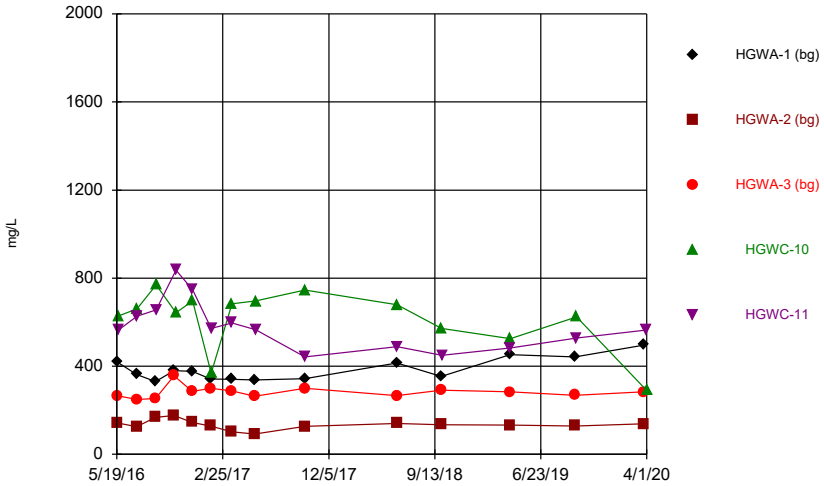
Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

Time Series



Constituent: Thallium Analysis Run 6/2/2020 4:08 PM
Plant Hammond Client: Southern Company Data: Hammond AP-1

Time Series

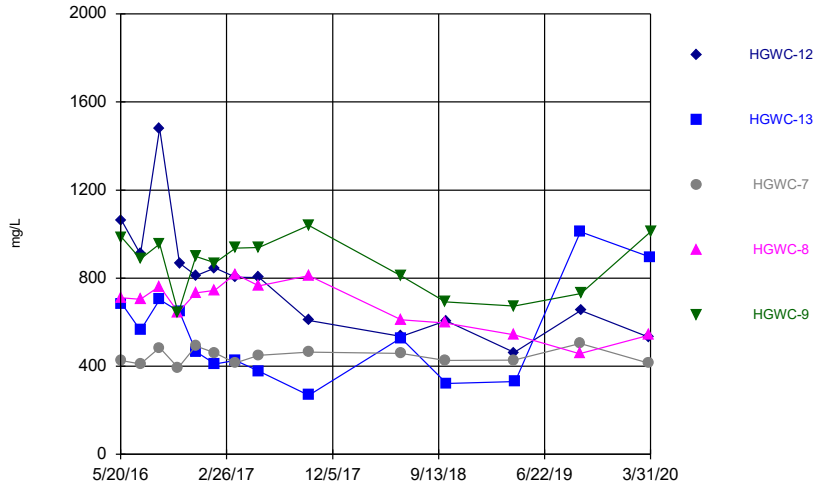


Constituent: Total Dissolved Solids Analysis Run 6/2/2020 4:08 PM

Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

Time Series



Constituent: Total Dissolved Solids Analysis Run 6/2/2020 4:08 PM

Plant Hammond Client: Southern Company Data: Hammond AP-1

Time Series

Constituent: Antimony (mg/L) Analysis Run 6/2/2020 4:19 PM

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWC-10	HGWC-11
5/19/2016	<0.003	<0.003	<0.003		
5/23/2016				<0.003	<0.003
7/11/2016	<0.003	<0.003			
7/12/2016			0.0003 (J)	<0.003	<0.003
8/30/2016	<0.003	<0.003	<0.003		
9/1/2016				<0.003	<0.003
10/19/2016	0.0014 (J)	<0.003	<0.003		
10/24/2016				<0.003	<0.003
12/6/2016	<0.003	<0.003	<0.003		
12/7/2016				<0.003	<0.003
1/24/2017	<0.003	<0.003	<0.003		
1/26/2017				<0.003	<0.003
3/21/2017	<0.003	<0.003	<0.003		
3/22/2017				<0.003	<0.003
5/22/2017	<0.003	<0.003	<0.003		
5/24/2017				<0.003	<0.003
4/2/2018	<0.003	<0.003			
4/3/2018			<0.003		
4/4/2018				<0.003	<0.003
3/12/2019	<0.003	<0.003	<0.003		
3/13/2019				<0.003	<0.003
4/1/2019			<0.003		
4/2/2019	<0.003	<0.003			
4/3/2019				<0.003	<0.003
9/23/2019	<0.003	<0.003	<0.003		
9/27/2019				<0.003	<0.003
3/2/2020	<0.003	<0.003	<0.003		
3/3/2020				<0.003	<0.003
3/25/2020	<0.003	<0.003	<0.003		
3/31/2020					<0.003
4/1/2020				<0.003	

Time Series

Constituent: Antimony (mg/L) Analysis Run 6/2/2020 4:19 PM

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWC-12	HGWC-13	HGWC-7	HGWC-8	HGWC-9
5/20/2016			<0.003	<0.003	
5/23/2016	<0.003	<0.003			<0.003
7/12/2016	<0.003	0.0003 (J)	<0.003	<0.003	<0.003
9/1/2016	<0.003	<0.003	<0.003	<0.003	<0.003
10/20/2016			<0.003	<0.003	<0.003
10/24/2016	<0.003	<0.003			
12/6/2016			<0.003	<0.003	<0.003
12/7/2016	<0.003	<0.003			
1/25/2017			<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	<0.003			<0.003
5/23/2017			<0.003	<0.003	<0.003
5/24/2017	<0.003	<0.003			
4/3/2018			<0.003	<0.003	<0.003
4/4/2018	<0.003	<0.003			
3/12/2019				<0.003	
3/13/2019		<0.003	<0.003		<0.003
3/14/2019	<0.003				
4/2/2019			<0.003		
4/3/2019	<0.003			<0.003	<0.003
4/5/2019		0.00021 (J)			
9/24/2019				<0.003	
9/25/2019			<0.003		
9/26/2019		<0.003			
9/27/2019	<0.003				<0.003
3/3/2020	<0.003			<0.003	
3/4/2020		0.00061 (J)	<0.003		0.00032 (J)
3/26/2020	<0.003				
3/27/2020			<0.003	<0.003	
3/30/2020		0.00036 (J)			
3/31/2020					0.00042 (J)

Time Series

Constituent: Arsenic (mg/L) Analysis Run 6/2/2020 4:19 PM

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWC-10	HGWC-11
5/19/2016	<0.005	0.00127 (J)	<0.005		
5/23/2016				<0.005	<0.005
7/11/2016	<0.005	0.002 (J)			
7/12/2016			0.0008 (J)	<0.005	0.0015 (J)
8/30/2016	<0.005	0.0017 (J)	<0.005		
9/1/2016				<0.005	<0.005
10/19/2016	<0.005	<0.005	<0.005		
10/24/2016				<0.005	<0.005
12/6/2016	<0.005	<0.005	<0.005		
12/7/2016				<0.005	<0.005
1/24/2017	<0.005	<0.005	<0.005		
1/26/2017				<0.005	<0.005
3/21/2017	0.0005 (J)	<0.005	0.0007 (J)		
3/22/2017				<0.005	0.0053
5/22/2017	<0.005	0.0006 (J)	0.0006 (J)		
5/24/2017				<0.005	<0.005
4/2/2018	<0.005	<0.005			
4/3/2018			<0.005		
4/4/2018				<0.005	<0.005
6/4/2018	<0.005	0.00088 (J)	0.0008 (J)		
6/5/2018				<0.005	0.0012 (J)
10/1/2018	<0.005	<0.005	0.0011 (J)		
10/2/2018				<0.005	
10/3/2018					<0.005
3/12/2019	<0.005	0.00069 (J)	0.00063 (J)		
3/13/2019				<0.005	0.0024 (J)
4/1/2019			<0.005		
4/2/2019	<0.005	<0.005			
4/3/2019				<0.005	0.00094 (J)
9/23/2019	0.00046 (J)	0.00067 (J)	0.0011 (J)		
9/27/2019				<0.005	0.0018 (J)
3/2/2020	<0.005	0.00043 (J)	0.0004 (J)		
3/3/2020				<0.005	0.0022 (J)
3/25/2020	<0.005	<0.005	<0.005		
3/31/2020					0.0022 (J)
4/1/2020				<0.005	

Time Series

Constituent: Arsenic (mg/L) Analysis Run 6/2/2020 4:19 PM

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWC-12	HGWC-13	HGWC-7	HGWC-8	HGWC-9
5/20/2016			<0.005	<0.005	
5/23/2016	0.0046 (J)	0.329			<0.005
7/12/2016	0.005	0.297	<0.005	<0.005	<0.005
9/1/2016	0.0043 (J)	0.314	<0.005	<0.005	<0.005
10/20/2016			<0.005	<0.005	<0.005
10/24/2016	0.0049 (J)	0.334			
12/6/2016			<0.005	<0.005	<0.005
12/7/2016	0.0046 (J)	0.35			
1/25/2017			<0.005	<0.005	
1/26/2017	<0.005	0.424			<0.005
3/21/2017			<0.005	<0.005	
3/22/2017	0.0019 (J)	0.419			0.0008 (J)
5/23/2017			<0.005	<0.005	<0.005
5/24/2017	0.0022 (J)	0.393			
4/3/2018			<0.005	<0.005	<0.005
4/4/2018	<0.005	0.49			
6/5/2018		0.38	<0.005		
6/6/2018	0.0048 (J)			<0.005	<0.005
10/2/2018			0.0019 (J)	<0.005	<0.005
10/3/2018	0.0037 (J)				
10/5/2018		0.34			
3/12/2019				<0.005	
3/13/2019		0.42	<0.005		0.00075 (J)
3/14/2019	0.0026 (J)				
4/2/2019			<0.005		
4/3/2019	0.0022 (J)			<0.005	<0.005
4/5/2019		0.36			
9/24/2019				<0.005	
9/25/2019			<0.005		
9/26/2019		0.44			
9/27/2019	0.0061				0.00037 (J)
3/3/2020	0.0023 (J)			<0.005	
3/4/2020		0.52	<0.005		<0.005
3/26/2020	0.0028 (J)				
3/27/2020			<0.005	<0.005	
3/30/2020		0.47			
3/31/2020					<0.005

Time Series

Constituent: Barium (mg/L) Analysis Run 6/2/2020 4:19 PM

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWC-10	HGWC-11
5/19/2016	0.0346	0.114	0.111		
5/23/2016				0.0877	0.0466
7/11/2016	0.0311	0.112			
7/12/2016			0.115	0.0926	0.0616
8/30/2016	0.0293	0.131	0.113		
9/1/2016				0.0994	0.0497
10/19/2016	0.0293	0.111	0.123		
10/24/2016				0.101	0.0794
12/6/2016	0.0304	0.108	0.127		
12/7/2016				0.107	0.1
1/24/2017	0.028	0.102	0.126		
1/26/2017				0.0538	0.0696
3/21/2017	0.0275	0.095	0.12		
3/22/2017				0.0962	0.0346
5/22/2017	0.0281	0.103	0.117		
5/24/2017				0.0996	0.0437
4/2/2018	0.026	0.099			
4/3/2018			0.11		
4/4/2018				0.084	0.029
6/4/2018	0.035	0.11	0.12		
6/5/2018				0.086	0.039
10/1/2018	0.029	0.11	0.14		
10/2/2018				0.076	
10/3/2018					0.033
3/12/2019	0.042	0.12	0.13		
3/13/2019				0.044	0.024
4/1/2019			0.13		
4/2/2019	0.04	0.13			
4/3/2019				0.076	0.023
9/23/2019	0.042	0.13	0.13		
9/27/2019				0.078	0.033
3/2/2020	0.034	0.11	0.14		
3/3/2020				0.048	0.022
3/25/2020	0.043	0.12	0.13		
3/31/2020					0.026
4/1/2020				0.058	

Time Series

Constituent: Barium (mg/L) Analysis Run 6/2/2020 4:19 PM

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWC-12	HGWC-13	HGWC-7	HGWC-8	HGWC-9
5/20/2016			0.0687	0.0808	
5/23/2016	0.133	0.0779			0.117
7/12/2016	0.135	0.0697	0.0731	0.083	0.13
9/1/2016	0.123	0.07	0.0747	0.0829	0.13
10/20/2016			0.072	0.0811	0.0806
10/24/2016	0.135	0.0882			
12/6/2016			0.0752	0.0845	0.128
12/7/2016	0.13	0.0798			
1/25/2017			0.0747	0.078	
1/26/2017	0.127	0.0738			0.142
3/21/2017			0.0722	0.0791	
3/22/2017	0.112	0.0755			0.122
5/23/2017			0.0794	0.0846	0.127
5/24/2017	0.106	0.0627			
4/3/2018			0.075	0.065	0.1
4/4/2018	0.083	0.099			
6/5/2018		0.13	0.071		
6/6/2018	0.09			0.063	0.11
10/2/2018			0.078	0.061	0.11
10/3/2018	0.087				
10/5/2018		0.076			
3/12/2019				0.062	
3/13/2019		0.1	0.083		0.1
3/14/2019	0.081				
4/2/2019			0.072		
4/3/2019	0.077			0.066	0.12
4/5/2019		0.079			
9/24/2019				0.053	
9/25/2019			0.061		
9/26/2019		0.11			
9/27/2019	0.096				0.11
3/3/2020	0.092			0.052	
3/4/2020		0.1	0.068		0.11
3/26/2020	0.089				
3/27/2020			0.059	0.059	
3/30/2020		0.08			
3/31/2020					0.11

Time Series

Constituent: Beryllium (mg/L) Analysis Run 6/2/2020 4:19 PM

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWC-10	HGWC-11
5/19/2016	<0.003	<0.003	<0.003		
5/23/2016				<0.003	<0.003
7/11/2016	<0.003	0.0001 (J)			
7/12/2016			<0.003	<0.003	<0.003
8/30/2016	<0.003	<0.003	<0.003		
9/1/2016				<0.003	<0.003
10/19/2016	<0.003	0.0001 (J)	<0.003		
10/24/2016				<0.003	<0.003
12/6/2016	<0.003	0.0002 (J)	<0.003		
12/7/2016				<0.003	<0.003
1/24/2017	<0.003	0.0001 (J)	<0.003		
1/26/2017				<0.003	<0.003
3/21/2017	<0.003	0.0001 (J)	<0.003		
3/22/2017				<0.003	9E-05 (J)
5/22/2017	<0.003	0.0001 (J)	<0.003		
5/24/2017				<0.003	<0.003
4/2/2018	<0.003	<0.003			
4/3/2018			<0.003		
4/4/2018				<0.003	<0.003
3/12/2019	<0.003	0.00017 (J)	<0.003		
3/13/2019				<0.003	0.0001 (J)
4/1/2019			<0.003		
4/2/2019	<0.003	0.00015 (J)			
4/3/2019				<0.003	0.00017 (J)
9/23/2019	<0.003	0.00011 (J)	<0.003		
9/27/2019				<0.003	8.6E-05 (J)
3/2/2020	<0.003	0.00014 (J)	<0.003		
3/3/2020				<0.003	0.00012 (J)
3/25/2020	<0.003	0.00016 (J)	<0.003		
3/31/2020					0.00015 (J)
4/1/2020				<0.003	

Time Series

Constituent: Beryllium (mg/L) Analysis Run 6/2/2020 4:19 PM

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWC-12	HGWC-13	HGWC-7	HGWC-8	HGWC-9
5/20/2016			<0.003	<0.003	
5/23/2016	<0.003	<0.003			<0.003
7/12/2016	<0.003	<0.003	<0.003	<0.003	<0.003
9/1/2016	<0.003	<0.003	<0.003	<0.003	<0.003
10/20/2016			<0.003	<0.003	<0.003
10/24/2016	<0.003	<0.003			
12/6/2016			<0.003	<0.003	<0.003
12/7/2016	<0.003	<0.003			
1/25/2017			<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	<0.003			<0.003
5/23/2017			<0.003	<0.003	<0.003
5/24/2017	<0.003	<0.003			
4/3/2018			<0.003	<0.003	<0.003
4/4/2018	<0.003	<0.003			
3/12/2019				<0.003	
3/13/2019		6.2E-05 (J)	<0.003		<0.003
3/14/2019	<0.003				
4/2/2019			<0.003		
4/3/2019	<0.003			7.4E-05 (J)	<0.003
4/5/2019		<0.003			
9/24/2019				<0.003	
9/25/2019			<0.003		
9/26/2019		0.00011 (J)			
9/27/2019	<0.003				<0.003
3/3/2020	<0.003			<0.003	
3/4/2020		9.3E-05 (J)	7.7E-05 (J)		<0.003
3/26/2020	<0.003				
3/27/2020			<0.003	<0.003	
3/30/2020		9.9E-05 (J)			
3/31/2020					<0.003

Time Series

Constituent: Boron (mg/L) Analysis Run 6/2/2020 4:19 PM

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWC-10	HGWC-11
5/19/2016	0.0214 (J)	0.0321 (J)	<0.1		
5/23/2016				0.72	0.787
7/11/2016	0.0142 (J)	0.0337 (J)			
7/12/2016			0.0074 (J)	0.778	1.17
8/30/2016	0.0074 (J)	0.0173 (J)	<0.1		
9/1/2016				0.786	1.49
10/19/2016	0.0224 (J)	0.0341 (J)	0.0085 (J)		
10/24/2016				0.831	2.54
12/6/2016	0.0211 (J)	0.0326 (J)	0.0085 (J)		
12/7/2016				1.01	2.96
1/24/2017	0.0165 (J)	0.0365 (J)	0.01 (J)		
1/26/2017				0.108	2.23
3/21/2017	0.0187 (J)	0.0349 (J)	0.0079 (J)		
3/22/2017				0.788	0.84
5/22/2017	0.0782	0.0475	0.0131 (J)		
5/24/2017				0.814	2.29
10/3/2017	0.0198 (J)	0.0386 (J)	0.0097 (J)	0.871	1.47
6/4/2018	0.02 (J)	0.036 (J)	0.017 (J)		
6/5/2018				1.2	1.3
10/1/2018	0.013 (J)	0.035 (J)	0.0061 (J)		
10/2/2018				0.62	
10/3/2018					0.91
4/1/2019			0.0066 (J)		
4/2/2019	0.016 (J)	0.034 (J)			
4/3/2019				0.66	0.23
9/23/2019	0.021 (J)	0.04 (J)	0.0081 (J)		
9/27/2019				1	0.53
3/25/2020	0.025 (J)	0.039 (J)	0.0096 (J)		
3/31/2020					0.17
4/1/2020				0.23	

Time Series

Constituent: Boron (mg/L) Analysis Run 6/2/2020 4:19 PM

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWC-12	HGWC-13	HGWC-7	HGWC-8	HGWC-9
5/20/2016			0.885	1.71	
5/23/2016	2.2	2.15			1.76
7/12/2016	1.98	1.91	0.857	1.43	1.56
9/1/2016	2.28	2.3	0.904	1.91	2
10/20/2016			0.936	1.72	1.68
10/24/2016	2.75	4.01			
12/6/2016			1.06	2.06	2.15
12/7/2016	3.35	3.85			
1/25/2017			0.764	2.01	
1/26/2017	3.07	2.45			1.87
3/21/2017			0.857	2.08	
3/22/2017	3.04	1.99			1.99
5/23/2017			0.91	2.32	2.29
5/24/2017	2.95	1.74			
10/3/2017	2.35	1.43	0.967	2.84	2.05
6/5/2018		1.3	0.86		
6/6/2018	2.5			2.6	2.3
10/2/2018			0.98	2.7	2.5
10/3/2018	2.3				
10/5/2018		1.6			
4/2/2019			0.99		
4/3/2019	1.8			2.8	2.3
4/5/2019		0.86 (J)			
9/24/2019				2.8	
9/25/2019			1.1		
9/26/2019		1.7			
9/27/2019	2.1				2.9
3/26/2020	1.6				
3/27/2020			1.2	2.4	
3/30/2020		1.8			
3/31/2020					2.2

Time Series

Constituent: Cadmium (mg/L) Analysis Run 6/2/2020 4:19 PM

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWC-10	HGWC-11
5/19/2016	<0.0025	<0.0025	<0.0025		
5/23/2016				0.000115 (J)	<0.0025
7/11/2016	<0.0025	<0.0025			
7/12/2016			<0.0025	<0.0025	<0.0025
8/30/2016	<0.0025	<0.0025	<0.0025		
9/1/2016				0.0001 (J)	<0.0025
10/19/2016	<0.0025	<0.0025	<0.0025		
10/24/2016				0.0001 (J)	<0.0025
12/6/2016	<0.0025	<0.0025	<0.0025		
12/7/2016				0.0001 (J)	0.0001 (J)
1/24/2017	<0.0025	0.0001 (J)	<0.0025		
1/26/2017				<0.0025	<0.0025
3/21/2017	<0.0025	7E-05 (J)	<0.0025		
3/22/2017				0.0001 (J)	0.0001 (J)
5/22/2017	<0.0025	0.0001 (J)	<0.0025		
5/24/2017				0.0002 (J)	<0.0025
4/2/2018	<0.0025	<0.0025			
4/3/2018			<0.0025		
4/4/2018				<0.0025	<0.0025
3/12/2019	<0.0025	0.00013 (J)	<0.0025		
3/13/2019				<0.0025	<0.0025
4/1/2019			<0.0025		
4/2/2019	<0.0025	0.00015 (J)			
4/3/2019				0.0001 (J)	9.6E-05 (J)
9/23/2019	<0.0025	<0.0025	<0.0025		
9/27/2019				<0.0025	<0.0025
3/2/2020	<0.0025	<0.0025	<0.0025		
3/3/2020				<0.0025	<0.0025
3/25/2020	<0.0025	0.00014 (J)	<0.0025		
3/31/2020					<0.0025
4/1/2020				<0.0025	

Time Series

Constituent: Cadmium (mg/L) Analysis Run 6/2/2020 4:19 PM

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWC-12	HGWC-13	HGWC-7	HGWC-8	HGWC-9
5/20/2016			<0.0025	0.00024 (J)	
5/23/2016	<0.0025	<0.0025			<0.0025
7/12/2016	<0.0025	<0.0025	<0.0025	0.0002 (J)	<0.0025
9/1/2016	<0.0025	<0.0025	<0.0025	0.0001 (J)	<0.0025
10/20/2016			<0.0025	0.0001 (J)	0.0002 (J)
10/24/2016	<0.0025	<0.0025			
12/6/2016			0.0002 (J)	0.0017	0.0001 (J)
12/7/2016	0.0002 (J)	<0.0025			
1/25/2017			0.0002 (J)	0.0002 (J)	
1/26/2017	<0.0025	<0.0025			<0.0025
3/21/2017			0.0002 (J)	0.0002 (J)	
3/22/2017	0.0003 (J)	<0.0025			7E-05 (J)
5/23/2017			0.0001 (J)	0.0003 (J)	<0.0025
5/24/2017	9E-05 (J)	<0.0025			
4/3/2018			<0.0025	<0.0025	<0.0025
4/4/2018	<0.0025	<0.0025			
3/12/2019				0.0002 (J)	
3/13/2019		<0.0025	<0.0025		<0.0025
3/14/2019	<0.0025				
4/2/2019			<0.0025		
4/3/2019	<0.0025			0.00032 (J)	<0.0025
4/5/2019		<0.0025			
9/24/2019				0.0002 (J)	
9/25/2019			<0.0025		
9/26/2019		<0.0025			
9/27/2019	<0.0025				<0.0025
3/3/2020	0.00015 (J)			0.00017 (J)	
3/4/2020		<0.0025	<0.0025		<0.0025
3/26/2020	<0.0025				
3/27/2020			<0.0025	0.00014 (J)	
3/30/2020		<0.0025			
3/31/2020					<0.0025

Time Series

Constituent: Calcium (mg/L) Analysis Run 6/2/2020 4:19 PM

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWC-10	HGWC-11
5/19/2016	138	22.9	76.2		
5/23/2016				167	131
7/11/2016	97.2	22.3			
7/12/2016			61.5	143	124
8/30/2016	97.5	26.4	65.1		
9/1/2016				156	107
10/19/2016	99.2	21.7	73.2		
10/24/2016				156	145
12/6/2016	105	18.2	74.9		
12/7/2016				183	159
1/24/2017	95.7	18.5	69.6		
1/26/2017				82.6	121
3/21/2017	106	18.6	75.7		
3/22/2017				154	130
5/22/2017	107	17.8	71.5		
5/24/2017				171	117
10/3/2017	102	20.2	76.3	162	87.7
6/4/2018	124	19.1	73.4		
6/5/2018				167	113
10/1/2018	108	20.5 (J)	80.9		
10/2/2018				144	
10/3/2018					89
4/1/2019			80.5		
4/2/2019	132	22.5 (J)			
4/3/2019				137	112
9/23/2019	118	19.5	71		
9/27/2019				157	113
3/25/2020	127	23	89.8		
3/31/2020					124
4/1/2020				96.2	

Time Series

Constituent: Calcium (mg/L) Analysis Run 6/2/2020 4:19 PM

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWC-12	HGWC-13	HGWC-7	HGWC-8	HGWC-9
5/20/2016			117	159	
5/23/2016	195	133			179
7/12/2016	181	101	88.8	127	174
9/1/2016	179	120	96.3	135	170
10/20/2016			96.9	134	133
10/24/2016	193	127			
12/6/2016			104	142	181
12/7/2016	193	113			
1/25/2017			94.5	142	
1/26/2017	172	77.9			175
3/21/2017			109	148	
3/22/2017	162	85.1			183
5/23/2017			93.3	140	181
5/24/2017	158	77.1			
10/3/2017	130	62	108	158	188
6/5/2018		110	99.8		
6/6/2018	136			127	184
10/2/2018			108	118	173
10/3/2018	125				
10/5/2018		73.6			
4/2/2019			101		
4/3/2019	114			125	164
4/5/2019		77.1			
9/24/2019				113	
9/25/2019			105		
9/26/2019		195			
9/27/2019	153				175
3/26/2020	145				
3/27/2020			119	133	
3/30/2020		234			
3/31/2020					182

Time Series

Constituent: Chloride (mg/L) Analysis Run 6/2/2020 4:19 PM

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWC-10	HGWC-11
5/19/2016	9.94	6.14	5.93		
5/23/2016				56.1	51.9
7/11/2016	6.3	5.9			
7/12/2016			6.2	63	100
8/30/2016	6	6.2	6.4		
9/1/2016				77	58
10/19/2016	5.8	6.1	6.5		
10/24/2016				99	220
12/6/2016	5.4	6	7.2		
12/7/2016				96	180
1/24/2017	5.2	6.1	6.4		
1/26/2017				7	90
3/21/2017	4.6	5.9	7.5		
3/22/2017				82	37
5/22/2017	4.6	5.9	6.5		
5/24/2017				81	69
10/3/2017	5.6	6.3	6.5	100	28
6/4/2018	13.1	6.1	6.3		
6/5/2018				66.6	56.1
10/1/2018	6.6	6.4	6.4		
10/2/2018				48.3	
10/3/2018					24.8
4/1/2019			6.5		
4/2/2019	20.3	5.8			
4/3/2019				49.3	4.6
9/23/2019	17.7	5.1	5.9		
9/27/2019				49.9	27.9
3/25/2020	20.4	5.2	6.1		
3/31/2020					3.2
4/1/2020				5.4	

Time Series

Constituent: Chloride (mg/L) Analysis Run 6/2/2020 4:19 PM

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWC-12	HGWC-13	HGWC-7	HGWC-8	HGWC-9
5/20/2016			50.4	109	
5/23/2016	160	93.2			152
7/12/2016	160	78	50	110	160
9/1/2016	140	100	50	110	160
10/20/2016			49	110	110
10/24/2016	160	140			
12/6/2016			51	100	150
12/7/2016	190	110			
1/25/2017			54	110	
1/26/2017	160	70			170
3/21/2017			46	110	
3/22/2017	130	59			160
5/23/2017			49	130	150
5/24/2017	120	50			
10/3/2017	93	29	52	130	160
6/5/2018		72.3	52.3		
6/6/2018	46.4			44.8	138
10/2/2018			52.6	89.4	142
10/3/2018	88.4				
10/5/2018		32.3			
4/2/2019			55.5		
4/3/2019	62.8			91.6	130
4/5/2019		36.4			
9/24/2019				60.2	
9/25/2019			49.8		
9/26/2019		109			
9/27/2019	81				126
3/26/2020	48				
3/27/2020			48.3	79.8	
3/30/2020		75.1			
3/31/2020					105

Time Series

Constituent: Chromium (mg/L) Analysis Run 6/2/2020 4:19 PM

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWC-10	HGWC-11
5/19/2016	<0.01	<0.01	<0.01		
5/23/2016				<0.01	<0.01
7/11/2016	<0.01	<0.01			
7/12/2016			<0.01	<0.01	<0.01
8/30/2016	<0.01	<0.01	<0.01		
9/1/2016				<0.01	<0.01
10/19/2016	<0.01	<0.01	<0.01		
10/24/2016				<0.01	<0.01
12/6/2016	<0.01	<0.01	<0.01		
12/7/2016				<0.01	<0.01
1/24/2017	<0.01	<0.01	<0.01		
1/26/2017				<0.01	<0.01
3/21/2017	0.0005 (J)	<0.01	<0.01		
3/22/2017				<0.01	0.0003 (J)
5/22/2017	<0.01	<0.01	0.0007 (J)		
5/24/2017				<0.01	<0.01
4/2/2018	<0.01	<0.01			
4/3/2018			<0.01		
4/4/2018				<0.01	<0.01
3/12/2019	<0.01	<0.01	<0.01		
3/13/2019				<0.01	<0.01
4/1/2019			<0.01		
4/2/2019	<0.01	0.0079 (J)			
4/3/2019				0.02	<0.01
9/23/2019	<0.01	0.00058 (J)	<0.01		
9/27/2019				<0.01	<0.01
3/2/2020	<0.01	0.00041 (J)	<0.01		
3/3/2020				<0.01	0.00061 (J)
3/25/2020	0.00072 (J)	<0.01	<0.01		
3/31/2020					<0.01
4/1/2020				<0.01	

Time Series

Constituent: Chromium (mg/L) Analysis Run 6/2/2020 4:19 PM

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWC-12	HGWC-13	HGWC-7	HGWC-8	HGWC-9
5/20/2016			<0.01	<0.01	
5/23/2016	<0.01	<0.01			<0.01
7/12/2016	<0.01	<0.01	<0.01	<0.01	<0.01
9/1/2016	<0.01	<0.01	<0.01	<0.01	<0.01
10/20/2016			<0.01	<0.01	<0.01
10/24/2016	<0.01	<0.01			
12/6/2016			<0.01	<0.01	<0.01
12/7/2016	<0.01	<0.01			
1/25/2017			<0.01	<0.01	
1/26/2017	<0.01	<0.01			<0.01
3/21/2017			<0.01	0.0005 (J)	
3/22/2017	0.0004 (J)	0.0004 (J)			<0.01
5/23/2017			<0.01	<0.01	<0.01
5/24/2017	<0.01	<0.01			
4/3/2018			<0.01	<0.01	<0.01
4/4/2018	<0.01	<0.01			
3/12/2019				<0.01	
3/13/2019		<0.01	<0.01		<0.01
3/14/2019	0.0025 (J)				
4/2/2019			<0.01		
4/3/2019	<0.01			<0.01	<0.01
4/5/2019		<0.01			
9/24/2019				<0.01	
9/25/2019			0.071		
9/26/2019		<0.01			
9/27/2019	<0.01				<0.01
3/3/2020	<0.01			0.0007 (J)	
3/4/2020		<0.01	0.0016 (J)		<0.01
3/26/2020	<0.01				
3/27/2020			0.0004 (J)	<0.01	
3/30/2020		0.00059 (J)			
3/31/2020					0.00052 (J)

Time Series

Constituent: Cobalt (mg/L) Analysis Run 6/2/2020 4:19 PM

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWC-10	HGWC-11
5/19/2016	<0.005	0.0293	<0.005		
5/23/2016				<0.005	<0.005
7/11/2016	0.0004 (J)	0.0267			
7/12/2016			<0.005	0.0006 (J)	0.0021 (J)
8/30/2016	<0.005	0.028	<0.005		
9/1/2016				0.0007 (J)	0.0025 (J)
10/19/2016	<0.005	0.0201	<0.005		
10/24/2016				0.0009 (J)	0.0032 (J)
12/6/2016	<0.005	0.0184	<0.005		
12/7/2016				0.0012 (J)	0.003 (J)
1/24/2017	<0.005	0.0206	<0.005		
1/26/2017				<0.005	0.0014 (J)
3/21/2017	<0.005	0.0251	<0.005		
3/22/2017				0.0006 (J)	0.0014 (J)
5/22/2017	<0.005	0.0263	<0.005		
5/24/2017				0.0006 (J)	0.0008 (J)
4/2/2018	<0.005	0.019			
4/3/2018			<0.005		
4/4/2018				<0.005	<0.005
3/12/2019	<0.005	0.017	<0.005		
3/13/2019				<0.005	0.00098 (J)
4/1/2019			<0.005		
4/2/2019	<0.005	0.019			
4/3/2019				<0.005	0.0018 (J)
9/23/2019	<0.005	0.038	<0.005		
9/27/2019				<0.005	0.00071 (J)
3/2/2020	<0.005	0.019	<0.005		
3/3/2020				<0.005	0.00087 (J)
3/25/2020	<0.005	0.02	<0.005		
3/31/2020					0.0014 (J)
4/1/2020				<0.005	

Time Series

Constituent: Cobalt (mg/L) Analysis Run 6/2/2020 4:19 PM

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWC-12	HGWC-13	HGWC-7	HGWC-8	HGWC-9
5/20/2016			<0.005	0.00207 (J)	
5/23/2016	<0.005	0.00361 (J)			<0.005
7/12/2016	0.0018 (J)	0.0032 (J)	0.0003 (J)	0.0019 (J)	0.0006 (J)
9/1/2016	0.0016 (J)	0.0033 (J)	<0.005	0.0023 (J)	0.0007 (J)
10/20/2016			0.0008 (J)	0.002 (J)	0.002 (J)
10/24/2016	0.0017 (J)	0.004 (J)			
12/6/2016			0.0009 (J)	0.0026 (J)	0.0011 (J)
12/7/2016	0.0021 (J)	0.0034 (J)			
1/25/2017			0.0005 (J)	0.002 (J)	
1/26/2017	0.0016 (J)	0.0024 (J)			0.0006 (J)
3/21/2017			0.0005 (J)	0.0023 (J)	
3/22/2017	0.0018 (J)	0.0026 (J)			0.0005 (J)
5/23/2017			0.0005 (J)	0.0023 (J)	0.0006 (J)
5/24/2017	0.0015 (J)	0.0022 (J)			
4/3/2018			<0.005	<0.005	<0.005
4/4/2018	<0.005	<0.005			
3/12/2019				0.002 (J)	
3/13/2019		0.0022 (J)	0.00067 (J)		0.00065 (J)
3/14/2019	0.0011 (J)				
4/2/2019			0.00069 (J)		
4/3/2019	0.0011 (J)			0.0019 (J)	0.00069 (J)
4/5/2019		0.0017 (J)			
9/24/2019				0.0015 (J)	
9/25/2019			0.0026 (J)		
9/26/2019		0.0042 (J)			
9/27/2019	0.0012 (J)				0.00057 (J)
3/3/2020	0.0013 (J)			0.002 (J)	
3/4/2020		0.0066	0.0011 (J)		0.00053 (J)
3/26/2020	0.0012 (J)				
3/27/2020			0.00074 (J)	0.0018 (J)	
3/30/2020		0.0053			
3/31/2020					0.00051 (J)

Time Series

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 6/2/2020 4:19 PM

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWC-10	HGWC-11
5/19/2016	0.397 (U)	0.627 (U)	0.342 (U)		
5/23/2016				0.419 (U)	0.509 (U)
7/11/2016	0.738 (U)	1.38			
7/12/2016			0.499 (U)	0.855	0.784 (U)
8/30/2016	0.581 (U)	1.05 (U)	0.976 (U)		
9/1/2016				0.844 (U)	0.261 (U)
10/19/2016	0.213 (U)	1.11 (U)	0.626 (U)		
10/24/2016				0.917 (U)	1.42
12/6/2016	0.444 (U)	0.741 (U)	0.805 (U)		
12/7/2016				0.558 (U)	0.781 (U)
1/24/2017	0.373 (U)	0.908 (U)	0.336 (U)		
1/26/2017				0.922 (U)	0.842 (U)
3/21/2017	0.816 (U)	0.567 (U)	0.358 (U)		
3/22/2017				0.751 (U)	0.318 (U)
5/22/2017	0.554 (U)	0.638 (U)	0.744 (U)		
5/24/2017				0.725 (U)	0.687 (U)
4/2/2018	0.405 (U)	0.761 (U)			
4/3/2018			0.684 (U)		
4/4/2018				0.715 (U)	1.5
6/4/2018	1.13 (U)	0.975 (U)	0.0291 (U)		
6/5/2018				0.718 (U)	0.549 (U)
10/1/2018	0.132 (U)	0.434 (U)	0.781 (U)		
10/2/2018				0.948	
10/3/2018					1.48
3/12/2019	0.327 (U)	0.454 (U)	1.01 (U)		
3/13/2019				1.19 (U)	0.584 (U)
4/1/2019			0.76 (U)		
4/2/2019	0.739 (U)	0.651 (U)			
4/3/2019				1.82 (U)	0.36 (U)
9/27/2019				1.16 (U)	1.78
9/30/2019	0.306 (U)	1.04 (U)	0.384 (U)		
3/2/2020	0.61 (U)	1.58	0.249 (U)		
3/3/2020				0.667 (U)	0.716 (U)
3/25/2020	4.36	0.621 (U)	0.833 (U)		
3/31/2020					1.3 (U)
4/1/2020				0.235 (U)	

Time Series

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 6/2/2020 4:19 PM

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWC-12	HGWC-13	HGWC-7	HGWC-8	HGWC-9
5/20/2016			0.62 (U)	0.56 (U)	
5/23/2016	1.12	0.625 (U)			0.826 (U)
7/12/2016	1.61	0.478 (U)	0.283 (U)	0.636 (U)	0.511 (U)
9/1/2016	1.23	0.595 (U)	0.703 (U)	0.818 (U)	0.762 (U)
10/20/2016			1.97	1.04 (U)	1.17
10/24/2016	1.98	1.54			
12/6/2016			2	0.771 (U)	0.126 (U)
12/7/2016	0.319 (U)	0.657 (U)			
1/25/2017			1.06 (U)	0.859 (U)	
1/26/2017	0.54 (U)	1.22			0.515 (U)
3/21/2017			0.668 (U)	0.851 (U)	
3/22/2017	0.635 (U)	0.285 (U)			0.451 (U)
5/23/2017			0.621 (U)	0.705 (U)	0.924 (U)
5/24/2017	1.01	0.655 (U)			
4/3/2018			0.538 (U)	0.311 (U)	0.732 (U)
4/4/2018	0.956	0.882 (U)			
6/5/2018		1.1 (U)	0.985 (U)		
6/6/2018	0.424 (U)			0.896 (U)	0.813 (U)
10/2/2018			0.837 (U)	1.21	0.61 (U)
10/3/2018	0.57 (U)				
10/5/2018		0.558 (U)			
3/12/2019				0.544 (U)	
3/13/2019		0.39 (U)	0.403 (U)		1 (U)
3/14/2019	0.992 (U)				
4/2/2019			0.865 (U)		
4/3/2019	0.734 (U)			0.885 (U)	0.156 (U)
4/5/2019		0.422 (U)			
9/24/2019				1.3	
9/25/2019			0.884 (U)		
9/26/2019		0.939 (U)			
9/27/2019	0.958 (U)				0.428 (U)
3/3/2020	0.971 (U)			0.835 (U)	
3/4/2020		0.708 (U)	0.624 (U)		1.03
3/26/2020	0.209 (U)				
3/27/2020			0.485 (U)	1.04 (U)	
3/30/2020		0.602 (U)			
3/31/2020					1.2 (U)

Time Series

Constituent: Fluoride (mg/L) Analysis Run 6/2/2020 4:19 PM

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWC-10	HGWC-11
5/19/2016	0.105 (J)	0.0303 (J)	0.0513 (J)		
5/23/2016				0.0394 (J)	0.203 (J)
7/11/2016	0.16 (J)	0.05 (J)			
7/12/2016			0.12 (J)	0.15 (J)	0.44
8/30/2016	0.09 (J)	0.06 (J)	0.09 (J)		
9/1/2016				0.5	0.67
10/19/2016	0.1 (J)	0.04 (J)	0.1 (J)		
10/24/2016				0.06 (J)	0.26 (J)
12/6/2016	0.11 (J)	0.36	0.21 (J)		
12/7/2016				0.44	0.55
1/24/2017	0.09 (J)	<0.3	0.06 (J)		
1/26/2017				0.29 (J)	0.27 (J)
3/21/2017	0.13 (J)	<0.3	0.005 (J)		
3/22/2017				0.34	0.66
5/22/2017	0.12 (J)	<0.3	0.05 (J)		
5/24/2017				0.13 (J)	0.35
10/3/2017	0.13 (J)	<0.3	0.13 (J)	0.46	0.56
4/2/2018	<0.3	<0.3			
4/3/2018			<0.3		
4/4/2018				<0.3	0.39
6/4/2018	0.074 (J)	<0.3	<0.3		
6/5/2018				<0.3	0.24 (J)
10/1/2018	<0.3	<0.3	<0.3		
10/2/2018				0.17 (J)	
10/3/2018					0.31
3/12/2019	0.29 (J)	0.038 (J)	0.072 (J)		
3/13/2019				0.17 (J)	0.51
4/1/2019			0.029 (J)		
4/2/2019	0.1 (J)	0.071 (J)			
4/3/2019				0.082 (J)	0.43
9/23/2019	0.078 (J)	<0.3	<0.3		
9/27/2019				0.17 (J)	0.42
3/2/2020	0.076 (J)	<0.3	<0.3		
3/3/2020				0.11 (J)	0.24 (J)
3/25/2020	0.098 (J)	<0.3	<0.3		
3/31/2020					0.19 (J)
4/1/2020				0.12 (J)	

Time Series

Constituent: Fluoride (mg/L) Analysis Run 6/2/2020 4:19 PM

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWC-12	HGWC-13	HGWC-7	HGWC-8	HGWC-9
5/20/2016			0.0828 (J)	0.499	
5/23/2016	0.212 (J)	0.2587 (J)			<0.3
7/12/2016	0.31	0.53	0.2 (J)	0.67	0.24 (J)
9/1/2016	0.62	0.74	0.51	0.94	0.46
10/20/2016			0.4	0.56	0.56
10/24/2016	0.19 (J)	0.31			
12/6/2016			0.26 (J)	0.76	0.31
12/7/2016	0.73	1			
1/25/2017			0.24 (J)	1.1	
1/26/2017	0.12 (J)	0.68			0.004 (J)
3/21/2017			0.13 (J)	0.46	
3/22/2017	0.44	0.76			0.28 (J)
5/23/2017			0.11 (J)	0.65	0.29 (J)
5/24/2017	0.34	0.54			
10/3/2017	0.58	0.83	0.17 (J)	0.66	0.53
4/3/2018			<0.3	0.39	<0.3
4/4/2018	<0.3	0.65			
6/5/2018		0.47	0.099 (J)		
6/6/2018	0.21 (J)			0.46	0.12 (J)
10/2/2018			<0.3	0.51	0.031 (J)
10/3/2018	0.15 (J)				
10/5/2018		0.77			
3/12/2019				0.58	
3/13/2019		0.78	0.12 (J)		0.14 (J)
3/14/2019	1.1				
4/2/2019			0.097 (J)		
4/3/2019	0.3 (J)			0.63	0.14 (J)
4/5/2019		0.83			
9/24/2019				0.49	
9/25/2019			0.1 (J)		
9/26/2019		0.64			
9/27/2019	0.26 (J)				0.26 (J)
3/3/2020	0.21 (J)			0.45	
3/4/2020		0.37	0.077 (J)		0.08 (J)
3/26/2020	0.17 (J)				
3/27/2020			0.059 (J)	0.46	
3/30/2020		0.44			
3/31/2020					0.074 (J)

Time Series

Constituent: Lead (mg/L) Analysis Run 6/2/2020 4:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWC-10	HGWC-11
5/19/2016	<0.005	<0.005	<0.005		
5/23/2016				<0.005	<0.005
7/11/2016	<0.005	<0.005			
7/12/2016			0.0001 (J)	<0.005	<0.005
8/30/2016	<0.005	<0.005	<0.005		
9/1/2016				<0.005	<0.005
10/19/2016	<0.005	<0.005	<0.005		
10/24/2016				<0.005	<0.005
12/6/2016	<0.005	<0.005	<0.005		
12/7/2016				<0.005	<0.005
1/24/2017	<0.005	<0.005	<0.005		
1/26/2017				<0.005	<0.005
3/21/2017	<0.005	6E-05 (J)	0.0001 (J)		
3/22/2017				<0.005	0.0003 (J)
5/22/2017	<0.005	9E-05 (J)	<0.005		
5/24/2017				<0.005	9E-05 (J)
4/2/2018	<0.005	<0.005			
4/3/2018			<0.005		
4/4/2018				<0.005	<0.005
3/12/2019	<0.005	<0.005	<0.005		
3/13/2019				<0.005	<0.005
9/23/2019	7.8E-05 (J)	9.2E-05 (J)	<0.005		
3/2/2020	4.8E-05 (J)	9.5E-05 (J)	<0.005		
3/3/2020				<0.005	0.00021 (J)
3/25/2020	<0.005	0.00011 (J)	<0.005		
3/31/2020					0.0003 (J)
4/1/2020				5E-05 (J)	

Time Series

Constituent: Lead (mg/L) Analysis Run 6/2/2020 4:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWC-12	HGWC-13	HGWC-7	HGWC-8	HGWC-9
5/20/2016			<0.005	<0.005	
5/23/2016	<0.005	<0.005			<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
10/20/2016			<0.005	<0.005	<0.005
10/24/2016	<0.005	<0.005			
12/6/2016			0.0001 (J)	<0.005	0.0002 (J)
12/7/2016	<0.005	<0.005			
1/25/2017			0.0001 (J)	<0.005	
1/26/2017	<0.005	<0.005			0.0001 (J)
3/21/2017			9E-05 (J)	<0.005	
3/22/2017	<0.005	7E-05 (J)			<0.005
5/23/2017			8E-05 (J)	<0.005	0.0001 (J)
5/24/2017	<0.005	<0.005			
4/3/2018			<0.005	<0.005	<0.005
4/4/2018	<0.005	<0.005			
3/12/2019				<0.005	
3/13/2019		<0.005	<0.005		<0.005
3/14/2019	<0.005				
3/3/2020	5.6E-05 (J)			0.00013 (J)	
3/4/2020		0.00014 (J)	0.00051 (J)		8.4E-05 (J)
3/26/2020	0.00043 (J)				
3/27/2020			5.4E-05 (J)	<0.005	
3/30/2020		0.0001 (J)			
3/31/2020					0.00014 (J)

Time Series

Constituent: Lithium (mg/L) Analysis Run 6/2/2020 4:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWC-10	HGWC-11
5/19/2016	<0.03	<0.03	<0.03		
5/23/2016				<0.03	<0.03
7/11/2016	<0.03	0.0014 (J)			
7/12/2016			0.0024 (J)	<0.03	<0.03
8/30/2016	<0.03	<0.03	0.0025 (J)		
9/1/2016				<0.03	<0.03
10/19/2016	<0.03	<0.03	0.003 (J)		
10/24/2016				<0.03	<0.03
12/6/2016	<0.03	<0.03	0.0033 (J)		
12/7/2016				<0.03	<0.03
1/24/2017	<0.03	<0.03	0.003 (J)		
1/26/2017				<0.03	<0.03
3/21/2017	<0.03	0.0012 (J)	0.0034 (J)		
3/22/2017				<0.03	<0.03
5/22/2017	<0.03	<0.03	0.003 (J)		
5/24/2017				<0.03	<0.03
4/2/2018	<0.03	0.0015 (J)			
4/3/2018			0.003 (J)		
4/4/2018				<0.03	<0.03
6/4/2018	0.001 (J)	0.0016 (J)	0.0027 (J)		
6/5/2018				<0.03	<0.03
10/1/2018	0.00099 (J)	0.0013 (J)	0.0032 (J)		
10/2/2018				<0.03	
10/3/2018					<0.03
3/12/2019	0.001 (J)	0.0018 (J)	0.0032 (J)		
3/13/2019				<0.03	<0.03
4/1/2019			0.0032 (J)		
4/2/2019	0.001 (J)	0.0018 (J)			
4/3/2019				<0.03	<0.03
9/23/2019	0.0011 (J)	0.0016 (J)	0.0029 (J)		
9/27/2019				<0.03	<0.03
3/2/2020	0.0012 (J)	0.0017 (J)	0.0037 (J)		
3/3/2020				<0.03	<0.03
3/25/2020	0.00083 (J)	0.0017 (J)	0.0035 (J)		
3/31/2020					<0.03
4/1/2020				<0.03	

Time Series

Constituent: Lithium (mg/L) Analysis Run 6/2/2020 4:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWC-12	HGWC-13	HGWC-7	HGWC-8	HGWC-9
5/20/2016			<0.03	<0.03	
5/23/2016	0.0107 (J)	0.0422 (J)			<0.03
7/12/2016	0.0113 (J)	0.0366 (J)	0.0021 (J)	0.0023 (J)	0.004 (J)
9/1/2016	0.0118 (J)	0.04 (J)	0.0025 (J)	0.0029 (J)	0.0044 (J)
10/20/2016			0.0021 (J)	0.0027 (J)	0.0027 (J)
10/24/2016	0.0114 (J)	0.0435 (J)			
12/6/2016			0.0026 (J)	0.0032 (J)	0.005 (J)
12/7/2016	0.0155 (J)	0.0477 (J)			
1/25/2017			0.0024 (J)	0.0026 (J)	
1/26/2017	0.0099 (J)	0.0342 (J)			0.0042 (J)
3/21/2017			0.0026 (J)	0.0029 (J)	
3/22/2017	0.0098 (J)	0.0353 (J)			0.0043 (J)
5/23/2017			0.0026 (J)	0.0029 (J)	0.0048 (J)
5/24/2017	0.0105 (J)	0.0317 (J)			
4/3/2018			0.0023 (J)	0.0025 (J)	0.0043 (J)
4/4/2018	0.008 (J)	0.031 (J)			
6/5/2018		0.031 (J)	0.0022 (J)		
6/6/2018	0.0095 (J)			0.0023 (J)	0.0043 (J)
10/2/2018			0.003 (J)	0.0025 (J)	0.004 (J)
10/3/2018	0.0083 (J)				
10/5/2018		0.027 (J)			
3/12/2019				0.0025 (J)	
3/13/2019		0.029 (J)	0.0024 (J)		0.004 (J)
3/14/2019	0.0058 (J)				
4/2/2019			0.002 (J)		
4/3/2019	0.0066 (J)			0.0025 (J)	0.004 (J)
4/5/2019		0.023 (J)			
9/24/2019				0.0024 (J)	
9/25/2019			0.0019 (J)		
9/26/2019		0.035			
9/27/2019	0.011 (J)				0.0044 (J)
3/3/2020	0.0063 (J)			0.0028 (J)	
3/4/2020		0.041	0.0034 (J)		0.004 (J)
3/26/2020	0.0063 (J)				
3/27/2020			0.002 (J)	0.0026 (J)	
3/30/2020		0.038			
3/31/2020					0.0043 (J)

Time Series

Constituent: Mercury (mg/L) Analysis Run 6/2/2020 4:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWC-10	HGWC-11
5/19/2016	<0.0005	<0.0005	<0.0005		
5/23/2016				<0.0005	<0.0005
7/11/2016	<0.0005	<0.0005			
7/12/2016			<0.0005	<0.0005	<0.0005
8/30/2016	4E-05 (J)	4E-05 (J)	<0.0005		
9/1/2016				<0.0005	<0.0005
10/19/2016	<0.0005	<0.0005	<0.0005		
10/24/2016				<0.0005	<0.0005
12/6/2016	<0.0005	<0.0005	<0.0005		
12/7/2016				<0.0005	<0.0005
1/24/2017	<0.0005	<0.0005	<0.0005		
1/26/2017				5E-05 (J)	5E-05 (J)
3/21/2017	<0.0005	<0.0005	<0.0005		
3/22/2017				<0.0005	<0.0005
5/22/2017	<0.0005	<0.0005	<0.0005		
5/24/2017				<0.0005	<0.0005
4/2/2018	<0.0005	<0.0005			
4/3/2018			<0.0005		
4/4/2018				<0.0005	<0.0005
3/12/2019	<0.0005	<0.0005	<0.0005		
3/13/2019				<0.0005	<0.0005
3/2/2020	<0.0005	<0.0005	<0.0005		
3/3/2020				<0.0005	<0.0005

Time Series

Constituent: Mercury (mg/L) Analysis Run 6/2/2020 4:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWC-12	HGWC-13	HGWC-7	HGWC-8	HGWC-9
5/20/2016			<0.0005	<0.0005	
5/23/2016	<0.0005	<0.0005			<0.0005
7/12/2016	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
9/1/2016	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
10/20/2016			<0.0005	<0.0005	<0.0005
10/24/2016	<0.0005	<0.0005			
12/6/2016			<0.0005	<0.0005	<0.0005
12/7/2016	<0.0005	<0.0005			
1/25/2017			<0.0005	<0.0005	
1/26/2017	<0.0005	4E-05 (J)			4E-05 (J)
3/21/2017			<0.0005	<0.0005	
3/22/2017	<0.0005	<0.0005			<0.0005
5/23/2017			<0.0005	<0.0005	<0.0005
5/24/2017	<0.0005	5E-05 (J)			
4/3/2018			<0.0005	<0.0005	<0.0005
4/4/2018	<0.0005	<0.0005			
3/12/2019				<0.0005	
3/13/2019		<0.0005	<0.0005		<0.0005
3/14/2019	<0.0005				
3/3/2020	<0.0005			<0.0005	
3/4/2020		<0.0005	<0.0005		<0.0005

Time Series

Constituent: Molybdenum (mg/L) Analysis Run 6/2/2020 4:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWC-10	HGWC-11
5/19/2016	<0.01	<0.01	<0.01		
5/23/2016				<0.01	0.0164
7/11/2016	<0.01	<0.01			
7/12/2016			<0.01	0.0013 (J)	0.0251
8/30/2016	<0.01	<0.01	<0.01		
9/1/2016				<0.01	0.0259
10/19/2016	<0.01	<0.01	<0.01		
10/24/2016				<0.01	0.0293
12/6/2016	<0.01	<0.01	<0.01		
12/7/2016				<0.01	0.0209
1/24/2017	<0.01	<0.01	<0.01		
1/26/2017				<0.01	0.0277
3/21/2017	<0.01	<0.01	<0.01		
3/22/2017				0.0013 (J)	0.011
5/22/2017	<0.01	<0.01	<0.01		
5/24/2017				0.0014 (J)	0.0373
4/2/2018	<0.01	<0.01			
4/3/2018			<0.01		
4/4/2018				<0.01	0.013
6/4/2018	<0.01	<0.01	<0.01		
6/5/2018				<0.01	0.029
10/1/2018	<0.01	<0.01	<0.01		
10/2/2018				<0.01	
10/3/2018					0.02
3/12/2019	<0.01	<0.01	<0.01		
3/13/2019				<0.01	0.012
4/1/2019			<0.01		
4/2/2019	<0.01	<0.01			
4/3/2019				0.0021 (J)	0.01
9/23/2019	<0.01	<0.01	<0.01		
9/27/2019				0.0014 (J)	0.016
3/2/2020	<0.01	<0.01	<0.01		
3/3/2020				<0.01	0.011
3/25/2020	<0.01	<0.01	<0.01		
3/31/2020					0.0074 (J)
4/1/2020				<0.01	

Time Series

Constituent: Molybdenum (mg/L) Analysis Run 6/2/2020 4:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWC-12	HGWC-13	HGWC-7	HGWC-8	HGWC-9
5/20/2016			0.028	0.446	
5/23/2016	0.0413 (J)	0.027			0.0187
7/12/2016	0.0484	0.0316	0.0273	0.455	0.0229
9/1/2016	0.0474	0.0336	0.0274	0.481	0.0239
10/20/2016			0.036	0.472	0.477
10/24/2016	0.047	0.0352			
12/6/2016			0.0365	0.52	0.0236
12/7/2016	0.0432	0.0383			
1/25/2017			0.0317	0.478	
1/26/2017	0.0484	0.041			0.0234
3/21/2017			0.0346	0.547	
3/22/2017	0.0494	0.0426			0.0219
5/23/2017			0.0336	0.482	0.0242
5/24/2017	0.047	0.04			
4/3/2018			0.032	0.44	0.025
4/4/2018	0.052	0.027			
6/5/2018		0.027	0.036		
6/6/2018	0.054			0.49	0.027
10/2/2018			0.039	0.47	0.028
10/3/2018	0.054				
10/5/2018		0.033			
3/12/2019				0.5	
3/13/2019		0.033	0.04		0.028
3/14/2019	0.046				
4/2/2019			0.041		
4/3/2019	0.049			0.5	0.03
4/5/2019		0.03			
9/24/2019				0.54	
9/25/2019			0.047		
9/26/2019		0.026			
9/27/2019	0.052				0.033
3/3/2020	0.045			0.44	
3/4/2020		0.03	0.045		0.031
3/26/2020	0.045				
3/27/2020			0.044	0.42	
3/30/2020		0.029			
3/31/2020					0.031

Time Series

Constituent: pH (s.u.) Analysis Run 6/2/2020 4:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWC-10	HGWC-11
5/19/2016	7.27	5.81	7.45		
5/23/2016				6.83	6.22
7/11/2016	7.06	5.68			
7/12/2016			7.32	6.58	6.04
8/30/2016	7.28	5.63	7.43		
9/1/2016				6.54	6.26
10/19/2016	7.02	5.46	7.03		
10/24/2016				6.59	6.46
12/6/2016	7.09	5.38	7.08		
12/7/2016				6.56	6.29
1/24/2017	7.2	5.37	7.39		
1/26/2017				6.83	6.46
3/21/2017	7.01	4.9	6.83		
3/22/2017				6.66	5.81
5/22/2017	7.11	5.2	7.02		
5/24/2017				6.67	6.51
10/3/2017	7.21	5.3	7.47	6.54	6.25
4/2/2018	7.1	5.4			
4/3/2018			7.38		
4/4/2018				6.61	5.86
6/4/2018	7.06	5.27	7.38		
6/5/2018				6.65	6.27
10/1/2018	7.09	5.31	7.13		
10/2/2018				6.55	
10/3/2018					5.97
3/12/2019	7.03	5.42	7.29		
3/13/2019				6.7	5.92
4/1/2019			7.16		
4/2/2019	6.86	5.41			
4/3/2019				6.55	5.69
9/23/2019	7.02	5.33	7.3		
9/27/2019				6.64	5.75
3/2/2020	7.1	5.43	7.12		
3/3/2020				6.67	5.95
3/25/2020	6.95	5.36	7.4		
3/31/2020					5.7
4/1/2020				6.84	

Time Series

Constituent: pH (s.u.) Analysis Run 6/2/2020 4:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWC-12	HGWC-13	HGWC-7	HGWC-8	HGWC-9
5/20/2016			7.14	6.99	
5/23/2016	7.15	7.14			7.23
7/12/2016	6.87	7.04	7.13	6.88	6.87
9/1/2016	7.2	7.24	7.29	6.73	7.15
10/20/2016			7.1	6.9	7.05
10/24/2016	7.1	6.9			
12/6/2016			7.15	6.98	7.15
12/7/2016	6.92	6.91			
1/25/2017			7.11	7.04	
1/26/2017	7.05	7.08			6.99
3/21/2017			7.12	6.87	
3/22/2017	7.08	7.13			7.03
5/23/2017			7.08	6.87	7.05
5/24/2017	7.11	7.15			
10/3/2017	7.01	7.32	7.21	6.72	7.07
4/3/2018			7.14	6.87	6.99
4/4/2018	7.12	7.27			
6/5/2018		7.2	7.13		
6/6/2018	7.12			6.9	7.02
10/2/2018			7.12	6.9	7.05
10/3/2018	7.08				
10/5/2018		7.24			
3/12/2019				6.91	
3/13/2019		7.24	7.27		7.06
3/14/2019	7.09				
4/2/2019			7.27		
4/3/2019	6.96			6.85	6.88
4/5/2019		7.24			
9/24/2019				6.95	
9/25/2019			7.11		
9/26/2019		6.94			
9/27/2019	7.07				7.01
3/3/2020	6.95			7.06	
3/4/2020		7.16	7.17		6.97
3/26/2020	6.99				
3/27/2020			7.05	6.95	
3/30/2020		6.91			
3/31/2020					7.07

Time Series

Constituent: Selenium (mg/L) Analysis Run 6/2/2020 4:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWC-10	HGWC-11
5/19/2016	<0.01	<0.01	<0.01		
5/23/2016				<0.01	0.0106
7/11/2016	<0.01	<0.01			
7/12/2016			<0.01	<0.01	0.0057 (J)
8/30/2016	<0.01	<0.01	<0.01		
9/1/2016				<0.01	0.0057 (J)
10/19/2016	<0.01	<0.01	<0.01		
10/24/2016				<0.01	0.0021 (J)
12/6/2016	<0.01	<0.01	<0.01		
12/7/2016				<0.01	0.0015 (J)
1/24/2017	<0.01	<0.01	<0.01		
1/26/2017				0.0041 (J)	0.0062 (J)
3/21/2017	<0.01	<0.01	<0.01		
3/22/2017				<0.01	0.0263
5/22/2017	<0.01	<0.01	<0.01		
5/24/2017				<0.01	0.0038 (J)
4/2/2018	<0.01	<0.01			
4/3/2018			<0.01		
4/4/2018				<0.01	0.021
6/4/2018	<0.01	<0.01	<0.01		
6/5/2018				<0.01	0.0062 (J)
10/1/2018	<0.01	<0.01	<0.01		
10/2/2018				0.0023 (J)	
10/3/2018					0.009 (J)
3/12/2019	<0.01	<0.01	<0.01		
3/13/2019				0.0015 (J)	0.023
4/1/2019			<0.01		
4/2/2019	<0.01	<0.01			
4/3/2019				<0.01	0.016
9/23/2019	<0.01	<0.01	<0.01		
9/27/2019				<0.01	0.013
3/2/2020	<0.01	<0.01	<0.01		
3/3/2020				<0.01	0.016
3/25/2020	<0.01	<0.01	<0.01		
3/31/2020					0.019
4/1/2020				0.002 (J)	

Time Series

Constituent: Selenium (mg/L) Analysis Run 6/2/2020 4:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWC-12	HGWC-13	HGWC-7	HGWC-8	HGWC-9
5/20/2016			<0.01	<0.01	
5/23/2016	<0.01	<0.01			<0.01
7/12/2016	<0.01	<0.01	<0.01	<0.01	<0.01
9/1/2016	<0.01	<0.01	<0.01	<0.01	<0.01
10/20/2016			<0.01	<0.01	<0.01
10/24/2016	<0.01	<0.01			
12/6/2016			<0.01	0.0024 (J)	0.0037 (J)
12/7/2016	0.0011 (J)	<0.01			
1/25/2017			<0.01	<0.01	
1/26/2017	<0.01	<0.01			<0.01
3/21/2017			<0.01	<0.01	
3/22/2017	<0.01	<0.01			<0.01
5/23/2017			<0.01	<0.01	<0.01
5/24/2017	<0.01	<0.01			
4/3/2018			<0.01	<0.01	<0.01
4/4/2018	<0.01	<0.01			
6/5/2018		<0.01	<0.01		
6/6/2018	<0.01			<0.01	<0.01
10/2/2018			<0.01	<0.01	<0.01
10/3/2018	<0.01				
10/5/2018		<0.01			
3/12/2019				<0.01	
3/13/2019		<0.01	<0.01		<0.01
3/14/2019	<0.01				
4/2/2019			<0.01		
4/3/2019	<0.01			<0.01	<0.01
4/5/2019		0.00018 (J)			
9/24/2019				<0.01	
9/25/2019			<0.01		
9/26/2019		<0.01			
9/27/2019	<0.01				<0.01
3/3/2020	<0.01			<0.01	
3/4/2020		<0.01	<0.01		<0.01
3/26/2020	<0.01				
3/27/2020			<0.01	<0.01	
3/30/2020		<0.01			
3/31/2020					<0.01

Time Series

Constituent: Sulfate (mg/L) Analysis Run 6/2/2020 4:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWC-10	HGWC-11
5/19/2016	66.9	48.6	42.3		
5/23/2016				175	260
7/11/2016	41	45			
7/12/2016			44	190	390
8/30/2016	36	42	40		
9/1/2016				190	240
10/19/2016	46	44	43		
10/24/2016				190	370
12/6/2016	59	44	43		
12/7/2016				200	260
1/24/2017	46	46	48		
1/26/2017				90	230
3/21/2017	63	46	45		
3/22/2017				170	330
5/22/2017	77	48	46		
5/24/2017				190	230
10/3/2017	42	47	48	200	230
6/4/2018	71.8	47.8	46.6		
6/5/2018				205	204
10/1/2018	49.1	48.1	48.6		
10/2/2018				178	
10/3/2018					233
4/1/2019			50.4		
4/2/2019	84.3	48.7			
4/3/2019				159	298
9/23/2019	70.2	47.2	43.9		
9/27/2019				181	<10
3/25/2020	85.9	46.3	50.5		
3/31/2020					283
4/1/2020				59	

Time Series

Constituent: Sulfate (mg/L) Analysis Run 6/2/2020 4:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWC-12	HGWC-13	HGWC-7	HGWC-8	HGWC-9
5/20/2016			96	219	
5/23/2016	288	215			207
7/12/2016	320	210	100	230	230
9/1/2016	300	190	100	230	230
10/20/2016			110	240	240
10/24/2016	270	180			
12/6/2016			110	250	240
12/7/2016	280	120			
1/25/2017			110	260	
1/26/2017	260	83			270
3/21/2017			110	240	
3/22/2017	220	100			240
5/23/2017			110	270	240
5/24/2017	210	110			
10/3/2017	190	67	120	230	240
6/5/2018		187	117		
6/6/2018	162			190	214
10/2/2018			120	193	218
10/3/2018	191				
10/5/2018		78.3			
4/2/2019			127		
4/3/2019	176			194	214
4/5/2019		105			
9/24/2019				133	
9/25/2019			109		
9/26/2019		444			
9/27/2019	198				214
3/26/2020	182				
3/27/2020			109	173	
3/30/2020		393			
3/31/2020					185

Time Series

Constituent: Thallium (mg/L) Analysis Run 6/2/2020 4:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWC-10	HGWC-11
5/19/2016	<0.001	<0.001	<0.001		
5/23/2016				<0.001	<0.001
7/11/2016	<0.001	<0.001			
7/12/2016			<0.001	<0.001	8E-05 (J)
8/30/2016	<0.001	<0.001	<0.001		
9/1/2016				<0.001	<0.001
10/19/2016	<0.001	<0.001	<0.001		
10/24/2016				<0.001	<0.001
12/6/2016	<0.001	<0.001	<0.001		
12/7/2016				<0.001	<0.001
1/24/2017	<0.001	<0.001	<0.001		
1/26/2017				<0.001	<0.001
3/21/2017	<0.001	3E-05 (J)	<0.001		
3/22/2017				<0.001	<0.001
5/22/2017	<0.001	<0.001	<0.001		
5/24/2017				<0.001	8E-05 (J)
4/2/2018	<0.001	<0.001			
4/3/2018			<0.001		
4/4/2018				<0.001	<0.001
6/4/2018	<0.001	<0.001	<0.001		
6/5/2018				<0.001	<0.001
10/1/2018	<0.001	<0.001	<0.001		
10/2/2018				<0.001	
10/3/2018					<0.001
3/12/2019	<0.001	<0.001	<0.001		
3/13/2019				<0.001	<0.001
4/1/2019			<0.001		
4/2/2019	<0.001	<0.001			
4/3/2019				<0.001	<0.001
9/23/2019	<0.001	<0.001	<0.001		
9/27/2019				<0.001	<0.001
3/2/2020	<0.001	<0.001	<0.001		
3/3/2020				<0.001	<0.001
3/25/2020	<0.001	<0.001	<0.001		
3/31/2020					<0.001
4/1/2020				<0.001	

Time Series

Constituent: Thallium (mg/L) Analysis Run 6/2/2020 4:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWC-12	HGWC-13	HGWC-7	HGWC-8	HGWC-9
5/20/2016			<0.001	<0.001	
5/23/2016	<0.001	0.000378 (J)			<0.001
7/12/2016	0.0002 (J)	0.0004 (J)	<0.001	7E-05 (J)	<0.001
9/1/2016	<0.001	0.0004 (J)	<0.001	<0.001	<0.001
10/20/2016			<0.001	<0.001	<0.001
10/24/2016	<0.001	0.0005 (J)			
12/6/2016			<0.001	<0.001	<0.001
12/7/2016	<0.001	0.0004 (J)			
1/25/2017			<0.001	<0.001	
1/26/2017	<0.001	0.0004 (J)			<0.001
3/21/2017			<0.001	9E-05 (J)	
3/22/2017	0.0001 (J)	0.0004 (J)			<0.001
5/23/2017			<0.001	8E-05 (J)	<0.001
5/24/2017	9E-05 (J)	0.0003 (J)			
4/3/2018			<0.001	<0.001	<0.001
4/4/2018	<0.001	0.00032 (J)			
6/5/2018		0.00035 (J)	<0.001		
6/6/2018	<0.001			<0.001	<0.001
10/2/2018			<0.001	<0.001	<0.001
10/3/2018	<0.001				
10/5/2018		0.00025 (J)			
3/12/2019				<0.001	
3/13/2019		0.00039 (J)	<0.001		<0.001
3/14/2019	<0.001				
4/2/2019			<0.001		
4/3/2019	<0.001			<0.001	<0.001
4/5/2019		0.00034 (J)			
9/24/2019				0.00011 (J)	
9/25/2019			<0.001		
9/26/2019		0.00039 (J)			
9/27/2019	8.8E-05 (J)				<0.001
3/3/2020	6.6E-05 (J)			6.1E-05 (J)	
3/4/2020		0.00056 (J)	<0.001		<0.001
3/26/2020	8E-05 (J)				
3/27/2020			<0.001	7.7E-05 (J)	
3/30/2020		0.00048 (J)			
3/31/2020					<0.001

Time Series

Constituent: Total Dissolved Solids (mg/L) Analysis Run 6/2/2020 4:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWC-10	HGWC-11
5/19/2016	421	143	267		
5/23/2016				629	564
7/11/2016	363	125			
7/12/2016			249	661	627
8/30/2016	330	168	254		
9/1/2016				769	656
10/19/2016	380	176	357		
10/24/2016				643	836
12/6/2016	377	145	285		
12/7/2016				697	748
1/24/2017	342	129	300		
1/26/2017				368	571
3/21/2017	340	103	288		
3/22/2017				683	597
5/22/2017	338	92	263		
5/24/2017				696	566
10/3/2017	343	127	300	746	443
6/4/2018	415	140	266		
6/5/2018				679	489
10/1/2018	354	135	291		
10/2/2018				572	
10/3/2018					449
4/1/2019			284		
4/2/2019	452	133			
4/3/2019				525	483
9/23/2019	442	129	268		
9/27/2019				624	528
3/25/2020	496	138	284		
3/31/2020					565
4/1/2020				290	

Time Series

Constituent: Total Dissolved Solids (mg/L) Analysis Run 6/2/2020 4:20 PM

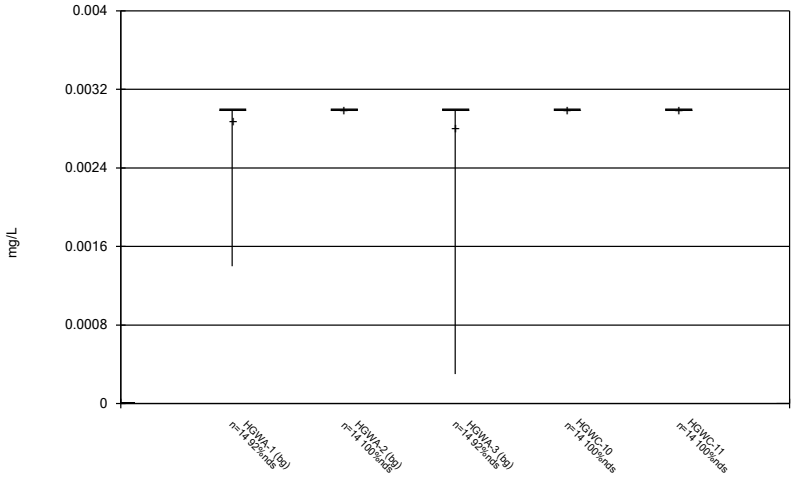
Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWC-12	HGWC-13	HGWC-7	HGWC-8	HGWC-9
5/20/2016			427	711	
5/23/2016	1060	683			984
7/12/2016	909	563	410	704	887
9/1/2016	1480	702	484	763	956
10/20/2016			393	644	642
10/24/2016	868	647			
12/6/2016			492	733	899
12/7/2016	811	465			
1/25/2017			461	744	
1/26/2017	846	411			869
3/21/2017			415	818	
3/22/2017	804	427			936
5/23/2017			450	765	939
5/24/2017	803	377			
10/3/2017	608	268	464	812	1040
6/5/2018		528	459		
6/6/2018	535			611	810
10/2/2018			426	597	693
10/3/2018	607				
10/5/2018		322			
4/2/2019			428		
4/3/2019	462			543	673
4/5/2019		331			
9/24/2019				457	
9/25/2019			503		
9/26/2019		1010			
9/27/2019	653				730
3/26/2020	533				
3/27/2020			413	541	
3/30/2020		895			
3/31/2020					1010

FIGURE B.

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

Box & Whiskers Plot

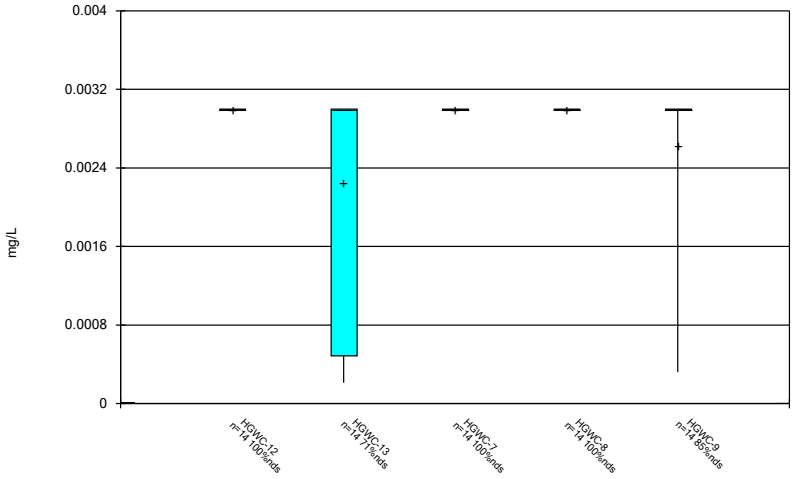


Constituent: Antimony Analysis Run 6/2/2020 4:24 PM

Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

Box & Whiskers Plot

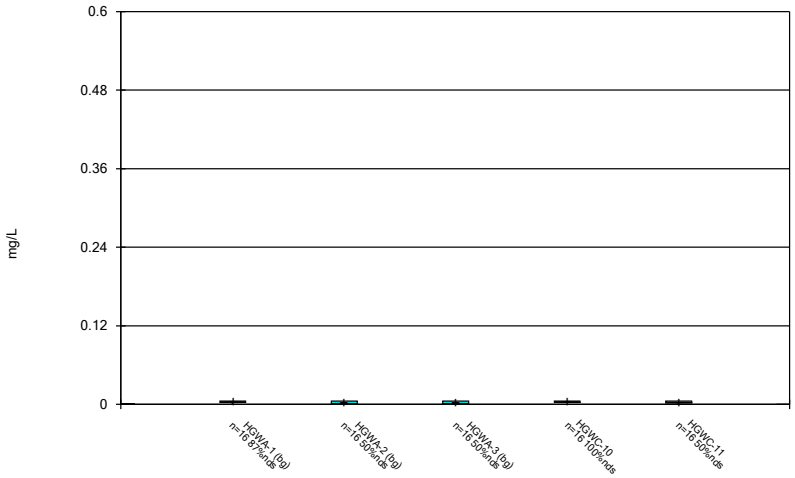


Constituent: Antimony Analysis Run 6/2/2020 4:24 PM

Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

Box & Whiskers Plot

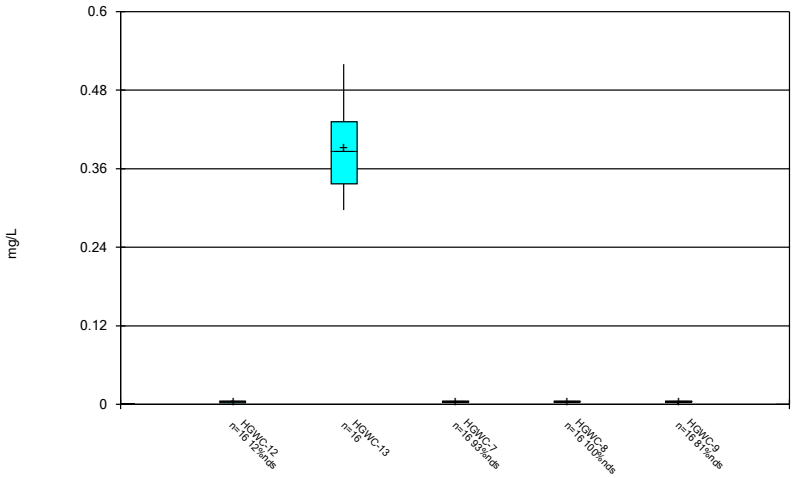


Constituent: Arsenic Analysis Run 6/2/2020 4:24 PM

Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

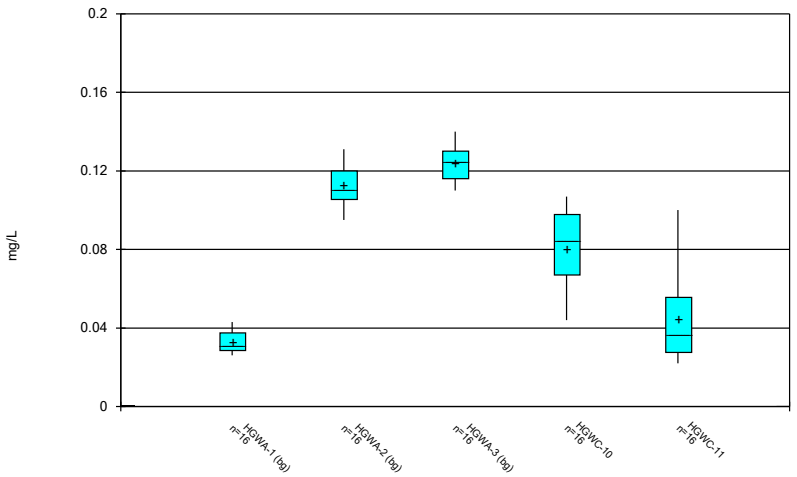
Box & Whiskers Plot



Constituent: Arsenic Analysis Run 6/2/2020 4:24 PM

Plant Hammond Client: Southern Company Data: Hammond AP-1

Box & Whiskers Plot

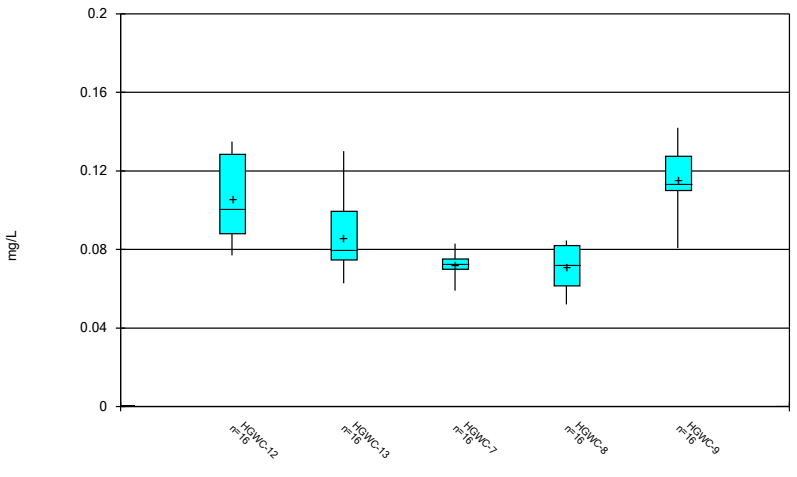


Constituent: Barium Analysis Run 6/2/2020 4:25 PM

Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

Box & Whiskers Plot

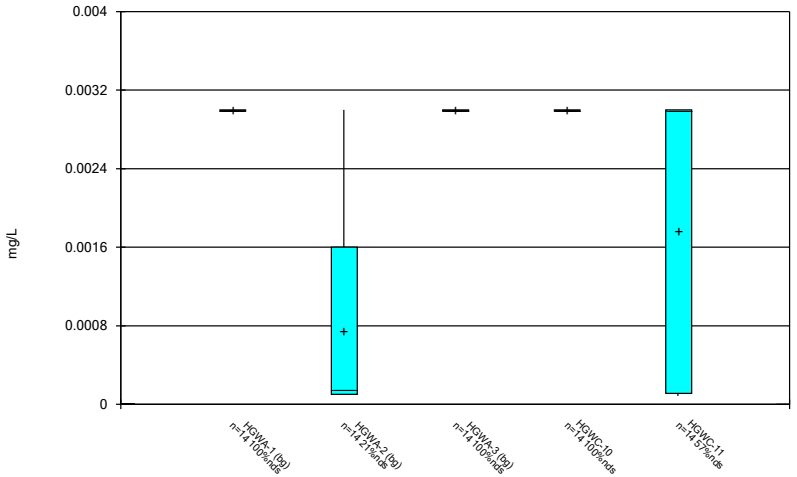


Constituent: Barium Analysis Run 6/2/2020 4:25 PM

Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

Box & Whiskers Plot

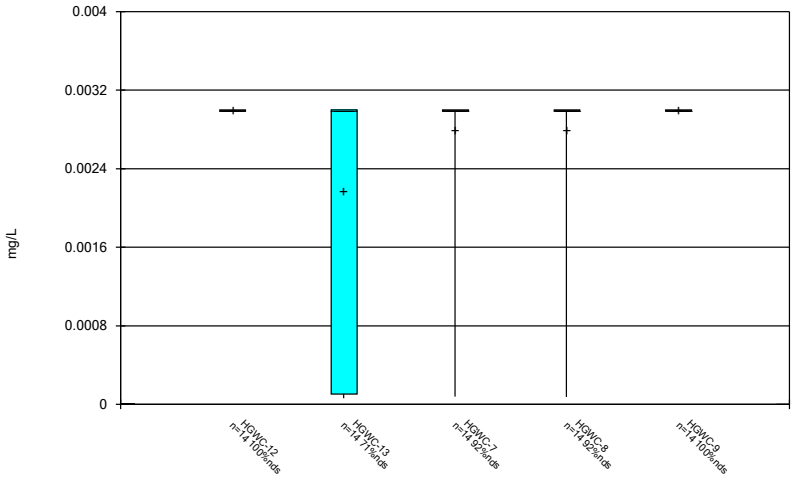


Constituent: Beryllium Analysis Run 6/2/2020 4:25 PM

Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

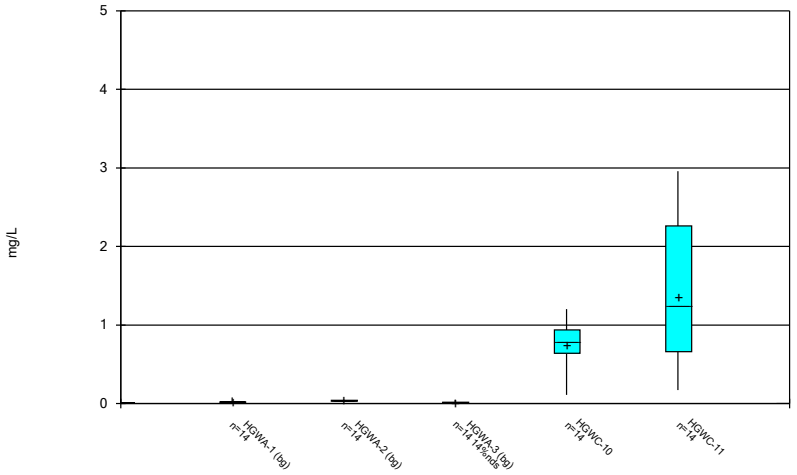
Box & Whiskers Plot



Constituent: Beryllium Analysis Run 6/2/2020 4:25 PM

Plant Hammond Client: Southern Company Data: Hammond AP-1

Box & Whiskers Plot

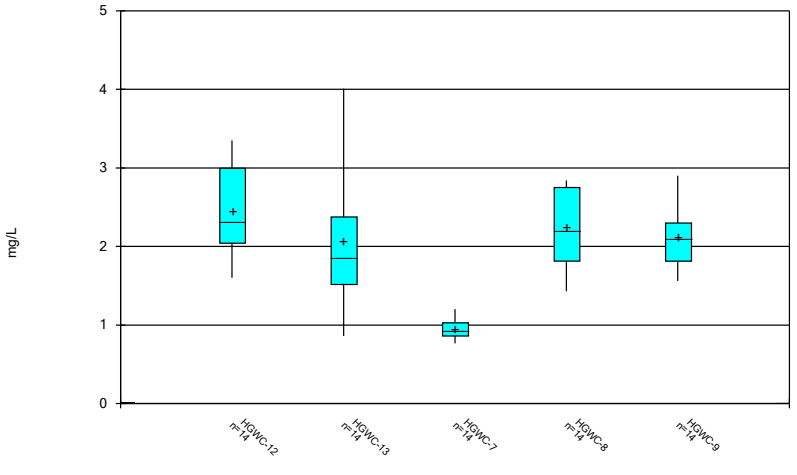


Constituent: Boron Analysis Run 6/2/2020 4:25 PM

Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

Box & Whiskers Plot

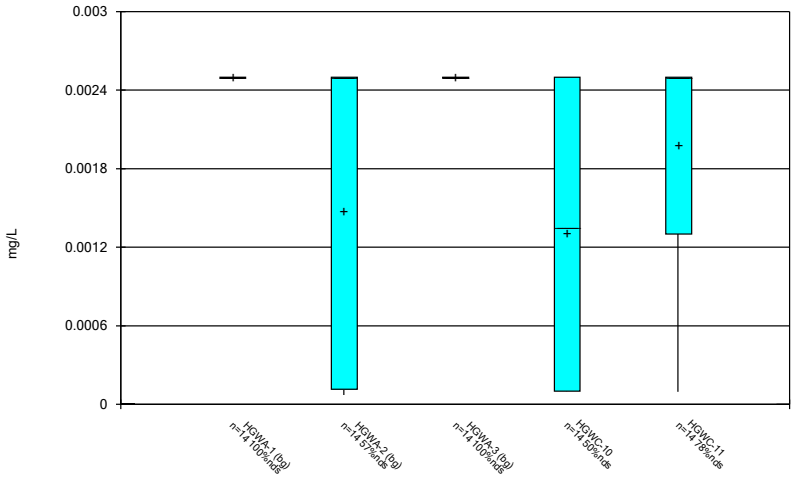


Constituent: Boron Analysis Run 6/2/2020 4:25 PM

Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

Box & Whiskers Plot

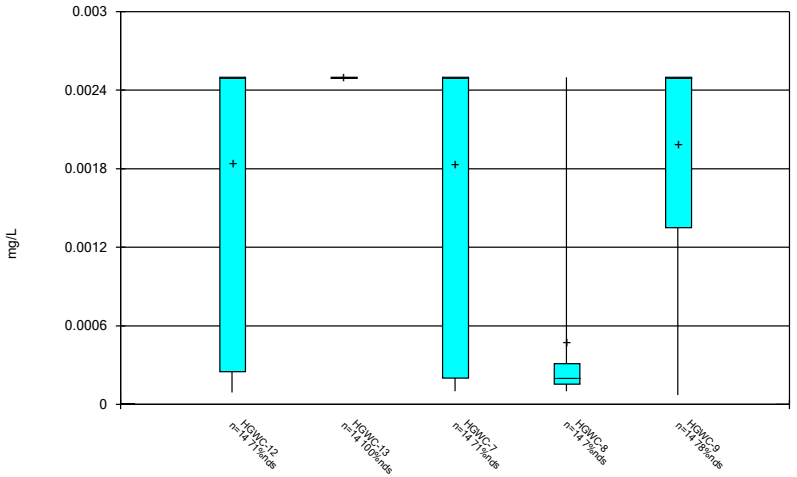


Constituent: Cadmium Analysis Run 6/2/2020 4:25 PM

Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

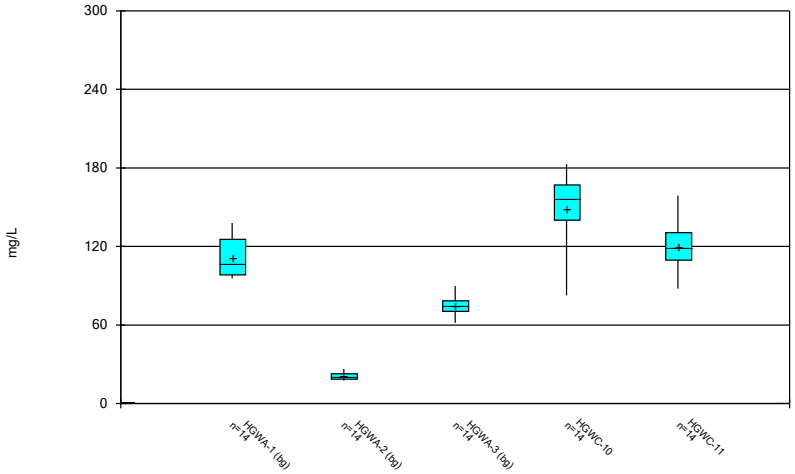
Box & Whiskers Plot



Constituent: Cadmium Analysis Run 6/2/2020 4:25 PM

Plant Hammond Client: Southern Company Data: Hammond AP-1

Box & Whiskers Plot

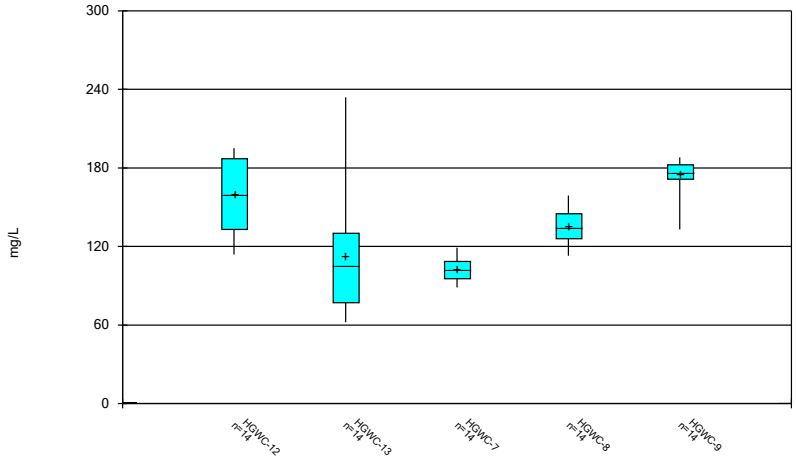


Constituent: Calcium Analysis Run 6/2/2020 4:25 PM

Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

Box & Whiskers Plot

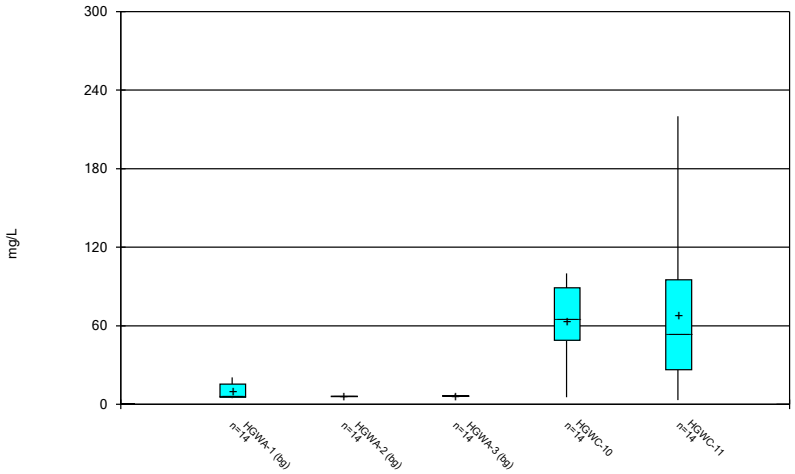


Constituent: Calcium Analysis Run 6/2/2020 4:25 PM

Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

Box & Whiskers Plot

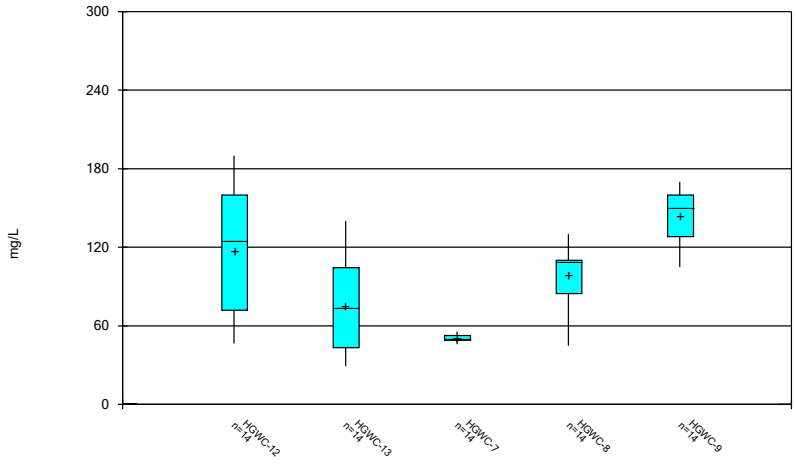


Constituent: Chloride Analysis Run 6/2/2020 4:25 PM

Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

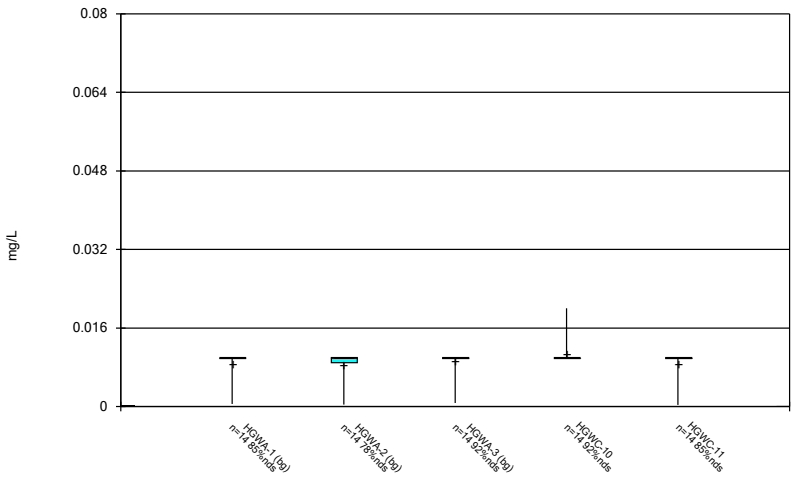
Box & Whiskers Plot



Constituent: Chloride Analysis Run 6/2/2020 4:25 PM

Plant Hammond Client: Southern Company Data: Hammond AP-1

Box & Whiskers Plot

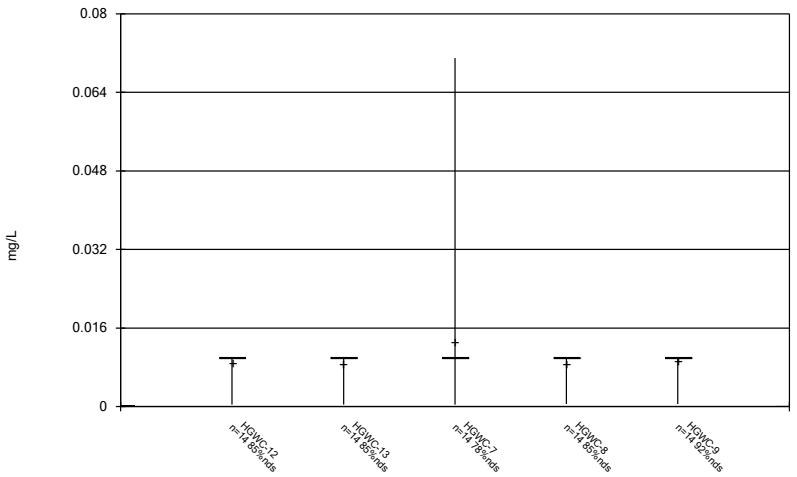


Constituent: Chromium Analysis Run 6/2/2020 4:25 PM

Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

Box & Whiskers Plot

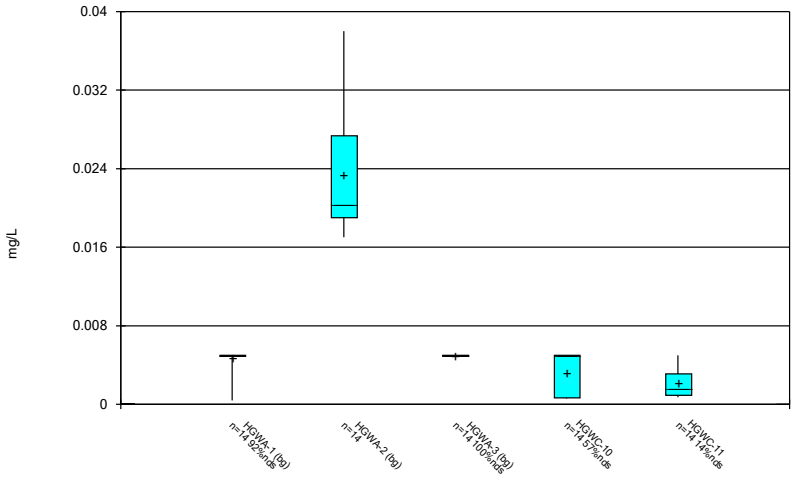


Constituent: Chromium Analysis Run 6/2/2020 4:25 PM

Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

Box & Whiskers Plot

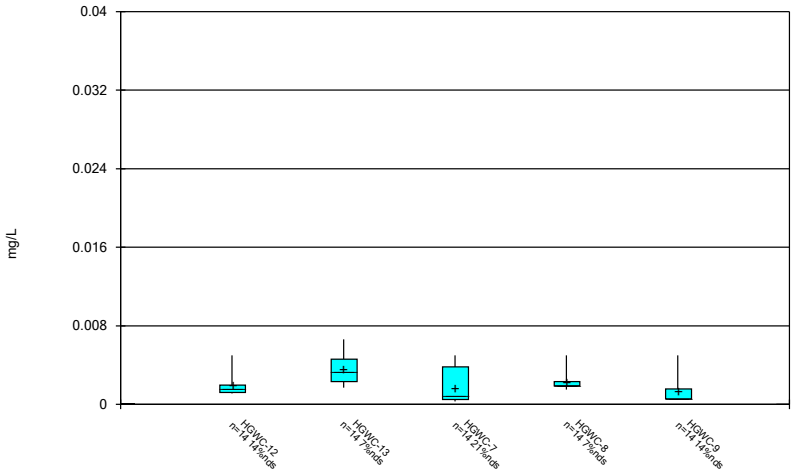


Constituent: Cobalt Analysis Run 6/2/2020 4:25 PM

Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

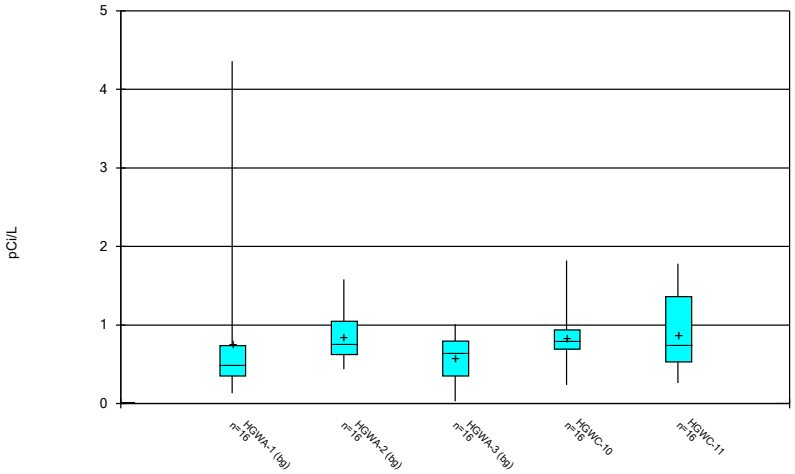
Box & Whiskers Plot



Constituent: Cobalt Analysis Run 6/2/2020 4:25 PM

Plant Hammond Client: Southern Company Data: Hammond AP-1

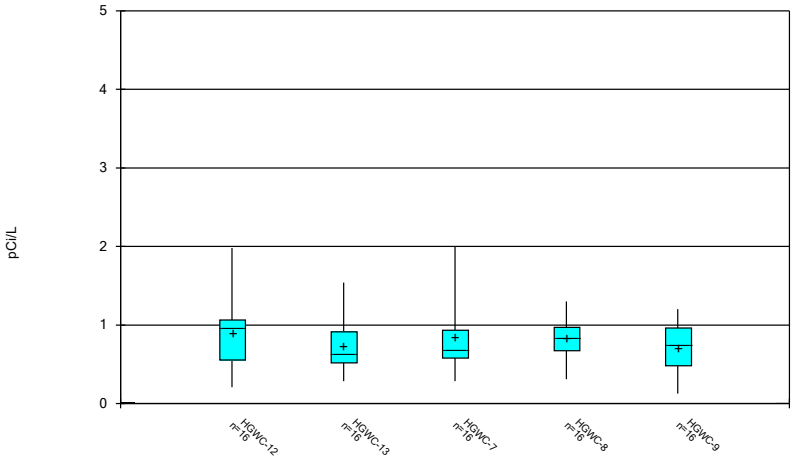
Box & Whiskers Plot



Constituent: Combined Radium 226 + 228 Analysis Run 6/2/2020 4:25 PM
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

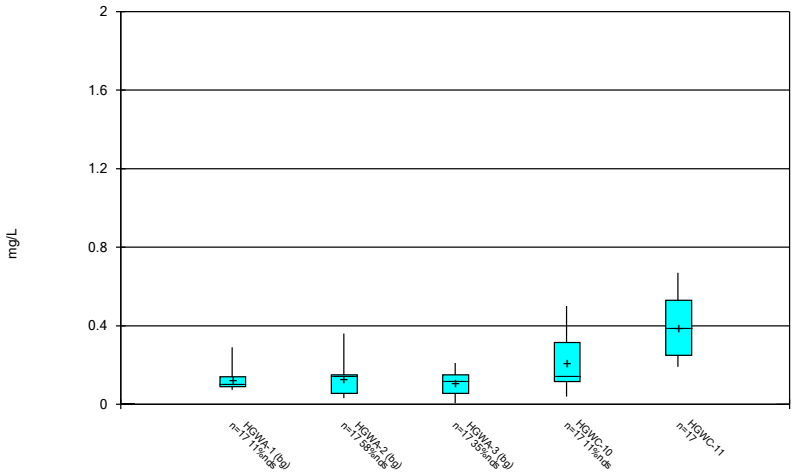
Box & Whiskers Plot



Constituent: Combined Radium 226 + 228 Analysis Run 6/2/2020 4:25 PM
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

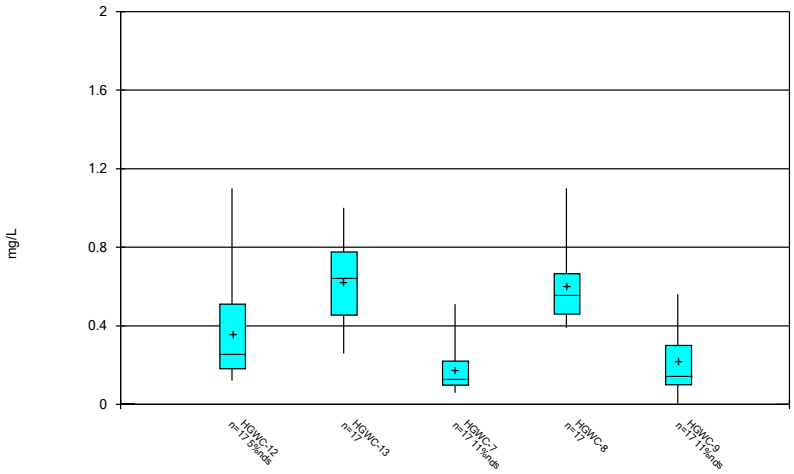
Box & Whiskers Plot



Constituent: Fluoride Analysis Run 6/2/2020 4:25 PM
Plant Hammond Client: Southern Company Data: Hammond AP-1

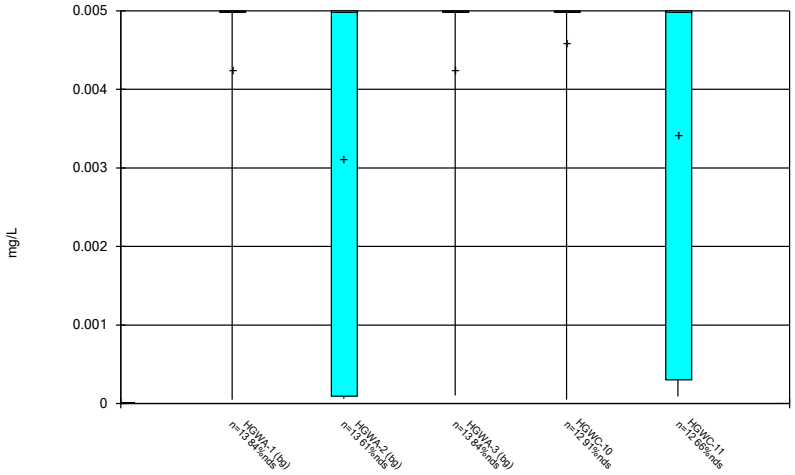
Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

Box & Whiskers Plot



Constituent: Fluoride Analysis Run 6/2/2020 4:25 PM
Plant Hammond Client: Southern Company Data: Hammond AP-1

Box & Whiskers Plot

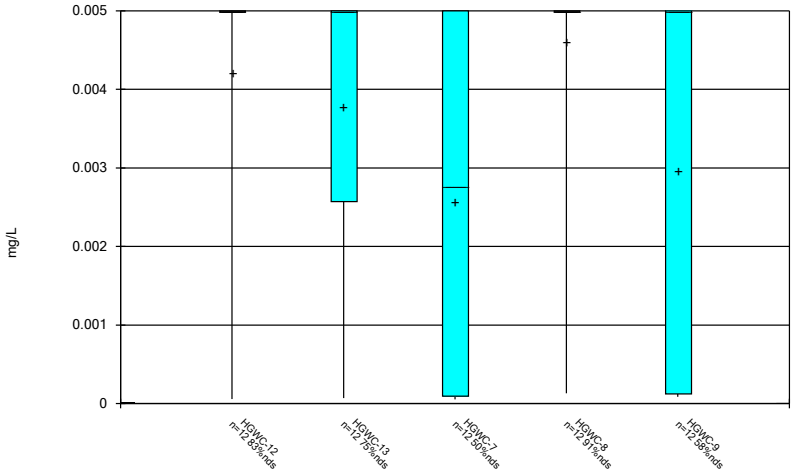


Constituent: Lead Analysis Run 6/2/2020 4:25 PM

Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

Box & Whiskers Plot

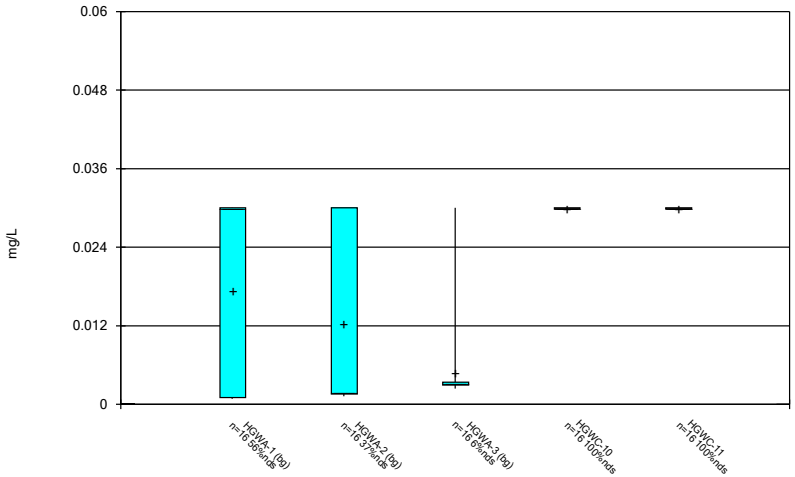


Constituent: Lead Analysis Run 6/2/2020 4:25 PM

Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

Box & Whiskers Plot

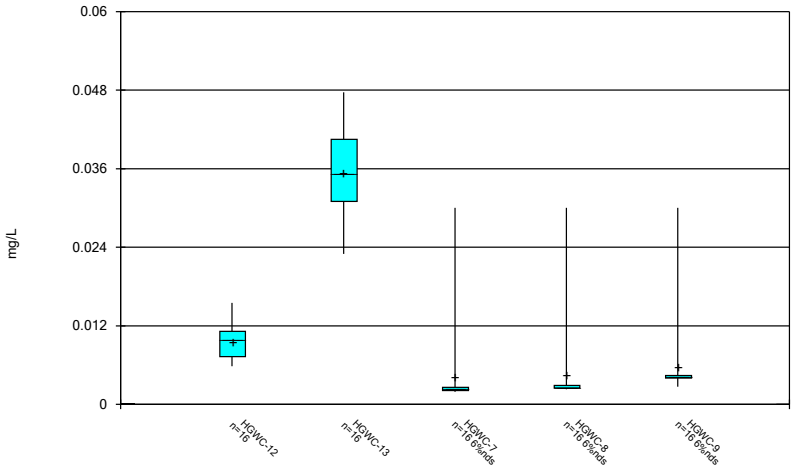


Constituent: Lithium Analysis Run 6/2/2020 4:25 PM

Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

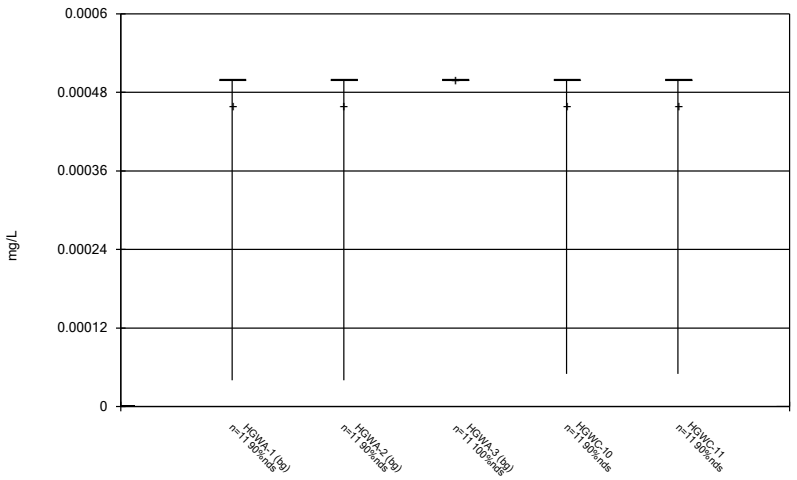
Box & Whiskers Plot



Constituent: Lithium Analysis Run 6/2/2020 4:25 PM

Plant Hammond Client: Southern Company Data: Hammond AP-1

Box & Whiskers Plot

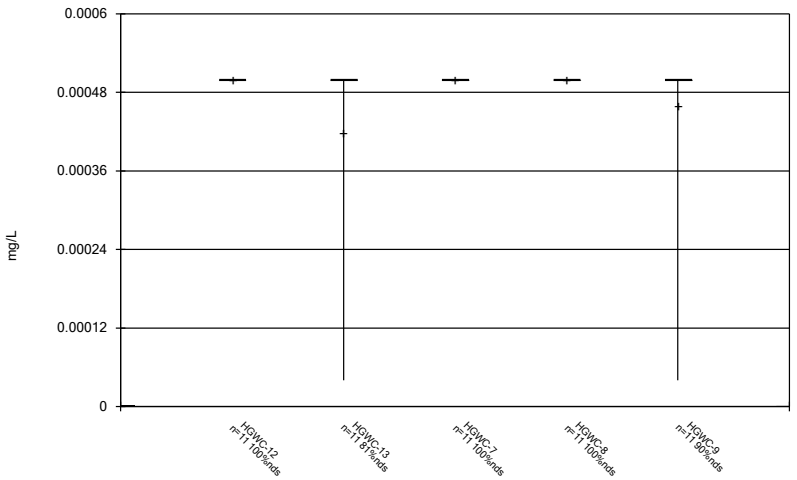


Constituent: Mercury Analysis Run 6/2/2020 4:25 PM

Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

Box & Whiskers Plot

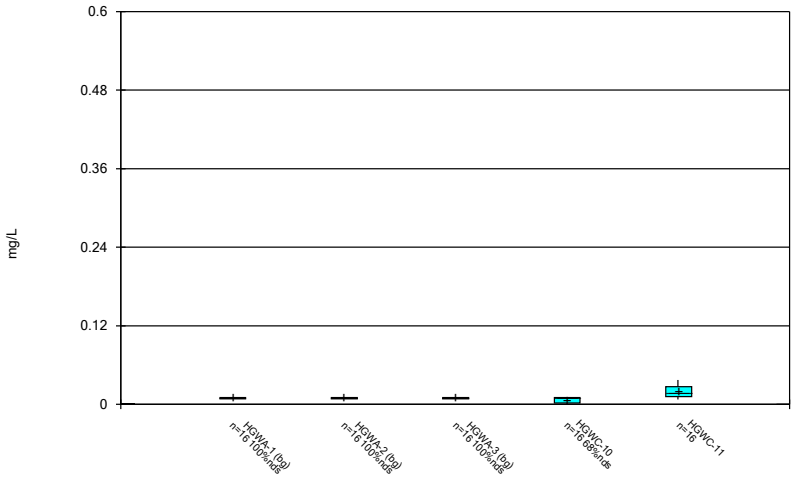


Constituent: Mercury Analysis Run 6/2/2020 4:25 PM

Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

Box & Whiskers Plot

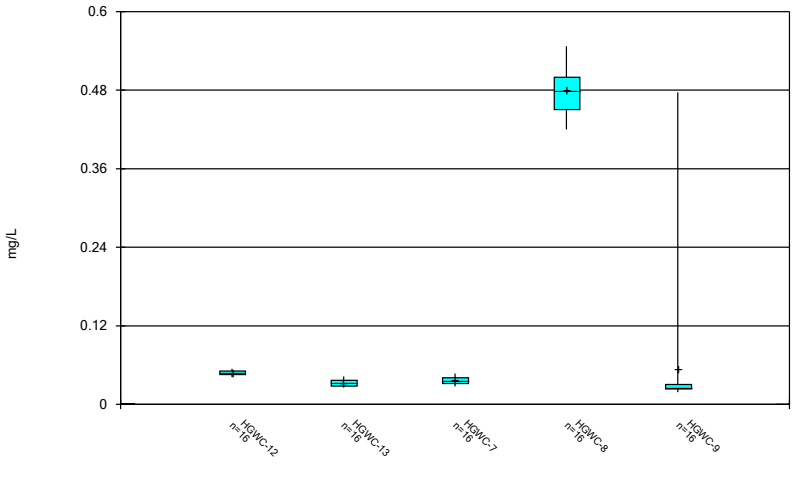


Constituent: Molybdenum Analysis Run 6/2/2020 4:25 PM

Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

Box & Whiskers Plot

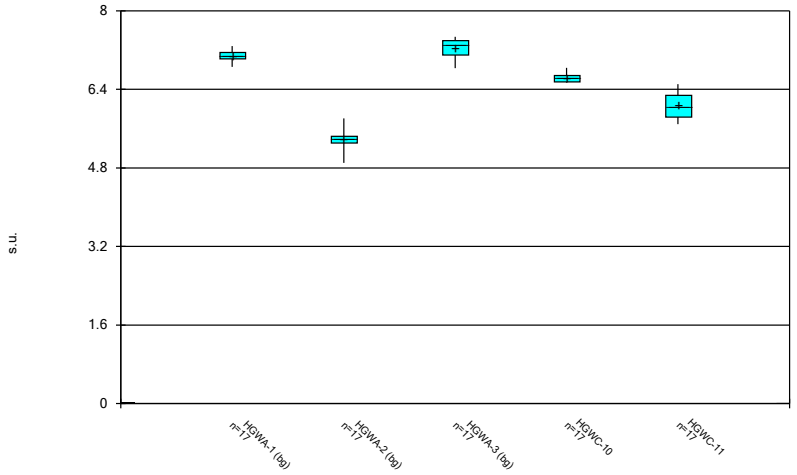


Constituent: Molybdenum Analysis Run 6/2/2020 4:25 PM

Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

Box & Whiskers Plot

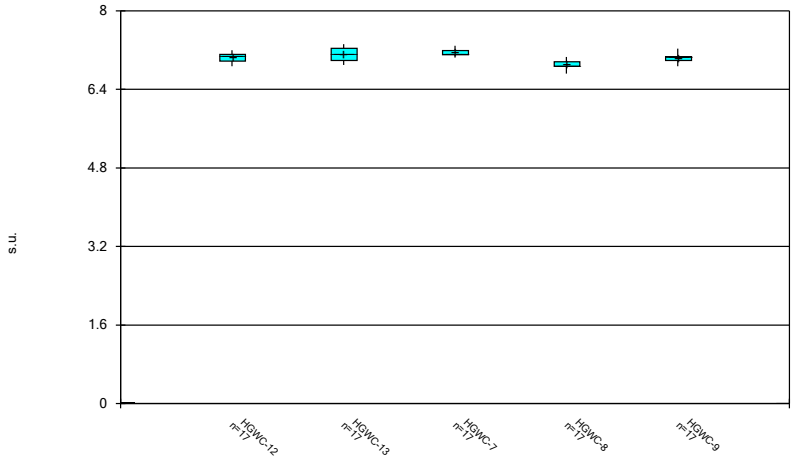


Constituent: pH Analysis Run 6/2/2020 4:25 PM

Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

Box & Whiskers Plot



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Plant Hammond Client: Southern Company Data: Hammond AP-1

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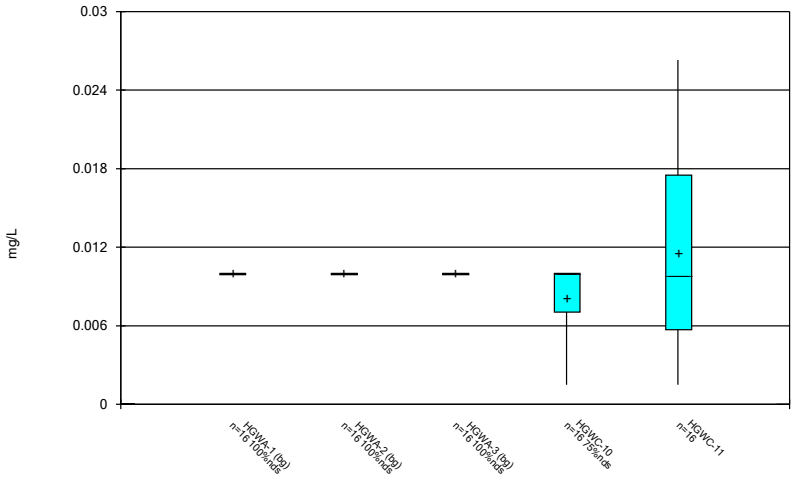
Box & Whiskers Plot



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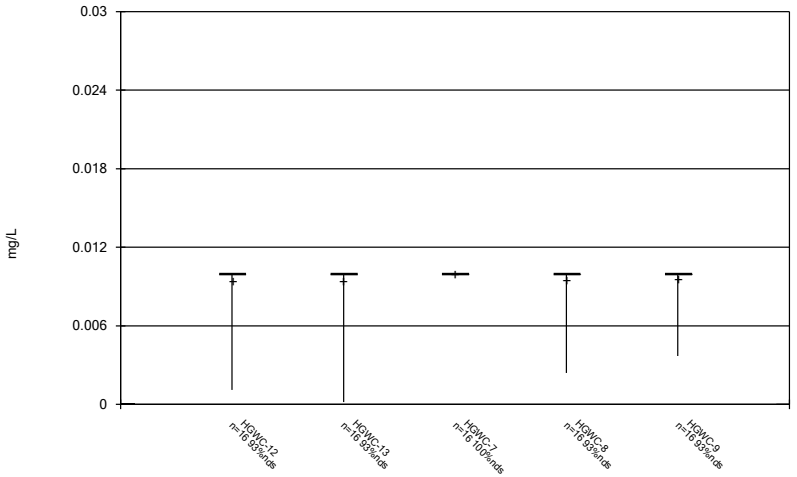
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

Box & Whiskers Plot



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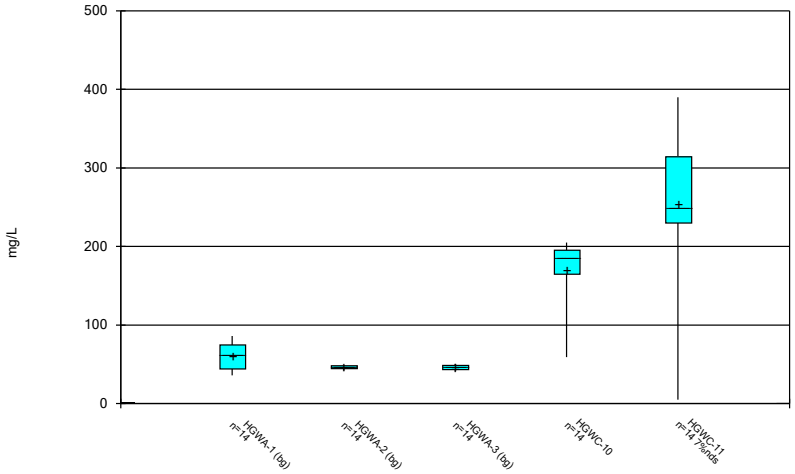
Plant Hammond Client: Southern Company Data: Hammond AP-1

Box & Whiskers Plot



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Plant Hammond Client: Southern Company Data: Hammond AP-1

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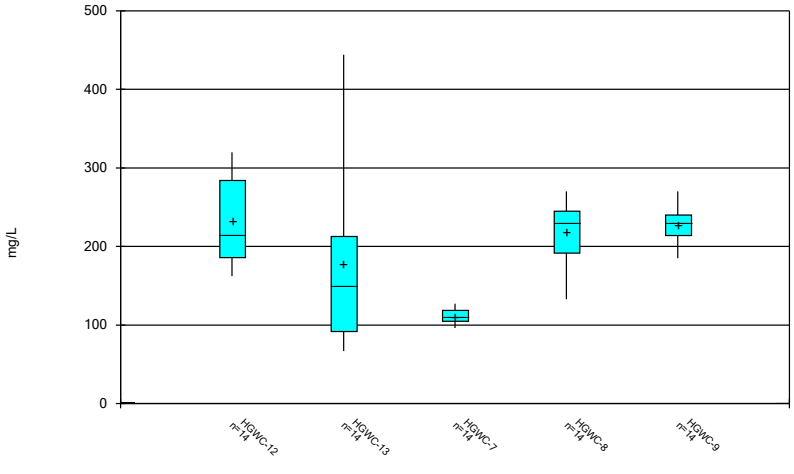
Box & Whiskers Plot



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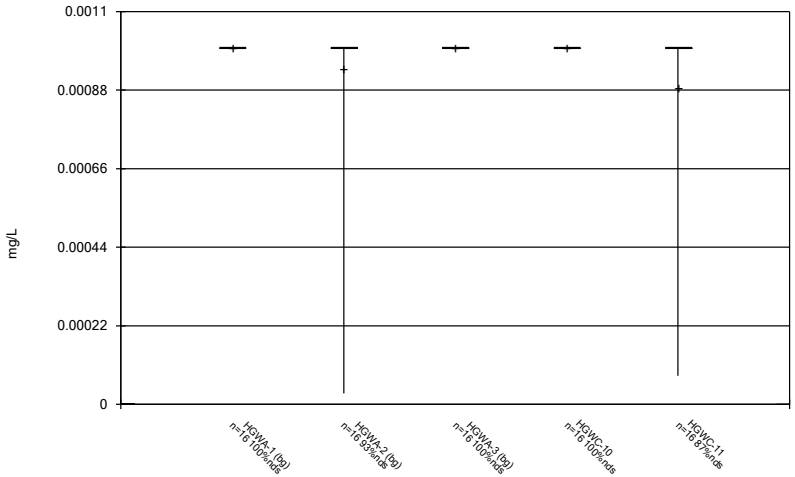
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

Box & Whiskers Plot



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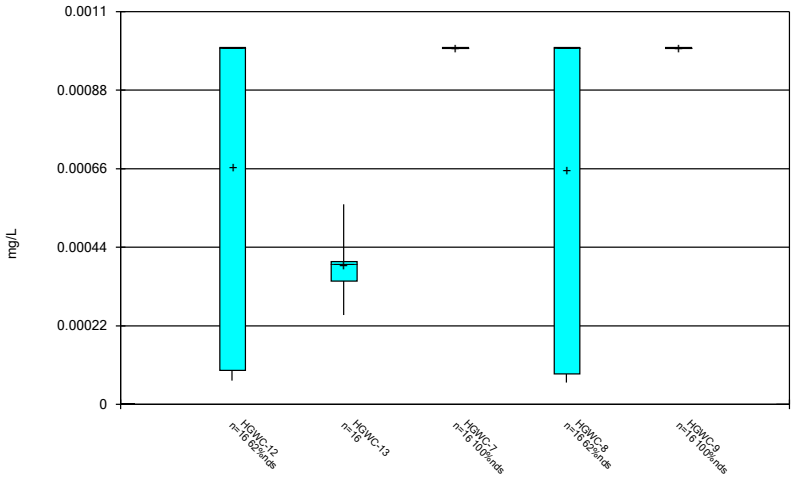
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

Box & Whiskers Plot



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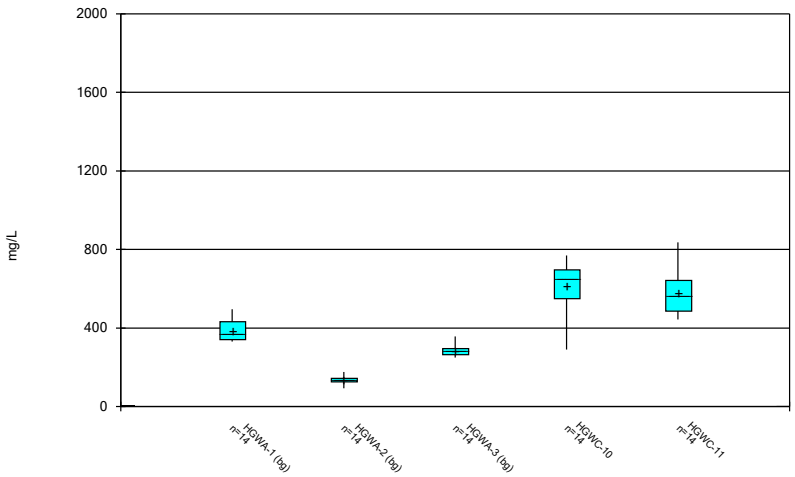
Box & Whiskers Plot

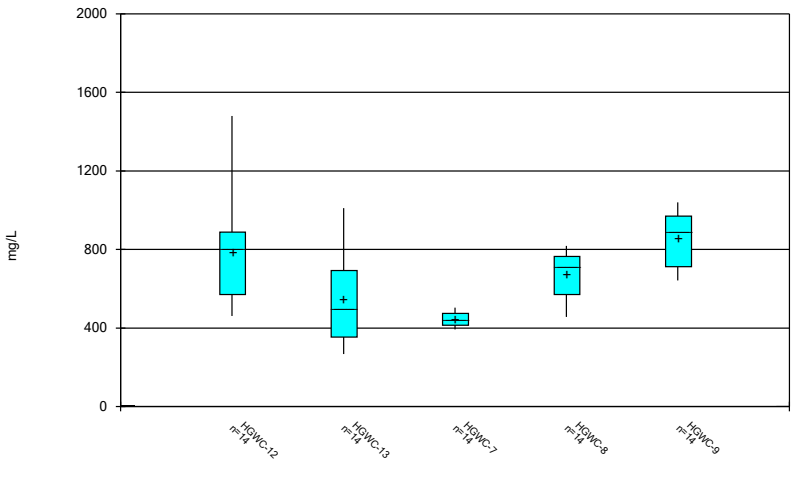


Constituent: Total Dissolved Solids Analysis Run 6/2/2020 4:25 PM

Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

Box & Whiskers Plot



Constituent: Total Dissolved Solids Analysis Run 6/2/2020 4:25 PM

Plant Hammond Client: Southern Company Data: Hammond AP-1

FIGURE C.

Outlier Summary

Pirkey Landfill Client: Geosyntec Data: Pirkey Landfill Printed 4/29/2020, 1:56 PM

No values flagged as outliers

FIGURE D.

Interwell Prediction Limits - Significant Results

Plant Hammond Client: Southern Company Data: Hammond AP-1 Printed 6/2/2020, 4:35 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Boron (mg/L)	HGWC-10	0.0592	n/a	4/1/2020	0.23	Yes	42	0.1482	0.04839	4.762	None	sqrt(x)	0.001075	Param Inter 1 of 2
Boron (mg/L)	HGWC-11	0.0592	n/a	3/31/2020	0.17	Yes	42	0.1482	0.04839	4.762	None	sqrt(x)	0.001075	Param Inter 1 of 2
Boron (mg/L)	HGWC-12	0.0592	n/a	3/26/2020	1.6	Yes	42	0.1482	0.04839	4.762	None	sqrt(x)	0.001075	Param Inter 1 of 2
Boron (mg/L)	HGWC-13	0.0592	n/a	3/30/2020	1.8	Yes	42	0.1482	0.04839	4.762	None	sqrt(x)	0.001075	Param Inter 1 of 2
Boron (mg/L)	HGWC-7	0.0592	n/a	3/27/2020	1.2	Yes	42	0.1482	0.04839	4.762	None	sqrt(x)	0.001075	Param Inter 1 of 2
Boron (mg/L)	HGWC-8	0.0592	n/a	3/27/2020	2.4	Yes	42	0.1482	0.04839	4.762	None	sqrt(x)	0.001075	Param Inter 1 of 2
Boron (mg/L)	HGWC-9	0.0592	n/a	3/31/2020	2.2	Yes	42	0.1482	0.04839	4.762	None	sqrt(x)	0.001075	Param Inter 1 of 2
Calcium (mg/L)	HGWC-12	138	n/a	3/26/2020	145	Yes	42	n/a	n/a	0	n/a	n/a	0.001046	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-13	138	n/a	3/30/2020	234	Yes	42	n/a	n/a	0	n/a	n/a	0.001046	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-9	138	n/a	3/31/2020	182	Yes	42	n/a	n/a	0	n/a	n/a	0.001046	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-12	20.4	n/a	3/26/2020	48	Yes	42	n/a	n/a	0	n/a	n/a	0.001046	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-13	20.4	n/a	3/30/2020	75.1	Yes	42	n/a	n/a	0	n/a	n/a	0.001046	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-7	20.4	n/a	3/27/2020	48.3	Yes	42	n/a	n/a	0	n/a	n/a	0.001046	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-8	20.4	n/a	3/27/2020	79.8	Yes	42	n/a	n/a	0	n/a	n/a	0.001046	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-9	20.4	n/a	3/31/2020	105	Yes	42	n/a	n/a	0	n/a	n/a	0.001046	NP Inter (normality) 1 of 2
Fluoride (mg/L)	HGWC-13	0.36	n/a	3/30/2020	0.44	Yes	51	n/a	n/a	35.29	n/a	n/a	0.0007158	NP Inter (normality) 1 of 2
Fluoride (mg/L)	HGWC-8	0.36	n/a	3/27/2020	0.46	Yes	51	n/a	n/a	35.29	n/a	n/a	0.0007158	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-11	85.9	n/a	3/31/2020	283	Yes	42	n/a	n/a	0	n/a	n/a	0.001046	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-12	85.9	n/a	3/26/2020	182	Yes	42	n/a	n/a	0	n/a	n/a	0.001046	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-13	85.9	n/a	3/30/2020	393	Yes	42	n/a	n/a	0	n/a	n/a	0.001046	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-7	85.9	n/a	3/27/2020	109	Yes	42	n/a	n/a	0	n/a	n/a	0.001046	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-8	85.9	n/a	3/27/2020	173	Yes	42	n/a	n/a	0	n/a	n/a	0.001046	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-9	85.9	n/a	3/31/2020	185	Yes	42	n/a	n/a	0	n/a	n/a	0.001046	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-11	483.4	n/a	3/31/2020	565	Yes	42	267.4	109.9	0	None	No	0.001075	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	HGWC-12	483.4	n/a	3/26/2020	533	Yes	42	267.4	109.9	0	None	No	0.001075	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	HGWC-13	483.4	n/a	3/30/2020	895	Yes	42	267.4	109.9	0	None	No	0.001075	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	HGWC-8	483.4	n/a	3/27/2020	541	Yes	42	267.4	109.9	0	None	No	0.001075	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	HGWC-9	483.4	n/a	3/31/2020	1010	Yes	42	267.4	109.9	0	None	No	0.001075	Param Inter 1 of 2

Interwell Prediction Limits - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-1 Printed 6/2/2020, 4:35 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Boron (mg/L)	**HGWC-10**	**0.0592**	**n/a**	**4/1/2020**	**0.23**	**Yes**	**42**	**0.1482**	**0.04839**	**4.762**	**None**	**sqrt(x)**	**0.001075**	**Param Inter 1 of 2**
Boron (mg/L)	**HGWC-11**	**0.0592**	**n/a**	**3/31/2020**	**0.17**	**Yes**	**42**	**0.1482**	**0.04839**	**4.762**	**None**	**sqrt(x)**	**0.001075**	**Param Inter 1 of 2**
Boron (mg/L)	**HGWC-12**	**0.0592**	**n/a**	**3/26/2020**	**1.6**	**Yes**	**42**	**0.1482**	**0.04839**	**4.762**	**None**	**sqrt(x)**	**0.001075**	**Param Inter 1 of 2**
Boron (mg/L)	**HGWC-13**	**0.0592**	**n/a**	**3/30/2020**	**1.8**	**Yes**	**42**	**0.1482**	**0.04839**	**4.762**	**None**	**sqrt(x)**	**0.001075**	**Param Inter 1 of 2**
Boron (mg/L)	**HGWC-7**	**0.0592**	**n/a**	**3/27/2020**	**1.2**	**Yes**	**42**	**0.1482**	**0.04839**	**4.762**	**None**	**sqrt(x)**	**0.001075**	**Param Inter 1 of 2**
Boron (mg/L)	**HGWC-8**	**0.0592**	**n/a**	**3/27/2020**	**2.4**	**Yes**	**42**	**0.1482**	**0.04839**	**4.762**	**None**	**sqrt(x)**	**0.001075**	**Param Inter 1 of 2**
Boron (mg/L)	**HGWC-9**	**0.0592**	**n/a**	**3/31/2020**	**2.2**	**Yes**	**42**	**0.1482**	**0.04839**	**4.762**	**None**	**sqrt(x)**	**0.001075**	**Param Inter 1 of 2**
Calcium (mg/L)	HGWC-10	138	n/a	4/1/2020	96.2	No	42	n/a	n/a	0	n/a	n/a	0.001046	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-11	138	n/a	3/31/2020	124	No	42	n/a	n/a	0	n/a	n/a	0.001046	NP Inter (normality) 1 of 2
Calcium (mg/L)	**HGWC-12**	**138**	**n/a**	**3/26/2020**	**145**	**Yes**	**42**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.001046**	**NP Inter (normality) 1 of 2**
Calcium (mg/L)	**HGWC-13**	**138**	**n/a**	**3/30/2020**	**234**	**Yes**	**42**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.001046**	**NP Inter (normality) 1 of 2**
Calcium (mg/L)	HGWC-7	138	n/a	3/27/2020	119	No	42	n/a	n/a	0	n/a	n/a	0.001046	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-8	138	n/a	3/27/2020	133	No	42	n/a	n/a	0	n/a	n/a	0.001046	NP Inter (normality) 1 of 2
Calcium (mg/L)	**HGWC-9**	**138**	**n/a**	**3/31/2020**	**182**	**Yes**	**42**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.001046**	**NP Inter (normality) 1 of 2**
Chloride (mg/L)	HGWC-10	20.4	n/a	4/1/2020	5.4	No	42	n/a	n/a	0	n/a	n/a	0.001046	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-11	20.4	n/a	3/31/2020	3.2	No	42	n/a	n/a	0	n/a	n/a	0.001046	NP Inter (normality) 1 of 2
Chloride (mg/L)	**HGWC-12**	**20.4**	**n/a**	**3/26/2020**	**48**	**Yes**	**42**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.001046**	**NP Inter (normality) 1 of 2**
Chloride (mg/L)	**HGWC-13**	**20.4**	**n/a**	**3/30/2020**	**75.1**	**Yes**	**42**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.001046**	**NP Inter (normality) 1 of 2**
Chloride (mg/L)	**HGWC-7**	**20.4**	**n/a**	**3/27/2020**	**48.3**	**Yes**	**42**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.001046**	**NP Inter (normality) 1 of 2**
Chloride (mg/L)	**HGWC-8**	**20.4**	**n/a**	**3/27/2020**	**79.8**	**Yes**	**42**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.001046**	**NP Inter (normality) 1 of 2**
Chloride (mg/L)	**HGWC-9**	**20.4**	**n/a**	**3/31/2020**	**105**	**Yes**	**42**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.001046**	**NP Inter (normality) 1 of 2**
Fluoride (mg/L)	HGWC-10	0.36	n/a	4/1/2020	0.12	No	51	n/a	n/a	35.29	n/a	n/a	0.0007158	NP Inter (normality) 1 of 2
Fluoride (mg/L)	HGWC-11	0.36	n/a	3/31/2020	0.19	No	51	n/a	n/a	35.29	n/a	n/a	0.0007158	NP Inter (normality) 1 of 2
Fluoride (mg/L)	HGWC-12	0.36	n/a	3/26/2020	0.17	No	51	n/a	n/a	35.29	n/a	n/a	0.0007158	NP Inter (normality) 1 of 2
Fluoride (mg/L)	**HGWC-13**	**0.36**	**n/a**	**3/30/2020**	**0.44**	**Yes**	**51**	**n/a**	**n/a**	**35.29**	**n/a**	**n/a**	**0.0007158**	**NP Inter (normality) 1 of 2**
Fluoride (mg/L)	HGWC-7	0.36	n/a	3/27/2020	0.059	No	51	n/a	n/a	35.29	n/a	n/a	0.0007158	NP Inter (normality) 1 of 2
Fluoride (mg/L)	**HGWC-8**	**0.36**	**n/a**	**3/27/2020**	**0.46**	**Yes**	**51**	**n/a**	**n/a**	**35.29**	**n/a**	**n/a**	**0.0007158**	**NP Inter (normality) 1 of 2**
Fluoride (mg/L)	HGWC-9	0.36	n/a	3/31/2020	0.074	No	51	n/a	n/a	35.29	n/a	n/a	0.0007158	NP Inter (normality) 1 of 2
pH (s.u.)	HGWC-10	7.47	4.9	4/1/2020	6.84	No	51	n/a	n/a	0	n/a	n/a	0.001432	NP Inter (normality) 1 of 2
pH (s.u.)	HGWC-11	7.47	4.9	3/31/2020	5.7	No	51	n/a	n/a	0	n/a	n/a	0.001432	NP Inter (normality) 1 of 2
pH (s.u.)	HGWC-12	7.47	4.9	3/26/2020	6.99	No	51	n/a	n/a	0	n/a	n/a	0.001432	NP Inter (normality) 1 of 2
pH (s.u.)	HGWC-13	7.47	4.9	3/30/2020	6.91	No	51	n/a	n/a	0	n/a	n/a	0.001432	NP Inter (normality) 1 of 2
pH (s.u.)	HGWC-7	7.47	4.9	3/27/2020	7.05	No	51	n/a	n/a	0	n/a	n/a	0.001432	NP Inter (normality) 1 of 2
pH (s.u.)	HGWC-8	7.47	4.9	3/27/2020	6.95	No	51	n/a	n/a	0	n/a	n/a	0.001432	NP Inter (normality) 1 of 2
pH (s.u.)	HGWC-9	7.47	4.9	3/31/2020	7.07	No	51	n/a	n/a	0	n/a	n/a	0.001432	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-10	85.9	n/a	4/1/2020	59	No	42	n/a	n/a	0	n/a	n/a	0.001046	NP Inter (normality) 1 of 2
Sulfate (mg/L)	**HGWC-11**	**85.9**	**n/a**	**3/31/2020**	**283**	**Yes**	**42**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.001046**	**NP Inter (normality) 1 of 2**
Sulfate (mg/L)	**HGWC-12**	**85.9**	**n/a**	**3/26/2020**	**182**	**Yes**	**42**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.001046**	**NP Inter (normality) 1 of 2**
Sulfate (mg/L)	**HGWC-13**	**85.9**	**n/a**	**3/30/2020**	**393**	**Yes**	**42**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.001046**	**NP Inter (normality) 1 of 2**
Sulfate (mg/L)	**HGWC-7**	**85.9**	**n/a**	**3/27/2020**	**109**	**Yes**	**42**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.001046**	**NP Inter (normality) 1 of 2**
Sulfate (mg/L)	**HGWC-8**	**85.9**	**n/a**	**3/27/2020**	**173**	**Yes**	**42**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.001046**	**NP Inter (normality) 1 of 2**
Sulfate (mg/L)	**HGWC-9**	**85.9**	**n/a**	**3/31/2020**	**185**	**Yes**	**42**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.001046**	**NP Inter (normality) 1 of 2**
Total Dissolved Solids (mg/L)	HGWC-10	483.4	n/a	4/1/2020	290	No	42	267.4	109.9	0	None	No	0.001075	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	**HGWC-11**	**483.4**	**n/a**	**3/31/2020**	**565**	**Yes**	**42**	**267.4**	**109.9**	**0**	**None**	**No**	**0.001075**	**Param Inter 1 of 2**
Total Dissolved Solids (mg/L)	**HGWC-12**	**483.4**	**n/a**	**3/26/2020**	**533**	**Yes**	**42**	**267.4**	**109.9**	**0**	**None**	**No**	**0.001075**	**Param Inter 1 of 2**
Total Dissolved Solids (mg/L)	**HGWC-13**	**483.4**	**n/a**	**3/30/2020**	**895**	**Yes**	**42**	**267.4**	**109.9**	**0**	**None**	**No**	**0.001075**	**Param Inter 1 of 2**
Total Dissolved Solids (mg/L)	HGWC-7	483.4	n/a	3/27/2020	413	No	42	267.4	109.9	0	None	No	0.001075	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	**HGWC-8**	**483.4**	**n/a**	**3/27/2020**	**541**	**Yes**	**42**	**267.4**	**109.9**	**0**	**None**	**No**	**0.001075**	**Param Inter 1 of 2**
Total Dissolved Solids (mg/L)	**HGWC-9**	**483.4**	**n/a**	**3/31/2020**	**1010**	**Yes**	**42**	**267.4**	**109.9**	**0**	**None**	**No**	**0.001075**	**Param Inter 1 of 2**

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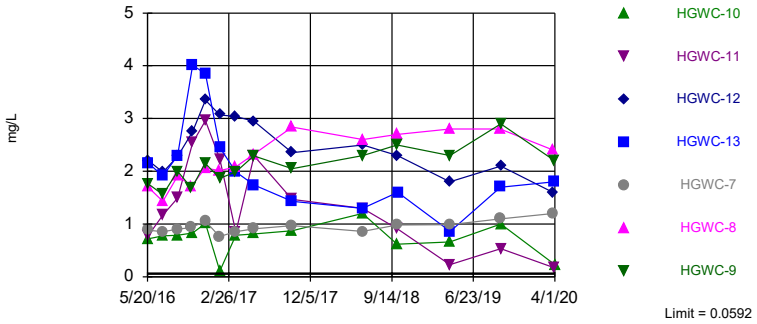
Exceeds Limit: HGWC-10, HGWC-11, HGWC-12, HGWC-13, HGWC-7, HGWC-8, HGWC-9

Prediction Limit

Interwell Parametric



Background Data Summary (based on square root transformation): Mean=0.1482, Std. Dev.=0.04839, n=42, 4.762% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9426, critical = 0.922. Kappa = 1.966 (c=7, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.001075. Comparing 7 points to limit.

Constituent: Boron Analysis Run 6/2/2020 4:32 PM View: Appendix III

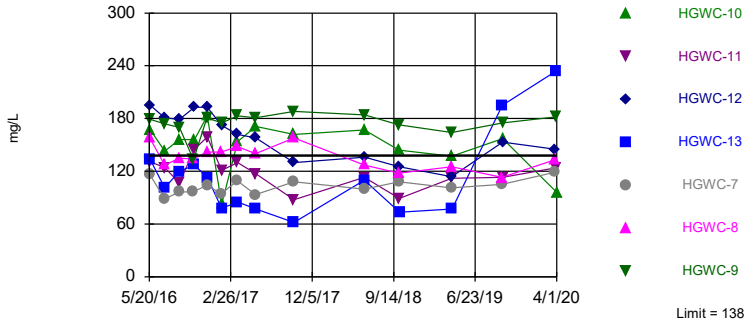
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

Exceeds Limit: HGWC-12, HGWC-13, HGWC-9

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 42 background values. Annual per-constituent alpha = 0.01455. Individual comparison alpha = 0.001046 (1 of 2). Comparing 7 points to limit.

Constituent: Calcium Analysis Run 6/2/2020 4:32 PM View: Appendix III

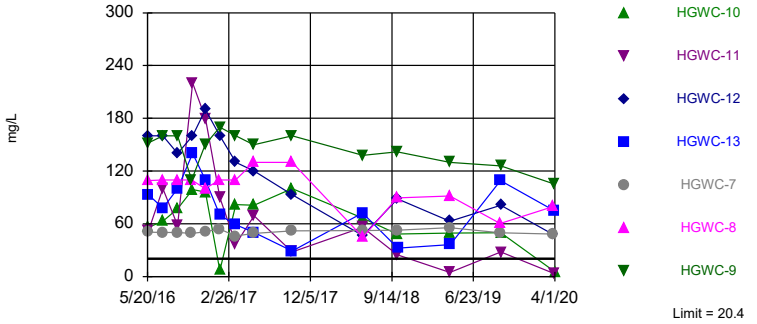
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

Exceeds Limit: HGWC-12, HGWC-13, HGWC-7, HGWC-8, HGWC-9

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 42 background values. Annual per-constituent alpha = 0.01455. Individual comparison alpha = 0.001046 (1 of 2). Comparing 7 points to limit.

Constituent: Chloride Analysis Run 6/2/2020 4:32 PM View: Appendix III

Plant Hammond Client: Southern Company Data: Hammond AP-1

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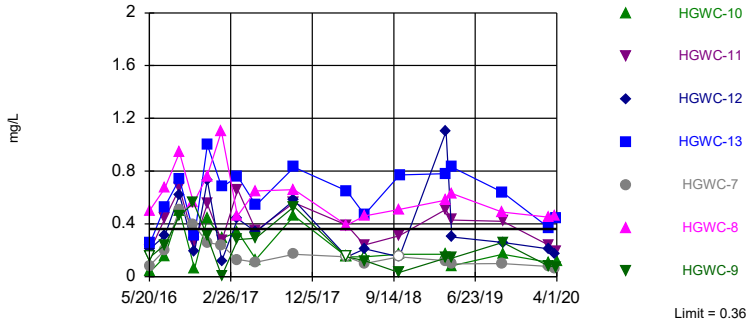
Hollow symbols indicate censored values.

Exceeds Limit: HGWC-13, HGWC-8

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 51 background values. 35.29% NDs. Annual per-constituent alpha = 0.009975. Individual comparison alpha = 0.0007158 (1 of 2). Comparing 7 points to limit.

Constituent: Fluoride Analysis Run 6/2/2020 4:32 PM View: Appendix III

Plant Hammond Client: Southern Company Data: Hammond AP-1

Prediction Limit

Constituent: Boron (mg/L) Analysis Run 6/2/2020 4:35 PM View: Appendix III

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWC-8	HGWC-7	HGWC-11	HGWC-12	HGWC-10	HGWC-9
5/19/2016	0.0214 (J)	0.0321 (J)	<0.1						
5/20/2016				1.71	0.885				
5/23/2016						0.787	2.2	0.72	1.76
7/11/2016	0.0142 (J)	0.0337 (J)							
7/12/2016			0.0074 (J)	1.43	0.857	1.17	1.98	0.778	1.56
8/30/2016	0.0074 (J)	0.0173 (J)	<0.1						
9/1/2016				1.91	0.904	1.49	2.28	0.786	2
10/19/2016	0.0224 (J)	0.0341 (J)	0.0085 (J)						
10/20/2016				1.72	0.936				1.68
10/24/2016						2.54	2.75	0.831	
12/6/2016	0.0211 (J)	0.0326 (J)	0.0085 (J)	2.06	1.06				2.15
12/7/2016						2.96	3.35	1.01	
1/24/2017	0.0165 (J)	0.0365 (J)	0.01 (J)						
1/25/2017				2.01	0.764				
1/26/2017						2.23	3.07	0.108	1.87
3/21/2017	0.0187 (J)	0.0349 (J)	0.0079 (J)	2.08	0.857				
3/22/2017						0.84	3.04	0.788	1.99
5/22/2017	0.0782	0.0475	0.0131 (J)						
5/23/2017				2.32	0.91				2.29
5/24/2017						2.29	2.95	0.814	
10/3/2017	0.0198 (J)	0.0386 (J)	0.0097 (J)	2.84	0.967	1.47	2.35	0.871	2.05
6/4/2018	0.02 (J)	0.036 (J)	0.017 (J)						
6/5/2018					0.86	1.3		1.2	
6/6/2018				2.6			2.5		2.3
10/1/2018	0.013 (J)	0.035 (J)	0.0061 (J)						
10/2/2018				2.7	0.98			0.62	2.5
10/3/2018						0.91	2.3		
10/5/2018									
4/1/2019			0.0066 (J)						
4/2/2019	0.016 (J)	0.034 (J)			0.99				
4/3/2019				2.8		0.23	1.8	0.66	2.3
4/5/2019									
9/23/2019	0.021 (J)	0.04 (J)	0.0081 (J)						
9/24/2019				2.8					
9/25/2019					1.1				
9/26/2019									
9/27/2019						0.53	2.1	1	2.9
3/25/2020	0.025 (J)	0.039 (J)	0.0096 (J)						
3/26/2020							1.6		
3/27/2020				2.4	1.2				
3/30/2020									
3/31/2020						0.17			2.2
4/1/2020								0.23	

Prediction Limit

Constituent: Boron (mg/L) Analysis Run 6/2/2020 4:35 PM View: Appendix III

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWC-13
5/19/2016	
5/20/2016	
5/23/2016	2.15
7/11/2016	
7/12/2016	1.91
8/30/2016	
9/1/2016	2.3
10/19/2016	
10/20/2016	
10/24/2016	4.01
12/6/2016	
12/7/2016	3.85
1/24/2017	
1/25/2017	
1/26/2017	2.45
3/21/2017	
3/22/2017	1.99
5/22/2017	
5/23/2017	
5/24/2017	1.74
10/3/2017	1.43
6/4/2018	
6/5/2018	1.3
6/6/2018	
10/1/2018	
10/2/2018	
10/3/2018	
10/5/2018	1.6
4/1/2019	
4/2/2019	
4/3/2019	
4/5/2019	0.86 (J)
9/23/2019	
9/24/2019	
9/25/2019	
9/26/2019	1.7
9/27/2019	
3/25/2020	
3/26/2020	
3/27/2020	
3/30/2020	1.8
3/31/2020	
4/1/2020	

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 6/2/2020 4:35 PM View: Appendix III

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWC-8	HGWC-7	HGWC-11	HGWC-12	HGWC-10	HGWC-9
5/19/2016	138	22.9	76.2						
5/20/2016				159	117				
5/23/2016						131	195	167	179
7/11/2016	97.2	22.3							
7/12/2016			61.5	127	88.8	124	181	143	174
8/30/2016	97.5	26.4	65.1						
9/1/2016				135	96.3	107	179	156	170
10/19/2016	99.2	21.7	73.2						
10/20/2016				134	96.9				133
10/24/2016						145	193	156	
12/6/2016	105	18.2	74.9	142	104				181
12/7/2016						159	193	183	
1/24/2017	95.7	18.5	69.6						
1/25/2017				142	94.5				
1/26/2017						121	172	82.6	175
3/21/2017	106	18.6	75.7	148	109				
3/22/2017						130	162	154	183
5/22/2017	107	17.8	71.5						
5/23/2017				140	93.3				181
5/24/2017						117	158	171	
10/3/2017	102	20.2	76.3	158	108	87.7	130	162	188
6/4/2018	124	19.1	73.4						
6/5/2018					99.8	113		167	
6/6/2018				127			136		184
10/1/2018	108	20.5 (J)	80.9						
10/2/2018				118	108			144	173
10/3/2018						89	125		
10/5/2018									
4/1/2019			80.5						
4/2/2019	132	22.5 (J)			101				
4/3/2019				125		112	114	137	164
4/5/2019									
9/23/2019	118	19.5	71						
9/24/2019				113					
9/25/2019					105				
9/26/2019									
9/27/2019						113	153	157	175
3/25/2020	127	23	89.8						
3/26/2020							145		
3/27/2020				133	119				
3/30/2020									
3/31/2020						124			182
4/1/2020								96.2	

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 6/2/2020 4:35 PM View: Appendix III

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWC-13
5/19/2016	
5/20/2016	
5/23/2016	133
7/11/2016	
7/12/2016	101
8/30/2016	
9/1/2016	120
10/19/2016	
10/20/2016	
10/24/2016	127
12/6/2016	
12/7/2016	113
1/24/2017	
1/25/2017	
1/26/2017	77.9
3/21/2017	
3/22/2017	85.1
5/22/2017	
5/23/2017	
5/24/2017	77.1
10/3/2017	62
6/4/2018	
6/5/2018	110
6/6/2018	
10/1/2018	
10/2/2018	
10/3/2018	
10/5/2018	73.6
4/1/2019	
4/2/2019	
4/3/2019	
4/5/2019	77.1
9/23/2019	
9/24/2019	
9/25/2019	
9/26/2019	195
9/27/2019	
3/25/2020	
3/26/2020	
3/27/2020	
3/30/2020	234
3/31/2020	
4/1/2020	

Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 6/2/2020 4:35 PM View: Appendix III

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWC-8	HGWC-7	HGWC-11	HGWC-12	HGWC-10	HGWC-9
5/19/2016	9.94	6.14	5.93						
5/20/2016				109	50.4				
5/23/2016						51.9	160	56.1	152
7/11/2016	6.3	5.9							
7/12/2016			6.2	110	50	100	160	63	160
8/30/2016	6	6.2	6.4						
9/1/2016				110	50	58	140	77	160
10/19/2016	5.8	6.1	6.5						
10/20/2016				110	49				110
10/24/2016						220	160	99	
12/6/2016	5.4	6	7.2	100	51				150
12/7/2016						180	190	96	
1/24/2017	5.2	6.1	6.4						
1/25/2017				110	54				
1/26/2017						90	160	7	170
3/21/2017	4.6	5.9	7.5	110	46				
3/22/2017						37	130	82	160
5/22/2017	4.6	5.9	6.5						
5/23/2017				130	49				150
5/24/2017						69	120	81	
10/3/2017	5.6	6.3	6.5	130	52	28	93	100	160
6/4/2018	13.1	6.1	6.3						
6/5/2018					52.3	56.1		66.6	
6/6/2018				44.8			46.4		138
10/1/2018	6.6	6.4	6.4						
10/2/2018				89.4	52.6			48.3	142
10/3/2018						24.8	88.4		
10/5/2018									
4/1/2019			6.5						
4/2/2019	20.3	5.8			55.5				
4/3/2019				91.6		4.6	62.8	49.3	130
4/5/2019									
9/23/2019	17.7	5.1	5.9						
9/24/2019				60.2					
9/25/2019					49.8				
9/26/2019									
9/27/2019						27.9	81	49.9	126
3/25/2020	20.4	5.2	6.1						
3/26/2020							48		
3/27/2020				79.8	48.3				
3/30/2020									
3/31/2020						3.2			105
4/1/2020								5.4	

Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 6/2/2020 4:35 PM View: Appendix III

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWC-13
5/19/2016	
5/20/2016	
5/23/2016	93.2
7/11/2016	
7/12/2016	78
8/30/2016	
9/1/2016	100
10/19/2016	
10/20/2016	
10/24/2016	140
12/6/2016	
12/7/2016	110
1/24/2017	
1/25/2017	
1/26/2017	70
3/21/2017	
3/22/2017	59
5/22/2017	
5/23/2017	
5/24/2017	50
10/3/2017	29
6/4/2018	
6/5/2018	72.3
6/6/2018	
10/1/2018	
10/2/2018	
10/3/2018	
10/5/2018	32.3
4/1/2019	
4/2/2019	
4/3/2019	
4/5/2019	36.4
9/23/2019	
9/24/2019	
9/25/2019	
9/26/2019	109
9/27/2019	
3/25/2020	
3/26/2020	
3/27/2020	
3/30/2020	75.1
3/31/2020	
4/1/2020	

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 6/2/2020 4:35 PM View: Appendix III

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWA-1 (bg)	HGWA-3 (bg)	HGWA-2 (bg)	HGWC-7	HGWC-8	HGWC-10	HGWC-9	HGWC-11	HGWC-12
5/19/2016	0.105 (J)	0.0513 (J)	0.0303 (J)						
5/20/2016				0.0828 (J)	0.499				
5/23/2016						0.0394 (J)	<0.3	0.203 (J)	0.212 (J)
7/11/2016	0.16 (J)		0.05 (J)						
7/12/2016		0.12 (J)		0.2 (J)	0.67	0.15 (J)	0.24 (J)	0.44	0.31
8/30/2016	0.09 (J)	0.09 (J)	0.06 (J)						
9/1/2016				0.51	0.94	0.5	0.46	0.67	0.62
10/19/2016	0.1 (J)	0.1 (J)	0.04 (J)						
10/20/2016				0.4	0.56		0.56		
10/24/2016						0.06 (J)		0.26 (J)	0.19 (J)
12/6/2016	0.11 (J)	0.21 (J)	0.36	0.26 (J)	0.76		0.31		
12/7/2016						0.44		0.55	0.73
1/24/2017	0.09 (J)	0.06 (J)	<0.3						
1/25/2017				0.24 (J)	1.1				
1/26/2017						0.29 (J)	0.004 (J)	0.27 (J)	0.12 (J)
3/21/2017	0.13 (J)	0.005 (J)	<0.3	0.13 (J)	0.46				
3/22/2017						0.34	0.28 (J)	0.66	0.44
5/22/2017	0.12 (J)	0.05 (J)	<0.3						
5/23/2017				0.11 (J)	0.65		0.29 (J)		
5/24/2017						0.13 (J)		0.35	0.34
10/3/2017	0.13 (J)	0.13 (J)	<0.3	0.17 (J)	0.66	0.46	0.53	0.56	0.58
4/2/2018	<0.3		<0.3						
4/3/2018		<0.3		<0.3	0.39		<0.3		
4/4/2018						<0.3		0.39	<0.3
6/4/2018	0.074 (J)	<0.3	<0.3						
6/5/2018				0.099 (J)		<0.3		0.24 (J)	
6/6/2018					0.46		0.12 (J)		0.21 (J)
10/1/2018	<0.3	<0.3	<0.3						
10/2/2018				<0.3	0.51	0.17 (J)	0.031 (J)		
10/3/2018								0.31	0.15 (J)
10/5/2018									
3/12/2019	0.29 (J)	0.072 (J)	0.038 (J)		0.58				
3/13/2019				0.12 (J)		0.17 (J)	0.14 (J)	0.51	
3/14/2019									1.1
4/1/2019		0.029 (J)							
4/2/2019	0.1 (J)		0.071 (J)	0.097 (J)					
4/3/2019					0.63	0.082 (J)	0.14 (J)	0.43	0.3 (J)
4/5/2019									
9/23/2019	0.078 (J)	<0.3	<0.3						
9/24/2019					0.49				
9/25/2019				0.1 (J)					
9/26/2019									
9/27/2019						0.17 (J)	0.26 (J)	0.42	0.26 (J)
3/2/2020	0.076 (J)	<0.3	<0.3						
3/3/2020					0.45	0.11 (J)		0.24 (J)	0.21 (J)
3/4/2020				0.077 (J)			0.08 (J)		
3/25/2020	0.098 (J)	<0.3	<0.3						
3/26/2020									0.17 (J)
3/27/2020				0.059 (J)	0.46				
3/30/2020									
3/31/2020							0.074 (J)	0.19 (J)	
4/1/2020						0.12 (J)			

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 6/2/2020 4:35 PM View: Appendix III

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWC-13
5/19/2016	
5/20/2016	
5/23/2016	0.2587 (J)
7/11/2016	
7/12/2016	0.53
8/30/2016	
9/1/2016	0.74
10/19/2016	
10/20/2016	
10/24/2016	0.31
12/6/2016	
12/7/2016	1
1/24/2017	
1/25/2017	
1/26/2017	0.68
3/21/2017	
3/22/2017	0.76
5/22/2017	
5/23/2017	
5/24/2017	0.54
10/3/2017	0.83
4/2/2018	
4/3/2018	
4/4/2018	0.65
6/4/2018	
6/5/2018	0.47
6/6/2018	
10/1/2018	
10/2/2018	
10/3/2018	
10/5/2018	0.77
3/12/2019	
3/13/2019	0.78
3/14/2019	
4/1/2019	
4/2/2019	
4/3/2019	
4/5/2019	0.83
9/23/2019	
9/24/2019	
9/25/2019	
9/26/2019	0.64
9/27/2019	
3/2/2020	
3/3/2020	
3/4/2020	0.37
3/25/2020	
3/26/2020	
3/27/2020	
3/30/2020	0.44
3/31/2020	
4/1/2020	

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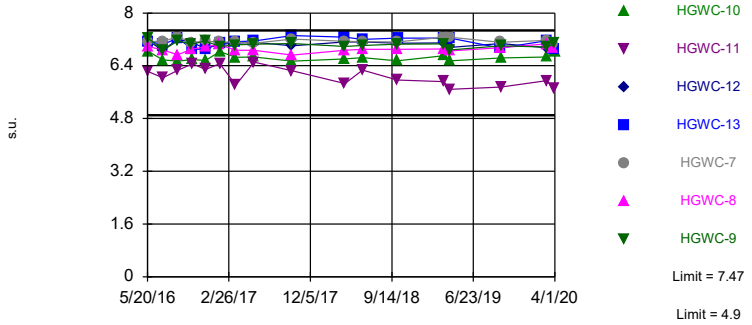
Within Limits

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limits are highest and lowest of 51 background values. Annual per-constituent alpha = 0.01995. Individual comparison alpha = 0.001432 (1 of 2). Comparing 7 points to limit.

Constituent: pH Analysis Run 6/2/2020 4:32 PM View: Appendix III

Plant Hammond Client: Southern Company Data: Hammond AP-1

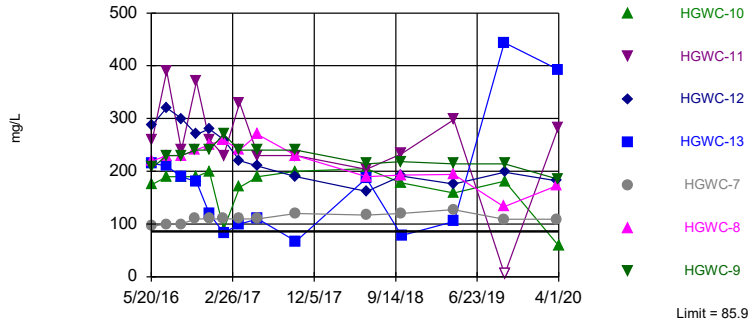
Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

Hollow symbols indicate censored values.

Exceeds Limit: HGWC-11, HGWC-12, HGWC-13, HGWC-7, HGWC-8, HGWC-9

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 42 background values. Annual per-constituent alpha = 0.01455. Individual comparison alpha = 0.001046 (1 of 2). Comparing 7 points to limit.

Constituent: Sulfate Analysis Run 6/2/2020 4:32 PM View: Appendix III

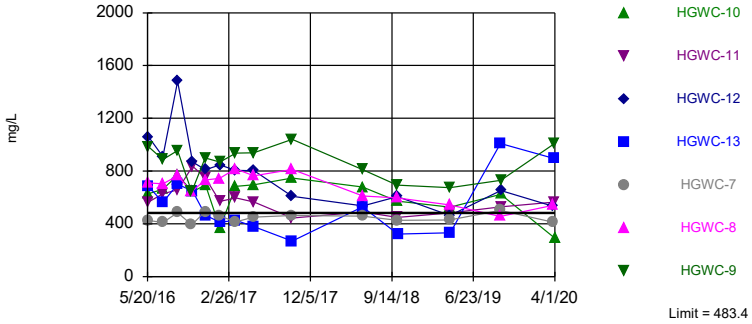
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

Exceeds Limit: HGWC-11, HGWC-12, HGWC-13, HGWC-8, HGWC-9

Prediction Limit

Interwell Parametric



Background Data Summary: Mean=267.4, Std. Dev.=109.9, n=42. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9318, critical = 0.922. Kappa = 1.966 (c=7, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.001075. Comparing 7 points to limit.

Constituent: Total Dissolved Solids Analysis Run 6/2/2020 4:32 PM View: Appendix III

Plant Hammond Client: Southern Company Data: Hammond AP-1

Prediction Limit

Constituent: pH (s.u.) Analysis Run 6/2/2020 4:35 PM View: Appendix III

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWA-1 (bg)	HGWA-3 (bg)	HGWA-2 (bg)	HGWC-7	HGWC-8	HGWC-10	HGWC-9	HGWC-11	HGWC-12
5/19/2016	7.27	7.45	5.81						
5/20/2016				7.14	6.99				
5/23/2016						6.83	7.23	6.22	7.15
7/11/2016	7.06		5.68						
7/12/2016		7.32		7.13	6.88	6.58	6.87	6.04	6.87
8/30/2016	7.28	7.43	5.63						
9/1/2016				7.29	6.73	6.54	7.15	6.26	7.2
10/19/2016	7.02	7.03	5.46						
10/20/2016				7.1	6.9		7.05		
10/24/2016						6.59		6.46	7.1
12/6/2016	7.09	7.08	5.38	7.15	6.98		7.15		
12/7/2016						6.56		6.29	6.92
1/24/2017	7.2	7.39	5.37						
1/25/2017				7.11	7.04				
1/26/2017						6.83	6.99	6.46	7.05
3/21/2017	7.01	6.83	4.9	7.12	6.87				
3/22/2017						6.66	7.03	5.81	7.08
5/22/2017	7.11	7.02	5.2						
5/23/2017				7.08	6.87		7.05		
5/24/2017						6.67		6.51	7.11
10/3/2017	7.21	7.47	5.3	7.21	6.72	6.54	7.07	6.25	7.01
4/2/2018	7.1		5.4						
4/3/2018		7.38		7.14	6.87		6.99		
4/4/2018						6.61		5.86	7.12
6/4/2018	7.06	7.38	5.27						
6/5/2018				7.13		6.65		6.27	
6/6/2018					6.9		7.02		7.12
10/1/2018	7.09	7.13	5.31						
10/2/2018				7.12	6.9	6.55	7.05		
10/3/2018								5.97	7.08
10/5/2018									
3/12/2019	7.03	7.29	5.42		6.91				
3/13/2019				7.27		6.7	7.06	5.92	
3/14/2019									7.09
4/1/2019		7.16							
4/2/2019	6.86		5.41	7.27					
4/3/2019					6.85	6.55	6.88	5.69	6.96
4/5/2019									
9/23/2019	7.02	7.3	5.33						
9/24/2019					6.95				
9/25/2019				7.11					
9/26/2019									
9/27/2019						6.64	7.01	5.75	7.07
3/2/2020	7.1	7.12	5.43						
3/3/2020					7.06	6.67		5.95	6.95
3/4/2020				7.17			6.97		
3/25/2020	6.95	7.4	5.36						
3/26/2020									6.99
3/27/2020				7.05	6.95				
3/30/2020									
3/31/2020							7.07	5.7	
4/1/2020						6.84			

Prediction Limit

Constituent: pH (s.u.) Analysis Run 6/2/2020 4:35 PM View: Appendix III

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWC-13
5/19/2016	
5/20/2016	
5/23/2016	7.14
7/11/2016	
7/12/2016	7.04
8/30/2016	
9/1/2016	7.24
10/19/2016	
10/20/2016	
10/24/2016	6.9
12/6/2016	
12/7/2016	6.91
1/24/2017	
1/25/2017	
1/26/2017	7.08
3/21/2017	
3/22/2017	7.13
5/22/2017	
5/23/2017	
5/24/2017	7.15
10/3/2017	7.32
4/2/2018	
4/3/2018	
4/4/2018	7.27
6/4/2018	
6/5/2018	7.2
6/6/2018	
10/1/2018	
10/2/2018	
10/3/2018	
10/5/2018	7.24
3/12/2019	
3/13/2019	7.24
3/14/2019	
4/1/2019	
4/2/2019	
4/3/2019	
4/5/2019	7.24
9/23/2019	
9/24/2019	
9/25/2019	
9/26/2019	6.94
9/27/2019	
3/2/2020	
3/3/2020	
3/4/2020	7.16
3/25/2020	
3/26/2020	
3/27/2020	
3/30/2020	6.91
3/31/2020	
4/1/2020	

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 6/2/2020 4:35 PM View: Appendix III

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWC-8	HGWC-7	HGWC-11	HGWC-12	HGWC-10	HGWC-9
5/19/2016	66.9	48.6	42.3						
5/20/2016				219	96				
5/23/2016						260	288	175	207
7/11/2016	41	45							
7/12/2016			44	230	100	390	320	190	230
8/30/2016	36	42	40						
9/1/2016				230	100	240	300	190	230
10/19/2016	46	44	43						
10/20/2016				240	110				240
10/24/2016						370	270	190	
12/6/2016	59	44	43	250	110				240
12/7/2016						260	280	200	
1/24/2017	46	46	48						
1/25/2017				260	110				
1/26/2017						230	260	90	270
3/21/2017	63	46	45	240	110				
3/22/2017						330	220	170	240
5/22/2017	77	48	46						
5/23/2017				270	110				240
5/24/2017						230	210	190	
10/3/2017	42	47	48	230	120	230	190	200	240
6/4/2018	71.8	47.8	46.6						
6/5/2018					117	204		205	
6/6/2018				190			162		214
10/1/2018	49.1	48.1	48.6						
10/2/2018				193	120			178	218
10/3/2018						233	191		
10/5/2018									
4/1/2019			50.4						
4/2/2019	84.3	48.7			127				
4/3/2019				194		298	176	159	214
4/5/2019									
9/23/2019	70.2	47.2	43.9						
9/24/2019				133					
9/25/2019					109				
9/26/2019									
9/27/2019						<10	198	181	214
3/25/2020	85.9	46.3	50.5						
3/26/2020							182		
3/27/2020				173	109				
3/30/2020									
3/31/2020						283			185
4/1/2020								59	

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 6/2/2020 4:35 PM View: Appendix III

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWC-13
5/19/2016	
5/20/2016	
5/23/2016	215
7/11/2016	
7/12/2016	210
8/30/2016	
9/1/2016	190
10/19/2016	
10/20/2016	
10/24/2016	180
12/6/2016	
12/7/2016	120
1/24/2017	
1/25/2017	
1/26/2017	83
3/21/2017	
3/22/2017	100
5/22/2017	
5/23/2017	
5/24/2017	110
10/3/2017	67
6/4/2018	
6/5/2018	187
6/6/2018	
10/1/2018	
10/2/2018	
10/3/2018	
10/5/2018	78.3
4/1/2019	
4/2/2019	
4/3/2019	
4/5/2019	105
9/23/2019	
9/24/2019	
9/25/2019	
9/26/2019	444
9/27/2019	
3/25/2020	
3/26/2020	
3/27/2020	
3/30/2020	393
3/31/2020	
4/1/2020	

Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 6/2/2020 4:35 PM View: Appendix III

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWC-8	HGWC-7	HGWC-11	HGWC-12	HGWC-10	HGWC-9
5/19/2016	421	143	267						
5/20/2016				711	427				
5/23/2016						564	1060	629	984
7/11/2016	363	125							
7/12/2016			249	704	410	627	909	661	887
8/30/2016	330	168	254						
9/1/2016				763	484	656	1480	769	956
10/19/2016	380	176	357						
10/20/2016				644	393				642
10/24/2016						836	868	643	
12/6/2016	377	145	285	733	492				899
12/7/2016						748	811	697	
1/24/2017	342	129	300						
1/25/2017				744	461				
1/26/2017						571	846	368	869
3/21/2017	340	103	288	818	415				
3/22/2017						597	804	683	936
5/22/2017	338	92	263						
5/23/2017				765	450				939
5/24/2017						566	803	696	
10/3/2017	343	127	300	812	464	443	608	746	1040
6/4/2018	415	140	266						
6/5/2018					459	489		679	
6/6/2018				611			535		810
10/1/2018	354	135	291						
10/2/2018				597	426			572	693
10/3/2018						449	607		
10/5/2018									
4/1/2019			284						
4/2/2019	452	133			428				
4/3/2019				543		483	462	525	673
4/5/2019									
9/23/2019	442	129	268						
9/24/2019				457					
9/25/2019					503				
9/26/2019									
9/27/2019						528	653	624	730
3/25/2020	496	138	284						
3/26/2020							533		
3/27/2020				541	413				
3/30/2020									
3/31/2020						565			1010
4/1/2020								290	

Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 6/2/2020 4:35 PM View: Appendix III

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWC-13
5/19/2016	
5/20/2016	
5/23/2016	683
7/11/2016	
7/12/2016	563
8/30/2016	
9/1/2016	702
10/19/2016	
10/20/2016	
10/24/2016	647
12/6/2016	
12/7/2016	465
1/24/2017	
1/25/2017	
1/26/2017	411
3/21/2017	
3/22/2017	427
5/22/2017	
5/23/2017	
5/24/2017	377
10/3/2017	268
6/4/2018	
6/5/2018	528
6/6/2018	
10/1/2018	
10/2/2018	
10/3/2018	
10/5/2018	322
4/1/2019	
4/2/2019	
4/3/2019	
4/5/2019	331
9/23/2019	
9/24/2019	
9/25/2019	
9/26/2019	1010
9/27/2019	
3/25/2020	
3/26/2020	
3/27/2020	
3/30/2020	895
3/31/2020	
4/1/2020	

FIGURE E.

Appendix III Trend Tests - Significant Results

Plant Hammond Client: Southern Company Data: Hammond AP-1 Printed 6/2/2020, 4:39 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Boron (mg/L)	**HGWA-2 (bg)**	**0.001791**	**45**	**44**	**Yes**	**14**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Boron (mg/L)	**HGWC-7**	**0.06141**	**48**	**44**	**Yes**	**14**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Boron (mg/L)	**HGWC-8**	**0.3688**	**66**	**44**	**Yes**	**14**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Boron (mg/L)	**HGWC-9**	**0.2649**	**60**	**44**	**Yes**	**14**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Calcium (mg/L)	**HGWC-12**	**-24.12**	**-64**	**-44**	**Yes**	**14**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Chloride (mg/L)	**HGWC-12**	**-32.73**	**-63**	**-44**	**Yes**	**14**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Sulfate (mg/L)	**HGWA-3 (bg)**	**2.216**	**57**	**44**	**Yes**	**14**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Sulfate (mg/L)	**HGWC-12**	**-41.21**	**-67**	**-44**	**Yes**	**14**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Total Dissolved Solids (mg/L)	**HGWC-12**	**-150.4**	**-73**	**-44**	**Yes**	**14**	**0**	**n/a**	**n/a**	**0.02**	**NP**

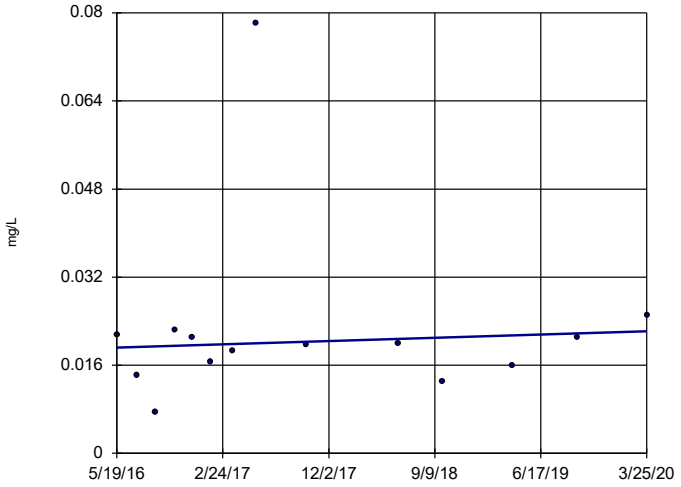
Appendix III Trend Tests - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-1 Printed 6/2/2020, 4:39 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Boron (mg/L)	HGWA-1 (bg)	0.0007668	9	44	No	14	0	n/a	n/a	0.02	NP
Boron (mg/L)	**HGWA-2 (bg)**	**0.001791**	**45**	**44**	**Yes**	**14**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Boron (mg/L)	HGWA-3 (bg)	-0.0007135	-19	-44	No	14	14.29	n/a	n/a	0.02	NP
Boron (mg/L)	HGWC-10	0.03857	7	44	No	14	0	n/a	n/a	0.02	NP
Boron (mg/L)	HGWC-11	-0.3864	-35	-44	No	14	0	n/a	n/a	0.02	NP
Boron (mg/L)	HGWC-12	-0.2033	-25	-44	No	14	0	n/a	n/a	0.02	NP
Boron (mg/L)	HGWC-13	-0.3844	-43	-44	No	14	0	n/a	n/a	0.02	NP
Boron (mg/L)	**HGWC-7**	**0.06141**	**48**	**44**	**Yes**	**14**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Boron (mg/L)	**HGWC-8**	**0.3688**	**66**	**44**	**Yes**	**14**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Boron (mg/L)	**HGWC-9**	**0.2649**	**60**	**44**	**Yes**	**14**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Calcium (mg/L)	HGWA-1 (bg)	6.687	43	44	No	14	0	n/a	n/a	0.02	NP
Calcium (mg/L)	HGWA-2 (bg)	-0.1393	-1	-44	No	14	0	n/a	n/a	0.02	NP
Calcium (mg/L)	HGWA-3 (bg)	3.531	39	44	No	14	0	n/a	n/a	0.02	NP
Calcium (mg/L)	**HGWC-12**	**-24.12**	**-64**	**-44**	**Yes**	**14**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Calcium (mg/L)	HGWC-13	-5.685	-14	-44	No	14	0	n/a	n/a	0.02	NP
Calcium (mg/L)	HGWC-9	1.628	15	44	No	14	0	n/a	n/a	0.02	NP
Chloride (mg/L)	HGWA-1 (bg)	1.469	22	44	No	14	0	n/a	n/a	0.02	NP
Chloride (mg/L)	HGWA-2 (bg)	-0.1372	-27	-44	No	14	0	n/a	n/a	0.02	NP
Chloride (mg/L)	HGWA-3 (bg)	0	-4	-44	No	14	0	n/a	n/a	0.02	NP
Chloride (mg/L)	**HGWC-12**	**-32.73**	**-63**	**-44**	**Yes**	**14**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Chloride (mg/L)	HGWC-13	-15.35	-27	-44	No	14	0	n/a	n/a	0.02	NP
Chloride (mg/L)	HGWC-7	0.6016	9	44	No	14	0	n/a	n/a	0.02	NP
Chloride (mg/L)	HGWC-8	-7.504	-26	-44	No	14	0	n/a	n/a	0.02	NP
Chloride (mg/L)	HGWC-9	-10.22	-42	-44	No	14	0	n/a	n/a	0.02	NP
Fluoride (mg/L)	HGWA-1 (bg)	-0.002837	-12	-58	No	17	11.76	n/a	n/a	0.02	NP
Fluoride (mg/L)	HGWA-2 (bg)	0	29	58	No	17	58.82	n/a	n/a	0.02	NP
Fluoride (mg/L)	HGWA-3 (bg)	0.04945	43	58	No	17	35.29	n/a	n/a	0.02	NP
Fluoride (mg/L)	HGWC-13	0.01508	9	58	No	17	0	n/a	n/a	0.02	NP
Fluoride (mg/L)	HGWC-8	-0.05579	-47	-58	No	17	0	n/a	n/a	0.02	NP
Sulfate (mg/L)	HGWA-1 (bg)	8.572	44	44	No	14	0	n/a	n/a	0.02	NP
Sulfate (mg/L)	HGWA-2 (bg)	1.136	35	44	No	14	0	n/a	n/a	0.02	NP
Sulfate (mg/L)	**HGWA-3 (bg)**	**2.216**	**57**	**44**	**Yes**	**14**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Sulfate (mg/L)	HGWC-11	-25.17	-29	-44	No	14	7.143	n/a	n/a	0.02	NP
Sulfate (mg/L)	**HGWC-12**	**-41.21**	**-67**	**-44**	**Yes**	**14**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Sulfate (mg/L)	HGWC-13	-21.73	-15	-44	No	14	0	n/a	n/a	0.02	NP
Sulfate (mg/L)	HGWC-7	5.935	40	44	No	14	0	n/a	n/a	0.02	NP
Sulfate (mg/L)	HGWC-8	-17.75	-29	-44	No	14	0	n/a	n/a	0.02	NP
Sulfate (mg/L)	HGWC-9	-5.703	-23	-44	No	14	0	n/a	n/a	0.02	NP
Total Dissolved Solids (mg/L)	HGWA-1 (bg)	19.47	27	44	No	14	0	n/a	n/a	0.02	NP
Total Dissolved Solids (mg/L)	HGWA-2 (bg)	-3.376	-14	-44	No	14	0	n/a	n/a	0.02	NP
Total Dissolved Solids (mg/L)	HGWA-3 (bg)	2.137	9	44	No	14	0	n/a	n/a	0.02	NP
Total Dissolved Solids (mg/L)	HGWC-11	-48.64	-37	-44	No	14	0	n/a	n/a	0.02	NP
Total Dissolved Solids (mg/L)	**HGWC-12**	**-150.4**	**-73**	**-44**	**Yes**	**14**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Total Dissolved Solids (mg/L)	HGWC-13	-76.14	-19	-44	No	14	0	n/a	n/a	0.02	NP
Total Dissolved Solids (mg/L)	HGWC-8	-48.91	-33	-44	No	14	0	n/a	n/a	0.02	NP
Total Dissolved Solids (mg/L)	HGWC-9	-43.42	-13	-44	No	14	0	n/a	n/a	0.02	NP

Sen's Slope Estimator

HGWA-1 (bg)



n = 14

Slope = 0.0007668 units per year.

Mann-Kendall statistic = 9
critical = 44

Trend not significant at 98% confidence level (α = 0.01 per tail).

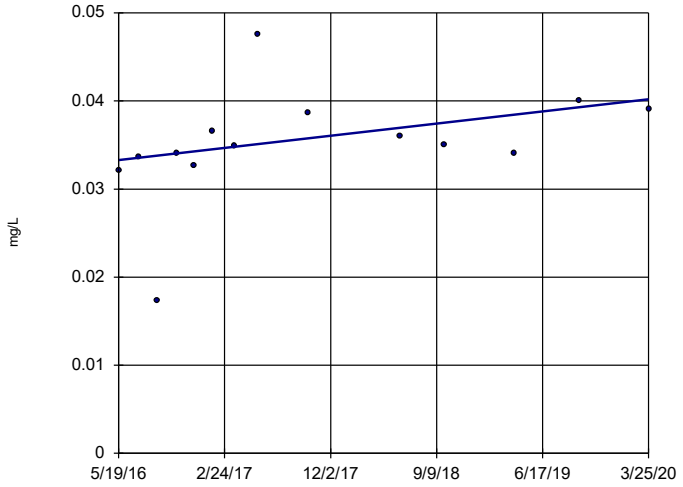
Constituent: Boron Analysis Run 6/2/2020 4:38 PM View: Appendix III - Trend Tests

Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

Sen's Slope Estimator

HGWA-2 (bg)



n = 14

Slope = 0.001791 units per year.

Mann-Kendall statistic = 45
critical = 44

Increasing trend significant at 98% confidence level (α = 0.01 per tail).

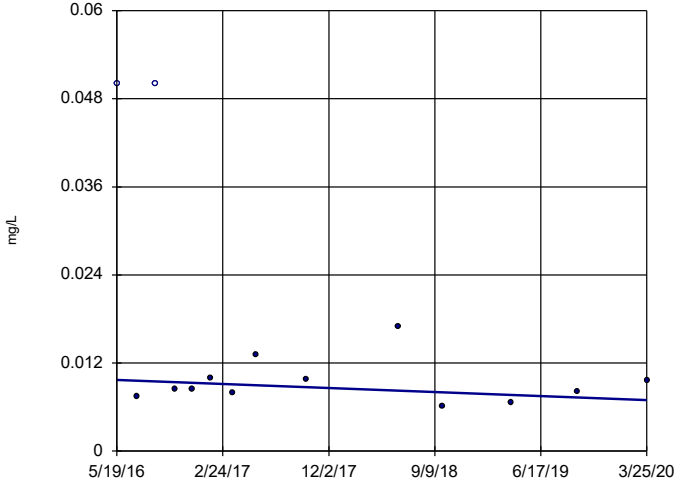
Constituent: Boron Analysis Run 6/2/2020 4:38 PM View: Appendix III - Trend Tests

Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

HGWA-3 (bg)



n = 14

Slope = -0.0007135 units per year.

Mann-Kendall statistic = -19
critical = -44

Trend not significant at 98% confidence level (α = 0.01 per tail).

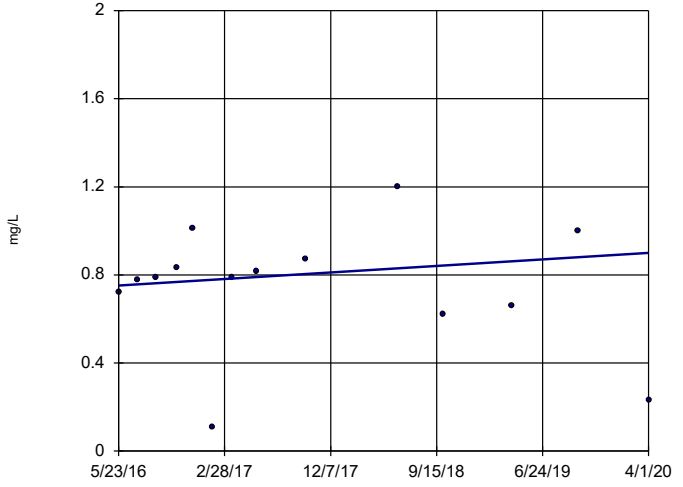
Constituent: Boron Analysis Run 6/2/2020 4:38 PM View: Appendix III - Trend Tests

Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

Sen's Slope Estimator

HGWC-10



n = 14

Slope = 0.03857 units per year.

Mann-Kendall statistic = 7
critical = 44

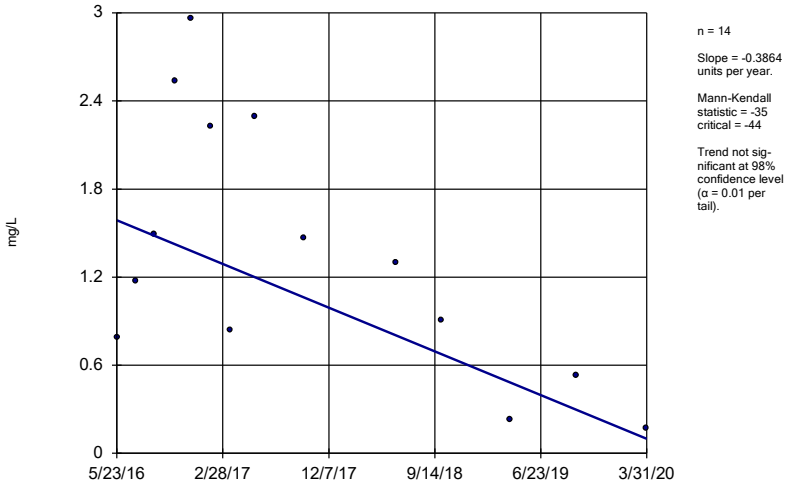
Trend not significant at 98% confidence level (α = 0.01 per tail).

Constituent: Boron Analysis Run 6/2/2020 4:38 PM View: Appendix III - Trend Tests

Plant Hammond Client: Southern Company Data: Hammond AP-1

Sen's Slope Estimator

HGWC-11



n = 14

Slope = -0.3864 units per year.

Mann-Kendall statistic = -35 critical = -44

Trend not significant at 98% confidence level (α = 0.01 per tail).

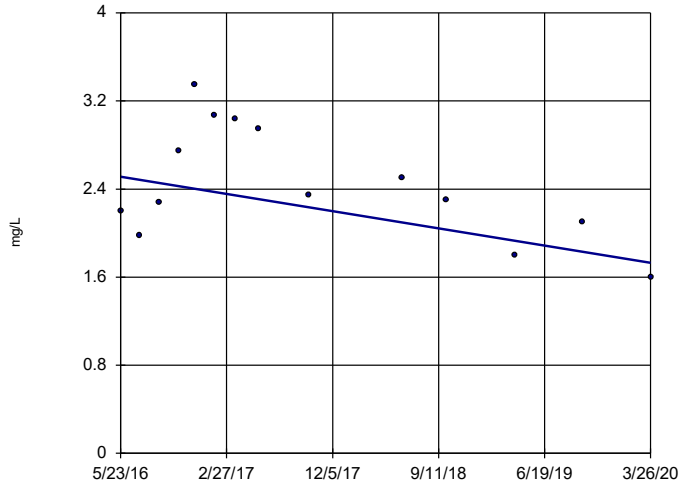
Constituent: Boron Analysis Run 6/2/2020 4:38 PM View: Appendix III - Trend Tests

Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

Sen's Slope Estimator

HGWC-12



n = 14

Slope = -0.2033 units per year.

Mann-Kendall statistic = -25 critical = -44

Trend not significant at 98% confidence level (α = 0.01 per tail).

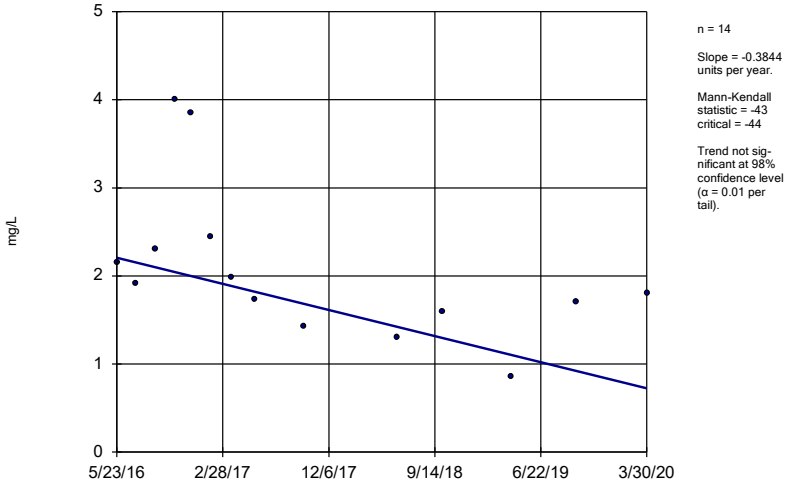
Constituent: Boron Analysis Run 6/2/2020 4:38 PM View: Appendix III - Trend Tests

Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

Sen's Slope Estimator

HGWC-13



n = 14

Slope = -0.3844 units per year.

Mann-Kendall statistic = -43 critical = -44

Trend not significant at 98% confidence level (α = 0.01 per tail).

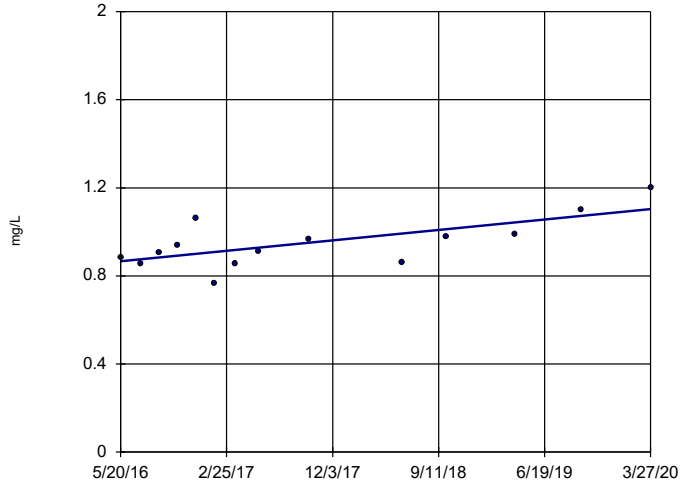
Constituent: Boron Analysis Run 6/2/2020 4:38 PM View: Appendix III - Trend Tests

Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

Sen's Slope Estimator

HGWC-7



n = 14

Slope = 0.06141 units per year.

Mann-Kendall statistic = 48 critical = 44

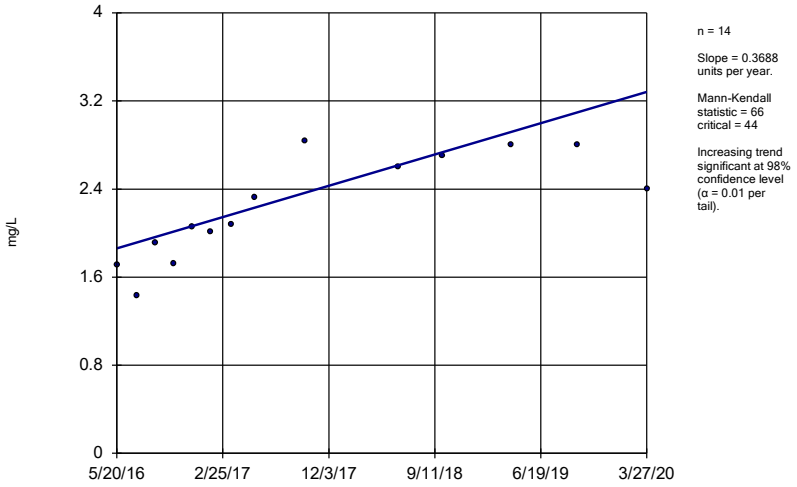
Increasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: Boron Analysis Run 6/2/2020 4:38 PM View: Appendix III - Trend Tests

Plant Hammond Client: Southern Company Data: Hammond AP-1

Sen's Slope Estimator

HGWC-8



n = 14

Slope = 0.3688 units per year.

Mann-Kendall statistic = 66
critical = 44

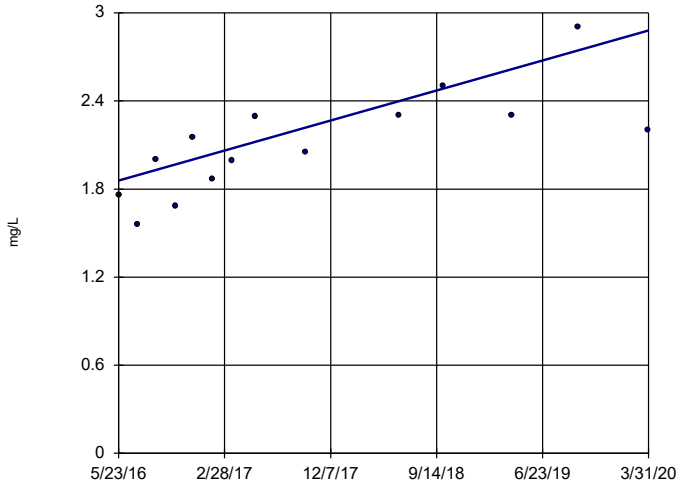
Increasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: Boron Analysis Run 6/2/2020 4:38 PM View: Appendix III - Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

Sen's Slope Estimator

HGWC-9



n = 14

Slope = 0.2649 units per year.

Mann-Kendall statistic = 60
critical = 44

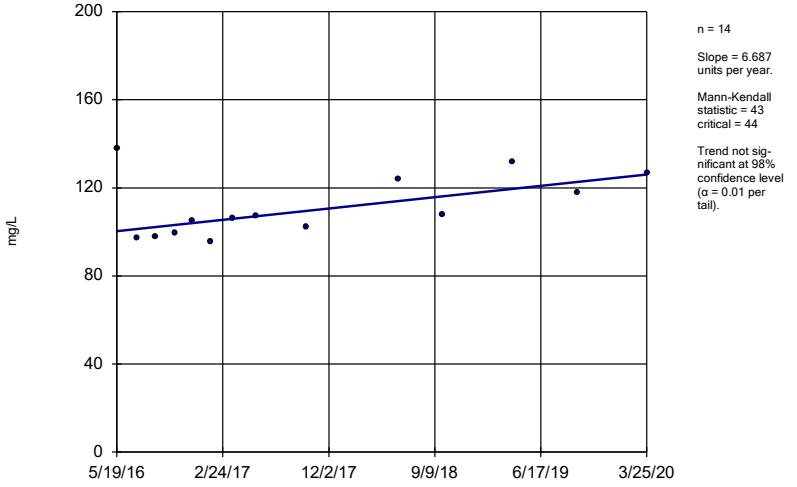
Increasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: Boron Analysis Run 6/2/2020 4:38 PM View: Appendix III - Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

Sen's Slope Estimator

HGWA-1 (bg)



n = 14

Slope = 6.687 units per year.

Mann-Kendall statistic = 43
critical = 44

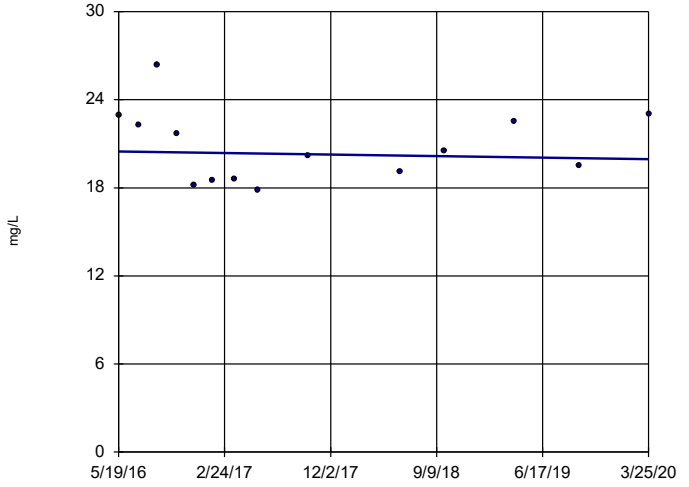
Trend not significant at 98% confidence level (α = 0.01 per tail).

Constituent: Calcium Analysis Run 6/2/2020 4:38 PM View: Appendix III - Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

Sen's Slope Estimator

HGWA-2 (bg)



n = 14

Slope = -0.1393 units per year.

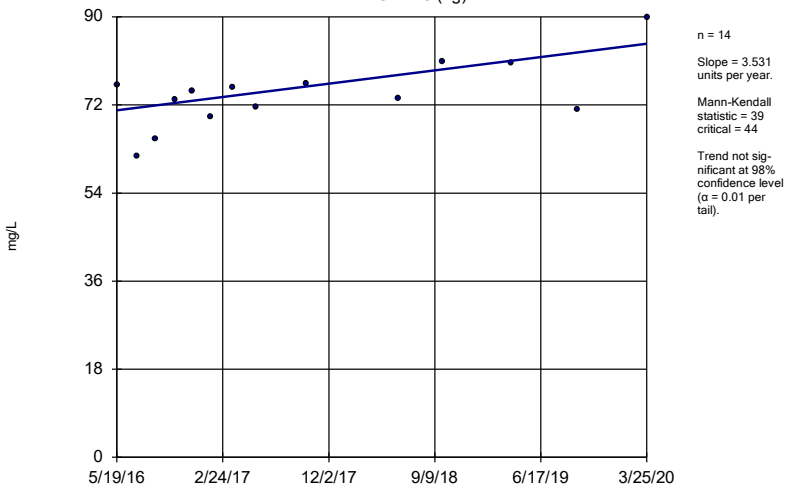
Mann-Kendall statistic = -1
critical = -44

Trend not significant at 98% confidence level (α = 0.01 per tail).

Constituent: Calcium Analysis Run 6/2/2020 4:38 PM View: Appendix III - Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sen's Slope Estimator

HGWA-3 (bg)



n = 14

Slope = 3.531 units per year.

Mann-Kendall statistic = 39 critical = 44

Trend not significant at 98% confidence level (α = 0.01 per tail).

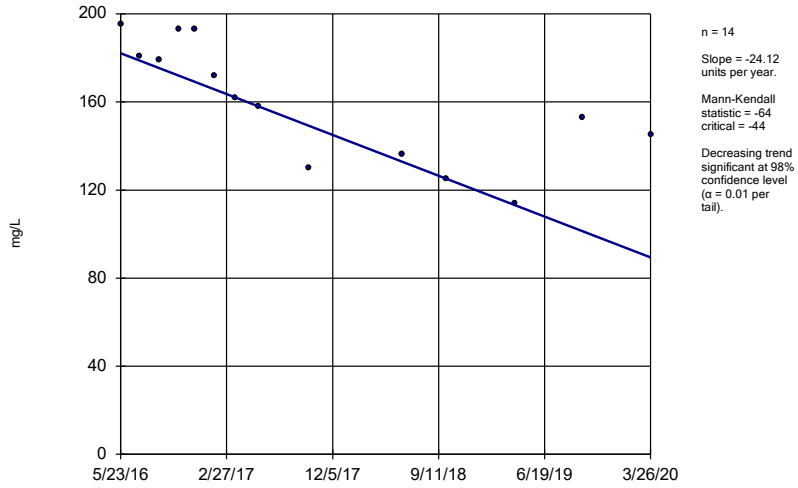
Constituent: Calcium Analysis Run 6/2/2020 4:38 PM View: Appendix III - Trend Tests

Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

Sen's Slope Estimator

HGWC-12



n = 14

Slope = -24.12 units per year.

Mann-Kendall statistic = -64 critical = -44

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

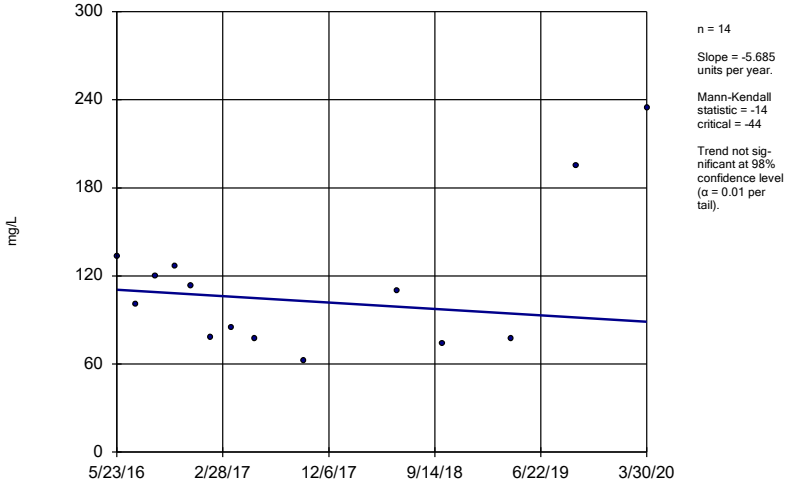
Constituent: Calcium Analysis Run 6/2/2020 4:38 PM View: Appendix III - Trend Tests

Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

Sen's Slope Estimator

HGWC-13



n = 14

Slope = -5.685 units per year.

Mann-Kendall statistic = -14 critical = -44

Trend not significant at 98% confidence level (α = 0.01 per tail).

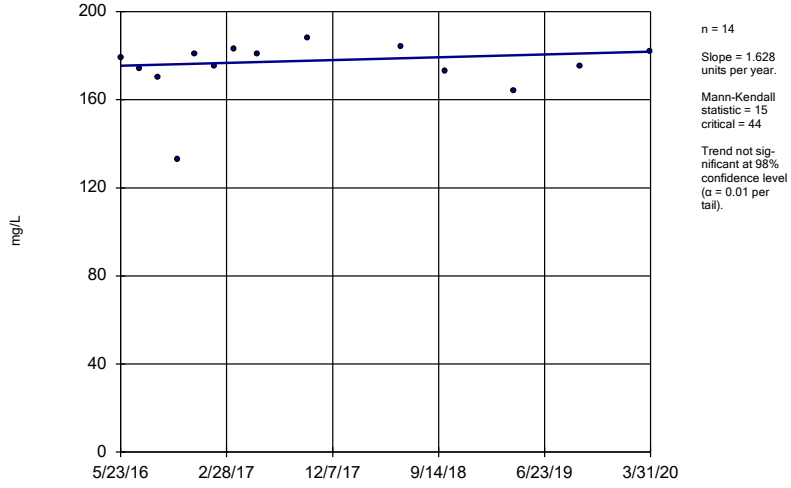
Constituent: Calcium Analysis Run 6/2/2020 4:38 PM View: Appendix III - Trend Tests

Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

Sen's Slope Estimator

HGWC-9



n = 14

Slope = 1.628 units per year.

Mann-Kendall statistic = 15 critical = 44

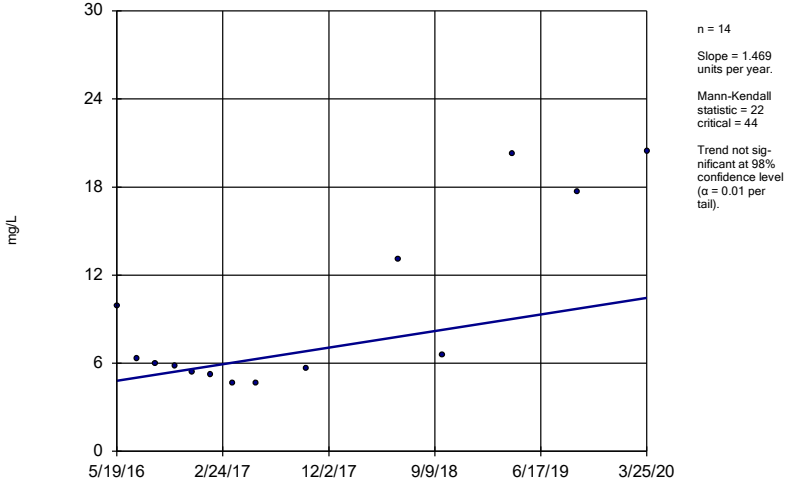
Trend not significant at 98% confidence level (α = 0.01 per tail).

Constituent: Calcium Analysis Run 6/2/2020 4:38 PM View: Appendix III - Trend Tests

Plant Hammond Client: Southern Company Data: Hammond AP-1

Sen's Slope Estimator

HGWA-1 (bg)



n = 14

Slope = 1.469 units per year.

Mann-Kendall statistic = 22 critical = 44

Trend not significant at 98% confidence level (α = 0.01 per tail).

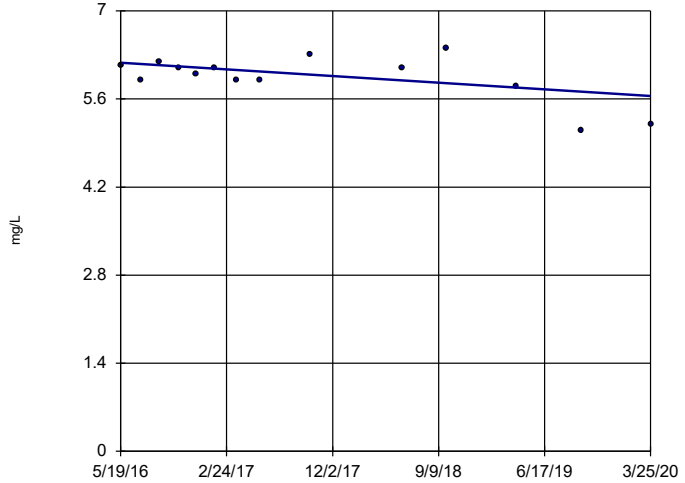
Constituent: Chloride Analysis Run 6/2/2020 4:38 PM View: Appendix III - Trend Tests

Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

Sen's Slope Estimator

HGWA-2 (bg)



n = 14

Slope = -0.1372 units per year.

Mann-Kendall statistic = -27 critical = -44

Trend not significant at 98% confidence level (α = 0.01 per tail).

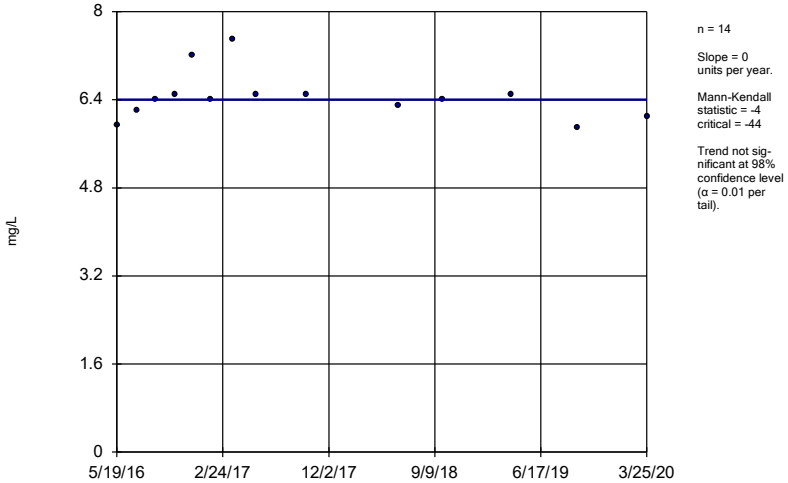
Constituent: Chloride Analysis Run 6/2/2020 4:38 PM View: Appendix III - Trend Tests

Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

Sen's Slope Estimator

HGWA-3 (bg)



n = 14

Slope = 0 units per year.

Mann-Kendall statistic = -4 critical = -44

Trend not significant at 98% confidence level (α = 0.01 per tail).

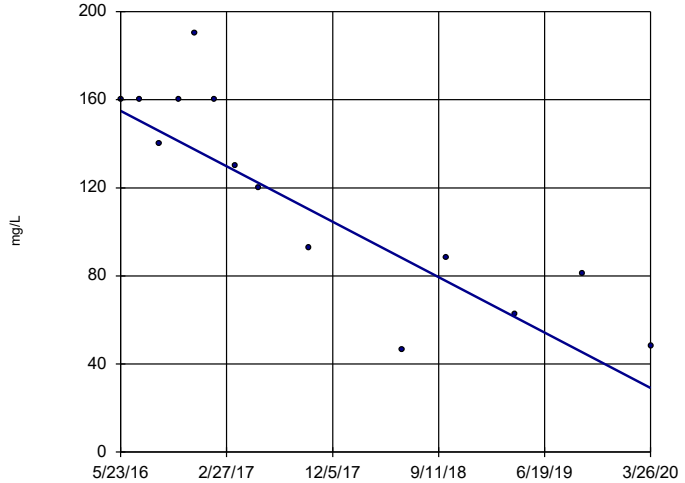
Constituent: Chloride Analysis Run 6/2/2020 4:38 PM View: Appendix III - Trend Tests

Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

Sen's Slope Estimator

HGWC-12



n = 14

Slope = -32.73 units per year.

Mann-Kendall statistic = -63 critical = -44

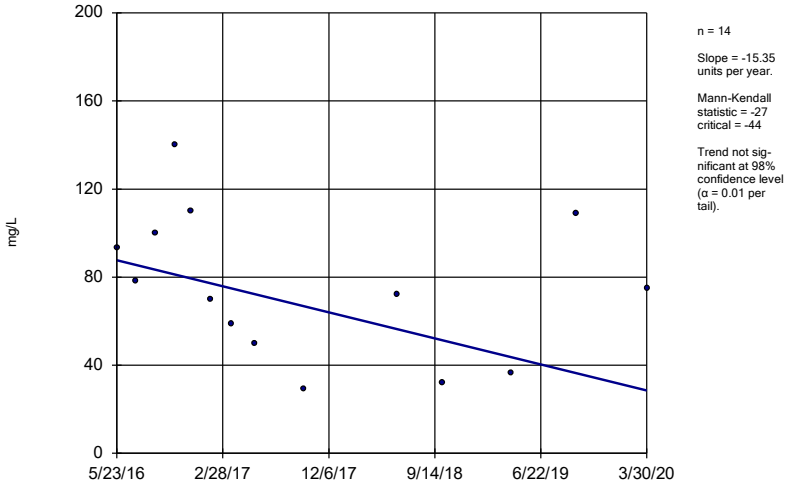
Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: Chloride Analysis Run 6/2/2020 4:38 PM View: Appendix III - Trend Tests

Plant Hammond Client: Southern Company Data: Hammond AP-1

Sen's Slope Estimator

HGWC-13



n = 14

Slope = -15.35 units per year.

Mann-Kendall statistic = -27
critical = -44

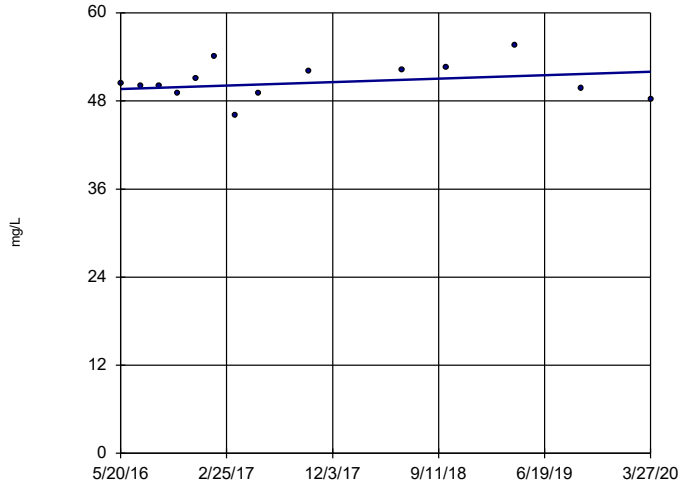
Trend not significant at 98% confidence level (α = 0.01 per tail).

Constituent: Chloride Analysis Run 6/2/2020 4:38 PM View: Appendix III - Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

Sen's Slope Estimator

HGWC-7



n = 14

Slope = 0.6016 units per year.

Mann-Kendall statistic = 9
critical = 44

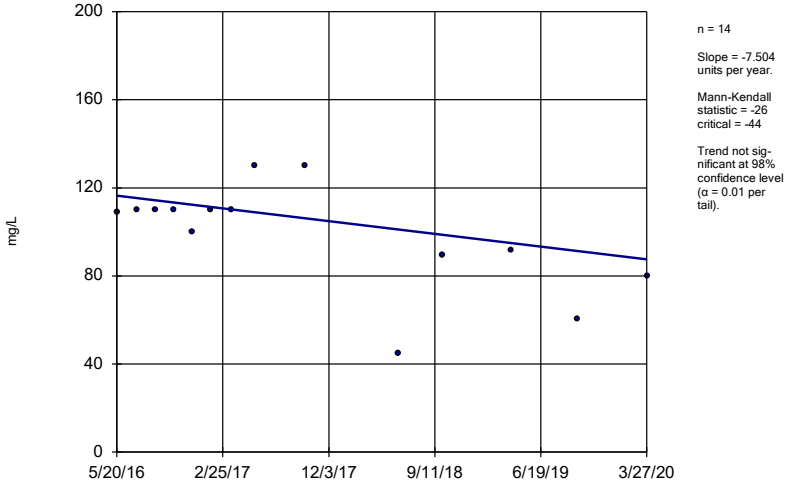
Trend not significant at 98% confidence level (α = 0.01 per tail).

Constituent: Chloride Analysis Run 6/2/2020 4:38 PM View: Appendix III - Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

Sen's Slope Estimator

HGWC-8



n = 14

Slope = -7.504 units per year.

Mann-Kendall statistic = -26
critical = -44

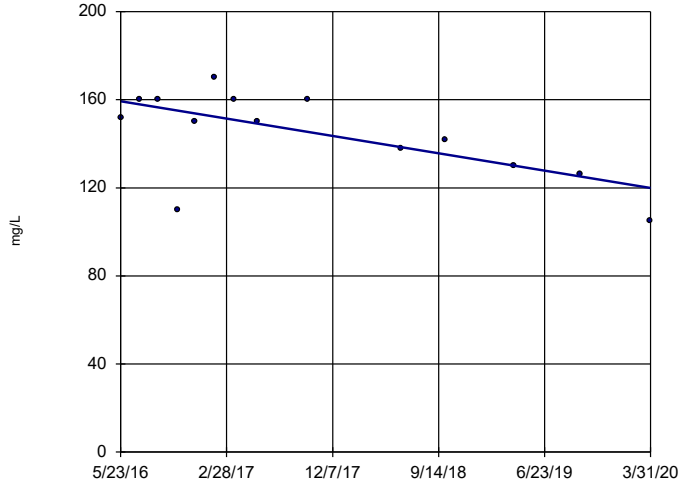
Trend not significant at 98% confidence level (α = 0.01 per tail).

Constituent: Chloride Analysis Run 6/2/2020 4:38 PM View: Appendix III - Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

Sen's Slope Estimator

HGWC-9



n = 14

Slope = -10.22 units per year.

Mann-Kendall statistic = -42
critical = -44

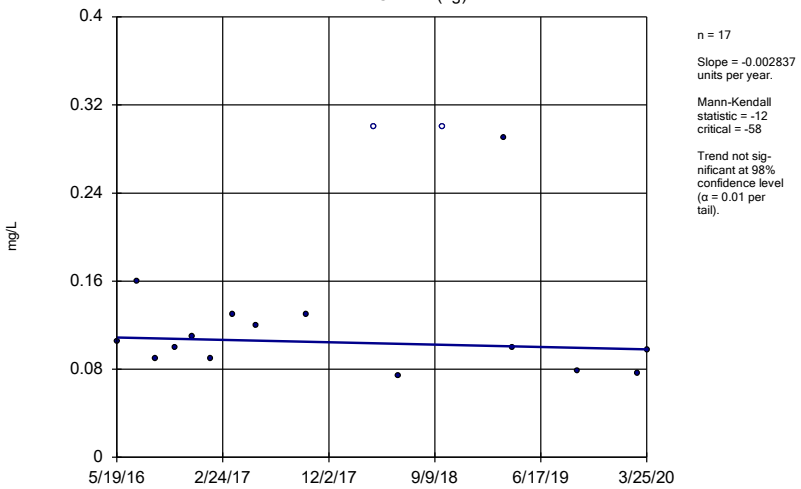
Trend not significant at 98% confidence level (α = 0.01 per tail).

Constituent: Chloride Analysis Run 6/2/2020 4:38 PM View: Appendix III - Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

HGWA-1 (bg)



n = 17

Slope = -0.002837 units per year.

Mann-Kendall statistic = -12
critical = -58

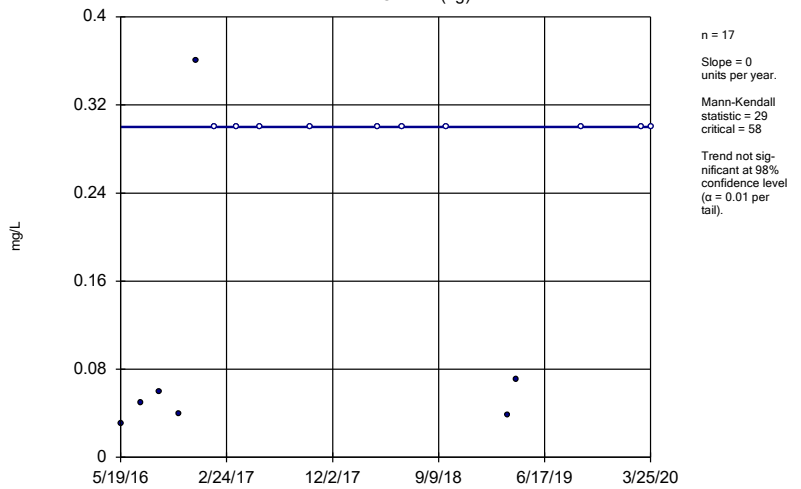
Trend not significant at 98% confidence level (α = 0.01 per tail).

Constituent: Fluoride Analysis Run 6/2/2020 4:38 PM View: Appendix III - Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

HGWA-2 (bg)



n = 17

Slope = 0 units per year.

Mann-Kendall statistic = 29
critical = 58

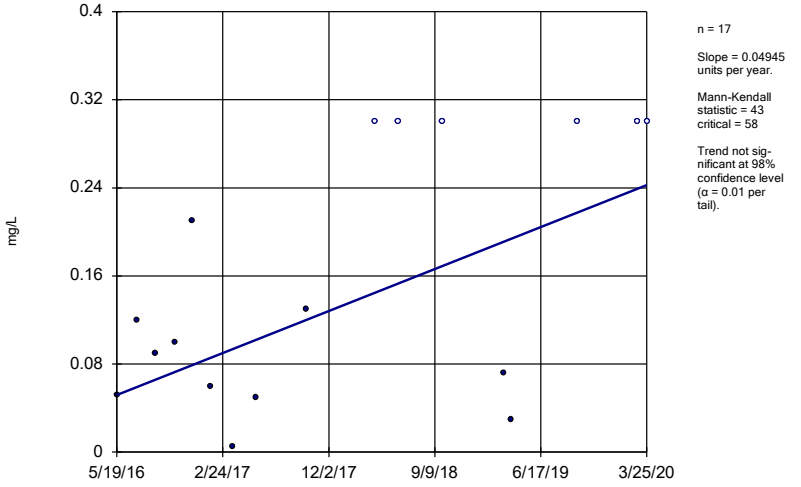
Trend not significant at 98% confidence level (α = 0.01 per tail).

Constituent: Fluoride Analysis Run 6/2/2020 4:38 PM View: Appendix III - Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

HGWA-3 (bg)



n = 17

Slope = 0.04945 units per year.

Mann-Kendall statistic = 43
critical = 58

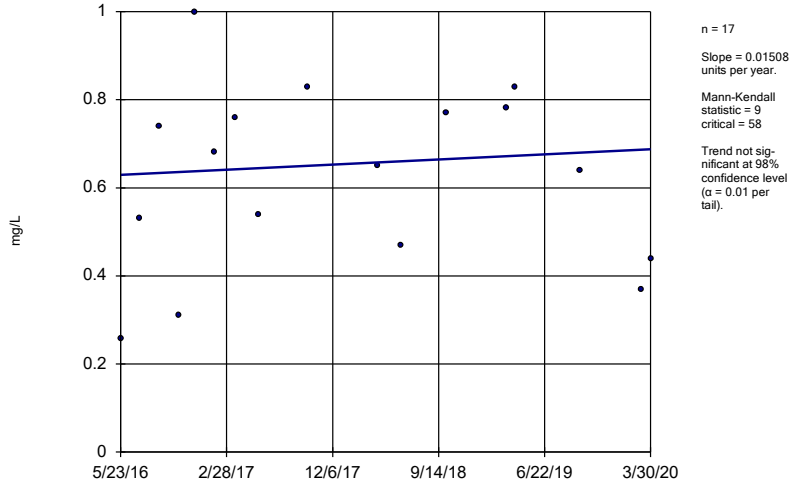
Trend not significant at 98% confidence level (α = 0.01 per tail).

Constituent: Fluoride Analysis Run 6/2/2020 4:38 PM View: Appendix III - Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

Sen's Slope Estimator

HGWC-13



n = 17

Slope = 0.01508 units per year.

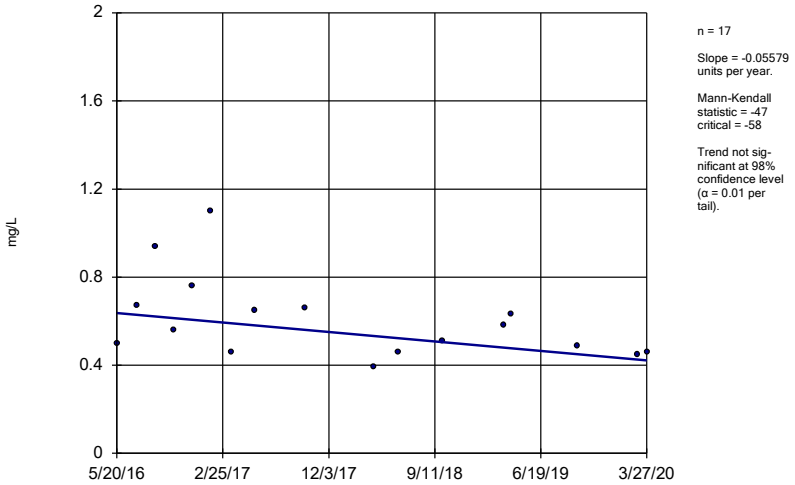
Mann-Kendall statistic = 9
critical = 58

Trend not significant at 98% confidence level (α = 0.01 per tail).

Constituent: Fluoride Analysis Run 6/2/2020 4:38 PM View: Appendix III - Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sen's Slope Estimator

HGWC-8



n = 17

Slope = -0.05579 units per year.

Mann-Kendall statistic = -47
critical = -58

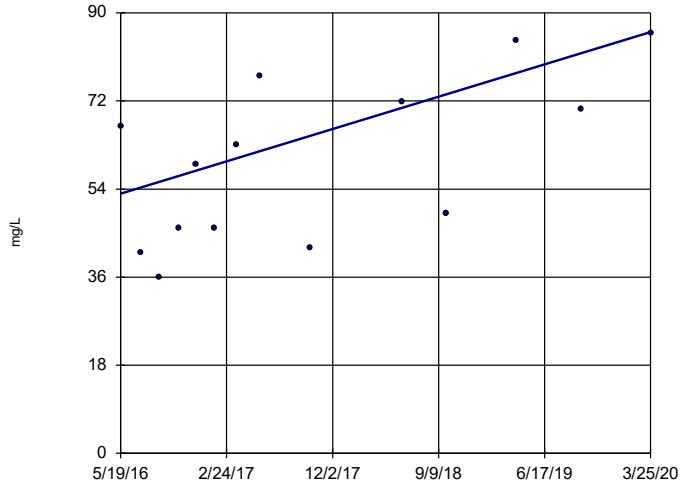
Trend not significant at 98% confidence level (α = 0.01 per tail).

Constituent: Fluoride Analysis Run 6/2/2020 4:38 PM View: Appendix III - Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

Sen's Slope Estimator

HGWA-1 (bg)



n = 14

Slope = 8.572 units per year.

Mann-Kendall statistic = 44
critical = 44

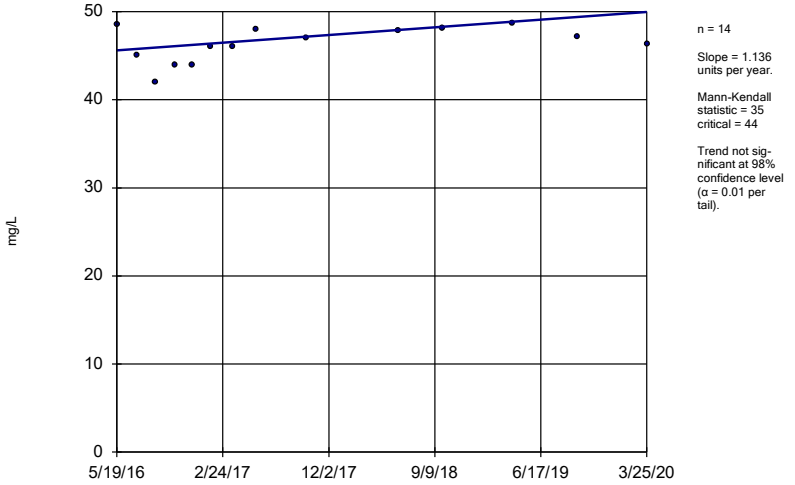
Trend not significant at 98% confidence level (α = 0.01 per tail).

Constituent: Sulfate Analysis Run 6/2/2020 4:38 PM View: Appendix III - Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

Sen's Slope Estimator

HGWA-2 (bg)



n = 14

Slope = 1.136 units per year.

Mann-Kendall statistic = 35
critical = 44

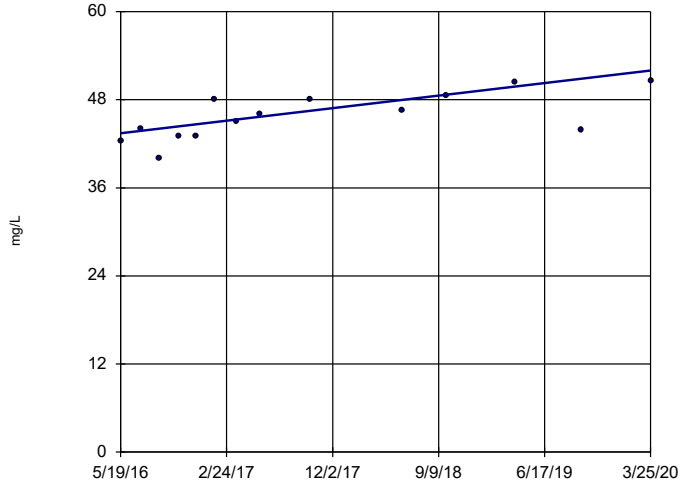
Trend not significant at 98% confidence level (α = 0.01 per tail).

Constituent: Sulfate Analysis Run 6/2/2020 4:38 PM View: Appendix III - Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

Sen's Slope Estimator

HGWA-3 (bg)



n = 14

Slope = 2.216 units per year.

Mann-Kendall statistic = 57
critical = 44

Increasing trend significant at 98% confidence level (α = 0.01 per tail).

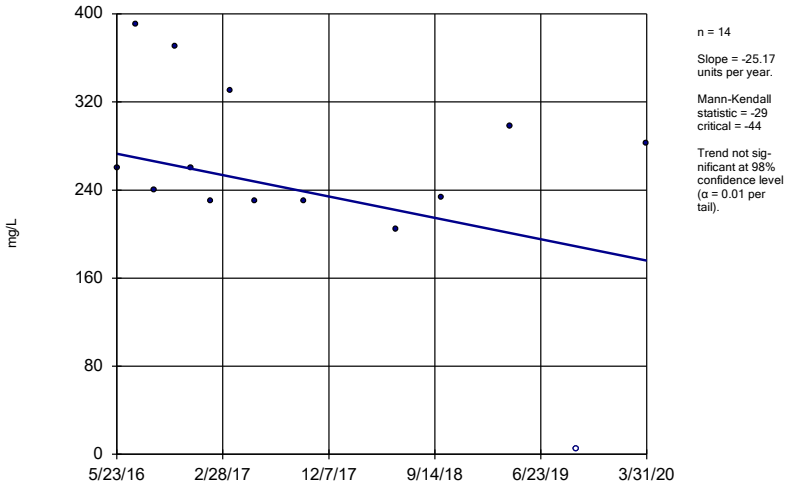
Constituent: Sulfate Analysis Run 6/2/2020 4:38 PM View: Appendix III - Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

Hollow symbols indicate censored values.

Sen's Slope Estimator

HGWC-11



n = 14

Slope = -25.17 units per year.

Mann-Kendall statistic = -29
critical = -44

Trend not significant at 98% confidence level (α = 0.01 per tail).

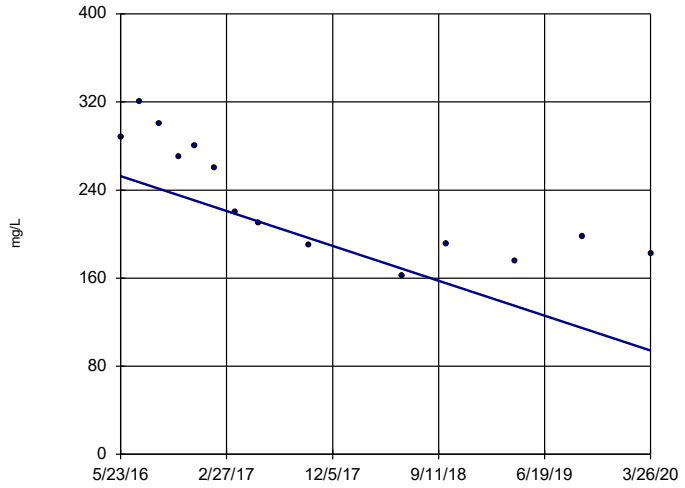
Constituent: Sulfate Analysis Run 6/2/2020 4:38 PM View: Appendix III - Trend Tests

Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

Sen's Slope Estimator

HGWC-12



n = 14

Slope = -41.21 units per year.

Mann-Kendall statistic = -67
critical = -44

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

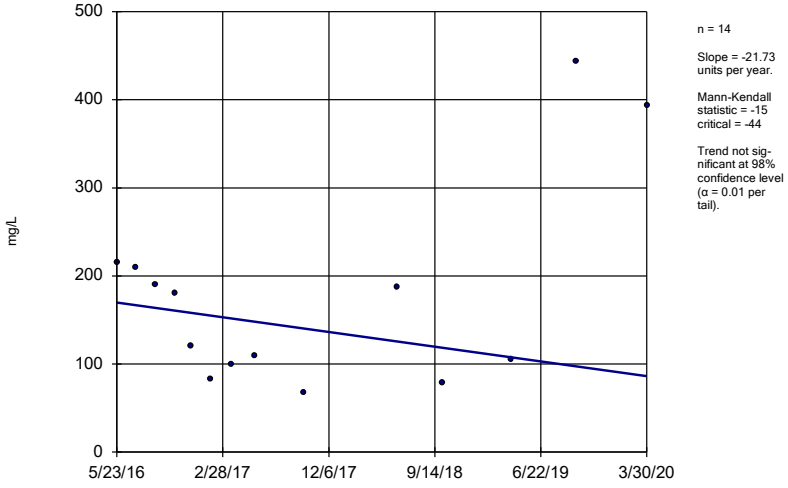
Constituent: Sulfate Analysis Run 6/2/2020 4:38 PM View: Appendix III - Trend Tests

Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

Sen's Slope Estimator

HGWC-13



n = 14

Slope = -21.73 units per year.

Mann-Kendall statistic = -15
critical = -44

Trend not significant at 98% confidence level (α = 0.01 per tail).

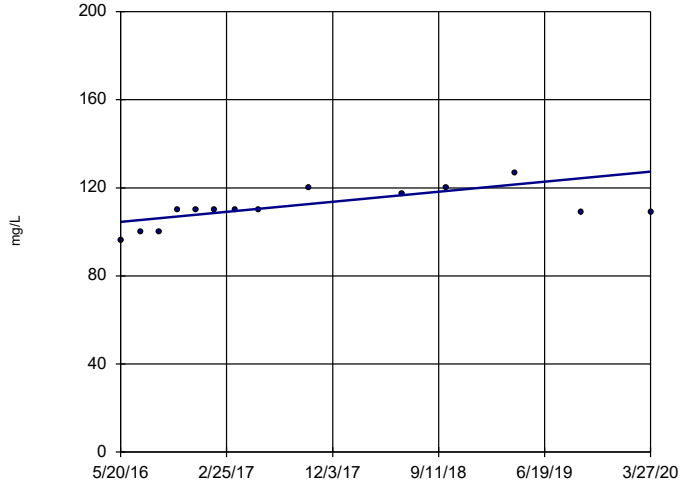
Constituent: Sulfate Analysis Run 6/2/2020 4:38 PM View: Appendix III - Trend Tests

Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

Sen's Slope Estimator

HGWC-7



n = 14

Slope = 5.935 units per year.

Mann-Kendall statistic = 40
critical = 44

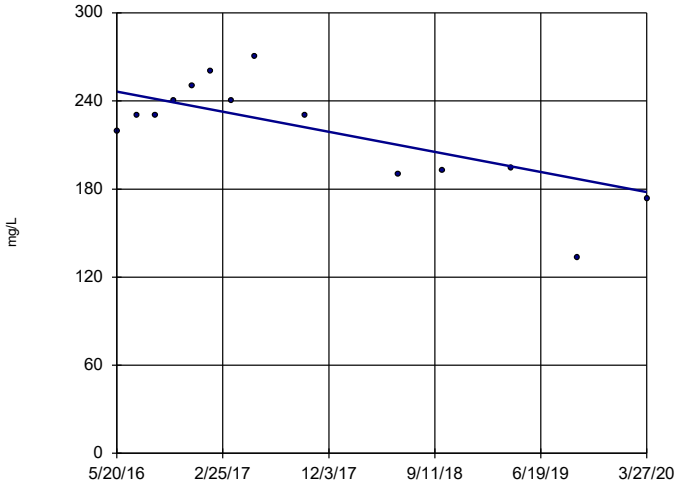
Trend not significant at 98% confidence level (α = 0.01 per tail).

Constituent: Sulfate Analysis Run 6/2/2020 4:38 PM View: Appendix III - Trend Tests

Plant Hammond Client: Southern Company Data: Hammond AP-1

Sen's Slope Estimator

HGWC-8



n = 14

Slope = -17.75 units per year.

Mann-Kendall statistic = -29
critical = -44

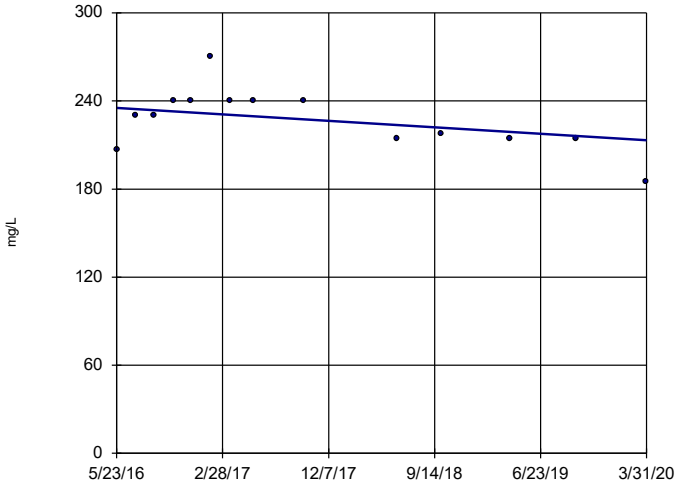
Trend not significant at 98% confidence level (α = 0.01 per tail).

Constituent: Sulfate Analysis Run 6/2/2020 4:38 PM View: Appendix III - Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

Sen's Slope Estimator

HGWC-9



n = 14

Slope = -5.703 units per year.

Mann-Kendall statistic = -23
critical = -44

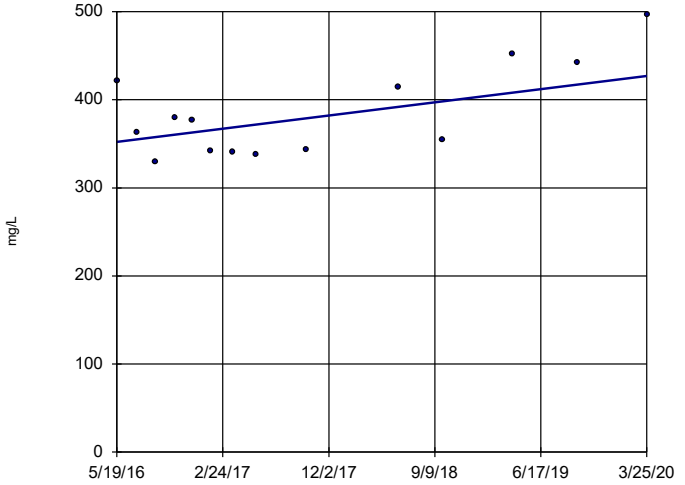
Trend not significant at 98% confidence level (α = 0.01 per tail).

Constituent: Sulfate Analysis Run 6/2/2020 4:38 PM View: Appendix III - Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

Sen's Slope Estimator

HGWA-1 (bg)



n = 14

Slope = 19.47 units per year.

Mann-Kendall statistic = 27
critical = 44

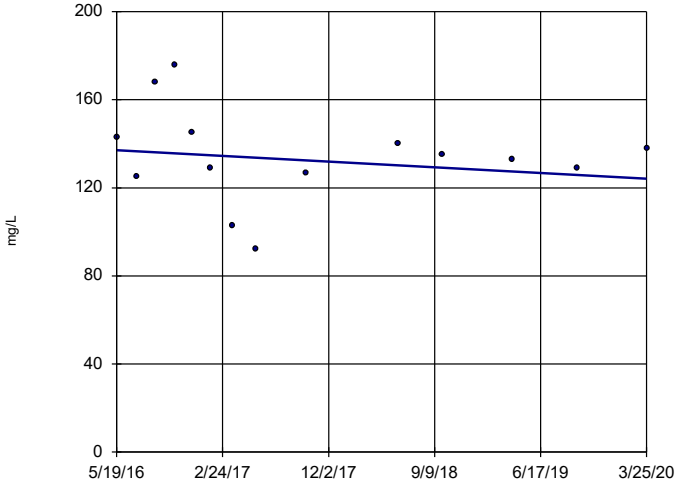
Trend not significant at 98% confidence level (α = 0.01 per tail).

Constituent: Total Dissolved Solids Analysis Run 6/2/2020 4:38 PM View: Appendix III - Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

Sen's Slope Estimator

HGWA-2 (bg)



n = 14

Slope = -3.376 units per year.

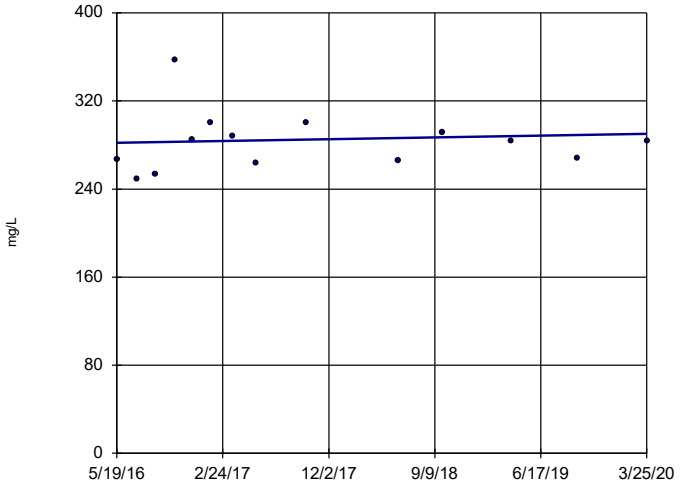
Mann-Kendall statistic = -14
critical = -44

Trend not significant at 98% confidence level (α = 0.01 per tail).

Constituent: Total Dissolved Solids Analysis Run 6/2/2020 4:38 PM View: Appendix III - Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sen's Slope Estimator

HGWA-3 (bg)



n = 14

Slope = 2.137 units per year.

Mann-Kendall statistic = 9
critical = 44

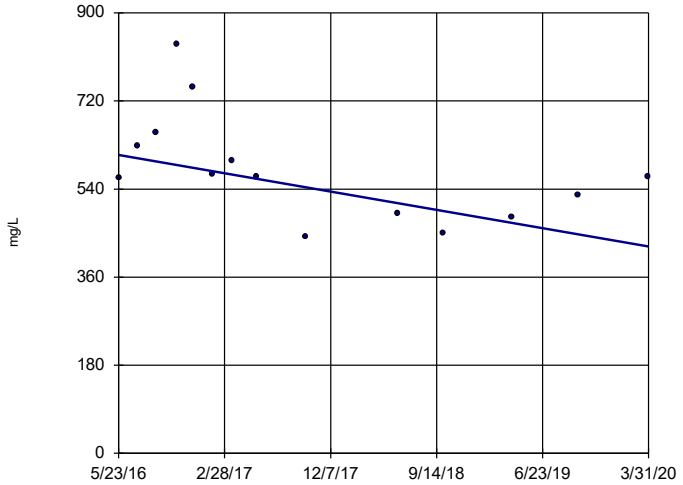
Trend not significant at 98% confidence level (α = 0.01 per tail).

Constituent: Total Dissolved Solids Analysis Run 6/2/2020 4:38 PM View: Appendix III - Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

Sen's Slope Estimator

HGWC-11



n = 14

Slope = -48.64 units per year.

Mann-Kendall statistic = -37
critical = -44

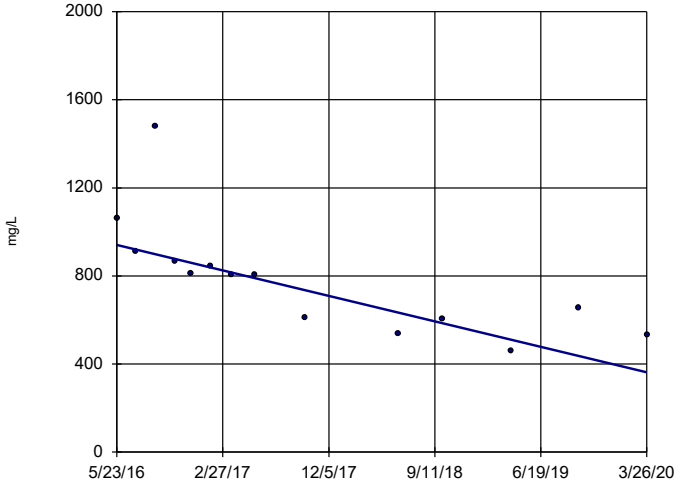
Trend not significant at 98% confidence level (α = 0.01 per tail).

Constituent: Total Dissolved Solids Analysis Run 6/2/2020 4:38 PM View: Appendix III - Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

Sen's Slope Estimator

HGWC-12



n = 14

Slope = -150.4 units per year.

Mann-Kendall statistic = -73
critical = -44

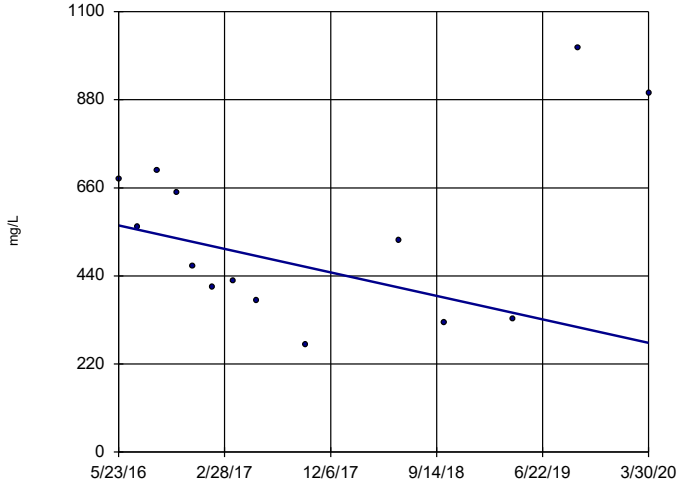
Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: Total Dissolved Solids Analysis Run 6/2/2020 4:38 PM View: Appendix III - Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

Sen's Slope Estimator

HGWC-13



n = 14

Slope = -76.14 units per year.

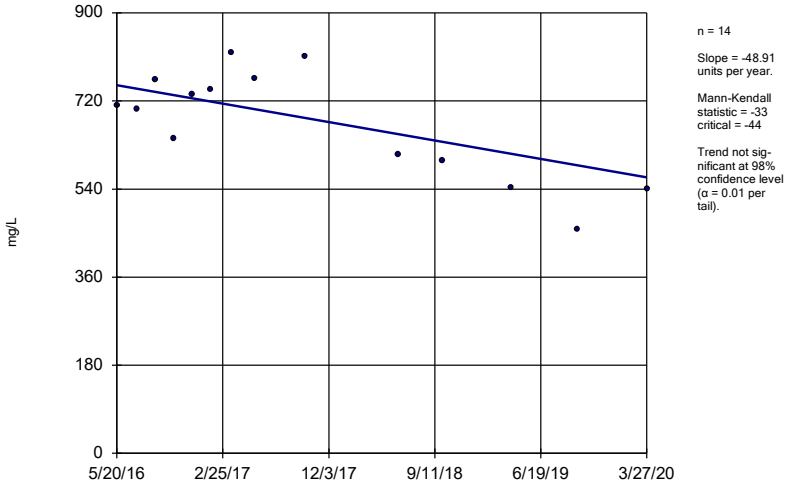
Mann-Kendall statistic = -19
critical = -44

Trend not significant at 98% confidence level (α = 0.01 per tail).

Constituent: Total Dissolved Solids Analysis Run 6/2/2020 4:38 PM View: Appendix III - Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sen's Slope Estimator

HGWC-8



n = 14

Slope = -48.91 units per year.

Mann-Kendall statistic = -33 critical = -44

Trend not significant at 98% confidence level (α = 0.01 per tail).

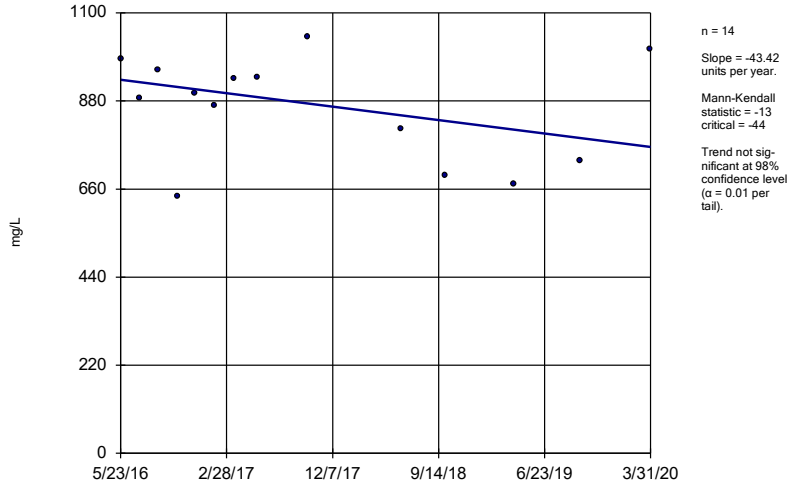
Constituent: Total Dissolved Solids Analysis Run 6/2/2020 4:38 PM View: Appendix III - Trend Tests

Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

Sen's Slope Estimator

HGWC-9



n = 14

Slope = -43.42 units per year.

Mann-Kendall statistic = -13 critical = -44

Trend not significant at 98% confidence level (α = 0.01 per tail).

Constituent: Total Dissolved Solids Analysis Run 6/2/2020 4:38 PM View: Appendix III - Trend Tests

Plant Hammond Client: Southern Company Data: Hammond AP-1

FIGURE F.

Tolerance Limit Summary Table - Appendix IV

Plant Hammond Client: Southern Company Data: Hammond AP-1 Printed 6/3/2020, 3:06 PM

Constituent	Well	Upper Lim.	Lower Lim.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Antimony (mg/L)	n/a	0.003	n/a	42	n/a	n/a	95.24	n/a	n/a	0.116	NP Inter(NDs)
Arsenic (mg/L)	n/a	0.005	n/a	48	n/a	n/a	62.5	n/a	n/a	0.08526	NP Inter(normality)
Barium (mg/L)	n/a	0.14	n/a	48	n/a	n/a	0	n/a	n/a	0.08526	NP Inter(normality)
Beryllium (mg/L)	n/a	0.003	n/a	42	n/a	n/a	73.81	n/a	n/a	0.116	NP Inter(normality)
Cadmium (mg/L)	n/a	0.0025	n/a	42	n/a	n/a	85.71	n/a	n/a	0.116	NP Inter(NDs)
Chromium (mg/L)	n/a	0.01	n/a	42	n/a	n/a	85.71	n/a	n/a	0.116	NP Inter(NDs)
Cobalt (mg/L)	n/a	0.038	n/a	42	n/a	n/a	64.29	n/a	n/a	0.116	NP Inter(normality)
Combined Radium 226 + 228 (pCi/L)	n/a	4.36	n/a	48	n/a	n/a	0	n/a	n/a	0.08526	NP Inter(normality)
Fluoride (mg/L)	n/a	0.36	n/a	51	n/a	n/a	35.29	n/a	n/a	0.0731	NP Inter(normality)
Lead (mg/L)	n/a	0.005	n/a	39	n/a	n/a	76.92	n/a	n/a	0.1353	NP Inter(NDs)
Lithium (mg/L)	n/a	0.03	n/a	48	n/a	n/a	33.33	n/a	n/a	0.08526	NP Inter(normality)
Mercury (mg/L)	n/a	0.0005	n/a	33	n/a	n/a	93.94	n/a	n/a	0.184	NP Inter(NDs)
Molybdenum (mg/L)	n/a	0.01	n/a	48	n/a	n/a	100	n/a	n/a	0.08526	NP Inter(NDs)
Selenium (mg/L)	n/a	0.01	n/a	48	n/a	n/a	100	n/a	n/a	0.08526	NP Inter(NDs)
Thallium (mg/L)	n/a	0.001	n/a	48	n/a	n/a	97.92	n/a	n/a	0.08526	NP Inter(NDs)

FIGURE G.

PLANT HAMMOND AP-1 GWPS - FEDERAL				
Constituent Name	**MCL**	**CCR-Rule Specified**	**Background Limit**	**GWPS**
Antimony, Total (mg/L)	0.006		0.003	0.006
Arsenic, Total (mg/L)	0.01		0.005	0.01
Barium, Total (mg/L)	2		0.14	2
Beryllium, Total (mg/L)	0.004		0.003	0.004
Cadmium, Total (mg/L)	0.005		0.0025	0.005
Chromium, Total (mg/L)	0.1		0.01	0.1
Cobalt, Total (mg/L)	n/a	0.006	0.038	0.038
Combined Radium, Total (pCi/L)	5		4.36	5
Fluoride, Total (mg/L)	4		0.36	4
Lead, Total (mg/L)	n/a	0.015	0.005	0.015
Lithium, Total (mg/L)	n/a	0.04	0.03	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		0.01	0.05
Thallium, Total (mg/L)	0.002		0.001	0.002

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

**MCL = Maximum Contaminant Level*

**CCR = Coal Combustion Residuals*

**GWPS = Groundwater Protection Statard*

FIGURE H.

PLANT HAMMOND AP-1 GWPS - STATE				
Constituent Name	**MCL**	**CCR-Rule Specified**	**Background Limit**	**GWPS**
Antimony, Total (mg/L)	0.006		0.003	0.006
Arsenic, Total (mg/L)	0.01		0.005	0.01
Barium, Total (mg/L)	2		0.14	2
Beryllium, Total (mg/L)	0.004		0.003	0.004
Cadmium, Total (mg/L)	0.005		0.0025	0.005
Chromium, Total (mg/L)	0.1		0.01	0.1
Cobalt, Total (mg/L)	n/a	0.006	0.038	0.038
Combined Radium, Total (pCi/L)	5		4.36	5
Fluoride, Total (mg/L)	4		0.36	4
Lead, Total (mg/L)	n/a	0.015	0.005	0.005
Lithium, Total (mg/L)	n/a	0.04	0.03	0.03
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		0.01	0.05
Thallium, Total (mg/L)	0.002		0.001	0.002

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

**MCL = Maximum Contaminant Level*

**CCR = Coal Combustion Residuals*

**GWPS = Groundwater Protection Statard*

FIGURE I.

Federal Confidence Intervals - Significant Results

Plant Hammond Client: Southern Company Data: Hammond AP-1 Printed 6/2/2020, 5:52 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Arsenic (mg/L)	**HGWC-13**	**0.4353**	**0.3497**	**0.01**	**Yes**	**16**	**0.3925**	**0.06582**	**0**	**None**	**No**	**0.01**	**Param.**
Molybdenum (mg/L)	**HGWC-8**	**0.5034**	**0.4567**	**0.1**	**Yes**	**16**	**0.4801**	**0.03591**	**0**	**None**	**No**	**0.01**	**Param.**

Federal Confidence Intervals - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-1 Printed 6/2/2020, 5:52 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Antimony (mg/L)	HGWC-13	0.003	0.00036	0.006	No	14	0.002249	0.001236	71.43	None	No	0.01	NP (NDs)
Antimony (mg/L)	HGWC-9	0.003	0.00042	0.006	No	14	0.002624	0.0009553	85.71	None	No	0.01	NP (NDs)
Arsenic (mg/L)	HGWC-11	0.005	0.0015	0.01	No	16	0.003596	0.001721	50	None	No	0.01	NP (normality)
Arsenic (mg/L)	HGWC-12	0.004743	0.003007	0.01	No	16	0.003875	0.001334	12.5	None	No	0.01	Param.
Arsenic (mg/L)	**HGWC-13**	**0.4353**	**0.3497**	**0.01**	**Yes**	**16**	**0.3925**	**0.06582**	**0**	**None**	**No**	**0.01**	**Param.**
Arsenic (mg/L)	HGWC-7	0.005	0.0019	0.01	No	16	0.004806	0.000775	93.75	None	No	0.01	NP (NDs)
Arsenic (mg/L)	HGWC-9	0.005	0.0008	0.01	No	16	0.004182	0.00176	81.25	None	No	0.01	NP (NDs)
Barium (mg/L)	HGWC-10	0.09345	0.06746	2	No	16	0.08046	0.01998	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-11	0.0567	0.03003	2	No	16	0.04464	0.02253	0	None	sqrt(x)	0.01	Param.
Barium (mg/L)	HGWC-12	0.1191	0.09136	2	No	16	0.106	0.02153	0	None	x^(1/3)	0.01	Param.
Barium (mg/L)	HGWC-13	0.09723	0.07422	2	No	16	0.08573	0.01768	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-7	0.0763	0.06833	2	No	16	0.07231	0.006127	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-8	0.083	0.059	2	No	16	0.07094	0.01183	0	None	No	0.01	NP (normality)
Barium (mg/L)	HGWC-9	0.1251	0.1057	2	No	16	0.1154	0.01489	0	None	No	0.01	Param.
Beryllium (mg/L)	HGWC-11	0.003	0.0001	0.004	No	14	0.001765	0.00148	57.14	None	No	0.01	NP (NDs)
Beryllium (mg/L)	HGWC-13	0.003	0.000099	0.004	No	14	0.002169	0.001364	71.43	None	No	0.01	NP (NDs)
Beryllium (mg/L)	HGWC-7	0.003	0.000077	0.004	No	14	0.002791	0.0007812	92.86	None	No	0.01	NP (NDs)
Beryllium (mg/L)	HGWC-8	0.003	0.000074	0.004	No	14	0.002791	0.000782	92.86	None	No	0.01	NP (NDs)
Cadmium (mg/L)	HGWC-10	0.0025	0.0001	0.005	No	14	0.001308	0.001237	50	None	No	0.01	NP (normality)
Cadmium (mg/L)	HGWC-11	0.0025	0.0001	0.005	No	14	0.001985	0.001023	78.57	None	No	0.01	NP (NDs)
Cadmium (mg/L)	HGWC-12	0.0025	0.0002	0.005	No	14	0.001839	0.001086	71.43	None	No	0.01	NP (NDs)
Cadmium (mg/L)	HGWC-7	0.0025	0.0002	0.005	No	14	0.001836	0.00109	71.43	None	No	0.01	NP (NDs)
Cadmium (mg/L)	HGWC-8	0.00032	0.00014	0.005	No	14	0.0004693	0.0007112	7.143	None	No	0.01	NP (normality)
Cadmium (mg/L)	HGWC-9	0.0025	0.0002	0.005	No	14	0.001991	0.001012	78.57	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-10	0.02	0.01	0.1	No	14	0.01071	0.002673	92.86	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-11	0.01	0.00061	0.1	No	14	0.008636	0.003467	85.71	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-12	0.01	0.0025	0.1	No	14	0.008779	0.003132	85.71	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-13	0.01	0.00059	0.1	No	14	0.008642	0.003452	85.71	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-7	0.071	0.0016	0.1	No	14	0.01307	0.01699	78.57	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-8	0.01	0.0007	0.1	No	14	0.008657	0.003414	85.71	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-9	0.01	0.00052	0.1	No	14	0.009323	0.002534	92.86	None	No	0.01	NP (NDs)
Cobalt (mg/L)	HGWC-10	0.005	0.0006	0.038	No	14	0.003186	0.002179	57.14	None	No	0.01	NP (NDs)
Cobalt (mg/L)	HGWC-11	0.002981	0.001145	0.038	No	14	0.002154	0.001439	14.29	None	sqrt(x)	0.01	Param.
Cobalt (mg/L)	HGWC-12	0.0021	0.0012	0.038	No	14	0.002	0.001305	14.29	None	No	0.01	NP (normality)
Cobalt (mg/L)	HGWC-13	0.004525	0.002576	0.038	No	14	0.003551	0.001376	7.143	None	No	0.01	Param.
Cobalt (mg/L)	HGWC-7	0.005	0.0005	0.038	No	14	0.001736	0.001851	21.43	None	No	0.01	NP (normality)
Cobalt (mg/L)	HGWC-8	0.0026	0.0018	0.038	No	14	0.002262	0.0008313	7.143	None	No	0.01	NP (normality)
Cobalt (mg/L)	HGWC-9	0.002	0.00053	0.038	No	14	0.001361	0.00159	14.29	None	No	0.01	NP (normality)
Combined Radium 226 + 228 (pCi/L)	HGWC-10	1.073	0.6078	5	No	16	0.8403	0.3572	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-11	1.177	0.5568	5	No	16	0.8669	0.4767	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-12	1.193	0.5889	5	No	16	0.8911	0.4645	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-13	0.9448	0.5122	5	No	16	0.7285	0.3325	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-7	1.095	0.5383	5	No	16	0.8466	0.4901	0	None	sqrt(x)	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-8	0.992	0.6657	5	No	16	0.8288	0.2507	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-9	0.9154	0.4914	5	No	16	0.7034	0.3259	0	None	No	0.01	Param.
Fluoride (mg/L)	HGWC-10	0.2769	0.1136	4	No	17	0.2077	0.1438	11.76	None	sqrt(x)	0.01	Param.
Fluoride (mg/L)	HGWC-11	0.4908	0.2966	4	No	17	0.3937	0.155	0	None	No	0.01	Param.
Fluoride (mg/L)	HGWC-12	0.4613	0.1992	4	No	17	0.3584	0.2623	5.882	None	x^(1/3)	0.01	Param.
Fluoride (mg/L)	HGWC-13	0.7524	0.4945	4	No	17	0.6235	0.2058	0	None	No	0.01	Param.
Fluoride (mg/L)	HGWC-7	0.2219	0.1016	4	No	17	0.1738	0.1211	11.76	None	x^(1/3)	0.01	Param.
Fluoride (mg/L)	HGWC-8	0.7057	0.4885	4	No	17	0.6041	0.1872	0	None	sqrt(x)	0.01	Param.
Fluoride (mg/L)	HGWC-9	0.329	0.1203	4	No	17	0.2246	0.1665	11.76	None	No	0.01	Param.
Lead (mg/L)	HGWC-10	0.005	0.00005	0.015	No	12	0.004587	0.001429	91.67	None	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-11	0.005	0.00021	0.015	No	12	0.003408	0.002352	66.67	None	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-12	0.005	0.00043	0.015	No	12	0.004207	0.001853	83.33	None	No	0.01	NP (NDs)

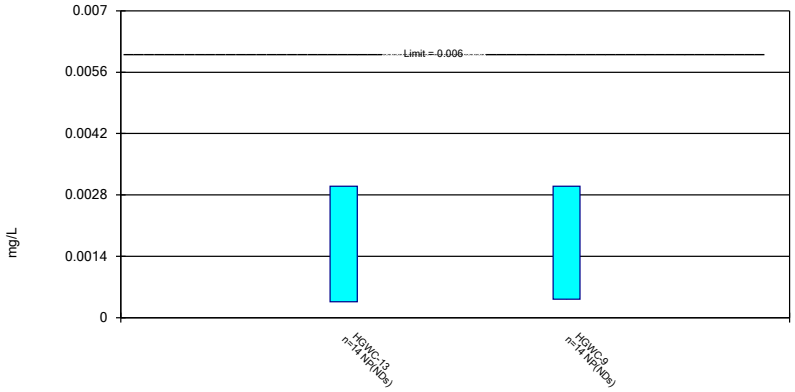
Federal Confidence Intervals - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-1 Printed 6/2/2020, 5:52 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Lead (mg/L)	HGWC-13	0.005	0.0001	0.015	No	12	0.003776	0.002215	75	None	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-7	0.005	0.00008	0.015	No	12	0.002578	0.002533	50	None	No	0.01	NP (normality)
Lead (mg/L)	HGWC-8	0.005	0.00013	0.015	No	12	0.004594	0.001406	91.67	None	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-9	0.005	0.0001	0.015	No	12	0.002969	0.002511	58.33	None	No	0.01	NP (NDs)
Lithium (mg/L)	HGWC-12	0.01122	0.00787	0.04	No	16	0.009544	0.002573	0	None	No	0.01	Param.
Lithium (mg/L)	HGWC-13	0.03965	0.03113	0.04	No	16	0.03539	0.006548	0	None	No	0.01	Param.
Lithium (mg/L)	HGWC-7	0.003	0.002	0.04	No	16	0.003819	0.005662	6.25	None	No	0.01	NP (normality)
Lithium (mg/L)	HGWC-8	0.0029	0.0024	0.04	No	16	0.004038	0.005595	6.25	None	No	0.01	NP (normality)
Lithium (mg/L)	HGWC-9	0.0048	0.004	0.04	No	16	0.005481	0.005228	6.25	None	No	0.01	NP (normality)
Molybdenum (mg/L)	HGWC-10	0.005	0.0014	0.1	No	16	0.003906	0.001685	68.75	None	No	0.01	NP (NDs)
Molybdenum (mg/L)	HGWC-11	0.02519	0.01381	0.1	No	16	0.0195	0.008742	0	None	No	0.01	Param.
Molybdenum (mg/L)	HGWC-12	0.05044	0.0457	0.1	No	16	0.04807	0.003647	0	None	No	0.01	Param.
Molybdenum (mg/L)	HGWC-13	0.03625	0.02928	0.1	No	16	0.03277	0.005358	0	None	No	0.01	Param.
Molybdenum (mg/L)	HGWC-7	0.04021	0.03218	0.1	No	16	0.03619	0.006173	0	None	No	0.01	Param.
Molybdenum (mg/L)	**HGWC-8**	**0.5034**	**0.4567**	**0.1**	**Yes**	**16**	**0.4801**	**0.03591**	**0**	**None**	**No**	**0.01**	**Param.**
Molybdenum (mg/L)	HGWC-9	0.031	0.0229	0.1	No	16	0.05429	0.1128	0	None	No	0.01	NP (normality)
Selenium (mg/L)	HGWC-10	0.01	0.0023	0.05	No	16	0.008119	0.003403	75	None	No	0.01	NP (NDs)
Selenium (mg/L)	HGWC-11	0.01666	0.006477	0.05	No	16	0.01157	0.007826	0	None	No	0.01	Param.
Selenium (mg/L)	HGWC-12	0.01	0.0011	0.05	No	16	0.009444	0.002225	93.75	None	No	0.01	NP (NDs)
Selenium (mg/L)	HGWC-13	0.01	0.00018	0.05	No	16	0.009386	0.002455	93.75	None	No	0.01	NP (NDs)
Selenium (mg/L)	HGWC-8	0.01	0.0024	0.05	No	16	0.009525	0.0019	93.75	None	No	0.01	NP (NDs)
Selenium (mg/L)	HGWC-9	0.01	0.0037	0.05	No	16	0.009606	0.001575	93.75	None	No	0.01	NP (NDs)
Thallium (mg/L)	HGWC-11	0.001	0.00008	0.002	No	16	0.000885	0.0003142	87.5	None	No	0.01	NP (NDs)
Thallium (mg/L)	HGWC-12	0.001	0.000088	0.002	No	16	0.000664	0.0004489	62.5	None	No	0.01	NP (NDs)
Thallium (mg/L)	HGWC-13	0.0004405	0.0003417	0.002	No	16	0.0003911	0.00007591	0	None	No	0.01	Param.
Thallium (mg/L)	HGWC-8	0.001	0.000077	0.002	No	16	0.0006555	0.0004594	62.5	None	No	0.01	NP (NDs)

Non-Parametric Confidence Interval

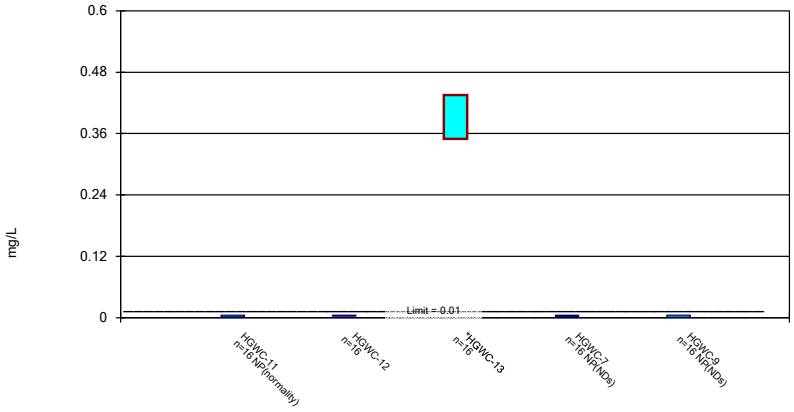
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Antimony Analysis Run 6/2/2020 5:51 PM View: Appendix IV
Plant Hammond Client: Southern Company Data: Hammond AP-1

Parametric and Non-Parametric (NP) Confidence Interval

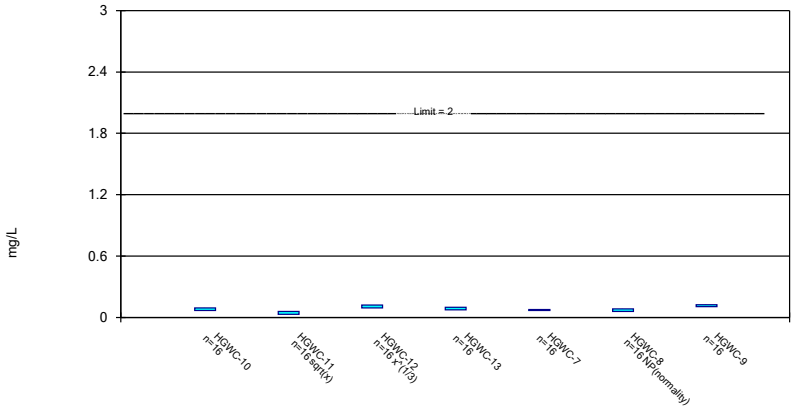
Compliance limit is exceeded.* Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Arsenic Analysis Run 6/2/2020 5:51 PM View: Appendix IV
Plant Hammond Client: Southern Company Data: Hammond AP-1

Parametric and Non-Parametric (NP) Confidence Interval

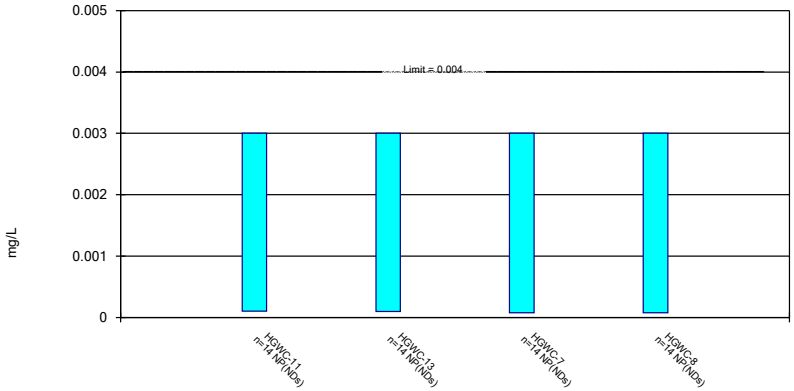
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Barium Analysis Run 6/2/2020 5:51 PM View: Appendix IV
Plant Hammond Client: Southern Company Data: Hammond AP-1

Non-Parametric Confidence Interval

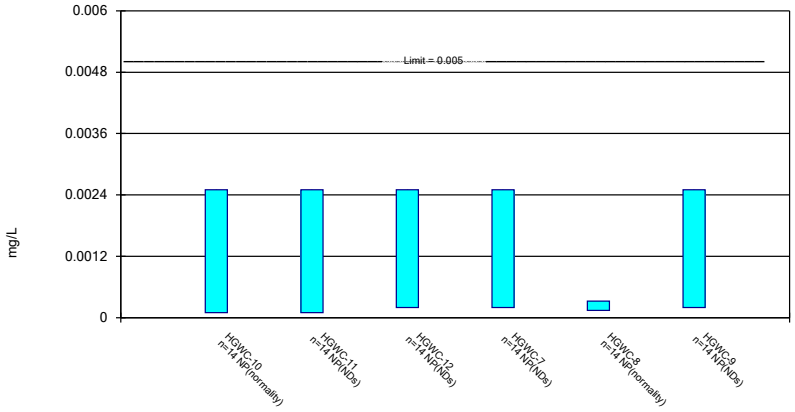
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Beryllium Analysis Run 6/2/2020 5:51 PM View: Appendix IV
Plant Hammond Client: Southern Company Data: Hammond AP-1

Non-Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Cadmium Analysis Run 6/2/2020 5:51 PM View: Appendix IV
Plant Hammond Client: Southern Company Data: Hammond AP-1

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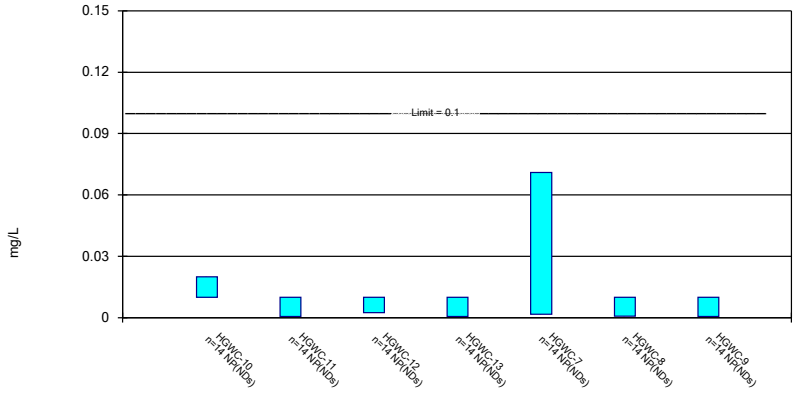
Non-Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01.

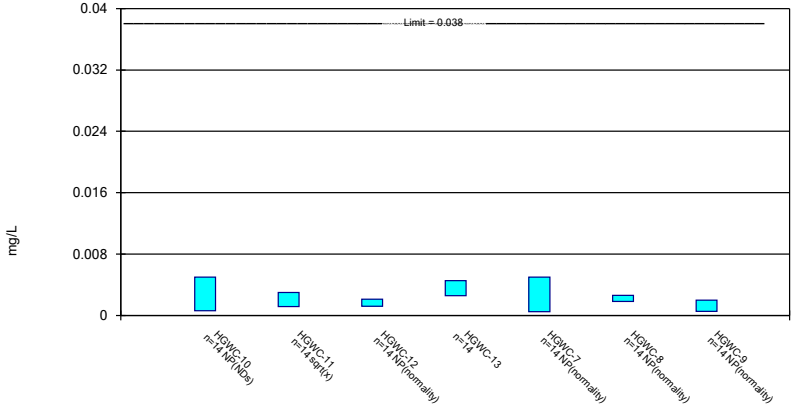


Constituent: Chromium Analysis Run 6/2/2020 5:51 PM View: Appendix IV
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

Parametric and Non-Parametric (NP) Confidence Interval

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

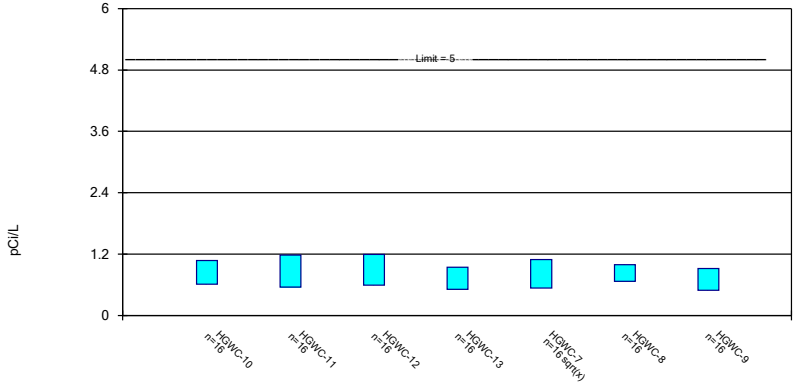


Constituent: Cobalt Analysis Run 6/2/2020 5:51 PM View: Appendix IV
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

Parametric Confidence Interval

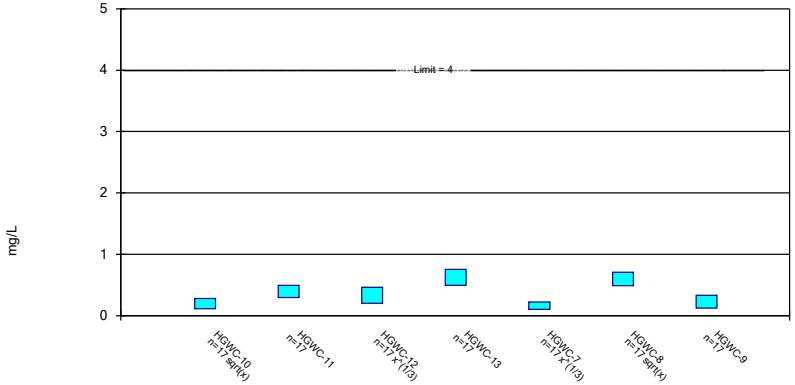
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Combined Radium 226 + 228 Analysis Run 6/2/2020 5:51 PM View: Appendix IV
Plant Hammond Client: Southern Company Data: Hammond AP-1

Parametric Confidence Interval

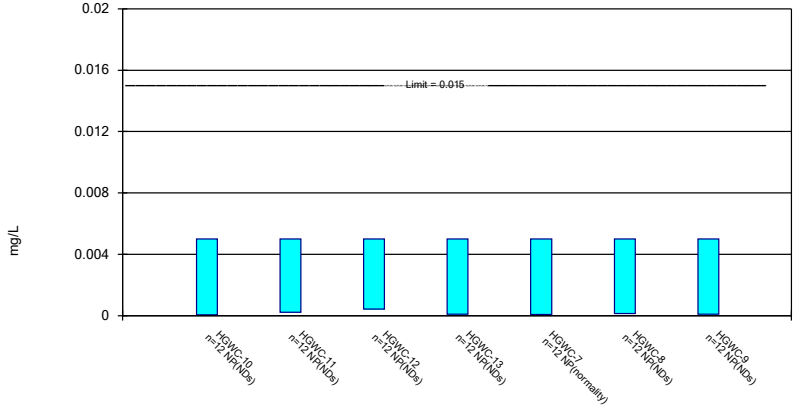
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Fluoride Analysis Run 6/2/2020 5:51 PM View: Appendix IV
Plant Hammond Client: Southern Company Data: Hammond AP-1

Non-Parametric Confidence Interval

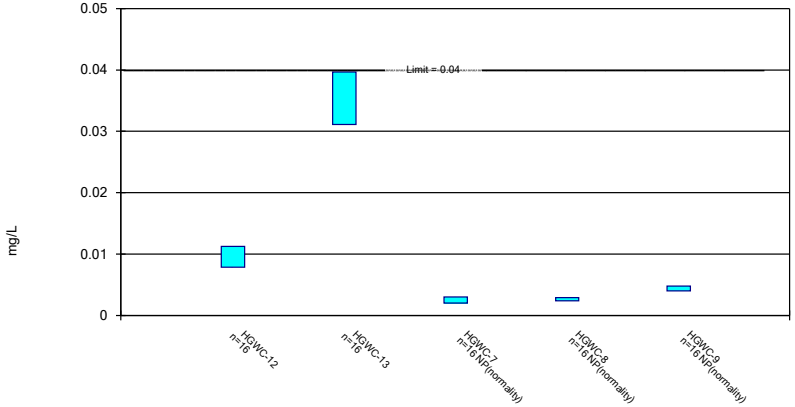
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Lead Analysis Run 6/2/2020 5:51 PM View: Appendix IV
Plant Hammond Client: Southern Company Data: Hammond AP-1

Parametric and Non-Parametric (NP) Confidence Interval

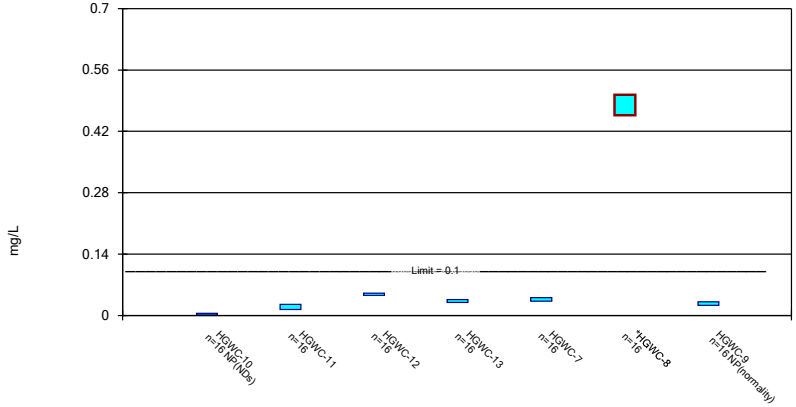
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Lithium Analysis Run 6/2/2020 5:51 PM View: Appendix IV
Plant Hammond Client: Southern Company Data: Hammond AP-1

Parametric and Non-Parametric (NP) Confidence Interval

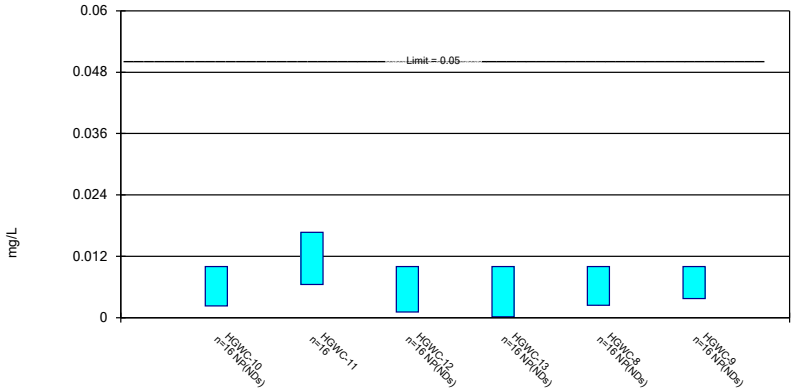
Compliance limit is exceeded.* Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Molybdenum Analysis Run 6/2/2020 5:51 PM View: Appendix IV
Plant Hammond Client: Southern Company Data: Hammond AP-1

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.

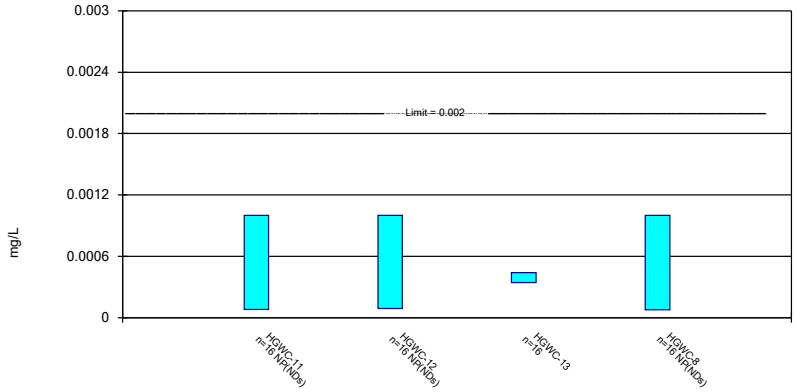


Constituent: Selenium Analysis Run 6/2/2020 5:51 PM View: Appendix IV
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

Parametric and Non-Parametric (NP) Confidence Interval

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



Constituent: Thallium Analysis Run 6/2/2020 5:51 PM View: Appendix IV
Plant Hammond Client: Southern Company Data: Hammond AP-1

FIGURE J.

Confidence Interval Summary Table (State) - Significant Results

Plant Hammond Client: Southern Company Data: Hammond AP-1 Printed 6/3/2020, 3:10 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Arsenic (mg/L)	**HGWC-13**	**0.4353**	**0.3497**	**0.01**	**Yes**	**16**	**0.3925**	**0.06582**	**0**	**None**	**No**	**0.01**	**Param.**
Lithium (mg/L)	**HGWC-13**	**0.03965**	**0.03113**	**0.03**	**Yes**	**16**	**0.03539**	**0.006548**	**0**	**None**	**No**	**0.01**	**Param.**
Molybdenum (mg/L)	**HGWC-11**	**0.02519**	**0.01381**	**0.01**	**Yes**	**16**	**0.0195**	**0.008742**	**0**	**None**	**No**	**0.01**	**Param.**
Molybdenum (mg/L)	**HGWC-12**	**0.05044**	**0.0457**	**0.01**	**Yes**	**16**	**0.04807**	**0.003647**	**0**	**None**	**No**	**0.01**	**Param.**
Molybdenum (mg/L)	**HGWC-13**	**0.03625**	**0.02928**	**0.01**	**Yes**	**16**	**0.03277**	**0.005358**	**0**	**None**	**No**	**0.01**	**Param.**
Molybdenum (mg/L)	**HGWC-7**	**0.04021**	**0.03218**	**0.01**	**Yes**	**16**	**0.03619**	**0.006173**	**0**	**None**	**No**	**0.01**	**Param.**
Molybdenum (mg/L)	**HGWC-8**	**0.5034**	**0.4567**	**0.01**	**Yes**	**16**	**0.4801**	**0.03591**	**0**	**None**	**No**	**0.01**	**Param.**
Molybdenum (mg/L)	**HGWC-9**	**0.031**	**0.0229**	**0.01**	**Yes**	**16**	**0.05429**	**0.1128**	**0**	**None**	**No**	**0.01**	**NP (normality)**

Confidence Interval Summary Table (State) - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-1 Printed 6/3/2020, 3:10 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Antimony (mg/L)	HGWC-10	0.003	0.003	0.006	No	14	0.003	0	100	None	No	0.01	NP (NDs)
Antimony (mg/L)	HGWC-11	0.003	0.003	0.006	No	14	0.003	0	100	None	No	0.01	NP (NDs)
Antimony (mg/L)	HGWC-12	0.003	0.003	0.006	No	14	0.003	0	100	None	No	0.01	NP (NDs)
Antimony (mg/L)	HGWC-13	0.003	0.00036	0.006	No	14	0.002249	0.001236	71.43	None	No	0.01	NP (normality)
Antimony (mg/L)	HGWC-7	0.003	0.003	0.006	No	14	0.003	0	100	None	No	0.01	NP (NDs)
Antimony (mg/L)	HGWC-8	0.003	0.003	0.006	No	14	0.003	0	100	None	No	0.01	NP (NDs)
Antimony (mg/L)	HGWC-9	0.003	0.00042	0.006	No	14	0.002624	0.0009553	85.71	None	No	0.01	NP (NDs)
Arsenic (mg/L)	HGWC-10	0.005	0.005	0.01	No	16	0.005	0	100	None	No	0.01	NP (NDs)
Arsenic (mg/L)	HGWC-11	0.005	0.0015	0.01	No	16	0.003596	0.001721	50	None	No	0.01	NP (normality)
Arsenic (mg/L)	HGWC-12	0.004743	0.003007	0.01	No	16	0.003875	0.001334	12.5	None	No	0.01	Param.
Arsenic (mg/L)	**HGWC-13**	**0.4353**	**0.3497**	**0.01**	**Yes**	**16**	**0.3925**	**0.06582**	**0**	**None**	**No**	**0.01**	**Param.**
Arsenic (mg/L)	HGWC-7	0.005	0.0019	0.01	No	16	0.004806	0.000775	93.75	None	No	0.01	NP (NDs)
Arsenic (mg/L)	HGWC-8	0.005	0.005	0.01	No	16	0.005	0	100	None	No	0.01	NP (NDs)
Arsenic (mg/L)	HGWC-9	0.005	0.0008	0.01	No	16	0.004182	0.00176	81.25	None	No	0.01	NP (NDs)
Barium (mg/L)	HGWC-10	0.09345	0.06746	2	No	16	0.08046	0.01998	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-11	0.0567	0.03003	2	No	16	0.04464	0.02253	0	None	sqrt(x)	0.01	Param.
Barium (mg/L)	HGWC-12	0.1191	0.09136	2	No	16	0.106	0.02153	0	None	x^(1/3)	0.01	Param.
Barium (mg/L)	HGWC-13	0.09723	0.07422	2	No	16	0.08573	0.01768	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-7	0.0763	0.06833	2	No	16	0.07231	0.006127	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-8	0.083	0.059	2	No	16	0.07094	0.01183	0	None	No	0.01	NP (normality)
Barium (mg/L)	HGWC-9	0.1251	0.1057	2	No	16	0.1154	0.01489	0	None	No	0.01	Param.
Beryllium (mg/L)	HGWC-10	0.003	0.003	0.004	No	14	0.003	0	100	None	No	0.01	NP (NDs)
Beryllium (mg/L)	HGWC-11	0.003	0.0001	0.004	No	14	0.001765	0.00148	57.14	None	No	0.01	NP (normality)
Beryllium (mg/L)	HGWC-12	0.003	0.003	0.004	No	14	0.003	0	100	None	No	0.01	NP (NDs)
Beryllium (mg/L)	HGWC-13	0.003	0.000099	0.004	No	14	0.002169	0.001364	71.43	None	No	0.01	NP (normality)
Beryllium (mg/L)	HGWC-7	0.003	0.000077	0.004	No	14	0.002791	0.0007812	92.86	None	No	0.01	NP (NDs)
Beryllium (mg/L)	HGWC-8	0.003	0.000074	0.004	No	14	0.002791	0.000782	92.86	None	No	0.01	NP (NDs)
Beryllium (mg/L)	HGWC-9	0.003	0.003	0.004	No	14	0.003	0	100	None	No	0.01	NP (NDs)
Cadmium (mg/L)	HGWC-10	0.0025	0.0001	0.005	No	14	0.001308	0.001237	50	None	No	0.01	NP (normality)
Cadmium (mg/L)	HGWC-11	0.0025	0.0001	0.005	No	14	0.001985	0.001023	78.57	None	No	0.01	NP (NDs)
Cadmium (mg/L)	HGWC-12	0.0025	0.0002	0.005	No	14	0.001839	0.001086	71.43	None	No	0.01	NP (normality)
Cadmium (mg/L)	HGWC-13	0.0025	0.0025	0.005	No	14	0.0025	0	100	None	No	0.01	NP (NDs)
Cadmium (mg/L)	HGWC-7	0.0025	0.0002	0.005	No	14	0.001836	0.00109	71.43	None	No	0.01	NP (normality)
Cadmium (mg/L)	HGWC-8	0.00032	0.00014	0.005	No	14	0.0004693	0.0007112	7.143	None	No	0.01	NP (normality)
Cadmium (mg/L)	HGWC-9	0.0025	0.0002	0.005	No	14	0.001991	0.001012	78.57	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-10	0.02	0.01	0.1	No	14	0.01071	0.002673	92.86	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-11	0.01	0.00061	0.1	No	14	0.008636	0.003467	85.71	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-12	0.01	0.0025	0.1	No	14	0.008779	0.003132	85.71	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-13	0.01	0.00059	0.1	No	14	0.008642	0.003452	85.71	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-7	0.071	0.0016	0.1	No	14	0.01307	0.01699	78.57	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-8	0.01	0.0007	0.1	No	14	0.008657	0.003414	85.71	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-9	0.01	0.00052	0.1	No	14	0.009323	0.002534	92.86	None	No	0.01	NP (NDs)
Cobalt (mg/L)	HGWC-10	0.005	0.0006	0.038	No	14	0.003186	0.002179	57.14	None	No	0.01	NP (normality)
Cobalt (mg/L)	HGWC-11	0.002981	0.001145	0.038	No	14	0.002154	0.001439	14.29	None	sqrt(x)	0.01	Param.
Cobalt (mg/L)	HGWC-12	0.0021	0.0012	0.038	No	14	0.002	0.001305	14.29	None	No	0.01	NP (normality)
Cobalt (mg/L)	HGWC-13	0.004525	0.002576	0.038	No	14	0.003551	0.001376	7.143	None	No	0.01	Param.
Cobalt (mg/L)	HGWC-7	0.005	0.0005	0.038	No	14	0.001736	0.001851	21.43	None	No	0.01	NP (normality)
Cobalt (mg/L)	HGWC-8	0.0026	0.0018	0.038	No	14	0.002262	0.0008313	7.143	None	No	0.01	NP (normality)
Cobalt (mg/L)	HGWC-9	0.002	0.00053	0.038	No	14	0.001361	0.00159	14.29	None	No	0.01	NP (normality)
Combined Radium 226 + 228 (pCi/L)	HGWC-10	1.073	0.6078	5	No	16	0.8403	0.3572	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-11	1.177	0.5568	5	No	16	0.8669	0.4767	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-12	1.193	0.5889	5	No	16	0.8911	0.4645	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-13	0.9448	0.5122	5	No	16	0.7285	0.3325	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-7	1.095	0.5383	5	No	16	0.8466	0.4901	0	None	sqrt(x)	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-8	0.992	0.6657	5	No	16	0.8288	0.2507	0	None	No	0.01	Param.

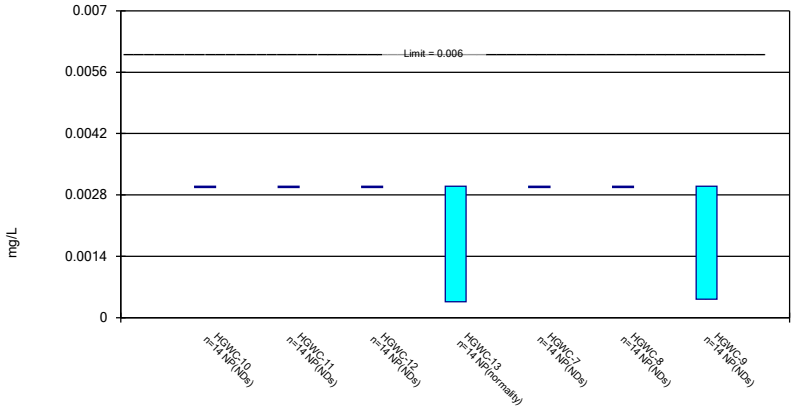
Confidence Interval Summary Table (State) - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-1 Printed 6/3/2020, 3:10 PM

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-9	0.9154	0.4914	5	No	16	0.7034	0.3259	0	None	No	0.01	Param.
Fluoride (mg/L)	HGWC-10	0.3162	0.1346	4	No	17	0.2254	0.1449	11.76	None	No	0.01	Param.
Fluoride (mg/L)	HGWC-11	0.4908	0.2966	4	No	17	0.3937	0.155	0	None	No	0.01	Param.
Fluoride (mg/L)	HGWC-12	0.4843	0.211	4	No	17	0.3672	0.2574	5.882	None	sqrt(x)	0.01	Param.
Fluoride (mg/L)	HGWC-13	0.7524	0.4945	4	No	17	0.6235	0.2058	0	None	No	0.01	Param.
Fluoride (mg/L)	HGWC-7	0.2525	0.11	4	No	17	0.1915	0.1275	11.76	None	sqrt(x)	0.01	Param.
Fluoride (mg/L)	HGWC-8	0.7057	0.4885	4	No	17	0.6041	0.1872	0	None	sqrt(x)	0.01	Param.
Fluoride (mg/L)	HGWC-9	0.346	0.1386	4	No	17	0.2423	0.1655	11.76	None	No	0.01	Param.
Lead (mg/L)	HGWC-10	0.005	0.00005	0.005	No	12	0.004587	0.001429	91.67	None	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-11	0.005	0.00021	0.005	No	12	0.003408	0.002352	66.67	None	No	0.01	NP (normality)
Lead (mg/L)	HGWC-12	0.005	0.00043	0.005	No	12	0.004207	0.001853	83.33	None	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-13	0.005	0.0001	0.005	No	12	0.003776	0.002215	75	None	No	0.01	NP (normality)
Lead (mg/L)	HGWC-7	0.005	0.00008	0.005	No	12	0.002578	0.002533	50	None	No	0.01	NP (normality)
Lead (mg/L)	HGWC-8	0.005	0.00013	0.005	No	12	0.004594	0.001406	91.67	None	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-9	0.005	0.0001	0.005	No	12	0.002969	0.002511	58.33	None	No	0.01	NP (normality)
Lithium (mg/L)	HGWC-10	0.03	0.03	0.03	No	16	0.03	0	100	None	No	0.01	NP (NDs)
Lithium (mg/L)	HGWC-11	0.03	0.03	0.03	No	16	0.03	0	100	None	No	0.01	NP (NDs)
Lithium (mg/L)	HGWC-12	0.01122	0.00787	0.03	No	16	0.009544	0.002573	0	None	No	0.01	Param.
Lithium (mg/L)	**HGWC-13**	**0.03965**	**0.03113**	**0.03**	**Yes**	**16**	**0.03539**	**0.006548**	**0**	**None**	**No**	**0.01**	**Param.**
Lithium (mg/L)	HGWC-7	0.003	0.002	0.03	No	16	0.004131	0.006909	6.25	None	No	0.01	NP (normality)
Lithium (mg/L)	HGWC-8	0.0029	0.0024	0.03	No	16	0.00435	0.006844	6.25	None	No	0.01	NP (normality)
Lithium (mg/L)	HGWC-9	0.0048	0.004	0.03	No	16	0.005794	0.006473	6.25	None	No	0.01	NP (normality)
Mercury (mg/L)	HGWC-10	0.0005	0.0005	0.002	No	11	0.0004591	0.0001357	90.91	None	No	0.006	NP (NDs)
Mercury (mg/L)	HGWC-11	0.0005	0.0005	0.002	No	11	0.0004591	0.0001357	90.91	None	No	0.006	NP (NDs)
Mercury (mg/L)	HGWC-12	0.0005	0.0005	0.002	No	11	0.0005	0	100	None	No	0.006	NP (NDs)
Mercury (mg/L)	HGWC-13	0.0005	0.00005	0.002	No	11	0.0004173	0.0001841	81.82	None	No	0.006	NP (NDs)
Mercury (mg/L)	HGWC-7	0.0005	0.0005	0.002	No	11	0.0005	0	100	None	No	0.006	NP (NDs)
Mercury (mg/L)	HGWC-8	0.0005	0.0005	0.002	No	11	0.0005	0	100	None	No	0.006	NP (NDs)
Mercury (mg/L)	HGWC-9	0.0005	0.0005	0.002	No	11	0.0004582	0.0001387	90.91	None	No	0.006	NP (NDs)
Molybdenum (mg/L)	HGWC-10	0.01	0.0014	0.01	No	16	0.007344	0.004073	68.75	None	No	0.01	NP (normality)
Molybdenum (mg/L)	**HGWC-11**	**0.02519**	**0.01381**	**0.01**	**Yes**	**16**	**0.0195**	**0.008742**	**0**	**None**	**No**	**0.01**	**Param.**
Molybdenum (mg/L)	**HGWC-12**	**0.05044**	**0.0457**	**0.01**	**Yes**	**16**	**0.04807**	**0.003647**	**0**	**None**	**No**	**0.01**	**Param.**
Molybdenum (mg/L)	**HGWC-13**	**0.03625**	**0.02928**	**0.01**	**Yes**	**16**	**0.03277**	**0.005358**	**0**	**None**	**No**	**0.01**	**Param.**
Molybdenum (mg/L)	**HGWC-7**	**0.04021**	**0.03218**	**0.01**	**Yes**	**16**	**0.03619**	**0.006173**	**0**	**None**	**No**	**0.01**	**Param.**
Molybdenum (mg/L)	**HGWC-8**	**0.5034**	**0.4567**	**0.01**	**Yes**	**16**	**0.4801**	**0.03591**	**0**	**None**	**No**	**0.01**	**Param.**
Molybdenum (mg/L)	**HGWC-9**	**0.031**	**0.0229**	**0.01**	**Yes**	**16**	**0.05429**	**0.1128**	**0**	**None**	**No**	**0.01**	**NP (normality)**
Selenium (mg/L)	HGWC-10	0.01	0.0023	0.05	No	16	0.008119	0.003403	75	None	No	0.01	NP (normality)
Selenium (mg/L)	HGWC-11	0.01666	0.006477	0.05	No	16	0.01157	0.007826	0	None	No	0.01	Param.
Selenium (mg/L)	HGWC-12	0.01	0.0011	0.05	No	16	0.009444	0.002225	93.75	None	No	0.01	NP (NDs)
Selenium (mg/L)	HGWC-13	0.01	0.00018	0.05	No	16	0.009386	0.002455	93.75	None	No	0.01	NP (NDs)
Selenium (mg/L)	HGWC-7	0.01	0.01	0.05	No	16	0.01	0	100	None	No	0.01	NP (NDs)
Selenium (mg/L)	HGWC-8	0.01	0.0024	0.05	No	16	0.009525	0.0019	93.75	None	No	0.01	NP (NDs)
Selenium (mg/L)	HGWC-9	0.01	0.0037	0.05	No	16	0.009606	0.001575	93.75	None	No	0.01	NP (NDs)
Thallium (mg/L)	HGWC-10	0.001	0.001	0.002	No	16	0.001	0	100	None	No	0.01	NP (NDs)
Thallium (mg/L)	HGWC-11	0.001	0.00008	0.002	No	16	0.000885	0.0003142	87.5	None	No	0.01	NP (NDs)
Thallium (mg/L)	HGWC-12	0.001	0.000088	0.002	No	16	0.000664	0.0004489	62.5	None	No	0.01	NP (normality)
Thallium (mg/L)	HGWC-13	0.0004405	0.0003417	0.002	No	16	0.0003911	0.00007591	0	None	No	0.01	Param.
Thallium (mg/L)	HGWC-7	0.001	0.001	0.002	No	16	0.001	0	100	None	No	0.01	NP (NDs)
Thallium (mg/L)	HGWC-8	0.001	0.000077	0.002	No	16	0.0006555	0.0004594	62.5	None	No	0.01	NP (normality)
Thallium (mg/L)	HGWC-9	0.001	0.001	0.002	No	16	0.001	0	100	None	No	0.01	NP (NDs)

Non-Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01.

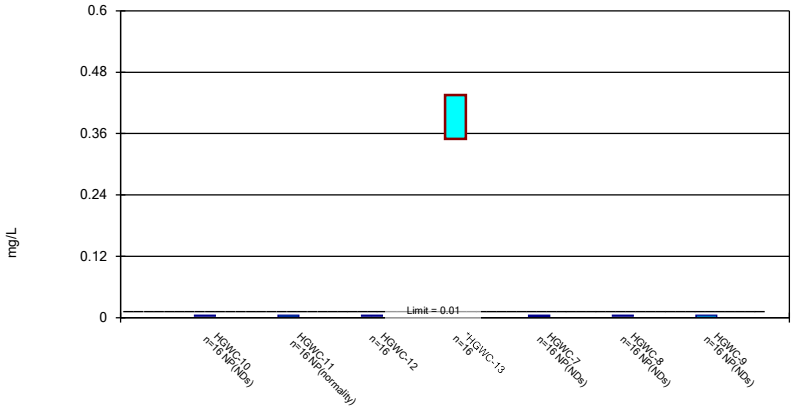


Constituent: Antimony Analysis Run 6/3/2020 3:08 PM View: Confidence Intervals - State
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25a Sanitas software utilized by Groundwater Stats Consulting. UG

Parametric and Non-Parametric (NP) Confidence Interval

Compliance limit is exceeded.* Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.

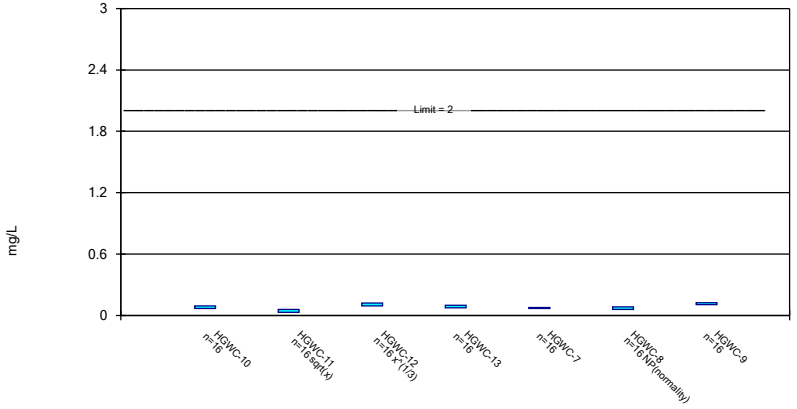


Constituent: Arsenic Analysis Run 6/3/2020 3:08 PM View: Confidence Intervals - State
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25a Sanitas software utilized by Groundwater Stats Consulting. UG

Parametric and Non-Parametric (NP) Confidence Interval

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

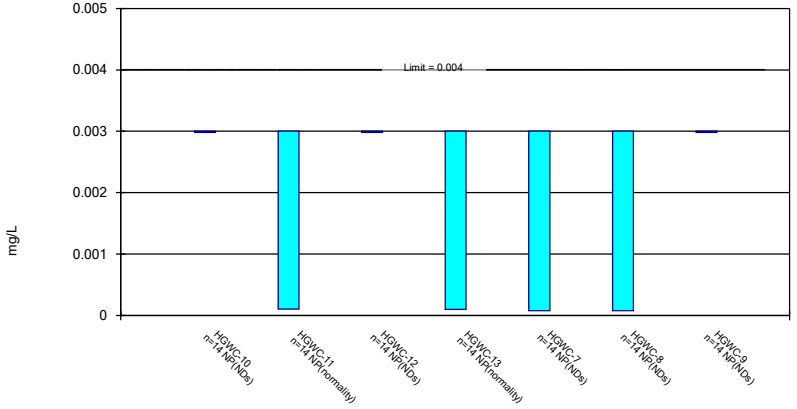


Constituent: Barium Analysis Run 6/3/2020 3:08 PM View: Confidence Intervals - State
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25a Sanitas software utilized by Groundwater Stats Consulting. UG

Non-Parametric Confidence Interval

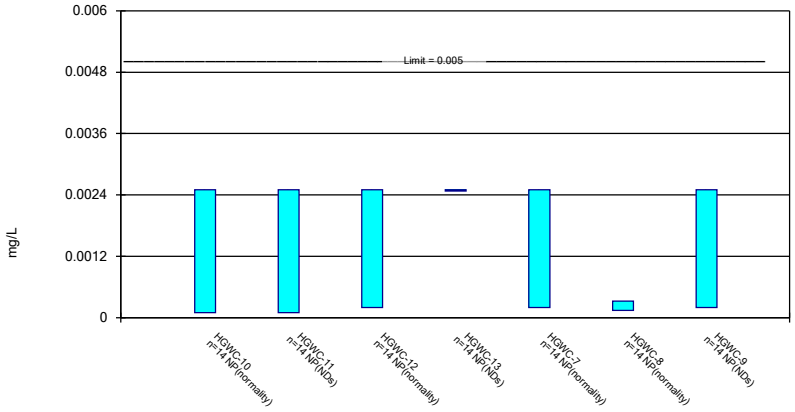
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Beryllium Analysis Run 6/3/2020 3:08 PM View: Confidence Intervals - State
Plant Hammond Client: Southern Company Data: Hammond AP-1

Non-Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01.

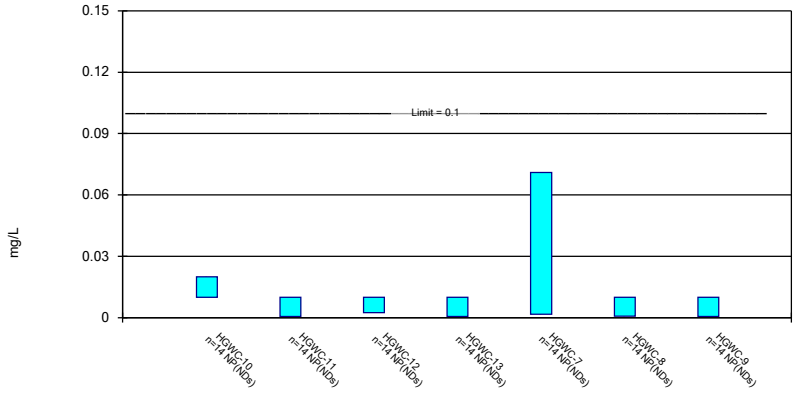


Constituent: Cadmium Analysis Run 6/3/2020 3:09 PM View: Confidence Intervals - State
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25a Sanitas software utilized by Groundwater Stats Consulting. UG

Non-Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01.

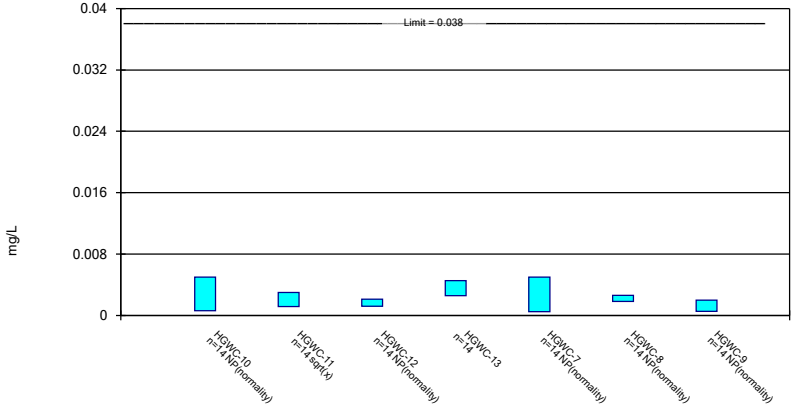


Constituent: Chromium Analysis Run 6/3/2020 3:09 PM View: Confidence Intervals - State
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25a Sanitas software utilized by Groundwater Stats Consulting. UG

Parametric and Non-Parametric (NP) Confidence Interval

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

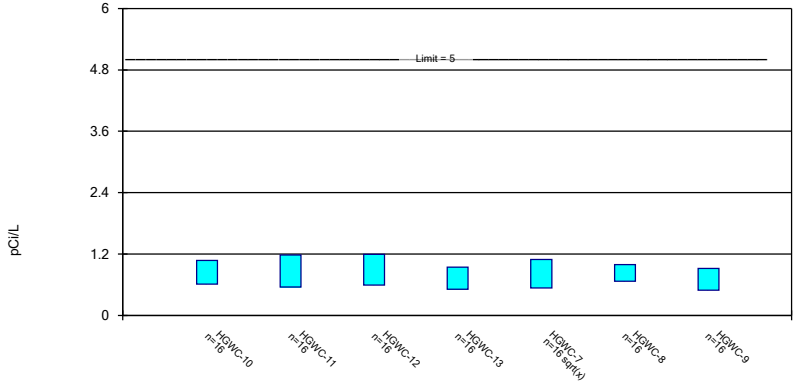


Constituent: Cobalt Analysis Run 6/3/2020 3:09 PM View: Confidence Intervals - State
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25a Sanitas software utilized by Groundwater Stats Consulting. UG

Parametric Confidence Interval

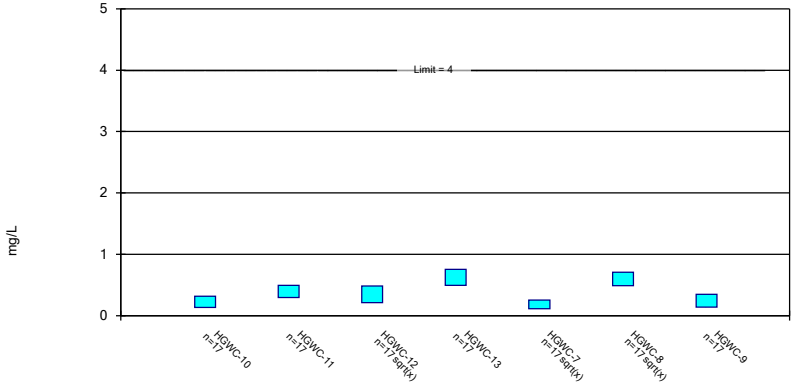
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Combined Radium 226 + 228 Analysis Run 6/3/2020 3:09 PM View: Confidence Intervals - St
Plant Hammond Client: Southern Company Data: Hammond AP-1

Parametric Confidence Interval

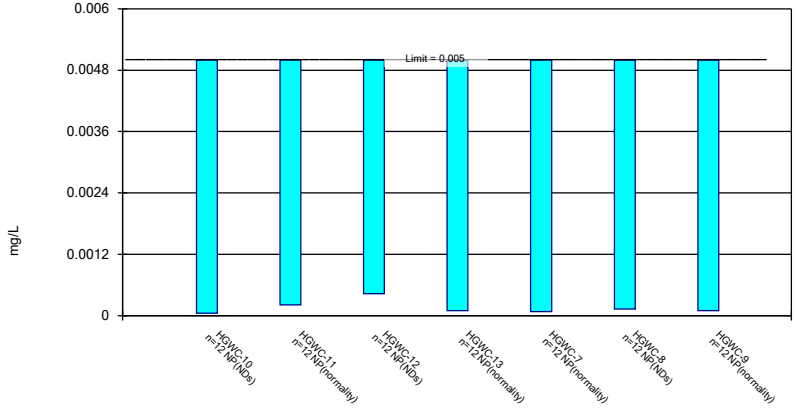
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Fluoride Analysis Run 6/3/2020 3:09 PM View: Confidence Intervals - State
Plant Hammond Client: Southern Company Data: Hammond AP-1

Non-Parametric Confidence Interval

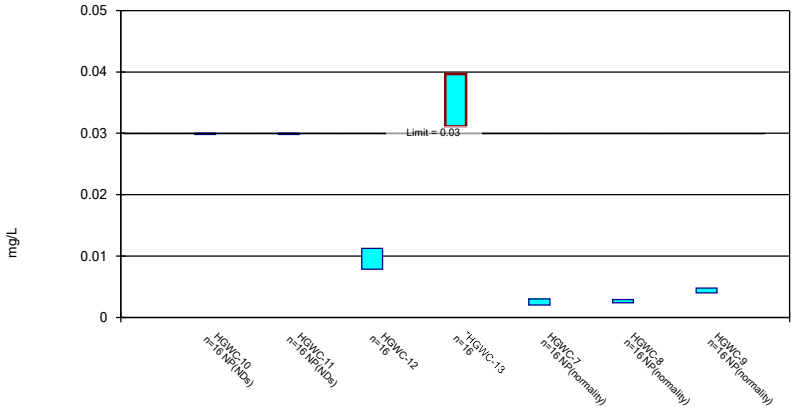
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Lead Analysis Run 6/3/2020 3:09 PM View: Confidence Intervals - State
Plant Hammond Client: Southern Company Data: Hammond AP-1

Parametric and Non-Parametric (NP) Confidence Interval

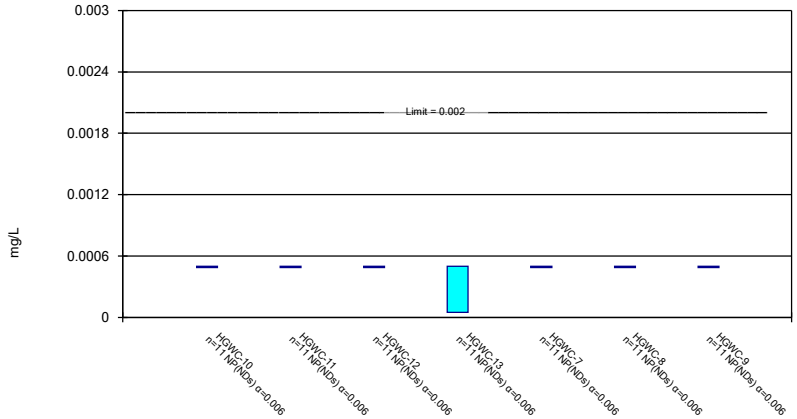
Compliance limit is exceeded.* Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Lithium Analysis Run 6/3/2020 3:09 PM View: Confidence Intervals - State
Plant Hammond Client: Southern Company Data: Hammond AP-1

Non-Parametric Confidence Interval

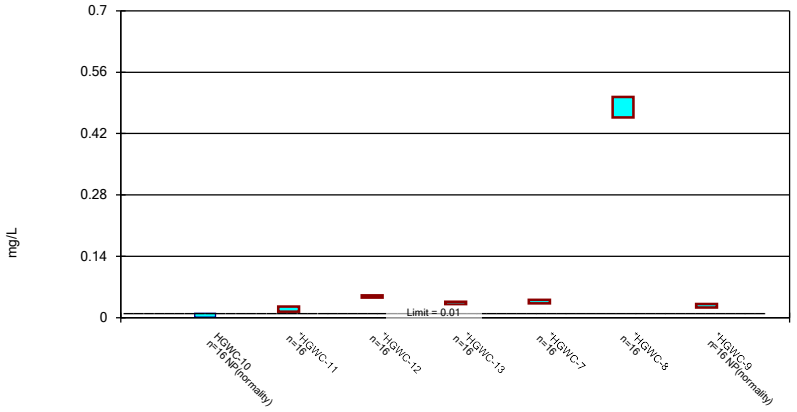
Compliance Limit is not exceeded.



Constituent: Mercury Analysis Run 6/3/2020 3:09 PM View: Confidence Intervals - State
Plant Hammond Client: Southern Company Data: Hammond AP-1

Parametric and Non-Parametric (NP) Confidence Interval

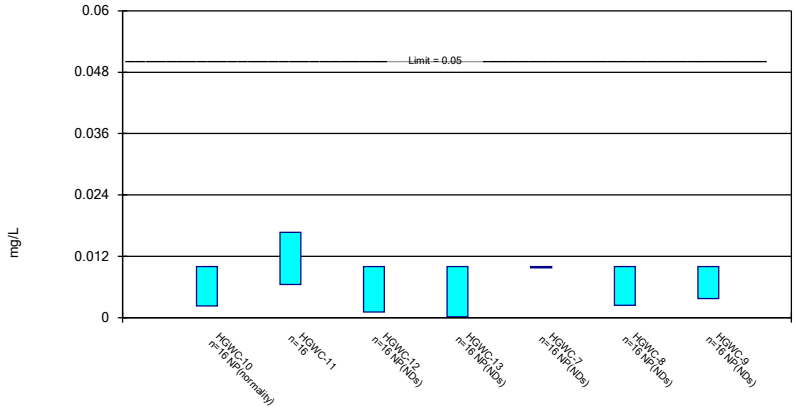
Compliance limit is exceeded.* Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Molybdenum Analysis Run 6/3/2020 3:09 PM View: Confidence Intervals - State
Plant Hammond Client: Southern Company Data: Hammond AP-1

Parametric and Non-Parametric (NP) Confidence Interval

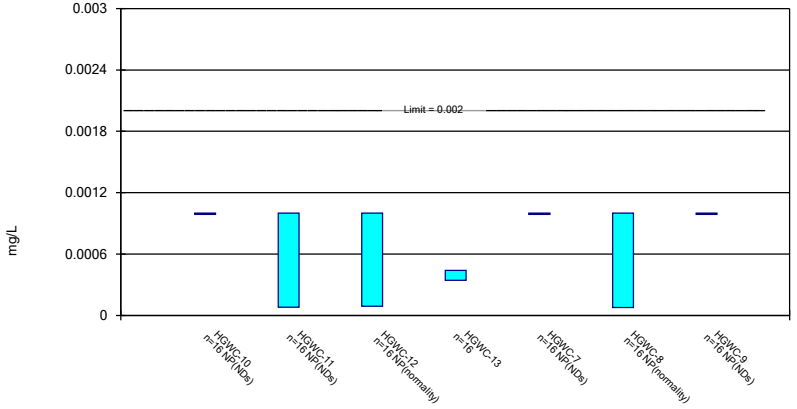
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Selenium Analysis Run 6/3/2020 3:09 PM View: Confidence Intervals - State
Plant Hammond Client: Southern Company Data: Hammond AP-1

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.



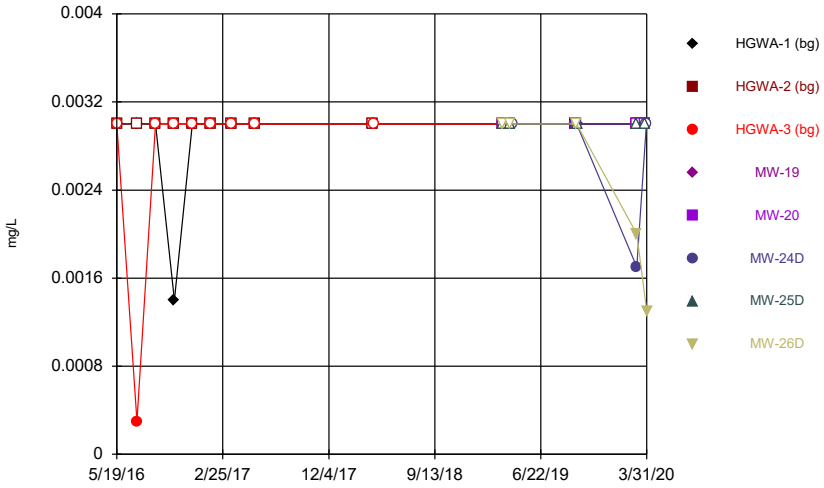
Constituent: Thallium Analysis Run 6/3/2020 3:09 PM View: Confidence Intervals - State
Plant Hammond Client: Southern Company Data: Hammond AP-1

ADDENDUM

FIGURE A.

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

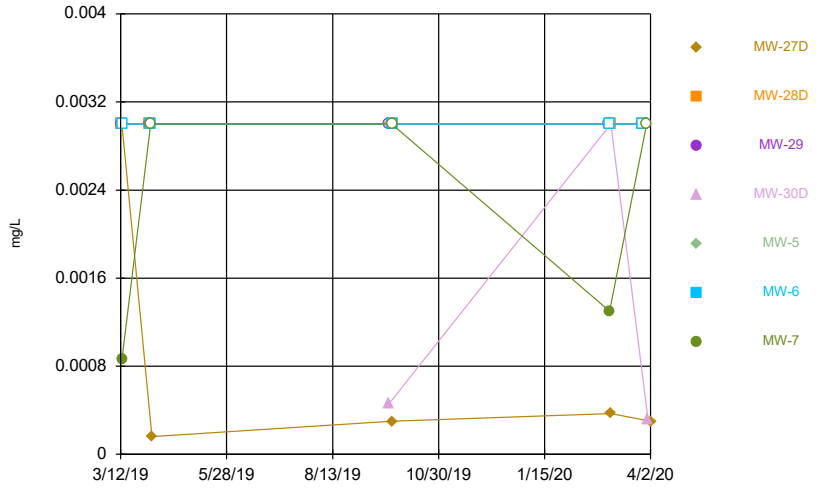
Time Series



Constituent: Antimony Analysis Run 6/16/2020 10:38 AM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

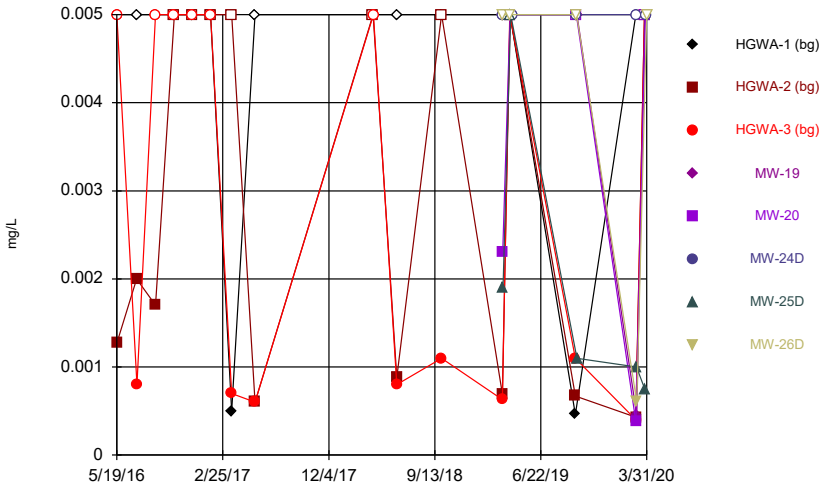
Time Series



Constituent: Antimony Analysis Run 6/16/2020 10:38 AM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

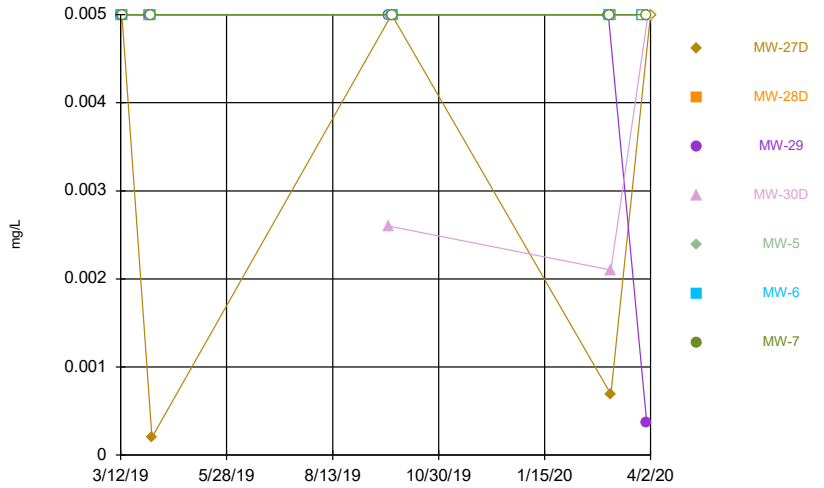
Time Series



Constituent: Arsenic Analysis Run 6/16/2020 10:38 AM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

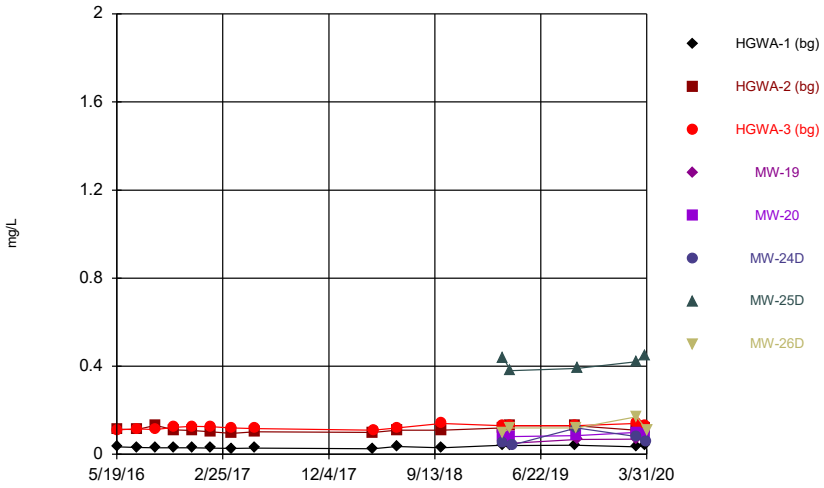
Time Series



Constituent: Arsenic Analysis Run 6/16/2020 10:38 AM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

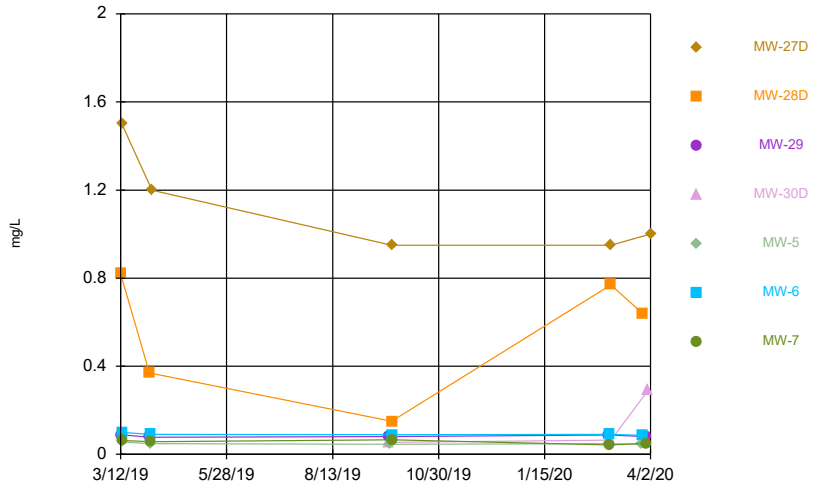
Time Series



Constituent: Barium Analysis Run 6/16/2020 10:38 AM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

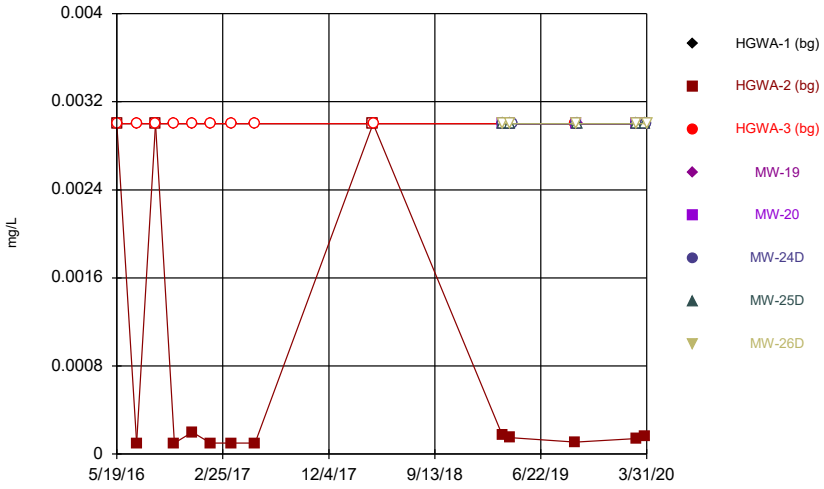
Time Series



Constituent: Barium Analysis Run 6/16/2020 10:38 AM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

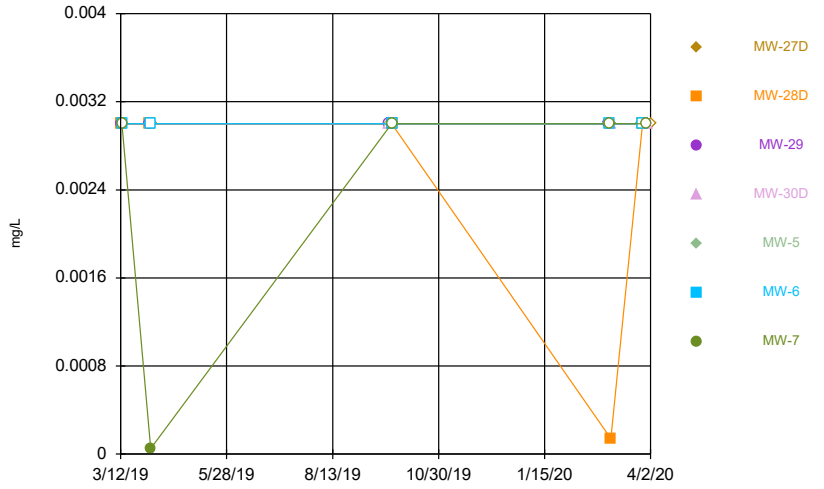
Time Series



Constituent: Beryllium Analysis Run 6/16/2020 10:38 AM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

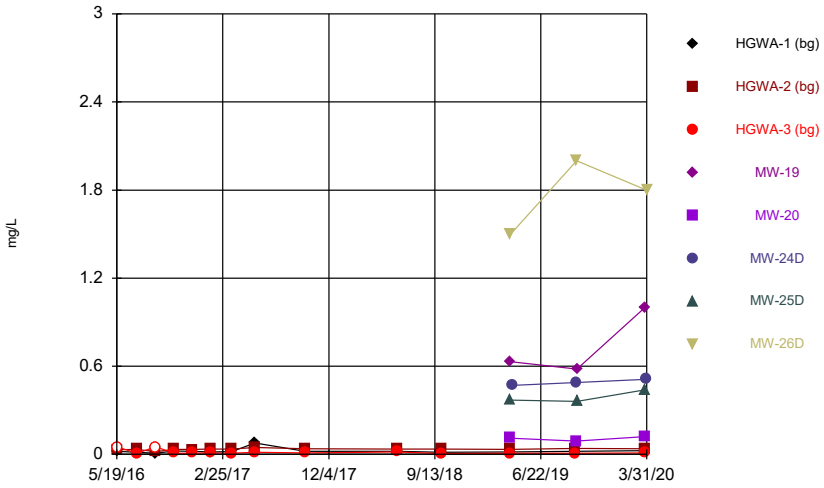
Time Series



Constituent: Beryllium Analysis Run 6/16/2020 10:38 AM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

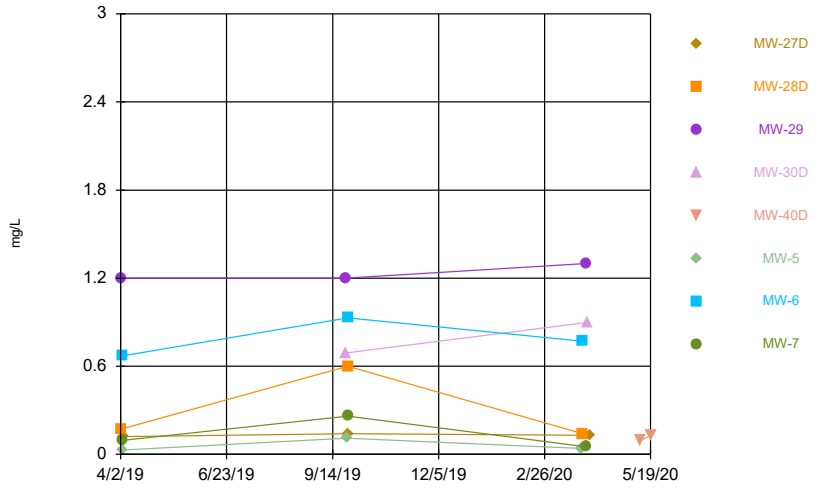
Time Series



Constituent: Boron Analysis Run 6/16/2020 10:38 AM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

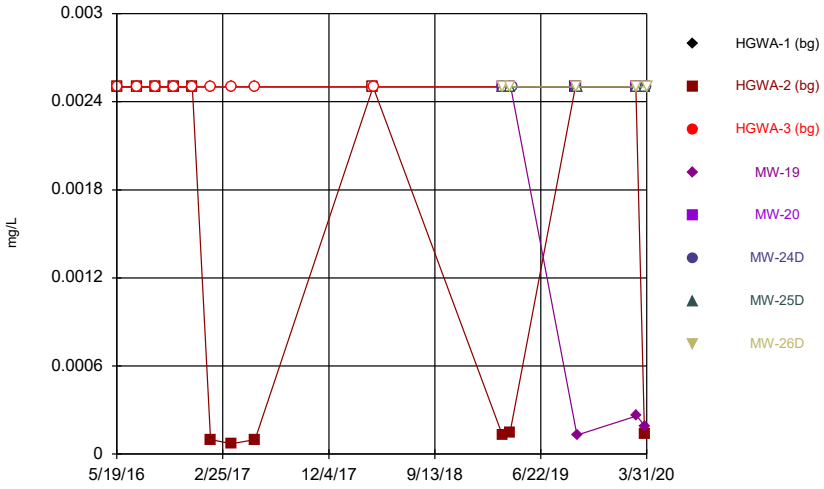
Time Series



Constituent: Boron Analysis Run 6/16/2020 10:38 AM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

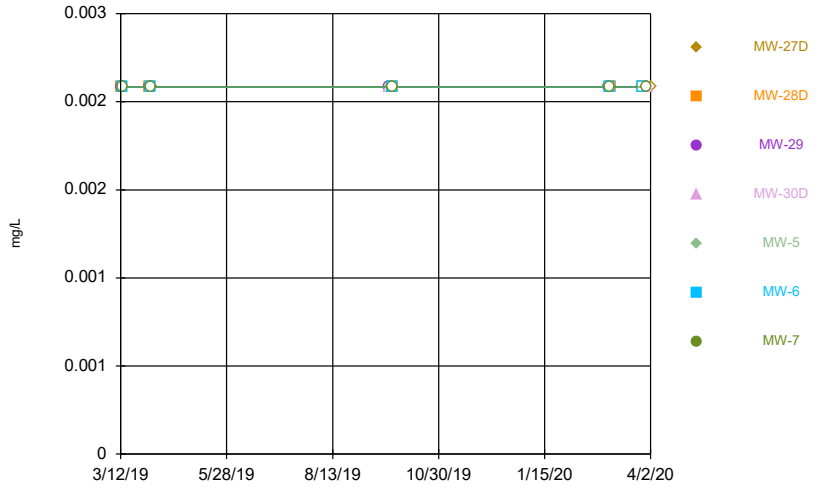
Time Series



Constituent: Cadmium Analysis Run 6/16/2020 10:38 AM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

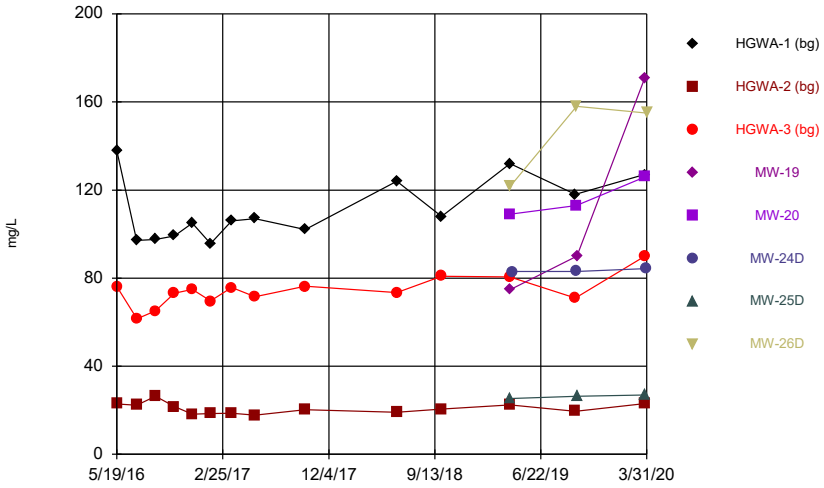
Time Series



Constituent: Cadmium Analysis Run 6/16/2020 10:38 AM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

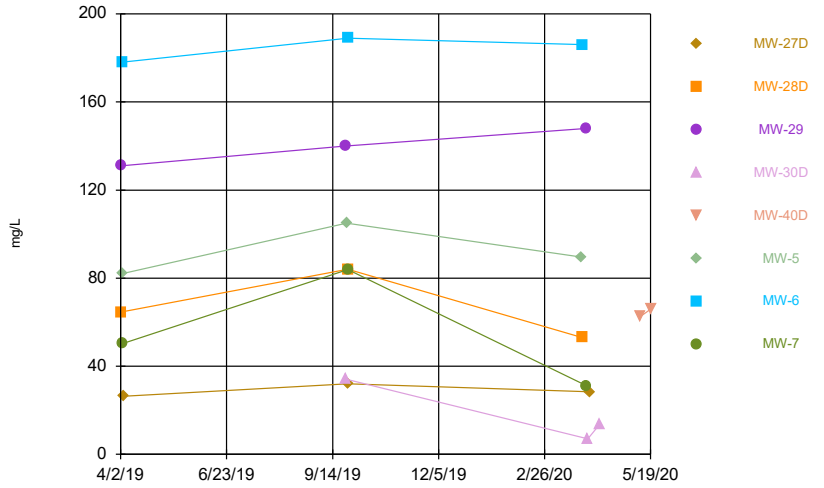
Time Series



Constituent: Calcium Analysis Run 6/16/2020 10:39 AM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

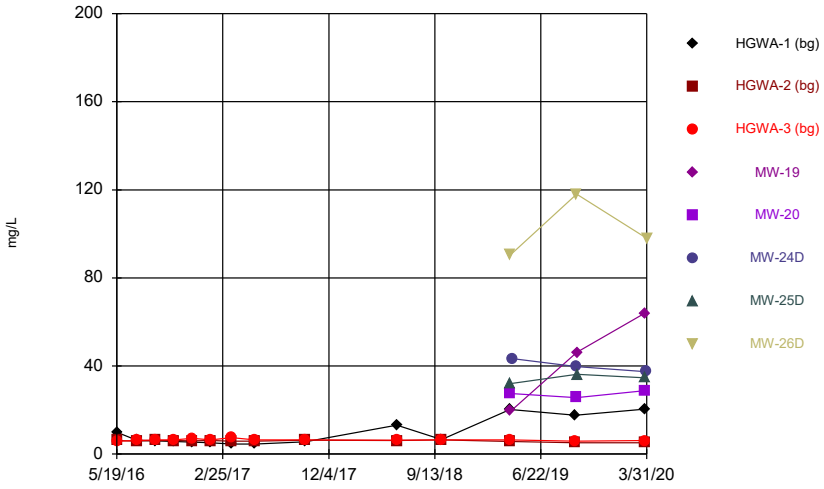
Time Series



Constituent: Calcium Analysis Run 6/16/2020 10:39 AM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

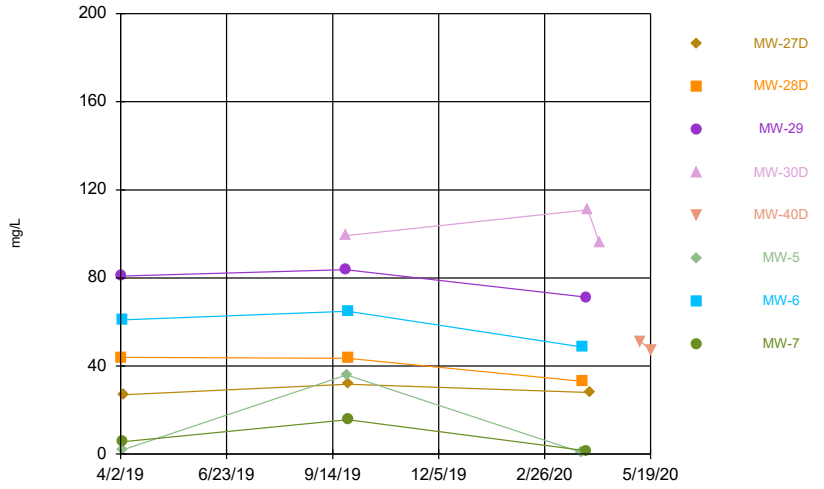
Time Series



Constituent: Chloride Analysis Run 6/16/2020 10:39 AM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

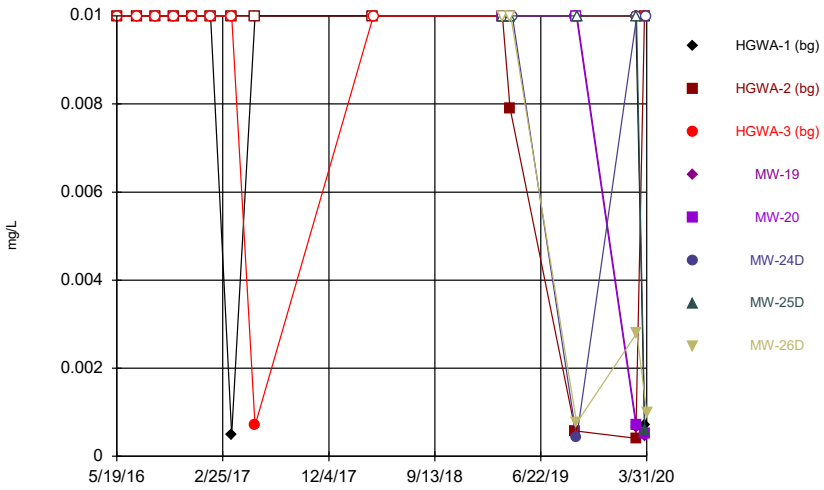
Time Series



Constituent: Chloride Analysis Run 6/16/2020 10:39 AM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

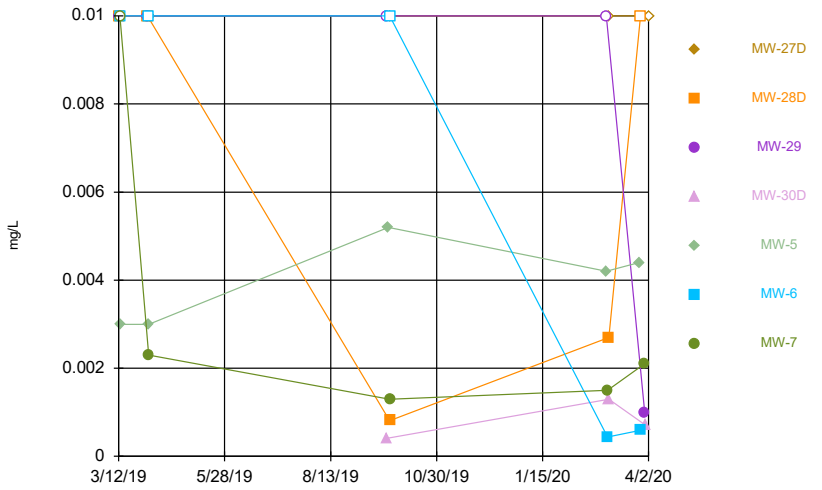
Time Series



Constituent: Chromium Analysis Run 6/16/2020 10:39 AM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

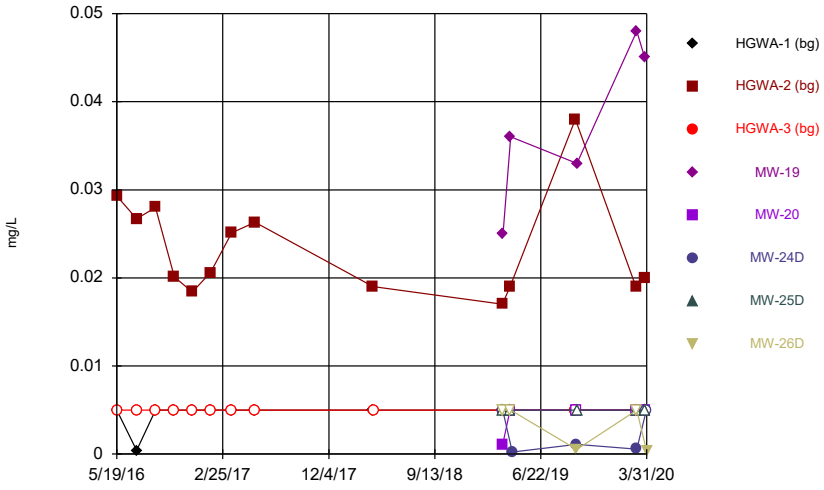
Time Series



Constituent: Chromium Analysis Run 6/16/2020 10:39 AM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

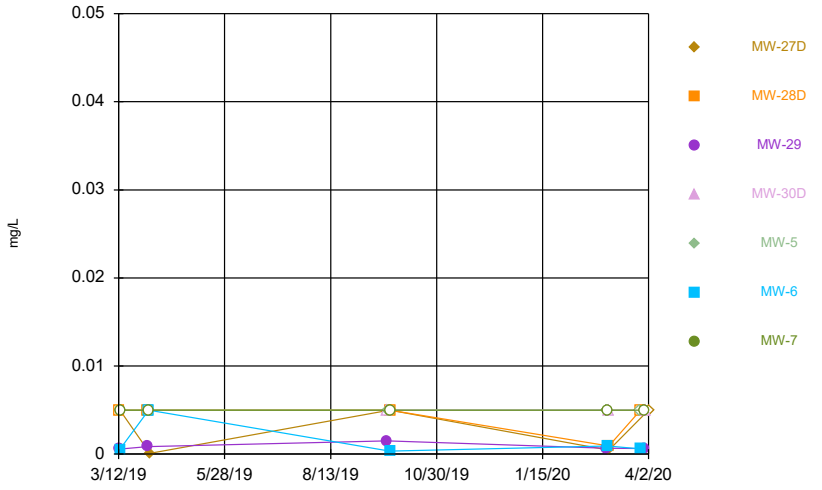
Time Series



Constituent: Cobalt Analysis Run 6/16/2020 10:39 AM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

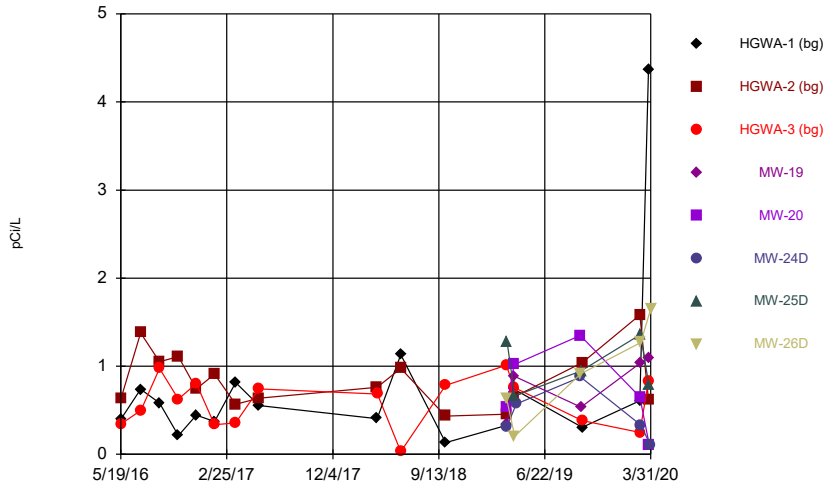
Time Series



Constituent: Cobalt Analysis Run 6/16/2020 10:39 AM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

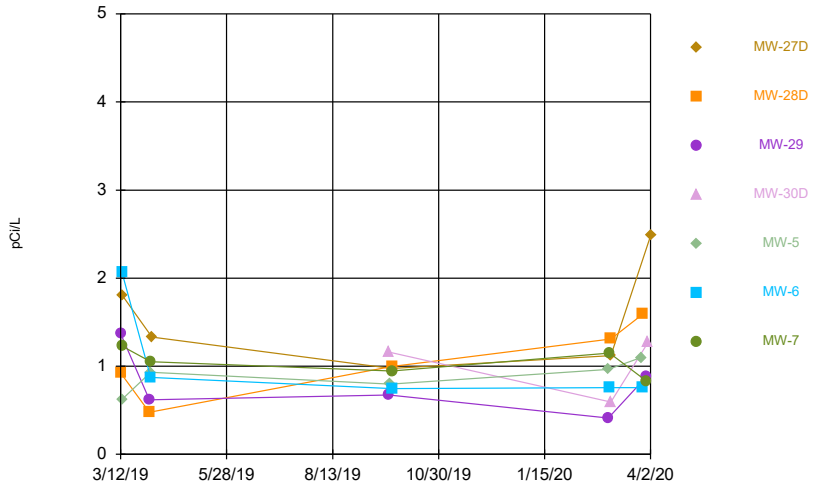
Time Series



Constituent: Combined Radium 226 + 228 Analysis Run 6/16/2020 10:39 AM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

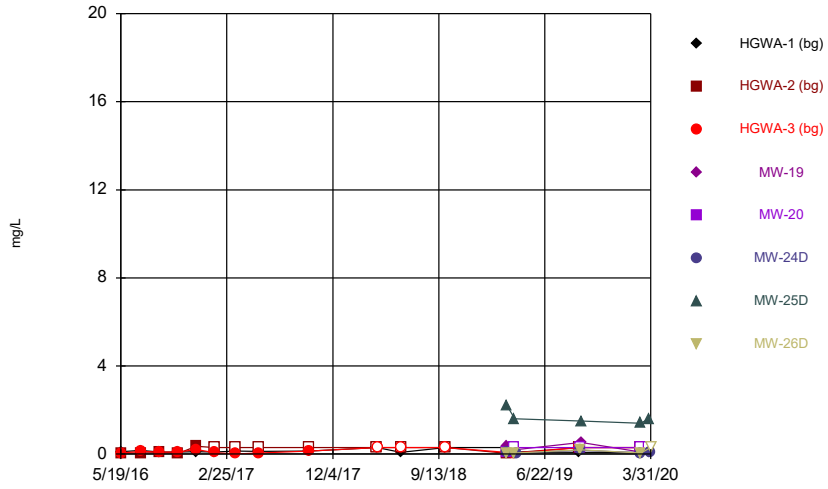
Time Series



Constituent: Combined Radium 226 + 228 Analysis Run 6/16/2020 10:39 AM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

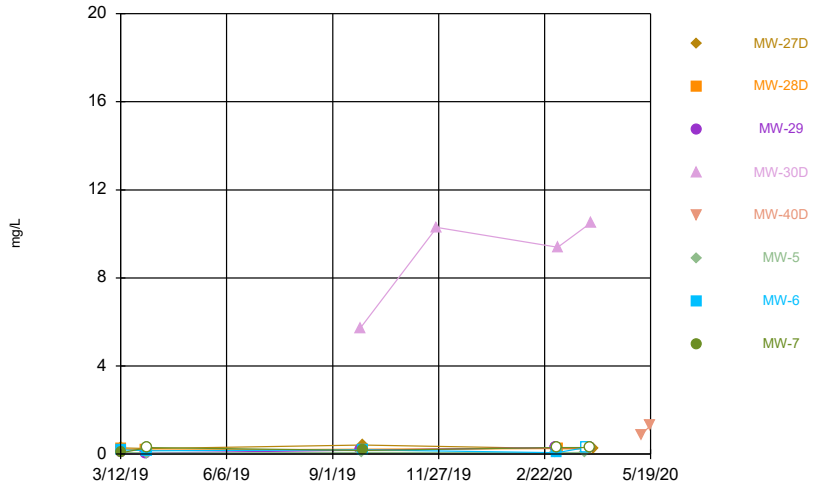
Time Series



Constituent: Fluoride Analysis Run 6/16/2020 10:39 AM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

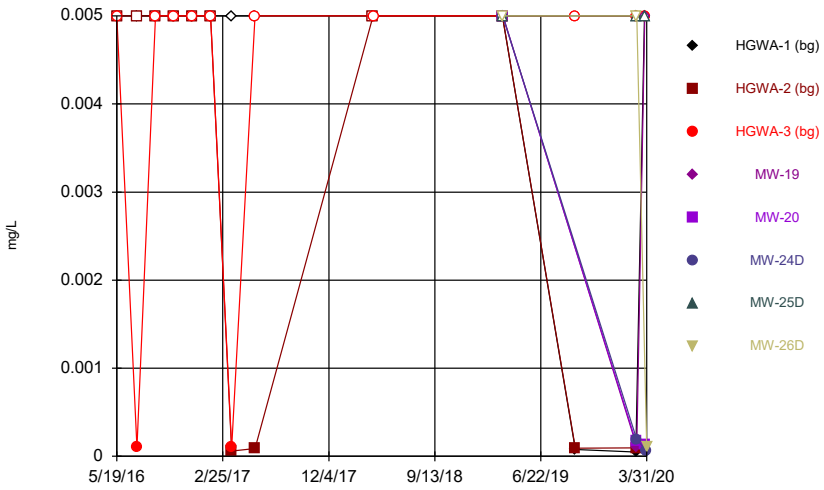
Time Series



Constituent: Fluoride Analysis Run 6/16/2020 10:39 AM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

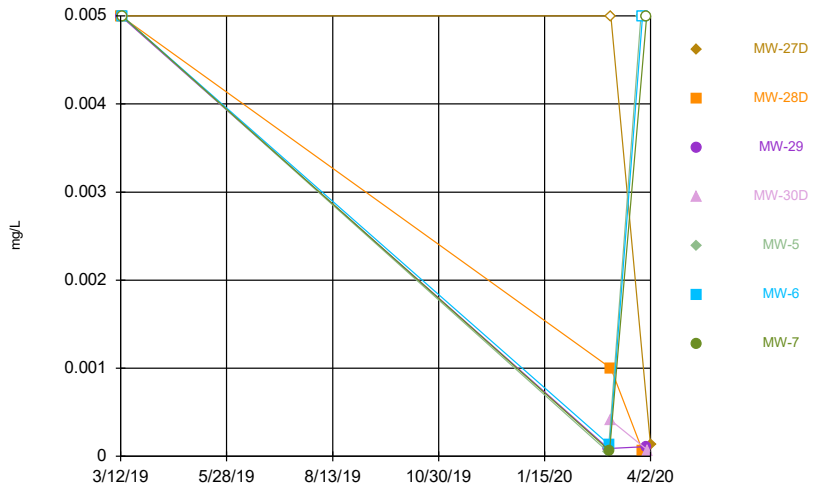
Time Series



Constituent: Lead Analysis Run 6/16/2020 10:39 AM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

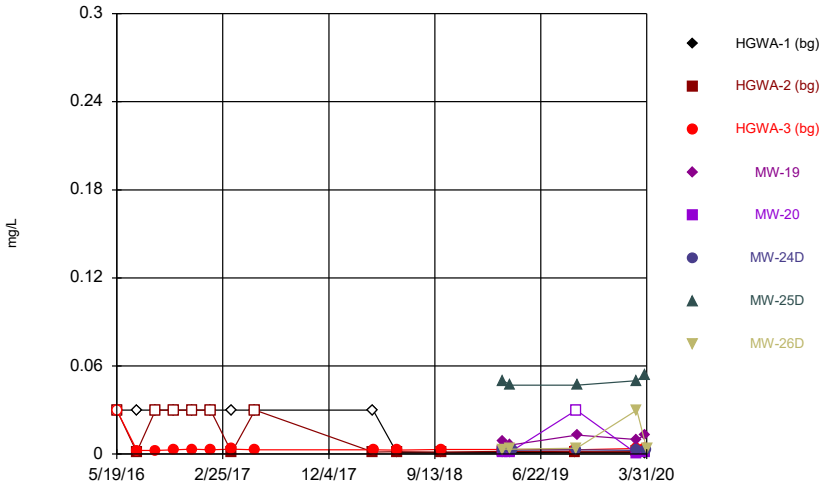
Time Series



Constituent: Lead Analysis Run 6/16/2020 10:39 AM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

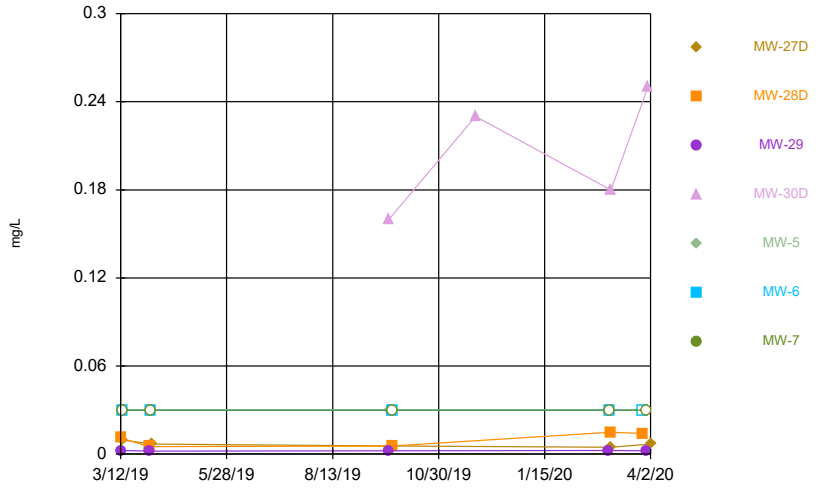
Time Series



Constituent: Lithium Analysis Run 6/16/2020 10:39 AM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

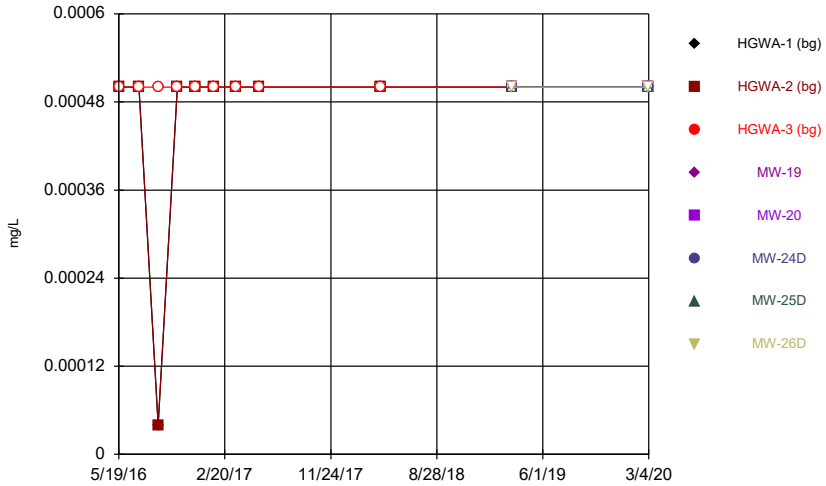
Time Series



Constituent: Lithium Analysis Run 6/16/2020 10:39 AM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

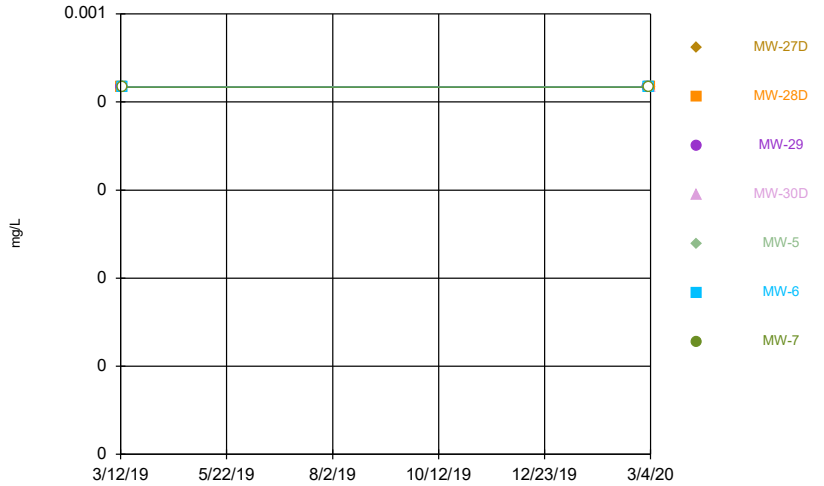
Time Series



Constituent: Mercury Analysis Run 6/16/2020 10:39 AM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

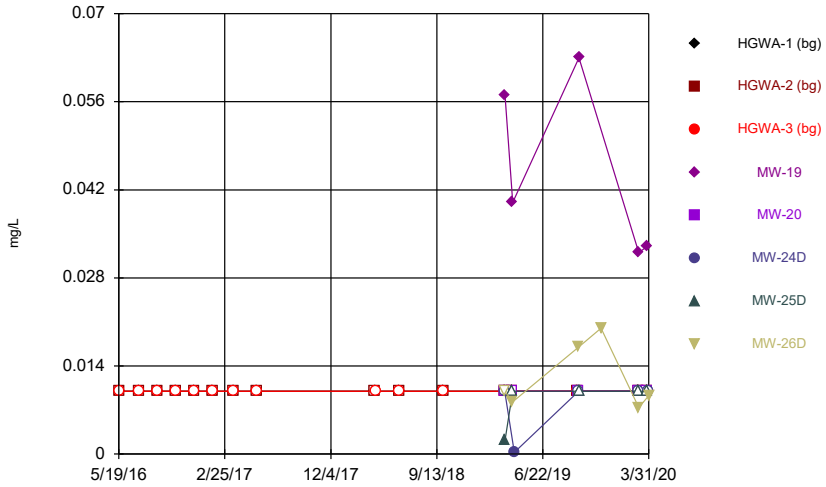
Time Series



Constituent: Mercury Analysis Run 6/16/2020 10:39 AM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

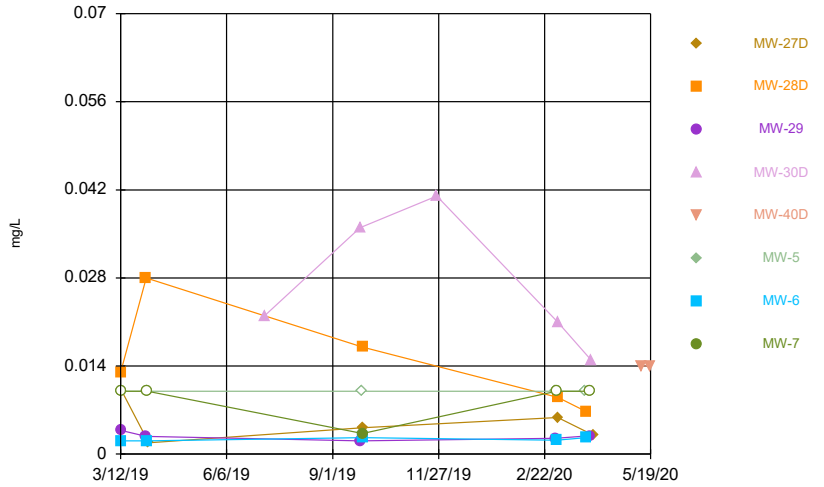
Time Series



Constituent: Molybdenum Analysis Run 6/16/2020 10:39 AM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

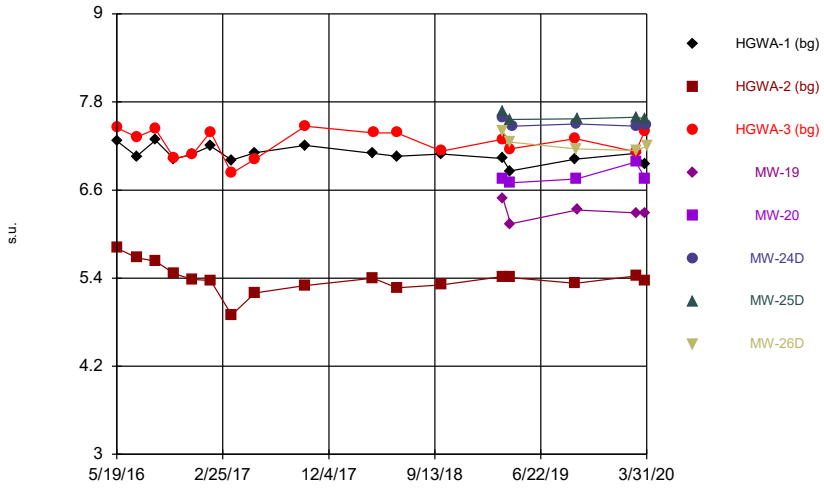
Time Series



Constituent: Molybdenum Analysis Run 6/16/2020 10:39 AM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

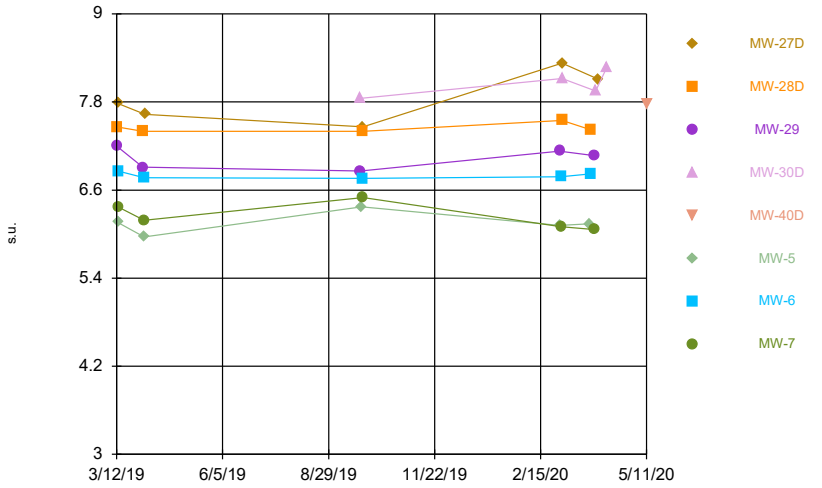
Time Series



Constituent: pH Analysis Run 6/16/2020 10:39 AM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

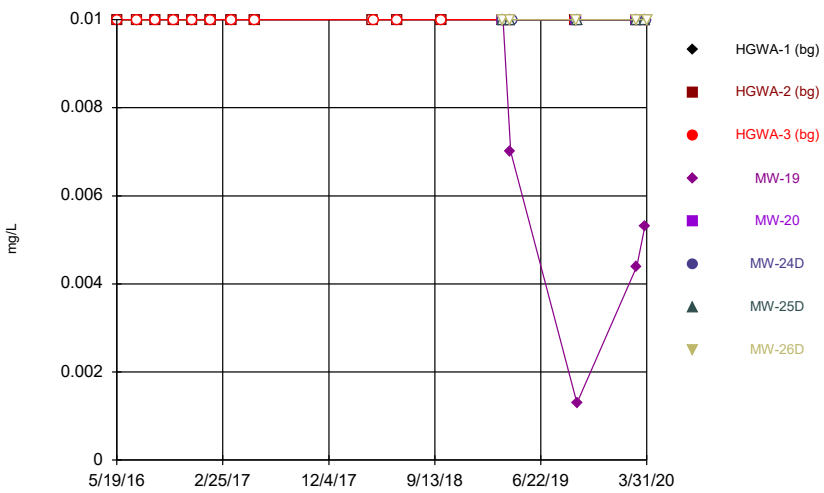
Time Series



Constituent: pH Analysis Run 6/16/2020 10:39 AM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

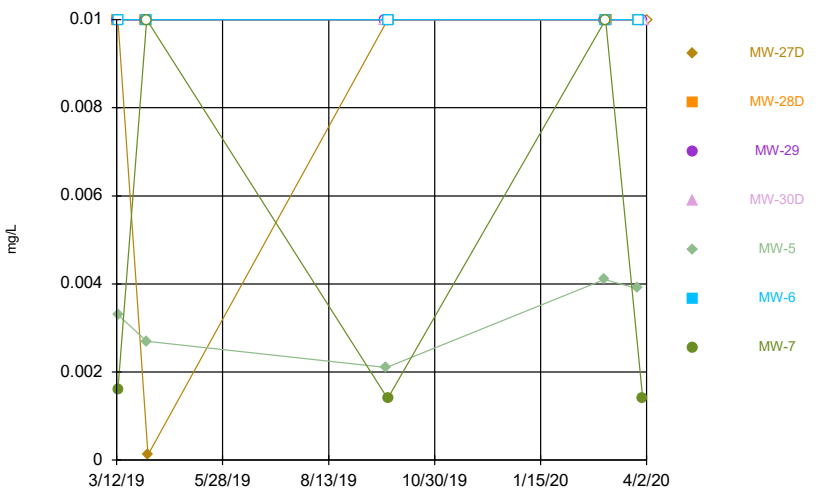
Time Series



Constituent: Selenium Analysis Run 6/16/2020 10:39 AM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

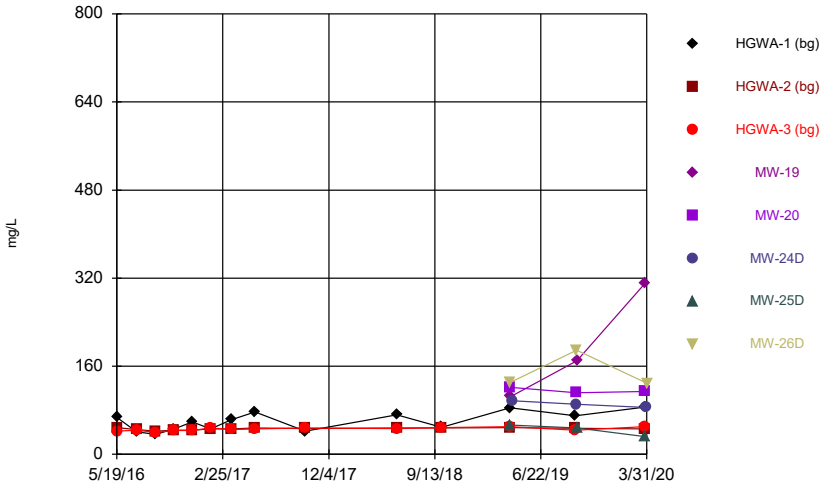
Time Series



Constituent: Selenium Analysis Run 6/16/2020 10:39 AM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

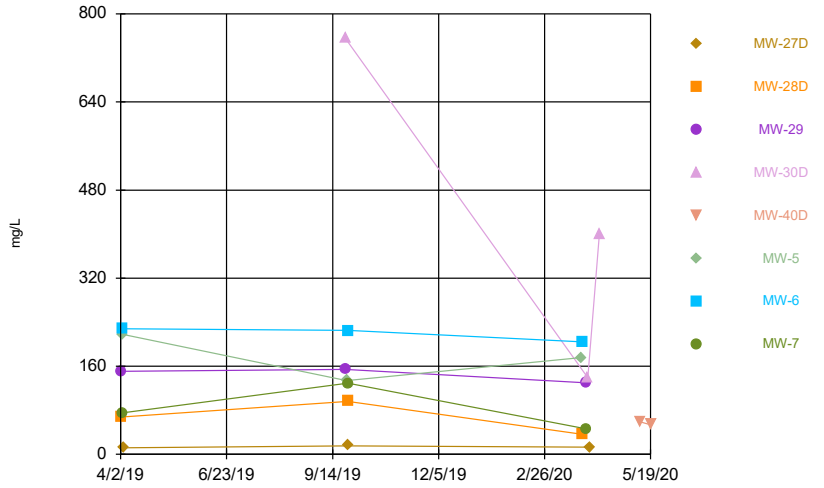
Time Series



Constituent: Sulfate Analysis Run 6/16/2020 10:39 AM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

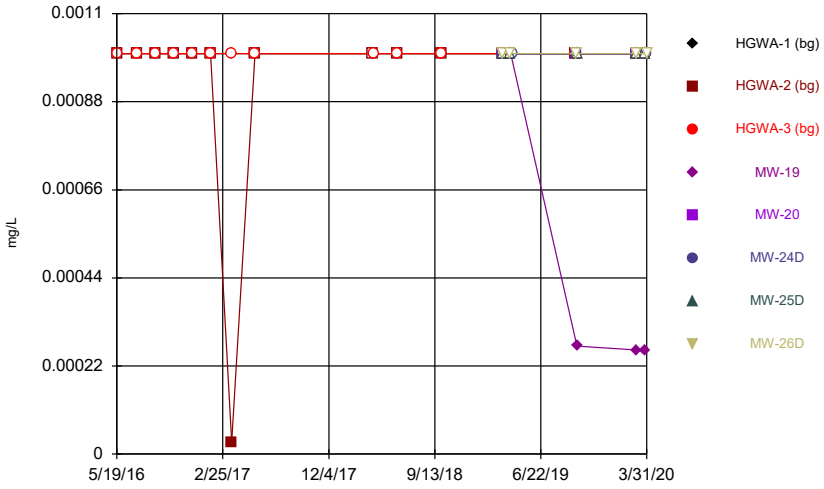
Time Series



Constituent: Sulfate Analysis Run 6/16/2020 10:39 AM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

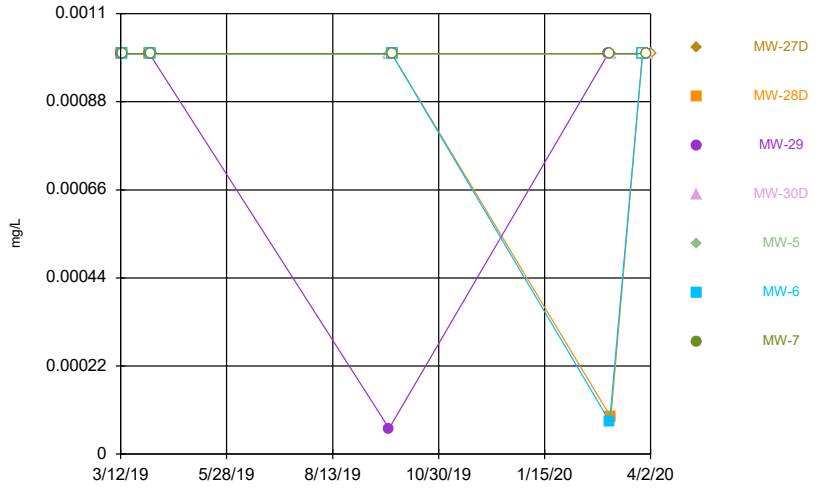
Time Series



Constituent: Thallium Analysis Run 6/16/2020 10:39 AM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

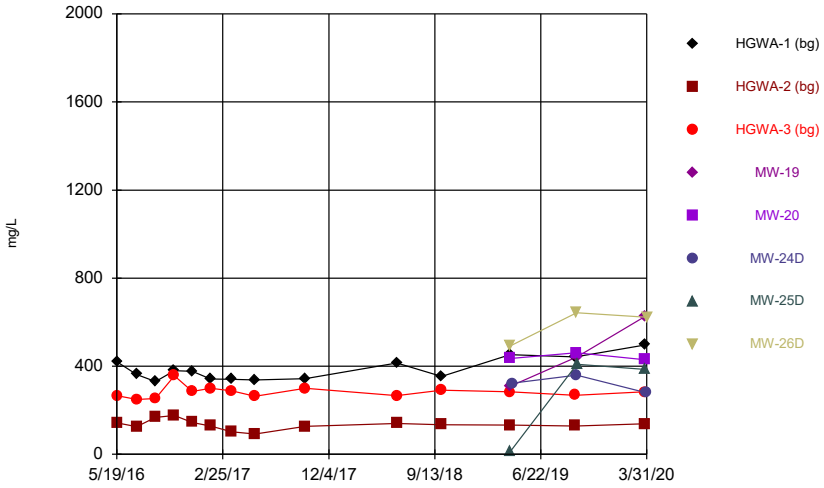
Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

Time Series



Constituent: Thallium Analysis Run 6/16/2020 10:39 AM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

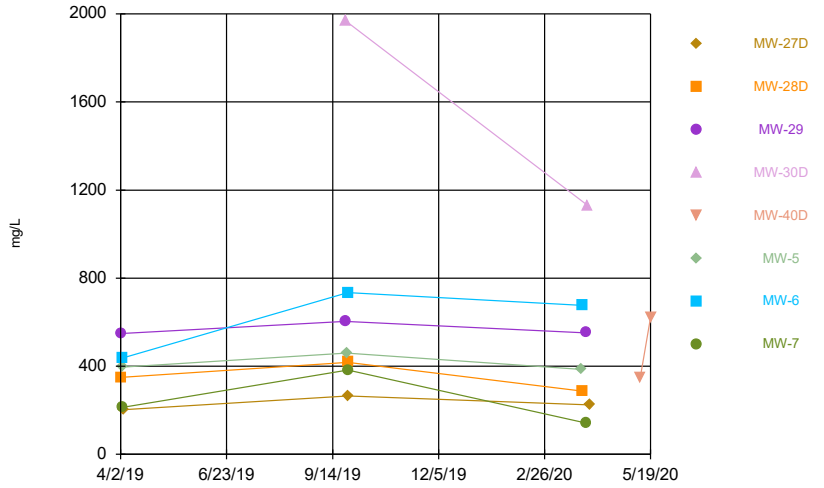
Time Series



Constituent: Total Dissolved Solids Analysis Run 6/16/2020 10:39 AM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

Time Series



Constituent: Total Dissolved Solids Analysis Run 6/16/2020 10:39 AM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

Time Series

Constituent: Antimony (mg/L) Analysis Run 6/16/2020 10:39 AM View: New Wells

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	MW-19	MW-20	MW-24D	MW-25D	MW-26D
5/19/2016	<0.003	<0.003	<0.003					
7/11/2016	<0.003	<0.003						
7/12/2016			0.0003 (J)					
8/30/2016	<0.003	<0.003	<0.003					
10/19/2016	0.0014 (J)	<0.003	<0.003					
12/6/2016	<0.003	<0.003	<0.003					
1/24/2017	<0.003	<0.003	<0.003					
3/21/2017	<0.003	<0.003	<0.003					
5/22/2017	<0.003	<0.003	<0.003					
4/2/2018	<0.003	<0.003						
4/3/2018			<0.003					
3/12/2019	<0.003	<0.003	<0.003					
3/13/2019					<0.003	<0.003		<0.003
3/14/2019				<0.003			<0.003	
4/1/2019			<0.003					
4/2/2019	<0.003	<0.003			<0.003			
4/3/2019				<0.003			<0.003	<0.003
4/8/2019						<0.003		
9/23/2019	<0.003	<0.003	<0.003					
9/25/2019					<0.003			
9/26/2019						<0.003		<0.003
9/27/2019				<0.003			<0.003	
3/2/2020	<0.003	<0.003	<0.003		<0.003			
3/3/2020							<0.003	
3/4/2020				<0.003		0.0017 (J)		0.002 (J)
3/25/2020	<0.003	<0.003	<0.003					
3/26/2020				<0.003			<0.003	
3/27/2020					<0.003			
3/30/2020						<0.003		
3/31/2020								0.0013 (J)

Time Series

Constituent: Antimony (mg/L) Analysis Run 6/16/2020 10:39 AM View: New Wells

Plant Hammond Client: Southern Company Data: Hammond AP-1

	MW-27D	MW-28D	MW-29	MW-30D	MW-5	MW-6	MW-7
3/12/2019		<0.003	<0.003				
3/13/2019	<0.003				<0.003	<0.003	0.00086 (J)
4/2/2019		<0.003	<0.003				
4/3/2019					<0.003	<0.003	<0.003
4/4/2019	0.00016 (J)						
9/24/2019			<0.003	0.00046 (J)			
9/25/2019					<0.003		
9/26/2019	0.0003 (J)	<0.003				<0.003	<0.003
3/2/2020			<0.003		<0.003		
3/3/2020						<0.003	0.0013 (J)
3/4/2020	0.00037 (J)	<0.003		<0.003			
3/26/2020					<0.003		
3/27/2020		<0.003				<0.003	
3/30/2020			<0.003				<0.003
3/31/2020				0.00032 (J)			
4/2/2020	0.0003 (J)						

Time Series

Constituent: Arsenic (mg/L) Analysis Run 6/16/2020 10:39 AM View: New Wells

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	MW-19	MW-20	MW-24D	MW-25D	MW-26D
5/19/2016	<0.005	0.00127 (J)	<0.005					
7/11/2016	<0.005	0.002 (J)						
7/12/2016			0.0008 (J)					
8/30/2016	<0.005	0.0017 (J)	<0.005					
10/19/2016	<0.005	<0.005	<0.005					
12/6/2016	<0.005	<0.005	<0.005					
1/24/2017	<0.005	<0.005	<0.005					
3/21/2017	0.0005 (J)	<0.005	0.0007 (J)					
5/22/2017	<0.005	0.0006 (J)	0.0006 (J)					
4/2/2018	<0.005	<0.005						
4/3/2018			<0.005					
6/4/2018	<0.005	0.00088 (J)	0.0008 (J)					
10/1/2018	<0.005	<0.005	0.0011 (J)					
3/12/2019	<0.005	0.00069 (J)	0.00063 (J)					
3/13/2019					0.0023 (J)	<0.005		<0.005
3/14/2019				<0.005			0.0019 (J)	
4/1/2019			<0.005					
4/2/2019	<0.005	<0.005			<0.005			
4/3/2019				<0.005			<0.005	<0.005
4/8/2019						<0.005		
9/23/2019	0.00046 (J)	0.00067 (J)	0.0011 (J)					
9/25/2019					<0.005			
9/26/2019						<0.005		<0.005
9/27/2019				<0.005			0.0011 (J)	
3/2/2020	<0.005	0.00043 (J)	0.0004 (J)		0.00038 (J)			
3/3/2020							0.001 (J)	
3/4/2020				0.00045 (J)		<0.005		0.0006 (J)
3/25/2020	<0.005	<0.005	<0.005					
3/26/2020				<0.005			0.00075 (J)	
3/27/2020					<0.005			
3/30/2020						<0.005		
3/31/2020								<0.005

Time Series

Constituent: Arsenic (mg/L) Analysis Run 6/16/2020 10:39 AM View: New Wells

Plant Hammond Client: Southern Company Data: Hammond AP-1

	MW-27D	MW-28D	MW-29	MW-30D	MW-5	MW-6	MW-7
3/12/2019		<0.005	<0.005				
3/13/2019	<0.005				<0.005	<0.005	<0.005
4/2/2019		<0.005	<0.005				
4/3/2019					<0.005	<0.005	<0.005
4/4/2019	0.0002 (J)						
9/24/2019			<0.005	0.0026 (J)			
9/25/2019					<0.005		
9/26/2019	<0.005	<0.005				<0.005	<0.005
3/2/2020			<0.005		<0.005		
3/3/2020						<0.005	<0.005
3/4/2020	0.00069 (J)	<0.005		0.0021 (J)			
3/26/2020					<0.005		
3/27/2020		<0.005				<0.005	
3/30/2020			0.00037 (J)				<0.005
3/31/2020				<0.005			
4/2/2020	<0.005						

Time Series

Constituent: Barium (mg/L) Analysis Run 6/16/2020 10:39 AM View: New Wells

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	MW-19	MW-20	MW-24D	MW-25D	MW-26D
5/19/2016	0.0346	0.114	0.111					
7/11/2016	0.0311	0.112						
7/12/2016			0.115					
8/30/2016	0.0293	0.131	0.113					
10/19/2016	0.0293	0.111	0.123					
12/6/2016	0.0304	0.108	0.127					
1/24/2017	0.028	0.102	0.126					
3/21/2017	0.0275	0.095	0.12					
5/22/2017	0.0281	0.103	0.117					
4/2/2018	0.026	0.099						
4/3/2018			0.11					
6/4/2018	0.035	0.11	0.12					
10/1/2018	0.029	0.11	0.14					
3/12/2019	0.042	0.12	0.13					
3/13/2019					0.087	0.053		0.099
3/14/2019				0.06			0.44	
4/1/2019			0.13					
4/2/2019	0.04	0.13			0.08			
4/3/2019				0.05			0.38	0.12
4/8/2019						0.043		
9/23/2019	0.042	0.13	0.13					
9/25/2019					0.085			
9/26/2019						0.12		0.12
9/27/2019				0.068			0.39	
3/2/2020	0.034	0.11	0.14		0.099			
3/3/2020							0.42	
3/4/2020				0.069		0.081		0.17
3/25/2020	0.043	0.12	0.13					
3/26/2020				0.067			0.45	
3/27/2020					0.093			
3/30/2020						0.056		
3/31/2020								0.11

Time Series

Constituent: Barium (mg/L) Analysis Run 6/16/2020 10:39 AM View: New Wells

Plant Hammond Client: Southern Company Data: Hammond AP-1

	MW-27D	MW-28D	MW-29	MW-30D	MW-5	MW-6	MW-7
3/12/2019		0.82	0.089				
3/13/2019	1.5				0.056	0.1	0.063
4/2/2019		0.37	0.078				
4/3/2019					0.049	0.09	0.058
4/4/2019	1.2						
9/24/2019			0.081	0.054			
9/25/2019					0.046		
9/26/2019	0.95	0.15				0.089	0.066
3/2/2020			0.088		0.049		
3/3/2020						0.09	0.043
3/4/2020	0.95	0.77		0.065			
3/26/2020					0.046		
3/27/2020		0.64				0.086	
3/30/2020			0.08				0.05
3/31/2020				0.29			
4/2/2020	1						

Time Series

Constituent: Beryllium (mg/L) Analysis Run 6/16/2020 10:39 AM View: New Wells

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	MW-19	MW-20	MW-24D	MW-25D	MW-26D
5/19/2016	<0.003	<0.003	<0.003					
7/11/2016	<0.003	0.0001 (J)						
7/12/2016			<0.003					
8/30/2016	<0.003	<0.003	<0.003					
10/19/2016	<0.003	0.0001 (J)	<0.003					
12/6/2016	<0.003	0.0002 (J)	<0.003					
1/24/2017	<0.003	0.0001 (J)	<0.003					
3/21/2017	<0.003	0.0001 (J)	<0.003					
5/22/2017	<0.003	0.0001 (J)	<0.003					
4/2/2018	<0.003	<0.003						
4/3/2018			<0.003					
3/12/2019	<0.003	0.00017 (J)	<0.003					
3/13/2019					<0.003	<0.003		<0.003
3/14/2019				<0.003			<0.003	
4/1/2019			<0.003					
4/2/2019	<0.003	0.00015 (J)			<0.003			
4/3/2019				<0.003			<0.003	<0.003
4/8/2019						<0.003		
9/23/2019	<0.003	0.00011 (J)	<0.003					
9/25/2019					<0.003			
9/26/2019						<0.003		<0.003
9/27/2019				<0.003			<0.003	
3/2/2020	<0.003	0.00014 (J)	<0.003		<0.003			
3/3/2020							<0.003	
3/4/2020				<0.003		<0.003		<0.003
3/25/2020	<0.003	0.00016 (J)	<0.003					
3/26/2020				<0.003			<0.003	
3/27/2020					<0.003			
3/30/2020						<0.003		
3/31/2020								<0.003

Time Series

Constituent: Beryllium (mg/L) Analysis Run 6/16/2020 10:39 AM View: New Wells

Plant Hammond Client: Southern Company Data: Hammond AP-1

	MW-27D	MW-28D	MW-29	MW-30D	MW-5	MW-6	MW-7
3/12/2019		<0.003	<0.003				
3/13/2019	<0.003				<0.003	<0.003	<0.003
4/2/2019		<0.003	<0.003				
4/3/2019					<0.003	<0.003	5.1E-05 (J)
4/4/2019	<0.003						
9/24/2019			<0.003	<0.003			
9/25/2019					<0.003		
9/26/2019	<0.003	<0.003				<0.003	<0.003
3/2/2020			<0.003		<0.003		
3/3/2020						<0.003	<0.003
3/4/2020	<0.003	0.00014 (J)		<0.003			
3/26/2020					<0.003		
3/27/2020		<0.003				<0.003	
3/30/2020			<0.003				<0.003
3/31/2020				<0.003			
4/2/2020	<0.003						

Time Series

Constituent: Boron (mg/L) Analysis Run 6/16/2020 10:39 AM View: New Wells

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	MW-19	MW-20	MW-24D	MW-25D	MW-26D
5/19/2016	0.0214 (J)	0.0321 (J)	<0.1					
7/11/2016	0.0142 (J)	0.0337 (J)						
7/12/2016			0.0074 (J)					
8/30/2016	0.0074 (J)	0.0173 (J)	<0.1					
10/19/2016	0.0224 (J)	0.0341 (J)	0.0085 (J)					
12/6/2016	0.0211 (J)	0.0326 (J)	0.0085 (J)					
1/24/2017	0.0165 (J)	0.0365 (J)	0.01 (J)					
3/21/2017	0.0187 (J)	0.0349 (J)	0.0079 (J)					
5/22/2017	0.0782	0.0475	0.0131 (J)					
10/3/2017	0.0198 (J)	0.0386 (J)	0.0097 (J)					
6/4/2018	0.02 (J)	0.036 (J)	0.017 (J)					
10/1/2018	0.013 (J)	0.035 (J)	0.0061 (J)					
4/1/2019			0.0066 (J)					
4/2/2019	0.016 (J)	0.034 (J)			0.11			
4/3/2019				0.63			0.37	1.5
4/8/2019						0.47 (J)		
9/23/2019	0.021 (J)	0.04 (J)	0.0081 (J)					
9/25/2019					0.091			
9/26/2019						0.49		2
9/27/2019				0.58			0.36	
3/25/2020	0.025 (J)	0.039 (J)	0.0096 (J)					
3/26/2020				1			0.44	
3/27/2020					0.12			
3/30/2020						0.51		
3/31/2020								1.8

Time Series

Constituent: Boron (mg/L) Analysis Run 6/16/2020 10:39 AM View: New Wells

Plant Hammond Client: Southern Company Data: Hammond AP-1

	MW-27D	MW-28D	MW-29	MW-30D	MW-40D	MW-5	MW-6	MW-7
4/2/2019		0.17	1.2					
4/3/2019						0.03 (J)	0.67	0.094
4/4/2019	0.12 (J)							
9/24/2019			1.2	0.69				
9/25/2019						0.11		
9/26/2019	0.14	0.6					0.93	0.26
3/26/2020						0.041 (J)		
3/27/2020		0.14					0.77	
3/30/2020			1.3					0.051 (J)
3/31/2020				0.9				
4/2/2020	0.13							
5/11/2020					0.093 (J)			
5/19/2020					0.13			

Time Series

Constituent: Cadmium (mg/L) Analysis Run 6/16/2020 10:39 AM View: New Wells

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	MW-19	MW-20	MW-24D	MW-25D	MW-26D
5/19/2016	<0.0025	<0.0025	<0.0025					
7/11/2016	<0.0025	<0.0025						
7/12/2016			<0.0025					
8/30/2016	<0.0025	<0.0025	<0.0025					
10/19/2016	<0.0025	<0.0025	<0.0025					
12/6/2016	<0.0025	<0.0025	<0.0025					
1/24/2017	<0.0025	0.0001 (J)	<0.0025					
3/21/2017	<0.0025	7E-05 (J)	<0.0025					
5/22/2017	<0.0025	0.0001 (J)	<0.0025					
4/2/2018	<0.0025	<0.0025						
4/3/2018			<0.0025					
3/12/2019	<0.0025	0.00013 (J)	<0.0025					
3/13/2019					<0.0025	<0.0025		<0.0025
3/14/2019				<0.0025			<0.0025	
4/1/2019			<0.0025					
4/2/2019	<0.0025	0.00015 (J)			<0.0025			
4/3/2019				<0.0025			<0.0025	<0.0025
4/8/2019						<0.0025		
9/23/2019	<0.0025	<0.0025	<0.0025					
9/25/2019					<0.0025			
9/26/2019						<0.0025		<0.0025
9/27/2019				0.00013 (J)			<0.0025	
3/2/2020	<0.0025	<0.0025	<0.0025		<0.0025			
3/3/2020							<0.0025	
3/4/2020				0.00026 (J)		<0.0025		<0.0025
3/25/2020	<0.0025	0.00014 (J)	<0.0025					
3/26/2020				0.00019 (J)			<0.0025	
3/27/2020					<0.0025			
3/30/2020						<0.0025		
3/31/2020								<0.0025

Time Series

Constituent: Cadmium (mg/L) Analysis Run 6/16/2020 10:39 AM View: New Wells

Plant Hammond Client: Southern Company Data: Hammond AP-1

	MW-27D	MW-28D	MW-29	MW-30D	MW-5	MW-6	MW-7
3/12/2019		<0.0025	<0.0025				
3/13/2019	<0.0025				<0.0025	<0.0025	<0.0025
4/2/2019		<0.0025	<0.0025				
4/3/2019					<0.0025	<0.0025	<0.0025
4/4/2019	<0.0025						
9/24/2019			<0.0025	<0.0025			
9/25/2019					<0.0025		
9/26/2019	<0.0025	<0.0025				<0.0025	<0.0025
3/2/2020			<0.0025		<0.0025		
3/3/2020						<0.0025	<0.0025
3/4/2020	<0.0025	<0.0025		<0.0025			
3/26/2020					<0.0025		
3/27/2020		<0.0025				<0.0025	
3/30/2020			<0.0025				<0.0025
3/31/2020				<0.0025			
4/2/2020	<0.0025						

Time Series

Constituent: Calcium (mg/L) Analysis Run 6/16/2020 10:39 AM View: New Wells

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	MW-19	MW-20	MW-24D	MW-25D	MW-26D
5/19/2016	138	22.9	76.2					
7/11/2016	97.2	22.3						
7/12/2016			61.5					
8/30/2016	97.5	26.4	65.1					
10/19/2016	99.2	21.7	73.2					
12/6/2016	105	18.2	74.9					
1/24/2017	95.7	18.5	69.6					
3/21/2017	106	18.6	75.7					
5/22/2017	107	17.8	71.5					
10/3/2017	102	20.2	76.3					
6/4/2018	124	19.1	73.4					
10/1/2018	108	20.5 (J)	80.9					
4/1/2019			80.5					
4/2/2019	132	22.5 (J)			109			
4/3/2019				74.9			25.4	122
4/8/2019						83		
9/23/2019	118	19.5	71					
9/25/2019					113			
9/26/2019						83.1		158
9/27/2019				90			26.4	
3/25/2020	127	23	89.8					
3/26/2020				171			27	
3/27/2020					126			
3/30/2020						84.4		
3/31/2020								155

Time Series

Constituent: Calcium (mg/L) Analysis Run 6/16/2020 10:39 AM View: New Wells

Plant Hammond Client: Southern Company Data: Hammond AP-1

	MW-27D	MW-28D	MW-29	MW-30D	MW-40D	MW-5	MW-6	MW-7
4/2/2019		64.6	131					
4/3/2019						82	178	50.2
4/4/2019	26.3							
9/24/2019			140	34.2				
9/25/2019						105		
9/26/2019	32.1	84					189	83.9
3/26/2020						89.6		
3/27/2020		53					186	
3/30/2020			148					31.1
3/31/2020				7.1				
4/2/2020	28.4							
4/9/2020				13.4				
5/11/2020					62.6			
5/19/2020					65.9			

Time Series

Constituent: Chloride (mg/L) Analysis Run 6/16/2020 10:39 AM View: New Wells

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	MW-19	MW-20	MW-24D	MW-25D	MW-26D
5/19/2016	9.94	6.14	5.93					
7/11/2016	6.3	5.9						
7/12/2016			6.2					
8/30/2016	6	6.2	6.4					
10/19/2016	5.8	6.1	6.5					
12/6/2016	5.4	6	7.2					
1/24/2017	5.2	6.1	6.4					
3/21/2017	4.6	5.9	7.5					
5/22/2017	4.6	5.9	6.5					
10/3/2017	5.6	6.3	6.5					
6/4/2018	13.1	6.1	6.3					
10/1/2018	6.6	6.4	6.4					
4/1/2019			6.5					
4/2/2019	20.3	5.8			27.5			
4/3/2019				19.5			32	90.6
4/8/2019						43.3		
9/23/2019	17.7	5.1	5.9					
9/25/2019					25.7			
9/26/2019						39.7		118
9/27/2019				46.2			36.2	
3/25/2020	20.4	5.2	6.1					
3/26/2020				64			34.6	
3/27/2020					28.8			
3/30/2020						37.4		
3/31/2020								98

Time Series

Constituent: Chloride (mg/L) Analysis Run 6/16/2020 10:39 AM View: New Wells

Plant Hammond Client: Southern Company Data: Hammond AP-1

	MW-27D	MW-28D	MW-29	MW-30D	MW-40D	MW-5	MW-6	MW-7
4/2/2019		44	80.9					
4/3/2019						1.8	60.9	5.6
4/4/2019	26.9							
9/24/2019			83.8	99.2				
9/25/2019						35.9		
9/26/2019	31.8	43.5					64.9	15.6
3/26/2020						0.73 (J)		
3/27/2020		33					48.6	
3/30/2020			71.2					1.5
3/31/2020				111				
4/2/2020	27.9							
4/9/2020				96				
5/11/2020					51.2			
5/19/2020					47.3			

Time Series

Constituent: Chromium (mg/L) Analysis Run 6/16/2020 10:39 AM View: New Wells

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	MW-19	MW-20	MW-24D	MW-25D	MW-26D
5/19/2016	<0.01	<0.01	<0.01					
7/11/2016	<0.01	<0.01						
7/12/2016			<0.01					
8/30/2016	<0.01	<0.01	<0.01					
10/19/2016	<0.01	<0.01	<0.01					
12/6/2016	<0.01	<0.01	<0.01					
1/24/2017	<0.01	<0.01	<0.01					
3/21/2017	0.0005 (J)	<0.01	<0.01					
5/22/2017	<0.01	<0.01	0.0007 (J)					
4/2/2018	<0.01	<0.01						
4/3/2018			<0.01					
3/12/2019	<0.01	<0.01	<0.01					
3/13/2019					<0.01	<0.01		<0.01
3/14/2019				<0.01			<0.01	
4/1/2019			<0.01					
4/2/2019	<0.01	0.0079 (J)			<0.01			
4/3/2019				<0.01			<0.01	<0.01
4/8/2019						<0.01		
9/23/2019	<0.01	0.00058 (J)	<0.01					
9/25/2019					<0.01			
9/26/2019						0.00042 (J)		0.00076 (J)
9/27/2019				<0.01			<0.01	
3/2/2020	<0.01	0.00041 (J)	<0.01		0.00071 (J)			
3/3/2020							<0.01	
3/4/2020				0.00066 (J)		<0.01		0.0028 (J)
3/25/2020	0.00072 (J)	<0.01	<0.01					
3/26/2020				0.00047 (J)			0.00061 (J)	
3/27/2020					0.00051 (J)			
3/30/2020						<0.01		
3/31/2020								0.001 (J)

Time Series

Constituent: Chromium (mg/L) Analysis Run 6/16/2020 10:39 AM View: New Wells

Plant Hammond Client: Southern Company Data: Hammond AP-1

	MW-27D	MW-28D	MW-29	MW-30D	MW-5	MW-6	MW-7
3/12/2019		<0.01	<0.01				
3/13/2019	<0.01				0.003 (J)	<0.01	<0.01
4/2/2019		<0.01	<0.01				
4/3/2019					0.003 (J)	<0.01	0.0023 (J)
4/4/2019	<0.01						
9/24/2019			<0.01	0.00041 (J)			
9/25/2019					0.0052 (J)		
9/26/2019	<0.01	0.00081 (J)				<0.01	0.0013 (J)
3/2/2020			<0.01		0.0042 (J)		
3/3/2020						0.00044 (J)	0.0015 (J)
3/4/2020	<0.01	0.0027 (J)		0.0013 (J)			
3/26/2020					0.0044 (J)		
3/27/2020		<0.01				0.00059 (J)	
3/30/2020			0.001 (J)				0.0021 (J)
3/31/2020				0.0007 (J)			
4/2/2020	<0.01						

Time Series

Constituent: Cobalt (mg/L) Analysis Run 6/16/2020 10:39 AM View: New Wells

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	MW-19	MW-20	MW-24D	MW-25D	MW-26D
5/19/2016	<0.005	0.0293	<0.005					
7/11/2016	0.0004 (J)	0.0267						
7/12/2016			<0.005					
8/30/2016	<0.005	0.028	<0.005					
10/19/2016	<0.005	0.0201	<0.005					
12/6/2016	<0.005	0.0184	<0.005					
1/24/2017	<0.005	0.0206	<0.005					
3/21/2017	<0.005	0.0251	<0.005					
5/22/2017	<0.005	0.0263	<0.005					
4/2/2018	<0.005	0.019						
4/3/2018			<0.005					
3/12/2019	<0.005	0.017	<0.005					
3/13/2019					0.0011 (J)	<0.005		<0.005
3/14/2019				0.025			<0.005	
4/1/2019			<0.005					
4/2/2019	<0.005	0.019			<0.005			
4/3/2019				0.036			<0.005	<0.005
4/8/2019						0.00025 (J)		
9/23/2019	<0.005	0.038	<0.005					
9/25/2019					<0.005			
9/26/2019						0.0011 (J)		0.00053 (J)
9/27/2019				0.033			<0.005	
3/2/2020	<0.005	0.019	<0.005		<0.005			
3/3/2020							<0.005	
3/4/2020				0.048		0.00056 (J)		<0.005
3/25/2020	<0.005	0.02	<0.005					
3/26/2020				0.045			<0.005	
3/27/2020					<0.005			
3/30/2020						<0.005		
3/31/2020								0.0003 (J)

Time Series

Constituent: Cobalt (mg/L) Analysis Run 6/16/2020 10:39 AM View: New Wells

Plant Hammond Client: Southern Company Data: Hammond AP-1

	MW-27D	MW-28D	MW-29	MW-30D	MW-5	MW-6	MW-7
3/12/2019		<0.005	0.00057 (J)				
3/13/2019	<0.005				<0.005	0.00055 (J)	<0.005
4/2/2019		<0.005	0.00084 (J)				
4/3/2019					<0.005	<0.005	<0.005
4/4/2019	9.1E-05 (J)						
9/24/2019			0.0015 (J)	<0.005			
9/25/2019					<0.005		
9/26/2019	<0.005	<0.005				0.00036 (J)	<0.005
3/2/2020			0.00067 (J)		<0.005		
3/3/2020						0.00094 (J)	<0.005
3/4/2020	0.00045 (J)	0.00093 (J)		<0.005			
3/26/2020					<0.005		
3/27/2020		<0.005				0.00059 (J)	
3/30/2020			0.00063 (J)				<0.005
3/31/2020				<0.005			
4/2/2020	<0.005						

Time Series

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 6/16/2020 10:39 AM View: New Wells

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	MW-19	MW-20	MW-24D	MW-25D	MW-26D
5/19/2016	0.397 (U)	0.627 (U)	0.342 (U)					
7/11/2016	0.738 (U)	1.38						
7/12/2016			0.499 (U)					
8/30/2016	0.581 (U)	1.05 (U)	0.976 (U)					
10/19/2016	0.213 (U)	1.11 (U)	0.626 (U)					
12/6/2016	0.444 (U)	0.741 (U)	0.805 (U)					
1/24/2017	0.373 (U)	0.908 (U)	0.336 (U)					
3/21/2017	0.816 (U)	0.567 (U)	0.358 (U)					
5/22/2017	0.554 (U)	0.638 (U)	0.744 (U)					
4/2/2018	0.405 (U)	0.761 (U)						
4/3/2018			0.684 (U)					
6/4/2018	1.13 (U)	0.975 (U)	0.0291 (U)					
10/1/2018	0.132 (U)	0.434 (U)	0.781 (U)					
3/12/2019	0.327 (U)	0.454 (U)	1.01 (U)					
3/13/2019					0.538 (U)	0.311 (U)		0.627 (U)
3/14/2019				0.347 (U)			1.28 (U)	
4/1/2019			0.76 (U)					
4/2/2019	0.739 (U)	0.651 (U)			1.02 (U)			
4/3/2019				0.884 (U)			0.662 (U)	0.205 (U)
4/8/2019						0.573 (U)		
9/25/2019					1.35 (U)			
9/26/2019						0.878 (U)		0.912 (U)
9/27/2019				0.534 (U)			0.945 (U)	
9/30/2019	0.306 (U)	1.04 (U)	0.384 (U)					
3/2/2020	0.61 (U)	1.58	0.249 (U)		0.653 (U)			
3/3/2020							1.36	
3/4/2020				1.04		0.333 (U)		1.27 (U)
3/25/2020	4.36	0.621 (U)	0.833 (U)					
3/26/2020				1.1 (U)			0.793 (U)	
3/27/2020					0.1 (U)			
3/30/2020						0.107 (U)		
3/31/2020								1.65

Time Series

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 6/16/2020 10:39 AM View: New Wells

Plant Hammond Client: Southern Company Data: Hammond AP-1

	MW-27D	MW-28D	MW-29	MW-30D	MW-5	MW-6	MW-7
3/12/2019		0.926 (U)	1.37				
3/13/2019	1.81				0.621 (U)	2.07	1.23
4/2/2019		0.479 (U)	0.62 (U)				
4/3/2019					0.932 (U)	0.872 (U)	1.05 (U)
4/4/2019	1.33						
9/24/2019			0.675 (U)	1.16			
9/25/2019					0.798 (U)		
9/26/2019	0.974 (U)	0.997 (U)				0.745 (U)	0.947 (U)
3/2/2020			0.413 (U)		0.964 (U)		
3/3/2020						0.757 (U)	1.15
3/4/2020	1.12	1.31		0.592 (U)			
3/26/2020					1.1		
3/27/2020		1.59				0.758 (U)	
3/30/2020			0.885 (U)				0.83 (U)
3/31/2020				1.27 (U)			
4/2/2020	2.48						

Time Series

Constituent: Fluoride (mg/L) Analysis Run 6/16/2020 10:39 AM View: New Wells

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	MW-19	MW-20	MW-24D	MW-25D	MW-26D
5/19/2016	0.105 (J)	0.0303 (J)	0.0513 (J)					
7/11/2016	0.16 (J)	0.05 (J)						
7/12/2016			0.12 (J)					
8/30/2016	0.09 (J)	0.06 (J)	0.09 (J)					
10/19/2016	0.1 (J)	0.04 (J)	0.1 (J)					
12/6/2016	0.11 (J)	0.36	0.21 (J)					
1/24/2017	0.09 (J)	<0.3	0.06 (J)					
3/21/2017	0.13 (J)	<0.3	0.005 (J)					
5/22/2017	0.12 (J)	<0.3	0.05 (J)					
10/3/2017	0.13 (J)	<0.3	0.13 (J)					
4/2/2018	<0.3	<0.3						
4/3/2018			<0.3					
6/4/2018	0.074 (J)	<0.3	<0.3					
10/1/2018	<0.3	<0.3	<0.3					
3/12/2019	0.29 (J)	0.038 (J)	0.072 (J)					
3/13/2019					0.072 (J)	0.074 (J)		0.052 (J)
3/14/2019				0.35			2.2	
4/1/2019			0.029 (J)					
4/2/2019	0.1 (J)	0.071 (J)			<0.3			
4/3/2019				0.19 (J)			1.6	0.044 (J)
4/8/2019						0.048 (J)		
9/23/2019	0.078 (J)	<0.3	<0.3					
9/25/2019					<0.3			
9/26/2019						0.18 (J)		0.19 (J)
9/27/2019				0.53			1.5	
3/2/2020	0.076 (J)	<0.3	<0.3		<0.3			
3/3/2020							1.4	
3/4/2020				0.096 (J)		0.051 (J)		0.052 (J)
3/25/2020	0.098 (J)	<0.3	<0.3					
3/26/2020				0.12 (J)			1.6	
3/27/2020					<0.3			
3/30/2020						0.064 (J)		
3/31/2020								<0.3

Time Series

Constituent: Fluoride (mg/L) Analysis Run 6/16/2020 10:39 AM View: New Wells

Plant Hammond Client: Southern Company Data: Hammond AP-1

	MW-27D	MW-28D	MW-29	MW-30D	MW-40D	MW-5	MW-6	MW-7
3/12/2019		0.24 (J)	0.07 (J)					
3/13/2019	0.28 (J)					0.1 (J)	0.19 (J)	0.069 (J)
4/2/2019		0.18 (J)	0.045 (J)					
4/3/2019						0.049 (J)	0.15 (J)	<0.3
4/4/2019	0.26 (J)							
9/24/2019			0.18 (J)	5.7				
9/25/2019						0.076 (J)		
9/26/2019	0.42	0.22 (J)					0.19 (J)	0.17 (J)
11/26/2019				10.3				
3/2/2020			<0.3			0.065 (J)		
3/3/2020							0.062 (J)	<0.3
3/4/2020	0.25 (J)	0.26 (J)		9.4				
3/26/2020						0.082 (J)		
3/27/2020		0.26 (J)					<0.3	
3/30/2020			<0.3					<0.3
3/31/2020				10.5				
4/2/2020	0.24 (J)							
5/11/2020					0.88			
5/19/2020					1.3			

Time Series

Constituent: Lead (mg/L) Analysis Run 6/16/2020 10:39 AM View: New Wells

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	MW-19	MW-20	MW-24D	MW-25D	MW-26D
5/19/2016	<0.005	<0.005	<0.005					
7/11/2016	<0.005	<0.005						
7/12/2016			0.0001 (J)					
8/30/2016	<0.005	<0.005	<0.005					
10/19/2016	<0.005	<0.005	<0.005					
12/6/2016	<0.005	<0.005	<0.005					
1/24/2017	<0.005	<0.005	<0.005					
3/21/2017	<0.005	6E-05 (J)	0.0001 (J)					
5/22/2017	<0.005	9E-05 (J)	<0.005					
4/2/2018	<0.005	<0.005						
4/3/2018			<0.005					
3/12/2019	<0.005	<0.005	<0.005					
3/13/2019					<0.005	<0.005		<0.005
3/14/2019				<0.005			<0.005	
9/23/2019	7.8E-05 (J)	9.2E-05 (J)	<0.005					
3/2/2020	4.8E-05 (J)	9.5E-05 (J)	<0.005		0.00017 (J)			
3/3/2020							<0.005	
3/4/2020				0.00011 (J)		0.00019 (J)		<0.005
3/25/2020	<0.005	0.00011 (J)	<0.005					
3/26/2020				<0.005			<0.005	
3/27/2020					0.00013 (J)			
3/30/2020						6.4E-05 (J)		
3/31/2020								0.0001 (J)

Time Series

Constituent: Lead (mg/L) Analysis Run 6/16/2020 10:39 AM View: New Wells

Plant Hammond Client: Southern Company Data: Hammond AP-1

	MW-27D	MW-28D	MW-29	MW-30D	MW-5	MW-6	MW-7
3/12/2019		<0.005	<0.005				
3/13/2019	<0.005				<0.005	<0.005	<0.005
3/2/2020			9E-05 (J)		4.7E-05 (J)		
3/3/2020						0.00013 (J)	6.2E-05 (J)
3/4/2020	<0.005	0.001 (J)		0.00041 (J)			
3/26/2020					<0.005		
3/27/2020		6.2E-05 (J)				<0.005	
3/30/2020			0.00011 (J)				<0.005
3/31/2020				6.7E-05 (J)			
4/2/2020	0.00013 (J)						

Time Series

Constituent: Lithium (mg/L) Analysis Run 6/16/2020 10:39 AM View: New Wells

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	MW-19	MW-20	MW-24D	MW-25D	MW-26D
5/19/2016	<0.03	<0.03	<0.03					
7/11/2016	<0.03	0.0014 (J)						
7/12/2016			0.0024 (J)					
8/30/2016	<0.03	<0.03	0.0025 (J)					
10/19/2016	<0.03	<0.03	0.003 (J)					
12/6/2016	<0.03	<0.03	0.0033 (J)					
1/24/2017	<0.03	<0.03	0.003 (J)					
3/21/2017	<0.03	0.0012 (J)	0.0034 (J)					
5/22/2017	<0.03	<0.03	0.003 (J)					
4/2/2018	<0.03	0.0015 (J)						
4/3/2018			0.003 (J)					
6/4/2018	0.001 (J)	0.0016 (J)	0.0027 (J)					
10/1/2018	0.00099 (J)	0.0013 (J)	0.0032 (J)					
3/12/2019	0.001 (J)	0.0018 (J)	0.0032 (J)					
3/13/2019					0.0016 (J)	0.0029 (J)		0.0033 (J)
3/14/2019				0.0089 (J)			0.05	
4/1/2019			0.0032 (J)					
4/2/2019	0.001 (J)	0.0018 (J)			0.0015 (J)			
4/3/2019				0.0061 (J)			0.047 (J)	0.0034 (J)
4/8/2019						0.0027 (J)		
9/23/2019	0.0011 (J)	0.0016 (J)	0.0029 (J)					
9/25/2019					<0.03			
9/26/2019						0.003 (J)		0.0041 (J)
9/27/2019				0.013 (J)			0.047	
3/2/2020	0.0012 (J)	0.0017 (J)	0.0037 (J)		0.00082 (J)			
3/3/2020							0.05	
3/4/2020				0.01 (J)		0.0026 (J)		0.03 (J)
3/25/2020	0.00083 (J)	0.0017 (J)	0.0035 (J)					
3/26/2020				0.013 (J)			0.054	
3/27/2020					0.0012 (J)			
3/30/2020						0.0027 (J)		
3/31/2020								0.0036 (J)

Time Series

Constituent: Lithium (mg/L) Analysis Run 6/16/2020 10:39 AM View: New Wells

Plant Hammond Client: Southern Company Data: Hammond AP-1

	MW-27D	MW-28D	MW-29	MW-30D	MW-5	MW-6	MW-7
3/12/2019		0.011 (J)	0.0024 (J)				
3/13/2019	0.0097 (J)				<0.03	<0.03	<0.03
4/2/2019		0.0052 (J)	0.0021 (J)				
4/3/2019					<0.03	<0.03	<0.03
4/4/2019	0.0069 (J)						
9/24/2019			0.0022 (J)	0.16			
9/25/2019					<0.03		
9/26/2019	0.0055 (J)	0.0055 (J)				<0.03	<0.03
11/26/2019				0.23			
3/2/2020			0.0025 (J)		<0.03		
3/3/2020						<0.03	<0.03
3/4/2020	0.0047 (J)	0.015 (J)		0.18			
3/26/2020					<0.03		
3/27/2020		0.014 (J)				<0.03	
3/30/2020			0.0023 (J)				<0.03
3/31/2020				0.25			
4/2/2020	0.0068 (J)						

Time Series

Constituent: Mercury (mg/L) Analysis Run 6/16/2020 10:39 AM View: New Wells

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	MW-19	MW-20	MW-24D	MW-25D	MW-26D
5/19/2016	<0.0005	<0.0005	<0.0005					
7/11/2016	<0.0005	<0.0005						
7/12/2016			<0.0005					
8/30/2016	4E-05 (J)	4E-05 (J)	<0.0005					
10/19/2016	<0.0005	<0.0005	<0.0005					
12/6/2016	<0.0005	<0.0005	<0.0005					
1/24/2017	<0.0005	<0.0005	<0.0005					
3/21/2017	<0.0005	<0.0005	<0.0005					
5/22/2017	<0.0005	<0.0005	<0.0005					
4/2/2018	<0.0005	<0.0005						
4/3/2018			<0.0005					
3/12/2019	<0.0005	<0.0005	<0.0005					
3/13/2019					<0.0005	<0.0005		<0.0005
3/14/2019				<0.0005			<0.0005	
3/2/2020	<0.0005	<0.0005	<0.0005		<0.0005			
3/3/2020							<0.0005	
3/4/2020				<0.0005		<0.0005		<0.0005

Time Series

Constituent: Mercury (mg/L) Analysis Run 6/16/2020 10:39 AM View: New Wells

Plant Hammond Client: Southern Company Data: Hammond AP-1

	MW-27D	MW-28D	MW-29	MW-30D	MW-5	MW-6	MW-7
3/12/2019		<0.0005	<0.0005				
3/13/2019	<0.0005				<0.0005	<0.0005	<0.0005
3/2/2020			<0.0005		<0.0005		
3/3/2020						<0.0005	<0.0005
3/4/2020	<0.0005	<0.0005		<0.0005			

Time Series

Constituent: Molybdenum (mg/L) Analysis Run 6/16/2020 10:39 AM View: New Wells

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	MW-19	MW-20	MW-24D	MW-25D	MW-26D
5/19/2016	<0.01	<0.01	<0.01					
7/11/2016	<0.01	<0.01						
7/12/2016			<0.01					
8/30/2016	<0.01	<0.01	<0.01					
10/19/2016	<0.01	<0.01	<0.01					
12/6/2016	<0.01	<0.01	<0.01					
1/24/2017	<0.01	<0.01	<0.01					
3/21/2017	<0.01	<0.01	<0.01					
5/22/2017	<0.01	<0.01	<0.01					
4/2/2018	<0.01	<0.01						
4/3/2018			<0.01					
6/4/2018	<0.01	<0.01	<0.01					
10/1/2018	<0.01	<0.01	<0.01					
3/12/2019	<0.01	<0.01	<0.01					
3/13/2019					<0.01	<0.01		<0.01
3/14/2019				0.057			0.0022 (J)	
4/1/2019			<0.01					
4/2/2019	<0.01	<0.01			<0.01			
4/3/2019				0.04			<0.01	0.0083 (J)
4/8/2019						0.00027 (J)		
9/23/2019	<0.01	<0.01	<0.01					
9/25/2019					<0.01			
9/26/2019						<0.01		0.017
9/27/2019				0.063			<0.01	
11/25/2019								0.02
3/2/2020	<0.01	<0.01	<0.01		<0.01			
3/3/2020							<0.01	
3/4/2020				0.032		<0.01		0.0074 (J)
3/25/2020	<0.01	<0.01	<0.01					
3/26/2020				0.033			<0.01	
3/27/2020					<0.01			
3/30/2020						<0.01		
3/31/2020								0.0093 (J)

Time Series

Constituent: Molybdenum (mg/L) Analysis Run 6/16/2020 10:39 AM View: New Wells

Plant Hammond Client: Southern Company Data: Hammond AP-1

	MW-27D	MW-28D	MW-29	MW-30D	MW-40D	MW-5	MW-6	MW-7
3/12/2019		0.013	0.0038 (J)					
3/13/2019	<0.01					<0.01	0.0021 (J)	<0.01
4/2/2019		0.028	0.0028 (J)					
4/3/2019						<0.01	0.0021 (J)	<0.01
4/4/2019	0.0018 (J)							
7/8/2019				0.022				
9/24/2019			0.0021 (J)	0.036				
9/25/2019						<0.01		
9/26/2019	0.0042 (J)	0.017					0.0026 (J)	0.0033 (J)
11/26/2019				0.041				
3/2/2020			0.0025 (J)			<0.01		
3/3/2020							0.0022 (J)	<0.01
3/4/2020	0.0058 (J)	0.009 (J)		0.021				
3/26/2020						<0.01		
3/27/2020		0.0068 (J)					0.0026 (J)	
3/30/2020			0.0029 (J)					<0.01
3/31/2020				0.015				
4/2/2020	0.003 (J)							
5/11/2020					0.014			
5/19/2020					0.014			

Time Series

Constituent: pH (s.u.) Analysis Run 6/16/2020 10:39 AM View: New Wells

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	MW-19	MW-20	MW-24D	MW-25D	MW-26D
5/19/2016	7.27	5.81	7.45					
7/11/2016	7.06	5.68						
7/12/2016			7.32					
8/30/2016	7.28	5.63	7.43					
10/19/2016	7.02	5.46	7.03					
12/6/2016	7.09	5.38	7.08					
1/24/2017	7.2	5.37	7.39					
3/21/2017	7.01	4.9	6.83					
5/22/2017	7.11	5.2	7.02					
10/3/2017	7.21	5.3	7.47					
4/2/2018	7.1	5.4						
4/3/2018			7.38					
6/4/2018	7.06	5.27	7.38					
10/1/2018	7.09	5.31	7.13					
3/12/2019	7.03	5.42	7.29					
3/13/2019					6.75	7.58		7.4
3/14/2019				6.48			7.67	
4/1/2019			7.16					
4/2/2019	6.86	5.41			6.7			
4/3/2019				6.14			7.56	7.25
4/8/2019						7.47		
9/23/2019	7.02	5.33	7.3					
9/25/2019					6.75			
9/26/2019						7.5		7.16
9/27/2019				6.33			7.57	
3/2/2020	7.1	5.43	7.12		6.98			
3/3/2020							7.59	
3/4/2020				6.29		7.47		7.14
3/25/2020	6.95	5.36	7.4					
3/26/2020				6.28			7.57	
3/27/2020					6.75			
3/30/2020						7.49		
3/31/2020								7.2

Time Series

Constituent: pH (s.u.) Analysis Run 6/16/2020 10:39 AM View: New Wells

Plant Hammond Client: Southern Company Data: Hammond AP-1

	MW-27D	MW-28D	MW-29	MW-30D	MW-40D	MW-5	MW-6	MW-7
3/12/2019		7.46	7.2					
3/13/2019	7.78					6.16	6.86	6.37
4/2/2019		7.4	6.91					
4/3/2019						5.96	6.77	6.19
4/4/2019	7.63							
9/24/2019			6.86	7.85				
9/25/2019						6.37		
9/26/2019	7.46	7.4					6.76	6.5
3/2/2020			7.13			6.12		
3/3/2020							6.78	6.1
3/4/2020	8.33	7.55		8.12				
3/26/2020						6.14		
3/27/2020		7.42					6.82	
3/30/2020			7.07					6.06
3/31/2020				7.95				
4/2/2020	8.11							
4/9/2020				8.27				
5/11/2020					7.77			

Time Series

Constituent: Selenium (mg/L) Analysis Run 6/16/2020 10:39 AM View: New Wells

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	MW-19	MW-20	MW-24D	MW-25D	MW-26D
5/19/2016	<0.01	<0.01	<0.01					
7/11/2016	<0.01	<0.01						
7/12/2016			<0.01					
8/30/2016	<0.01	<0.01	<0.01					
10/19/2016	<0.01	<0.01	<0.01					
12/6/2016	<0.01	<0.01	<0.01					
1/24/2017	<0.01	<0.01	<0.01					
3/21/2017	<0.01	<0.01	<0.01					
5/22/2017	<0.01	<0.01	<0.01					
4/2/2018	<0.01	<0.01						
4/3/2018			<0.01					
6/4/2018	<0.01	<0.01	<0.01					
10/1/2018	<0.01	<0.01	<0.01					
3/12/2019	<0.01	<0.01	<0.01					
3/13/2019					<0.01	<0.01		<0.01
3/14/2019				<0.01			<0.01	
4/1/2019			<0.01					
4/2/2019	<0.01	<0.01			<0.01			
4/3/2019				0.007 (J)			<0.01	<0.01
4/8/2019						<0.01		
9/23/2019	<0.01	<0.01	<0.01					
9/25/2019					<0.01			
9/26/2019						<0.01		<0.01
9/27/2019				0.0013 (J)			<0.01	
3/2/2020	<0.01	<0.01	<0.01		<0.01			
3/3/2020							<0.01	
3/4/2020				0.0044 (J)		<0.01		<0.01
3/25/2020	<0.01	<0.01	<0.01					
3/26/2020				0.0053 (J)			<0.01	
3/27/2020					<0.01			
3/30/2020						<0.01		
3/31/2020								<0.01

Time Series

Constituent: Selenium (mg/L) Analysis Run 6/16/2020 10:39 AM View: New Wells

Plant Hammond Client: Southern Company Data: Hammond AP-1

	MW-27D	MW-28D	MW-29	MW-30D	MW-5	MW-6	MW-7
3/12/2019		<0.01	<0.01				
3/13/2019	<0.01				0.0033 (J)	<0.01	0.0016 (J)
4/2/2019		<0.01	<0.01				
4/3/2019					0.0027 (J)	<0.01	<0.01
4/4/2019	0.00012 (J)						
9/24/2019			<0.01	<0.01			
9/25/2019					0.0021 (J)		
9/26/2019	<0.01	<0.01				<0.01	0.0014 (J)
3/2/2020			<0.01		0.0041 (J)		
3/3/2020						<0.01	<0.01
3/4/2020	<0.01	<0.01		<0.01			
3/26/2020					0.0039 (J)		
3/27/2020		<0.01				<0.01	
3/30/2020			<0.01				0.0014 (J)
3/31/2020				<0.01			
4/2/2020	<0.01						

Time Series

Constituent: Sulfate (mg/L) Analysis Run 6/16/2020 10:39 AM View: New Wells

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	MW-19	MW-20	MW-24D	MW-25D	MW-26D
5/19/2016	66.9	48.6	42.3					
7/11/2016	41	45						
7/12/2016			44					
8/30/2016	36	42	40					
10/19/2016	46	44	43					
12/6/2016	59	44	43					
1/24/2017	46	46	48					
3/21/2017	63	46	45					
5/22/2017	77	48	46					
10/3/2017	42	47	48					
6/4/2018	71.8	47.8	46.6					
10/1/2018	49.1	48.1	48.6					
4/1/2019			50.4					
4/2/2019	84.3	48.7			122			
4/3/2019				105			53	131
4/8/2019						97.3		
9/23/2019	70.2	47.2	43.9					
9/25/2019					112			
9/26/2019						91		189
9/27/2019				170			48	
3/25/2020	85.9	46.3	50.5					
3/26/2020				310			32.3	
3/27/2020					114			
3/30/2020						84.9		
3/31/2020								129

Time Series

Constituent: Sulfate (mg/L) Analysis Run 6/16/2020 10:39 AM View: New Wells

Plant Hammond Client: Southern Company Data: Hammond AP-1

	MW-27D	MW-28D	MW-29	MW-30D	MW-40D	MW-5	MW-6	MW-7
4/2/2019		67.7	151					
4/3/2019						218	228	75.3
4/4/2019	11.8							
9/24/2019			154	756				
9/25/2019						134		
9/26/2019	15.6	96.2					225	129
3/26/2020						176		
3/27/2020		36					204	
3/30/2020			130					46.2
3/31/2020				139				
4/2/2020	13.3							
4/9/2020				399				
5/11/2020					58.9			
5/19/2020					54			

Time Series

Constituent: Thallium (mg/L) Analysis Run 6/16/2020 10:39 AM View: New Wells

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	MW-19	MW-20	MW-24D	MW-25D	MW-26D
5/19/2016	<0.001	<0.001	<0.001					
7/11/2016	<0.001	<0.001						
7/12/2016			<0.001					
8/30/2016	<0.001	<0.001	<0.001					
10/19/2016	<0.001	<0.001	<0.001					
12/6/2016	<0.001	<0.001	<0.001					
1/24/2017	<0.001	<0.001	<0.001					
3/21/2017	<0.001	3E-05 (J)	<0.001					
5/22/2017	<0.001	<0.001	<0.001					
4/2/2018	<0.001	<0.001						
4/3/2018			<0.001					
6/4/2018	<0.001	<0.001	<0.001					
10/1/2018	<0.001	<0.001	<0.001					
3/12/2019	<0.001	<0.001	<0.001					
3/13/2019					<0.001	<0.001		<0.001
3/14/2019				<0.001			<0.001	
4/1/2019			<0.001					
4/2/2019	<0.001	<0.001			<0.001			
4/3/2019				<0.001			<0.001	<0.001
4/8/2019						<0.001		
9/23/2019	<0.001	<0.001	<0.001					
9/25/2019					<0.001			
9/26/2019						<0.001		<0.001
9/27/2019				0.00027 (J)			<0.001	
3/2/2020	<0.001	<0.001	<0.001		<0.001			
3/3/2020							<0.001	
3/4/2020				0.00026 (J)		<0.001		<0.001
3/25/2020	<0.001	<0.001	<0.001					
3/26/2020				0.00026 (J)			<0.001	
3/27/2020					<0.001			
3/30/2020						<0.001		
3/31/2020								<0.001

Time Series

Constituent: Thallium (mg/L) Analysis Run 6/16/2020 10:39 AM View: New Wells

Plant Hammond Client: Southern Company Data: Hammond AP-1

	MW-27D	MW-28D	MW-29	MW-30D	MW-5	MW-6	MW-7
3/12/2019		<0.001	<0.001				
3/13/2019	<0.001				<0.001	<0.001	<0.001
4/2/2019		<0.001	<0.001				
4/3/2019					<0.001	<0.001	<0.001
4/4/2019	<0.001						
9/24/2019			6.4E-05 (J)	<0.001			
9/25/2019					<0.001		
9/26/2019	<0.001	<0.001				<0.001	<0.001
3/2/2020			<0.001		<0.001		
3/3/2020						8.2E-05 (J)	<0.001
3/4/2020	<0.001	9.2E-05 (J)		<0.001			
3/26/2020					<0.001		
3/27/2020		<0.001				<0.001	
3/30/2020			<0.001				<0.001
3/31/2020				<0.001			
4/2/2020	<0.001						

Time Series

Constituent: Total Dissolved Solids (mg/L) Analysis Run 6/16/2020 10:39 AM View: New Wells

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	MW-19	MW-20	MW-24D	MW-25D	MW-26D
5/19/2016	421	143	267					
7/11/2016	363	125						
7/12/2016			249					
8/30/2016	330	168	254					
10/19/2016	380	176	357					
12/6/2016	377	145	285					
1/24/2017	342	129	300					
3/21/2017	340	103	288					
5/22/2017	338	92	263					
10/3/2017	343	127	300					
6/4/2018	415	140	266					
10/1/2018	354	135	291					
4/1/2019			284					
4/2/2019	452	133			435			
4/3/2019				310			15 (J)	493
4/8/2019						323		
9/23/2019	442	129	268					
9/25/2019					461			
9/26/2019						360		643
9/27/2019				442			409	
3/25/2020	496	138	284					
3/26/2020				626			385	
3/27/2020					429			
3/30/2020						280		
3/31/2020								623

Time Series

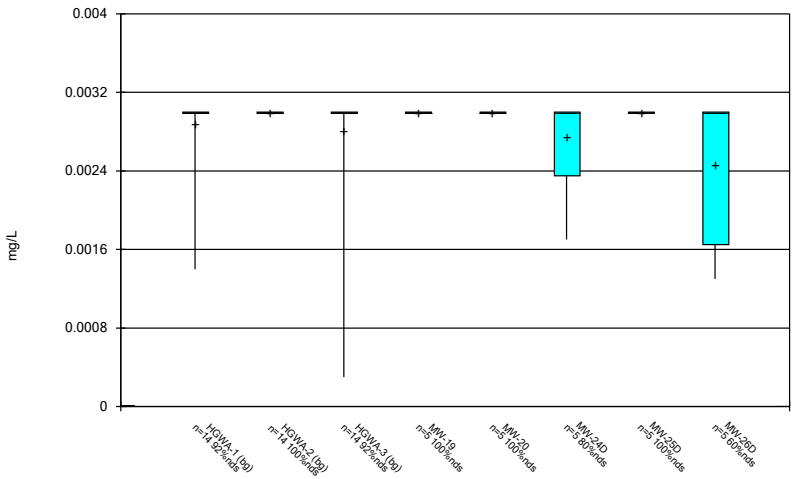
Constituent: Total Dissolved Solids (mg/L) Analysis Run 6/16/2020 10:39 AM View: New Wells

Plant Hammond Client: Southern Company Data: Hammond AP-1

	MW-27D	MW-28D	MW-29	MW-30D	MW-40D	MW-5	MW-6	MW-7
4/2/2019		350	548					
4/3/2019						396	437	213
4/4/2019	203							
9/24/2019			603	1970				
9/25/2019						460		
9/26/2019	265	418					735	383
3/26/2020						385		
3/27/2020		287					676	
3/30/2020			552					142
3/31/2020				1130				
4/2/2020	224							
5/11/2020					350			
5/19/2020					621			

FIGURE B.

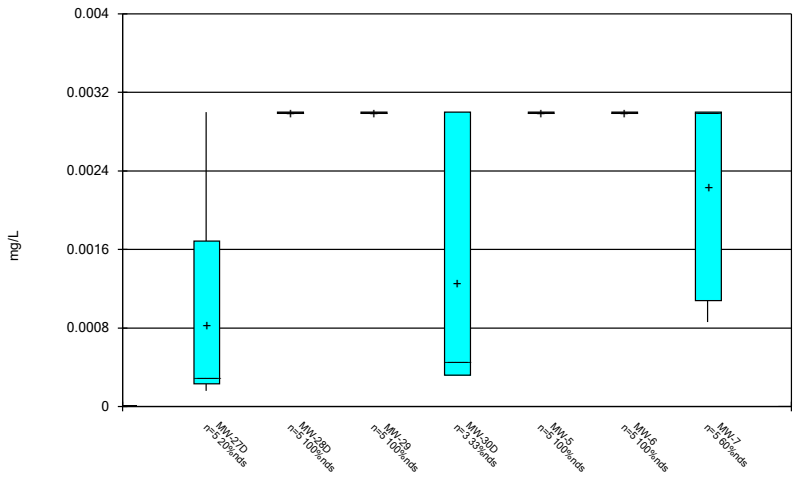
Box & Whiskers Plot



Constituent: Antimony Analysis Run 6/16/2020 10:42 AM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

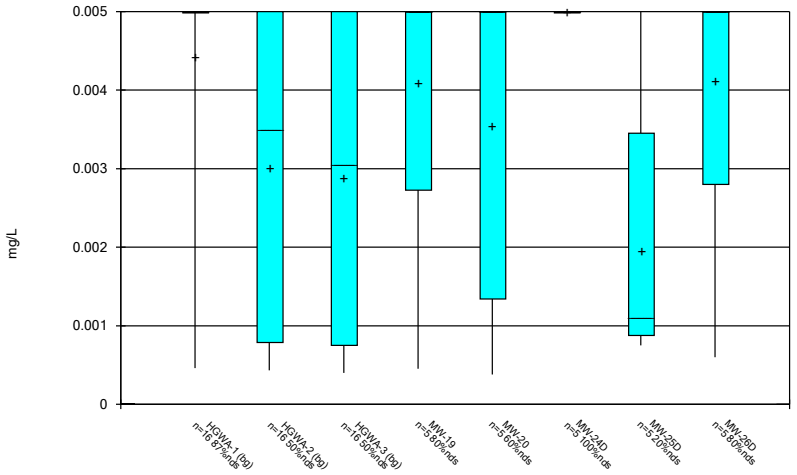
Box & Whiskers Plot



Constituent: Antimony Analysis Run 6/16/2020 10:42 AM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

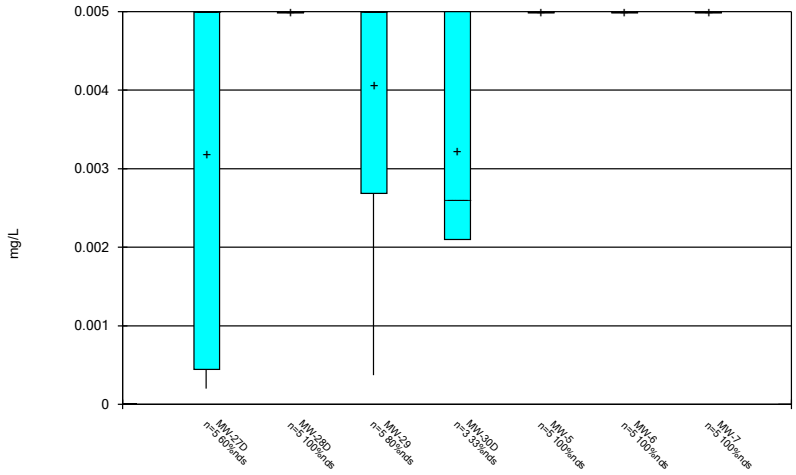
Box & Whiskers Plot



Constituent: Arsenic Analysis Run 6/16/2020 10:42 AM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

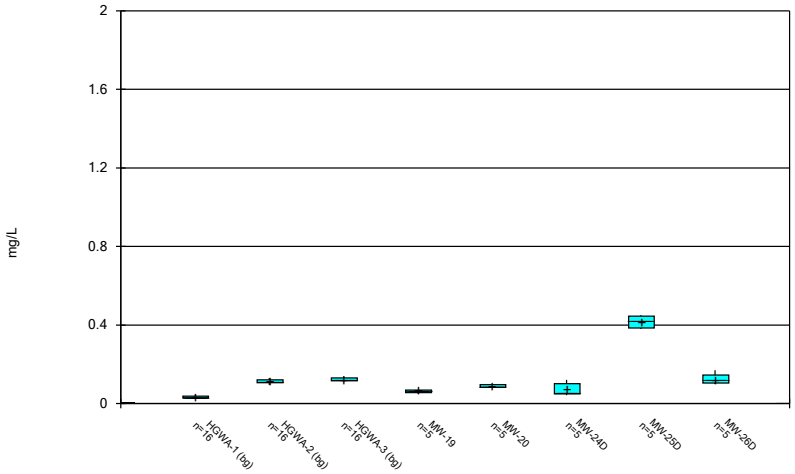
Box & Whiskers Plot



Constituent: Arsenic Analysis Run 6/16/2020 10:42 AM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

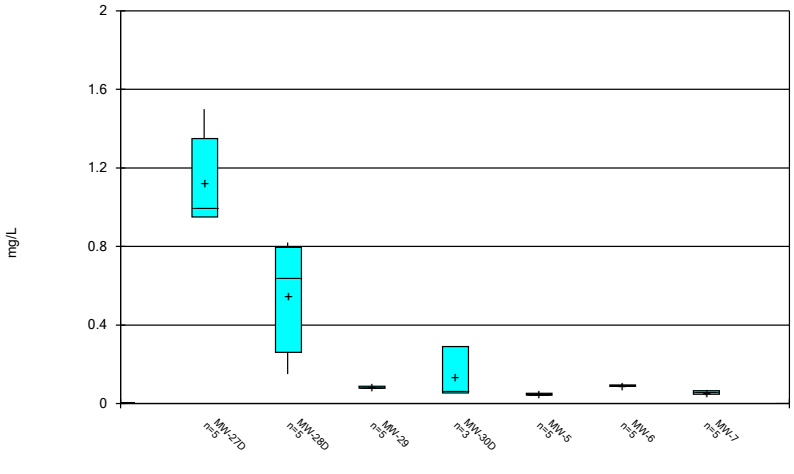
Box & Whiskers Plot



Constituent: Barium Analysis Run 6/16/2020 10:42 AM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

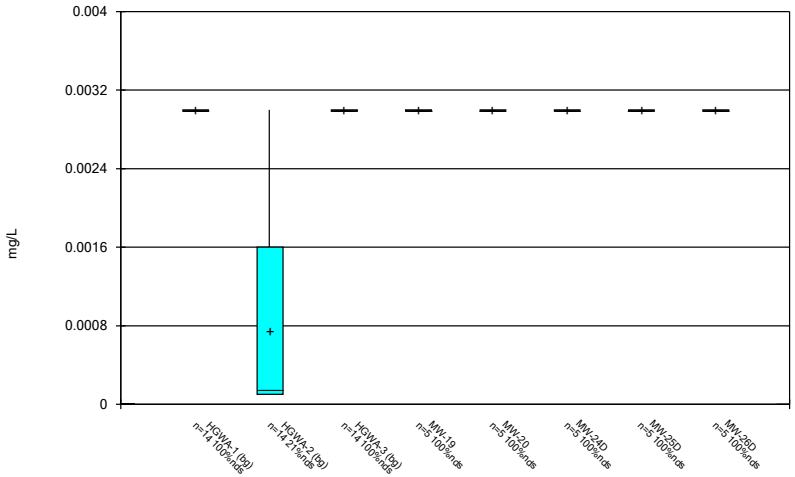
Box & Whiskers Plot



Constituent: Barium Analysis Run 6/16/2020 10:42 AM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

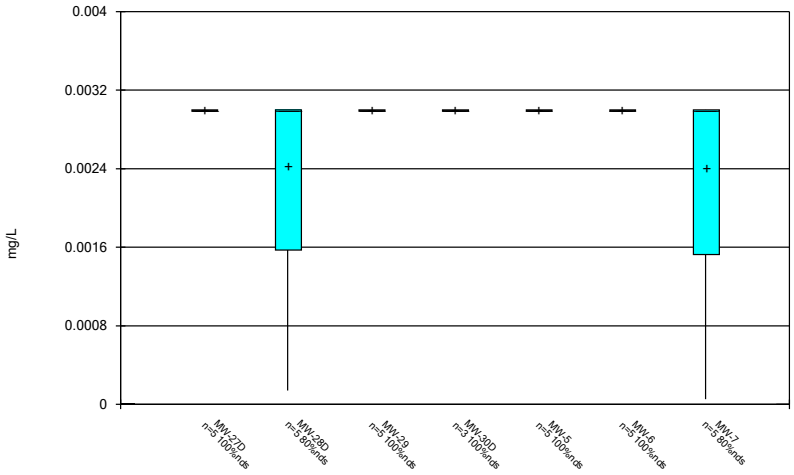
Box & Whiskers Plot



Constituent: Beryllium Analysis Run 6/16/2020 10:42 AM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

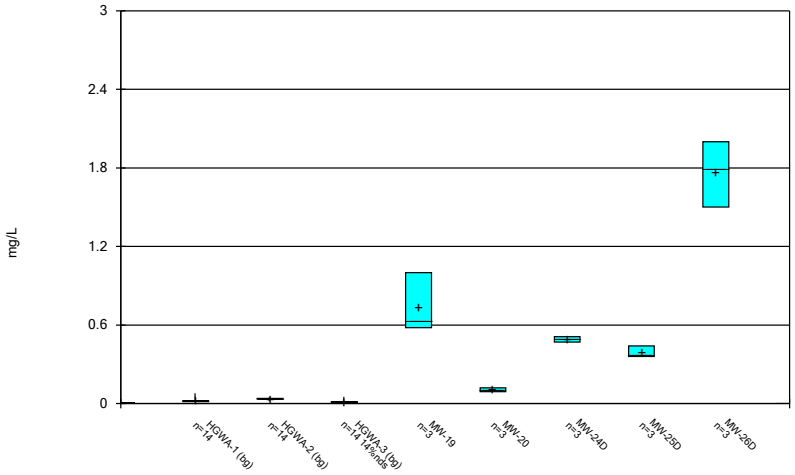
Box & Whiskers Plot



Constituent: Beryllium Analysis Run 6/16/2020 10:42 AM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

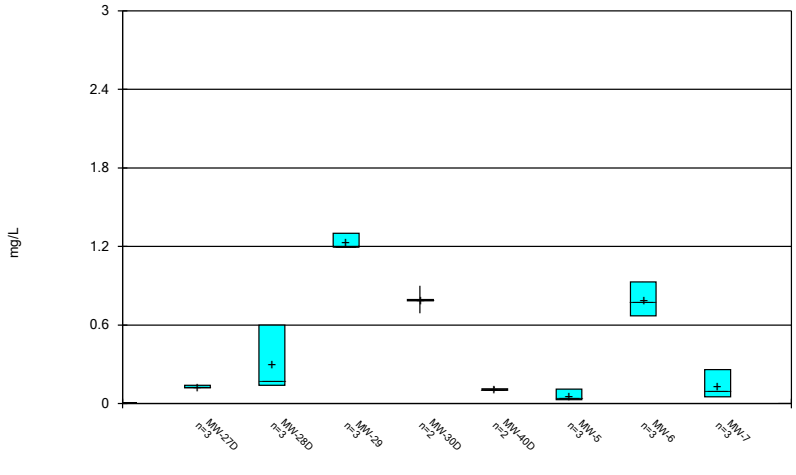
Box & Whiskers Plot



Constituent: Boron Analysis Run 6/16/2020 10:42 AM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

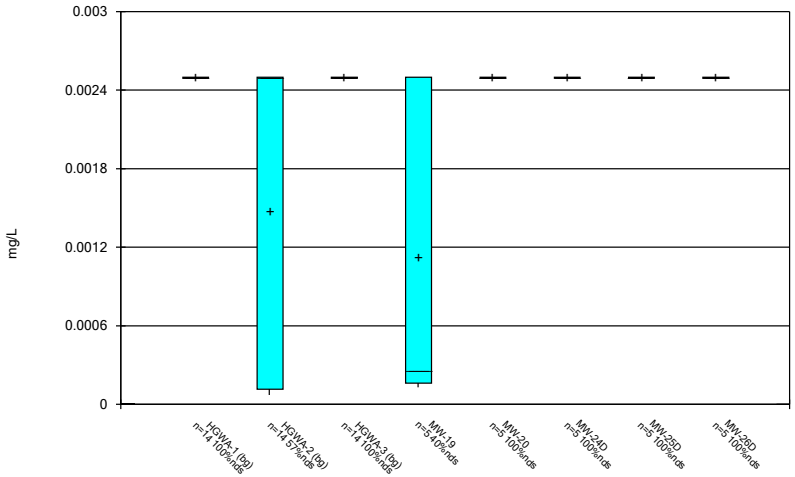
Box & Whiskers Plot



Constituent: Boron Analysis Run 6/16/2020 10:42 AM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

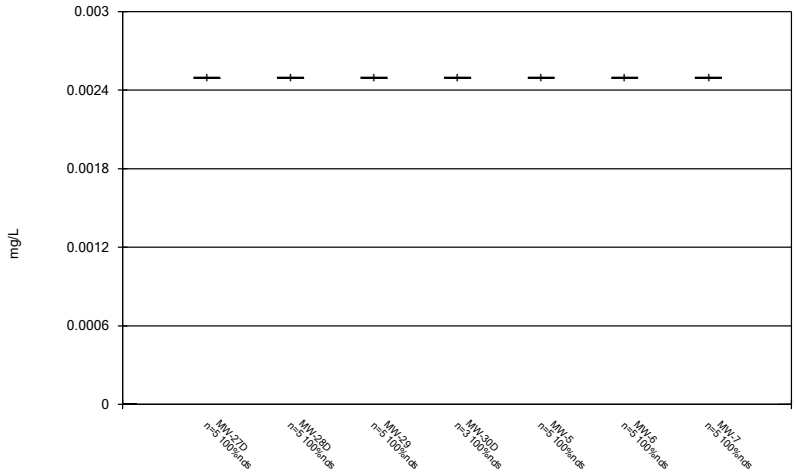
Box & Whiskers Plot



Constituent: Cadmium Analysis Run 6/16/2020 10:42 AM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

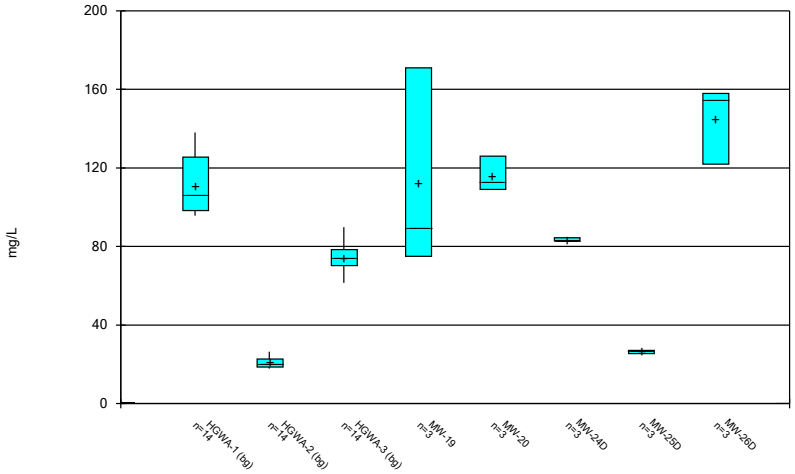
Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

Box & Whiskers Plot



Constituent: Cadmium Analysis Run 6/16/2020 10:42 AM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

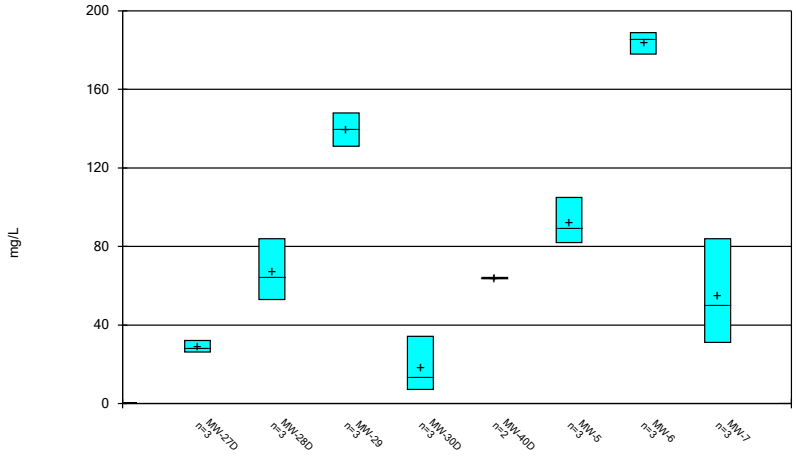
Box & Whiskers Plot



Constituent: Calcium Analysis Run 6/16/2020 10:42 AM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

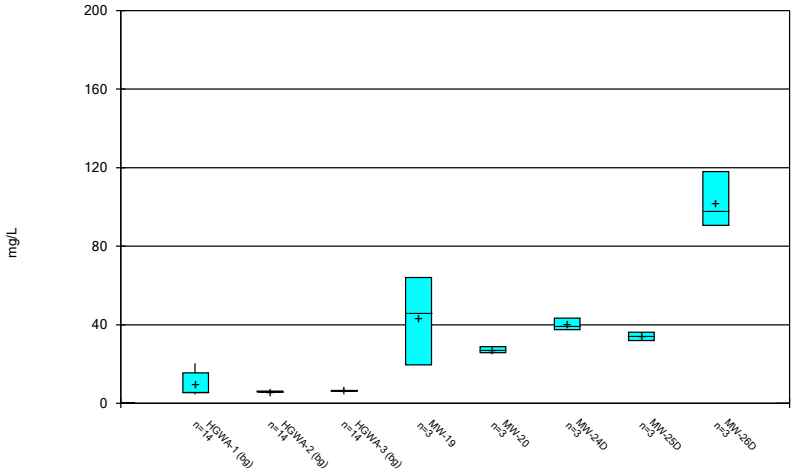
Box & Whiskers Plot



Constituent: Calcium Analysis Run 6/16/2020 10:42 AM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

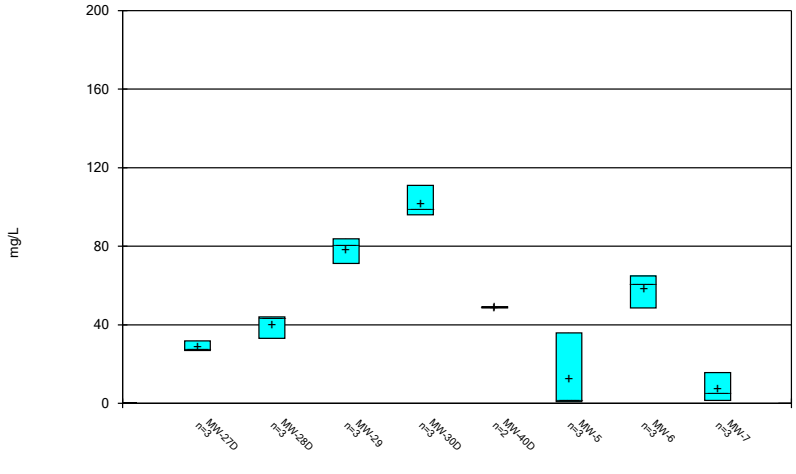
Box & Whiskers Plot



Constituent: Chloride Analysis Run 6/16/2020 10:42 AM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

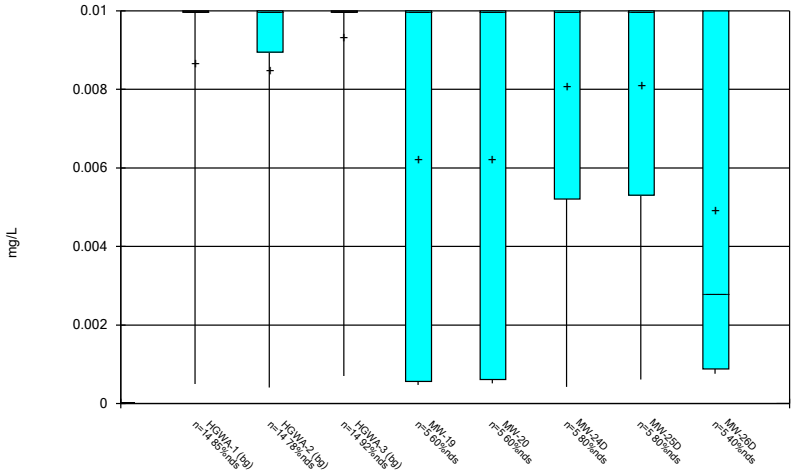
Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

Box & Whiskers Plot



Constituent: Chloride Analysis Run 6/16/2020 10:42 AM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

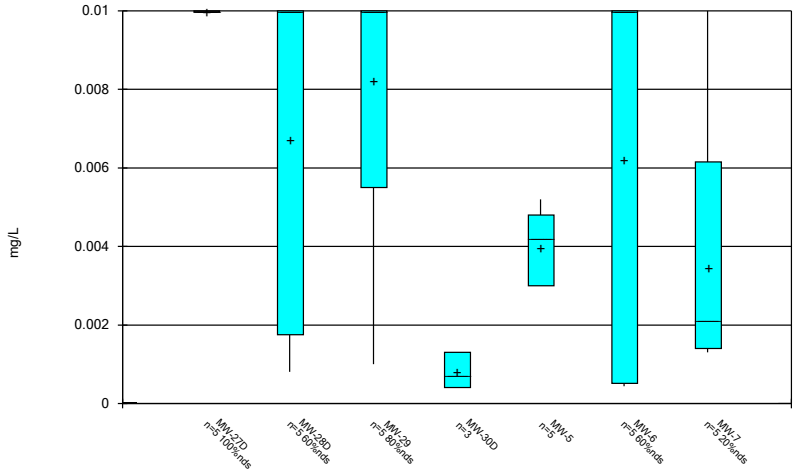
Box & Whiskers Plot



Constituent: Chromium Analysis Run 6/16/2020 10:43 AM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

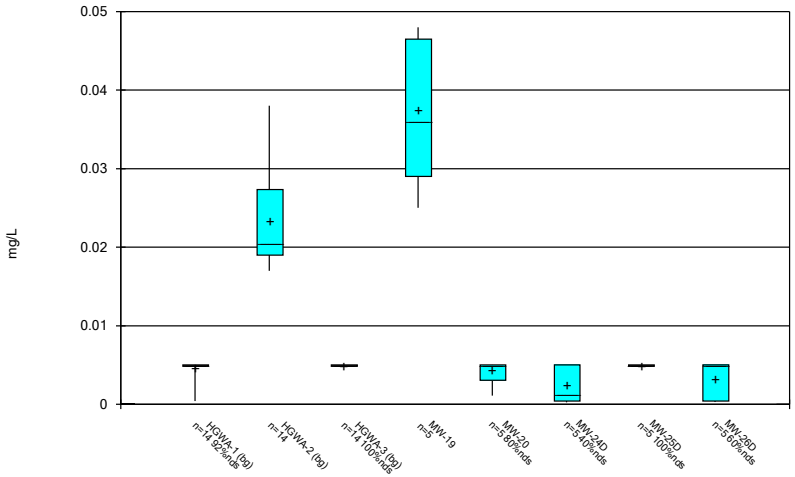
Box & Whiskers Plot



Constituent: Chromium Analysis Run 6/16/2020 10:43 AM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

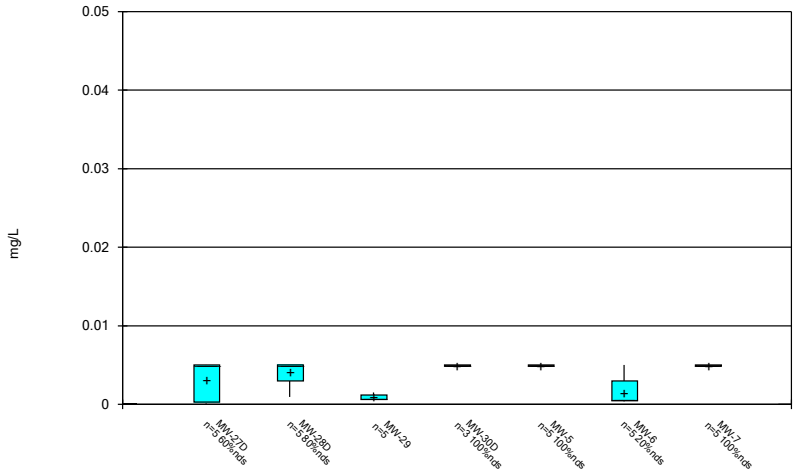
Box & Whiskers Plot



Constituent: Cobalt Analysis Run 6/16/2020 10:43 AM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

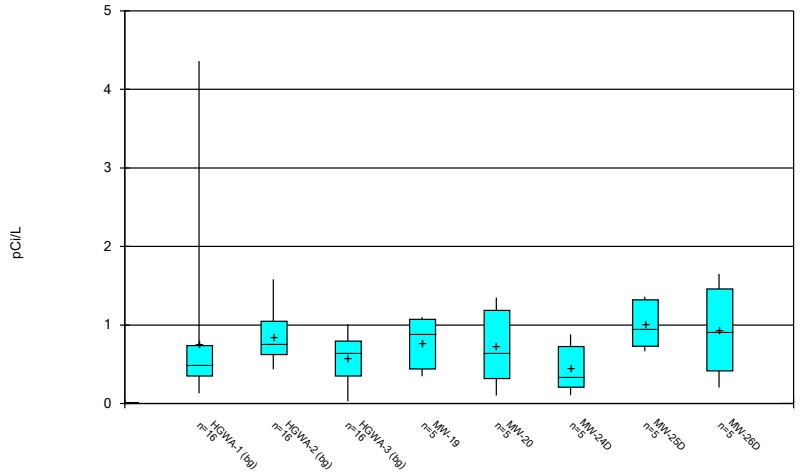
Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

Box & Whiskers Plot



Constituent: Cobalt Analysis Run 6/16/2020 10:43 AM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

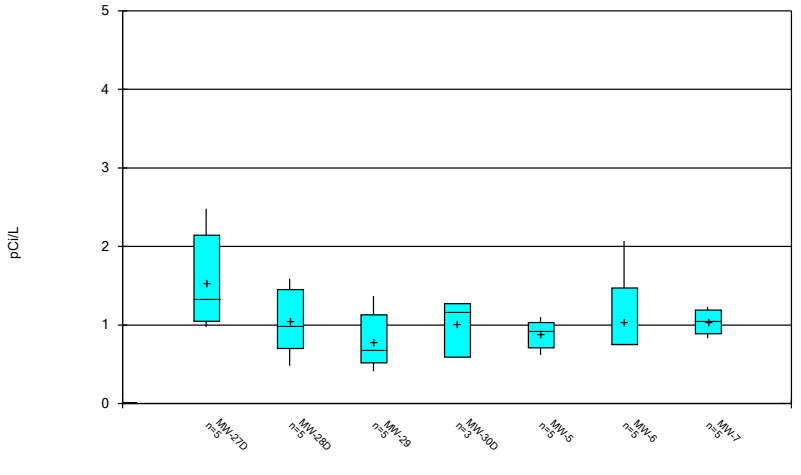
Box & Whiskers Plot



Constituent: Combined Radium 226 + 228 Analysis Run 6/16/2020 10:43 AM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

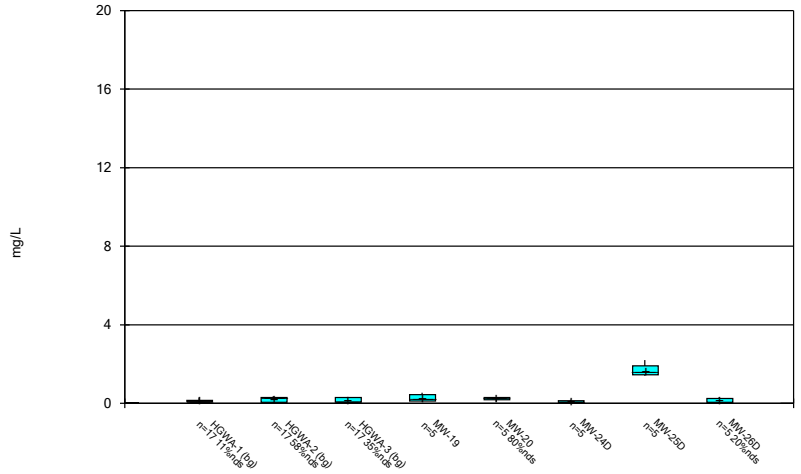
Box & Whiskers Plot



Constituent: Combined Radium 226 + 228 Analysis Run 6/16/2020 10:43 AM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

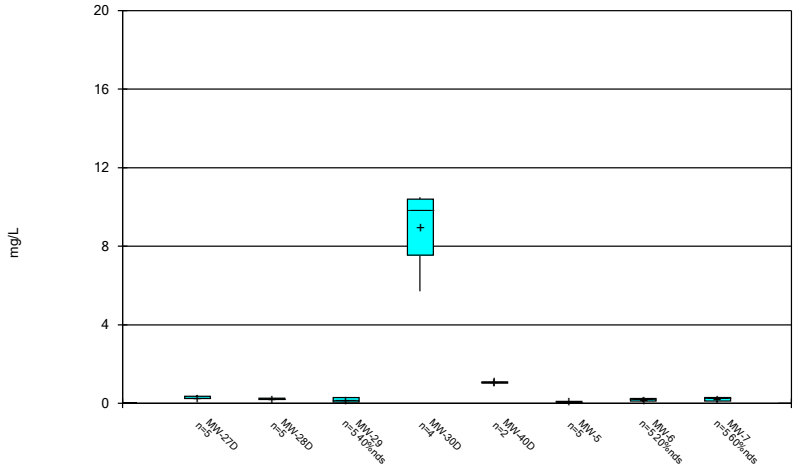
Box & Whiskers Plot



Constituent: Fluoride Analysis Run 6/16/2020 10:43 AM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

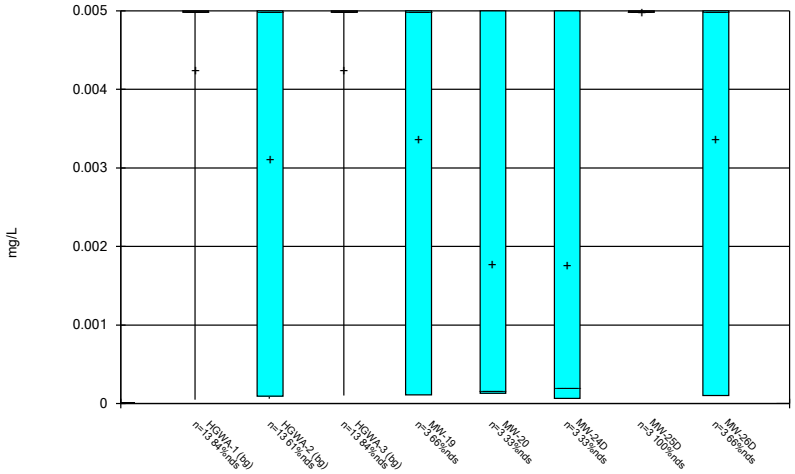
Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

Box & Whiskers Plot



Constituent: Fluoride Analysis Run 6/16/2020 10:43 AM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

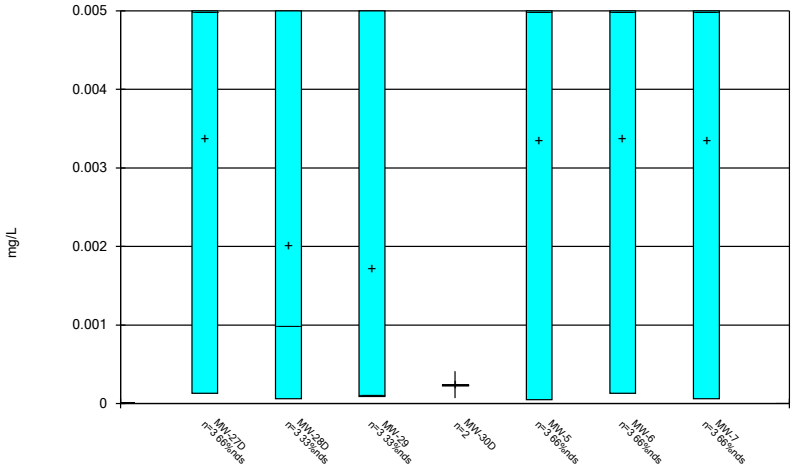
Box & Whiskers Plot



Constituent: Lead Analysis Run 6/16/2020 10:43 AM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

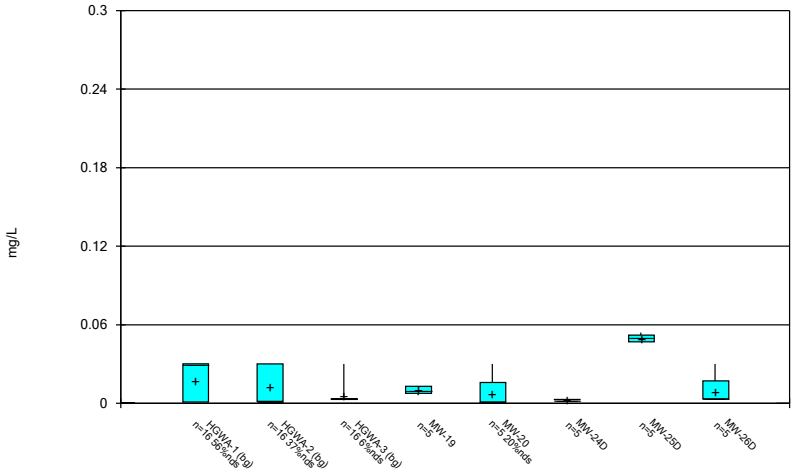
Box & Whiskers Plot



Constituent: Lead Analysis Run 6/16/2020 10:43 AM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

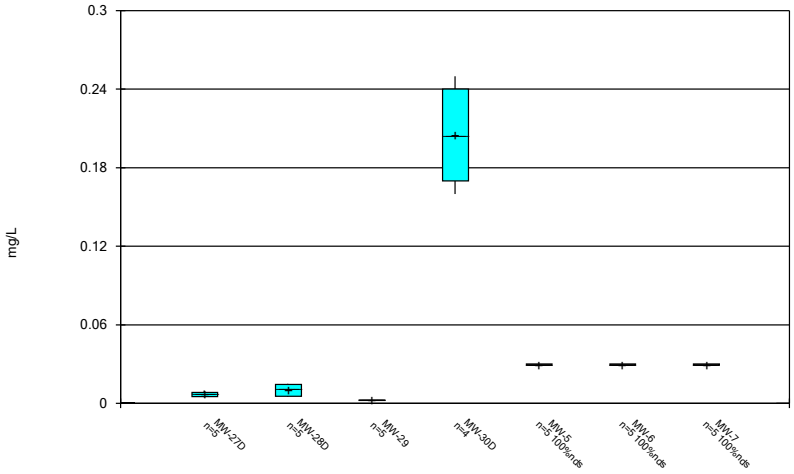
Box & Whiskers Plot



Constituent: Lithium Analysis Run 6/16/2020 10:43 AM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

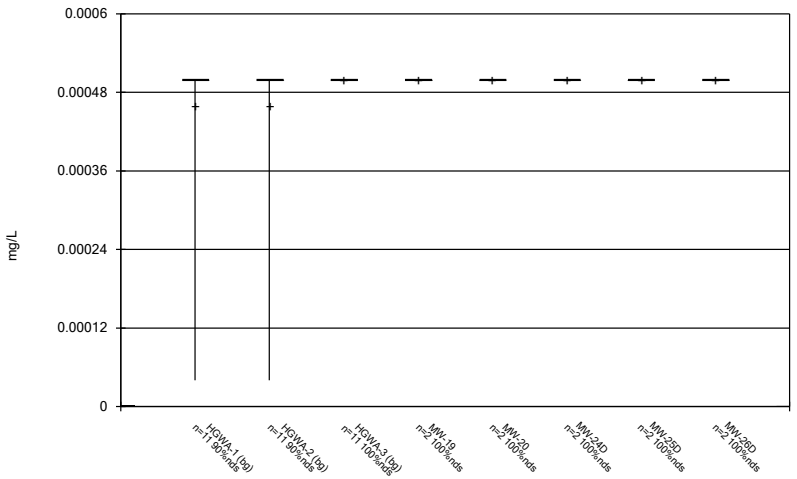
Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

Box & Whiskers Plot



Constituent: Lithium Analysis Run 6/16/2020 10:43 AM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

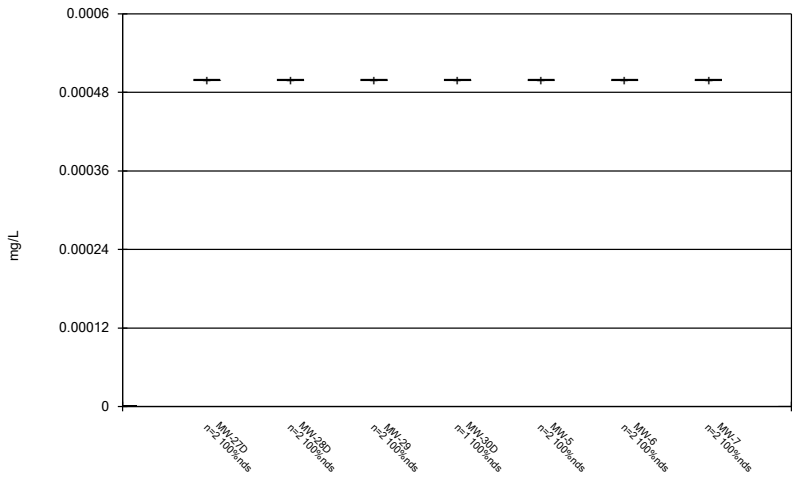
Box & Whiskers Plot



Constituent: Mercury Analysis Run 6/16/2020 10:43 AM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

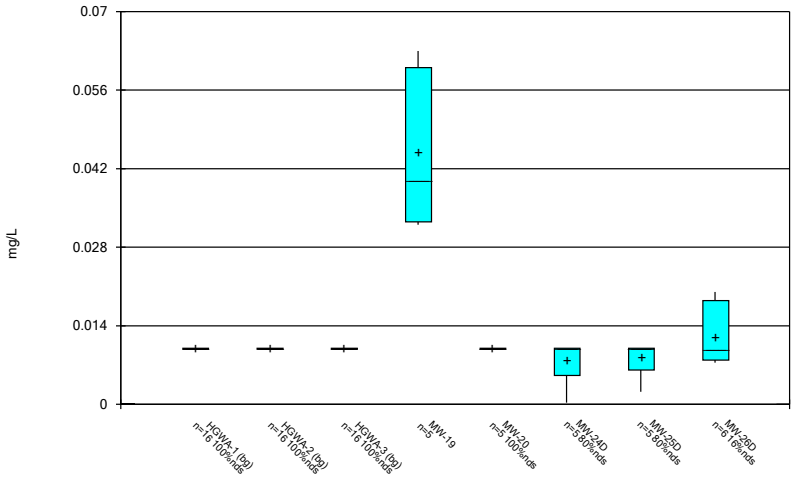
Box & Whiskers Plot



Constituent: Mercury Analysis Run 6/16/2020 10:43 AM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

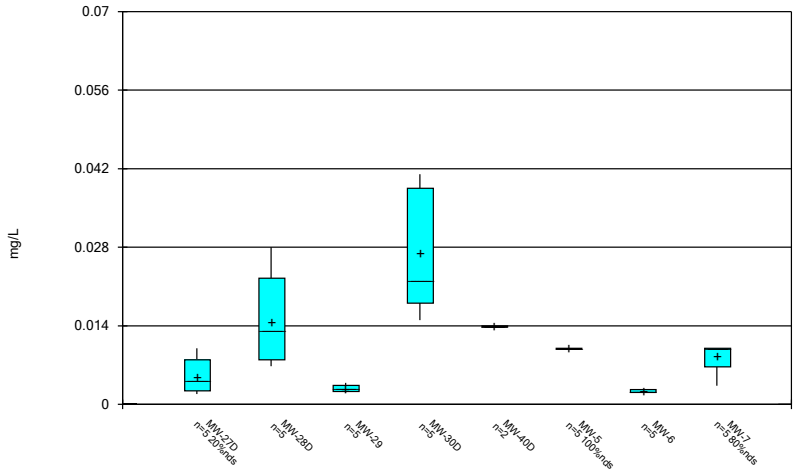
Box & Whiskers Plot



Constituent: Molybdenum Analysis Run 6/16/2020 10:43 AM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

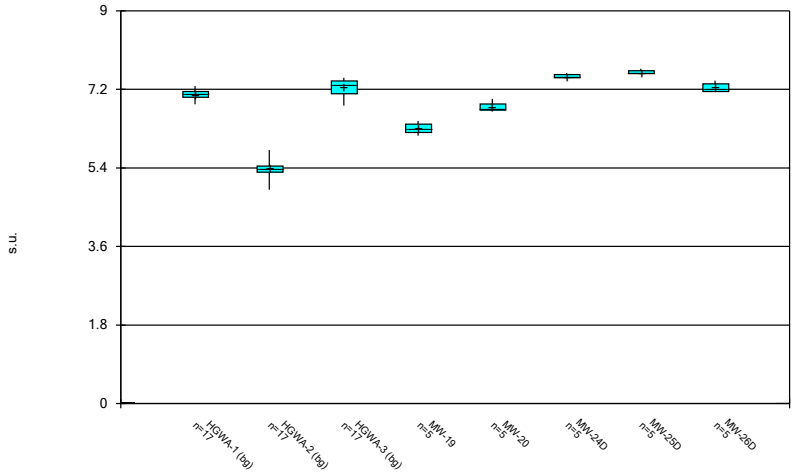
Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

Box & Whiskers Plot



Constituent: Molybdenum Analysis Run 6/16/2020 10:43 AM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

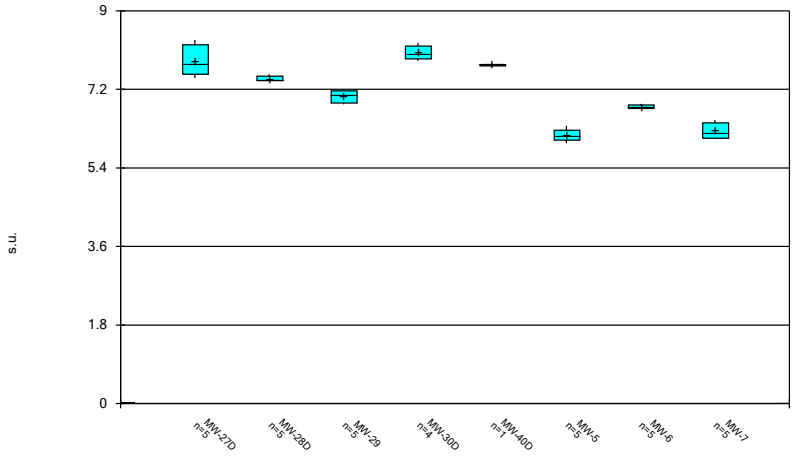
Box & Whiskers Plot



Constituent: pH Analysis Run 6/16/2020 10:43 AM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

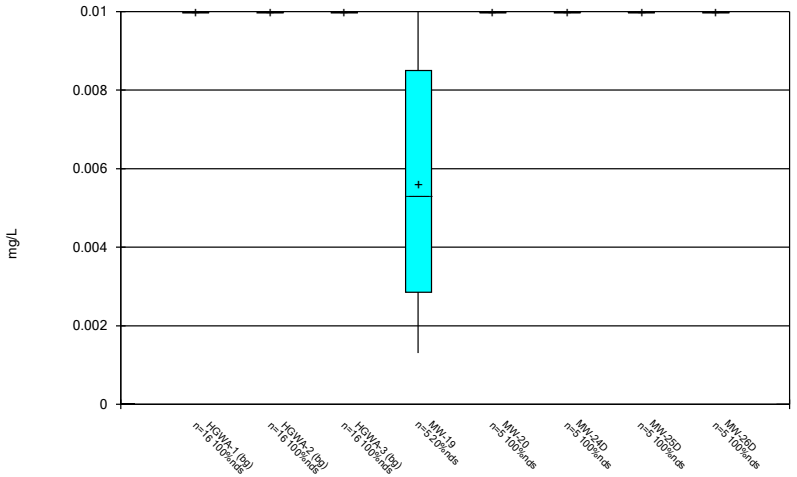
Box & Whiskers Plot



Constituent: pH Analysis Run 6/16/2020 10:43 AM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

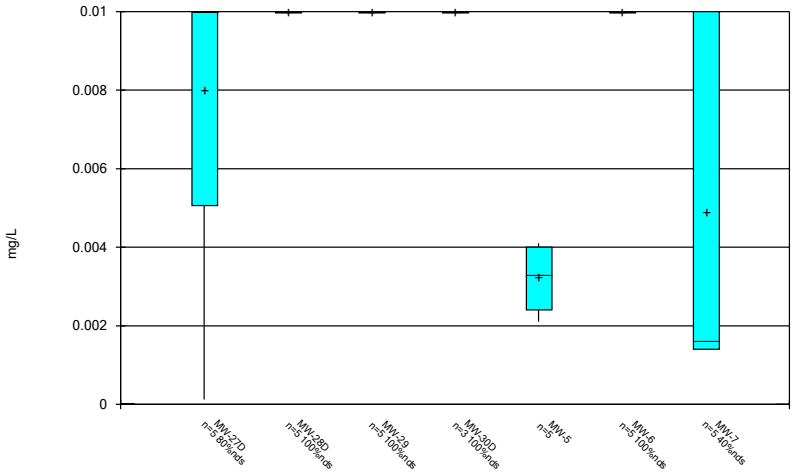
Box & Whiskers Plot



Constituent: Selenium Analysis Run 6/16/2020 10:43 AM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

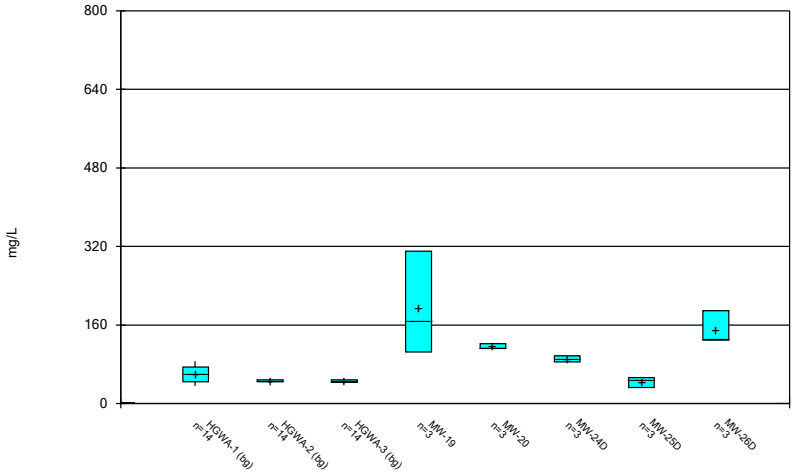
Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

Box & Whiskers Plot



Constituent: Selenium Analysis Run 6/16/2020 10:43 AM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

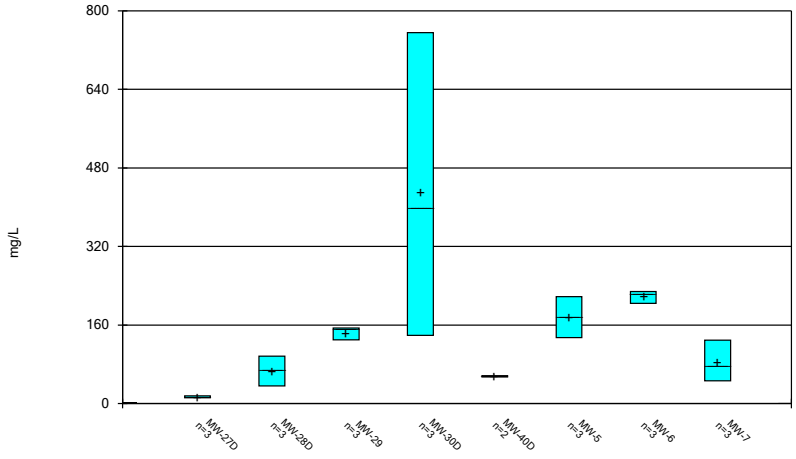
Box & Whiskers Plot



Constituent: Sulfate Analysis Run 6/16/2020 10:43 AM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

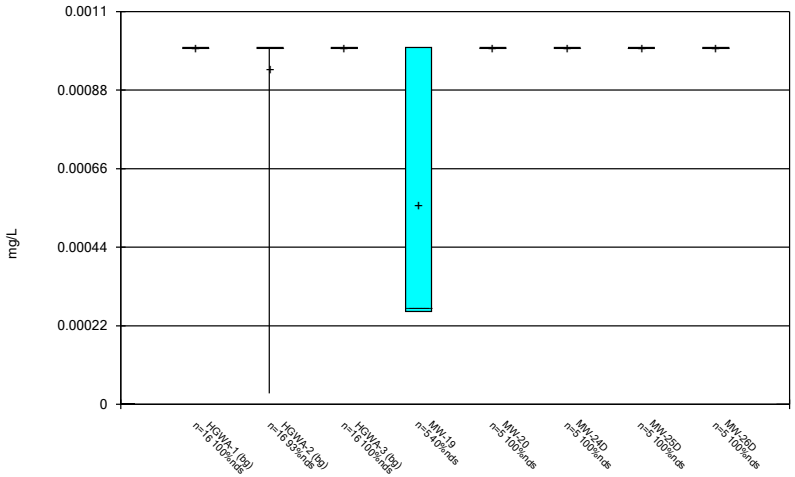
Box & Whiskers Plot



Constituent: Sulfate Analysis Run 6/16/2020 10:43 AM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

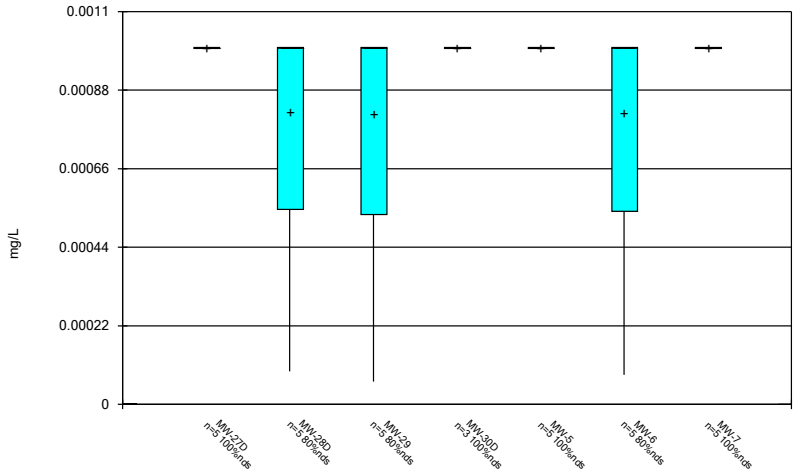
Box & Whiskers Plot



Constituent: Thallium Analysis Run 6/16/2020 10:43 AM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

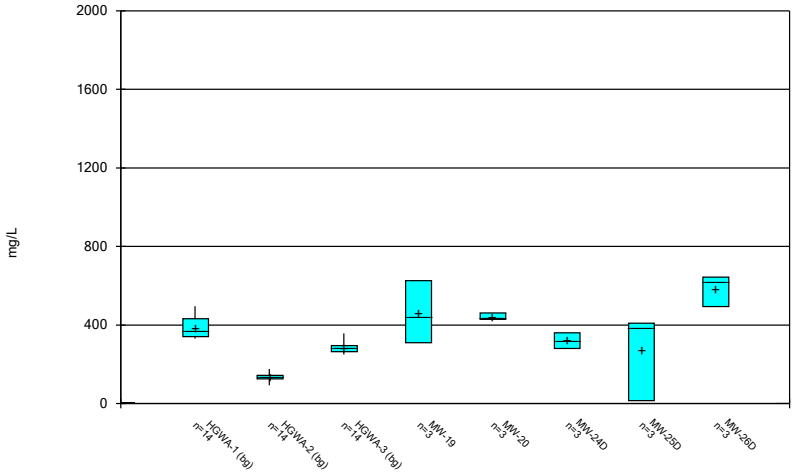
Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

Box & Whiskers Plot



Constituent: Thallium Analysis Run 6/16/2020 10:43 AM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

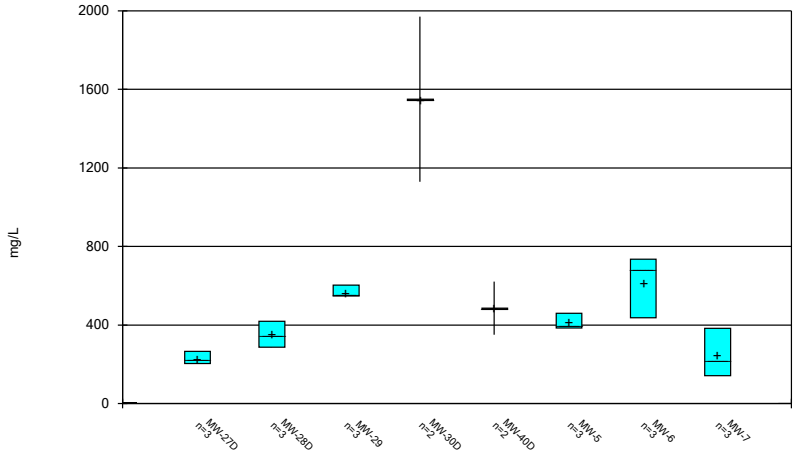
Box & Whiskers Plot



Constituent: Total Dissolved Solids Analysis Run 6/16/2020 10:43 AM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

Box & Whiskers Plot



Constituent: Total Dissolved Solids Analysis Run 6/16/2020 10:43 AM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

FIGURE C.

New Wells Interwell Prediction Limits - Significant Results

Plant Hammond Client: Southern Company Data: Hammond AP-1 Printed 6/12/2020, 3:32 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Boron (mg/L)	MW-19	0.0592	n/a	3/26/2020	1	Yes	42	0.1482	0.04839	4.762	None	sqrt(x)	0.001075	Param Inter 1 of 2
Boron (mg/L)	MW-20	0.0592	n/a	3/27/2020	0.12	Yes	42	0.1482	0.04839	4.762	None	sqrt(x)	0.001075	Param Inter 1 of 2
Boron (mg/L)	MW-24D	0.0592	n/a	3/30/2020	0.51	Yes	42	0.1482	0.04839	4.762	None	sqrt(x)	0.001075	Param Inter 1 of 2
Boron (mg/L)	MW-25D	0.0592	n/a	3/26/2020	0.44	Yes	42	0.1482	0.04839	4.762	None	sqrt(x)	0.001075	Param Inter 1 of 2
Boron (mg/L)	MW-26D	0.0592	n/a	3/31/2020	1.8	Yes	42	0.1482	0.04839	4.762	None	sqrt(x)	0.001075	Param Inter 1 of 2
Boron (mg/L)	MW-27D	0.0592	n/a	4/2/2020	0.13	Yes	42	0.1482	0.04839	4.762	None	sqrt(x)	0.001075	Param Inter 1 of 2
Boron (mg/L)	MW-28D	0.0592	n/a	3/27/2020	0.14	Yes	42	0.1482	0.04839	4.762	None	sqrt(x)	0.001075	Param Inter 1 of 2
Boron (mg/L)	MW-29	0.0592	n/a	3/30/2020	1.3	Yes	42	0.1482	0.04839	4.762	None	sqrt(x)	0.001075	Param Inter 1 of 2
Boron (mg/L)	MW-30D	0.0592	n/a	3/31/2020	0.9	Yes	42	0.1482	0.04839	4.762	None	sqrt(x)	0.001075	Param Inter 1 of 2
Boron (mg/L)	MW-40D	0.0592	n/a	5/19/2020	0.13	Yes	42	0.1482	0.04839	4.762	None	sqrt(x)	0.001075	Param Inter 1 of 2
Boron (mg/L)	MW-6	0.0592	n/a	3/27/2020	0.77	Yes	42	0.1482	0.04839	4.762	None	sqrt(x)	0.001075	Param Inter 1 of 2
Calcium (mg/L)	MW-19	138	n/a	3/26/2020	171	Yes	42	n/a	n/a	0	n/a	n/a	0.001046	NP Inter (normality) 1 of 2
Calcium (mg/L)	MW-26D	138	n/a	3/31/2020	155	Yes	42	n/a	n/a	0	n/a	n/a	0.001046	NP Inter (normality) 1 of 2
Calcium (mg/L)	MW-29	138	n/a	3/30/2020	148	Yes	42	n/a	n/a	0	n/a	n/a	0.001046	NP Inter (normality) 1 of 2
Calcium (mg/L)	MW-6	138	n/a	3/27/2020	186	Yes	42	n/a	n/a	0	n/a	n/a	0.001046	NP Inter (normality) 1 of 2
Chloride (mg/L)	MW-19	20.4	n/a	3/26/2020	64	Yes	42	n/a	n/a	0	n/a	n/a	0.001046	NP Inter (normality) 1 of 2
Chloride (mg/L)	MW-20	20.4	n/a	3/27/2020	28.8	Yes	42	n/a	n/a	0	n/a	n/a	0.001046	NP Inter (normality) 1 of 2
Chloride (mg/L)	MW-24D	20.4	n/a	3/30/2020	37.4	Yes	42	n/a	n/a	0	n/a	n/a	0.001046	NP Inter (normality) 1 of 2
Chloride (mg/L)	MW-25D	20.4	n/a	3/26/2020	34.6	Yes	42	n/a	n/a	0	n/a	n/a	0.001046	NP Inter (normality) 1 of 2
Chloride (mg/L)	MW-26D	20.4	n/a	3/31/2020	98	Yes	42	n/a	n/a	0	n/a	n/a	0.001046	NP Inter (normality) 1 of 2
Chloride (mg/L)	MW-27D	20.4	n/a	4/2/2020	27.9	Yes	42	n/a	n/a	0	n/a	n/a	0.001046	NP Inter (normality) 1 of 2
Chloride (mg/L)	MW-28D	20.4	n/a	3/27/2020	33	Yes	42	n/a	n/a	0	n/a	n/a	0.001046	NP Inter (normality) 1 of 2
Chloride (mg/L)	MW-29	20.4	n/a	3/30/2020	71.2	Yes	42	n/a	n/a	0	n/a	n/a	0.001046	NP Inter (normality) 1 of 2
Chloride (mg/L)	MW-30D	20.4	n/a	4/9/2020	96	Yes	42	n/a	n/a	0	n/a	n/a	0.001046	NP Inter (normality) 1 of 2
Chloride (mg/L)	MW-40D	20.4	n/a	5/19/2020	47.3	Yes	42	n/a	n/a	0	n/a	n/a	0.001046	NP Inter (normality) 1 of 2
Chloride (mg/L)	MW-6	20.4	n/a	3/27/2020	48.6	Yes	42	n/a	n/a	0	n/a	n/a	0.001046	NP Inter (normality) 1 of 2
Fluoride (mg/L)	MW-25D	0.36	n/a	3/26/2020	1.6	Yes	51	n/a	n/a	35.29	n/a	n/a	0.0007158	NP Inter (normality) 1 of 2
Fluoride (mg/L)	MW-30D	0.36	n/a	3/31/2020	10.5	Yes	51	n/a	n/a	35.29	n/a	n/a	0.0007158	NP Inter (normality) 1 of 2
Fluoride (mg/L)	MW-40D	0.36	n/a	5/19/2020	1.3	Yes	51	n/a	n/a	35.29	n/a	n/a	0.0007158	NP Inter (normality) 1 of 2
pH (s.u.)	MW-24D	7.47	4.9	3/30/2020	7.49	Yes	51	n/a	n/a	0	n/a	n/a	0.001432	NP Inter (normality) 1 of 2
pH (s.u.)	MW-25D	7.47	4.9	3/26/2020	7.57	Yes	51	n/a	n/a	0	n/a	n/a	0.001432	NP Inter (normality) 1 of 2
pH (s.u.)	MW-27D	7.47	4.9	4/2/2020	8.11	Yes	51	n/a	n/a	0	n/a	n/a	0.001432	NP Inter (normality) 1 of 2
pH (s.u.)	MW-30D	7.47	4.9	4/9/2020	8.27	Yes	51	n/a	n/a	0	n/a	n/a	0.001432	NP Inter (normality) 1 of 2
pH (s.u.)	MW-40D	7.47	4.9	5/11/2020	7.77	Yes	51	n/a	n/a	0	n/a	n/a	0.001432	NP Inter (normality) 1 of 2
Sulfate (mg/L)	MW-19	85.9	n/a	3/26/2020	310	Yes	42	n/a	n/a	0	n/a	n/a	0.001046	NP Inter (normality) 1 of 2
Sulfate (mg/L)	MW-20	85.9	n/a	3/27/2020	114	Yes	42	n/a	n/a	0	n/a	n/a	0.001046	NP Inter (normality) 1 of 2
Sulfate (mg/L)	MW-26D	85.9	n/a	3/31/2020	129	Yes	42	n/a	n/a	0	n/a	n/a	0.001046	NP Inter (normality) 1 of 2
Sulfate (mg/L)	MW-29	85.9	n/a	3/30/2020	130	Yes	42	n/a	n/a	0	n/a	n/a	0.001046	NP Inter (normality) 1 of 2
Sulfate (mg/L)	MW-30D	85.9	n/a	4/9/2020	399	Yes	42	n/a	n/a	0	n/a	n/a	0.001046	NP Inter (normality) 1 of 2
Sulfate (mg/L)	MW-5	85.9	n/a	3/26/2020	176	Yes	42	n/a	n/a	0	n/a	n/a	0.001046	NP Inter (normality) 1 of 2
Sulfate (mg/L)	MW-6	85.9	n/a	3/27/2020	204	Yes	42	n/a	n/a	0	n/a	n/a	0.001046	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	MW-19	483.4	n/a	3/26/2020	626	Yes	42	267.4	109.9	0	None	No	0.001075	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	MW-26D	483.4	n/a	3/31/2020	623	Yes	42	267.4	109.9	0	None	No	0.001075	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	MW-29	483.4	n/a	3/30/2020	552	Yes	42	267.4	109.9	0	None	No	0.001075	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	MW-30D	483.4	n/a	3/31/2020	1130	Yes	42	267.4	109.9	0	None	No	0.001075	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	MW-40D	483.4	n/a	5/19/2020	621	Yes	42	267.4	109.9	0	None	No	0.001075	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	MW-6	483.4	n/a	3/27/2020	676	Yes	42	267.4	109.9	0	None	No	0.001075	Param Inter 1 of 2

New Wells Interwell Prediction Limits - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-1 Printed 6/12/2020, 3:32 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Boron (mg/L)	**MW-19**	**0.0592**	**n/a**	**3/26/2020**	**1**	**Yes**	**42**	**0.1482**	**0.04839**	**4.762**	**None**	**sqrt(x)**	**0.001075**	**Param Inter 1 of 2**
Boron (mg/L)	**MW-20**	**0.0592**	**n/a**	**3/27/2020**	**0.12**	**Yes**	**42**	**0.1482**	**0.04839**	**4.762**	**None**	**sqrt(x)**	**0.001075**	**Param Inter 1 of 2**
Boron (mg/L)	**MW-24D**	**0.0592**	**n/a**	**3/30/2020**	**0.51**	**Yes**	**42**	**0.1482**	**0.04839**	**4.762**	**None**	**sqrt(x)**	**0.001075**	**Param Inter 1 of 2**
Boron (mg/L)	**MW-25D**	**0.0592**	**n/a**	**3/26/2020**	**0.44**	**Yes**	**42**	**0.1482**	**0.04839**	**4.762**	**None**	**sqrt(x)**	**0.001075**	**Param Inter 1 of 2**
Boron (mg/L)	**MW-26D**	**0.0592**	**n/a**	**3/31/2020**	**1.8**	**Yes**	**42**	**0.1482**	**0.04839**	**4.762**	**None**	**sqrt(x)**	**0.001075**	**Param Inter 1 of 2**
Boron (mg/L)	**MW-27D**	**0.0592**	**n/a**	**4/2/2020**	**0.13**	**Yes**	**42**	**0.1482**	**0.04839**	**4.762**	**None**	**sqrt(x)**	**0.001075**	**Param Inter 1 of 2**
Boron (mg/L)	**MW-28D**	**0.0592**	**n/a**	**3/27/2020**	**0.14**	**Yes**	**42**	**0.1482**	**0.04839**	**4.762**	**None**	**sqrt(x)**	**0.001075**	**Param Inter 1 of 2**
Boron (mg/L)	**MW-29**	**0.0592**	**n/a**	**3/30/2020**	**1.3**	**Yes**	**42**	**0.1482**	**0.04839**	**4.762**	**None**	**sqrt(x)**	**0.001075**	**Param Inter 1 of 2**
Boron (mg/L)	**MW-30D**	**0.0592**	**n/a**	**3/31/2020**	**0.9**	**Yes**	**42**	**0.1482**	**0.04839**	**4.762**	**None**	**sqrt(x)**	**0.001075**	**Param Inter 1 of 2**
Boron (mg/L)	**MW-40D**	**0.0592**	**n/a**	**5/19/2020**	**0.13**	**Yes**	**42**	**0.1482**	**0.04839**	**4.762**	**None**	**sqrt(x)**	**0.001075**	**Param Inter 1 of 2**
Boron (mg/L)	MW-5	0.0592	n/a	3/26/2020	0.041	No	42	0.1482	0.04839	4.762	None	sqrt(x)	0.001075	Param Inter 1 of 2
Boron (mg/L)	**MW-6**	**0.0592**	**n/a**	**3/27/2020**	**0.77**	**Yes**	**42**	**0.1482**	**0.04839**	**4.762**	**None**	**sqrt(x)**	**0.001075**	**Param Inter 1 of 2**
Boron (mg/L)	MW-7	0.0592	n/a	3/30/2020	0.051	No	42	0.1482	0.04839	4.762	None	sqrt(x)	0.001075	Param Inter 1 of 2
Calcium (mg/L)	**MW-19**	**138**	**n/a**	**3/26/2020**	**171**	**Yes**	**42**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.001046**	**NP Inter (normality) 1 of 2**
Calcium (mg/L)	MW-20	138	n/a	3/27/2020	126	No	42	n/a	n/a	0	n/a	n/a	0.001046	NP Inter (normality) 1 of 2
Calcium (mg/L)	MW-24D	138	n/a	3/30/2020	84.4	No	42	n/a	n/a	0	n/a	n/a	0.001046	NP Inter (normality) 1 of 2
Calcium (mg/L)	MW-25D	138	n/a	3/26/2020	27	No	42	n/a	n/a	0	n/a	n/a	0.001046	NP Inter (normality) 1 of 2
Calcium (mg/L)	**MW-26D**	**138**	**n/a**	**3/31/2020**	**155**	**Yes**	**42**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.001046**	**NP Inter (normality) 1 of 2**
Calcium (mg/L)	MW-27D	138	n/a	4/2/2020	28.4	No	42	n/a	n/a	0	n/a	n/a	0.001046	NP Inter (normality) 1 of 2
Calcium (mg/L)	MW-28D	138	n/a	3/27/2020	53	No	42	n/a	n/a	0	n/a	n/a	0.001046	NP Inter (normality) 1 of 2
Calcium (mg/L)	**MW-29**	**138**	**n/a**	**3/30/2020**	**148**	**Yes**	**42**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.001046**	**NP Inter (normality) 1 of 2**
Calcium (mg/L)	MW-30D	138	n/a	4/9/2020	13.4	No	42	n/a	n/a	0	n/a	n/a	0.001046	NP Inter (normality) 1 of 2
Calcium (mg/L)	MW-40D	138	n/a	5/19/2020	65.9	No	42	n/a	n/a	0	n/a	n/a	0.001046	NP Inter (normality) 1 of 2
Calcium (mg/L)	MW-5	138	n/a	3/26/2020	89.6	No	42	n/a	n/a	0	n/a	n/a	0.001046	NP Inter (normality) 1 of 2
Calcium (mg/L)	**MW-6**	**138**	**n/a**	**3/27/2020**	**186**	**Yes**	**42**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.001046**	**NP Inter (normality) 1 of 2**
Calcium (mg/L)	MW-7	138	n/a	3/30/2020	31.1	No	42	n/a	n/a	0	n/a	n/a	0.001046	NP Inter (normality) 1 of 2
Chloride (mg/L)	**MW-19**	**20.4**	**n/a**	**3/26/2020**	**64**	**Yes**	**42**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.001046**	**NP Inter (normality) 1 of 2**
Chloride (mg/L)	**MW-20**	**20.4**	**n/a**	**3/27/2020**	**28.8**	**Yes**	**42**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.001046**	**NP Inter (normality) 1 of 2**
Chloride (mg/L)	**MW-24D**	**20.4**	**n/a**	**3/30/2020**	**37.4**	**Yes**	**42**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.001046**	**NP Inter (normality) 1 of 2**
Chloride (mg/L)	**MW-25D**	**20.4**	**n/a**	**3/26/2020**	**34.6**	**Yes**	**42**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.001046**	**NP Inter (normality) 1 of 2**
Chloride (mg/L)	**MW-26D**	**20.4**	**n/a**	**3/31/2020**	**98**	**Yes**	**42**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.001046**	**NP Inter (normality) 1 of 2**
Chloride (mg/L)	**MW-27D**	**20.4**	**n/a**	**4/2/2020**	**27.9**	**Yes**	**42**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.001046**	**NP Inter (normality) 1 of 2**
Chloride (mg/L)	**MW-28D**	**20.4**	**n/a**	**3/27/2020**	**33**	**Yes**	**42**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.001046**	**NP Inter (normality) 1 of 2**
Chloride (mg/L)	**MW-29**	**20.4**	**n/a**	**3/30/2020**	**71.2**	**Yes**	**42**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.001046**	**NP Inter (normality) 1 of 2**
Chloride (mg/L)	**MW-30D**	**20.4**	**n/a**	**4/9/2020**	**96**	**Yes**	**42**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.001046**	**NP Inter (normality) 1 of 2**
Chloride (mg/L)	**MW-40D**	**20.4**	**n/a**	**5/19/2020**	**47.3**	**Yes**	**42**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.001046**	**NP Inter (normality) 1 of 2**
Chloride (mg/L)	MW-5	20.4	n/a	3/26/2020	0.73	No	42	n/a	n/a	0	n/a	n/a	0.001046	NP Inter (normality) 1 of 2
Chloride (mg/L)	**MW-6**	**20.4**	**n/a**	**3/27/2020**	**48.6**	**Yes**	**42**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.001046**	**NP Inter (normality) 1 of 2**
Chloride (mg/L)	MW-7	20.4	n/a	3/30/2020	1.5	No	42	n/a	n/a	0	n/a	n/a	0.001046	NP Inter (normality) 1 of 2
Fluoride (mg/L)	MW-19	0.36	n/a	3/26/2020	0.12	No	51	n/a	n/a	35.29	n/a	n/a	0.0007158	NP Inter (normality) 1 of 2
Fluoride (mg/L)	MW-20	0.36	n/a	3/27/2020	0.3ND	No	51	n/a	n/a	35.29	n/a	n/a	0.0007158	NP Inter (normality) 1 of 2
Fluoride (mg/L)	MW-24D	0.36	n/a	3/30/2020	0.064	No	51	n/a	n/a	35.29	n/a	n/a	0.0007158	NP Inter (normality) 1 of 2
Fluoride (mg/L)	**MW-25D**	**0.36**	**n/a**	**3/26/2020**	**1.6**	**Yes**	**51**	**n/a**	**n/a**	**35.29**	**n/a**	**n/a**	**0.0007158**	**NP Inter (normality) 1 of 2**
Fluoride (mg/L)	MW-26D	0.36	n/a	3/31/2020	0.3ND	No	51	n/a	n/a	35.29	n/a	n/a	0.0007158	NP Inter (normality) 1 of 2
Fluoride (mg/L)	MW-27D	0.36	n/a	4/2/2020	0.24	No	51	n/a	n/a	35.29	n/a	n/a	0.0007158	NP Inter (normality) 1 of 2
Fluoride (mg/L)	MW-28D	0.36	n/a	3/27/2020	0.26	No	51	n/a	n/a	35.29	n/a	n/a	0.0007158	NP Inter (normality) 1 of 2
Fluoride (mg/L)	MW-29	0.36	n/a	3/30/2020	0.3ND	No	51	n/a	n/a	35.29	n/a	n/a	0.0007158	NP Inter (normality) 1 of 2
Fluoride (mg/L)	**MW-30D**	**0.36**	**n/a**	**3/31/2020**	**10.5**	**Yes**	**51**	**n/a**	**n/a**	**35.29**	**n/a**	**n/a**	**0.0007158**	**NP Inter (normality) 1 of 2**
Fluoride (mg/L)	**MW-40D**	**0.36**	**n/a**	**5/19/2020**	**1.3**	**Yes**	**51**	**n/a**	**n/a**	**35.29**	**n/a**	**n/a**	**0.0007158**	**NP Inter (normality) 1 of 2**
Fluoride (mg/L)	MW-5	0.36	n/a	3/26/2020	0.082	No	51	n/a	n/a	35.29	n/a	n/a	0.0007158	NP Inter (normality) 1 of 2
Fluoride (mg/L)	MW-6	0.36	n/a	3/27/2020	0.3ND	No	51	n/a	n/a	35.29	n/a	n/a	0.0007158	NP Inter (normality) 1 of 2
Fluoride (mg/L)	MW-7	0.36	n/a	3/30/2020	0.3ND	No	51	n/a	n/a	35.29	n/a	n/a	0.0007158	NP Inter (normality) 1 of 2
pH (s.u.)	MW-19	7.47	4.9	3/26/2020	6.28	No	51	n/a	n/a	0	n/a	n/a	0.001432	NP Inter (normality) 1 of 2
pH (s.u.)	MW-20	7.47	4.9	3/27/2020	6.75	No	51	n/a	n/a	0	n/a	n/a	0.001432	NP Inter (normality) 1 of 2
pH (s.u.)	**MW-24D**	**7.47**	**4.9**	**3/30/2020**	**7.49**	**Yes**	**51**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.001432**	**NP Inter (normality) 1 of 2**
pH (s.u.)	**MW-25D**	**7.47**	**4.9**	**3/26/2020**	**7.57**	**Yes**	**51**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.001432**	**NP Inter (normality) 1 of 2**

New Wells Interwell Prediction Limits - All Results

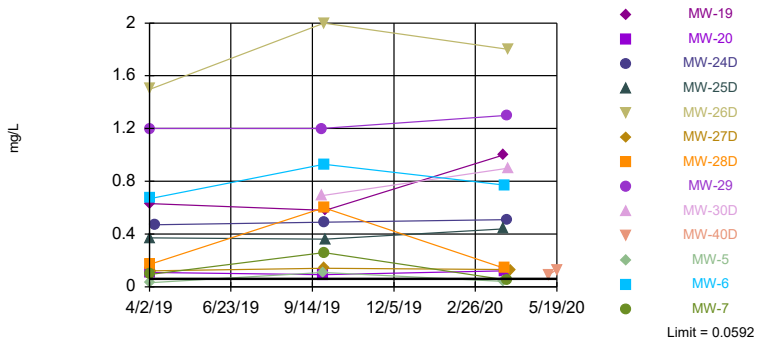
Plant Hammond Client: Southern Company Data: Hammond AP-1 Printed 6/12/2020, 3:32 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
pH (s.u.)	MW-26D	7.47	4.9	3/31/2020	7.2	No	51	n/a	n/a	0	n/a	n/a	0.001432	NP Inter (normality) 1 of 2
pH (s.u.)	**MW-27D**	**7.47**	**4.9**	**4/2/2020**	**8.11**	**Yes**	**51**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.001432**	**NP Inter (normality) 1 of 2**
pH (s.u.)	MW-28D	7.47	4.9	3/27/2020	7.42	No	51	n/a	n/a	0	n/a	n/a	0.001432	NP Inter (normality) 1 of 2
pH (s.u.)	MW-29	7.47	4.9	3/30/2020	7.07	No	51	n/a	n/a	0	n/a	n/a	0.001432	NP Inter (normality) 1 of 2
pH (s.u.)	**MW-30D**	**7.47**	**4.9**	**4/9/2020**	**8.27**	**Yes**	**51**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.001432**	**NP Inter (normality) 1 of 2**
pH (s.u.)	**MW-40D**	**7.47**	**4.9**	**5/11/2020**	**7.77**	**Yes**	**51**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.001432**	**NP Inter (normality) 1 of 2**
pH (s.u.)	MW-5	7.47	4.9	3/26/2020	6.14	No	51	n/a	n/a	0	n/a	n/a	0.001432	NP Inter (normality) 1 of 2
pH (s.u.)	MW-6	7.47	4.9	3/27/2020	6.82	No	51	n/a	n/a	0	n/a	n/a	0.001432	NP Inter (normality) 1 of 2
pH (s.u.)	MW-7	7.47	4.9	3/30/2020	6.06	No	51	n/a	n/a	0	n/a	n/a	0.001432	NP Inter (normality) 1 of 2
Sulfate (mg/L)	**MW-19**	**85.9**	**n/a**	**3/26/2020**	**310**	**Yes**	**42**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.001046**	**NP Inter (normality) 1 of 2**
Sulfate (mg/L)	**MW-20**	**85.9**	**n/a**	**3/27/2020**	**114**	**Yes**	**42**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.001046**	**NP Inter (normality) 1 of 2**
Sulfate (mg/L)	MW-24D	85.9	n/a	3/30/2020	84.9	No	42	n/a	n/a	0	n/a	n/a	0.001046	NP Inter (normality) 1 of 2
Sulfate (mg/L)	MW-25D	85.9	n/a	3/26/2020	32.3	No	42	n/a	n/a	0	n/a	n/a	0.001046	NP Inter (normality) 1 of 2
Sulfate (mg/L)	**MW-26D**	**85.9**	**n/a**	**3/31/2020**	**129**	**Yes**	**42**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.001046**	**NP Inter (normality) 1 of 2**
Sulfate (mg/L)	MW-27D	85.9	n/a	4/2/2020	13.3	No	42	n/a	n/a	0	n/a	n/a	0.001046	NP Inter (normality) 1 of 2
Sulfate (mg/L)	MW-28D	85.9	n/a	3/27/2020	36	No	42	n/a	n/a	0	n/a	n/a	0.001046	NP Inter (normality) 1 of 2
Sulfate (mg/L)	**MW-29**	**85.9**	**n/a**	**3/30/2020**	**130**	**Yes**	**42**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.001046**	**NP Inter (normality) 1 of 2**
Sulfate (mg/L)	**MW-30D**	**85.9**	**n/a**	**4/9/2020**	**399**	**Yes**	**42**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.001046**	**NP Inter (normality) 1 of 2**
Sulfate (mg/L)	MW-40D	85.9	n/a	5/19/2020	54	No	42	n/a	n/a	0	n/a	n/a	0.001046	NP Inter (normality) 1 of 2
Sulfate (mg/L)	**MW-5**	**85.9**	**n/a**	**3/26/2020**	**176**	**Yes**	**42**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.001046**	**NP Inter (normality) 1 of 2**
Sulfate (mg/L)	**MW-6**	**85.9**	**n/a**	**3/27/2020**	**204**	**Yes**	**42**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.001046**	**NP Inter (normality) 1 of 2**
Sulfate (mg/L)	MW-7	85.9	n/a	3/30/2020	46.2	No	42	n/a	n/a	0	n/a	n/a	0.001046	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	**MW-19**	**483.4**	**n/a**	**3/26/2020**	**626**	**Yes**	**42**	**267.4**	**109.9**	**0**	**None**	**No**	**0.001075**	**Param Inter 1 of 2**
Total Dissolved Solids (mg/L)	MW-20	483.4	n/a	3/27/2020	429	No	42	267.4	109.9	0	None	No	0.001075	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	MW-24D	483.4	n/a	3/30/2020	280	No	42	267.4	109.9	0	None	No	0.001075	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	MW-25D	483.4	n/a	3/26/2020	385	No	42	267.4	109.9	0	None	No	0.001075	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	**MW-26D**	**483.4**	**n/a**	**3/31/2020**	**623**	**Yes**	**42**	**267.4**	**109.9**	**0**	**None**	**No**	**0.001075**	**Param Inter 1 of 2**
Total Dissolved Solids (mg/L)	MW-27D	483.4	n/a	4/2/2020	224	No	42	267.4	109.9	0	None	No	0.001075	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	MW-28D	483.4	n/a	3/27/2020	287	No	42	267.4	109.9	0	None	No	0.001075	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	**MW-29**	**483.4**	**n/a**	**3/30/2020**	**552**	**Yes**	**42**	**267.4**	**109.9**	**0**	**None**	**No**	**0.001075**	**Param Inter 1 of 2**
Total Dissolved Solids (mg/L)	**MW-30D**	**483.4**	**n/a**	**3/31/2020**	**1130**	**Yes**	**42**	**267.4**	**109.9**	**0**	**None**	**No**	**0.001075**	**Param Inter 1 of 2**
Total Dissolved Solids (mg/L)	**MW-40D**	**483.4**	**n/a**	**5/19/2020**	**621**	**Yes**	**42**	**267.4**	**109.9**	**0**	**None**	**No**	**0.001075**	**Param Inter 1 of 2**
Total Dissolved Solids (mg/L)	MW-5	483.4	n/a	3/26/2020	385	No	42	267.4	109.9	0	None	No	0.001075	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	**MW-6**	**483.4**	**n/a**	**3/27/2020**	**676**	**Yes**	**42**	**267.4**	**109.9**	**0**	**None**	**No**	**0.001075**	**Param Inter 1 of 2**
Total Dissolved Solids (mg/L)	MW-7	483.4	n/a	3/30/2020	142	No	42	267.4	109.9	0	None	No	0.001075	Param Inter 1 of 2

Exceeds Limit: MW-19, MW-20, MW-24D, MW-25D, MW-26D, MW-27D, MW-28D, MW -29, MW-30D, MW-40D, MW-6

Prediction Limit

Interwell Parametric



Background Data Summary (based on square root transformation): Mean=0.1482, Std. Dev.=0.04839, n=42, 4.762% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9426, critical = 0.922. Kappa = 1.966 (c=7, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.001075. Comparing 13 points to limit.

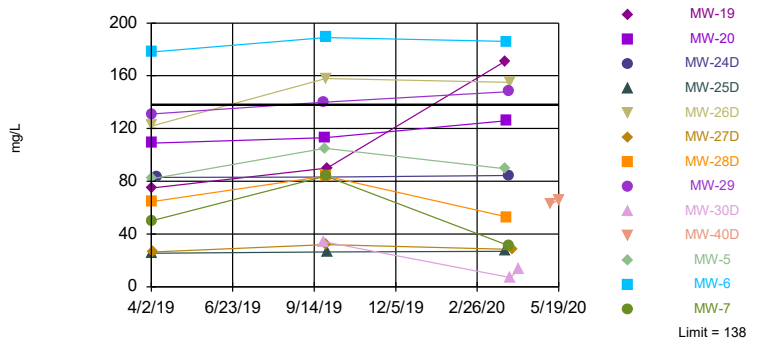
Constituent: Boron Analysis Run 6/12/2020 3:30 PM View: New Wells

Plant Hammond Client: Southern Company Data: Hammond AP-1

Exceeds Limit: MW-19, MW-26D, MW-29, MW-6

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 42 background values. Annual per-constituent alpha = 0.01455. Individual comparison alpha = 0.001046 (1 of 2). Comparing 13 points to limit.

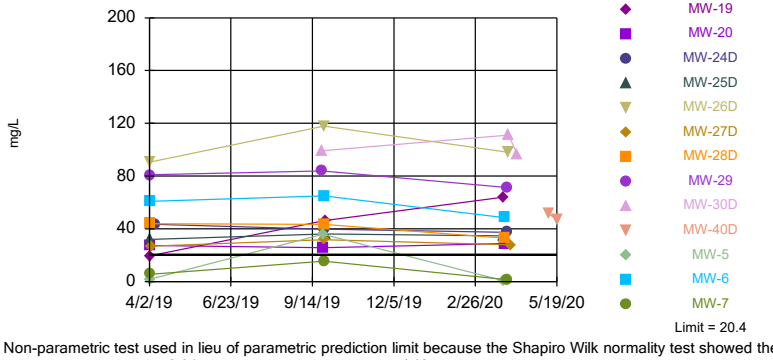
Constituent: Calcium Analysis Run 6/12/2020 3:30 PM View: New Wells

Plant Hammond Client: Southern Company Data: Hammond AP-1

Exceeds Limit: MW-19, MW-20, MW-24D, MW-25D, MW-26D, MW-27D, MW-28D, MW -29, MW-30D, MW-40D, MW-6

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 42 background values. Annual per-constituent alpha = 0.01455. Individual comparison alpha = 0.001046 (1 of 2). Comparing 13 points to limit.

Constituent: Chloride Analysis Run 6/12/2020 3:30 PM View: New Wells

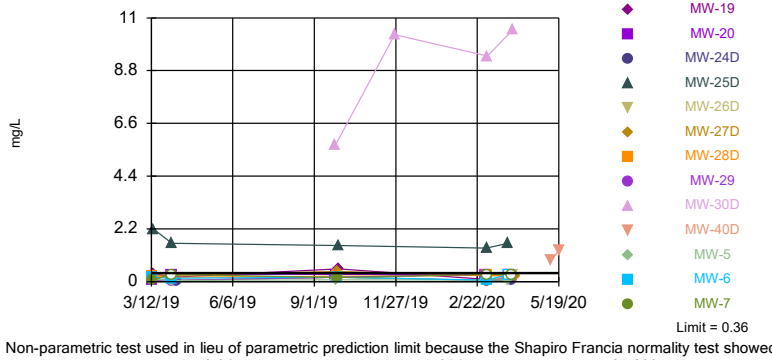
Plant Hammond Client: Southern Company Data: Hammond AP-1

Hollow symbols indicate censored values.

Exceeds Limit: MW-25D, MW-30D, MW-40D

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 51 background values. 35.29% NDs. Annual per-constituent alpha = 0.009975. Individual comparison alpha = 0.0007158 (1 of 2). Comparing 13 points to limit.

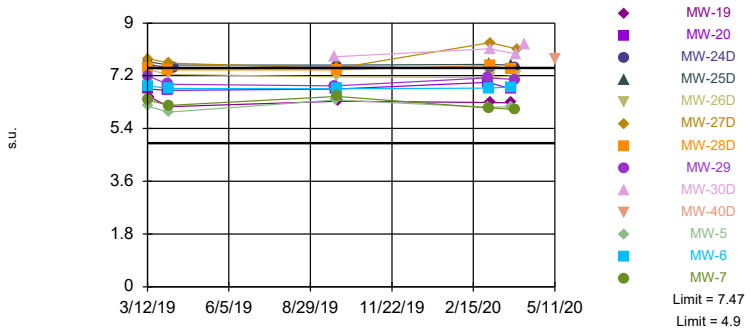
Constituent: Fluoride Analysis Run 6/12/2020 3:30 PM View: New Wells

Plant Hammond Client: Southern Company Data: Hammond AP-1

Exceeds Limits: MW-24D, MW-25D, MW-27D, MW-30D, MW-40D

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limits are highest and lowest of 51 background values. Annual per-constituent alpha = 0.01995. Individual comparison alpha = 0.001432 (1 of 2). Comparing 13 points to limit.

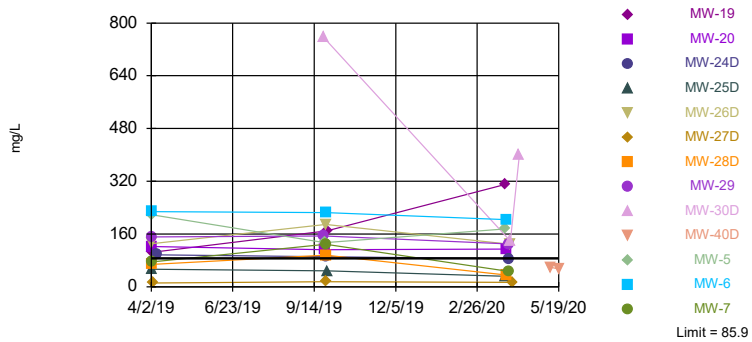
Constituent: pH Analysis Run 6/12/2020 3:30 PM View: New Wells

Plant Hammond Client: Southern Company Data: Hammond AP-1

Exceeds Limit: MW-19, MW-20, MW-26D, MW-29, MW-30D, MW-5, MW-6

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 42 background values. Annual per-constituent alpha = 0.01455. Individual comparison alpha = 0.001046 (1 of 2). Comparing 13 points to limit.

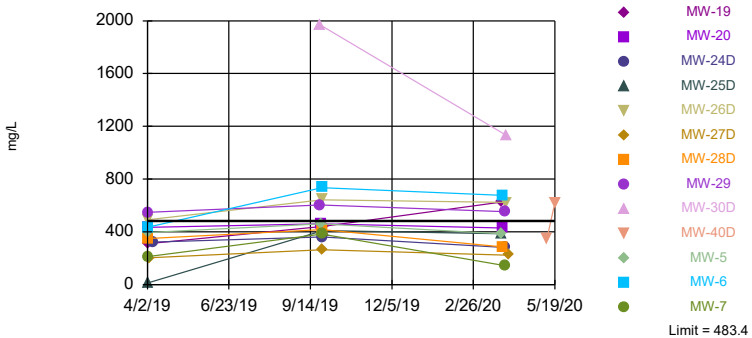
Constituent: Sulfate Analysis Run 6/12/2020 3:30 PM View: New Wells

Plant Hammond Client: Southern Company Data: Hammond AP-1

Exceeds Limit: MW-19, MW-26D, MW-29, MW-30D, MW-40D, MW-6

Prediction Limit

Interwell Parametric



Background Data Summary: Mean=267.4, Std. Dev.=109.9, n=42. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9318, critical = 0.922. Kappa = 1.966 (c=7, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.001075. Comparing 13 points to limit.

Constituent: Total Dissolved Solids Analysis Run 6/12/2020 3:30 PM View: New Wells

Plant Hammond Client: Southern Company Data: Hammond AP-1

Prediction Limit

Constituent: Boron (mg/L) Analysis Run 6/12/2020 3:31 PM View: New Wells

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWA-1 (bg)	HGWA-3 (bg)	HGWA-2 (bg)	MW-29	MW-28D	MW-20	MW-5	MW-6	MW-26D
5/19/2016	0.0214 (J)	<0.1	0.0321 (J)						
7/11/2016	0.0142 (J)		0.0337 (J)						
7/12/2016		0.0074 (J)							
8/30/2016	0.0074 (J)	<0.1	0.0173 (J)						
10/19/2016	0.0224 (J)	0.0085 (J)	0.0341 (J)						
12/6/2016	0.0211 (J)	0.0085 (J)	0.0326 (J)						
1/24/2017	0.0165 (J)	0.01 (J)	0.0365 (J)						
3/21/2017	0.0187 (J)	0.0079 (J)	0.0349 (J)						
5/22/2017	0.0782	0.0131 (J)	0.0475						
10/3/2017	0.0198 (J)	0.0097 (J)	0.0386 (J)						
6/4/2018	0.02 (J)	0.017 (J)	0.036 (J)						
10/1/2018	0.013 (J)	0.0061 (J)	0.035 (J)						
4/1/2019		0.0066 (J)							
4/2/2019	0.016 (J)		0.034 (J)	1.2	0.17	0.11			
4/3/2019							0.03 (J)	0.67	1.5
4/4/2019									
4/8/2019									
9/23/2019	0.021 (J)	0.0081 (J)	0.04 (J)						
9/24/2019				1.2					
9/25/2019						0.091	0.11		
9/26/2019					0.6			0.93	2
9/27/2019									
3/25/2020	0.025 (J)	0.0096 (J)	0.039 (J)						
3/26/2020							0.041 (J)		
3/27/2020					0.14	0.12		0.77	
3/30/2020				1.3					
3/31/2020									1.8
4/2/2020									
5/11/2020									
5/19/2020									

Prediction Limit

Constituent: Boron (mg/L) Analysis Run 6/12/2020 3:31 PM View: New Wells

Plant Hammond Client: Southern Company Data: Hammond AP-1

	MW-19	MW-25D	MW-7	MW-27D	MW-24D	MW-30D	MW-40D
5/19/2016							
7/11/2016							
7/12/2016							
8/30/2016							
10/19/2016							
12/6/2016							
1/24/2017							
3/21/2017							
5/22/2017							
10/3/2017							
6/4/2018							
10/1/2018							
4/1/2019							
4/2/2019							
4/3/2019	0.63	0.37	0.094				
4/4/2019				0.12 (J)			
4/8/2019					0.47 (J)		
9/23/2019							
9/24/2019						0.69	
9/25/2019							
9/26/2019			0.26	0.14	0.49		
9/27/2019	0.58	0.36					
3/25/2020							
3/26/2020	1	0.44					
3/27/2020							
3/30/2020			0.051 (J)		0.51		
3/31/2020						0.9	
4/2/2020				0.13			
5/11/2020							0.093 (J)
5/19/2020							0.13

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 6/12/2020 3:31 PM View: New Wells

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWA-1 (bg)	HGWA-3 (bg)	HGWA-2 (bg)	MW-29	MW-28D	MW-20	MW-5	MW-6	MW-26D
5/19/2016	138	76.2	22.9						
7/11/2016	97.2		22.3						
7/12/2016		61.5							
8/30/2016	97.5	65.1	26.4						
10/19/2016	99.2	73.2	21.7						
12/6/2016	105	74.9	18.2						
1/24/2017	95.7	69.6	18.5						
3/21/2017	106	75.7	18.6						
5/22/2017	107	71.5	17.8						
10/3/2017	102	76.3	20.2						
6/4/2018	124	73.4	19.1						
10/1/2018	108	80.9	20.5 (J)						
4/1/2019		80.5							
4/2/2019	132		22.5 (J)	131	64.6	109			
4/3/2019							82	178	122
4/4/2019									
4/8/2019									
9/23/2019	118	71	19.5						
9/24/2019				140					
9/25/2019						113	105		
9/26/2019					84			189	158
9/27/2019									
3/25/2020	127	89.8	23						
3/26/2020							89.6		
3/27/2020					53	126		186	
3/30/2020				148					
3/31/2020									155
4/2/2020									
4/9/2020									
5/11/2020									
5/19/2020									

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 6/12/2020 3:31 PM View: New Wells

Plant Hammond Client: Southern Company Data: Hammond AP-1

	MW-19	MW-25D	MW-7	MW-27D	MW-24D	MW-30D	MW-40D
5/19/2016							
7/11/2016							
7/12/2016							
8/30/2016							
10/19/2016							
12/6/2016							
1/24/2017							
3/21/2017							
5/22/2017							
10/3/2017							
6/4/2018							
10/1/2018							
4/1/2019							
4/2/2019							
4/3/2019	74.9	25.4	50.2				
4/4/2019				26.3			
4/8/2019					83		
9/23/2019							
9/24/2019						34.2	
9/25/2019							
9/26/2019			83.9	32.1	83.1		
9/27/2019	90	26.4					
3/25/2020							
3/26/2020	171	27					
3/27/2020							
3/30/2020			31.1		84.4		
3/31/2020						7.1	
4/2/2020				28.4			
4/9/2020						13.4	
5/11/2020							62.6
5/19/2020							65.9

Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 6/12/2020 3:31 PM View: New Wells

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWA-1 (bg)	HGWA-3 (bg)	HGWA-2 (bg)	MW-29	MW-28D	MW-20	MW-5	MW-6	MW-26D
5/19/2016	9.94	5.93	6.14						
7/11/2016	6.3		5.9						
7/12/2016		6.2							
8/30/2016	6	6.4	6.2						
10/19/2016	5.8	6.5	6.1						
12/6/2016	5.4	7.2	6						
1/24/2017	5.2	6.4	6.1						
3/21/2017	4.6	7.5	5.9						
5/22/2017	4.6	6.5	5.9						
10/3/2017	5.6	6.5	6.3						
6/4/2018	13.1	6.3	6.1						
10/1/2018	6.6	6.4	6.4						
4/1/2019		6.5							
4/2/2019	20.3		5.8	80.9	44	27.5			
4/3/2019							1.8	60.9	90.6
4/4/2019									
4/8/2019									
9/23/2019	17.7	5.9	5.1						
9/24/2019				83.8					
9/25/2019						25.7	35.9		
9/26/2019					43.5			64.9	118
9/27/2019									
3/25/2020	20.4	6.1	5.2						
3/26/2020							0.73 (J)		
3/27/2020					33	28.8		48.6	
3/30/2020				71.2					
3/31/2020									98
4/2/2020									
4/9/2020									
5/11/2020									
5/19/2020									

Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 6/12/2020 3:31 PM View: New Wells

Plant Hammond Client: Southern Company Data: Hammond AP-1

	MW-19	MW-25D	MW-7	MW-27D	MW-24D	MW-30D	MW-40D
5/19/2016							
7/11/2016							
7/12/2016							
8/30/2016							
10/19/2016							
12/6/2016							
1/24/2017							
3/21/2017							
5/22/2017							
10/3/2017							
6/4/2018							
10/1/2018							
4/1/2019							
4/2/2019							
4/3/2019	19.5	32	5.6				
4/4/2019				26.9			
4/8/2019					43.3		
9/23/2019							
9/24/2019						99.2	
9/25/2019							
9/26/2019			15.6	31.8	39.7		
9/27/2019	46.2	36.2					
3/25/2020							
3/26/2020	64	34.6					
3/27/2020							
3/30/2020			1.5		37.4		
3/31/2020						111	
4/2/2020				27.9			
4/9/2020						96	
5/11/2020							51.2
5/19/2020							47.3

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 6/12/2020 3:31 PM View: New Wells

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWA-1 (bg)	HGWA-3 (bg)	HGWA-2 (bg)	MW-29	MW-28D	MW-27D	MW-20	MW-7	MW-26D
5/19/2016	0.105 (J)	0.0513 (J)	0.0303 (J)						
7/11/2016	0.16 (J)		0.05 (J)						
7/12/2016		0.12 (J)							
8/30/2016	0.09 (J)	0.09 (J)	0.06 (J)						
10/19/2016	0.1 (J)	0.1 (J)	0.04 (J)						
12/6/2016	0.11 (J)	0.21 (J)	0.36						
1/24/2017	0.09 (J)	0.06 (J)	<0.3						
3/21/2017	0.13 (J)	0.005 (J)	<0.3						
5/22/2017	0.12 (J)	0.05 (J)	<0.3						
10/3/2017	0.13 (J)	0.13 (J)	<0.3						
4/2/2018	<0.3		<0.3						
4/3/2018		<0.3							
6/4/2018	0.074 (J)	<0.3	<0.3						
10/1/2018	<0.3	<0.3	<0.3						
3/12/2019	0.29 (J)	0.072 (J)	0.038 (J)	0.07 (J)	0.24 (J)				
3/13/2019						0.28 (J)	0.072 (J)	0.069 (J)	0.052 (J)
3/14/2019									
4/1/2019		0.029 (J)							
4/2/2019	0.1 (J)		0.071 (J)	0.045 (J)	0.18 (J)		<0.3		
4/3/2019								<0.3	0.044 (J)
4/4/2019						0.26 (J)			
4/8/2019									
9/23/2019	0.078 (J)	<0.3	<0.3						
9/24/2019				0.18 (J)					
9/25/2019							<0.3		
9/26/2019					0.22 (J)	0.42		0.17 (J)	0.19 (J)
9/27/2019									
11/26/2019									
3/2/2020	0.076 (J)	<0.3	<0.3	<0.3			<0.3		
3/3/2020								<0.3	
3/4/2020					0.26 (J)	0.25 (J)			0.052 (J)
3/25/2020	0.098 (J)	<0.3	<0.3						
3/26/2020									
3/27/2020					0.26 (J)		<0.3		
3/30/2020				<0.3				<0.3	
3/31/2020									<0.3
4/2/2020						0.24 (J)			
5/11/2020									
5/19/2020									

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 6/12/2020 3:31 PM View: New Wells

Plant Hammond Client: Southern Company Data: Hammond AP-1

	MW-5	MW-24D	MW-6	MW-19	MW-25D	MW-30D	MW-40D
5/19/2016							
7/11/2016							
7/12/2016							
8/30/2016							
10/19/2016							
12/6/2016							
1/24/2017							
3/21/2017							
5/22/2017							
10/3/2017							
4/2/2018							
4/3/2018							
6/4/2018							
10/1/2018							
3/12/2019							
3/13/2019	0.1 (J)	0.074 (J)	0.19 (J)				
3/14/2019				0.35	2.2		
4/1/2019							
4/2/2019							
4/3/2019	0.049 (J)		0.15 (J)	0.19 (J)	1.6		
4/4/2019							
4/8/2019		0.048 (J)					
9/23/2019							
9/24/2019						5.7	
9/25/2019	0.076 (J)						
9/26/2019		0.18 (J)	0.19 (J)				
9/27/2019				0.53	1.5		
11/26/2019						10.3	
3/2/2020	0.065 (J)						
3/3/2020			0.062 (J)		1.4		
3/4/2020		0.051 (J)		0.096 (J)		9.4	
3/25/2020							
3/26/2020	0.082 (J)			0.12 (J)	1.6		
3/27/2020			<0.3				
3/30/2020		0.064 (J)					
3/31/2020						10.5	
4/2/2020							
5/11/2020							0.88
5/19/2020							1.3

Prediction Limit

Constituent: pH (s.u.) Analysis Run 6/12/2020 3:31 PM View: New Wells

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWA-1 (bg)	HGWA-3 (bg)	HGWA-2 (bg)	MW-29	MW-28D	MW-5	MW-20	MW-7	MW-26D
5/19/2016	7.27	7.45	5.81						
7/11/2016	7.06		5.68						
7/12/2016		7.32							
8/30/2016	7.28	7.43	5.63						
10/19/2016	7.02	7.03	5.46						
12/6/2016	7.09	7.08	5.38						
1/24/2017	7.2	7.39	5.37						
3/21/2017	7.01	6.83	4.9						
5/22/2017	7.11	7.02	5.2						
10/3/2017	7.21	7.47	5.3						
4/2/2018	7.1		5.4						
4/3/2018		7.38							
6/4/2018	7.06	7.38	5.27						
10/1/2018	7.09	7.13	5.31						
3/12/2019	7.03	7.29	5.42	7.2	7.46				
3/13/2019						6.16	6.75	6.37	7.4
3/14/2019									
4/1/2019		7.16							
4/2/2019	6.86		5.41	6.91	7.4		6.7		
4/3/2019						5.96		6.19	7.25
4/4/2019									
4/8/2019									
9/23/2019	7.02	7.3	5.33						
9/24/2019				6.86					
9/25/2019						6.37	6.75		
9/26/2019					7.4			6.5	7.16
9/27/2019									
3/2/2020	7.1	7.12	5.43	7.13		6.12	6.98		
3/3/2020								6.1	
3/4/2020					7.55				7.14
3/25/2020	6.95	7.4	5.36						
3/26/2020						6.14			
3/27/2020					7.42		6.75		
3/30/2020				7.07				6.06	
3/31/2020									7.2
4/2/2020									
4/9/2020									
5/11/2020									

Prediction Limit

Constituent: pH (s.u.) Analysis Run 6/12/2020 3:31 PM View: New Wells

Plant Hammond Client: Southern Company Data: Hammond AP-1

	MW-27D	MW-24D	MW-6	MW-19	MW-25D	MW-30D	MW-40D
5/19/2016							
7/11/2016							
7/12/2016							
8/30/2016							
10/19/2016							
12/6/2016							
1/24/2017							
3/21/2017							
5/22/2017							
10/3/2017							
4/2/2018							
4/3/2018							
6/4/2018							
10/1/2018							
3/12/2019							
3/13/2019	7.78	7.58	6.86				
3/14/2019				6.48	7.67		
4/1/2019							
4/2/2019							
4/3/2019			6.77	6.14	7.56		
4/4/2019	7.63						
4/8/2019		7.47					
9/23/2019							
9/24/2019						7.85	
9/25/2019							
9/26/2019	7.46	7.5	6.76				
9/27/2019				6.33	7.57		
3/2/2020							
3/3/2020			6.78		7.59		
3/4/2020	8.33	7.47		6.29		8.12	
3/25/2020							
3/26/2020				6.28	7.57		
3/27/2020			6.82				
3/30/2020		7.49					
3/31/2020						7.95	
4/2/2020	8.11						
4/9/2020						8.27	
5/11/2020							7.77

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 6/12/2020 3:31 PM View: New Wells

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWA-1 (bg)	HGWA-3 (bg)	HGWA-2 (bg)	MW-29	MW-28D	MW-20	MW-5	MW-6	MW-26D
5/19/2016	66.9	42.3	48.6						
7/11/2016	41		45						
7/12/2016		44							
8/30/2016	36	40	42						
10/19/2016	46	43	44						
12/6/2016	59	43	44						
1/24/2017	46	48	46						
3/21/2017	63	45	46						
5/22/2017	77	46	48						
10/3/2017	42	48	47						
6/4/2018	71.8	46.6	47.8						
10/1/2018	49.1	48.6	48.1						
4/1/2019		50.4							
4/2/2019	84.3		48.7	151	67.7	122			
4/3/2019							218	228	131
4/4/2019									
4/8/2019									
9/23/2019	70.2	43.9	47.2						
9/24/2019				154					
9/25/2019						112	134		
9/26/2019					96.2			225	189
9/27/2019									
3/25/2020	85.9	50.5	46.3						
3/26/2020							176		
3/27/2020					36	114		204	
3/30/2020				130					
3/31/2020									129
4/2/2020									
4/9/2020									
5/11/2020									
5/19/2020									

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 6/12/2020 3:31 PM View: New Wells

Plant Hammond Client: Southern Company Data: Hammond AP-1

	MW-19	MW-25D	MW-7	MW-27D	MW-24D	MW-30D	MW-40D
5/19/2016							
7/11/2016							
7/12/2016							
8/30/2016							
10/19/2016							
12/6/2016							
1/24/2017							
3/21/2017							
5/22/2017							
10/3/2017							
6/4/2018							
10/1/2018							
4/1/2019							
4/2/2019							
4/3/2019	105	53	75.3				
4/4/2019				11.8			
4/8/2019					97.3		
9/23/2019							
9/24/2019						756	
9/25/2019							
9/26/2019			129	15.6	91		
9/27/2019	170	48					
3/25/2020							
3/26/2020	310	32.3					
3/27/2020							
3/30/2020			46.2		84.9		
3/31/2020						139	
4/2/2020				13.3			
4/9/2020						399	
5/11/2020							58.9
5/19/2020							54

Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 6/12/2020 3:31 PM View: New Wells

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWA-1 (bg)	HGWA-3 (bg)	HGWA-2 (bg)	MW-29	MW-28D	MW-20	MW-5	MW-6	MW-26D
5/19/2016	421	267	143						
7/11/2016	363		125						
7/12/2016		249							
8/30/2016	330	254	168						
10/19/2016	380	357	176						
12/6/2016	377	285	145						
1/24/2017	342	300	129						
3/21/2017	340	288	103						
5/22/2017	338	263	92						
10/3/2017	343	300	127						
6/4/2018	415	266	140						
10/1/2018	354	291	135						
4/1/2019		284							
4/2/2019	452		133	548	350	435			
4/3/2019							396	437	493
4/4/2019									
4/8/2019									
9/23/2019	442	268	129						
9/24/2019				603					
9/25/2019						461	460		
9/26/2019					418			735	643
9/27/2019									
3/25/2020	496	284	138						
3/26/2020							385		
3/27/2020					287	429		676	
3/30/2020				552					
3/31/2020									623
4/2/2020									
5/11/2020									
5/19/2020									

Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 6/12/2020 3:31 PM View: New Wells

Plant Hammond Client: Southern Company Data: Hammond AP-1

	MW-19	MW-25D	MW-7	MW-27D	MW-24D	MW-30D	MW-40D
5/19/2016							
7/11/2016							
7/12/2016							
8/30/2016							
10/19/2016							
12/6/2016							
1/24/2017							
3/21/2017							
5/22/2017							
10/3/2017							
6/4/2018							
10/1/2018							
4/1/2019							
4/2/2019							
4/3/2019	310	15 (J)	213				
4/4/2019				203			
4/8/2019					323		
9/23/2019							
9/24/2019						1970	
9/25/2019							
9/26/2019			383	265	360		
9/27/2019	442	409					
3/25/2020							
3/26/2020	626	385					
3/27/2020							
3/30/2020			142		280		
3/31/2020						1130	
4/2/2020				224			
5/11/2020							350
5/19/2020							621

FIGURE D.

Tolerance Limit Summary Table - Appendix IV

Plant Hammond Client: Southern Company Data: Hammond AP-1 Printed 6/3/2020, 3:06 PM

Constituent	Well	Upper Lim.	Lower Lim.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Antimony (mg/L)	n/a	0.003	n/a	42	n/a	n/a	95.24	n/a	n/a	0.116	NP Inter(NDs)
Arsenic (mg/L)	n/a	0.005	n/a	48	n/a	n/a	62.5	n/a	n/a	0.08526	NP Inter(normality)
Barium (mg/L)	n/a	0.14	n/a	48	n/a	n/a	0	n/a	n/a	0.08526	NP Inter(normality)
Beryllium (mg/L)	n/a	0.003	n/a	42	n/a	n/a	73.81	n/a	n/a	0.116	NP Inter(normality)
Cadmium (mg/L)	n/a	0.0025	n/a	42	n/a	n/a	85.71	n/a	n/a	0.116	NP Inter(NDs)
Chromium (mg/L)	n/a	0.01	n/a	42	n/a	n/a	85.71	n/a	n/a	0.116	NP Inter(NDs)
Cobalt (mg/L)	n/a	0.038	n/a	42	n/a	n/a	64.29	n/a	n/a	0.116	NP Inter(normality)
Combined Radium 226 + 228 (pCi/L)	n/a	4.36	n/a	48	n/a	n/a	0	n/a	n/a	0.08526	NP Inter(normality)
Fluoride (mg/L)	n/a	0.36	n/a	51	n/a	n/a	35.29	n/a	n/a	0.0731	NP Inter(normality)
Lead (mg/L)	n/a	0.005	n/a	39	n/a	n/a	76.92	n/a	n/a	0.1353	NP Inter(NDs)
Lithium (mg/L)	n/a	0.03	n/a	48	n/a	n/a	33.33	n/a	n/a	0.08526	NP Inter(normality)
Mercury (mg/L)	n/a	0.0005	n/a	33	n/a	n/a	93.94	n/a	n/a	0.184	NP Inter(NDs)
Molybdenum (mg/L)	n/a	0.01	n/a	48	n/a	n/a	100	n/a	n/a	0.08526	NP Inter(NDs)
Selenium (mg/L)	n/a	0.01	n/a	48	n/a	n/a	100	n/a	n/a	0.08526	NP Inter(NDs)
Thallium (mg/L)	n/a	0.001	n/a	48	n/a	n/a	97.92	n/a	n/a	0.08526	NP Inter(NDs)

FIGURE E.

PLANT HAMMOND AP-1 GWPS - FEDERAL				
Constituent Name	**MCL**	**CCR-Rule Specified**	**Background Limit**	**GWPS**
Antimony, Total (mg/L)	0.006		0.003	0.006
Arsenic, Total (mg/L)	0.01		0.005	0.01
Barium, Total (mg/L)	2		0.14	2
Beryllium, Total (mg/L)	0.004		0.003	0.004
Cadmium, Total (mg/L)	0.005		0.0025	0.005
Chromium, Total (mg/L)	0.1		0.01	0.1
Cobalt, Total (mg/L)	n/a	0.006	0.038	0.038
Combined Radium, Total (pCi/L)	5		4.36	5
Fluoride, Total (mg/L)	4		0.36	4
Lead, Total (mg/L)	n/a	0.015	0.005	0.015
Lithium, Total (mg/L)	n/a	0.04	0.03	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		0.01	0.05
Thallium, Total (mg/L)	0.002		0.001	0.002

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

**MCL = Maximum Contaminant Level*

**CCR = Coal Combustion Residuals*

**GWPS = Groundwater Protection Statard*

FIGURE F.

PLANT HAMMOND AP-1 GWPS - STATE				
Constituent Name	**MCL**	**CCR-Rule Specified**	**Background Limit**	**GWPS**
Antimony, Total (mg/L)	0.006		0.003	0.006
Arsenic, Total (mg/L)	0.01		0.005	0.01
Barium, Total (mg/L)	2		0.14	2
Beryllium, Total (mg/L)	0.004		0.003	0.004
Cadmium, Total (mg/L)	0.005		0.0025	0.005
Chromium, Total (mg/L)	0.1		0.01	0.1
Cobalt, Total (mg/L)	n/a	0.006	0.038	0.038
Combined Radium, Total (pCi/L)	5		4.36	5
Fluoride, Total (mg/L)	4		0.36	4
Lead, Total (mg/L)	n/a	0.015	0.005	0.005
Lithium, Total (mg/L)	n/a	0.04	0.03	0.03
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		0.01	0.05
Thallium, Total (mg/L)	0.002		0.001	0.002

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

**MCL = Maximum Contaminant Level*

**CCR = Coal Combustion Residuals*

**GWPS = Groundwater Protection Statard*

FIGURE G.

Federal Confidence Intervals - Significant Results

Plant Hammond Client: Southern Company Data: Hammond AP-1 Printed 6/12/2020, 3:48 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Lithium (mg/L)	**MW-25D**	**0.05443**	**0.04477**	**0.04**	**Yes**	**5**	**0.0496**	**0.002881**	**0**	**None**	**No**	**0.01**	**Param.**
Lithium (mg/L)	**MW-30D**	**0.3004**	**0.1096**	**0.04**	**Yes**	**4**	**0.205**	**0.04203**	**0**	**None**	**No**	**0.01**	**Param.**

Federal Confidence Intervals - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-1 Printed 6/12/2020, 3:48 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Antimony (mg/L)	MW-19	0.003	0.003	0.006	No	5	0.003	0	100	None	No	0.031	NP (NDs)
Antimony (mg/L)	MW-20	0.003	0.003	0.006	No	5	0.003	0	100	None	No	0.031	NP (NDs)
Antimony (mg/L)	MW-24D	0.003	0.0017	0.006	No	5	0.00274	0.0005814	80	None	No	0.031	NP (NDs)
Antimony (mg/L)	MW-25D	0.003	0.003	0.006	No	5	0.003	0	100	None	No	0.031	NP (NDs)
Antimony (mg/L)	MW-26D	0.003	0.0013	0.006	No	5	0.00246	0.0007797	60	None	No	0.031	NP (NDs)
Antimony (mg/L)	MW-27D	0.003	0.00016	0.006	No	5	0.000826	0.001218	20	None	No	0.031	NP (normality)
Antimony (mg/L)	MW-28D	0.003	0.003	0.006	No	5	0.003	0	100	None	No	0.031	NP (NDs)
Antimony (mg/L)	MW-29	0.003	0.003	0.006	No	5	0.003	0	100	None	No	0.031	NP (NDs)
Antimony (mg/L)	MW-5	0.003	0.003	0.006	No	5	0.003	0	100	None	No	0.031	NP (NDs)
Antimony (mg/L)	MW-6	0.003	0.003	0.006	No	5	0.003	0	100	None	No	0.031	NP (NDs)
Antimony (mg/L)	MW-7	0.003	0.00086	0.006	No	5	0.002232	0.001063	60	None	No	0.031	NP (NDs)
Arsenic (mg/L)	MW-19	0.005	0.00045	0.01	No	5	0.00409	0.002035	80	None	No	0.031	NP (NDs)
Arsenic (mg/L)	MW-20	0.005	0.00038	0.01	No	5	0.003536	0.002116	60	None	No	0.031	NP (NDs)
Arsenic (mg/L)	MW-24D	0.005	0.005	0.01	No	5	0.005	0	100	None	No	0.031	NP (NDs)
Arsenic (mg/L)	MW-25D	0.001929	0.0005739	0.01	No	5	0.00195	0.001759	20	Kaplan-Meier	sqrt(x)	0.01	Param.
Arsenic (mg/L)	MW-26D	0.005	0.0006	0.01	No	5	0.00412	0.001968	80	Kaplan-Meier	No	0.031	NP (NDs)
Arsenic (mg/L)	MW-27D	0.005	0.0002	0.01	No	5	0.003178	0.002501	60	Kaplan-Meier	No	0.031	NP (NDs)
Arsenic (mg/L)	MW-28D	0.005	0.005	0.01	No	5	0.005	0	100	None	No	0.031	NP (NDs)
Arsenic (mg/L)	MW-29	0.005	0.00037	0.01	No	5	0.004074	0.002071	80	None	No	0.031	NP (NDs)
Arsenic (mg/L)	MW-5	0.005	0.005	0.01	No	5	0.005	0	100	None	No	0.031	NP (NDs)
Arsenic (mg/L)	MW-6	0.005	0.005	0.01	No	5	0.005	0	100	None	No	0.031	NP (NDs)
Arsenic (mg/L)	MW-7	0.005	0.005	0.01	No	5	0.005	0	100	None	No	0.031	NP (NDs)
Barium (mg/L)	MW-19	0.07617	0.04943	2	No	5	0.0628	0.007981	0	None	No	0.01	Param.
Barium (mg/L)	MW-20	0.1011	0.07646	2	No	5	0.0888	0.007362	0	None	No	0.01	Param.
Barium (mg/L)	MW-24D	0.1225	0.01873	2	No	5	0.0706	0.03096	0	None	No	0.01	Param.
Barium (mg/L)	MW-25D	0.4671	0.3649	2	No	5	0.416	0.0305	0	None	No	0.01	Param.
Barium (mg/L)	MW-26D	0.1695	0.07815	2	No	5	0.1238	0.02724	0	None	No	0.01	Param.
Barium (mg/L)	MW-27D	1.516	0.7243	2	No	5	1.12	0.2361	0	None	No	0.01	Param.
Barium (mg/L)	MW-28D	1.025	0.07471	2	No	5	0.55	0.2836	0	None	No	0.01	Param.
Barium (mg/L)	MW-29	0.09153	0.07487	2	No	5	0.0832	0.00497	0	None	No	0.01	Param.
Barium (mg/L)	MW-5	0.05605	0.04235	2	No	5	0.0492	0.004087	0	None	No	0.01	Param.
Barium (mg/L)	MW-6	0.09987	0.08213	2	No	5	0.091	0.005292	0	None	No	0.01	Param.
Barium (mg/L)	MW-7	0.07185	0.04015	2	No	5	0.056	0.00946	0	None	No	0.01	Param.
Beryllium (mg/L)	MW-19	0.003	0.003	0.004	No	5	0.003	0	100	None	No	0.031	NP (NDs)
Beryllium (mg/L)	MW-20	0.003	0.003	0.004	No	5	0.003	0	100	None	No	0.031	NP (NDs)
Beryllium (mg/L)	MW-24D	0.003	0.003	0.004	No	5	0.003	0	100	None	No	0.031	NP (NDs)
Beryllium (mg/L)	MW-25D	0.003	0.003	0.004	No	5	0.003	0	100	None	No	0.031	NP (NDs)
Beryllium (mg/L)	MW-26D	0.003	0.003	0.004	No	5	0.003	0	100	None	No	0.031	NP (NDs)
Beryllium (mg/L)	MW-27D	0.003	0.003	0.004	No	5	0.003	0	100	None	No	0.031	NP (NDs)
Beryllium (mg/L)	MW-28D	0.003	0.00014	0.004	No	5	0.002428	0.001279	80	None	No	0.031	NP (NDs)
Beryllium (mg/L)	MW-29	0.003	0.003	0.004	No	5	0.003	0	100	None	No	0.031	NP (NDs)
Beryllium (mg/L)	MW-5	0.003	0.003	0.004	No	5	0.003	0	100	None	No	0.031	NP (NDs)
Beryllium (mg/L)	MW-6	0.003	0.003	0.004	No	5	0.003	0	100	None	No	0.031	NP (NDs)
Beryllium (mg/L)	MW-7	0.003	0.000051	0.004	No	5	0.00241	0.001319	80	None	No	0.031	NP (NDs)
Cadmium (mg/L)	MW-19	0.0025	0.00013	0.005	No	5	0.001116	0.001264	40	None	No	0.031	NP (normality)
Cadmium (mg/L)	MW-20	0.0025	0.0025	0.005	No	5	0.0025	0	100	None	No	0.031	NP (NDs)
Cadmium (mg/L)	MW-24D	0.0025	0.0025	0.005	No	5	0.0025	0	100	None	No	0.031	NP (NDs)
Cadmium (mg/L)	MW-25D	0.0025	0.0025	0.005	No	5	0.0025	0	100	None	No	0.031	NP (NDs)
Cadmium (mg/L)	MW-26D	0.0025	0.0025	0.005	No	5	0.0025	0	100	None	No	0.031	NP (NDs)
Cadmium (mg/L)	MW-27D	0.0025	0.0025	0.005	No	5	0.0025	0	100	None	No	0.031	NP (NDs)
Cadmium (mg/L)	MW-28D	0.0025	0.0025	0.005	No	5	0.0025	0	100	None	No	0.031	NP (NDs)
Cadmium (mg/L)	MW-29	0.0025	0.0025	0.005	No	5	0.0025	0	100	None	No	0.031	NP (NDs)
Cadmium (mg/L)	MW-5	0.0025	0.0025	0.005	No	5	0.0025	0	100	None	No	0.031	NP (NDs)
Cadmium (mg/L)	MW-6	0.0025	0.0025	0.005	No	5	0.0025	0	100	None	No	0.031	NP (NDs)
Cadmium (mg/L)	MW-7	0.0025	0.0025	0.005	No	5	0.0025	0	100	None	No	0.031	NP (NDs)

Federal Confidence Intervals - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-1 Printed 6/12/2020, 3:48 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Chromium (mg/L)	MW-19	0.01	0.00047	0.1	No	5	0.006226	0.005168	60	None	No	0.031	NP (NDs)
Chromium (mg/L)	MW-20	0.01	0.00051	0.1	No	5	0.006244	0.005144	60	None	No	0.031	NP (NDs)
Chromium (mg/L)	MW-24D	0.01	0.00042	0.1	No	5	0.008084	0.004284	80	None	No	0.031	NP (NDs)
Chromium (mg/L)	MW-25D	0.01	0.00061	0.1	No	5	0.008122	0.004199	80	None	No	0.031	NP (NDs)
Chromium (mg/L)	MW-26D	0.003136	0.0003512	0.1	No	5	0.004912	0.004711	40	Kaplan-Meier	sqrt(x)	0.01	Param.
Chromium (mg/L)	MW-27D	0.01	0.01	0.1	No	5	0.01	0	100	Kaplan-Meier	No	0.031	NP (NDs)
Chromium (mg/L)	MW-28D	0.01	0.00081	0.1	No	5	0.006702	0.004565	60	None	No	0.031	NP (NDs)
Chromium (mg/L)	MW-29	0.01	0.001	0.1	No	5	0.0082	0.004025	80	None	No	0.031	NP (NDs)
Chromium (mg/L)	MW-5	0.005557	0.002363	0.1	No	5	0.00396	0.0009529	0	None	No	0.01	Param.
Chromium (mg/L)	MW-6	0.01	0.00044	0.1	No	5	0.006206	0.005195	60	None	No	0.031	NP (NDs)
Chromium (mg/L)	MW-7	0.01	0.0013	0.1	No	5	0.00344	0.00369	20	None	No	0.031	NP (normality)
Cobalt (mg/L)	MW-19	0.05297	0.02183	0.038	No	5	0.0374	0.00929	0	None	No	0.01	Param.
Cobalt (mg/L)	MW-20	0.005	0.0011	0.038	No	5	0.00422	0.001744	80	None	No	0.031	NP (NDs)
Cobalt (mg/L)	MW-24D	0.001304	0.0001519	0.038	No	5	0.002382	0.002409	40	Kaplan-Meier	sqrt(x)	0.01	Param.
Cobalt (mg/L)	MW-25D	0.005	0.005	0.038	No	5	0.005	0	100	Kaplan-Meier	No	0.031	NP (NDs)
Cobalt (mg/L)	MW-26D	0.005	0.0003	0.038	No	5	0.003166	0.002513	60	Kaplan-Meier	No	0.031	NP (NDs)
Cobalt (mg/L)	MW-27D	0.005	0.000091	0.038	No	5	0.003108	0.002594	60	Kaplan-Meier	No	0.031	NP (NDs)
Cobalt (mg/L)	MW-28D	0.005	0.00093	0.038	No	5	0.004186	0.00182	80	None	No	0.031	NP (NDs)
Cobalt (mg/L)	MW-29	0.001489	0.0003399	0.038	No	5	0.000842	0.0003813	0	None	sqrt(x)	0.01	Param.
Cobalt (mg/L)	MW-5	0.005	0.005	0.038	No	5	0.005	0	100	None	No	0.031	NP (NDs)
Cobalt (mg/L)	MW-6	0.001018	0.0003254	0.038	No	5	0.001488	0.001974	20	Kaplan-Meier	ln(x)	0.01	Param.
Cobalt (mg/L)	MW-7	0.005	0.005	0.038	No	5	0.005	0	100	Kaplan-Meier	No	0.031	NP (NDs)
Combined Radium 226 + 228 (pCi/L)	MW-19	1.33	0.2323	5	No	5	0.781	0.3274	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-20	1.531	-0.06625	5	No	5	0.7322	0.4765	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-24D	0.935	-0.05422	5	No	5	0.4404	0.2952	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-25D	1.516	0.4999	5	No	5	1.008	0.3032	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-26D	1.87	-0.00458	5	No	5	0.9328	0.5594	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-27D	2.568	0.5176	5	No	5	1.543	0.6118	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-28D	1.763	0.358	5	No	5	1.06	0.4192	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-29	1.402	0.1828	5	No	5	0.7926	0.3639	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-5	1.187	0.5787	5	No	5	0.883	0.1816	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-6	2.07	0.745	5	No	5	1.04	0.5779	0	None	No	0.031	NP (normality)
Combined Radium 226 + 228 (pCi/L)	MW-7	1.308	0.7751	5	No	5	1.041	0.1589	0	None	No	0.01	Param.
Fluoride (mg/L)	MW-19	0.562	-0.04761	4	No	5	0.2572	0.1819	0	None	No	0.01	Param.
Fluoride (mg/L)	MW-20	0.3	0.072	4	No	5	0.2544	0.102	80	None	No	0.031	NP (NDs)
Fluoride (mg/L)	MW-24D	0.1786	0.02992	4	No	5	0.0834	0.055	0	None	ln(x)	0.01	Param.
Fluoride (mg/L)	MW-25D	2.188	1.187	4	No	5	1.66	0.313	0	None	sqrt(x)	0.01	Param.
Fluoride (mg/L)	MW-26D	0.1854	0.01695	4	No	5	0.1276	0.1141	20	Kaplan-Meier	x^(1/3)	0.01	Param.
Fluoride (mg/L)	MW-27D	0.42	0.24	4	No	5	0.29	0.07416	0	None	No	0.031	NP (normality)
Fluoride (mg/L)	MW-28D	0.2881	0.1759	4	No	5	0.232	0.03347	0	None	No	0.01	Param.
Fluoride (mg/L)	MW-29	0.1966	0.00006774	4	No	5	0.179	0.1216	40	Kaplan-Meier	No	0.01	Param.
Fluoride (mg/L)	MW-30D	14.05	3.9	4	No	4	8.975	2.235	0	None	No	0.01	Param.
Fluoride (mg/L)	MW-5	0.1063	0.0425	4	No	5	0.0744	0.01903	0	None	No	0.01	Param.
Fluoride (mg/L)	MW-6	0.2153	0.03873	4	No	5	0.1784	0.08575	20	Kaplan-Meier	No	0.01	Param.
Fluoride (mg/L)	MW-7	0.3	0.069	4	No	5	0.2278	0.1051	60	Kaplan-Meier	No	0.031	NP (NDs)
Lithium (mg/L)	MW-19	0.0151	0.005299	0.04	No	5	0.0102	0.002925	0	None	No	0.01	Param.
Lithium (mg/L)	MW-20	0.03	0.00082	0.04	No	5	0.007024	0.01285	20	None	No	0.031	NP (normality)
Lithium (mg/L)	MW-24D	0.003055	0.002505	0.04	No	5	0.00278	0.0001643	0	None	No	0.01	Param.
Lithium (mg/L)	**MW-25D**	**0.05443**	**0.04477**	**0.04**	**Yes**	**5**	**0.0496**	**0.002881**	**0**	**None**	**No**	**0.01**	**Param.**
Lithium (mg/L)	MW-26D	0.03	0.0033	0.04	No	5	0.00888	0.01181	0	None	No	0.031	NP (normality)
Lithium (mg/L)	MW-27D	0.009909	0.003531	0.04	No	5	0.00672	0.001903	0	None	No	0.01	Param.
Lithium (mg/L)	MW-28D	0.01787	0.002407	0.04	No	5	0.01014	0.004615	0	None	No	0.01	Param.
Lithium (mg/L)	MW-29	0.002565	0.002035	0.04	No	5	0.0023	0.0001581	0	None	No	0.01	Param.
Lithium (mg/L)	**MW-30D**	**0.3004**	**0.1096**	**0.04**	**Yes**	**4**	**0.205**	**0.04203**	**0**	**None**	**No**	**0.01**	**Param.**
Lithium (mg/L)	MW-5	0.03	0.03	0.04	No	5	0.03	0	100	None	No	0.031	NP (NDs)

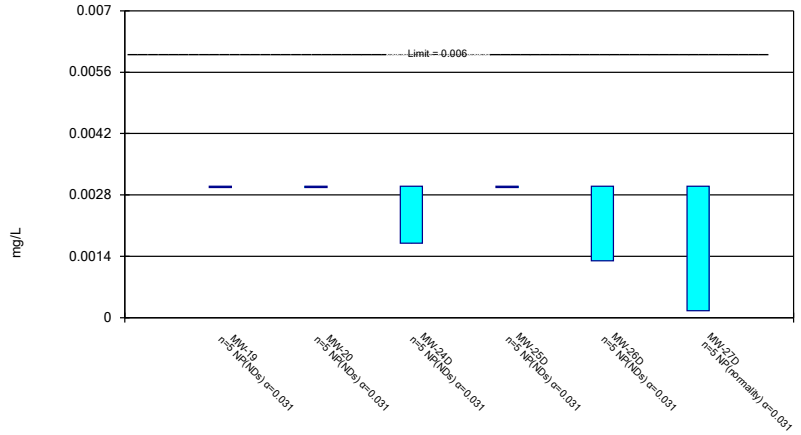
Federal Confidence Intervals - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-1 Printed 6/12/2020, 3:48 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Lithium (mg/L)	MW-6	0.03	0.03	0.04	No	5	0.03	0	100	None	No	0.031	NP (NDs)
Lithium (mg/L)	MW-7	0.03	0.03	0.04	No	5	0.03	0	100	None	No	0.031	NP (NDs)
Molybdenum (mg/L)	MW-19	0.06879	0.02121	0.1	No	5	0.045	0.0142	0	None	No	0.01	Param.
Molybdenum (mg/L)	MW-20	0.01	0.01	0.1	No	5	0.01	0	100	None	No	0.031	NP (NDs)
Molybdenum (mg/L)	MW-24D	0.01	0.00027	0.1	No	5	0.008054	0.004351	80	None	No	0.031	NP (NDs)
Molybdenum (mg/L)	MW-25D	0.01	0.0022	0.1	No	5	0.00844	0.003488	80	None	No	0.031	NP (NDs)
Molybdenum (mg/L)	MW-26D	0.01847	0.004975	0.1	No	6	0.012	0.005199	16.67	Kaplan-Meier	No	0.01	Param.
Molybdenum (mg/L)	MW-27D	0.00618	0.00122	0.1	No	5	0.00496	0.003182	20	Kaplan-Meier	No	0.01	Param.
Molybdenum (mg/L)	MW-28D	0.02878	0.0007414	0.1	No	5	0.01476	0.008366	0	None	No	0.01	Param.
Molybdenum (mg/L)	MW-29	0.003876	0.001764	0.1	No	5	0.00282	0.0006301	0	None	No	0.01	Param.
Molybdenum (mg/L)	MW-30D	0.04539	0.008606	0.1	No	5	0.027	0.01098	0	None	No	0.01	Param.
Molybdenum (mg/L)	MW-5	0.01	0.01	0.1	No	5	0.01	0	100	None	No	0.031	NP (NDs)
Molybdenum (mg/L)	MW-6	0.0026	0.0021	0.1	No	5	0.00232	0.0002588	0	None	No	0.031	NP (normality)
Molybdenum (mg/L)	MW-7	0.01	0.0033	0.1	No	5	0.00866	0.002996	80	None	No	0.031	NP (NDs)
Selenium (mg/L)	MW-19	0.007969	0.001031	0.05	No	5	0.0056	0.003215	20	Kaplan-Meier	No	0.01	Param.
Selenium (mg/L)	MW-20	0.01	0.01	0.05	No	5	0.01	0	100	Kaplan-Meier	No	0.031	NP (NDs)
Selenium (mg/L)	MW-24D	0.01	0.01	0.05	No	5	0.01	0	100	Kaplan-Meier	No	0.031	NP (NDs)
Selenium (mg/L)	MW-25D	0.01	0.01	0.05	No	5	0.01	0	100	Kaplan-Meier	No	0.031	NP (NDs)
Selenium (mg/L)	MW-26D	0.01	0.01	0.05	No	5	0.01	0	100	Kaplan-Meier	No	0.031	NP (NDs)
Selenium (mg/L)	MW-27D	0.01	0.00012	0.05	No	5	0.008024	0.004418	80	Kaplan-Meier	No	0.031	NP (NDs)
Selenium (mg/L)	MW-28D	0.01	0.01	0.05	No	5	0.01	0	100	None	No	0.031	NP (NDs)
Selenium (mg/L)	MW-29	0.01	0.01	0.05	No	5	0.01	0	100	None	No	0.031	NP (NDs)
Selenium (mg/L)	MW-5	0.004614	0.001826	0.05	No	5	0.00322	0.0008319	0	None	No	0.01	Param.
Selenium (mg/L)	MW-6	0.01	0.01	0.05	No	5	0.01	0	100	None	No	0.031	NP (NDs)
Selenium (mg/L)	MW-7	0.01	0.0014	0.05	No	5	0.00488	0.004675	40	None	No	0.031	NP (normality)
Thallium (mg/L)	MW-19	0.001	0.00026	0.002	No	5	0.000558	0.0004035	40	None	No	0.031	NP (normality)
Thallium (mg/L)	MW-20	0.001	0.001	0.002	No	5	0.001	0	100	None	No	0.031	NP (NDs)
Thallium (mg/L)	MW-24D	0.001	0.001	0.002	No	5	0.001	0	100	None	No	0.031	NP (NDs)
Thallium (mg/L)	MW-25D	0.001	0.001	0.002	No	5	0.001	0	100	None	No	0.031	NP (NDs)
Thallium (mg/L)	MW-26D	0.001	0.001	0.002	No	5	0.001	0	100	None	No	0.031	NP (NDs)
Thallium (mg/L)	MW-27D	0.001	0.001	0.002	No	5	0.001	0	100	None	No	0.031	NP (NDs)
Thallium (mg/L)	MW-28D	0.001	0.000092	0.002	No	5	0.0008184	0.0004061	80	None	No	0.031	NP (NDs)
Thallium (mg/L)	MW-29	0.001	0.000064	0.002	No	5	0.0008128	0.0004186	80	None	No	0.031	NP (NDs)
Thallium (mg/L)	MW-5	0.001	0.001	0.002	No	5	0.001	0	100	None	No	0.031	NP (NDs)
Thallium (mg/L)	MW-6	0.001	0.000082	0.002	No	5	0.0008164	0.0004105	80	None	No	0.031	NP (NDs)
Thallium (mg/L)	MW-7	0.001	0.001	0.002	No	5	0.001	0	100	None	No	0.031	NP (NDs)

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

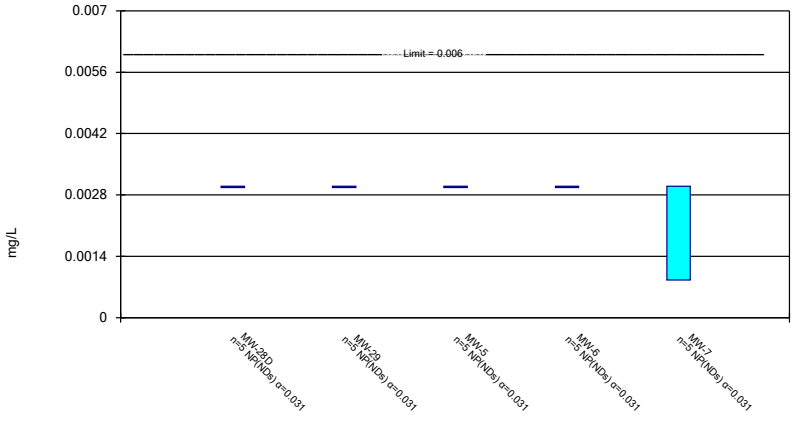


Constituent: Antimony Analysis Run 6/12/2020 3:41 PM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

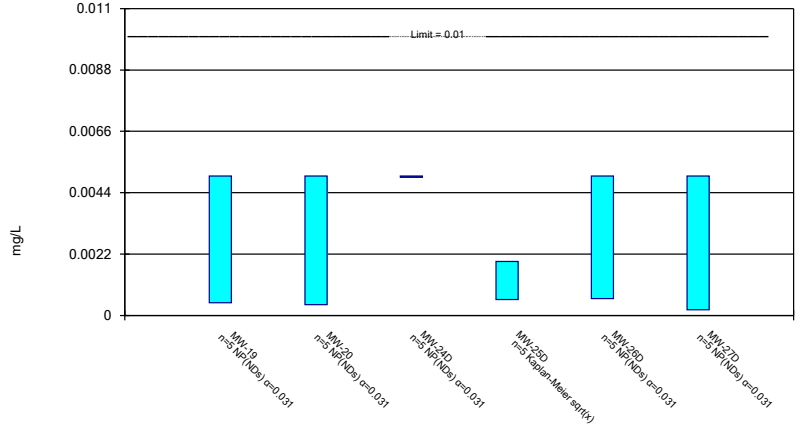


Constituent: Antimony Analysis Run 6/12/2020 3:41 PM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

Parametric and Non-Parametric (NP) Confidence Interval

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

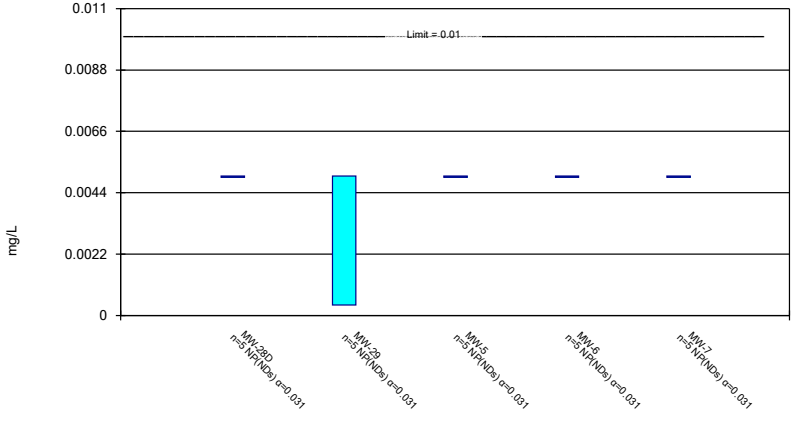


Constituent: Arsenic Analysis Run 6/12/2020 3:41 PM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

Non-Parametric Confidence Interval

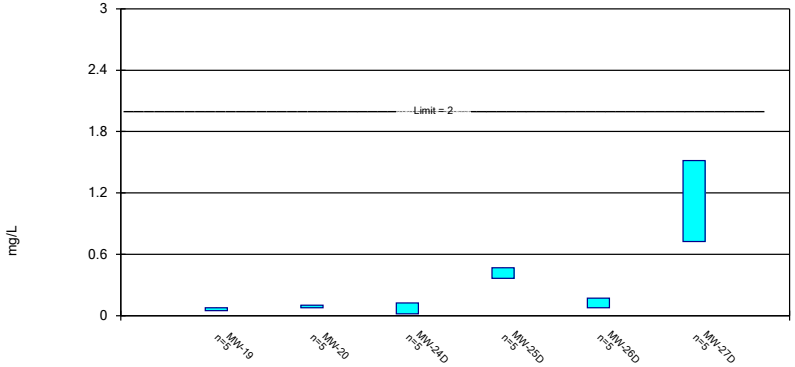
Compliance Limit is not exceeded.



Constituent: Arsenic Analysis Run 6/12/2020 3:41 PM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

Parametric Confidence Interval

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

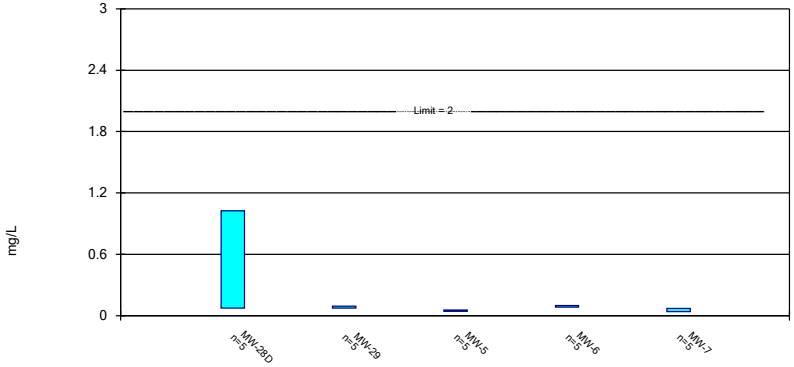


Constituent: Barium Analysis Run 6/12/2020 3:41 PM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

Parametric Confidence Interval

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

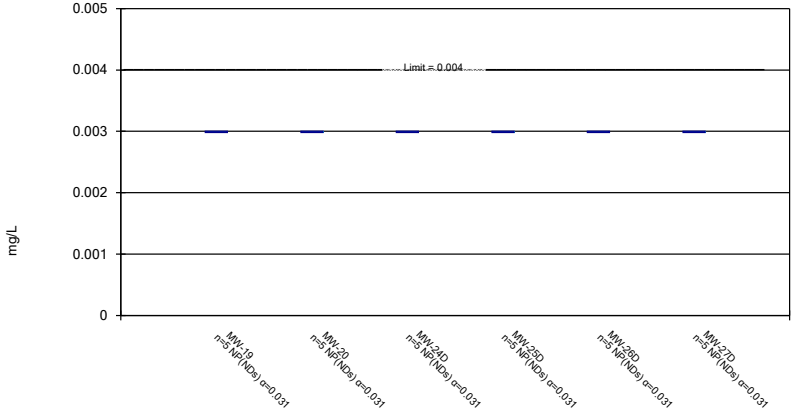


Constituent: Barium Analysis Run 6/12/2020 3:41 PM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

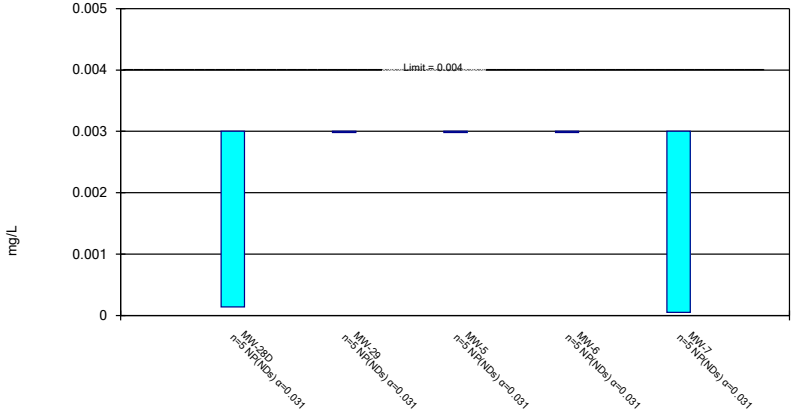


Constituent: Beryllium Analysis Run 6/12/2020 3:41 PM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

Non-Parametric Confidence Interval

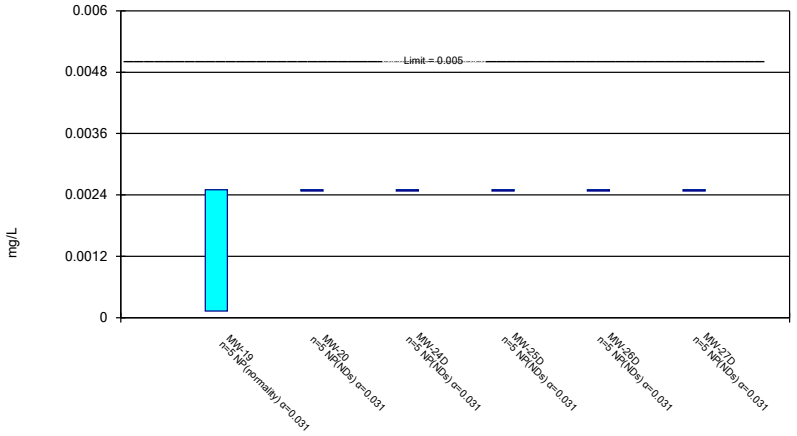
Compliance Limit is not exceeded.



Constituent: Beryllium Analysis Run 6/12/2020 3:41 PM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

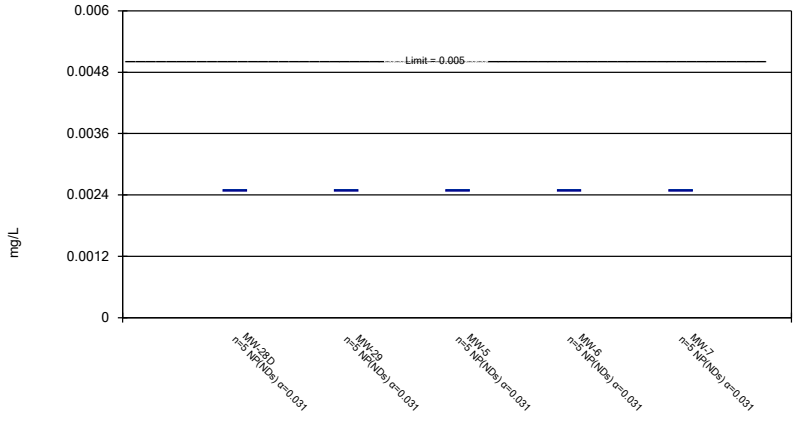


Constituent: Cadmium Analysis Run 6/12/2020 3:41 PM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

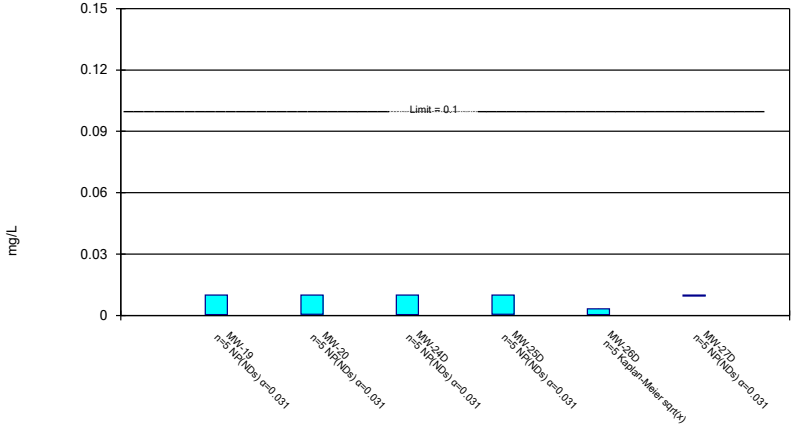


Constituent: Cadmium Analysis Run 6/12/2020 3:41 PM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

Parametric and Non-Parametric (NP) Confidence Interval

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

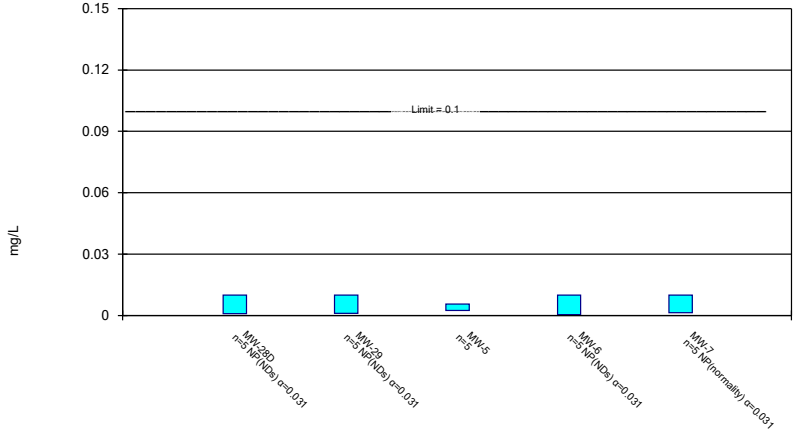


Constituent: Chromium Analysis Run 6/12/2020 3:41 PM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

Parametric and Non-Parametric (NP) Confidence Interval

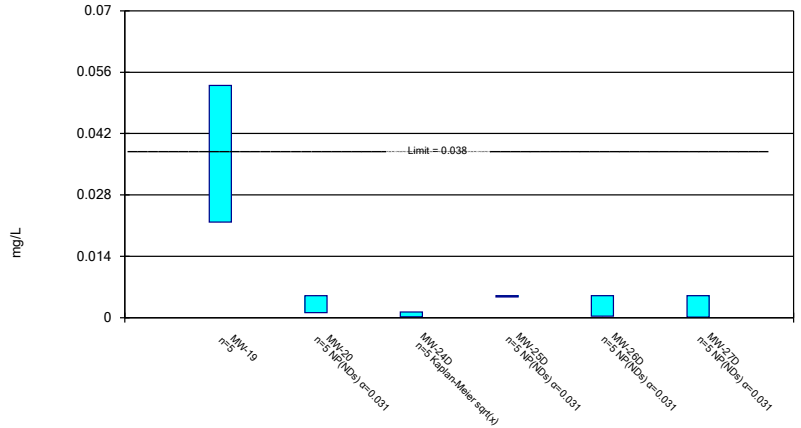
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Chromium Analysis Run 6/12/2020 3:41 PM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

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.

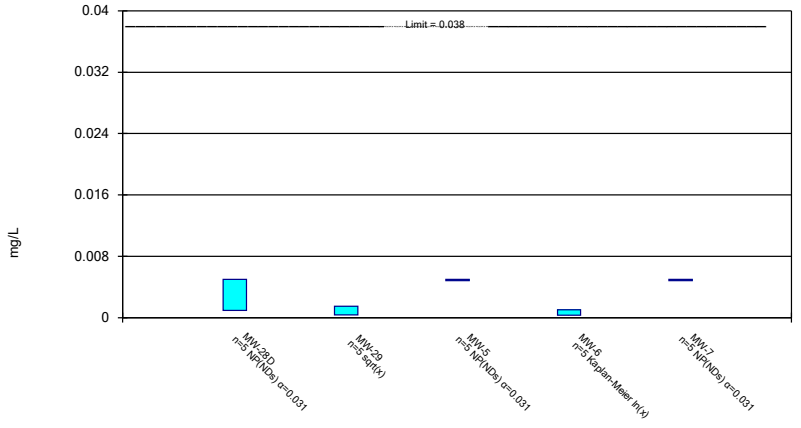


Constituent: Cobalt Analysis Run 6/12/2020 3:41 PM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

Parametric and Non-Parametric (NP) Confidence Interval

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

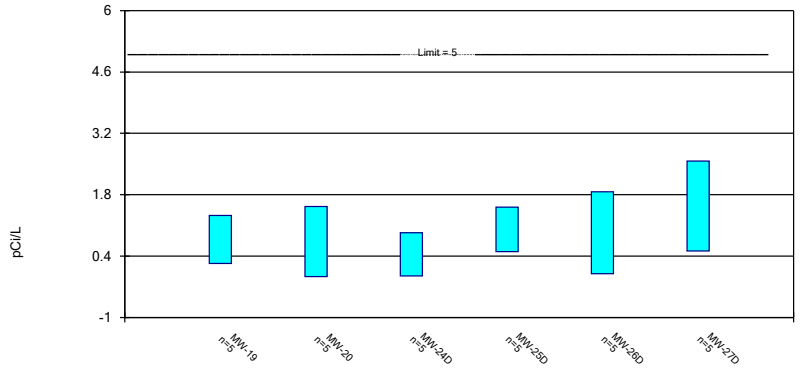


Constituent: Cobalt Analysis Run 6/12/2020 3:41 PM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

Parametric Confidence Interval

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

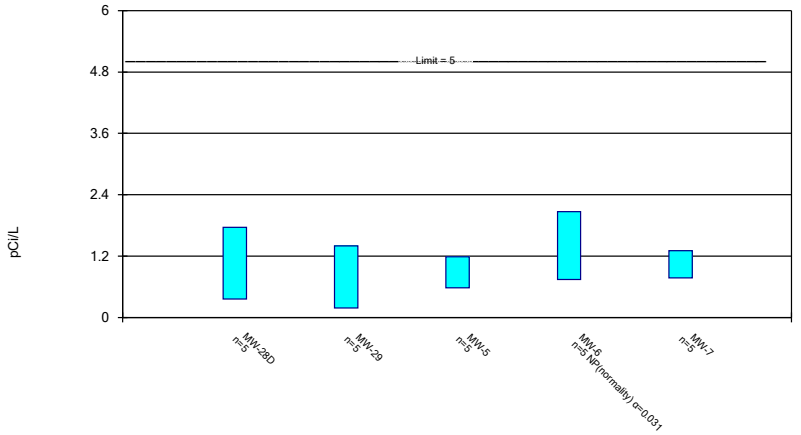


Constituent: Combined Radium 226 + 228 Analysis Run 6/12/2020 3:41 PM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

Parametric and Non-Parametric (NP) Confidence Interval

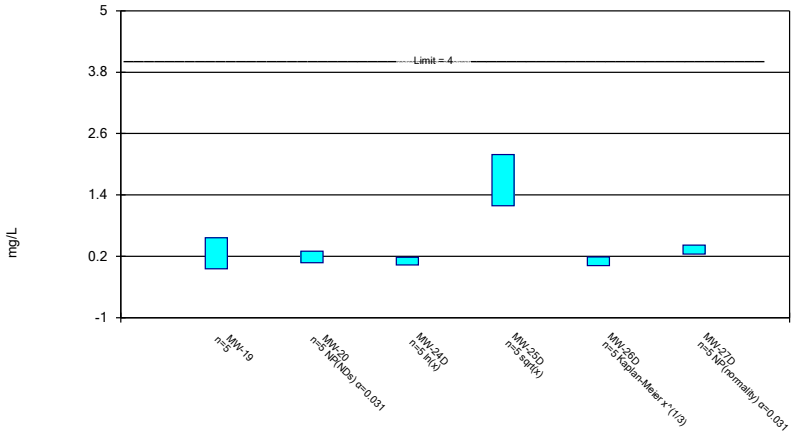
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Combined Radium 226 + 228 Analysis Run 6/12/2020 3:41 PM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

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.



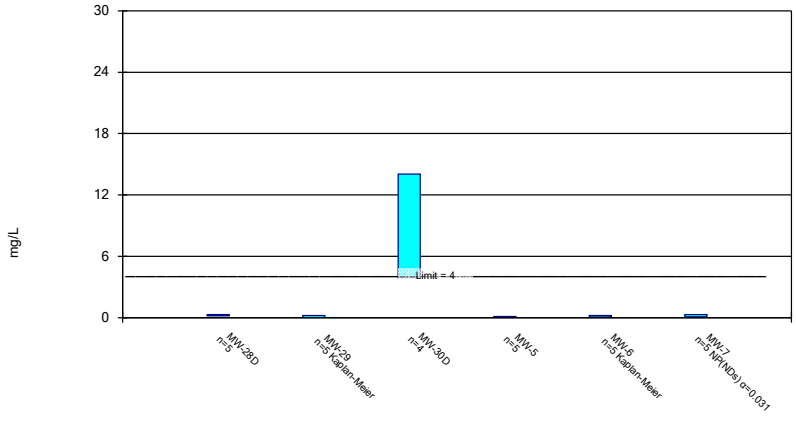
Constituent: Fluoride Analysis Run 6/12/2020 3:41 PM View: New Wells

Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

Parametric and Non-Parametric (NP) Confidence Interval

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



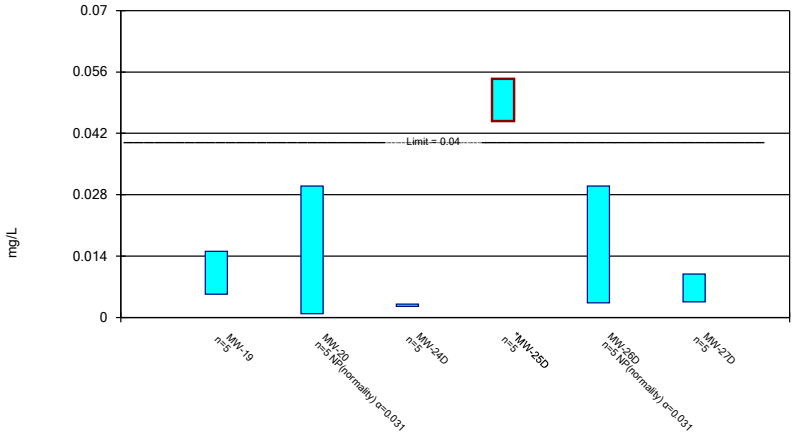
Constituent: Fluoride Analysis Run 6/12/2020 3:41 PM View: New Wells

Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

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.



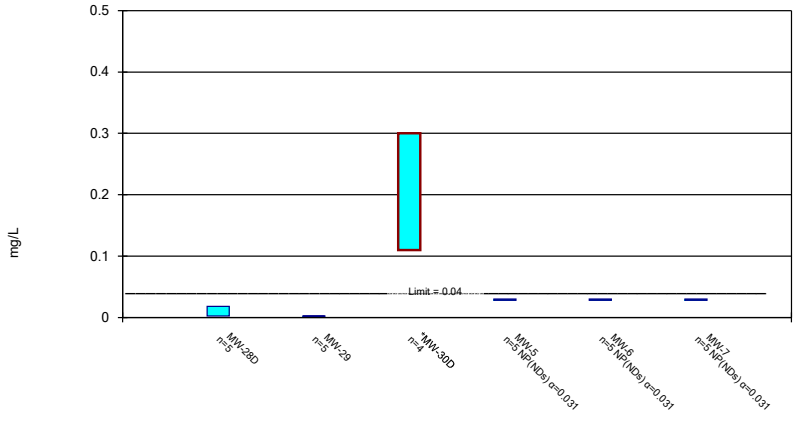
Constituent: Lithium Analysis Run 6/12/2020 3:41 PM View: New Wells

Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

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.

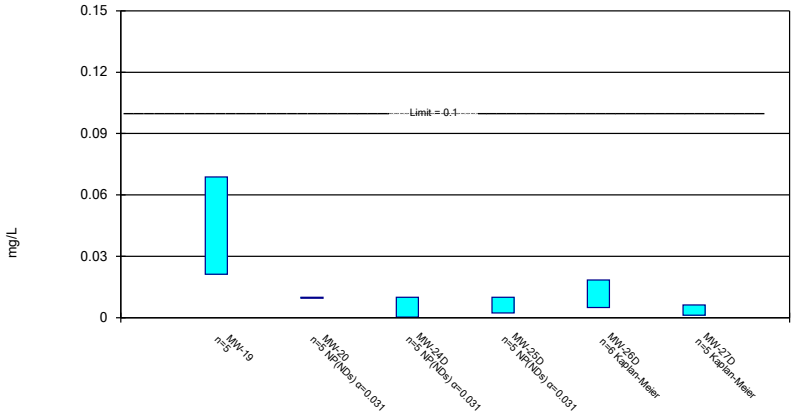


Constituent: Lithium Analysis Run 6/12/2020 3:41 PM View: New Wells

Plant Hammond Client: Southern Company Data: Hammond AP-1

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.



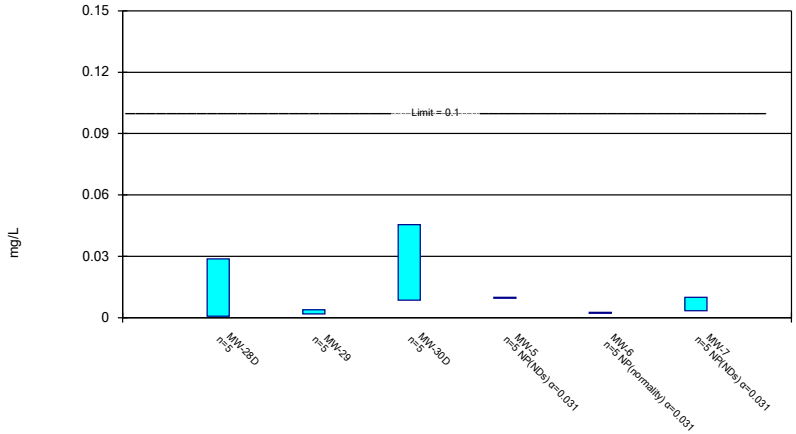
Constituent: Molybdenum Analysis Run 6/12/2020 3:41 PM View: New Wells

Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

Parametric and Non-Parametric (NP) Confidence Interval

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



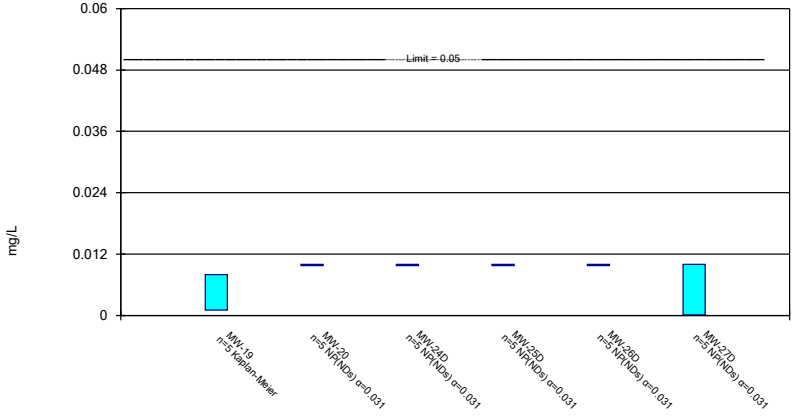
Constituent: Molybdenum Analysis Run 6/12/2020 3:41 PM View: New Wells

Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

Parametric and Non-Parametric (NP) Confidence Interval

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



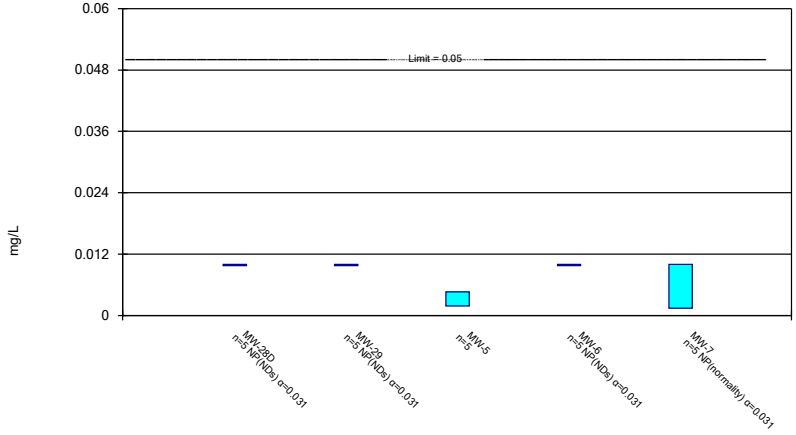
Constituent: Selenium Analysis Run 6/12/2020 3:41 PM View: New Wells

Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

Parametric and Non-Parametric (NP) Confidence Interval

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

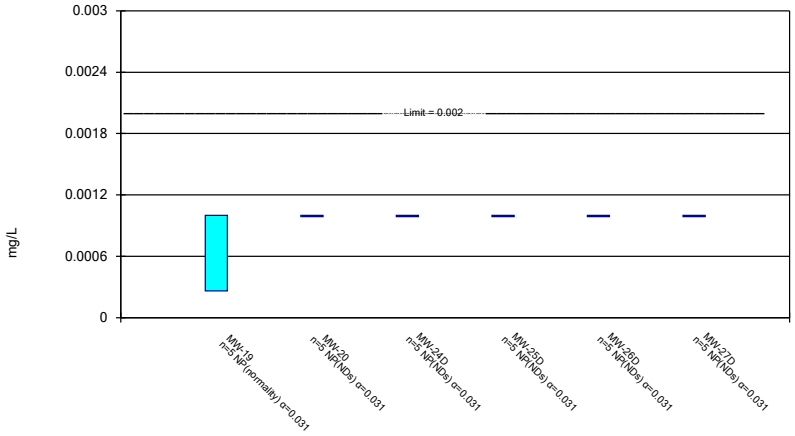


Constituent: Selenium Analysis Run 6/12/2020 3:41 PM View: New Wells

Plant Hammond Client: Southern Company Data: Hammond AP-1

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

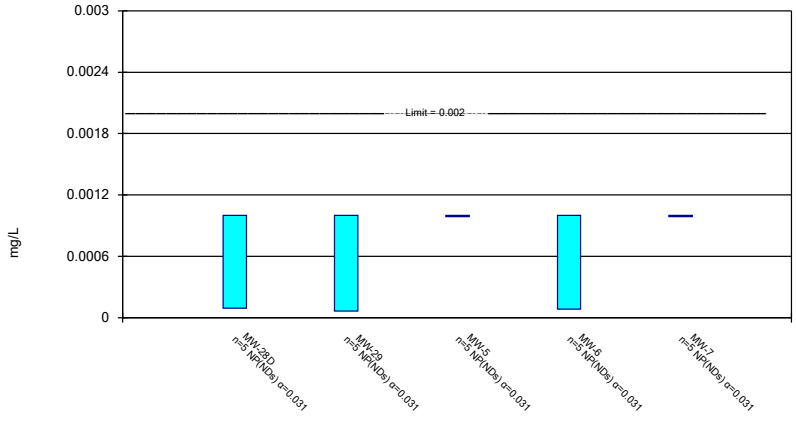


Constituent: Thallium Analysis Run 6/12/2020 3:41 PM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.



Constituent: Thallium Analysis Run 6/12/2020 3:41 PM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

FIGURE H.

State Confidence Intervals - Significant Results

Plant Hammond Client: Southern Company Data: Hammond AP-1 Printed 6/15/2020, 11:03 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Lithium (mg/L)	**MW-25D**	**0.05443**	**0.04477**	**0.03**	**Yes**	**5**	**0.0496**	**0.002881**	**0**	**None**	**No**	**0.01**	**Param.**
Lithium (mg/L)	**MW-30D**	**0.3004**	**0.1096**	**0.03**	**Yes**	**4**	**0.205**	**0.04203**	**0**	**None**	**No**	**0.01**	**Param.**
Molybdenum (mg/L)	**MW-19**	**0.06879**	**0.02121**	**0.01**	**Yes**	**5**	**0.045**	**0.0142**	**0**	**None**	**No**	**0.01**	**Param.**

State Confidence Intervals - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-1 Printed 6/15/2020, 11:03 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Antimony (mg/L)	MW-19	0.003	0.003	0.006	No	5	0.003	0	100	None	No	0.031	NP (NDs)
Antimony (mg/L)	MW-20	0.003	0.003	0.006	No	5	0.003	0	100	None	No	0.031	NP (NDs)
Antimony (mg/L)	MW-24D	0.003	0.0017	0.006	No	5	0.00274	0.0005814	80	None	No	0.031	NP (NDs)
Antimony (mg/L)	MW-25D	0.003	0.003	0.006	No	5	0.003	0	100	None	No	0.031	NP (NDs)
Antimony (mg/L)	MW-26D	0.003	0.0013	0.006	No	5	0.00246	0.0007797	60	None	No	0.031	NP (NDs)
Antimony (mg/L)	MW-27D	0.003	0.00016	0.006	No	5	0.000826	0.001218	20	None	No	0.031	NP (normality)
Antimony (mg/L)	MW-28D	0.003	0.003	0.006	No	5	0.003	0	100	None	No	0.031	NP (NDs)
Antimony (mg/L)	MW-29	0.003	0.003	0.006	No	5	0.003	0	100	None	No	0.031	NP (NDs)
Antimony (mg/L)	MW-5	0.003	0.003	0.006	No	5	0.003	0	100	None	No	0.031	NP (NDs)
Antimony (mg/L)	MW-6	0.003	0.003	0.006	No	5	0.003	0	100	None	No	0.031	NP (NDs)
Antimony (mg/L)	MW-7	0.003	0.00086	0.006	No	5	0.002232	0.001063	60	None	No	0.031	NP (NDs)
Arsenic (mg/L)	MW-19	0.005	0.00045	0.01	No	5	0.00409	0.002035	80	None	No	0.031	NP (NDs)
Arsenic (mg/L)	MW-20	0.005	0.00038	0.01	No	5	0.003536	0.002116	60	None	No	0.031	NP (NDs)
Arsenic (mg/L)	MW-24D	0.005	0.005	0.01	No	5	0.005	0	100	None	No	0.031	NP (NDs)
Arsenic (mg/L)	MW-25D	0.001929	0.0005739	0.01	No	5	0.00195	0.001759	20	Kaplan-Meier	sqrt(x)	0.01	Param.
Arsenic (mg/L)	MW-26D	0.005	0.0006	0.01	No	5	0.00412	0.001968	80	Kaplan-Meier	No	0.031	NP (NDs)
Arsenic (mg/L)	MW-27D	0.005	0.0002	0.01	No	5	0.003178	0.002501	60	Kaplan-Meier	No	0.031	NP (NDs)
Arsenic (mg/L)	MW-28D	0.005	0.005	0.01	No	5	0.005	0	100	None	No	0.031	NP (NDs)
Arsenic (mg/L)	MW-29	0.005	0.00037	0.01	No	5	0.004074	0.002071	80	None	No	0.031	NP (NDs)
Arsenic (mg/L)	MW-5	0.005	0.005	0.01	No	5	0.005	0	100	None	No	0.031	NP (NDs)
Arsenic (mg/L)	MW-6	0.005	0.005	0.01	No	5	0.005	0	100	None	No	0.031	NP (NDs)
Arsenic (mg/L)	MW-7	0.005	0.005	0.01	No	5	0.005	0	100	None	No	0.031	NP (NDs)
Barium (mg/L)	MW-19	0.07617	0.04943	2	No	5	0.0628	0.007981	0	None	No	0.01	Param.
Barium (mg/L)	MW-20	0.1011	0.07646	2	No	5	0.0888	0.007362	0	None	No	0.01	Param.
Barium (mg/L)	MW-24D	0.1225	0.01873	2	No	5	0.0706	0.03096	0	None	No	0.01	Param.
Barium (mg/L)	MW-25D	0.4671	0.3649	2	No	5	0.416	0.0305	0	None	No	0.01	Param.
Barium (mg/L)	MW-26D	0.1695	0.07815	2	No	5	0.1238	0.02724	0	None	No	0.01	Param.
Barium (mg/L)	MW-27D	1.516	0.7243	2	No	5	1.12	0.2361	0	None	No	0.01	Param.
Barium (mg/L)	MW-28D	1.025	0.07471	2	No	5	0.55	0.2836	0	None	No	0.01	Param.
Barium (mg/L)	MW-29	0.09153	0.07487	2	No	5	0.0832	0.00497	0	None	No	0.01	Param.
Barium (mg/L)	MW-5	0.05605	0.04235	2	No	5	0.0492	0.004087	0	None	No	0.01	Param.
Barium (mg/L)	MW-6	0.09987	0.08213	2	No	5	0.091	0.005292	0	None	No	0.01	Param.
Barium (mg/L)	MW-7	0.07185	0.04015	2	No	5	0.056	0.00946	0	None	No	0.01	Param.
Beryllium (mg/L)	MW-19	0.003	0.003	0.004	No	5	0.003	0	100	None	No	0.031	NP (NDs)
Beryllium (mg/L)	MW-20	0.003	0.003	0.004	No	5	0.003	0	100	None	No	0.031	NP (NDs)
Beryllium (mg/L)	MW-24D	0.003	0.003	0.004	No	5	0.003	0	100	None	No	0.031	NP (NDs)
Beryllium (mg/L)	MW-25D	0.003	0.003	0.004	No	5	0.003	0	100	None	No	0.031	NP (NDs)
Beryllium (mg/L)	MW-26D	0.003	0.003	0.004	No	5	0.003	0	100	None	No	0.031	NP (NDs)
Beryllium (mg/L)	MW-27D	0.003	0.003	0.004	No	5	0.003	0	100	None	No	0.031	NP (NDs)
Beryllium (mg/L)	MW-28D	0.003	0.00014	0.004	No	5	0.002428	0.001279	80	None	No	0.031	NP (NDs)
Beryllium (mg/L)	MW-29	0.003	0.003	0.004	No	5	0.003	0	100	None	No	0.031	NP (NDs)
Beryllium (mg/L)	MW-5	0.003	0.003	0.004	No	5	0.003	0	100	None	No	0.031	NP (NDs)
Beryllium (mg/L)	MW-6	0.003	0.003	0.004	No	5	0.003	0	100	None	No	0.031	NP (NDs)
Beryllium (mg/L)	MW-7	0.003	0.000051	0.004	No	5	0.00241	0.001319	80	None	No	0.031	NP (NDs)
Cadmium (mg/L)	MW-19	0.0025	0.00013	0.005	No	5	0.001116	0.001264	40	None	No	0.031	NP (normality)
Cadmium (mg/L)	MW-20	0.0025	0.0025	0.005	No	5	0.0025	0	100	None	No	0.031	NP (NDs)
Cadmium (mg/L)	MW-24D	0.0025	0.0025	0.005	No	5	0.0025	0	100	None	No	0.031	NP (NDs)
Cadmium (mg/L)	MW-25D	0.0025	0.0025	0.005	No	5	0.0025	0	100	None	No	0.031	NP (NDs)
Cadmium (mg/L)	MW-26D	0.0025	0.0025	0.005	No	5	0.0025	0	100	None	No	0.031	NP (NDs)
Cadmium (mg/L)	MW-27D	0.0025	0.0025	0.005	No	5	0.0025	0	100	None	No	0.031	NP (NDs)
Cadmium (mg/L)	MW-28D	0.0025	0.0025	0.005	No	5	0.0025	0	100	None	No	0.031	NP (NDs)
Cadmium (mg/L)	MW-29	0.0025	0.0025	0.005	No	5	0.0025	0	100	None	No	0.031	NP (NDs)
Cadmium (mg/L)	MW-5	0.0025	0.0025	0.005	No	5	0.0025	0	100	None	No	0.031	NP (NDs)
Cadmium (mg/L)	MW-6	0.0025	0.0025	0.005	No	5	0.0025	0	100	None	No	0.031	NP (NDs)
Cadmium (mg/L)	MW-7	0.0025	0.0025	0.005	No	5	0.0025	0	100	None	No	0.031	NP (NDs)

State Confidence Intervals - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-1 Printed 6/15/2020, 11:03 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Chromium (mg/L)	MW-19	0.01	0.00047	0.1	No	5	0.006226	0.005168	60	None	No	0.031	NP (NDs)
Chromium (mg/L)	MW-20	0.01	0.00051	0.1	No	5	0.006244	0.005144	60	None	No	0.031	NP (NDs)
Chromium (mg/L)	MW-24D	0.01	0.00042	0.1	No	5	0.008084	0.004284	80	None	No	0.031	NP (NDs)
Chromium (mg/L)	MW-25D	0.01	0.00061	0.1	No	5	0.008122	0.004199	80	None	No	0.031	NP (NDs)
Chromium (mg/L)	MW-26D	0.003136	0.0003512	0.1	No	5	0.004912	0.004711	40	Kaplan-Meier	sqrt(x)	0.01	Param.
Chromium (mg/L)	MW-27D	0.01	0.01	0.1	No	5	0.01	0	100	Kaplan-Meier	No	0.031	NP (NDs)
Chromium (mg/L)	MW-28D	0.01	0.00081	0.1	No	5	0.006702	0.004565	60	None	No	0.031	NP (NDs)
Chromium (mg/L)	MW-29	0.01	0.001	0.1	No	5	0.0082	0.004025	80	None	No	0.031	NP (NDs)
Chromium (mg/L)	MW-5	0.005557	0.002363	0.1	No	5	0.00396	0.0009529	0	None	No	0.01	Param.
Chromium (mg/L)	MW-6	0.01	0.00044	0.1	No	5	0.006206	0.005195	60	None	No	0.031	NP (NDs)
Chromium (mg/L)	MW-7	0.01	0.0013	0.1	No	5	0.00344	0.00369	20	None	No	0.031	NP (normality)
Cobalt (mg/L)	MW-19	0.05297	0.02183	0.038	No	5	0.0374	0.00929	0	None	No	0.01	Param.
Cobalt (mg/L)	MW-20	0.005	0.0011	0.038	No	5	0.00422	0.001744	80	None	No	0.031	NP (NDs)
Cobalt (mg/L)	MW-24D	0.001304	0.0001519	0.038	No	5	0.002382	0.002409	40	Kaplan-Meier	sqrt(x)	0.01	Param.
Cobalt (mg/L)	MW-25D	0.005	0.005	0.038	No	5	0.005	0	100	Kaplan-Meier	No	0.031	NP (NDs)
Cobalt (mg/L)	MW-26D	0.005	0.0003	0.038	No	5	0.003166	0.002513	60	Kaplan-Meier	No	0.031	NP (NDs)
Cobalt (mg/L)	MW-27D	0.005	0.000091	0.038	No	5	0.003108	0.002594	60	Kaplan-Meier	No	0.031	NP (NDs)
Cobalt (mg/L)	MW-28D	0.005	0.00093	0.038	No	5	0.004186	0.00182	80	None	No	0.031	NP (NDs)
Cobalt (mg/L)	MW-29	0.001489	0.0003399	0.038	No	5	0.000842	0.0003813	0	None	sqrt(x)	0.01	Param.
Cobalt (mg/L)	MW-5	0.005	0.005	0.038	No	5	0.005	0	100	None	No	0.031	NP (NDs)
Cobalt (mg/L)	MW-6	0.001018	0.0003254	0.038	No	5	0.001488	0.001974	20	Kaplan-Meier	ln(x)	0.01	Param.
Cobalt (mg/L)	MW-7	0.005	0.005	0.038	No	5	0.005	0	100	Kaplan-Meier	No	0.031	NP (NDs)
Combined Radium 226 + 228 (pCi/L)	MW-19	1.33	0.2323	5	No	5	0.781	0.3274	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-20	1.531	-0.06625	5	No	5	0.7322	0.4765	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-24D	0.935	-0.05422	5	No	5	0.4404	0.2952	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-25D	1.516	0.4999	5	No	5	1.008	0.3032	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-26D	1.87	-0.00458	5	No	5	0.9328	0.5594	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-27D	2.568	0.5176	5	No	5	1.543	0.6118	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-28D	1.763	0.358	5	No	5	1.06	0.4192	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-29	1.402	0.1828	5	No	5	0.7926	0.3639	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-5	1.187	0.5787	5	No	5	0.883	0.1816	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-6	2.07	0.745	5	No	5	1.04	0.5779	0	None	No	0.031	NP (normality)
Combined Radium 226 + 228 (pCi/L)	MW-7	1.308	0.7751	5	No	5	1.041	0.1589	0	None	No	0.01	Param.
Fluoride (mg/L)	MW-19	0.562	-0.04761	4	No	5	0.2572	0.1819	0	None	No	0.01	Param.
Fluoride (mg/L)	MW-20	0.3	0.072	4	No	5	0.2544	0.102	80	None	No	0.031	NP (NDs)
Fluoride (mg/L)	MW-24D	0.1786	0.02992	4	No	5	0.0834	0.055	0	None	ln(x)	0.01	Param.
Fluoride (mg/L)	MW-25D	2.188	1.187	4	No	5	1.66	0.313	0	None	sqrt(x)	0.01	Param.
Fluoride (mg/L)	MW-26D	0.1854	0.01695	4	No	5	0.1276	0.1141	20	Kaplan-Meier	x^(1/3)	0.01	Param.
Fluoride (mg/L)	MW-27D	0.42	0.24	4	No	5	0.29	0.07416	0	None	No	0.031	NP (normality)
Fluoride (mg/L)	MW-28D	0.2881	0.1759	4	No	5	0.232	0.03347	0	None	No	0.01	Param.
Fluoride (mg/L)	MW-29	0.1966	0.00006774	4	No	5	0.179	0.1216	40	Kaplan-Meier	No	0.01	Param.
Fluoride (mg/L)	MW-30D	14.05	3.9	4	No	4	8.975	2.235	0	None	No	0.01	Param.
Fluoride (mg/L)	MW-5	0.1063	0.0425	4	No	5	0.0744	0.01903	0	None	No	0.01	Param.
Fluoride (mg/L)	MW-6	0.2153	0.03873	4	No	5	0.1784	0.08575	20	Kaplan-Meier	No	0.01	Param.
Fluoride (mg/L)	MW-7	0.3	0.069	4	No	5	0.2278	0.1051	60	Kaplan-Meier	No	0.031	NP (NDs)
Lithium (mg/L)	MW-19	0.0151	0.005299	0.03	No	5	0.0102	0.002925	0	None	No	0.01	Param.
Lithium (mg/L)	MW-20	0.03	0.00082	0.03	No	5	0.007024	0.01285	20	None	No	0.031	NP (normality)
Lithium (mg/L)	MW-24D	0.003055	0.002505	0.03	No	5	0.00278	0.0001643	0	None	No	0.01	Param.
Lithium (mg/L)	**MW-25D**	**0.05443**	**0.04477**	**0.03**	**Yes**	**5**	**0.0496**	**0.002881**	**0**	**None**	**No**	**0.01**	**Param.**
Lithium (mg/L)	MW-26D	0.03	0.0033	0.03	No	5	0.00888	0.01181	0	None	No	0.031	NP (normality)
Lithium (mg/L)	MW-27D	0.009909	0.003531	0.03	No	5	0.00672	0.001903	0	None	No	0.01	Param.
Lithium (mg/L)	MW-28D	0.01787	0.002407	0.03	No	5	0.01014	0.004615	0	None	No	0.01	Param.
Lithium (mg/L)	MW-29	0.002565	0.002035	0.03	No	5	0.0023	0.0001581	0	None	No	0.01	Param.
Lithium (mg/L)	**MW-30D**	**0.3004**	**0.1096**	**0.03**	**Yes**	**4**	**0.205**	**0.04203**	**0**	**None**	**No**	**0.01**	**Param.**
Lithium (mg/L)	MW-5	0.03	0.03	0.03	No	5	0.03	0	100	None	No	0.031	NP (NDs)

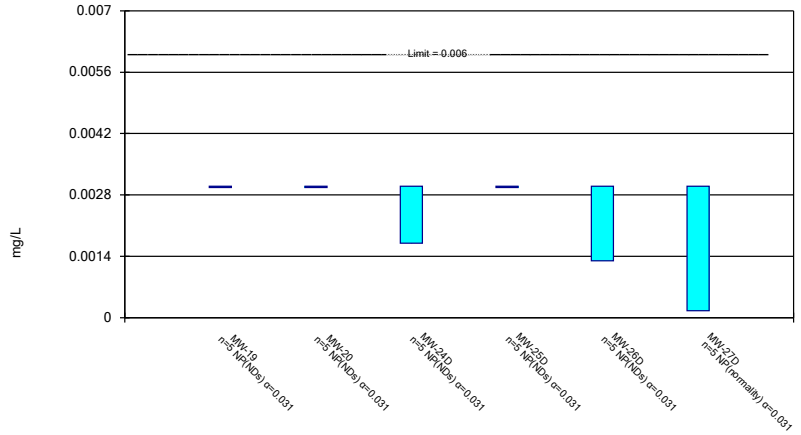
State Confidence Intervals - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-1 Printed 6/15/2020, 11:03 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Lithium (mg/L)	MW-6	0.03	0.03	0.03	No	5	0.03	0	100	None	No	0.031	NP (NDs)
Lithium (mg/L)	MW-7	0.03	0.03	0.03	No	5	0.03	0	100	None	No	0.031	NP (NDs)
Molybdenum (mg/L)	**MW-19**	**0.06879**	**0.02121**	**0.01**	**Yes**	**5**	**0.045**	**0.0142**	**0**	**None**	**No**	**0.01**	**Param.**
Molybdenum (mg/L)	MW-20	0.01	0.01	0.01	No	5	0.01	0	100	None	No	0.031	NP (NDs)
Molybdenum (mg/L)	MW-24D	0.01	0.00027	0.01	No	5	0.008054	0.004351	80	None	No	0.031	NP (NDs)
Molybdenum (mg/L)	MW-25D	0.01	0.0022	0.01	No	5	0.00844	0.003488	80	None	No	0.031	NP (NDs)
Molybdenum (mg/L)	MW-26D	0.01847	0.004975	0.01	No	6	0.012	0.005199	16.67	Kaplan-Meier	No	0.01	Param.
Molybdenum (mg/L)	MW-27D	0.00618	0.00122	0.01	No	5	0.00496	0.003182	20	Kaplan-Meier	No	0.01	Param.
Molybdenum (mg/L)	MW-28D	0.02878	0.0007414	0.01	No	5	0.01476	0.008366	0	None	No	0.01	Param.
Molybdenum (mg/L)	MW-29	0.003876	0.001764	0.01	No	5	0.00282	0.0006301	0	None	No	0.01	Param.
Molybdenum (mg/L)	MW-30D	0.04539	0.008606	0.01	No	5	0.027	0.01098	0	None	No	0.01	Param.
Molybdenum (mg/L)	MW-5	0.01	0.01	0.01	No	5	0.01	0	100	None	No	0.031	NP (NDs)
Molybdenum (mg/L)	MW-6	0.0026	0.0021	0.01	No	5	0.00232	0.0002588	0	None	No	0.031	NP (normality)
Molybdenum (mg/L)	MW-7	0.01	0.0033	0.01	No	5	0.00866	0.002996	80	None	No	0.031	NP (NDs)
Selenium (mg/L)	MW-19	0.007969	0.001031	0.05	No	5	0.0056	0.003215	20	Kaplan-Meier	No	0.01	Param.
Selenium (mg/L)	MW-20	0.01	0.01	0.05	No	5	0.01	0	100	Kaplan-Meier	No	0.031	NP (NDs)
Selenium (mg/L)	MW-24D	0.01	0.01	0.05	No	5	0.01	0	100	Kaplan-Meier	No	0.031	NP (NDs)
Selenium (mg/L)	MW-25D	0.01	0.01	0.05	No	5	0.01	0	100	Kaplan-Meier	No	0.031	NP (NDs)
Selenium (mg/L)	MW-26D	0.01	0.01	0.05	No	5	0.01	0	100	Kaplan-Meier	No	0.031	NP (NDs)
Selenium (mg/L)	MW-27D	0.01	0.00012	0.05	No	5	0.008024	0.004418	80	Kaplan-Meier	No	0.031	NP (NDs)
Selenium (mg/L)	MW-28D	0.01	0.01	0.05	No	5	0.01	0	100	None	No	0.031	NP (NDs)
Selenium (mg/L)	MW-29	0.01	0.01	0.05	No	5	0.01	0	100	None	No	0.031	NP (NDs)
Selenium (mg/L)	MW-5	0.004614	0.001826	0.05	No	5	0.00322	0.0008319	0	None	No	0.01	Param.
Selenium (mg/L)	MW-6	0.01	0.01	0.05	No	5	0.01	0	100	None	No	0.031	NP (NDs)
Selenium (mg/L)	MW-7	0.01	0.0014	0.05	No	5	0.00488	0.004675	40	None	No	0.031	NP (normality)
Thallium (mg/L)	MW-19	0.001	0.00026	0.002	No	5	0.000558	0.0004035	40	None	No	0.031	NP (normality)
Thallium (mg/L)	MW-20	0.001	0.001	0.002	No	5	0.001	0	100	None	No	0.031	NP (NDs)
Thallium (mg/L)	MW-24D	0.001	0.001	0.002	No	5	0.001	0	100	None	No	0.031	NP (NDs)
Thallium (mg/L)	MW-25D	0.001	0.001	0.002	No	5	0.001	0	100	None	No	0.031	NP (NDs)
Thallium (mg/L)	MW-26D	0.001	0.001	0.002	No	5	0.001	0	100	None	No	0.031	NP (NDs)
Thallium (mg/L)	MW-27D	0.001	0.001	0.002	No	5	0.001	0	100	None	No	0.031	NP (NDs)
Thallium (mg/L)	MW-28D	0.001	0.000092	0.002	No	5	0.0008184	0.0004061	80	None	No	0.031	NP (NDs)
Thallium (mg/L)	MW-29	0.001	0.000064	0.002	No	5	0.0008128	0.0004186	80	None	No	0.031	NP (NDs)
Thallium (mg/L)	MW-5	0.001	0.001	0.002	No	5	0.001	0	100	None	No	0.031	NP (NDs)
Thallium (mg/L)	MW-6	0.001	0.000082	0.002	No	5	0.0008164	0.0004105	80	None	No	0.031	NP (NDs)
Thallium (mg/L)	MW-7	0.001	0.001	0.002	No	5	0.001	0	100	None	No	0.031	NP (NDs)

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

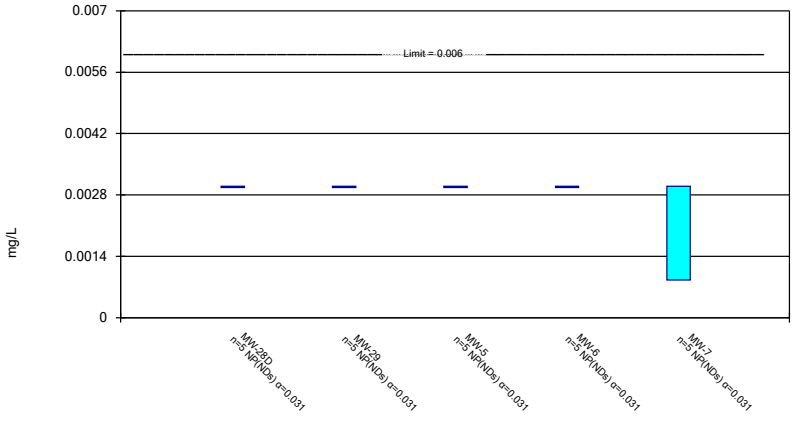


Constituent: Antimony Analysis Run 6/15/2020 11:01 AM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

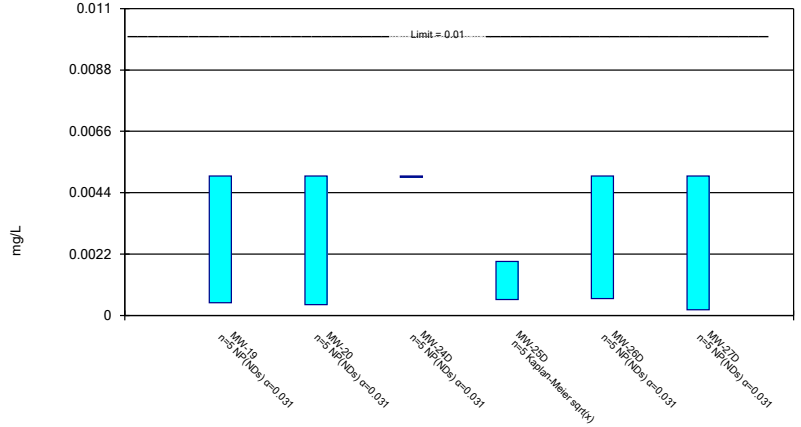


Constituent: Antimony Analysis Run 6/15/2020 11:01 AM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

Parametric and Non-Parametric (NP) Confidence Interval

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

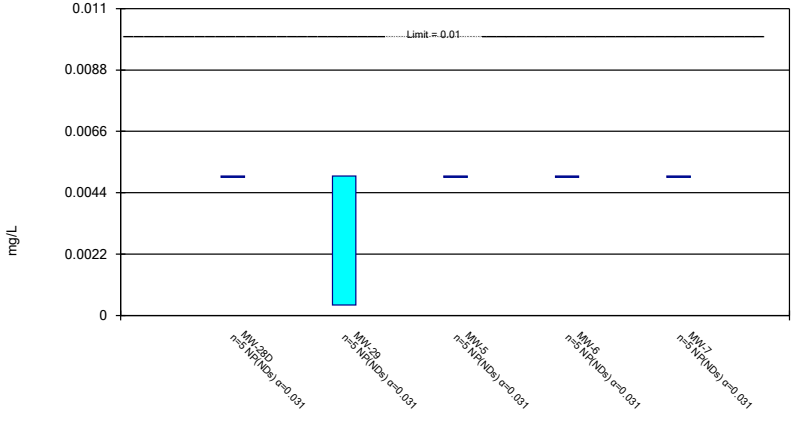


Constituent: Arsenic Analysis Run 6/15/2020 11:01 AM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

Non-Parametric Confidence Interval

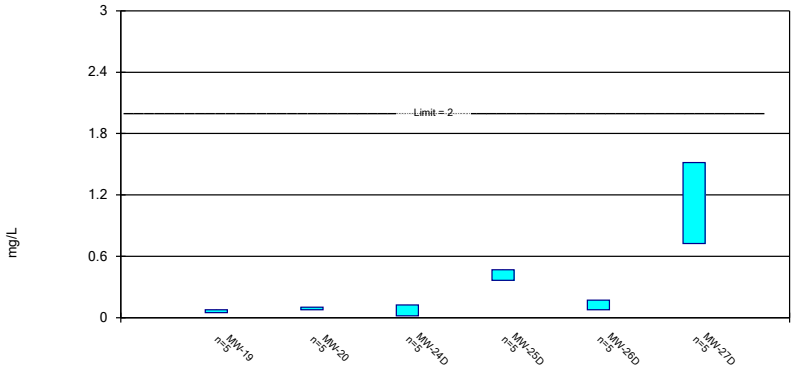
Compliance Limit is not exceeded.



Constituent: Arsenic Analysis Run 6/15/2020 11:01 AM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

Parametric Confidence Interval

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

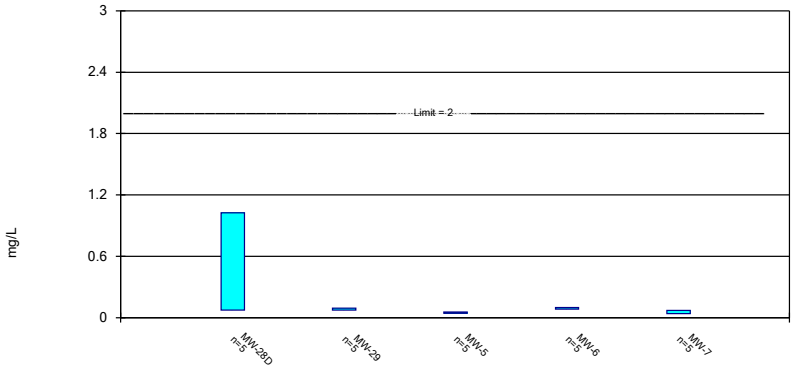


Constituent: Barium Analysis Run 6/15/2020 11:01 AM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

Parametric Confidence Interval

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

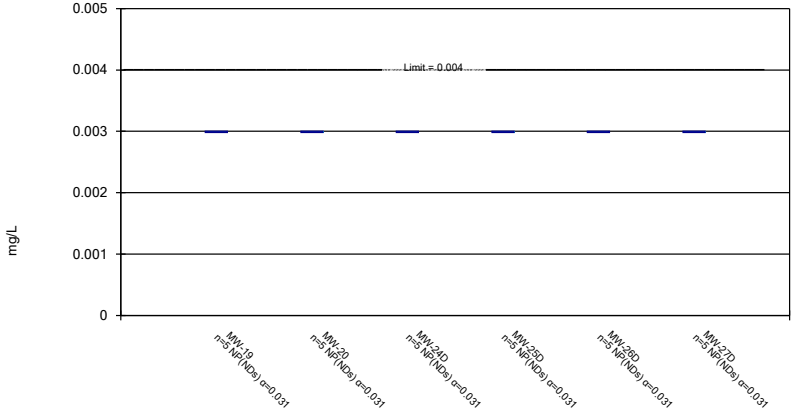


Constituent: Barium Analysis Run 6/15/2020 11:01 AM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

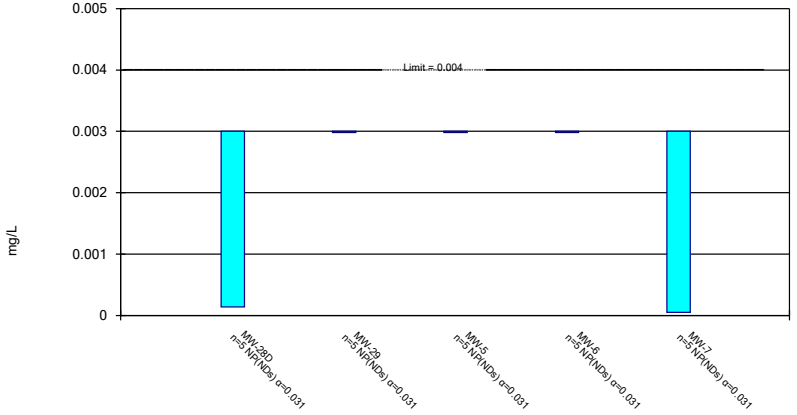


Constituent: Beryllium Analysis Run 6/15/2020 11:01 AM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

Non-Parametric Confidence Interval

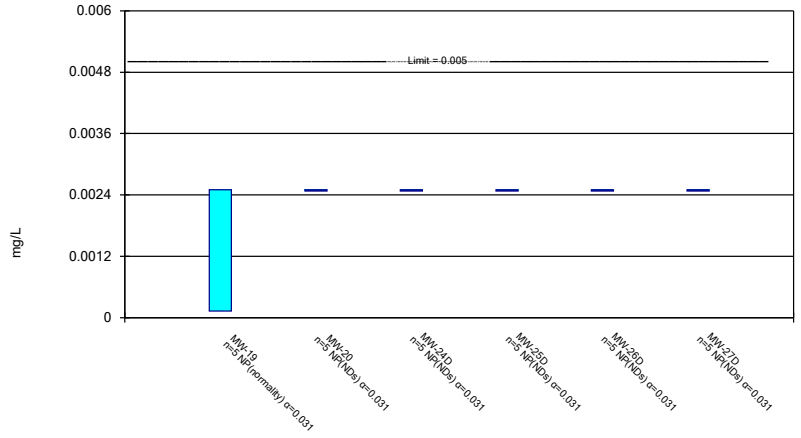
Compliance Limit is not exceeded.



Constituent: Beryllium Analysis Run 6/15/2020 11:01 AM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

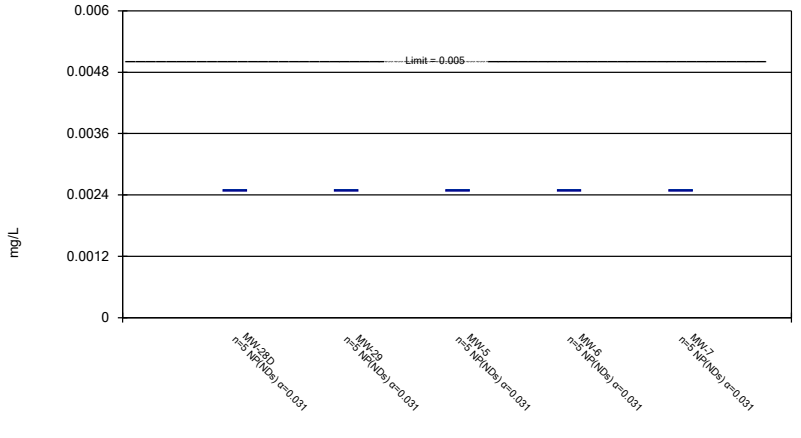


Constituent: Cadmium Analysis Run 6/15/2020 11:01 AM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

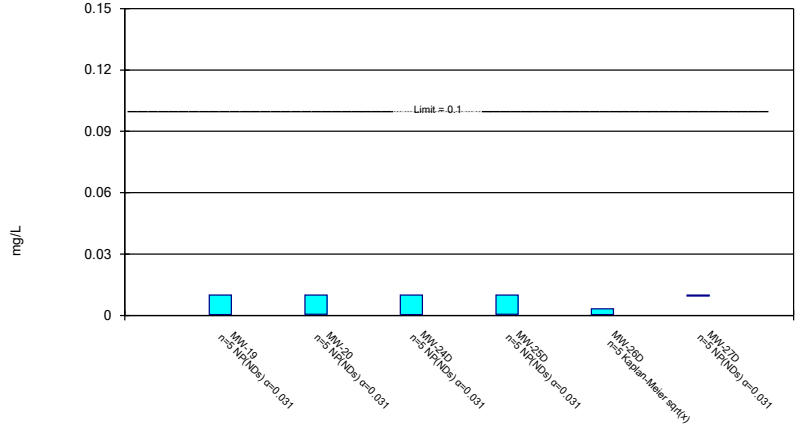


Constituent: Cadmium Analysis Run 6/15/2020 11:01 AM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

Parametric and Non-Parametric (NP) Confidence Interval

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

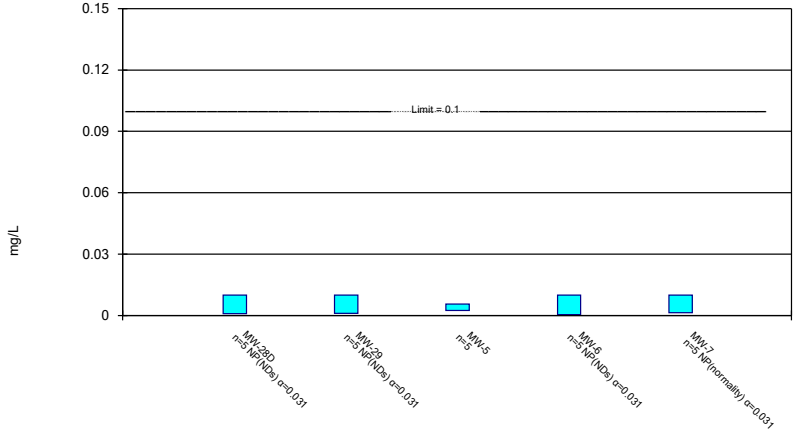


Constituent: Chromium Analysis Run 6/15/2020 11:01 AM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

Parametric and Non-Parametric (NP) Confidence Interval

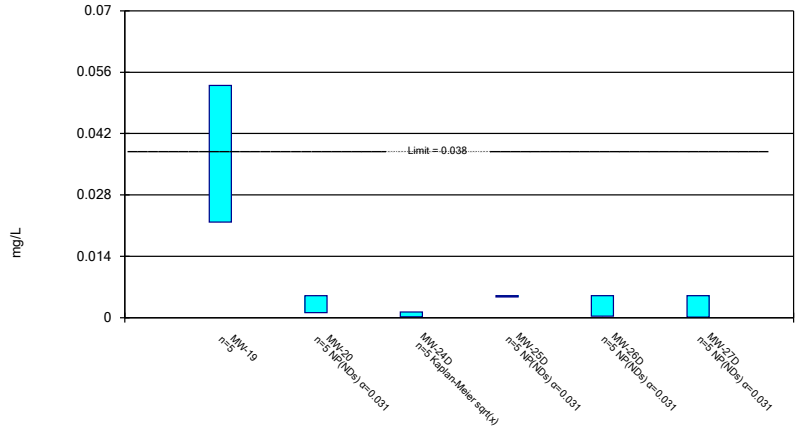
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Chromium Analysis Run 6/15/2020 11:01 AM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

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.

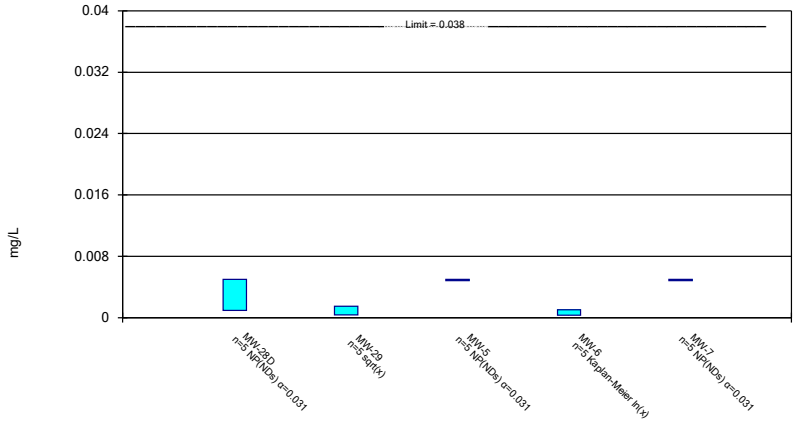


Constituent: Cobalt Analysis Run 6/15/2020 11:01 AM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

Parametric and Non-Parametric (NP) Confidence Interval

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

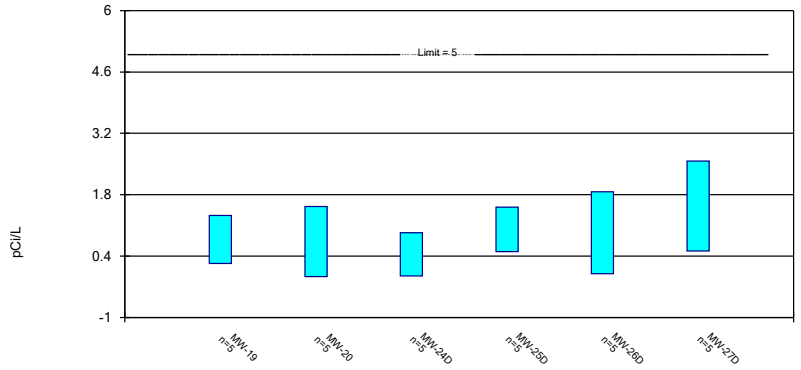


Constituent: Cobalt Analysis Run 6/15/2020 11:01 AM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

Parametric Confidence Interval

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

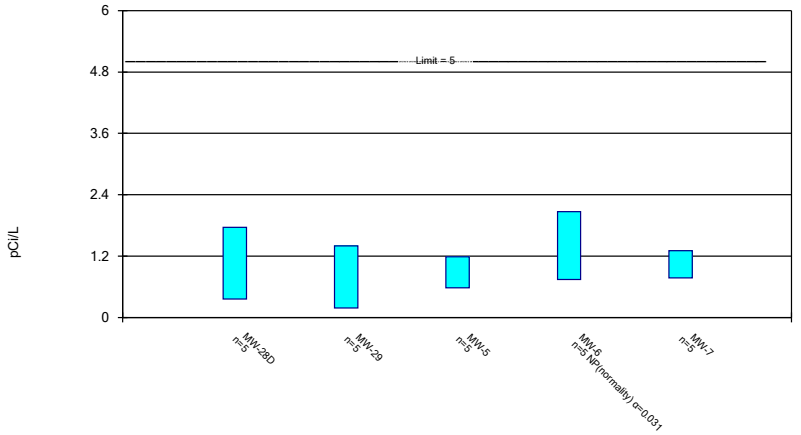


Constituent: Combined Radium 226 + 228 Analysis Run 6/15/2020 11:01 AM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

Parametric and Non-Parametric (NP) Confidence Interval

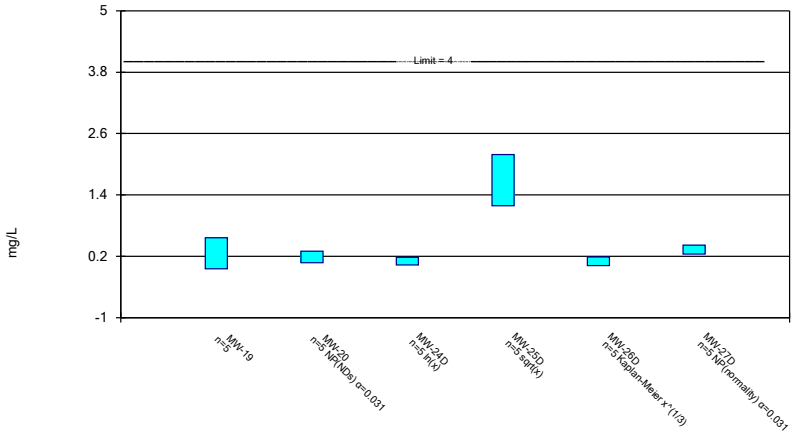
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Combined Radium 226 + 228 Analysis Run 6/15/2020 11:01 AM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

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.

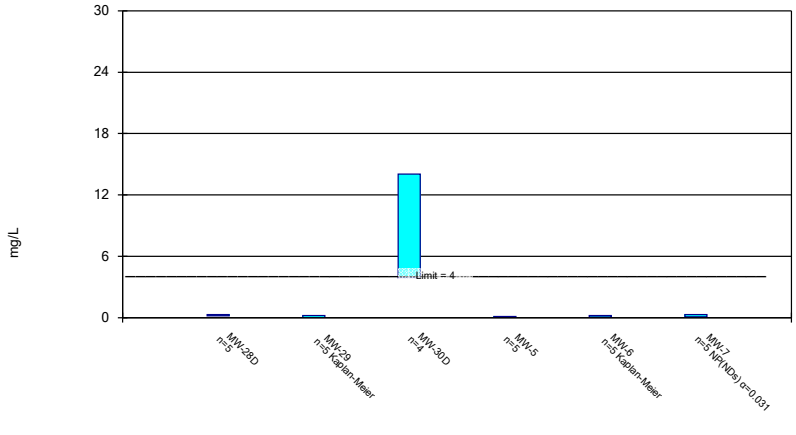


Constituent: Fluoride Analysis Run 6/15/2020 11:01 AM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

Parametric and Non-Parametric (NP) Confidence Interval

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

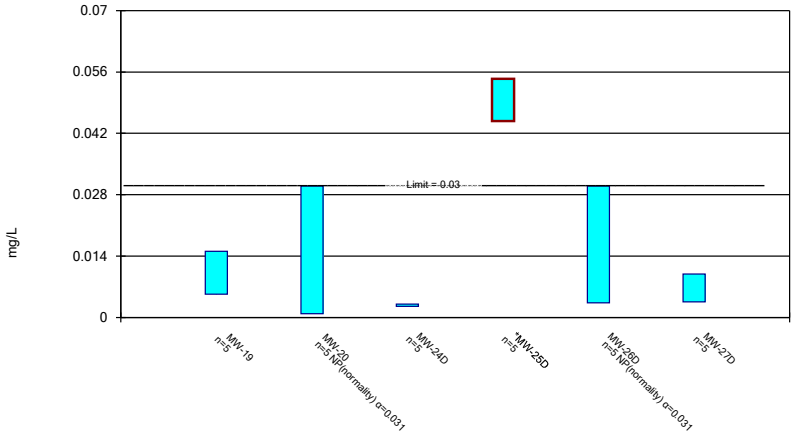


Constituent: Fluoride Analysis Run 6/15/2020 11:01 AM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

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.

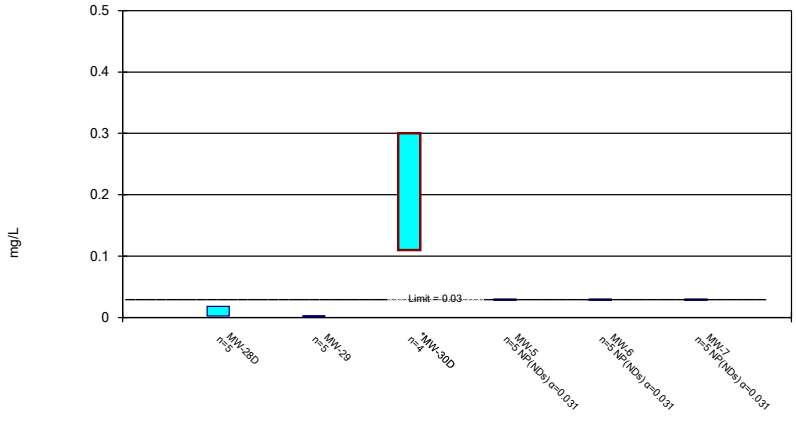


Constituent: Lithium Analysis Run 6/15/2020 11:01 AM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

Parametric and Non-Parametric (NP) Confidence Interval

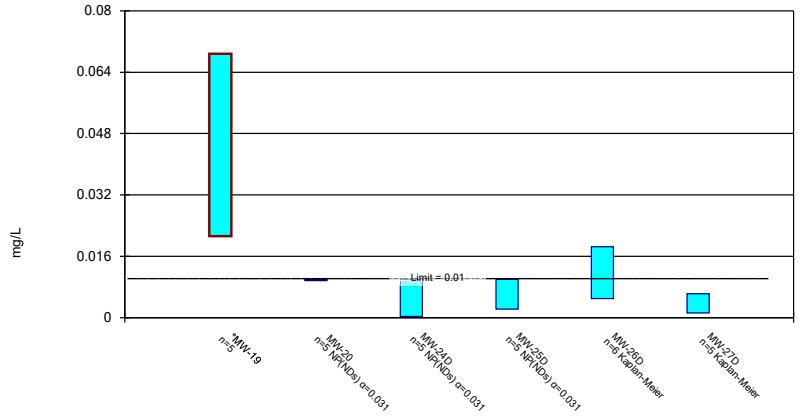
Compliance limit is exceeded.* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Lithium Analysis Run 6/15/2020 11:01 AM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

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.

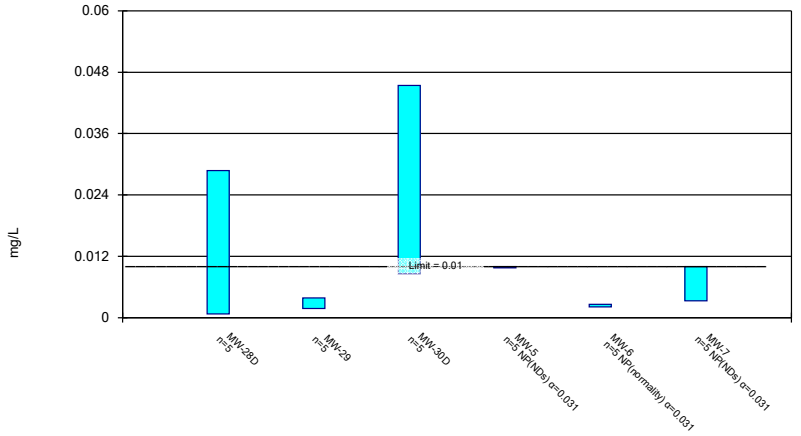


Constituent: Molybdenum Analysis Run 6/15/2020 11:01 AM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

Parametric and Non-Parametric (NP) Confidence Interval

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

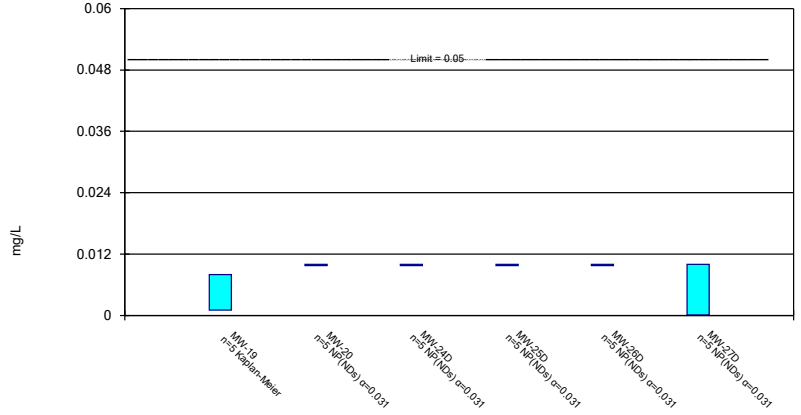


Constituent: Molybdenum Analysis Run 6/15/2020 11:01 AM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

Parametric and Non-Parametric (NP) Confidence Interval

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

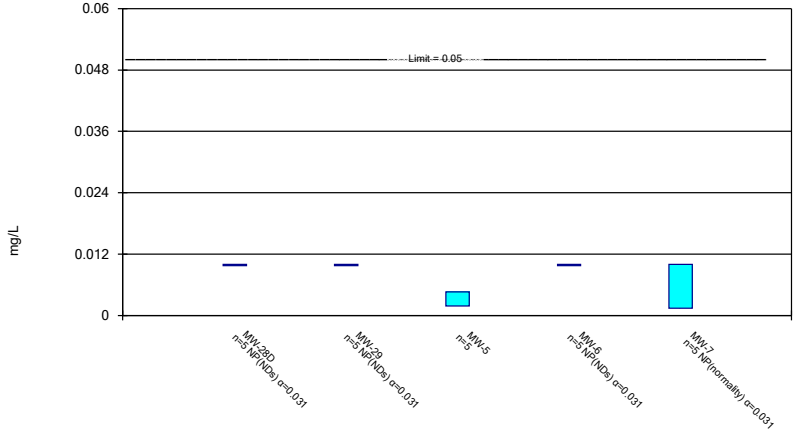


Constituent: Selenium Analysis Run 6/15/2020 11:01 AM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sanitas™ v.9.6.25 Groundwater Stats Consulting. UG

Parametric and Non-Parametric (NP) Confidence Interval

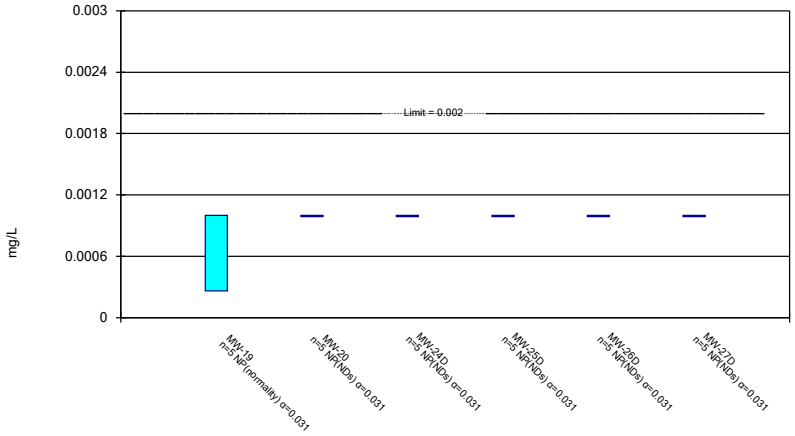
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Selenium Analysis Run 6/15/2020 11:01 AM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.



Constituent: Thallium Analysis Run 6/15/2020 11:01 AM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1

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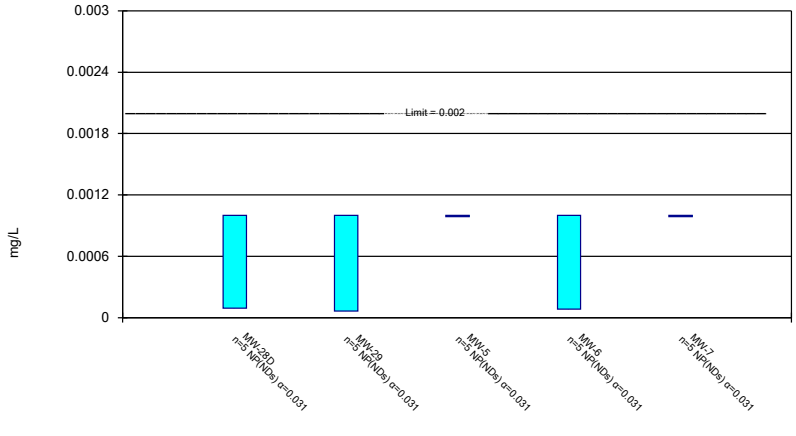
Non-Parametric Confidence Interval

Compliance Limit is not exceeded.



Constituent: Thallium Analysis Run 6/15/2020 11:01 AM View: New Wells
Plant Hammond Client: Southern Company Data: Hammond AP-1