Prepared for

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2021 SEMIANNUAL GROUNDWATER MONITORING & CORRECTIVE ACTION REPORT

GEORGIA POWER COMPANY
PLANT HAMMOND ASH POND 2 (AP-2)

Prepared by

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Project Number GW6581B

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CERTIFICATION STATEMENT

This *2021 Semiannual Groundwater Monitoring & Corrective Action Report, Georgia Power Company - Plant Hammond – Ash Pond 2 (AP-2)* has been prepared in compliance with the United States Environmental Protection Agency coal combustion residual rule [40 Code of Federal Regulations (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, 2021

Whitney B. Law — Date

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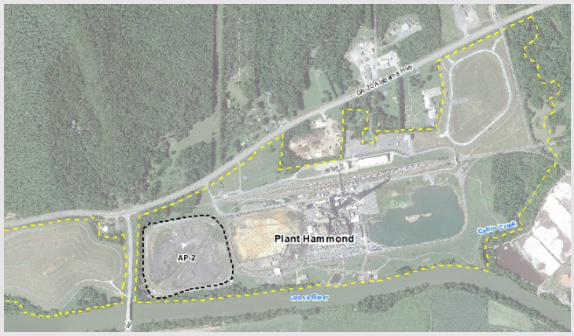
SUMMARY

This summary of the *2021 Semiannual Groundwater Monitoring and Corrective Action Report* provides the status of the groundwater monitoring and corrective action program through July 2021 at Georgia Power Company's (Georgia Power's) Plant Hammond Ash Pond 2 (AP-2) (the Site). This summary was prepared by Geosyntec Consultants, Inc. (Geosyntec) on behalf of Georgia Power to meet the requirements listed in Part A, Section 6[1] of the U.S. Environmental Protection Agency (USEPA) coal combustion residual (CCR) rule (40 Code of Federal Regulations [CFR] 257 Subpart D) (herein referred to as the CCR Rule).

Plant Hammond is located at 5963 Alabama Highway SW, approximately 10 miles west of Rome in Floyd County, Georgia. Plant Hammond is a four-unit, coal-fired electric generating facility. All four units at Plant Hammond were decommissioned in July 2019 and no longer produce electricity. Dewatered ash from AP-2 is excavated and transported to the nearby Huffaker Road facility, a permitted solid waste disposal location owned and operated by Georgia Power. The Site is located on the southwestern portion of the Plant Hammond property. The Georgia Environmental Protection Division (GA EPD) approved Closure permit No. 057-024D(CCR) for AP-2 on June 22, 2020.



Plant Hammond and the Site

Groundwater at the Site is monitored using a monitoring system comprised of nine upgradient and five downgradient wells installed between October 2014 and August 2020 that meet federal and state monitoring requirements. Routine sampling and reporting began after the background groundwater conditions were established between May 2016 and May 2017. Based on groundwater conditions at the Site, an assessment monitoring program and assessment of corrective measures were established in January 2018 and

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

January 2019, respectively. During the 2021 semiannual reporting period, the Site remained in assessment monitoring as corrective measures are being evaluated.

During the 2021 semiannual reporting period, Geosyntec conducted two groundwater sampling events, one in February and one in March. Groundwater samples were submitted to Pace Analytical Services, LLC, for analysis. Per the CCR Rule, groundwater results through March 2021 data were evaluated in accordance with the certified statistical methods. That evaluation showed statistically significant values of Appendix III[2] and Appendix IV[3] parameters in wells provided in the table below.

Appendix III Parameter	**March 2021**
Boron	HGWC-14, HGWC-15, HGWC-16, HGWC-17, HGWC-18
Calcium	HGWC-14, HGWC-15, HGWC-16, HGWC-17, HGWC-18
Chloride	HGWC-14, HGWC-15, HGWC-16, HGWC-17, HGWC-18
pH	HGWC-14, HGWC-18
Sulfate	HGWC-14, HGWC-15, HGWC-16, HGWC-17, HGWC-18
Total Dissolved Solids	HGWC-14, HGWC-16, HGWC-17, HGWC-18
Appendix IV Parameter[4]	**March 2021**
Cobalt	*Federal and State:* HGWC-18, MW-33, MW-35
Lead	*State only:* HGWC-14, HCWC-18, MW-33
Molybdenum	*State only:* MW-21D

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

[2] Boron, calcium, chloride, fluoride, pH, sulfate, and total dissolved solids (TDS)
[3] Antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, fluoride, lead, lithium, mercury, molybdenum, selenium, thallium, and radium 226 + 228
[4] A state statistically significant level (SSL)-related constituent is determined by comparing the confidence intervals developed to either the constituent's maximum contaminant level (MCL), if available, or the calculated background interwell prediction limit. A federal SSL-related constituent is determined by comparing the confidence intervals developed to either the constituent's MCL, if available, the USEPA Regional Screening Level, if no MCL is available, or the calculated background interwell prediction limit.

Geosyntec consultants

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LIST OF ACRONYMS

ACM	Assessment of Corrective Measures
AP	ash pond
CCR	coal combustion residuals
CFR	Code of Federal Regulations
cm/sec	centimeters per second
DO	dissolved oxygen
ft/day	feet per day
ft/ft	feet per foot
GA-20	Georgia Highway 20
GA EPD	Georgia Environmental Protection Division
Georgia Power	Georgia Power Company
Geosyntec	Geosyntec Consultants, Inc.
GWPS	Groundwater Protection Standard
HAR	Hydrogeologic Assessment Report
K_h	horizontal hydraulic conductivity
MCL	Maximum Contaminant Level
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, Inc. (Geosyntec) has prepared this *2021 Semiannual Groundwater Monitoring & Corrective Action Report* to document groundwater monitoring activities conducted at Georgia Power Company (Georgia Power) Plant Hammond (Site) Ash Pond 2 (AP-2) for the reporting period of January through July 2021 (referred to herein as the reporting period).

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

Due to statistically significant levels (SSLs) of cobalt identified in compliance wells HGWC-15 and HGWC-18, as noted in the *2018 Annual Groundwater Monitoring and Corrective Action Report* (Geosyntec, 2019a), Georgia Power initiated an assessment of corrective measures (ACM) program for AP-2 in January 2019. Pursuant to § 257.96(b), Georgia Power continues to monitor groundwater associated with AP-2 in accordance with the assessment monitoring program established for the unit in 2018, including annual and semiannual monitoring and reporting pursuant to § 257.90 through § 257.95 of the Federal CCR Rule, and GA EPD Rules for Solid Waste Management 391-3-4-.10(6)(a).

1.1 Site Description and Background

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

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

AP-2 is a 21-acre surface impoundment. Dewatered ash from AP-2 is excavated and transported to the nearby Huffaker Road facility, a permitted solid waste disposal location owned and operated by Georgia Power. Georgia Power will close AP-2 through removal of the CCR material from the CCR unit. The Closure Plan submitted to GA EPD as part of the closure permit application package describes the closure activities and requirements in accordance with § 257.102 and corresponding Rule 391-3-4-.10(7)(b). The proposed closure by removal approach provides a source control measure that reduces the potential for migration of CCR constituents to groundwater. Details of the closure approach are provided in the Initial Written Closure Plan and published in 2016 to Georgia Power's CCR Rule Compliance website. Closure permit No. 057-024D(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-2 as described in the *Hydrogeologic Assessment Report Revision 01 – AP-2* (HAR Rev 01) submitted to GA EPD in December 2019 under separate cover in support of the AP-2 solid waste handling permit (Geosyntec, 2019c).

1.2.1 Regional and Site Geology

The Site is located within the Great Valley District of the Valley and Ridge Physiographic Province (Valley and Ridge) in northwest Georgia, 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-2 is underlain by the lower units of the Cambrian age Conasauga Formation, consisting of mostly calcareous shale. Based on review of subsurface investigations at AP-2, the bedrock was identified as predominantly calcareous shale and fissile black shale. AP-2 is underlain primarily by five lithologic units: (i) terrace alluvium, (ii) colluvium, (iii) residuum, (iv) partially weathered shale bedrock, and (v) unweathered shale bedrock.

Based on subsurface investigations, the alluvial deposits generally grade from a silt and silty clay to a clayey sand and silty sand to a sand and gravelly sand at depth. The colluvium consists of silty sand, silty clay with angular and sub-rounded chert fragments, and dolomite, sandstone, and shale fragments. Residual or native soils have been derived from the in-place weathering of the shale bedrock. The residuum is generally described as brown to yellow brown firm clayey silt with weathered shale fragments. The partially

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

1.2.2 Hydrogeologic Setting

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

1.3 Groundwater Monitoring Well Network

In accordance with § 257.91, a groundwater monitoring system was installed at AP-2 that consists of a sufficient number of wells installed at appropriate locations and depths to yield groundwater samples from the uppermost aquifer to represent the groundwater quality both upgradient of the units (i.e., background conditions) and passing the waste boundary of the units. The number, spacing, and depths of the groundwater monitoring wells were selected based on the characterization of site-specific hydrogeologic conditions.

The compliance monitoring well network for AP-2 consists of fourteen monitoring wells. As part of the assessment monitoring program, four delineation wells (MW-21D, MW-22, MW-23D, and MW-37D) have been installed since 2018 to characterize the nature and extent of cobalt in groundwater downgradient of AP-2. Pursuant to § 257.95(g)(1)(iv), the wells, classified as “delineation wells”, will continue to be sampled concurrently with the compliance monitoring well network.

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 ten piezometers used to gauge groundwater levels in vicinity of AP-2 (MW-8, MW-9, MW-12, MW-16, MW-17,

MW-18, MW-33, MW-34D, MW-35, and MW-36D). The piezometers may be sampled as needed to support the ACM program.

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

2.0 GROUNDWATER MONITORING ACTIVITIES

In accordance with § 257.90(e), the following describes monitoring-related activities performed during January through July 2021 and discusses any change in status of the monitoring program. All groundwater sampling was performed in accordance with § 257.93.

2.1 Monitoring Well Installation and Maintenance

No additional compliance monitoring wells, delineation wells, or piezometers were installed during this reporting period.

The well and piezometer networks are inspected during each groundwater monitoring event using GA EPD Groundwater Well Integrity Form. 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) are addressed before the following groundwater sampling event. The well inspection forms for the reporting period are provided in **Appendix A**.

2.2 Assessment Monitoring

Georgia Power initiated an assessment monitoring program for groundwater at AP-2 in January 2018. Statistical analyses of the 2018 assessment monitoring groundwater data identified SSLs of cobalt in AP-2 compliance wells HGWC-15 and HGWC-18. Pursuant to § 257.96, an ACM was initiated for AP-2 in January 2019. An *Assessment of Corrective Measures Report – Plant Hammond Ash Pond 1 (AP-1)* (ACM Report) was subsequently prepared for AP-2 (Geosyntec, 2019b) and submitted to GA EPD in June 2019 and posted to Georgia Power's CCR Rule Compliance website in July 2019. In accordance with § 257.96(b), groundwater continues to be monitored at AP-2 under the assessment monitoring program while the ACM phase is implemented.

The annual Appendix IV sampling event for this reporting period was conducted in February 2021; the first semiannual assessment monitoring event for this reporting period was conducted in March 2021. The number of groundwater samples collected for analysis and the dates the samples were collected at AP-2 during this reporting period are summarized in **Table 2**.

During this reporting period, samples were collected in January 2021 from HGWA-42D, HGWA-43D, and HGWA-44D to characterize background groundwater conditions, as

shown in **Table 2**. For this event, the samples were analyzed for the complete list of Appendix III and Appendix IV constituents. A similar sampling event was conducted in December 2020 at these three background wells, but the laboratory report was not received in time to include in the previous semiannual groundwater monitoring report. The laboratory reports associated with both the December 2020 and January 2021 groundwater sampling events are provided in **Appendix C.**

2.3 Additional Groundwater and Surface Water Sampling

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

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

3.0 SAMPLING METHODOLOGY & ANALYSES

The following section presents a summary of the field sampling procedures that were implemented, and the groundwater sampling results that were obtained, in connection with the assessment monitoring program conducted at AP-2 during this 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-2 wells and piezometers and used to calculate the corresponding groundwater elevations. The calculated groundwater elevations for the February and March 2021 events are presented in **Table 3**. The February and March elevations 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 February and March 2021 events, which are presented on **Figures 3** and **4**, respectively. Groundwater in the AP-2 area flows under the influence of topography from higher elevations on the northern and eastern side of the Site in a westerly direction beneath AP-2 with a southerly flow component.

3.2 Groundwater Gradient and Flow Velocity

The groundwater hydraulic gradient within the uppermost aquifer beneath AP-2 was calculated using the groundwater elevation data from the February and March 2021 events. The hydraulic gradient is commonly calculated between two points along the groundwater flow path perpendicular to groundwater elevation contours. Ideally, this flow path originates and concludes with groundwater elevations reported for two wells, but this may not be feasible and still remain perpendicular to the contours. At the request of GA EPD, the hydraulic gradients in this report were calculated between upgradient and downgradient wells selected to provide the most accurate alignment possible relative to the interpreted groundwater flow path. Hydraulic gradients were calculated across the central portion of AP-2 between piezometer MW-18 and well HGWC-17. The supporting calculations are presented in **Table 4.** The presented hydraulic gradients represent the calculated average of the February and March 2021 events. The general trajectory of the flow paths used in the calculations and associated potentiometric contour lines are shown on **Figures 3** and **4**, respectively.

The average hydraulic gradient along the westerly flow path lines is 0.007 feet per foot (ft/ft). The calculations are presented on **Table 4**.

The approximate horizontal flow velocities associated with AP-2 were calculated using the following derivative of Darcy's Law:

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

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 horizontal hydraulic conductivity (K_h) measurements were calculated from slug test data collected in AP-2 wells and piezometers. As presented in the HAR Rev 01, results were broadly grouped based on the lithology in which the wells or piezometers were screened. The geometric mean of the K_h values of the alluvium, colluvium, residuum, and partially weathered shale bedrock were used to represent the overall hydraulic conductivity at AP-2 of 5.17 x 10^{-4} centimeters per second (cm/sec) [1.47 feet per day (ft/day)] (Geosyntec, 2019c). An effective porosity value of 0.15 was used to represent average lithologic conditions at AP-2, derived based on review of literature (Kresic, 2007), observed site lithology, and professional judgement. Applying these values and the average hydraulic gradient, the average groundwater flow velocity underneath AP-2 was calculated as 0.069 ft/day. The flow velocity calculations are provided in **Table 4**.

3.3 Groundwater Sampling Procedures

During the reporting period, groundwater samples were collected using low-flow sampling procedures in accordance with § 257.93(a). The wells were purged and generally sampled using a dedicated bladder pump equipped with dedicated tubing. Wells HGWA-42D, HGWA-43D, HGWA-44D, and MW-37D were sampled using a non-dedicated QED bladder pump for each sampling event. Wells MW-21D, MW-33,

and MW-35 were sampled using a peristaltic pump in February 2021 before being equipped with a dedicated bladder pump prior to the March 2021 event. Well MW-23D was sampled using a peristaltic pump for both sampling events. Non-dedicated bladder pumps and peristaltic pumps were equipped with new disposable polyethylene tubing for each well. All non-disposable equipment was decontaminated before use and between well locations.

A SmarTroll or Aqua TROLL (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 milligrams per liter (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 5 nephelometric turbidity units (NTU) or measured between 5 and 10 NTU following three hours of purging.

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

3.4 Laboratory Analyses

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

The groundwater analytical results from the February and March 2021 monitoring events and supplemental monitoring events in December and January 2021 are summarized in **Table 5**. Surface water analytical results from the March 2021 monitoring event is summarized in **Table 6**. The Pace Analytical laboratory reports associated with the results presented in **Tables 5** and **6** are provided in **Appendix C**.

3.5 Quality Assurance & 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, 2020a), 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 parameters by Pace Analytical.

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

4.0 STATISTICAL ANALYSIS

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

4.1 Statistical Methods

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

4.1.1 Appendix III Statistical Methods

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 assess whether there are significant statistical increases (SSIs). An "initial exceedance" occurs when an Appendix III constituent reported in the groundwater of a downgradient compliance monitoring well exceeds the constituent's associated PL. The 1-of-2

resample plan allows for collection of an independent resample. A confirmed exceedance is noted only when the resample confirms the initial exceedance by also exceeding the statistical limit. If the resample falls within its respective prediction limit, no exceedance is declared.

4.1.2 Appendix IV Statistical Methods

To statistically compare groundwater data to GWPS, confidence intervals are constructed for each of the detected Appendix IV constituents in each downgradient well with a minimum of 4 samples. In accordance with Section 21.1.1 of the Unified Guidance (USEPA, 2009), four independent data are the minimum population size recommended to construct confidence intervals required to assess SSLs for Appendix IV constituents. Due to supplemental (or ACM investigation) sampling, some Appendix IV constituents at a well location have differing number of analytical data points.

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

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

(1) The maximum contaminant level (MCL) established under § 141.62 and 141.66.

(2) Where an MCL has not been established:

(i) Cobalt 0.006 mg/L;

(ii) Lead 0.015 mg/L;

(iii) Lithium 0.040 mg/L; and

(iv) Molybdenum 0.10 mg/L.

(3) Background levels for constituents where the background level is higher than the MCL or rule-specified GWPS.

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

(1) The federally established MCL.

(2) Where an MCL has not been established, the background concentration.

(3) Background levels for constituents where the background level is higher than the MCL.

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

4.2 Statistical Analyses Results

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

AP-2 (Federal CCR Rule):

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

AP-2 (GA EPD CCR Rule):

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

The semiannual statistical evaluation results for cobalt and molybdenum are generally consistent with the 2020 reporting year statistical results. However, statistical analysis of the March 2021 data identified an SSL of Appendix IV constituent cobalt above the site derived GWPS in MW-35 and lead above the established state GWPS in HGWC-14 HGWC-18, and MW-33. This is the first reporting period for which an SSL of a lead concentration has been identified in an AP-2 well. The SSL is likely the result of a decrease in the laboratory reporting and background limit for lead from 0.005 mg/L to 0.001 mg/L, which is used as the state GWPS for applicable confidence intervals. A

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

4.3 Delineation Data

Based on the groundwater data presented herein, a portion of the identified SSLs for wells and constituents listed above have been horizontally and vertically delineated to below the state and federal GWPS as determined by confidence intervals (statistical analysis) prepared for the delineation wells discussed in the following paragraphs; results of the statistical analyses are provided in **Appendix D**. In select cases, as explained below, delineation by statistical analysis is pending.

Currently, the cobalt SSL identified in HGWC-18 is vertically delineated to below the site specific GWPS (0.038 mg/L) by MW-21D. Vertical delineation of cobalt in MW-33 is pending additional groundwater data reported for MW-34D. Well MW-34D is installed less than 30 feet upgradient of MW-33 and screened approximately 26 feet deeper than MW-33 (**Table 1**). MW-34D has been sampled twice and both results measured less than the GWPS; the well will be sampled moving forward to evaluate vertical delineation at MW-33. Vertical delineation of cobalt in MW-35 may require the installation of an additional well and is currently under evaluation.

Due to the presence of a surface water feature in the downgradient direction of HGWC-18 (refer to **Figure 2**), installation of additional wells to horizontally characterize this area is infeasible. For this reason, Georgia Power proactively collected surface water samples in March 2021 from three locations in the unnamed creek west of AP-2 (AP2-Up, AP2-Mid, AP2-Down) shown on **Figure 2** to horizontally delineate cobalt. To delineate MW-33 and MW-35, surface water samples were collected from the Coosa River. Of the seven sample locations along the Coosa River, three (i.e., H+0.25, H+0.35, H+0.75) are most applicable to delineating cobalt concentrations downgradient of MW-33 and MW-35. These three locations are shown on **Figure 2**. The data associated with the March 2021 surface water sampling event are presented in **Table 6** and the laboratory reports are included in **Appendix C**. Cobalt was not detected above the laboratory reporting limit (0.0050 mg/L) in either the three unnamed creek water samples or any of the Coosa River samples. Therefore, based on cobalt data collected to date, no cobalt impacts to surface water have been detected and horizontal delineation is complete.

The newly identified SSLs for lead in HGWC-14, HGWC-18, and MW-33 are likely the result of a decrease in the laboratory reporting and background limit for lead from 0.005 mg/L to 0.001 mg/L. Vertical and horizontal delineation of the newly identified lead SSLs are currently under evaluation.

The molybdenum concentration in MW-21D has been steadily decreasing since the SSL identified was identified in 2019 (i.e., March 2019: 0.045 mg/L; March 2021: 0.016 mg/L; state GWPS 0.010 mg/L). In 2020, Georgia Power proactively installed a deeper well (MW-37D) to vertically delineate molybdenum concentrations reported in MW-21D. The March 2021 data for MW-37D vertically delineates MW-21D to below the state GWPS, as determined by the statistically derived confidence interval for MW-37D. Additionally, no molybdenum was detected above the laboratory reporting limit (0.010 mg/L) in the three unnamed creek water samples collected in March 2021 (**Table 6**). Therefore, horizontal delineation is complete for MW-21D.

5.0 MONITORING PROGRAM STATUS

5.1 Assessment Monitoring Status

Pursuant to § 257.96(b), Georgia Power will continue to monitor the groundwater at AP-2 in accordance with the assessment monitoring program regulations of § 257.95 while ACM efforts are continued to be evaluated. Pursuant to § 257. 95(g)(1)(iv), the 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 B**. The Semiannual Progress Report summarizes:

(i) the current conceptual site model applicable to evaluating groundwater corrective measures proposed in the ACM Report (Geosyntec, 2019b);

(ii) the analytical data obtained during supplemental ACM-specific field investigations;

(iii) the status of evaluating applicable corrective measures; and

(iv) the planned activities and anticipated schedule for the following semi-annual reporting period.

Georgia Power will include future Semiannual Progress Reports with each groundwater monitoring and corrective action report.

6.0 CONCLUSIONS & FUTURE ACTIONS

This *2021 Semiannual Groundwater Monitoring & Corrective Action Report* for Plant Hammond AP-2 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 the AP-2 well network confirmed (i) the continued presence of an SSL of cobalt in HGWC-18 and MW-33 and a new cobalt SSL in MW-35, with groundwater concentrations above the site specific GWPS in all three wells; (ii) the continued SSL of molybdenum in MW-21D above the state GWPS; and (iii) the new identification of SSLs of lead in HGWC-14, HGWC-18, and MW-33 above the state GWPS.

Currently, the cobalt SSL identified in HGWC-18 is vertically delineated by MW-21D. Vertical delineation of cobalt near MW-33 is pending additional groundwater data reported in MW-34D; MW-34D has been sampled twice and both results measured less than the GWPS. Vertical delineation of cobalt in MW-35 may require the installation of an additional well and is currently under evaluation. The molybdenum SSL in MW-21D is vertically delineated to below the state GWPS by MW-37D.

Due to the presence of an unnamed creek and the Coosa River in the downgradient direction of HGWC-18, MW-21D, MW-33, and MW-35, Georgia power collected surface water samples in March 2021 from locations along these two water bodies. The surface water samples collected from the locations near AP-2 indicated both cobalt and molybdenum were not detected. Based on these results, no cobalt or molybdenum impacts to surface water have been detected to date. Therefore, horizontal delineation of cobalt SSLs is complete for HGWC-18, MW-33, and MW-33, and for the molybdenum SSL reported for MW-21D. Georgia Power will continue to collect surface water samples on a frequency coinciding with the semiannual groundwater assessment monitoring events.

In support of the assessment monitoring program and ACM efforts, Georgia Power installed a piezometer in July 2021 to characterize the nature and extent of cobalt in groundwater downgradient of AP-2, specifically MW-35. A well installation report will be submitted to GA EPD within 60 days of completing its installation, survey, and development. The results from the initial sampling of this new piezometer will be submitted in January 2022 with the 2021 Annual Groundwater Monitoring & Corrective Action Report.

The new SSLs for lead identified for HGWC-14, HGWC-18, and MW-33 were reported following the March 2021 assessment monitoring event as a result of decreased laboratory reporting limits implemented during the current reporting period. Georgia Power is currently evaluating options for vertically and horizontally delineating the newly identified lead SSLs.

Georgia Power will continue to monitor AP-2 groundwater under the assessment monitoring program and proceed with the evaluation of remedies presented in the ACM Report (Geosyntec, 2019b). The second semiannual assessment monitoring event is scheduled to occur in August 2021.

7.0 REFERENCES

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TABLES

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

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

Notes:
ft = feet
BTOC = below top of casing
(1) Coordinates in North American Datum (NAD) 1983, State Plane, Georgia-West, feet. Survey completed by GEL Solutions dated May 19, 2020 and September 10, 2020 (for wells HGWA-42D, HGWA-43D, and HGWA-44D).
(2) Elevations referenced to the North American Vertical Datum of 1988 (NAVD88). Survey completed by GEL Solutions dated May 19, 2020 and September 10, 2020 (for wells HGWA-42D, HGWA-43D, and HGWA-44D).
(3) Total well depth accounts for sump if data provided on well construction logs.

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

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

Table 3

Summary of Groundwater and Surface Water Elevations

Plant Hammond AP-2, Floyd County, Georgia

Well ID	Top of Casing Elevation [1] (ft)	February 8, 2021		March 10, 2021	
		Depth to Water (ft BTOC)	Groundwater Elevation[1] (ft)	Depth to Water (ft BTOC)	Groundwater Elevation[1] (ft)
Compliance Monitoring Wells					
HGWA-1	595.21	13.76	581.45	10.94	584.27
HGWA-2	587.92	8.10	579.82	7.08	580.84
HGWA-3	587.74	7.71	580.03	6.68	581.06
HGWA-4	587.60	6.23	581.37	5.7	581.90
HGWA-5	583.24	5.53	577.71	4.73	578.51
HGWA-6	583.38	5.02	578.36	4.03	579.35
HGWA-42D	586.17	10.46	575.71	10.58	575.59
HGWA-43D	595.08	13.71	581.37	10.85	584.23
HGWA-44D	594.79	13.60	581.19	11.18	583.61
HGWC-14	597.25	28.30	568.95	27.20	570.05
HGWC-15	581.49	17.40	564.09	15.95	565.54
HGWC-16	580.02	14.60	565.42	11.94	568.08
HGWC-17	584.30	17.70	566.60	17.6	566.70
HGWC-18	584.18	17.69	566.49	17.69	566.49
Piezometers					
MW-8	586.93	20.30	566.63	19.02	567.91
MW-9	590.95	16.25	574.70	14.05	576.90
MW-12	583.27	11.63	571.64	--[2]	--[2]
MW-16	574.22	9.18	565.04	5.84	568.38
MW-17	586.78	4.50	582.28	9.54	577.24
MW-18	592.28	14.2	578.08	17.73	574.55
MW-33	593.92	25.5	568.42	24.35	569.57
MW-34D	596.51	31.66	564.85	31.85	564.66
MW-35	574.40	10.3	564.10	8.29	566.11
MW-36D	584.10	16.82	567.28	16.6	567.50
Delineation Monitoring Wells					
MW-21D	583.84	16.58	567.26	16.51	567.33
MW-22	578.51	14.6	563.91	13.8	564.71
MW-23D	581.30	18.90	562.40	17	564.30
MW-37D	583.58	16.37	567.21	16.27	567.31
Surface Water Level Gauge Point					
Coosa River	--	--	561.30	--	563.10
Unnamed Creek	--	--	571.74	--	--[2]

Notes:

-- = not measured or not applicable

ft = feet

BTOC = below top of casing

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

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

Table 4

Groundwater Gradient and Flow Velocity Calculations

Plant Hammond AP-2, Floyd County, Georgia

	February 8, 2021				March 10, 2021				
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)**
Westerly Flow Path (MW-18 to HGWC-17)	578.08	566.60	1,300	0.009	574.55	566.70	1,300	0.006	0.007

			Averaged for 2021	
Flow Path Direction [(1)]	**K_h (ft/d)**	**n**	**Δh/Δl (ft/ft)**	**V (ft/d)[(2)]**
Westerly Flow Path (MW-18 to HGWC-17)	1.47	0.15	0.007	0.069

Notes:

ft = feet

ft/d = feet per day

ft/ft = feet per foot

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-2 and illustrated on Figures 3 and 4 of associated report.

(2) Groundwater flow velocity equation: $V = [K * (\Delta h/\Delta l)] / n$

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

	Well ID:	HGWA-1	HGWA-1	HGWA-2	HGWA-2	HGWA-3	HGWA-3	HGWA-4	HGWA-4	HGWA-5	HGWA-5	HGWA-6	HGWA-6	HGWA-42D[4]	HGWA-42D[4]	HGWA-42D	HGWA-42D
	Sample Date:	2/8/2021	3/10/2021	2/9/2021	3/11/2021	2/9/2021	3/11/2021	2/8/2021	3/10/2021	2/9/2021	3/11/2021	2/9/2021	3/11/2021	12/15/2020	1/20/2021	2/8/2021	3/10/2021
	Parameter[1,2,3]																
APPENDIX III	Boron	--	0.015 J	--	0.056	--	0.015 J	--	0.012 J	--	0.0075 J	--	0.018 J	0.043 J	0.045 J	--	0.048
	Calcium	--	111	--	43.8	--	83.8	--	5.9	--	28.3	--	53.1	47.3	41.8	--	43.4
	Chloride	--	7.4	--	5.1	--	5.9	--	2.9	--	1.4	--	1.2	3.2	2.8	--	3.0
	Fluoride	--	0.079 J	--	0.10	--	<0.050	--	<0.050	--	0.060 J	--	0.17	0.11	0.082 J	--	0.11
	pH	7.11	6.95	5.42	5.80	7.23	7.33	4.94	5.28	6.35	6.48	7.40	7.56	7.64	7.68	7.64	7.70
	Sulfate	--	49.6	--	52.9	--	50.4	--	1.2	--	22.7	--	35.5	10.9	9.8	--	10.8
	TDS	--	348	--	169	--	267	--	53.0	--	118	--	215	193	158	--	163
APPENDIX IV	Antimony	<0.00028	<0.00028	0.00062 J	<0.00028	0.00031 J	<0.00028	<0.00028	<0.00028	<0.00028	<0.00028	<0.00028	<0.00028	0.00035 J	<0.00028	0.0019 J	<0.00028
	Arsenic	<0.00078	<0.00078	<0.00078	<0.00078	<0.00078	<0.00078	<0.00078	<0.00078	<0.00078	<0.00078	<0.00078	<0.00078	<0.00078	<0.00078	<0.00078	<0.00078
	Barium	0.032	0.030	0.12	0.070	0.13	0.13	0.040	0.036	0.046	0.044	0.21	0.21	0.19	0.20	0.19	0.18
	Beryllium	<0.000046	<0.000046	0.00014 J	0.000086 J	<0.000046	0.015 J	0.00023 J	0.00017 J	<0.000046	<0.000046	<0.000046	<0.000046	<0.000046	<0.000046	<0.000046	<0.000046
	Cadmium	<0.00012	<0.00012	0.00016 J	<0.00012	<0.00012	<0.00012	<0.00012	<0.00012	<0.00012	<0.00012	<0.00012	<0.00012	<0.00012	<0.00012	<0.00012	<0.00012
	Chromium	<0.00055	<0.00055	<0.00055	<0.00055	<0.00055	<0.00055	<0.00055	<0.00055	<0.00055	0.0011 J	<0.00055	<0.00055	0.0025 J	<0.00055	0.00078 J	<0.00055
	Cobalt	<0.00038	<0.00038	0.020	0.013	<0.00038	<0.00038	0.00074 J	0.00065 J	0.00071 J	0.0013 J	<0.00038	<0.00038	0.00049 J	<0.00038	<0.00038	<0.00038
	Fluoride	0.078 J	0.079 J	<0.050	0.10	0.074 J	<0.050	<0.050	<0.050	0.053 J	0.060 J	<0.050	0.17	0.11	0.082 J	0.096 J	0.11
	Lead	0.000058 J	<0.000036	0.000094 J	0.000076 J	<0.000036	<0.000036	0.00024 J	0.00016 J	<0.000036	<0.000036	<0.000036	<0.000036	0.00045 J	<0.000036	0.000081 J	<0.000036
	Lithium	0.00086 J	0.00090 J	0.0012 J	0.0011 J	0.0032 J	0.0035 J	0.0013 J	0.0011 J	0.0030 J	0.0037 J	0.010 J	0.012 J	0.0080 J	0.010 J	0.0098 J	0.0094 J
	Mercury	<0.000078	--	<0.000078	--	<0.000078	--	<0.000078	--	<0.000078	--	<0.000078	--	<0.000078	<0.000078	<0.000078	--
	Molybdenum	<0.00069	<0.00069	<0.00069	<0.00069	<0.00069	<0.00069	<0.00069	<0.00069	<0.00069	<0.00069	<0.00069	<0.00069	0.00082 J	<0.00069	<0.00069	<0.00069
	Comb. Radium 226/228	0.223 U	0.00 U	0.721 U	0.737 U	0.447 U	0.128 U	0.558 U	0.281 U	0.370 U	1.07 U	0.324 U	0.601 U	0.261 U	0.845 U	0.429 U	1.21
	Selenium	<0.0016	0.0047 J	<0.0016	<0.0016	<0.0016	<0.0016	<0.0016	<0.0016	<0.0016	<0.0016	<0.0016	<0.0016	<0.0016	<0.0016	<0.0016	<0.0016
	Thallium	<0.00014	<0.00014	<0.00014	<0.00014	<0.00014	<0.00014	<0.00014	<0.00014	<0.00014	<0.00014	<0.00014	<0.00014	<0.00014	<0.00014	<0.00014	<0.00014

Notes:

-- = Parameter was not analyzed
TDS = Total dissolved solids
< = Indicates the parameter was not detected above the analytical MDL.
J = Indicates the parameter was estimated and detected between the method detection limit (MDL) and the reporting limit (RL).
U = Indicates the parameter was not detected above the analytical MDL (Specific to combined radium).
(1) Appendix III/IV parameter per 40 CFR 257 Subpart D. Parameters are reported in units of milligrams per liter (mg/L), except for pH reported as s.u. (standard units) .
(2) Metals were analyzed by EPA Method 6020B, mercury was analyzed by EPA Method 7470A, anions were analyzed by EPA Method 300.0, TDS was analyzed by SM2540C, and combined radium by EPA Methods 9315/9320.
(3) The pH value presented was recorded at the time of sample collection in the field.
(4) Monitoring wells HGWA-42D, HGWA-43D, and HGWA-44D were analyzed for the complete list of Appendix III and Appendix IV constituents to establish background groundwater quality conditions.

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

	Well ID:	HGWA-43D[4]	HGWA-43D[4]	HGWA-43D	HGWA-43D	HGWA-44D[4]	HGWA-44D[4]	HGWA-44D	HGWA-44D	HGWC-14	HGWC-14	HGWC-15	HGWC-15	HGWC-16	HGWC-16	HGWC-17	HGWC-17
	Sample Date:	12/15/2020	1/19/2021	2/9/2021	3/11/2021	12/15/2020	1/19/2021	2/9/2021	3/10/2021	2/11/2021	3/17/2021	2/12/2021	3/16/2021	2/10/2021	3/17/2021	2/11/2021	3/18/2021
	Parameter [1,2,3]																
APPENDIX III	Boron	0.052 J	0.049 J	--	0.060	0.31	0.40	--	0.39	--	11.8	--	2.4	--	2.7	--	6.8
	Calcium	62.6	60.1	--	59.6	28.7	33.0	--	18.3	--	572	--	196	--	198	--	266
	Chloride	4.7	4.1	--	4.5	9.4	9.5	--	12.3	--	233	--	103	--	93.8	--	138
	Fluoride	0.21	0.16	--	0.20	0.67	0.74	--	0.65	--	0.076 J	--	<0.050	--	<0.050	--	0.057 J
	pH	7.39	7.39	7.44	7.46	7.87	7.86	7.84	7.92	4.84	4.72	5.99	6.08	7.08	7.19	6.31	6.43
	Sulfate	38.8	37.3	--	38.6	6.7	7.4	--	<0.50	--	1300	--	379	--	250	--	447
	TDS	289	270	--	279	295	278	--	289	--	1640	--	92.0	--	768	--	1020
APPENDIX IV	Antimony	0.00031 J	0.00029 J	0.00037 J	0.00057 J	0.00047 J	0.00067 J	0.00042 J	0.00037 J	0.00043 J	<0.00028	<0.00028	<0.00028	<0.00028	<0.00028	<0.00028	<0.00028
	Arsenic	<0.00078	0.0011 J	0.0017 J	0.0013 J	<0.00078	<0.00078	0.00083 J	<0.00078	0.0062	<0.0039	<0.00078	<0.00078	0.0012 J	<0.00078	0.0012 J	<0.00078
	Barium	0.29	0.32	0.34	0.32	0.39	0.41	0.46	0.26	0.020	0.023	0.014	0.012	0.11	0.12	0.025	0.027
	Beryllium	<0.000046	<0.000046	<0.000046	<0.000046	<0.000046	<0.000046	<0.000046	<0.000046	0.00044 J	0.00058	<0.000046	<0.000046	<0.000046	<0.000046	0.000067 J	0.000048 J
	Cadmium	<0.00012	<0.00012	<0.00012	<0.00012	<0.00012	<0.00012	<0.00012	<0.00012	<0.00012	<0.00012	0.0014 J	0.0011	<0.00012	<0.00012	<0.00012	<0.00012
	Chromium	<0.00055	<0.00055	0.00095 J	<0.00055	0.00072 J	0.0011 J	0.00066 J	<0.00055	<0.00055	<0.0028	<0.00055	0.0012 J	<0.00055	<0.00055	0.00074 J	0.00069 J
	Cobalt	<0.00038	<0.00038	<0.00038	<0.00038	<0.00038	<0.00038	<0.00038	<0.00038	0.033	0.034	0.019	0.018	<0.00038	<0.00038	0.012	0.012
	Fluoride	0.21	0.16	0.19	0.20	0.67	0.74	0.44	0.65	0.059 J	0.076 J	0.053 J	<0.050	0.21	<0.050	0.058 J	0.057 J
	Lead	0.000082 J	0.000044 J	0.00029 J	0.000094 J	0.00011 J	0.00019 J	0.00010 J	<0.000036	0.0015 J	0.0019	<0.000036	<0.000036	0.000094 J	0.000058 J	0.00018 J	0.000088 J
	Lithium	0.0019 J	0.0025 J	0.0026 J	0.0022 J	0.028 J	0.034	0.026 J	0.030	<0.00081	<0.00081	0.036	0.032	0.0038 J	0.0048 J	0.0013 J	0.0014 J
	Mercury	<0.000078	<0.000078	<0.000078	--	<0.000078	<0.000078	<0.000078	--	<0.000078	--	<0.000078	--	<0.000078	--	<0.000078	--
	Molybdenum	0.0044 J	0.0038 J	0.0045 J	0.0064 J	0.0019 J	0.0035 J	0.0038 J	0.0019 J	<0.00069	<0.00069	<0.00069	<0.00069	<0.00069	<0.00069	<0.00069	<0.00069
	Comb. Radium 226/228	1.04 U	0.685 U	0.138 U	1.51 U	0.700 U	0.790 U	0.486 U	0.811 U	0.730 U	1.84	1.65	0.801 U	0.773 U	0.228 U	0.831 U	0.856 U
	Selenium	<0.0016	<0.0016	<0.0016	<0.0016	<0.0016	<0.0016	<0.0016	<0.0016	0.0072 J	0.010 J	<0.0016	<0.0016	<0.0016	<0.0016	<0.0016	<0.0016
	Thallium	<0.00014	<0.00014	<0.00014	<0.00014	<0.00014	<0.00014	<0.00014	<0.00014	0.00026 J	0.00034 J	<0.00014	<0.00014	<0.00014	<0.00014	<0.00014	<0.00014

Table 5

Summary of Groundwater Analytical Data

Plant Hammond AP-2, Floyd County, Georgia

	Well ID:	HGWC-18	HGWC-18	MW-21D	MW-21D	MW-22	MW-22	MW-23D	MW-23D	MW-33	MW-33	MW-35	MW-35	MW-37D	MW-37D
	Sample Date:	2/11/2021	3/18/2021	2/11/2021	3/18/2021	2/15/2021	3/17/2021	2/12/2021	3/17/2021	2/12/2021	3/18/2021	2/15/2021	3/19/2021	2/11/2021	3/12/2021
	Parameter [1,2,3]														
APPENDIX III	Boron	--	8.9	--	5.7	--	2.7	--	3.4	--	10.2	--	11.9	--	0.15
	Calcium	--	407	--	382	--	200	--	341	--	574	--	552	--	170
	Chloride	--	90.2	--	208	--	127	--	151	--	199	--	250	--	124
	Fluoride	--	0.64	--	<0.050	--	<0.050	--	<0.050	--	0.40	--	0.082 J	--	0.061 J
	pH	4.53	4.54	6.87	6.95	5.48	5.57	6.80	6.86	4.40	4.27	4.82	4.89	7.42	7.50
	Sulfate	--	1050	--	829	--	461	--	486	--	1360	--	1220	--	237
	TDS	--	1390	--	1390	--	998	--	990	--	1790	--	1690	--	890
APPENDIX IV	Antimony	<0.00028	<0.00028	<0.00028	<0.00028	<0.00028	<0.00028	<0.00028	<0.00028	0.00046 J	<0.00028	0.00041 J	<0.00028	0.00079 J	<0.00028
	Arsenic	0.0069	0.0083 J	0.0010 J	<0.00078	<0.00078	<0.00078	0.0010 J	<0.00078	0.0059	0.0054 J	0.0050	<0.0039	0.0023 J	<0.00078
	Barium	0.030	0.031	0.044	0.047	0.017	0.018	0.056	0.058	0.025	0.029	0.026	0.032	0.14	0.12
	Beryllium	0.0036	0.0038	<0.000046	<0.000046	0.000062 J	0.000082 J	<0.000046	<0.000046	0.0010 J	0.0011	0.00060 J	0.00061	<0.000046	<0.000046
	Cadmium	0.0016 J	0.0015	<0.00012	<0.00012	0.0020 J	0.0022	0.00045 J	0.00057	0.00017 J	0.00019 J	0.0017 J	0.0018	<0.00012	<0.00012
	Chromium	<0.00055	<0.0028	<0.00055	0.00074 J	<0.00055	0.00075 J	<0.00055	0.00083 J	<0.00055	<0.0028	<0.00055	0.00083 J	0.0014 J	<0.00055
	Cobalt	0.14	0.14	<0.00038	<0.00038	0.038	0.039	0.0010 J	0.0011 J	0.055	0.057	0.095	0.10	0.00048 J	<0.00038
	Fluoride	0.71	0.64	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.25	0.40	0.093 J	0.082 J	0.077 J	0.061 J
	Lead	0.00098 J	0.00096 J	0.00066 J	0.000073 J	0.000036 J	<0.000036	<0.000036	<0.000036	0.0018 J	0.0017	0.00055 J	0.00066 J	0.00039 J	<0.000036
	Lithium	0.011 J	0.013 J	0.021 J	0.026 J	0.0011 J	0.0012 J	0.0023 J	0.0024 J	0.0011 J	0.0012 J	0.0043 J	0.0045 J	0.034	0.035
	Mercury	<0.000078	--	<0.000078	--	<0.000078	--	<0.000078	--	<0.000078	--	<0.000078	--	<0.000078	--
	Molybdenum	<0.00069	<0.00069	0.016	0.016	<0.00069	<0.00069	0.0039 J	0.0034 J	<0.00069	<0.00069	<0.00069	<0.00069	0.019	0.014
	Comb. Radium 226/228	1.11	1.63	0.317 U	0.500 U	0.215 U	0.981 U	1.21 U	0.579 U	2.26	0.733 U	1.52	0.524 U	0.120 U	0.578 U
	Selenium	0.023	0.019 J	<0.0016	<0.0016	<0.0016	<0.0016	<0.0016	<0.0016	0.011	0.028	0.010	0.016 J	<0.0016	<0.0016
	Thallium	<0.00014	0.00016 J	<0.00014	<0.00014	<0.00014	<0.00014	<0.00014	<0.00014	0.00025 J	0.00031 J	<0.00014	<0.00014	<0.00014	<0.00014

Table 6

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

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

Notes:

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

-- = not measured or not applicable.

TDS = Total dissolved solids

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

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

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

Table 7

Summary of Background Concentrations and Groundwater Protection Standards
Plant Hammond AP-2, 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	0.46	2	2
Beryllium	mg/L	0.0005	0.004	0.004
Cadmium	mg/L	0.0005	0.005	0.005
Chromium	mg/L	0.0019	0.1	0.1
Cobalt	mg/L	0.038	0.038	0.038
Fluoride	mg/L	0.74	4	4
Lead	mg/L	0.001	0.015	0.001
Lithium	mg/L	0.034	0.04	0.034
Mercury	mg/L	0.0005	0.002	0.002
Molybdenum	mg/L	0.01	0.1	0.01
Selenium	mg/L	0.01	0.05	0.05
Thallium	mg/L	0.001	0.002	0.002
Combined Radium-226/228	pCi/L	1.68	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

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

0 400 800 1,600

SCALE IN FEET

SITE LOCATION MAP

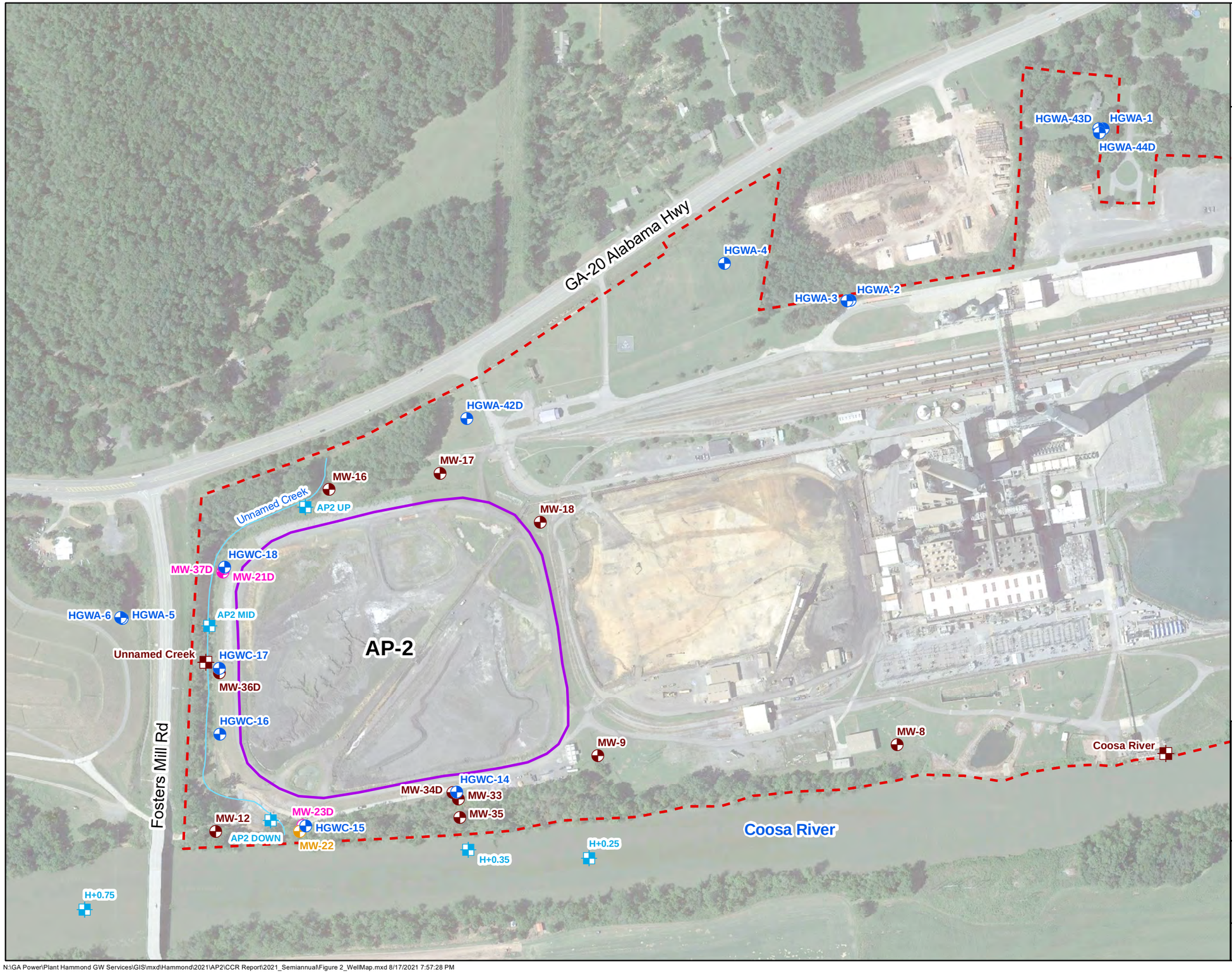
GEORGIA POWER COMPANY
PLANT HAMMOND AP-2
FLOYD COUNTY, GEORGIA

Prepared For: Georgia Power

Prepared By: Geosyntec consultants

KENNESAW, GA | AUGUST 2021

FIGURE 1



N

LEGEND

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

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

0 175 350 700

SCALE IN FEET

MONITORING WELL NETWORK AND SAMPLING LOCATION MAP

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

Prepared For: Georgia Power

Prepared By: Geosyntec consultants

KENNESAW, GA | AUGUST 2021

FIGURE 2

2021 Semiannual Groundwater Monitoring & Corrective Action Report - Georgia Power Company - Plant Hammond Ash Pond 2 (AP-2)

N:\GA Power\Plant Hammond GW Services\GIS\mxd\Hammond\2021\AP2\CCR Report\2021_Semiannual\Figure 2_WellMap.mxd 8/17/2021 7:57:28 PM

2021 Semiannual Groundwater Monitoring & Corrective Action Report - Georgia Power Company - Plant Hammond Ash Pond 2 (AP-2)

N:\GA Power\Plant Hammond GW Services\GIS\mxd\Hammond\2021\AP2\CCR Report\2021_Semiannual\Figure 3_POT Map_Feb2021_AP-2.mxd 8/27/2021 5:18:53 PM

N

LEGEND

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

Notes:

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

0 150 300 600

SCALE IN FEET

GEORGIA REGISTERED No. PE030513 PROFESSIONAL ENGINEER WHITNEY B. LAW

POTENTIOMETRIC SURFACE CONTOUR MAP - FEBRUARY 2021

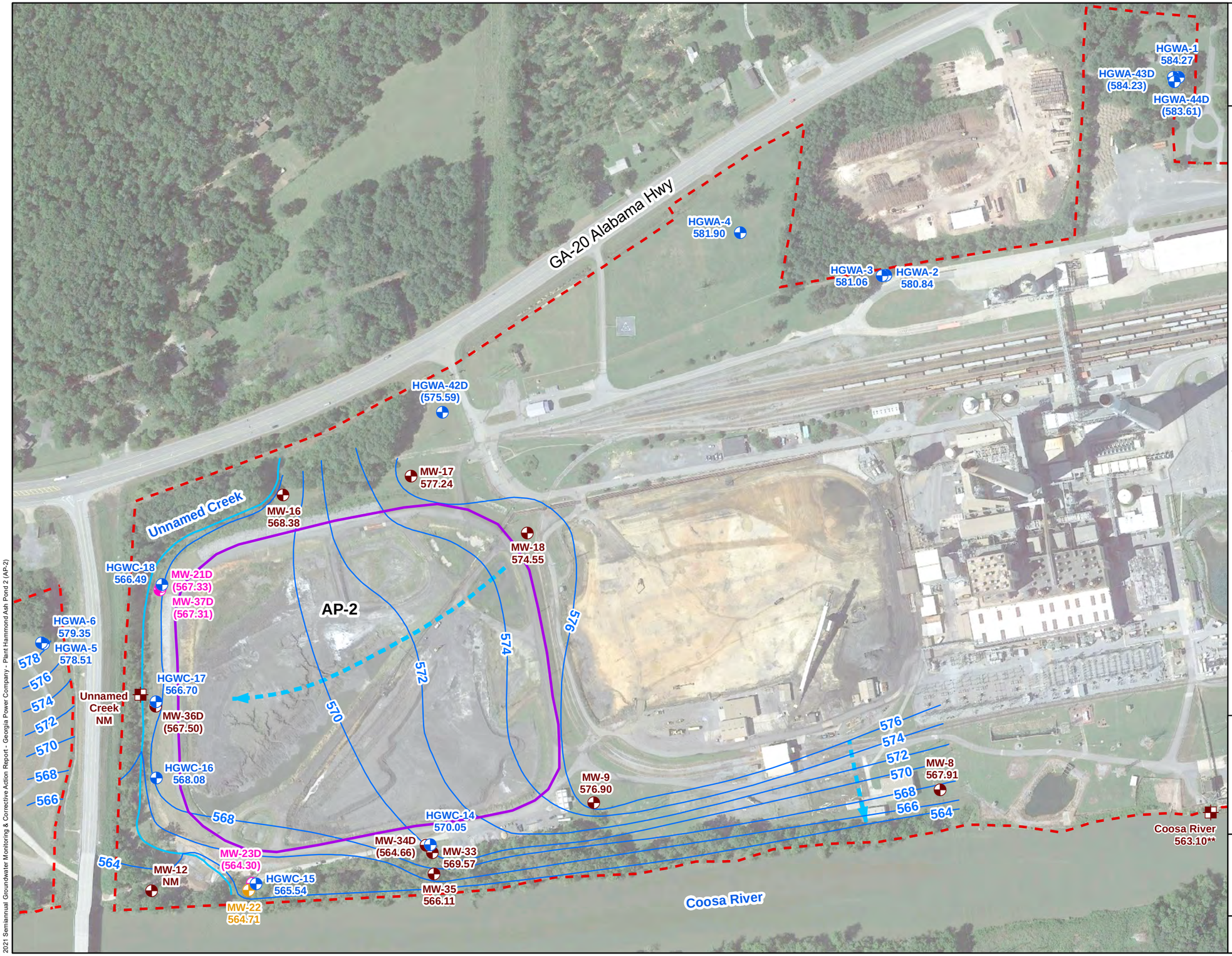
GEORGIA POWER COMPANY
PLANT HAMMOND AP-2
ROME, FLOYD COUNTY, GEORGIA

Prepared For: Georgia Power

Prepared By: Geosyntec consultants

KENNESAW, GA | AUGUST 2021

FIGURE 3



2021 Semiannual Groundwater Monitoring & Corrective Action Report - Georgia Power Company - Plant Hammond Ash Pond 2 (AP-2)

N

LEGEND

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

Notes:

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

0 150 300 600

SCALE IN FEET

GEORGIA REGISTERED No. PE036610 PROFESSIONAL ENGINEER WHITNEY B. LAW

POTENTIOMETRIC SURFACE CONTOUR MAP - MARCH 2021

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

Prepared For: Georgia Power

Prepared By: Geosyntec consultants

KENNESAW, GA | AUGUST 2021

FIGURE 4

APPENDIX A

Well Inspection Forms

Groundwater Monitoring Well Integrity Form

Site Name: Hammon A
Permit Number:
Well ID: HGWA-1
Date, field conditions: 3/10/2020 65°F SUNNY

		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
Permit Number:
Well ID: NGWA-2
Date, field conditions: 3/10/2021 65°F sunny

		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
Permit Number:
Well ID: HGWA-3
Date, field conditions: 3/10/2021 65°F Sunny

		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

3-10-2021

Groundwater Monitoring Well Integrity Form

Site Name: HAMMOND AP-2
Permit Number:
Well ID: HGWA-4
Date, field conditions: SUNNY, 37°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?	✓		

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: Plant Hammond AP-42
Permit Number:
Well ID: HGWA-5
Date, field conditions: 3/10/21 40°, sunny

		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: Plant Hammond AP-42
Permit Number:
Well ID: HGW4-G
Date, field conditions: 3/10/21 40° sunny

		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

3-10-2024

Groundwater Monitoring Well Integrity Form

Site Name: HAMMOND AP-2
Permit Number:
Well ID: HGWA-42D / MW-42D
Date, field conditions: SUNNY, 60°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?	✓		

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
Permit Number:
Well ID: HGWA-43D
Date, field conditions: 3/10/2021 65°F sunny

		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
Permit Number:
Well ID: HGWA-44D
Date, field conditions: 3/10/2021 65°F sunny

		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

3-10-2021

Site Name: HAMMOND AP-2
Permit Number:
Well ID: HGWC-14
Date, field conditions: SUNNY, 37°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?	VT ✓		
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

03-0-2024

Site Name HAMMOND AP-2
Permit Number
Well ID HGWC-15
Date, field conditions SUNNY, 39°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?	✓		

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

Signature and Seal of PE/PG responsible for inspection

3-11-2024

Groundwater Monitoring Well Integrity Form

Site Name: Hammond AP-2
Permit Number:
Well ID: HGWC-1b
Date, field conditions: SUNNY, 39°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?	✓		

7 Corrective actions as needed, by date:

N/A

Signature and Seal of PE/PG responsible for inspection

3-10-2021

Groundwater Monitoring Well Integrity Form

Site Name: Hanford AP-2
Permit Number:
Well ID: HGWC-17
Date, field conditions: SUNNY, 39°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?	✓		

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-2
Permit Number:
Well ID: HGWC 18D
Date, field conditions: SUNNY, 40°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?			

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

Signature and Seal of PE/PG responsible for inspection

3-10-2021

Groundwater Monitoring Well Integrity Form

Site Name: HAMMOND A9-2
Permit Number:
Well ID: MW-8
Date, field conditions: SUNNY, 60°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:**	(CR)		
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

3-10-2024

Groundwater Monitoring Well Integrity Form

Site Name: HAMMOND AP-2
Permit Number:
Well ID: MW-9
Date, field conditions: SUNNY, 62°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?	✓		

7 Corrective actions as needed, by date:
NEED TO CLEAN CONCRETE PAD

Signature and Seal of PE/PG responsible for inspection

3-10-2024

Groundwater Monitoring Well Integrity Form

Site Name: Hammond AP-2
Permit Number:
Well ID: MW-16
Date, field conditions: SUNNY, 53°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?	✓		

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

Signature and Seal of PE/PG responsible for inspection

3-10-2021

Groundwater Monitoring Well Integrity Form

Site Name: Hammond AP-2
Permit Number:
Well ID: MW-17
Date, field conditions: SUNNY, 49°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?	✓		

7 Corrective actions as needed, by date:

N/A

Signature and Seal of PE/PG responsible for inspection

3-10-2024

Groundwater Monitoring Well Integrity Form

Site Name: HAMMOND AP-2
Permit Number:
Well ID: MW-18
Date, field conditions: SUNNY, 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?	✓		

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-2
Permit Number
Well ID MW-2D
Date, field conditions Sunny, 40°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?	✓		

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

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

03-10-2024

Site Name: HAMMOND AP-2
Permit Number:
Well ID: MW-22
Date, field conditions: SUNNY, 39°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?	VT ✓	✓	
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

03-10-2021

Site Name: Hammond, AP-2
Permit Number:
Well ID: MW-230
Date, field conditions: Sunny, 39°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?	✓		

7 Corrective actions as needed, by date:

N/A

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

3-10-2021

Site Name: HAMMOND AP-2
Permit Number:
Well ID: MW-330
Date, field conditions: SUNNY, 37°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?	√T ✓	✓	
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?	√T	✓	
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:
NEED SURVEY MARKING ON INNER CASING

Signature and Seal of PE/PG responsible for inspection

3-10-2021

Groundwater Monitoring Well Integrity Form

Site Name: HAMMOND AP-2
Permit Number:
Well ID: MW-340
Date, field conditions: SUNNY, 37°F

		yes	no	n/a	
1	Location/Identification				
a	Is the well visible and accessible?	✓			WELL ID "MW-340"
b	Is the well properly identified with the correct well ID?	✓*			*NOT VISIBLE FROM FAR.
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:

NEED VISIBLE TAG "MW-340"
NEED SURVEY MARKER ON INNER CASING.

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

3-10-2024

Site Name: HAMMOND AP-2
Permit Number:
Well ID: MW-35
Date, field conditions: SUNNY, 45°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?	✓		

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

Signature and Seal of PE/PG responsible for inspection

03-10-2024

Groundwater Monitoring Well Integrity Form

Site Name: HANFORD AR-2
Permit Number:
Well ID: MW-360
Date, field conditions: SUNNY, 39°F

		yes	no	n/a	
1	**Location/Identification**				
a	Is the well visible and accessible?	✓			TAG FOR MW-360
b	Is the well properly identified with the correct well ID?		✓		★ NOT VISIBLE FROM AFAR.
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:

NEED VISIBLE TAG "MW-360"
NEED SURVEY POINT ON INNER CASING

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: HAMMOND AP-2
Permit Number:
Well ID: MW-37D
Date, field conditions: SUNNY, 39°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?		✓		* NO VISIBLE TAG "MW-37D"
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:
NEED VISIBLE TAG "MW-37D"
NEED SURVEY MARKER

Signature and Seal of PE/PG responsible for inspection

APPENDIX B

Semiannual Remedy Section and Design Progress Report

Prepared for

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

SEMIANNUAL REMEDY SELECTION AND DESIGN PROGRESS REPORT

PLANT HAMMOND ASH POND 2 (AP-2)

Prepared by

Geosyntec consultants

engineers | scientists | innovators

1255 Roberts Boulevard, Suite 200
Kennesaw, Georgia 30144

Project Number GW6581B

August 2021

SEMIANNUAL REMEDY SELECTION AND DESIGN PROGRESS REPORT

GEORGIA POWER COMPANY - PLANT HAMMOND

ASH POND 2 (AP-2)

This *Semiannual Remedy Selection and Design Progress Report (Revision 1), Georgia Power Company - Plant Hammond, Ash Pond 2 (AP-2),* has been prepared in accordance with the United States Environmental Protection Agency coal combustion residual rule, specifically 40 Code of Federal (CFR) § 257.97(a) and the Georgia Environmental Protection Division Rules for Solid Waste Management 391-3-4-.10(6)(a). This report describes the progress made during the first semiannual period of 2021 in selecting and designing a remedy previously documented in the *Assessment of Corrective Measures Report – Plant Hammond Ash Pond 2 (AP-2)*.

Report Prepared by:

Whitney B. Law, P.E.
Georgia Professional Engineer No. 036641

August 31, 2021
Date

Geosyntec consultants

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LIST OF ACRONYMS

ACM	Assessment of Corrective Measures
AEC	anion exchange capacity
Al	aluminum
AP	ash pond
As	arsenic
ASD	alternate source demonstration
CCR	coal combustion residuals
Cd	cadmium
CEC	cation exchange capacity
CFR	Code of Federal Regulations
Co	cobalt
CSM	conceptual site model
Cu	copper
DPT	direct push technology
EDXA	energy disperse X-Ray analysis
EPD	Georgia Environmental Protection Division
Fe	iron
ft bgs	feet below ground surface
Geosyntec	Geosyntec Consultants, Inc.
Georgia Power	Georgia Power Company
GWPS	Groundwater Protection Standard
mg/L	milligrams per liter
mg/kg	milligrams per kilogram
mL	milliliter
meq/100g	milliequivalents per 100 grams
M	molar
Mn	manganese
MNA	monitored natural attenuation
Mo	molybdenum
Pb	lead
PRB	permeable reactive barriers
Se	selenium
SEM	scanning electron microscopy
SEP	sequential extraction procedure
SSI	statistically significant increase
SSL	statistically significant level

TOC	total organic carbon
USEPA	United States Environmental Protection Agency
WRA	Whole Rock Analysis
XRD	X-Ray diffraction
Zn	zinc

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 2 (AP-2 or Site) in accordance with the United States Environmental Protection Agency (US EPA) coal combustion residual rule (CCR Rule) (40 Code of Federal Regulations [CFR] 257 Subpart D), specifically 40 CFR 257.97(a), and the Georgia Environmental Protection Division (EPD) Rules for Solid Waste Management 391-3-4-.10(6)(a). This progress report describes the progress made since the prior semiannual progress report in selecting and designing a remedy. Potentially applicable groundwater corrective measures were previously described in the *Assessment of Corrective Measures Report – Plant Hammond Ash Pond 2 (AP-2)* (Geosyntec, 2019a) (ACM Report).

The purpose of the ACM Report (and subsequent semiannual progress reports) is to document the process of evaluating and selecting corrective measure(s) to improve groundwater quality. This process is typically iterative and may be composed of multiple steps to analyze the applicability of corrective measures. Once potential corrective measures are identified, they are further evaluated using the criteria outlined in § 257.96(c) and Rule 391-3-4-.10(6)(a). The selected corrective measure must meet the additional protection criteria outlined in § 257.97 and corresponding Rule 391-3-4-10(6)(a). Pursuant to § 257.97(a) and Rule 391-3-4-.10(6)(a), semiannual progress reports have been regularly submitted to document the efforts of evaluating and progressing towards selecting a groundwater corrective measure (Geosyntec, 2019b, 2020a, 2020b).

1.2 Site Background and Overview of AP-2 Pond Closure

Plant Hammond is located in Floyd County, Georgia, approximately 10 miles west of Rome and is bordered by Georgia Highway 20 (GA-20) on the north, the Coosa River on the south, Cabin Creek and industrial land on the east, and sparsely populated, forested, rural and industrial land on the west (**Figure 1**). The four coal-fired electric generating units at Plant Hammond were decommissioned in 2019 and electricity is no longer produced at the Site.

AP-2 is a 21-acre surface impoundment. Dewatered ash from AP-2 is excavated and transported to the nearby Huffaker Road facility, a permitted solid waste disposal location owned and operated by Georgia Power. Georgia Power will close AP-2 through removal

of the CCR material from the CCR unit. The Closure Plan submitted to EPD as part of the closure permit application package describes the closure activities and requirements in accordance with § 257.102 and corresponding Rule 391-3-4-.10(7)(b). The proposed closure by removal approach provides a source control measure that reduces the potential for migration of CCR constituents to groundwater. Details of the closure approach are provided in the Initial Written Closure Plan and published in 2016 to Georgia Power's website. Closure permit No. 057-024D(CCR) was approved by EPD on June 22, 2020.

1.3 Regulatory Program Status and Nature and Extent

CCR compliance groundwater monitoring-related activities have been performed for AP-2 since May 2016 pursuant to the CCR Rule. Georgia Power initiated the assessment monitoring program in January 2018 after identifying statistically significant increases (SSIs) above background of Appendix III constituents in groundwater. Statistical analyses of the Appendix IV assessment monitoring groundwater data collected in 2018 identified SSLs of cobalt (Co) in compliance monitoring wells HGWC-15 and HGWC-18 at concentrations exceeding the groundwater protection standard (GWPS) (Geosyntec, 2019b). Pursuant to § 257.96, Georgia Power initiated an assessment of corrective measures (ACM) for AP-2 in January 2019. The ACM Report (Geosyntec, 2019a) was submitted to EPD in June 2019 and posted to the CCR compliance website in July 2019.

As part of the assessment monitoring program, four delineation wells have been installed to delineate Appendix IV constituents and four piezometers have been installed to characterize flow conditions downgradient of AP-2 (**Figure 2**; well construction details are provided in **Table 1**). Further, three additional upgradient compliance monitoring wells (HGWA-42D, HGWA-43D, and HGWA-44D) were installed in August 2020 to characterize background groundwater quality and flow conditions in deeper zones of the uppermost aquifer.

Statistical analysis of the March 2021 semiannual 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 *2021 Semiannual Groundwater Monitoring and Corrective Action Report* (2021 Semiannual Report) (Geosyntec, 2021b).

AP-2 (Federal CC Rule):

- Co: HGWC-18, MW-33, MW-35

AP-2 (EPD CCR Rule):

- Co: HGWC-18, MW-33, MW-35
- Lead (Pb): HGWC-14, HGWC-18, and MW-33
- Molybdenum (Mo): MW-21D

Based on the groundwater data reported in the 2021 Semiannual Report, a portion of the identified SSLs for wells and constituents listed above have been horizontally and vertically delineated to below the state and federal GWPS as determined by confidence intervals (statistical analysis) prepared for the delineation wells discussed in the following paragraphs (Geosyntec, 2021b). In select cases, as explained below, delineation by statistical analysis is pending.

Currently, the Co SSL identified in HGWC-18 is vertically delineated to below the site-specific GWPS (0.038 mg/L) by MW-21D. Vertical delineation of Co in MW-33 is pending additional groundwater data reported for MW-34D. Well MW-34D is installed less than 30 feet upgradient of MW-33 and screened approximately 26 feet deeper than MW-33. MW-34D has been sampled twice and both results measured less than the GWPS; the well will be sampled moving forward to evaluate vertical delineation at MW-33. Vertical delineation of Co in MW-35 may require the installation of an additional well and is currently under evaluation.

Due to the presence of a surface water feature in the downgradient direction of HGWC-18 (refer to **Figure 2**), installation of additional wells to horizontally characterize this area is infeasible. For this reason, Georgia Power proactively collected surface water samples in March 2021 from three locations in the unnamed creek west of AP-2 (AP2-Up, AP2-Mid, AP2-Down) shown on **Figure 2** to horizontally delineate Co. To delineate MW-33 and MW-35, surface water samples were collected from the Coosa River. Of the seven sample locations along the Coosa River, three (i.e., H+0.25, H+0.35, H+0.75) are most applicable to delineating Co concentrations downgradient of MW-33 and MW-35. These three locations are shown on **Figure 2**. Cobalt was not detected above the laboratory reporting limit (0.0050 mg/L) in any of the three unnamed creek water samples or any of the Coosa River samples collected during the March 2021 event. Therefore, based on Co data collected to date, no Co impacts to surface water have been detected and horizontal delineation is complete. The data associated with the March 2021 surface water sampling event are presented in Appendix C of the 2021 Semiannual Report. An

iso-concentration map for Co, generated from the March 2021 groundwater and surface water data, is presented on **Figure 3**.

The newly identified SSLs for Pb in wells HGWC-14 and HGWC-18 and piezometer MW-33 are likely the result of a decrease in the laboratory reporting and background limit for Pb from <0.005 mg/L to <0.001 mg/L. Vertical and horizontal delineation of the newly identified Pb SSLs to below the state GWPS (0.005 mg/L) are currently under evaluation. For this reason, the Pb SSLs are not considered at this time with respect to the corrective measures presented herein. An iso-concentration map for Pb, generated from the March 2021 groundwater data, is presented on **Figure 4**.

The Mo concentrations in MW-21D have steadily decreased since the SSL was identified in 2019 (i.e., March 2019: 0.045 mg/L; March 2021: 0.016 mg/L). In 2020, Georgia Power proactively installed a deeper well (MW-37D) to vertically delineate Mo concentrations reported in MW-21D. The March 2021 data for MW-37D vertically delineates MW-21D to below the state GWPS (0.010 mg/L), as determined by the statistically derived confidence interval for MW-37D. Additionally, Mo was not detected above the laboratory reporting limit (0.010 mg/L) in the three unnamed creek water samples collected in March 2021 (Geosyntec, 2021a). Therefore, horizontal delineation is complete for MW-21D.

Georgia Power will continue to adaptively manage the Site and use ongoing data collection to evaluate the need for additional wells at AP-2. Pursuant to § 257.96, groundwater in the vicinity of AP-2 continues to be monitored during the ACM phase in accordance with the established assessment monitoring program.

1.4 Corrective Measures Evaluated

As discussed in the ACM Report, the following corrective measures are potentially feasible for use at AP-2. A comparative screening of the corrective measures is provided in **Table 2**.

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

The PRB and vertical barrier wall corrective measures were removed from consideration based on data evaluations presented in the August 2020 semiannual progress report (Geosyntec, 2020a). The rationale for not considering phytoremediation and in-situ solidification/stabilization (ISS) as potentially appliable corrective measures at AP-2 was presented in the ACM Report (Geosyntec, 2019a). There is a lack of available area to plant trees (i.e., phytoremediation) downgradient of the pond and ISS is not an applicable technology at AP-2 since the CCR unit will be closed by removal of CCR materials from the unit.

Georgia Power proactively initiated adaptive site management as outlined in the ACM Report to support the groundwater remedy selection process and address potential changes in site conditions (e.g., successful reduction of constituent concentrations or changing trends) as appropriate. The adaptive site management approach will take existing site conditions, including natural attenuation mechanisms, into account. Characterization activities to evaluate attenuation mechanisms at the Site include collection of data necessary to progressively evaluate the existing and long-term effectiveness of these processes in the aquifer and reduce uncertainty for decision making at each screening step as listed in the USEPA guidelines for MNA of inorganic constituents (USEPA, 1999, 2007 and 2015). The 1999 MNA guidance originally introduced the "tiered approach" with three tiers of site-specific information, or lines of evidence, to evaluate the appropriate use of MNA at certain sites (USEPA, 1999). In 2007, the USEPA issued MNA technical guidance specific to inorganic contaminants (USEPA, 2007) that contained four "tiers." The 2015 MNA guidance retains these four "tiers," but describes them as "phases" as described below (USEPA, 2015). This 2015 MNA document for inorganic contaminants expands on and is designed to be a companion to the 1999 and 2007 MNA guidance.

- Phase I: Demonstration that the groundwater plume is *not expanding*.
- Phase II: Determination that the *mechanism and rate* of the attenuation process are sufficient.
- Phase III: Determination that the *capacity* of the aquifer is sufficient to attenuate the mass of contaminant within the plume and the *stability* of the immobilized contaminant is sufficient to resist re-mobilization.
- Phase IV: Design of a *performance monitoring program* based on an understanding of the mechanism of the attenuation process, and establishment of contingency remedies tailored to site-specific characteristics.

Georgia Power will address Phase IV, as appropriate, during the development of the future corrective action monitoring plan, after the final remedy selection report.

The data collection approach and the data interpretation presented within this semiannual progress report are informed by this phased MNA guidance. It is noted, however, that the characterization data collected under this approach are also used to refine the conceptual site model (CSM) and evaluate other retained potential corrective measures.

1.5 Risk Evaluation

In addition to the assessment monitoring program at the Site, Georgia Power conducted a human health and ecological risk evaluation to evaluate Co and Mo SSLs in groundwater at AP-2. The risk evaluation provides one of many lines of evidence that will be evaluated and factored into the remedy selection process, which will be completed in accordance with § 257.97. Based upon this evaluation, concentrations of Co and Mo detected in groundwater at AP-2 between May 2016 and June 2020 are not expected to pose a risk to human health or the environment (Geosyntec, 2021a). Cobalt and Mo data collected since June 2020 are consistent with data used in the risk evaluation; therefore, the conclusions provided in the *2020 Risk Evaluation Report – Plant Hammond Ash Pond 2* (Geosyntec, 2021a) are supported by current conditions. The risk evaluation will be updated to include Pb (as appropriate), and the results will be submitted with the Remedy Selection Report.

2.0 SUMMARY OF WORK COMPLETED

The following summarizes the field investigations and data evaluations completed since the issuance of the prior semiannual progress report in January 2021 (Geosyntec, 2021c). The routine initial assessment and semiannual assessment monitoring event conducted in February 2021 and March 2021, respectively, are discussed in the *2021 Semiannual Groundwater Monitoring and Corrective Action Report*.

2.1 Field Activities

2.1.1 Collection of Aquifer Solids and Background Groundwater

A direct-push technology (DPT) rig was used to collect aquifer matrix samples from the saturated unconsolidated zone at five locations in the vicinity of AP-2 on January 26, January 27, and February 2, 2021. Four borehole locations (DPT-08, DPT-09, DPT-10, and DPT-11) were selected to provide representative materials downgradient of AP-2. A sample was also collected from one location (DPT-07) upgradient of the unit to be representative of background conditions. The approximate sampling locations are depicted on **Figure 2**, and field sampling/boring logs are provided in **Appendix A**. 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, which are consistent with the screened intervals of nearby monitoring wells.

In addition to collecting the aquifer solid samples, Geosyntec collected a groundwater sample on May 26, 2021, from background location HGWA-5 for use in batch sorption and desorption studies that are currently being conducted at SiREM laboratories in Guelph, Ontario (SiREM).

2.1.2 Installation of Temporary Piezometers to Evaluate pH

Two temporary piezometers were installed on January 26, 2021, and February 3, 2021, and water samples were subsequently collected from these piezometers in support of evaluating pH conditions in and around AP-2. A DPT rig fitted with hollow stem augers was used to install the two piezometers. One pore water piezometer (TPZ-01) was installed west of PMW-04 within the CCR of AP-2. The second piezometer, a groundwater piezometer, (TPZ-02) was installed along the shoulder of the AP-2 dike road and screened within groundwater. The locations are shown on **Figure 2**. Boring/well construction logs are provided in **Appendix A**; the piezometer construction details are presented in **Table 1**. Both temporary piezometers were abandoned on May 19, 2021, in

preparation of pond closure activities, including excavation of the CCR material, anticipated to begin in late 2021. The piezometer abandonment memorandum is provided in **Appendix B**.

2.1.3 Collection of Water Samples for pH Evaluation Study

Between February 9 to 12, 2021, water samples were collected from TPZ-01, TPZ-02, PMW-04, and HGWC-18 for the analysis of the following constituents to evaluate water quality, geochemical conditions, and conditions that could impact pH conditions: calcium, chloride, sulfate, potassium, magnesium, sodium, sulfide, manganese (Mn), iron (Fe), total alkalinity, bicarbonate alkalinity, carbonate alkalinity, dissolved (free) carbon dioxide, and Co. The sample collected from HGWC-18 was also analyzed for the complete Appendix IV parameter list as part of the annual Appendix IV sampling event also conducted at AP-2 in February 2021. Additional samples were collected between March 18-22, 2021, during the semiannual assessment monitoring event. Water samples collected from TPZ-01, TPZ-02, and PMW-04 during that sampling event were analyzed for Appendix III constituents, Co, and Mo; the groundwater sample collected from HGWC-18 was analyzed for the Appendix III and IV parameter list associated with the March 2021 semiannual assessment monitoring event. For both events, sample bottles were submitted to Pace Analytical Services, LLC. in Norcross, Georgia. The field sampling forms generated for TPZ-01, TPZ-02, PMW-04, and HGWC-18 during the February 2021 event and for TPZ-01, TPZ-02, and PMW-04 sampled during the March 2021 event are provided in **Appendix C**. The field sampling form prepared for HGWC-18 during the routine March 2021 semiannual assessment monitoring event is provided with the 2021 Semiannual Groundwater Monitoring and Corrective Action Report (Geosyntec, 2021b).

2.2 Data Analysis Activities

2.2.1 Characterization of Aquifer Solids

2.2.1.1 Chemical and Mineralogical Characterization

The groundwater sample (for use in sorption/desorption studies) as well as the aquifer matrix samples from borings DPT-07 (background location) and DPT-08 through DPT-11 (downgradient locations) were submitted to SiREM 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*: Ion exchange capacity (both anion exchange capacity [AEC] and cation exchange capacity [CEC]) of a soil or aquifer is an important variable to understand when evaluating attenuation processes. It is generally defined as the capacity of a soil to retain both positively charged and negatively charged ions, including cations such as many metals and (micro-) nutrients, and anions such as sulfate or chloride. Note that while many metals are present as cations in soils under most environmental conditions (such as Pb, zinc [Zn], aluminum [Al], cadmium [Cd], Fe, etc.), a number of trace elements can also occur as oxyanions in nature, such as arsenic (As), selenium (Se), or Mo. It is therefore important to account for both the CEC as well as the AEC of a soil to evaluate its capacity to retain these ions via sorptive processes (USEPA Phases II and III).

- *Total Sulfur, Sulfide*: The presence of sulfur, and especially sulfide in the aquifer materials may give an indication whether metals prone to precipitation as sulfides or co-precipitation with sulfidic minerals, such as Fe, As, copper [Cu], Zn, Cd and others might be present in the aquifer matrix. Understanding the presence and speciation of sulfur compounds allows an estimation of whether certain metals are likely to form sparingly soluble sulfide minerals as a possible attenuation mechanism (USEPA Phases II and III).

- *Organic Carbon Content*: Organic carbon, if present, can contribute to the CEC and AEC of a soil and would therefore increase the sorptive capacity of a soil or aquifer matrix. In addition, organic carbon can provide an energy source for microbially mediated metal(loid)s transformations, changing their oxidation-reduction (redox) state, which affects their mobilization/ immobilization (USEPA Phases II and III).

- *Total Metals Concentration*: Total concentrations of targeted constituents in the solid phase. The samples are analyzed for site-specific constituents, Fe, Al, and Mn. This analysis helps to understand the presence of site-specific constituents in aquifer solids as well as the elements Fe, Al, and Mn that form major mineral phases known to sorb/retain many metals (USEPA Phases II and III).

- *X-Ray Diffraction, Scanning Electron Microscopy (SEM) and Energy Dispersive X-Ray Analysis (EDXA)*: Qualitative and quantitative confirmation of mineral phases present, including Whole Rock Analysis (WRA) for quantitative confirmation of XRD results. Identifying crystalline and non-crystalline solid

phases aids in the evaluation of attenuation mechanisms and capacity (USEPA Phases II and III).

2.2.1.2 Sequential Extraction Procedure

In addition to the chemical and mineralogical characterization described above, samples DPT-07, DPT-08, and DPT-11 were submitted for a sequential extraction procedure (SEP) at the Eurofins/TestAmerica laboratory in Knoxville, Tennessee, which assesses the geochemical fractionation of trace elements within aquifer solids. 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 class of solids and 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).

Eurofins/TestAmerica uses a 7-step extraction procedure as described below.

- Step 1 (Exchangeable Phase): This extraction includes trace elements that are reversibly sorbed to soil minerals, amorphous solids, and/or organic material by electrostatic forces. These forces may be overcome by exposing the soil to a concentrated electrolyte solution, such as 1 molar (M) magnesium sulfate ($MgSO_4$) that displaces the trace elements from solid surfaces.

- Step 2 (Carbonate Phase): This extraction targets trace elements that are sorbed or otherwise bound to carbonate minerals. This phase is soluble in a mild acid solution (1M sodium acetate [NaOAc] solution in 25% acetic acid [HOAc] at pH 5).

- Step 3 (Non-Crystalline Materials Phase): This extraction targets trace elements that are complexed by, and co-precipitated with, amorphous solids (e.g. Fe/Mn/Al oxyhydroxides). This phase is extracted with 25 milliliter (mL) of 0.2M ammonium oxalate (pH 3) and can provide significant attenuation capacity.

- Step 4 (Metal Hydroxide Phase): Trace elements bound to crystalline hydroxides of Fe, Mn, and/or Al are extracted using a solution of 1M hydroxylamine hydrochloride in 25% v/v acetic acid. This phase often provides significant attenuation capacity.

- Step 5 (Organic Phase): This extraction targets trace elements strongly bound via chemisorption to organic material. Oxidation of soil organic matter (using pH 9.5; at 5% sodium hypochlorite [NaOCl]), will bring into solution metals bound to organic functional groups.

- Step 6 (Acid/Sulfide Fraction): The extraction is used to identify trace elements precipitated as sulfide minerals. Metals associated with sulfide minerals will be extracted by leaching the soils with a 3:1:2 v/v solution of hydrochloric acid-nitric acid-water [HCl-HNO_3-H_2O] to dissolve the metal sulfide minerals. Sulfide phases are fairly stable in the groundwater environment and can provide non-reversible attenuation under most conditions.

- Step 7 (Residual Fraction): Trace elements remaining in the soil after the previous extractions will be distributed between silicates, phosphates, and refractory oxides. These residual metals can be removed from the soil through total dissolution with hydrofluoric acid [HF], HNO_3, HCl and boric acid [H_3BO_3]. These are stable, but usually are the naturally occurring fraction and not attenuated trace elements from a CCR release.

SEP data can be used to interpret the mechanism and potential reversibility of attenuation processes, consistent with Phases II and III of the MNA guidance. These data also supplement information collected during the baseline characterization, such as CEC and AEC as well as the presence of certain minerals and/or metal oxyhydroxides.

2.2.2 Spatial Evaluation of pH

The data collected from TPZ-01, TPZ-02, PMW-04, and HGWC-18 were used for geochemical analyses to evaluate potential mechanisms that could explain the widely varying pH conditions in and around AP-2. A more detailed interpretation of these analyses will be presented during the next progress report. The laboratory analytical results are presented in the current progress report and briefly discussed in Section 3.1.6.

3.0 SUMMARY OF RESULTS

The following presents the results of the data analysis efforts outlined in Section 2.

3.1 Summary of Unconsolidated Aquifer Solids Analysis

A brief summary of the aquifer solids results for DPT-07 through DPT-11 is provided below, and the complete SiREM report is included in **Appendix D** of this report. Results of the groundwater sampled from HGWA-5 for use in batch sorption and desorption studies will be reported in the next semiannual progress report.

3.1.1 Anion and Cation Exchange Capacity

The CEC of soils is dependent on the amount and type of clay minerals, organic matter, and amorphous minerals, while the sources of AEC in soils include clay minerals (primarily 1:1 clays such as kaolinite), metal oxides, and amorphous materials. In general, the CEC of a soil is higher than the AEC, but highly weathered and acidic soils can have substantial AEC (Sparks, 1995).

The table presented on page 4 of the SiREM report included in **Appendix D** lists the CEC ranging from 6.61 milliequivalents per 100 grams (meq/100 g) in boring DPT-08 to 11.91 meq/100 g in boring DPT-09. Similarly, the AEC varies within a narrow range between 5.17 meq/100 g in DPT-09 and 6.84 meq/ 100 g in background boring DPT-07. These results will be further evaluated in upcoming reports as additional data regarding sorption and desorption processes become available.

3.1.2 Total Sulfur, Total Sulfide, and Total Organic Carbon

As can be seen in the table presented on page 4 of the SiREM report included in **Appendix D**, with the exception of background boring DPT-07, the total sulfur content is low and ranges from 0.014% in DPT-10 to 0.811% in background location DPT-07. Similarly, total sulfide ranges from non-detect (<0.04%) in DPT-10 to 0.85% in background boring DPT-07. The substantially higher sulfur/sulfide content in boring DPT-07 may be indicative of the presence of sulfide minerals.

The total organic carbon (TOC) content of these materials ranges from 0.11% in DPT-11 to 1.06% in background boring DPT-07. These relatively low results are expected given that the samples were collected at depth within the aquifer matrix made up of mostly residuum (i.e., clays) and partially weathered bedrock at that depth.

3.1.3 Total Metals and Whole Rock Analyses

The total metals results are summarized in the table presented on page 5 of the SiREM report included in **Appendix D**. The metals include the site-specific constituents of interest Co and Mo. In addition, lithium (Li) and As were included in the analysis to supplement (by comparison) results from nearby units AP-1 and AP-3 where Li (AP-1 and previously AP-3) and As (AP-1) are SSLs. Lithium and As data are provided in **Appendix D** but are not part of the analysis for AP-2, and will not be further discussed herein. Furthermore, Fe, Al, and Mn were also analyzed to give an indication whether oxides/oxyhydroxides of these metals may be present, since these mineral phases can be a significant source of attenuation capacity for metal(loid)s.

As can be seen in this table, the aquifer materials contain site-specific constituents of interest within a fairly narrow range. Cobalt detections range from 7.0 micrograms per gram (µg/g), which is equivalent to milligrams per kilogram (mg/kg), in boring DPT-11 to 14 mg/kg in downgradient boring DPT-10 and background boring DPT-07. Molybdenum detections range from 0.80 mg/kg in boring DPT-09 to 2.2 mg/kg in background boring DPT-07.

Interestingly, background boring DPT-07 exhibited the highest concentrations of Co and Mo, indicating they are naturally present in the rocks near AP-2.

As expected for residuum and highly weathered bedrock materials, the Fe and Al contents are substantial, with Fe concentrations ranging from 24,000 mg/kg (2.4%) in boring DPT-08 to 39,000 mg/kg (3.9%) in DPT-11, and Al concentrations ranging from 48,000 mg/kg (4.8%) in DPT-08 to 77,000 mg/kg (7.7%) in background boring DPT-07. This is indicative of the abundant presence of Fe- and Al-oxides and hydroxides as well as clay minerals, which provide substantial attenuation capacity for site-specific constituents. Manganese concentrations range from 170 mg/kg in background boring DPT-07 to 540 mg/kg in boring DPT-10, indicating that there may be some Mn-oxide mineral coatings present that provide additional sorption sites for certain trace metals.

Whole Rock Analysis (WRA) was included as a chemical assay to confirm and reconcile the quantitative mineral analysis obtained through XRD. While the name might imply "rock" samples, the analysis was conducted on the unconsolidated DPT borings and not competent bedrock. The WRA of these aquifer materials summarized in the table presented on page 6 of the SiREM report (**Appendix D**) confirm the presence of major mineral phases. Quartz was the most abundant mineral phase detected in these borings ranging from 65.6% to 78.6%, with Al-oxide and Fe-oxide concentrations coming in as

the second most abundant mineral phases ranging from 10.3% to 16.3%, and 3.90% to 6.23%, respectively. Other oxides, especially containing potassium, titanium, and magnesium, are consistently detected, albeit at lower concentrations of generally less than 1%.

3.1.4 XRD and SEM/EDXA Analyses

XRD as well as SEM/EDXA analyses were completed to characterize both the crystalline and non-crystalline phases of the unconsolidated aquifer matrix. Overall, the mineralogy of the aquifer matrix reflects the abundance of quartz, muscovite, kaolinite, albite, and microcline, and includes minerals that provide ample surface area and ion exchange capacities to attenuate both cationic as well as anionic constituents.

As expected (and confirmed through WRA), the quantitative XRD analysis (see page 7 in **Appendix D**) indicated that the largest percentage of the aquifer matrix is made up of quartz, ranging from 43.7% (by weight) in background boring DPT-07 to 65.6% (by weight) in boring DPT-08. The second-highest percentage of the mineralogy was characterized by the 2:1 clay mineral muscovite at weight percentages between 7.9% and 33.1%, and the 1:1 clay mineral kaolinite at weight percentages between 12.7% and 22.0%. Clay minerals are major contributors to the CEC of soil and aquifer solid materials.

Other minerals consistently detected include the feldspar mineral albite and the titanium oxide (TiO_2) minerals anatase and rutile.

The SEM/EDXA images and results are included as pages 27 through 61 in the SiREM report (**Appendix D**). SEM/EDXA has the advantage of also identifying amorphous (i.e., non-crystalline) phases that cannot be identified using XRD. It therefore supplements the XRD results.

The identified minerals and amorphous phases were generally consistent across all five borings. The main minerals identified include quartz, various feldspar minerals and silicates, clays and clay minerals such as kaolinite, muscovite and chlorite, and an abundance of Fe-oxides and oxyhydroxides that are either present within the soil matrix or as coatings on feldspar grains or clay minerals. Other minerals such as zircon, ilmenite and rutile were also consistently identified across all borings. In addition, pyrite was detected in each boring, but it was especially abundant in background boring DPT-07, which is consistent with the higher sulfide content in this sample discussed above. Furthermore, the abundance of Fe-oxides and oxyhydroxides suggests that ample

attenuation sites are potentially available within the aquifer matrix for site-specific constituents.

3.1.5 Sequential Extraction Procedure

As described in Section 2.2.1, a 7-step SEP analysis was conducted by Eurofins/ TestAmerica, to evaluate the fractionation of Co. The results are summarized in a table found on page 8 of the SiREM report (**Appendix D**).

As a first step to evaluate data quality in an SEP analysis, a comparison of the total concentrations of a metal with the sum of the individual extraction steps should be made. While not expected to be exactly the same, these results should be consistent with each other. As can be seen in the table found on page 8 of **Appendix D**, the totals analyses for Co and the sum of Co from extraction steps 1 through 7 match reasonably well, indicating good metal recovery in the SEP steps and data quality.

Total Co concentrations in these samples varied within a narrow range from 7.0 mg/kg (estimated) in boring DPT-11 to 11 mg/kg in background boring DPT-07. These results are consistent with the independent analysis of these samples presented in Section 3.1.3 above by SiREM and historical results of Co in aquifer solids (Geosyntec, 2020b).

For the downgradient borings DPT-08 (near HGWC-18) and DPT-11 (near HGWC-14) little to no Co was recovered in the first two extractions steps, which include the Exchangeable Phase (Step 1) and the Carbonate Phase (Step 2). Contrary to the downgradient borings, the bulk of the total Co concentration from background boring DPT-07 was recovered in Step 1, which represents the weakly sorbed fraction of Co. Some Co was also released in Step 5 (Organic Phase) and Step 6 (Acid/Sulfide Fraction) in boring DPT-07, indicating that Co is also associated with organic carbon and sulfide minerals. This is consistent with the higher TOC and sulfide concentrations detected in this boring. The bulk of Co concentrations in downgradient boring DPT-08 was associated with the Non-Crystalline Phase (Step 3), and some Co was associated with Step 4 (Metal Hydroxide Phase), indicating that Co is mostly associated with amorphous and crystalline metal oxides and oxyhydroxides. Most of the Co in downgradient boring DPT-11 was associated with Step 4 (Metal Hydroxide Phase) and Step 6 (Acid/Sulfide Fraction). These results will be further evaluated in upcoming reports as additional data regarding sorption and desorption processes become available.

3.1.6 Geochemical Conditions In and Around AP-2

The analytical data obtained through the sampling of pore water piezometers PMW-04 and TPZ-02 and groundwater piezometers/wells TPZ-02 and HGWC-18 are presented in **Table 3**, and the laboratory analytical reports are included in **Appendix C**. The lab reports containing HGWC-18 data associated with the annual Appendix IV sampling event and the March 2021 semiannual assessment monitoring event are provided with the 2021 Semiannual Report (Geosyntec, 2021b).

As can be seen in **Table 3**, the pH conditions between PMW-04 and HGWC-18 change from pH 7.13 (PMW-04) to pH 9.38 (TPZ-01) within the CCR pore water, and then drop to pH 6.75 (TPZ-02) and pH 4.55 (HGWC-18) using data from the February 2021 sampling event. It has previously been established that the mobility of Co is closely correlated with pH, and that Co at the Site is mobilized through acidic conditions. Therefore, understanding the potential source(s) of acidity is important for the understanding of Co mobility and the application of potential groundwater corrective measures. As stated in Section 2.2.2 above, the next progress report will include a more detailed evaluation of these pH conditions.

4.0 UPDATED CONCEPTUAL SITE MODEL

AP-2 will be closed by removal of CCR materials from the unit, thereby providing a source control measure that reduces potential for migration of CCR-related constituents to groundwater. The additional data collected since the issuance of the previous semiannual progress report in January 2021 (Geosyntec, 2021c) allow the refinement of the CSM. The following bullets summarize the current understanding of the CSM within the context of selecting an appropriate groundwater corrective measure for AP-2:

- Statistical analyses and recent iso-concentration maps indicate that Co SSLs in the compliance and delineation monitoring well network (HGWC-18, MW-33, and MW-35) are horizontally delineated to below the site-specific GWPS by the Unnamed Creek and the Coosa River. Vertical delineation of Co at HGWC-18 is complete, while additional vertical delineation at MW-33 and MW-35 is under evaluation.

- New SSLs above the state GWPS (i.e., background) for Pb were reported in wells/ piezometers HGWC-14, HGWC-18, and MW-33. This is likely related to the change in the laboratory reporting limit for Pb from <0.005 to <0.001 mg/L. Vertical and horizontal delineations of the newly identified Pb SSLs are currently under evaluation.

- Molybdenum concentrations at vertical delineation well MW-21D are below the federal GWPS and additional groundwater monitoring of the well will determine whether the observed decreasing concentrations will drop to below the state GWPS. The March 2021 data for the deeper well MW-37D vertically delineates MW-21D to below the state GWPS, as determined by the statistically derived confidence interval for MW-37D. Additionally, Mo was not detected above the laboratory reporting limit in the three unnamed creek water samples collected in March 2021. Therefore, horizontal delineation is complete for MW-21D.

- Cobalt appears to be mostly mobilized through low pH conditions. There are similar relationships between pH and Co concentration observed in upgradient well HGWA-2 and downgradient well HGWC-18. A more detailed discussion of the various potential mechanisms that could explain the variability of pH will be provided in the next report.

- The characterization of unconsolidated aquifer solids summarized in this progress report included determination of the CEC and AEC, evaluation of total sulfur,

total sulfide, and TOC concentrations, evaluation of total metals and whole rock analysis, and characterization of the soil/aquifer mineralogy using XRD as well as SEM/EDXA methods. In addition, an SEP analysis was conducted on a subset of the aquifer samples. These characterizations were completed to evaluate attenuation mechanisms consistent with the phased approach of USEPA's guidance for the implementation of MNA (i.e., Phases II and III). Results indicate CEC and AEC levels consistent with the primary and secondary soil minerals present, including the type and abundance of various clay minerals. The abundant presence of identified crystalline and non-crystalline mineral phases, including Fe-oxides and oxyhydroxides, suggest that the aquifer matrix has sorption capacity to attenuate the site-specific constituents of interest. In addition, the abundant presence of pyrite (especially in background boring DPT-07) was demonstrated through this characterization of aquifer solids.

5.0 UPDATED EVALUATION OF CORRECTIVE MEASURES

As briefly discussed in Section 1.4, the potential corrective measures PRB and vertical barrier wall were eliminated from further evaluation to treat the site-specific constituents in groundwater. The remaining three potential corrective measures were retained for further evaluation. Data collected during the past six months reported in the current progress report have not resulted in the elimination of additional corrective measures. Therefore, the following three potential corrective measures, which have been described in further detail in the August 2020 progress report, will be retained for further evaluation:

- Geochemical Injections:
    - Geochemical injections include the use of an injection well network, or other means of introducing reagents or air into the subsurface, to provide suitable reagents for either anaerobic or aerobic attenuation of Co, and possibly Mo. Injections could also be used to adjust pH conditions to affect attenuation of constituents, especially Co. This potential corrective measure may still be feasible around well HGWC-18 and potentially south of AP-2, most likely through locally adjusting the groundwater pH to immobilize Co via (ad-)sorption under higher pH conditions. Additional evaluation is required to determine efficacy of this corrective measure to treat Mo in bedrock where the SSL has been identified (MW-21D).

- Hydraulic Containment:
    - Hydraulic containment refers to the use of groundwater extraction to induce a hydraulic gradient for hydraulic capture or control the migration of impacted groundwater downgradient of the permitted unit. This approach uses extraction wells or trenches to capture groundwater, which may subsequently require above-ground treatment and permitted discharge to a receiving water feature, reinjection into the groundwater, or reuse. Hydraulic containment is applicable to a variable mix of inorganic constituents, including dissolved Co and Mo, and this potential corrective measure may still be feasible through targeted extraction of impacted groundwater at AP-2. However, there are logistical challenges and permitting considerations associated with the aboveground treatment approach of the extracted groundwater.

- Monitored Natural Attenuation:

    - MNA relies on natural attenuation processes to achieve site-specific remediation objectives within a reasonable timeframe relative to more active methods. Under certain conditions (e.g., through sorption, mineral precipitation or oxidation-reduction (redox) reactions), MNA effectively reduces the dissolved concentrations of inorganic constituents in groundwater. MNA may either be a stand-alone corrective measure or be part of a combination of corrective measures to address groundwater impacts. Additional batch sorption and desorption studies using site-specific groundwater and aquifer solids samples are currently ongoing and will be summarized within the next report.

6.0 PLANNED ACTIVITIES & ANTICIPATED SCHEDULE

The proposed closure by removal approach provides a source control measure that reduces the potential for migration of CCR constituents to groundwater. During the pond closure by removal of CCR, temporary changes in site conditions may occur that must be considered as part of remedy selection. Georgia Power proactively initiated adaptive site management as outlined in the ACM Report (Geosyntec, 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. Once sufficient data are available to select one or more specific corrective measures, necessary steps will be taken to design and implement a remedy for AP-2 in accordance with § 257.98.

Supplementary data collection and evaluation activities proposed to be completed during the next semiannual reporting period are presented in **Table 4**.

- *Conduct sorption and desorption batch studies on unconsolidated aquifer solids to evaluate the attenuation capacity of the aquifer solids for Co and Mo.*

- *Evaluate conceptual layouts of a hydraulic containment corrective measure to evaluate hydraulic capture zones and pumping rates during and after closure activities.*

- *Evaluate vertical delineation of the Co and Pb SSLs to determine if additional delineation wells are necessary and feasible.*

Georgia Power will continue to prepare semiannual progress reports to document AP-2 groundwater conditions, results associated with additional data collection, and the progress in selecting and designing a groundwater remedy in accordance with § 257.97(a). Georgia Power will include future semiannual progress reports in routine groundwater monitoring and corrective action reports. Record keeping, notifications, and publicly accessible internet site requirements for the semiannual progress reports will be provided in accordance with § 257.105(h)(12), § 257.106(h)(9), and § 257.107(h)(9), respectively.

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TABLES

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

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

Notes:
ft = feet
BTOC = below top of casing
(1) Coordinates in North American Datum (NAD) 1983, State Plane, Georgia-West, feet. Survey completed by GEL Solutions dated May 19, 2020 and September 10, 2020 (for wells HGWA-42D, HGWA-43D, and HGWA-44D).
(2) Elevations referenced to the North American Vertical Datum of 1988 (NAVD88). Survey completed by GEL Solutions dated May 19, 2020 and September 10, 2020 (for wells HGWA-42D, HGWA-43D, and HGWA-44D).
(3) Total well depth accounts for sump if data provided on well construction logs.

Table 2
Evaluation of Remedial Technologies
Plant Hammond AP-2, Floyd County, Georgia

	Regulatory Citation for Criteria:	40 CFR 257.96(C)(1)		40 CFR 257.96(C)(1)
Corrective Measure	**Description**	**Performance**	**Reliability**	**Ease of Implementation**
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 cobalt (Co). Under anaerobic conditions, Co would be attenuated within sparingly soluble sulfide minerals. Under aerobic conditions, soluble iron or manganese and oxygen (either via air sparging or through a chemical oxidant) would be injected to promote the formation of iron or manganese (oxy-) hydroxides for subsequent sorption of Co (and potentially molybdenum (Mo)) onto these mineral phases. If sufficient iron is present in groundwater, the use of air sparging alone may be considered to precipitate iron (oxy-) hydroxides for sorption. In-situ chemical oxidation (ISCO) or in-situ chemical reduction (ISCR) can be used to chemically alter the redox environment in the subsurface to affect the mobility of certain inorganic compounds, including Co. However, the main attenuation mechanism for Co and Mo is sorption, which is more dependent on pH than redox.	The effective immobilization of Co has been shown under aerobic and anaerobic conditions; however, the anaerobic approach (involving the injection of an electron donor together with iron or manganese and sulfur) requires careful study and testing. While aerobic approaches are somewhat less complex, additional aquifer characterization is needed to further evaluate these options. While both constituents can be remediated with geochemical injections, the immobilization of Mo using this approach is not well established and is still considered experimental at this time.	Reliability dependent on permeability of the subsurface and the amount and distribution of secondary iron or manganese (oxy-) hydroxides (for aerobic approach), or electron donors and soluble iron or manganese and sulfur that can be consistently distributed (for anaerobic approach). Reliable technology if injected materials can be distributed throughout the impacted aquifer. Bench- and/or pilot-scale treatability testing programs are needed to understand the biogeochemical processes that would effectively reduce migration of Co and Mo in groundwater.	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.
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 Co.	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-2, implementation of the corrective measure is contingent on completing additional assessment activities (i.e. high-resolution site characterization, additional pump tests, flow modeling, and capture zone analysis). 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.	Moderate. Proven approach, and supplemental installation of extraction wells/trenches is fairly straightforward. The extracted groundwater may potentially require an above-ground treatment system. A variety of sorption and precipitation approaches exist for ex-situ treatment of Co. 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.
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 Co and Mo at AP-2, are either physical (e.g. dilution, dispersion, flushing, and related processes) or chemical (sorption or oxidation reduction reactions. Chemical attenuation processes include precipitation and sorption reactions such as adsorption on the surfaces of soil minerals, absorption into the matrix of soil minerals, or partitioning into organic matter. Further, oxidation-reduction (redox) reactions, via abiotic or biotic processes, can transform the valence states of some inorganic constituents to less soluble and thus less mobile forms. For Co and Mo, main attenuation processes include sorption to iron and manganese oxides (Co and Mo), aluminum oxides (Mo), and formation of sparingly soluble sulfide minerals (Co).	Physical and chemical MNA mechanisms for Co, including dilution, dispersion, sorption, and oxidation reduction reactions, can be effective at achieving groundwater protection standards (GWPS) within a reasonable time frame. Source control will improve the mass balance such that the buffer capacity of the aquifer is unlikely to be exhausted, and the attenuation processes already at work for Co and Mo at AP-2 will further enhance ongoing MNA.	Reliable as long as the aquifer conditions that result in Co attenuation remain favorable and/or are being enhanced and sufficient attenuation capacity is present. MNA is reliable and can either be used as a stand-alone corrective measure for groundwater impacted by dissolved Co or Mo, or in combination with a second technology.	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.
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 Co and Mo. The carbon could be composed of peat moss, mulch or another carbon source. Exact placement of the PRB is contingent on finalization of the nature and extent characterization. PRB walls are typically keyed into the bedrock. While the shallow groundwater in the residuum and fractured bedrock is connected to the groundwater in more competent bedrock, the higher permeability/conductivity of the PRB is not expected to impede groundwater flow. PRBs can also be constructed as "funnel and gate" systems, where a barrier wall directs groundwater to a smaller "treatment gate" filled with reactive media.	PRBs have been shown to effectively address Co (and to a lesser degree Mo) in groundwater if the right mix of reactive materials (e.g., ZVI and carbon) is selected for removal/immobilization of the constituent. The approach is expected to achieve GWPS for Co and possibly Mo as impacted groundwater passes through the reactive barrier. Additional testing is required to select the appropriate sorptive media mix.	Reliable groundwater corrective measure, but loss of reactivity over time may require re-installation depending on the duration of the remedy. Additional data collection, including conducting a bench and/or pilot study, is needed to better characterize current attenuation mechanisms and/or select the appropriate reactive media mix for a PRB wall.	Moderate to difficult. Trenching would be required to install a mix of reactive materials in the subsurface. Continuous trenching may be the most feasible construction method. Installation methods and materials are readily available. Once installed, treatment will be passive and O&M requirements are minimal if replacement of the PRB is not necessary. Technically infeasible to construct a PRB at the required depths to address the aquifer zone in the vicinity of MW-21D (>30 ft into bedrock).
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 below ground surface (ft bgs); specialty drilling/installation techniques can achieve depths greater up to approximately 90 ft bgs. However, site-specific geologic and technology-specific considerations may limit this depth to shallower installations. Within the context of AP-2, a barrier wall might be used in conjunction with a "funnel and gate" system for a PRB rather than a stand-alone technology. As such, groundwater with Co and Mo above GWPS could either be directed to "treatment gates" for passive treatment (in a PRB) or migration of impacted groundwater could be minimized via barrier wall installation. Additional subsurface investigations, aquifer testing, and compatibility testing with site-specific groundwater will be needed.	Generally reliable as a barrier to groundwater flow; however, treatment of downgradient groundwater is incidental and not the primary objective.	Moderate to difficult. Trenching 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. Technically infeasible to construct a barrier wall at the required depths to address the aquifer zone in the vicinity of MW-21D (>30 ft into bedrock).

Table 2
Evaluation of Remedial Technologies
Plant Hammond AP-2, Floyd County, Georgia

	40 CFR 257.96(C)(1)	40 CFR 257.96(C)(2)	40 CFR 257.96(C)(3)
Corrective Measure	**Potential Impacts**	**Time Requirement to Begin/Complete**	**Institutional Requirements**
Geochemical Approaches (In-Situ Injection)	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.	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.
Hydraulic Containment	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 Co.	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.
Monitored Natural Attenuation (MNA)	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. Engineering measures will be implemented during closure of AP-2 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.	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.
Permeable Reactive Barrier	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.	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.
Subsurface Vertical Barrier Walls	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.	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.

Table 2
Evaluation of Remedial Technologies
Plant Hammond AP-2, Floyd County, Georgia

	40 CFR 257.96(C)(3)		
Corrective Measure	**Other Env or Public Health Requirements**	**Relative Costs**	**Evaluation of Retainage**
Geochemical Approaches (In-Situ Injection)	Based on the results of the Risk Evaluation Report (Geosyntec, 2021a), SSL-related constituents (Co, Mo) evaluated from AP-2 are not expected to pose a risk to human health or the environment; therefore, no further risk evaluation for groundwater is warranted based on the current data set. Georgia Power will proactively evaluate the data and update this evaluation, if necessary. Potential for mobilization of redox-sensitive 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; could be applied to immobilize Co as a sparingly-soluble mineral, or could be applied to raise the groundwater pH to promote immobilization through sorption mechanisms. Additional evaluation required to determine efficacy to treat Mo in bedrock.
Hydraulic Containment	Based on the results of the Risk Evaluation Report (Geosyntec, 2021a), SSL-related constituents (Co, Mo) evaluated from AP-2 are not expected to pose a risk to human health or the environment; therefore, no further risk evaluation for groundwater is warranted based on the current data set. Georgia Power will proactively evaluate the data and update this evaluation, if necessary. Above-ground treatment components may need to be present for an extended period of time, generating residuals requiring management and disposal.	Medium to high (depending on remedy duration, complexity of above-ground treatment system, and volume of water processed)	Retained for further analysis; extracted water could be routed to wastewater treatment infrastructure built for dewatering and closure of ponds at the site; however, this may pose permitting challenges and may require the installation of separate water treatment infrastructure. Corrective measure generally accepted by most stake-holders. Could be considered an effective measure to maintain hydraulic control along Coosa River and/or the unnamed creek west of AP-2 should closure construction activities require an interim groundwater treatment configuration.
Monitored Natural Attenuation (MNA)	Little to no physical disruption to remediation areas and no adverse construction-related impacts are expected on the surrounding community. Based on the results of the Risk Evaluation Report (Geosyntec, 2021a), SSL-related constituents (Co, Mo) evaluated from AP-2 are not expected to pose a risk to human health or the environment; therefore, no further risk evaluation for groundwater is warranted based on the current data set. Georgia Power will proactively evaluate the data and update this evaluation, if necessary.	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.
Permeable Reactive Barrier	Based on the results of the Risk Evaluation Report (Geosyntec, 2021a), SSL-related constituents (Co, Mo) evaluated from AP-2 are not expected to pose a risk to human health or the environment; therefore, no further risk evaluation for groundwater is warranted based on the current data set. Georgia Power will proactively evaluate the data and update this evaluation, if necessary. Following installation, the remedy is passive. However, certain treatment media (such as ZVI) have the potential to mobilize naturally-occurring constituents downgradient of the PRB.	Medium to high (for installation) - minimal O&M requirements if replacement is not necessary	Not retained for further analysis; does not address downgradient groundwater when installed along the compliance boundary; impractical to construct a wall at the required depths (>30ft into bedrock); potential for increased maintenance due to potential biofouling and mineral precipitation.
Subsurface Vertical Barrier Walls	Based on the results of the Risk Evaluation Report (Geosyntec, 2021a), SSL-related constituents (Co, Mo) evaluated from AP-2 are not expected to pose a risk to human health or the environment; therefore, no further risk evaluation for groundwater is warranted based on the current data set. Georgia Power will proactively evaluate the data and update this evaluation, if necessary. Due to the need for groundwater extraction associated with barrier walls, above-ground treatment components may need to be present for an extended period of time, generating residuals requiring management and disposal.	Medium to high (depending on length and depth of wall, remedy duration and complexity of above-ground treatment system)	Not retained for further analysis; should be considered as part of source control, which is unnecessary in the context of closure by removal of CCR; impractical to construct a wall at the required depths (>30ft into bedrock); furthermore, does not address downgradient groundwater when installed along the compliance boundary.

Table 3

Summary of Groundwater and Pore Water Analytical Data
Plant Hammond AP-2, Floyd County, Georgia

	Well ID:	HGWC-18	HGWC-18	PMW-04	PMW-04 FILTERED	PMW-04	TPZ-01	TPZ-01	TPZ-02	TPZ-02
	Sample Date:	2/10/2021	3/18/2021	2/9/2021	2/9/2021	3/18/2021	2/10/2021	3/19/2021	2/12/2021	3/22/2021
	Parameter [1,2,3]									
APPENDIX III	Boron	--	8.9	9.7	9.6	9.6	--	16.3	--	8.0
	Calcium	397	407	277	280	282	773	789	429	427
	Chloride	93.4	90.2	15.7	13.8	38.5	296	309	115	129
	Fluoride	--	0.64	2.1	1.9	2.1	--	0.12	--	0.054 J
	pH	4.55	4.54	7.13	7.13	7.62	9.38	9.73	6.75	6.64
	Sulfate	1040	1050	489	488	649	1370	1320	1330	1220
	TDS	--	1390	1260	1220	1170	--	2040	--	1680
APPENDIX IV	Antimony	<0.00028	<0.00028	--	--	--	--	--	--	--
	Arsenic	0.0069	0.0083 J	--	--	--	--	--	--	--
	Barium	0.030	0.031	--	--	--	--	--	--	--
	Beryllium	0.0036	0.0038	--	--	--	--	--	--	--
	Cadmium	0.0016 J	0.0015	--	--	--	--	--	--	--
	Chromium	<0.00055	<0.0028	--	--	--	--	--	--	--
	Cobalt	0.14	0.14	0.0017 J	0.0013 J	0.0021 J	<0.00038	<0.0019	0.0091	0.0042 J
	Fluoride	0.71	0.64	2.1	1.9	2.1	--	0.12	--	0.054 J
	Lead	0.00098 J	0.00096 J	--	--	--	--	--	--	--
	Lithium	0.011 J	0.013 J	--	--	--	--	--	--	--
	Mercury	<0.000078	--	--	--	--	--	--	--	--
	Molybdenum	<0.00069	<0.00069	7.5	7.1	7.1	--	3.2	--	0.018
	Comb. Radium 226/228	1.11	1.63	--	--	--	--	--	--	--
	Selenium	0.023	0.019 J	--	--	--	--	--	--	--
	Thallium	<0.00014	0.00016 J	--	--	--	--	--	--	--
GEOCHEM	Bicarb. Alkalinity	<5.0	--	156	150	--	8.2	--	36.7	--
	Carbon dioxide	100000	--	9650	9590	--	<127	--	31700	--
	Iron	0.22	--	3.0	2.6	--	0.039 J	--	54.9	--
	Magnesium	42.1	--	37.2	37.1	--	11.0	--	80.3	--
	Manganese	3.1	--	0.33	0.33	--	0.0084 J	--	4.0	--
	Potassium	10.2	--	5.0	4.9	--	29.0	--	13.0	--
	Sodium	11.9	--	3.5	3.5	--	13.4	--	24.6	--
	Sulfide	<0.050	--	<0.050	<0.050	--	<0.050	--	<0.050	--

Notes:

-- = Parameter was not analyzed

TDS = Total dissolved solids

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

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

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

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

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

Table 4

Proposed ACM Supplementary Data Analyses and Collection Tasks for Second Semiannual Period 2021

Plant Hammond AP-2, Floyd County, Georgia

Data Collection Event	Applicable CMs [(1)]	Applicability/Rationale	Field Component	Parameters of Interest (POI)	Analytical Lab Performing Analysis
Complete batch sorption and desorption studies using unconsolidated aquifer matrix samples and site-specific groundwater	2, 3	Evaluation of the sorption capacity of key constituents of interest and results for attenuation mechanism and rates in support of evaluating MNA with respect to USEPA's four-tier approach	Field collection of materials (i.e., aquifer solids and groundwater) already completed during current reporting period.	Site-specific constituents (i.e., Co) as well as pH and oxidation/reduction (redox) potential.	SiREM and subcontracted labs
Perform a conceptual-level feasibility study of applied corrective measures	1	Evaluate potential hydraulic capture zones using groundwater extraction systems (extraction well gallery); determine conceptual layouts to achieve hydraulic capture in target areas.	Not Applicable (Desktop Study)	Conceptually determine layouts for extraction well gallery to provide effective hydraulic containment while minimizing additional infrastructure or land requirements.	No lab data required; Geosyntec desktop analyses
Evalaute vertical delineation of Co and lead (Pb) SSLs	1, 2, 3	Evaluate vertical delineation of the Co and Pb SSLs to determine if additional delineation wells are necessary and feasible	Not Applicable (Desktop Study)	Site-specific constituents (Co, Pb)	No lab data required; Geosyntec desktop analyses

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

FIGURES

N

Note:
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-2
FLOYD COUNTY, GEORGIA

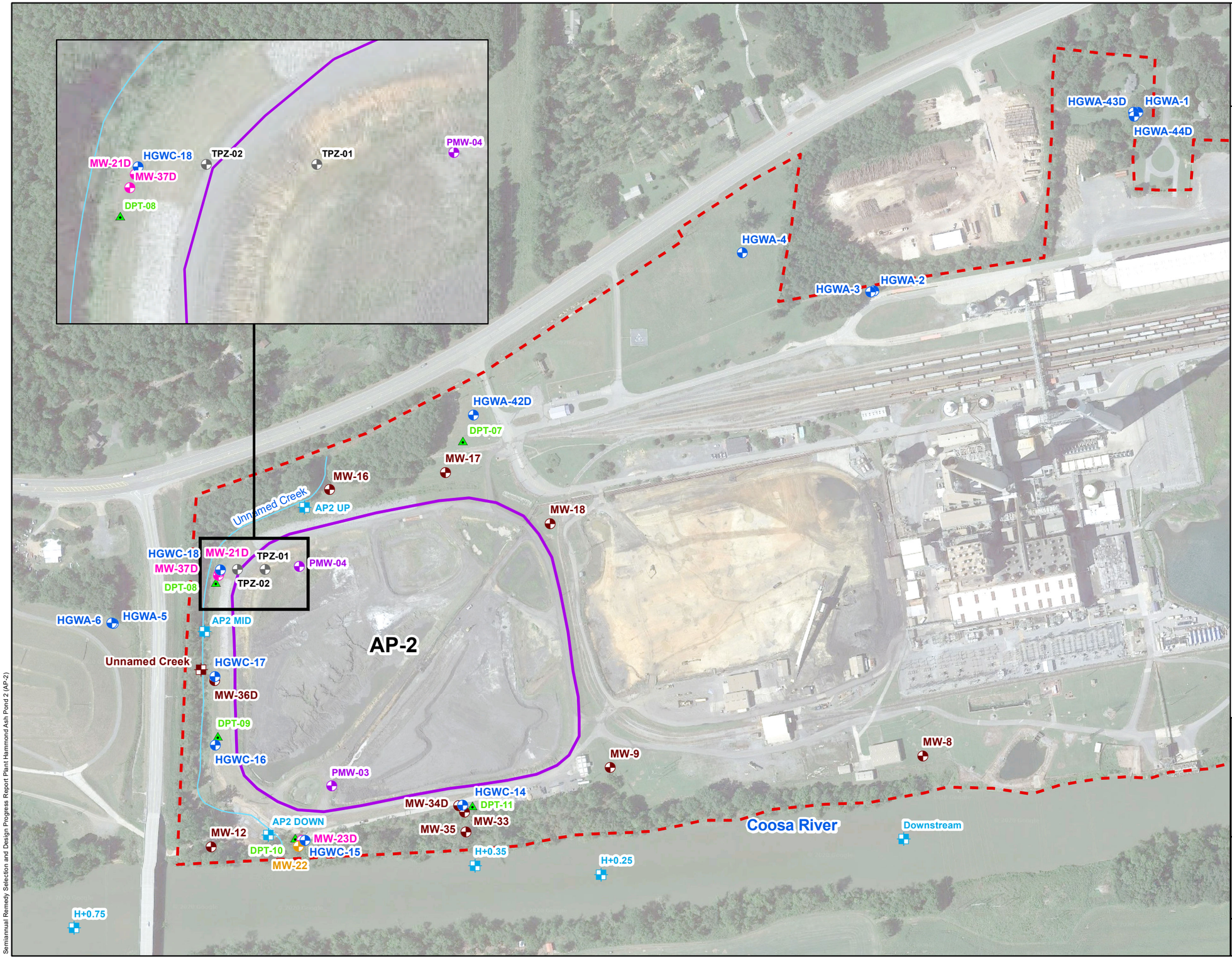
Prepared For: Georgia Power

Prepared By: Geosyntec consultants

KENNESAW, GA | AUGUST 2021

FIGURE 1

Semiannual Remedy Selection and Design Progress Report Revision 1 Plant Hammond Ash Pond 2 (AP-2)



Semiannual Remedy Selection and Design Progress Report Plant Hammond Ash Pond 2 (AP-2)

N

LEGEND

- Compliance Monitoring Well
- Horizontal Delineation Well
- Vertical Delineation Well
- Piezometer
- Surface Water Level Gauge Point
- DPT Borehole (unsurveyed location)
- Temporary Piezometer
- Pore Water Piezometer
- Surface Water Sample Point
- Plant Hammond Property Boundary
- Approximate AP-2 Boundary

Note:
1. Aerial photograph source: Google Earth Pro, August 2019.
2. Three upstream Coosa River surface water sampling locations, Upstram, H-0.5, and H-2, are not shown on the figure and located at (194929.29, 1548194.63), (1942375.24, 1548207.69), and 1943448.96,1543373.73, respectively.

0 165 330 660

SCALE IN FEET

MONITORING WELL NETWORK AND SAMPLING LOCATION MAP

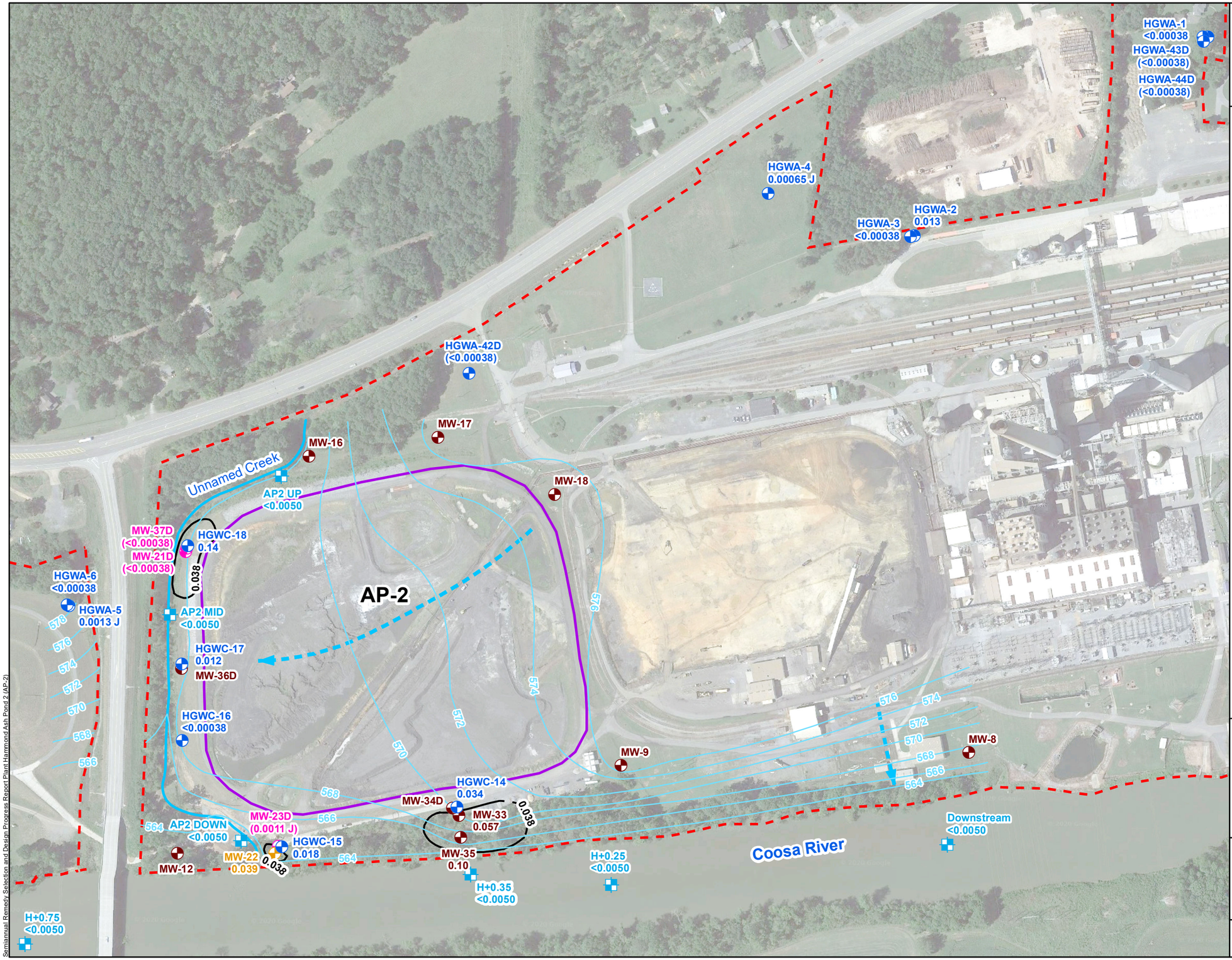
GEORGIA POWER COMPANY
PLANT HAMMOND AP-2
ROME, FLOYD COUNTY, GEORGIA

Prepared For: Georgia Power

Prepared By: Geosyntec consultants

KENNESAW, GA | AUGUST 2021

FIGURE 2



Seminannual Remedy Selection and Design Progress Report Plant Hammond Ash Pond 2 (AP-2)

N

LEGEND

- Compliance Monitoring Well
- Horizontal Delineation Well
- Vertical Delineation Well (Not Used for Contouring)
- Piezometer
- Surface Water Sample Point
- State GWPS Cobalt Iso-Concentration Contour (mg/L) (inferred where dashed)
- Groundwater Elevation Iso-Contour
- Approximate Groundwater Flow
- Approximate AP-2 Boundary
- Plant Hammond Property Boundary

Notes:

1. Concentration data from groundwater samples collected during the March 2021 semiannual monitoring event. Surface water data collected in March 2021. Data reported for wells screened deeper in the aquifer were not used to generate the iso-concentration contour (HGWA-42D, HGWA-43D, HGWA-44D, MW-21D, MW-23D, MW-37D). Concentrations are reported in mg/L.
2. Water level elevation recorded on March 10, 2021. Elevation provided in feet (ft) referenced to the North American Vertical Datum (NAVD) 88.
3. The state and federal Groundwater Protection Standard (GWPS) for cobalt is 0.038 mg/L.
4. Aerial photograph source: Google Earth Pro, August 2019.

0 150 300 600 Feet

SCALE IN FEET

ISO-CONCENTRATION MAP COBALT - MARCH 2021

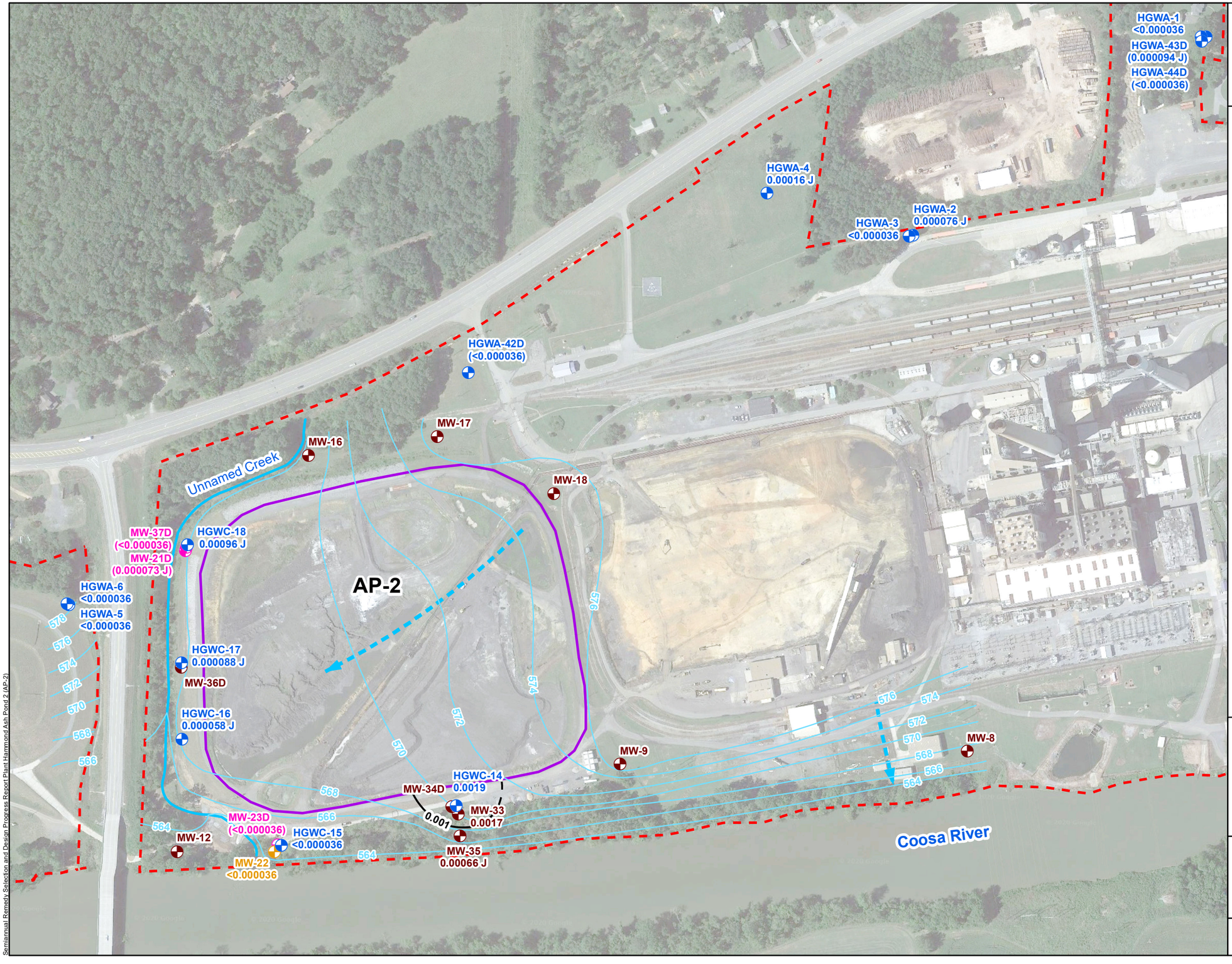
GEORGIA POWER COMPANY
PLANT HAMMOND AP-2
ROME, FLOYD COUNTY, GEORGIA

Prepared For: Georgia Power

Prepared By: Geosyntec consultants

KENNESAW, GA | AUGUST 2021

FIGURE 3



Semiannual Remedy Selection and Design Progress Report Plant Hammond Ash Pond 2 (AP-2)

N

LEGEND

- Compliance Monitoring Well
- Horizontal Delineation Well
- Vertical Delineation Well (Not Used for Contouring)
- Piezometer
- State GWPS Lead Iso-Concentration Contour (mg/L) (inferred where dashed)
- Groundwater Elevation Iso-Contour
- Approximate Groundwater Flow
- Approximate AP-2 Boundary
- Plant Hammond Property Boundary

Notes:
1. Concentration data from groundwater samples collected during the March 2021 semiannual monitoring event. Data reported for wells screened deeper in the aquifer were not used to generate the iso-concentration contour (HGWA-42D, HGWA-43D, HGWA-44D, MW-21D, MW-23D, MW-37D). Concentrations are reported in mg/L.
2. Water level elevation recorded on March 10, 2021. Elevation provided in feet (ft) referenced to the North American Vertical Datum (NAVD) 88.
3. The state Groundwater Protection Standard (GWPS) for lead is 0.001 mg/L; the federal GWPS is 0.015 mg/L.
4. Aerial photograph source: Google Earth Pro, August 2019.

0 150 300 600
Feet

SCALE IN FEET

ISO-CONCENTRATION MAP
LEAD - MARCH 2021

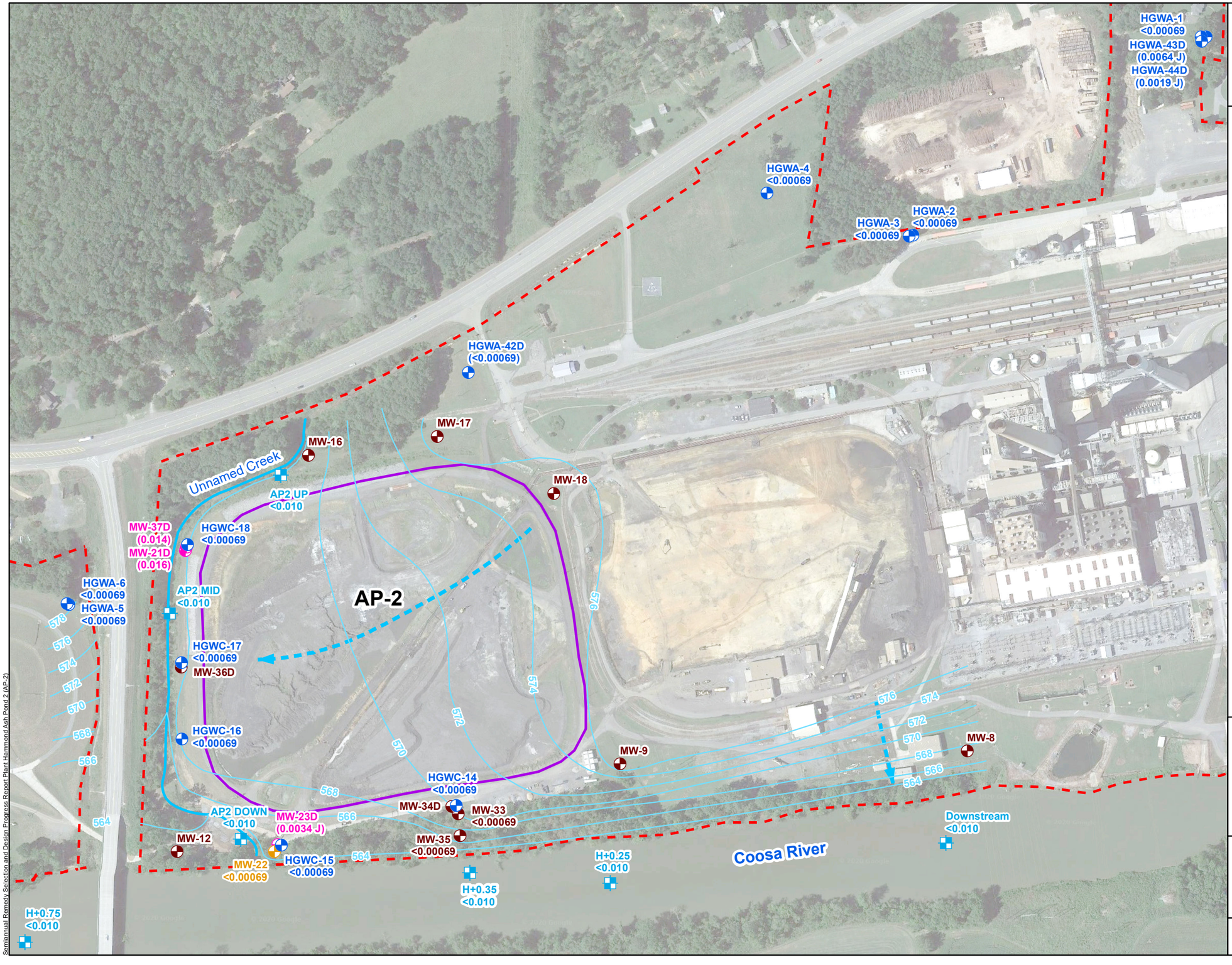
GEORGIA POWER COMPANY
PLANT HAMMOND AP-2
ROME, FLOYD COUNTY, GEORGIA

Prepared For: Georgia Power

Prepared By: Geosyntec consultants

KENNESAW, GA | AUGUST 2021

FIGURE 4



Semiannual Remedy Selection and Design Progress Report Plant Hammond Ash Pond 2 (AP-2)

N

LEGEND

- Compliance Monitoring Well
- Horizontal Delineation Well
- Vertical Delineation Well (Not Used for Contouring)
- Piezometer
- Surface Water Sample Point
- Groundwater Elevation Iso-Contour
- Approximate Groundwater Flow
- Approximate AP-2 Boundary
- Plant Hammond Property Boundary

Notes:

1. Concentration data from groundwater samples collected during the March 2021 semiannual monitoring event. Surface water data collected in March 2021. Data reported for wells screened deeper in the aquifer were not used to generate the iso-concentration contour (HGWA-42D, HGWA-43D, HGWA-44D, MW-21D, MW-23D, MW-37D). Concentrations are reported in mg/L.
2. Water level elevation recorded on March 10, 2021. Elevation provided in feet (ft) referenced to the North American Vertical Datum (NAVD) 88.
3. All molybdenum concentrations reported for the compliance monitoring wells are less than the state Groundwater Protection Standard (GWPS) of 0.010 mg/L, therefore no contours are depicted. A statistically significant level (SSL) of molybdenum above the state GWPS is reported for vertical delineation well MW-21D.
4. Aerial photograph source: Google Earth Pro, August 2019.

0 150 300 600
Feet

SCALE IN FEET

ISO-CONCENTRATION MAP MOLYBDENUM - MARCH 2021

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

Prepared For: Georgia Power

Prepared By: Geosyntec consultants

KENNESAW, GA | AUGUST 2021

FIGURE 5

APPENDIX A

DPT Boring Logs

Geosyntec consultants

BORING LOG

BORING NO.: DPT-02 Front Gate PROJECT NO.: GWE681 PAGE 1 OF 1

SITE: Hammond AP-2 DATE: 2/1/2021

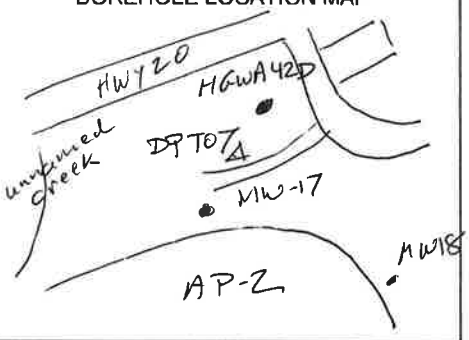
TOOLS AND METHOD: DPT BIT DIA: _____

TOTAL DEPTH: 20' GROUNDWATER DEPTH: _____

DRILLING COMPANY: Cascade RIG: Geoprobe

DRILLERS: _____ LOGGERS: Chad Russo

BOREHOLE LOCATION MAP



LITHOLOGY LOG	GRAPHIC LOG	SAMPLE ID AND DEPTH	SPT BLOW COUNT	DRILLING LOG
0'-10' No Recovery				
10'-12.5' course sand w/ gravel reddish yellow				
15'-16' CLAY reddish yellow				
16'-20' silt very dark brown				
end of hole refusal				

Geosyntec consultants

BORING LOG

BORING NO.: DPT-08 PROJECT NO.: GW6581 PAGE 1 OF 1

SITE: Plant Hammond DATE: 1/26/21

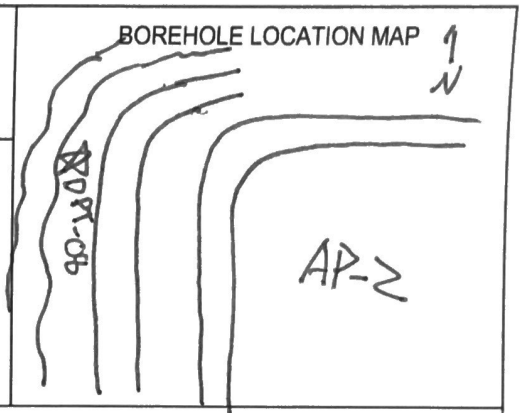
TOOLS AND METHOD: DPT BIT DIA: 1"

TOTAL DEPTH: 20' GROUNDWATER DEPTH: —

DRILLING COMPANY: Cascade RIG: Geoprobe

DRILLERS: Casey LOGGERS: Thomas Kessler

BOREHOLE LOCATION MAP



LITHOLOGY LOG	DEPTH (ft)	GRAPHIC LOG	SAMPLE ID AND DEPTH	DRILLING LOG
10-20				
0-5 Silty Clay, Brownish Yellow (10YR 6/8) moist, medium plasticity, well graded sands				Air Vac material, no sample
5-10 SAA	5			
10-15 ~~Silty Sand~~ Silty, Sandy Clay, Brownish Yellow (10YR 6/8) moist, well graded sands and gravel, Red mottling throughout	10			Refusal at 12', kick out and push again. Samples- 10-20' DPT-08A- Bag ~~1510-1515~~ 1500 DPT-08B- Conner 1510 DPT-08C- Conner 1515 - Drillers used Portland cement to grout Bore holes
15-20 15-16 - SAA 16-20 - Silty Clay, Brownish Yellow (10YR 6/8) moist, firm, medium plasticity 19-20 color change to dark gray	15			
EOB	20			

Geosyntec consultants

BORING LOG

BORING NO.: DPT-09 PROJECT NO.: GW6581 PAGE 1 OF 1

SITE: Plant Hammond DATE: 1/26/21

TOOLS AND METHOD: DPT BIT DIA: 1"

TOTAL DEPTH: 30' GROUNDWATER DEPTH: —

DRILLING COMPANY: Cascade RIG: Geoprobe

DRILLERS: Casey LOGGERS: Thomas Kessler

BOREHOLE LOCATION MAP

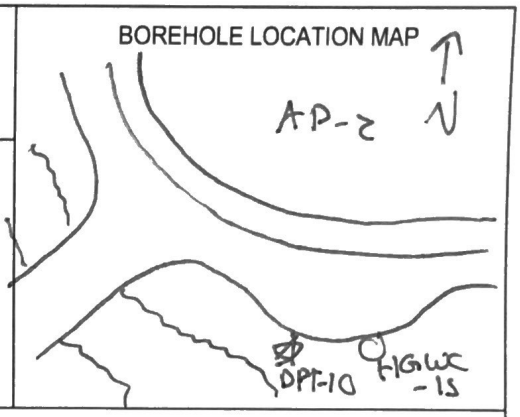
AP-2

LITHOLOGY LOG	DEPTH (ft)	GRAPHIC LOG	SAMPLE ID AND DEPTH	DRILLING LOG
20-30' 0-5 Clay, Stony Brown (7.5YR 4/6) moist, low plasticity, trace sands				Air Vac material, No Sample
5-10 SAA	5			
10-15 Clay, Yellow (10YR 8/8), moist, low plasticity, trace sands	10			Very little resistance
15-20 SAA, color change to Brown (10YR 5/3)	15			
20-25 20-24 - SAA 24-25 - Sandy Clay, Brown (10YR 5/3) med.-fine grain sands.	20			Samples - 20-30 DPT-09A - Bag 1650 DPT-09B - Conner 1716 DPT-09C - Conner 1730
25-30 25-26 - SAA 26-27 - SAA, grayish Brown (10YR 4/2) 27-29 - Sandy Clay, grayish Brown, fine to med grain with gravel 29-30 - PWR, light Brownish gray (2.5Y 6/2), moist, relic rock structures	25			
EOB	30			

Geosyntec consultants

BORING LOG

BOREHOLE LOCATION MAP



BORING NO.: DPT-10 PROJECT NO.: GWC581 PAGE 1 OF 1

SITE: Plant Hammond DATE: 11/27/21

TOOLS AND METHOD: DPT BIT DIA: 1"

TOTAL DEPTH: 35' GROUNDWATER DEPTH: –

DRILLING COMPANY: Cascade RIG: Geoprobe

DRILLERS: Casey LOGGERS: Thomas Hessler

LITHOLOGY LOG (25-35)	DEPTH (ft)	GRAPHIC LOG	SAMPLE ID AND DEPTH	DRILLING LOG
0-5 Silty Clay, Reddish Brown (5YR 5/3) moist, loose, medium plasticity, black sands throughout.	5			Air Vac material, No Sample
5-10 SAA	10			
10-15 Silty Clay, Strong brown (7.5YR 5/6) moist, ~~firm~~ Hard to firm, medium plasticity, Iron staining	15			
15-20 SAA	20			
20-25 SAA, soft	25			
25-30 SAA, Soft, Iron staining throughout, white and black mottling throughout	30			Samples 25-35' DPT-10A (Bags) 0857 DPT-10B (connex) 0928 DPT-10C (connex) 0932
30-35 Clay, Yellowish Brown (10YR 5/4) to gray (10YR 6/1) all other properties, SAA	35			

EOB

Geosyntec consultants

BORING LOG

BORING NO.: DPT-11 PROJECT NO.: GW0581 PAGE 1 OF 1

SITE: Plant Hammond DATE: 11/23/21

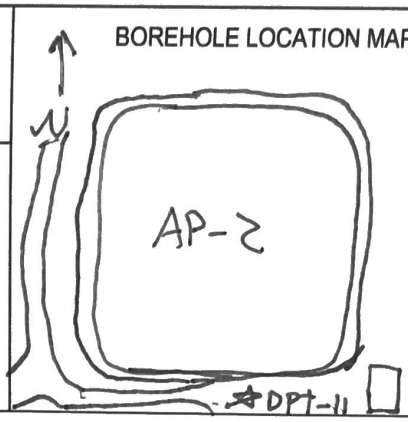
TOOLS AND METHOD: DPT BIT DIA: 1"

TOTAL DEPTH: 40' GROUNDWATER DEPTH: -

DRILLING COMPANY: Cascade RIG: Geoprobe

DRILLERS: Cassey LOGGERS: Thomas Kessler

BOREHOLE LOCATION MAP



LITHOLOGY LOG	DEPTH (ft)	GRAPHIC LOG	SAMPLE ID AND DEPTH	DRILLING LOG
30-40 0-5 Silty, Sandy Clay, Dark Brown (7.5YR4/2), moist to wet, Firm, low plasticity, well graded gravel throughout				Air Vac material, no sample
5-10 SAA	5			
10-15 Silty Clay, Dark Brown (7.5YR4/2) moist, Firm, medium plasticity, well graded gravel throughout	10			
15-20 Silty Clay, Dark Brown (7.5YR4/2) moist, Firm, medium plasticity, trace sands, large gravel in first 5 feet	15			
20-25 Silty Clay, Strong Brown (7.5YR4/6), moist, Hard to Firm, trace sands, gray mottling/staining throughout	20			
25-30 SAA, Rare gravel throughout	25			
30-35 Silty Clay, Brownish Yellow (10YR6/6) moist, firm, medium plasticity, trace sands, red mottling	30			Samples - 30-40' DPT-11A (Bags) 1122 DPT-11B (connex) 1201 DPT-11C (connex) 1231
35-40 35-37' - SAA, with gravel 37-38 - Clay, Yellow (10YR8/8), moist, firm 38-40 - SAA, Strong Brown (7.5YR5/6)	35			
	40			

EOB

APPENDIX B

Piezometer Abandonment Summary Memorandum

Geosyntec consultants

1255 Roberts Boulevard, Suite 200
Kennesaw, Georgia 30144
PH 678.202.9500
FAX 678.202.9501
www.geosyntec.com

DATE: July 30, 2021

TO: Kristen Jurinko, P.G., Southern Company Services, Inc.
Lauren Petty, P.G., Georgia Power Company
Ben Hodges, Georgia Power Company

FROM: Christine Hug, P.G., Geosyntec Consultants
Whitney Law, P.E., Geosyntec Consultants

SUBJECT: **Piezometer Abandonment Summary Memorandum**
Plant Hammond Ash Pond 2
Georgia Power Company

INTRODUCTION

On behalf Georgia Power Company (Georgia Power), Geosyntec Consultants (Geosyntec) has prepared this *Piezometer Abandonment Summary Memorandum* for the Georgia Environmental Protection Division (GA EPD) to summarize well abandonment activities at Plant Hammond Ash Pond 2 (AP-2) conducted between May 18 and May 19, 2021. The piezometers were abandoned in support of pond closure activities initiated in 2021, and completed in general accordance with the *Georgia Water Well Standards Act* (OCGA § 12-5-120 through 138) and the U.S. Environmental Protection Agency (USEPA) Science and Ecosystem Support Division guidance document *Design and Installation of Monitoring Wells* (SESDGUID-101-R2).

Abandonment activities were performed by Civil Field Services (CFS) of Birmingham, Alabama. In accordance with the Georgia Water Well Standards Act, CFS has a bond on file with the State of Georgia. A copy of the bond, which was valid at the time of drilling, is included in **Attachment A**.

WELL ABANDONMENT

A total of four piezometers (PMW-03, PMW-04, TPZ-01 and TPZ-02) were abandoned at AP-2 by CFS during the reporting period. The work was completed under the direction and supervision of a Geosyntec geologist licensed in the State of Georgia.

The locations of the abandoned piezometers are presented on **Figure 1**. **Table 1** presents piezometer construction and abandonment details. All piezometers were constructed of 2-inch

diameter polyvinyl chloride (PVC) well screen and riser installed in a 6-inch diameter borehole. Three wells were located and screened within the CCR material of AP-2 (PMW-03, PMW-04, and TPZ-01), one well was located on the AP-2 dike road (TPZ-02) and screened in shale bedrock. The water level and total well depth were measured and recorded to calculate the estimated volumes of grout needed before initiating abandonment procedures for a given well.

PelPlug time-release-coated 3/8-inch bentonite pellets were placed within the 2-inch PVC casing at TPZ-02 (located on the dike road) by gravity-pouring. The bentonite pellets were added to the well casing to approximately 2 feet above the top of screen to prevent bentonite grout from entering the water bearing zone of nearby wells. A tremie pipe was used to probe the PVC to ensure that no bridging occurred.

Following the manufacture's specified hydration period for the bentonite pellets in TPZ-02, each piezometer was abandoned by pumping a sodium bentonite grout slurry (Aquaguard brand) through the end of a PVC tremie pipe placed at the bottom of the well, which was raised as the grout slurry level rose to the ground surface. Aquaguard is a mixture containing granular sodium bentonite blended with inorganic additives which creates a slurry containing 30 percent active solids with a density of 10.1 pounds per gallon when mixed with 14 gallons of water. The volume of grout material used at each well location was consistent with the anticipated (calculated) volume, indicating little to no grout loss or bridging.

Once the grout had cured for at least 24 hours, the piezometers were then over drilled to 5 feet below ground surface (ft bgs) and grouted to surface. During the over drilling the grouted PVC casing was drilled up and extracted as part of the auger drill cuttings. Drilling was performed with a CME 55 truck-mounted rig, using hollow-stem auger (HSA) techniques. No water was used during the over drilling part of the abandonments. Any settled grout levels were brought up to the ground surface after the grout had cured for at least 24 hours.

Piezometer abandonment forms for each piezometer are provided in **Attachment B**.

Geosyntec consultants

Sincerely,

Christine Hug, P.G.
Project Geologist

Whitney Law, P.E.
Project Manager

*****

ENCLOSURES

Table 1 – Summary Details of Abandoned Piezometers

Figure 1 – Abandoned Piezometer Locations May 2021

Attachment A – Bond for Drillers

Attachment B – Piezometer Abandonment Logs

Table 1
Summary Details of Abandoned Piezometers
Plant Hammond AP-2, Floyd County, Georgia

Well ID	Installation Date	Northing [1]	Easting [1]	Ground Surface Elevation (ft)	Top of Casing Elevation [2] (ft)	Screen Interval Length	Well Depth (ft BTOC)[3]	Depth to Water (ft BTOC)[3]	Abandonment Date[4]	Estimated PVC Grout Volume	Actual PVC Grout Volume	Estimated Open Hole Grout Volume	Actual Open Hole Grout Volume (gal)	Abandonment Method
PMW-03	12/13/2018	1548066.77	1937948.67	601.20	605.13	5	30.47	27.51	5/19/2021	4.35	5.00	12.80	15.00	A
PMW-04	12/11/2018	1548833.61	1937834.79	592.40	595.37	5	20.38	17.00	5/19/2021	2.85	3.00	12.80	15.00	
TPZ-01	1/26/2021	1548817.75	1937743.75	586.99	591.05	5	20.30	13.60	5/19/2021	2.66	3.00	12.80	15.00	
TPZ-02	2/3/2021	1548803.64	1937607.97	600.20	603.32	5	46.38	36.18	5/19/2021	6.27	6.00	12.80	15.00	B

Notes:
ft = feet.
ft BTOC = feet below top of casing.
gal = US liquid gallon.
HSA = Hollow Stem Auger.
OD = Outer diameter.
PVC = Polyvinyl chloride casing.
(1) Coordinates in North American Datum (NAD) 1983, State Plane, Georgia-West, feet.
(2) Elevations referenced to the North American Vertical Datum of 1988 (NAVD88).
(3) Total well depth measured prior to well abandonment.
(4) Well abandonment date indicates date of completion of well abandonment/surface grouting. PVC risers were grouted at least 24h prior to grouting open hole.

Abandonment Method:
A = Tremie grouted PVC riser pipe, overdrilled to 5 ft below ground surface using 8 inch OD HSA and grouted to surface.
B = Added bentonite chips to PVC riser pipe to above screened interval, tremie grouted PVC riser pipe, overdrilled to 5 ft below ground surface using 8 inch OD HSA and grouted to surface.

N

LEGEND

Abandoned Piezometer Location

Notes:
1. Piezometer locations shown on the map were abandoned between May 18 and May 19, 2021.
2. Aerial photograph source: Google Earth Pro, August 2019.

0 280 560

SCALE IN FEET

ABANDONED PIEZOMETER LOCATIONS MAY 2021

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

Prepared For: Georgia Power

Prepared By: Geosyntec consultants

KENNESAW, GA | JULY 2021

FIGURE 1

ATTACHMENT A

Bond for Drillers

CONTINUATION CERTIFICATE

SAFECO Insurance Company of America , Surety upon

a certain Bond No. **4993104**

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

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

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

does hereby continue said bond in force for the further period

beginning on June 30, 2019
(MONTH-DAY-YEAR)

and ending on June 30, 2020
(MONTH-DAY-YEAR)

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

Description of bond Water Well Contractors & Drillers

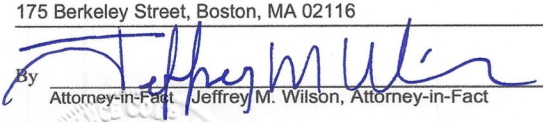
Premium: $100.00

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

Signed and dated on 11/10/2020
(MONTH-DAY-YEAR)

SAFECO Insurance Company of America

175 Berkeley Street, Boston, MA 02116

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

McGriff, Seibels & Williams, Inc.
Agent

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

(205) 252-9871
Telephone Number of Agent

S-0157/GE 8/08

XDP

Liberty Mutual SURETY

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

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

Certificate No: **8201221-016032**

POWER OF ATTORNEY

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

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

IN WITNESS WHEREOF, this Power of Attorney has been subscribed by an authorized officer or official of the Companies and the corporate seals of the Companies have been affixed thereto this 8th day of May, 2019.

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

By: _____
David M. Carey, Assistant Secretary

State of PENNSYLVANIA
County of MONTGOMERY ss

On this 8th day of May, 2019 before me personally appeared David M. Carey, who acknowledged himself to be the Assistant Secretary of American States Insurance Company, First National Insurance Company of America, General Insurance Company of America, and Safeco Insurance Company of America, and that he, as such, being authorized so to do, execute the foregoing instrument for the purposes therein contained by signing on behalf of the corporations by himself as a duly authorized officer.

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

COMMONWEALTH OF PENNSYLVANIA
Notarial Seal
Teresa Pastella, Notary Public
Upper Merion Twp., Montgomery County
My Commission Expires March 28, 2021
Member, Pennsylvania Association of Notaries

By: _____
Teresa Pastella, Notary Public

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

ARTICLE IV – OFFICERS: Section 12. Power of Attorney.
Any officer or other official of the Corporation authorized for that purpose in writing by the Chairman or the President, and subject to such limitation as the Chairman or the President may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Corporation to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorney-in-fact, subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Corporation by their signature and executed, such instruments shall be as binding as if signed by the President and attested to by the Secretary. Any power or authority granted to any representative or attorney-in-fact under the provisions of this article may be revoked at any time by the Board, the Chairman, the President or by the officer or officers granting such power or authority.

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

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

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

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed the seals of said Companies this 10th day of November, 2020.

By: _____
Renee C. Llewellyn, Assistant Secretary

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

To confirm the validity of this Power of Attorney call 1-610-832-8240 between 9:00 am and 4:30 pm EST on any business day.

CONTINUATION
CERTIFICATE

SAFECO Insurance Company of America , Surety upon

a certain Bond No. **4993104**

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

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

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

does hereby continue said bond in force for the further period

beginning on June 30, 2020
(MONTH-DAY-YEAR)

and ending on June 30, 2021
(MONTH-DAY-YEAR)

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

Description of bond Water Well Contractors & Drillers

Premium: $100.00

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

Signed and dated on 11/10/2020
(MONTH-DAY-YEAR)

SAFECO Insurance Company of America

175 Berkeley Street, Boston, MA 02116

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

McGriff, Seibels & Williams, Inc.
Agent

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

(205) 252-9871
Telephone Number of Agent

S-0157/GE 8/08

XDP

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

Liberty Mutual SURETY

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

Certificate No: **8201221-016032**

POWER OF ATTORNEY

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

IN WITNESS WHEREOF, this Power of Attorney has been subscribed by an authorized officer or official of the Companies and the corporate seals of the Companies have been affixed thereto this 8th day of May, 2019.

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

By: _____
David M. Carey, Assistant Secretary

State of PENNSYLVANIA
County of MONTGOMERY ss

On this 8th day of May, 2019 before me personally appeared David M. Carey, who acknowledged himself to be the Assistant Secretary of American States Insurance Company, First National Insurance Company of America, General Insurance Company of America, and Safeco Insurance Company of America, and that he, as such, being authorized so to do, execute the foregoing instrument for the purposes therein contained by signing on behalf of the corporations by himself as a duly authorized officer.

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

COMMONWEALTH OF PENNSYLVANIA
Notarial Seal
Teresa Pastella, Notary Public
Upper Merion Twp., Montgomery County
My Commission Expires March 28, 2021
Member, Pennsylvania Association of Notaries

By: _____
Teresa Pastella, Notary Public

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

ARTICLE IV – OFFICERS: Section 12. Power of Attorney.
Any officer or other official of the Corporation authorized for that purpose in writing by the Chairman or the President, and subject to such limitation as the Chairman or the President may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Corporation to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorney-in-fact, subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Corporation by their signature and executed, such instruments shall be as binding as if signed by the President and attested to by the Secretary. Any power or authority granted to any representative or attorney-in-fact under the provisions of this article may be revoked at any time by the Board, the Chairman, the President or by the officer or officers granting such power or authority.

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

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

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

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed the seals of said Companies this 10th day of November, 2020.

By: _____
Renee C. Llewellyn, Assistant Secretary

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

To confirm the validity of this Power of Attorney call 1-610-832-8240 between 9:00 am and 4:30 pm EST on any business day.

ATTACHMENT B

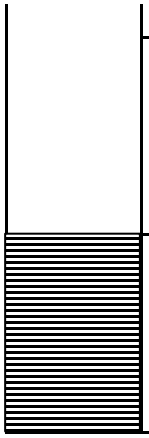
Piezometer Abandonment Logs

SOUTHERN COMPANY
Energy to Serve Your World℠

WELL ABANDONMENT DATA

PROJECT: Plant Hammond AP-2 Well Abandonment	**WELL NO.:** PMW-03
SITE: Plant Hammond	**COORDINATES:** N 1548066.77 E 1937948.67
FORM PREPARED BY: Thomas Kessler (Geosyntec Consultants) **ABANDONMENT BY:** Sean Denty (Civil Field Services)	**DATE ABANDONED:** 05/19/2021
METHOD OF FILLING: . Grout in place, over drill to 5 ft bgs and grout to surface.	**VOLUME USED:** Aquaguard bentonite grout: 5 gal PVC + 15 gal open hole
DEPTH SOUNDED PRIOR TO FILLING/GROUTING: 30.47 ft bTOC	**DEPTH TO WATER PRIOR TO ABANDONMENT:** 27.51ft bTOC

TOC Elevation (NAVD88): 605.13'



	DEPTH*:	ELEV.*:
GROUND SURFACE	0.0'	601.20
TOP OF SCREEN	21.0'	580.20
BOTTOM OF WELL	26.0'	575.20

Notes:

ft bTOC = Feet below top of PVC casing

ft bgs = Feet below ground surface

gal = US liquid gallon

OD = Outer diameter

** Well construction details from original boring log*

REMARKS:

5/18/21: Added Aquaguard bentonite grout into 2 inch PVC casing and filled to surface (5 gal).

5/19/21: Over drilled well to 5 ft bgs (OD = 8 inch) using hollow stem augers.

5/19/21: Grouted 8 inch open hole to surface using Aquaguard bentonite grout (15 gal).

Certified By: Christine Hug

CHRISTINE HUG
GEORGIA REGISTERED PROFESSIONAL GEOLOGIST
No. 2221

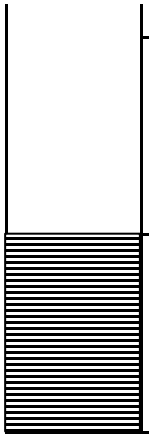
Date: 7/7/2021

SOUTHERN COMPANY
Energy to Serve Your World℠

WELL ABANDONMENT DATA

PROJECT: Plant Hammond AP-2 Well Abandonment	**WELL NO.:** PMW-04
SITE: Plant Hammond	**COORDINATES:** N 1548533.61 E 1937834.79
FORM PREPARED BY: Thomas Kessler (Geosyntec Consultants) **ABANDONMENT BY:** Sean Denty (Civil Field Services)	**DATE ABANDONED:** 05/18/2021
METHOD OF FILLING: . Grout in place, over drill to 5 ft bgs and grout to surface.	**VOLUME USED:** Aquaguard bentonite grout: 3 gal PVC + 15 gal open hole
DEPTH SOUNDED PRIOR TO FILLING/GROUTING: 20.38 ft bTOC	**DEPTH TO WATER PRIOR TO ABANDONMENT:** 17.0 ft bTOC

TOC Elevation (NAVD88): 595.37'



	DEPTH*:	ELEV.*:
GROUND SURFACE	0.0'	592.40
TOP OF SCREEN	11.00	581.40
BOTTOM OF WELL	16.30	576.10

Notes:

ft bTOC = Feet below top of PVC casing

ft bgs = Feet below ground surface

gal = US liquid gallon

OD = Outer diameter

** Well construction details from original boring log*

REMARKS:

5/18/21: Added Aquaguard bentonite grout into 2 inch PVC casing and filled to surface (3 gal).

5/19/21: Over drilled well to 5 ft bgs (OD = 8 inch) using hollow stem augers.

5/19/21: Grouted 8 inch open hole to surface using Aquaguard bentonite grout (15 gal).

Certified By: Christine Hug

CHRISTINE HUG
GEORGIA REGISTERED PROFESSIONAL GEOLOGIST
No. 2221

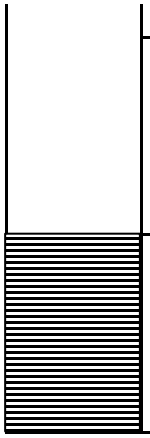
Date: 7/7/2021

SOUTHERN COMPANY
Energy to Serve Your World℠

WELL ABANDONMENT DATA

PROJECT: Plant Hammond AP-2 Well Abandonment	**WELL NO.:** TPZ-01
SITE: Plant Hammond	**COORDINATES:** N 1548817.75 E 1937743.75
FORM PREPARED BY: Thomas Kessler (Geosyntec Consultants) **ABANDONMENT BY:** Sean Denty (Civil Field Services)	**DATE ABANDONED:** 05/18/2021
METHOD OF FILLING: . Grout in place, over drill to 5 ft bgs and grout to surface.	**VOLUME USED:** Aquaguard bentonite grout: 3 gal PVC + 15 gal open hole
DEPTH SOUNDED PRIOR TO FILLING/GROUTING: 20.30 ft bTOC	**DEPTH TO WATER PRIOR TO ABANDONMENT:** 13.60 ft bTOC

TOC Elevation (NAVD88): 591.05'



	DEPTH*:	ELEV*.:
GROUND SURFACE	0.0'	586.99
TOP OF SCREEN	11.0'	575.99
BOTTOM OF WELL	16.0'	570.99

Notes:

ft bTOC = Feet below top of PVC casing

ft bgs = Feet below ground surface

gal = US liquid gallon

OD = Outer diameter

** Well construction details from original boring log*

REMARKS:

5/18/21: Added Aquaguard bentonite grout into 2 inch PVC casing and filled to surface (3 gal).

5/19/21: Over drilled well to 5 ft bgs (OD = 8 inch) using hollow stem augers.

5/19/21: Grouted 8 inch open hole to surface using Aquaguard bentonite grout (15 gal).

Certified By: Christine Hug

CHRISTINE HUG
GEORGIA REGISTERED PROFESSIONAL GEOLOGIST
No. 2221

Date: 7/7/2021

SOUTHERN COMPANY
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WELL ABANDONMENT DATA

PROJECT: Plant Hammond AP-2 Well Abandonment	**WELL NO.:** TPZ-02
SITE: Plant Hammond	**COORDINATES:** N 1548803.64 E 1937607.97
FORM PREPARED BY: Thomas Kessler (Geosyntec Consultants) **ABANDONMENT BY:** Sean Denty (Civil Field Services)	**DATE ABANDONED:** 05/19/2021
METHOD OF FILLING: . Grout in place, over drill to 5 ft bgs and grout to surface.	**VOLUME USED:** Aquaguard bentonite grout: 6 gal PVC + 15 gal open hole
DEPTH SOUNDED PRIOR TO FILLING/GROUTING: 46.38 ft bTOC	**DEPTH TO WATER PRIOR TO ABANDONMENT:** 36.18 ft bTOC

TOC Elevation (NAVD88): 603.32'

2 inch OD

	DEPTH*:	ELEV.*:
GROUND SURFACE	0.0'	600.20
TOP OF SCREEN	38.0'	562.20
BOTTOM OF WELL	43.0'	557.20

Notes:

ft bTOC = Feet below top of PVC casing

ft bgs = Feet below ground surface

gal = US liquid gallon

OD = Outer diameter

** Well construction details from original boring log*

REMARKS:

5/18/21: Added 3/8" bentonite chips into 2 inch PVC casing and filled to 36 ft bgs and hydrated for 24h.

5/19/21: Added Aquaguard bentonite grout into 2 inch PVC casing and filled to surface (6 gal).

5/19/21: Over drilled well to 5 ft bgs (OD = 8 inch) using hollow stem augers.

5/19/21: Grouted 8 inch open hole to surface using Aquaguard bentonite grout (15 gal).

Certified By: Christine Hug

CHRISTINE HUG
GEORGIA REGISTERED PROFESSIONAL GEOLOGIST
No. 2221

Date: 7/7/2021

APPENDIX C

Laboratory Analytical and Field Sampling Reports for Non-Routine Geochemical Evaluation

LABORATORY ANALYTICAL RESULTS

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

March 10, 2021

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

RE: Project: PLANT HAMMOND AP-2 NR
Pace Project No.: 92521359

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory between February 10, 2021 and February 15, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

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

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

Sincerely,

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

Enclosures

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

REPORT OF LABORATORY ANALYSIS

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

CERTIFICATIONS

Project: PLANT HAMMOND AP-2 NR
Pace Project No.: 92521359

Pace Analytical Gulf Coast
7979 Innovation Park Drive, Baton Rouge, LA 70820
Arkansas Certification #: 88-0655
DoD ELAP Certification #: L18-597
Florida Certification #: E87854
Illinois Certification #: 004585
Kansas Certification #: E-10354
Louisiana/LELAP Certification #: 01955
North Carolina Certification #: 618
North Dakota Certification #: R-195
Oklahoma Certification #: 2019-101
South Carolina Certification #: 73006001
Texas Certification #: T104704178-19-11
USDA Soil Permit # P330-19-00209
Virginia Certification #: 460215
Washington Certification #: C929

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

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

SAMPLE SUMMARY

Project: PLANT HAMMOND AP-2 NR
Pace Project No.: 92521359

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92521359001	**PMW-04**	Water	02/09/21 17:04	02/10/21 09:36
92521359002	**PMW-04/FILTERED**	Water	02/09/21 17:04	02/10/21 09:36
92521359003	**HGWC-18**	Water	02/10/21 12:23	02/11/21 09:19
92521359004	**DUP-3**	Water	02/10/21 00:00	02/11/21 09:19
92521359005	**TPZ-01**	Water	02/10/21 15:10	02/11/21 09:19
92521359006	**PMW-03**	Water	02/11/21 16:05	02/12/21 09:36
92521359007	**TPZ-02**	Water	02/12/21 12:04	02/15/21 09:45

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

SAMPLE ANALYTE COUNT

Project: PLANT HAMMOND AP-2 NR
Pace Project No.: 92521359

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92521359001	**PMW-04**	RSK-175	JAR	1	GCLA
		EPA 6010D	KH	6	PASI-GA
		EPA 6020B	CW1	3	PASI-GA
		SM 2450C-2011	AW1	1	PASI-GA
		SM 2320B-2011	ECH	3	PASI-A
		SM 4500-S2D-2011	JP1	1	PASI-A
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
92521359002	**PMW-04/FILTERED**	RSK-175	JAR	1	GCLA
		EPA 6010D	KH	6	PASI-GA
		EPA 6020B	CW1	3	PASI-GA
		SM 2450C-2011	AW1	1	PASI-GA
		SM 2320B-2011	ECH	3	PASI-A
		SM 4500-S2D-2011	JP1	1	PASI-A
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
92521359003	**HGWC-18**	RSK-175	JAR	1	GCLA
		EPA 6010D	DRB, KH	6	PASI-GA
		EPA 6020B	CW1	1	PASI-GA
		SM 2320B-2011	ECH	3	PASI-A
		SM 4500-S2D-2011	JP1	1	PASI-A
		EPA 300.0 Rev 2.1 1993	CDC	2	PASI-A
92521359004	**DUP-3**	RSK-175	JAR	1	GCLA
		EPA 6010D	DRB, KH	6	PASI-GA
		EPA 6020B	CW1	1	PASI-GA
		SM 2320B-2011	ECH	3	PASI-A
		SM 4500-S2D-2011	JP1	1	PASI-A
		EPA 300.0 Rev 2.1 1993	CDC	2	PASI-A
92521359005	**TPZ-01**	RSK-175	JAR	1	GCLA
		EPA 6010D	DRB, KH	6	PASI-GA
		EPA 6020B	CW1	1	PASI-GA
		SM 2320B-2011	ECH	3	PASI-A
		SM 4500-S2D-2011	JP1	1	PASI-A
		EPA 300.0 Rev 2.1 1993	CDC	2	PASI-A
92521359006	**PMW-03**	RSK-175	JAR	1	GCLA
		EPA 6010D	KH	6	PASI-GA
		EPA 6020B	CW1	3	PASI-GA
		SM 2320B-2011	ECH	3	PASI-A
		SM 2540C-2011	RED	1	PASI-A

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

SAMPLE ANALYTE COUNT

Project: PLANT HAMMOND AP-2 NR
Pace Project No.: 92521359

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		SM 4500-S2D-2011	JP1	1	PASI-A
		EPA 300.0 Rev 2.1 1993	JLH	3	PASI-A
92521359007	**TPZ-02**	RSK-175	JAR	1	GCLA
		EPA 6010D	DRB, KH	6	PASI-GA
		EPA 6020B	CW1	1	PASI-GA
		SM 2320B-2011	ECH	3	PASI-A
		SM 4500-S2D-2011	JP1	1	PASI-A
		EPA 300.0 Rev 2.1 1993	JLH	2	PASI-A

GCLA = Pace Analytical Gulf Coast
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: PLANT HAMMOND AP-2 NR
Pace Project No.: 92521359

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92521359001	**PMW-04**					
	Performed by	CUSTOMER			02/18/21 07:57	
	pH	7.13	Std. Units		02/18/21 07:57	
RSK-175	Carbon dioxide	9650	ug/L	900	02/14/21 14:02	
EPA 6010D	Iron	3.0	mg/L	0.040	02/17/21 06:20	
EPA 6010D	Manganese	0.33	mg/L	0.040	02/17/21 06:20	
EPA 6010D	Potassium	5.0	mg/L	0.20	02/17/21 06:20	M1
EPA 6010D	Sodium	3.5	mg/L	1.0	02/17/21 06:20	M1
EPA 6010D	Calcium	277	mg/L	1.0	02/17/21 06:20	M1
EPA 6010D	Magnesium	37.2	mg/L	0.050	02/17/21 06:20	M1
EPA 6020B	Boron	9.7	mg/L	0.040	02/15/21 15:09	
EPA 6020B	Cobalt	0.0017J	mg/L	0.0050	02/15/21 15:09	
EPA 6020B	Molybdenum	7.5	mg/L	0.10	02/16/21 13:32	
SM 2450C-2011	Total Dissolved Solids	1260	mg/L	20.0	02/11/21 12:09	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	156	mg/L	5.0	02/17/21 17:01	
SM 2320B-2011	Alkalinity, Total as CaCO3	156	mg/L	5.0	02/17/21 17:01	
EPA 300.0 Rev 2.1 1993	Chloride	15.7	mg/L	1.0	02/11/21 15:02	
EPA 300.0 Rev 2.1 1993	Fluoride	2.1	mg/L	0.10	02/11/21 15:02	
EPA 300.0 Rev 2.1 1993	Sulfate	489	mg/L	13.0	02/12/21 05:10	M6
92521359002	**PMW-04/FILTERED**					
	Performed by	CUSTOMER			02/18/21 07:57	
	pH	7.13	Std. Units		02/18/21 07:57	
RSK-175	Carbon dioxide	9590	ug/L	900	02/14/21 14:09	
EPA 6010D	Iron	2.6	mg/L	0.040	02/17/21 06:40	
EPA 6010D	Manganese	0.33	mg/L	0.040	02/17/21 06:40	
EPA 6010D	Potassium	4.9	mg/L	0.20	02/17/21 06:40	
EPA 6010D	Sodium	3.5	mg/L	1.0	02/17/21 06:40	
EPA 6010D	Calcium	280	mg/L	1.0	02/17/21 06:40	
EPA 6010D	Magnesium	37.1	mg/L	0.050	02/17/21 06:40	
EPA 6020B	Boron	9.6	mg/L	0.040	02/15/21 15:43	
EPA 6020B	Cobalt	0.0013J	mg/L	0.0050	02/15/21 15:43	
EPA 6020B	Molybdenum	7.1	mg/L	0.10	02/16/21 13:38	
SM 2450C-2011	Total Dissolved Solids	1220	mg/L	20.0	02/11/21 12:09	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	150	mg/L	5.0	02/17/21 17:13	
SM 2320B-2011	Alkalinity, Total as CaCO3	150	mg/L	5.0	02/17/21 17:13	
EPA 300.0 Rev 2.1 1993	Chloride	13.8	mg/L	1.0	02/11/21 16:24	
EPA 300.0 Rev 2.1 1993	Fluoride	1.9	mg/L	0.10	02/11/21 16:24	
EPA 300.0 Rev 2.1 1993	Sulfate	488	mg/L	13.0	02/12/21 05:57	
92521359003	**HGWC-18**					
	Performed by	CUSTOMER			02/18/21 07:57	
	pH	4.55	Std. Units		02/18/21 07:57	
RSK-175	Carbon dioxide	100000	ug/L	9000	02/14/21 14:38	
EPA 6010D	Iron	0.22	mg/L	0.040	02/17/21 06:45	
EPA 6010D	Manganese	3.1	mg/L	0.040	02/17/21 06:45	
EPA 6010D	Potassium	10.2	mg/L	0.20	02/17/21 06:45	

REPORT OF LABORATORY ANALYSIS

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

SUMMARY OF DETECTION

Project: PLANT HAMMOND AP-2 NR
Pace Project No.: 92521359

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92521359003	**HGWC-18**					
EPA 6010D	Sodium	11.9	mg/L	1.0	02/17/21 06:45	
EPA 6010D	Calcium	397	mg/L	10.0	02/17/21 21:48	
EPA 6010D	Magnesium	42.1	mg/L	0.50	02/17/21 21:48	
EPA 6020B	Cobalt	0.14	mg/L	0.0050	02/15/21 16:29	
EPA 300.0 Rev 2.1 1993	Chloride	93.4	mg/L	23.0	02/13/21 03:57	
EPA 300.0 Rev 2.1 1993	Sulfate	1040	mg/L	23.0	02/13/21 03:57	
92521359004	**DUP-3**					
RSK-175	Carbon dioxide	93200	ug/L	9000	02/14/21 14:47	
EPA 6010D	Iron	0.13	mg/L	0.040	02/17/21 06:50	
EPA 6010D	Manganese	3.1	mg/L	0.040	02/17/21 06:50	
EPA 6010D	Potassium	10.3	mg/L	0.20	02/17/21 06:50	
EPA 6010D	Sodium	11.8	mg/L	1.0	02/17/21 06:50	
EPA 6010D	Calcium	387	mg/L	10.0	02/17/21 21:53	
EPA 6010D	Magnesium	41.6	mg/L	0.50	02/17/21 21:53	
EPA 6020B	Cobalt	0.14	mg/L	0.0050	02/15/21 16:35	
EPA 300.0 Rev 2.1 1993	Chloride	92.9	mg/L	23.0	02/13/21 04:12	
EPA 300.0 Rev 2.1 1993	Sulfate	1040	mg/L	23.0	02/13/21 04:12	
92521359005	**TPZ-01**					
	Performed by	CUSTOMER			02/18/21 07:57	
	pH	9.38	Std. Units		02/18/21 07:57	
EPA 6010D	Iron	0.039J	mg/L	0.040	02/17/21 06:55	
EPA 6010D	Manganese	0.0084J	mg/L	0.040	02/17/21 06:55	
EPA 6010D	Potassium	29.0	mg/L	0.20	02/17/21 06:55	
EPA 6010D	Sodium	13.4	mg/L	1.0	02/17/21 06:55	
EPA 6010D	Calcium	773	mg/L	10.0	02/17/21 21:58	
EPA 6010D	Magnesium	11.0	mg/L	0.50	02/17/21 21:58	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	8.2	mg/L	5.0	02/18/21 16:02	
SM 2320B-2011	Alkalinity,Carbonate (CaCO3)	66.4	mg/L	5.0	02/18/21 16:02	
SM 2320B-2011	Alkalinity, Total as CaCO3	74.6	mg/L	5.0	02/18/21 16:02	
EPA 300.0 Rev 2.1 1993	Chloride	296	mg/L	30.0	02/13/21 04:26	
EPA 300.0 Rev 2.1 1993	Sulfate	1370	mg/L	30.0	02/13/21 04:26	
92521359006	**PMW-03**					
	Performed by	CUSTOMER			02/18/21 07:57	
	pH	5.73	Std. Units		02/18/21 07:57	
RSK-175	Carbon dioxide	15700	ug/L	900	02/26/21 16:19	
EPA 6010D	Iron	16.6	mg/L	0.040	02/17/21 07:25	
EPA 6010D	Manganese	1.6	mg/L	0.040	02/17/21 07:25	
EPA 6010D	Potassium	28.7	mg/L	0.20	02/17/21 07:25	
EPA 6010D	Sodium	14.9	mg/L	1.0	02/17/21 07:25	
EPA 6010D	Calcium	237	mg/L	1.0	02/17/21 07:25	
EPA 6010D	Magnesium	31.8	mg/L	0.050	02/17/21 07:25	
EPA 6020B	Boron	3.2	mg/L	0.040	03/03/21 12:32	
EPA 6020B	Cobalt	0.062	mg/L	0.0050	02/15/21 17:46	
EPA 6020B	Molybdenum	0.0031J	mg/L	0.010	02/15/21 17:46	

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SUMMARY OF DETECTION

Project: PLANT HAMMOND AP-2 NR
Pace Project No.: 92521359

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92521359006	**PMW-03**					
SM 2540C-2011	Total Dissolved Solids	1210	mg/L	50.0	02/17/21 19:55	
EPA 300.0 Rev 2.1 1993	Chloride	91.5	mg/L	1.0	02/16/21 00:31	
EPA 300.0 Rev 2.1 1993	Fluoride	0.37	mg/L	0.10	02/16/21 00:31	
EPA 300.0 Rev 2.1 1993	Sulfate	638	mg/L	14.0	02/16/21 14:16	
92521359007	**TPZ-02**					
	Performed by	CUSTOMER			02/18/21 07:57	
	pH	6.75	Std. Units		02/18/21 07:57	
RSK-175	Carbon dioxide	31700	ug/L	4500	03/05/21 16:54	
EPA 6010D	Iron	54.9	mg/L	0.040	02/17/21 07:29	
EPA 6010D	Manganese	4.0	mg/L	0.040	02/17/21 07:29	
EPA 6010D	Potassium	13.0	mg/L	0.20	02/17/21 07:29	
EPA 6010D	Sodium	24.6	mg/L	1.0	02/17/21 07:29	
EPA 6010D	Calcium	429	mg/L	10.0	02/17/21 22:03	
EPA 6010D	Magnesium	80.3	mg/L	0.50	02/17/21 22:03	
EPA 6020B	Cobalt	0.0091	mg/L	0.0050	02/18/21 21:06	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	36.7	mg/L	5.0	02/18/21 17:17	
SM 2320B-2011	Alkalinity, Total as CaCO3	36.7	mg/L	5.0	02/18/21 17:17	
EPA 300.0 Rev 2.1 1993	Chloride	115	mg/L	23.0	02/17/21 05:59	
EPA 300.0 Rev 2.1 1993	Sulfate	1330	mg/L	23.0	02/17/21 05:59	

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ANALYTICAL RESULTS

Project: PLANT HAMMOND AP-2 NR
Pace Project No.: 92521359

Sample: PMW-04 **Lab ID: 92521359001** Collected: 02/09/21 17:04 Received: 02/10/21 09:36 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Charlotte								
Performed by	**CUSTOMER**				1		02/18/21 07:57		
pH	**7.13**	Std. Units			1		02/18/21 07:57		
EPA RSK-175	Analytical Method: RSK-175 Pace Analytical Gulf Coast								
Carbon dioxide	**9650**	ug/L	900	127	1		02/14/21 14:02	124-38-9	
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Iron	**3.0**	mg/L	0.040	0.016	1	02/16/21 13:00	02/17/21 06:20	7439-89-6	
Manganese	**0.33**	mg/L	0.040	0.0017	1	02/16/21 13:00	02/17/21 06:20	7439-96-5	
Potassium	**5.0**	mg/L	0.20	0.056	1	02/16/21 13:00	02/17/21 06:20	7440-09-7	M1
Sodium	**3.5**	mg/L	1.0	0.26	1	02/16/21 13:00	02/17/21 06:20	7440-23-5	M1
Calcium	**277**	mg/L	1.0	0.070	1	02/16/21 13:00	02/17/21 06:20	7440-70-2	M1
Magnesium	**37.2**	mg/L	0.050	0.0076	1	02/16/21 13:00	02/17/21 06:20	7439-95-4	M1
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Boron	**9.7**	mg/L	0.040	0.0052	1	02/15/21 10:05	02/15/21 15:09	7440-42-8	
Cobalt	**0.0017J**	mg/L	0.0050	0.00038	1	02/15/21 10:05	02/15/21 15:09	7440-48-4	
Molybdenum	**7.5**	mg/L	0.10	0.0069	10	02/15/21 10:05	02/16/21 13:32	7439-98-7	
2540C Total Dissolved Solids	Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	**1260**	mg/L	20.0	20.0	1		02/11/21 12:09		
2320B Alkalinity	Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville								
Alkalinity,Bicarbonate (CaCO3)	**156**	mg/L	5.0	5.0	1		02/17/21 17:01		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		02/17/21 17:01		
Alkalinity, Total as CaCO3	**156**	mg/L	5.0	5.0	1		02/17/21 17:01		
4500S2D Sulfide Water	Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville								
Sulfide	ND	mg/L	0.10	0.050	1		02/11/21 05:43	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**15.7**	mg/L	1.0	0.60	1		02/11/21 15:02	16887-00-6	
Fluoride	**2.1**	mg/L	0.10	0.050	1		02/11/21 15:02	16984-48-8	
Sulfate	**489**	mg/L	13.0	6.5	13		02/12/21 05:10	14808-79-8	M6

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: PLANT HAMMOND AP-2 NR
Pace Project No.: 92521359

Sample: PMW-04/FILTERED **Lab ID: 92521359002** Collected: 02/09/21 17:04 Received: 02/10/21 09:36 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Charlotte								
Performed by	**CUSTOMER**				1		02/18/21 07:57		
pH	**7.13**	Std. Units			1		02/18/21 07:57		
EPA RSK-175	Analytical Method: RSK-175 Pace Analytical Gulf Coast								
Carbon dioxide	**9590**	ug/L	900	127	1		02/14/21 14:09	124-38-9	
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Iron	**2.6**	mg/L	0.040	0.016	1	02/16/21 13:00	02/17/21 06:40	7439-89-6	
Manganese	**0.33**	mg/L	0.040	0.0017	1	02/16/21 13:00	02/17/21 06:40	7439-96-5	
Potassium	**4.9**	mg/L	0.20	0.056	1	02/16/21 13:00	02/17/21 06:40	7440-09-7	
Sodium	**3.5**	mg/L	1.0	0.26	1	02/16/21 13:00	02/17/21 06:40	7440-23-5	
Calcium	**280**	mg/L	1.0	0.070	1	02/16/21 13:00	02/17/21 06:40	7440-70-2	
Magnesium	**37.1**	mg/L	0.050	0.0076	1	02/16/21 13:00	02/17/21 06:40	7439-95-4	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Boron	**9.6**	mg/L	0.040	0.0052	1	02/15/21 10:05	02/15/21 15:43	7440-42-8	
Cobalt	**0.0013J**	mg/L	0.0050	0.00038	1	02/15/21 10:05	02/15/21 15:43	7440-48-4	
Molybdenum	**7.1**	mg/L	0.10	0.0069	10	02/15/21 10:05	02/16/21 13:38	7439-98-7	
2540C Total Dissolved Solids	Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	**1220**	mg/L	20.0	20.0	1		02/11/21 12:09		
2320B Alkalinity	Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville								
Alkalinity,Bicarbonate (CaCO3)	**150**	mg/L	5.0	5.0	1		02/17/21 17:13		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		02/17/21 17:13		
Alkalinity, Total as CaCO3	**150**	mg/L	5.0	5.0	1		02/17/21 17:13		
4500S2D Sulfide Water	Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville								
Sulfide	ND	mg/L	0.10	0.050	1		02/11/21 05:43	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**13.8**	mg/L	1.0	0.60	1		02/11/21 16:24	16887-00-6	
Fluoride	**1.9**	mg/L	0.10	0.050	1		02/11/21 16:24	16984-48-8	
Sulfate	**488**	mg/L	13.0	6.5	13		02/12/21 05:57	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: PLANT HAMMOND AP-2 NR
Pace Project No.: 92521359

Sample: HGWC-18 **Lab ID: 92521359003** Collected: 02/10/21 12:23 Received: 02/11/21 09:19 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Charlotte								
Performed by	**CUSTOMER**				1		02/18/21 07:57		
pH	**4.55**	Std. Units			1		02/18/21 07:57		
EPA RSK-175	Analytical Method: RSK-175 Pace Analytical Gulf Coast								
Carbon dioxide	**100000**	ug/L	9000	1270	10		02/14/21 14:38	124-38-9	
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Iron	**0.22**	mg/L	0.040	0.016	1	02/16/21 13:00	02/17/21 06:45	7439-89-6	
Manganese	**3.1**	mg/L	0.040	0.0017	1	02/16/21 13:00	02/17/21 06:45	7439-96-5	
Potassium	**10.2**	mg/L	0.20	0.056	1	02/16/21 13:00	02/17/21 06:45	7440-09-7	
Sodium	**11.9**	mg/L	1.0	0.26	1	02/16/21 13:00	02/17/21 06:45	7440-23-5	
Calcium	**397**	mg/L	10.0	0.70	10	02/16/21 13:00	02/17/21 21:48	7440-70-2	
Magnesium	**42.1**	mg/L	0.50	0.076	10	02/16/21 13:00	02/17/21 21:48	7439-95-4	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Cobalt	**0.14**	mg/L	0.0050	0.00038	1	02/15/21 10:05	02/15/21 16:29	7440-48-4	
2320B Alkalinity	Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville								
Alkalinity,Bicarbonate (CaCO3)	ND	mg/L	5.0	5.0	1		02/18/21 15:52		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		02/18/21 15:52		
Alkalinity, Total as CaCO3	ND	mg/L	5.0	5.0	1		02/18/21 15:52		
4500S2D Sulfide Water	Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville								
Sulfide	ND	mg/L	0.10	0.050	1		02/16/21 04:55	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**93.4**	mg/L	23.0	13.8	23		02/13/21 03:57	16887-00-6	
Sulfate	**1040**	mg/L	23.0	11.5	23		02/13/21 03:57	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: PLANT HAMMOND AP-2 NR
Pace Project No.: 92521359

Sample: DUP-3 **Lab ID: 92521359004** Collected: 02/10/21 00:00 Received: 02/11/21 09:19 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
EPA RSK-175	Analytical Method: RSK-175 Pace Analytical Gulf Coast								
Carbon dioxide	**93200**	ug/L	9000	1270	10		02/14/21 14:47	124-38-9	
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Iron	**0.13**	mg/L	0.040	0.016	1	02/16/21 13:00	02/17/21 06:50	7439-89-6	
Manganese	**3.1**	mg/L	0.040	0.0017	1	02/16/21 13:00	02/17/21 06:50	7439-96-5	
Potassium	**10.3**	mg/L	0.20	0.056	1	02/16/21 13:00	02/17/21 06:50	7440-09-7	
Sodium	**11.8**	mg/L	1.0	0.26	1	02/16/21 13:00	02/17/21 06:50	7440-23-5	
Calcium	**387**	mg/L	10.0	0.70	10	02/16/21 13:00	02/17/21 21:53	7440-70-2	
Magnesium	**41.6**	mg/L	0.50	0.076	10	02/16/21 13:00	02/17/21 21:53	7439-95-4	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Cobalt	**0.14**	mg/L	0.0050	0.00038	1	02/15/21 10:05	02/15/21 16:35	7440-48-4	
2320B Alkalinity	Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville								
Alkalinity,Bicarbonate (CaCO3)	ND	mg/L	5.0	5.0	1		02/18/21 15:58		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		02/18/21 15:58		
Alkalinity, Total as CaCO3	ND	mg/L	5.0	5.0	1		02/18/21 15:58		
4500S2D Sulfide Water	Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville								
Sulfide	ND	mg/L	0.10	0.050	1		02/16/21 04:56	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**92.9**	mg/L	23.0	13.8	23		02/13/21 04:12	16887-00-6	
Sulfate	**1040**	mg/L	23.0	11.5	23		02/13/21 04:12	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: PLANT HAMMOND AP-2 NR
Pace Project No.: 92521359

Sample: TPZ-01 **Lab ID: 92521359005** Collected: 02/10/21 15:10 Received: 02/11/21 09:19 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Charlotte								
Performed by	**CUSTOMER**				1		02/18/21 07:57		
pH	**9.38**	Std. Units			1		02/18/21 07:57		
EPA RSK-175	Analytical Method: RSK-175 Pace Analytical Gulf Coast								
Carbon dioxide	ND	ug/L	900	127	1		02/14/21 15:06	124-38-9	
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Iron	**0.039J**	mg/L	0.040	0.016	1	02/16/21 13:00	02/17/21 06:55	7439-89-6	
Manganese	**0.0084J**	mg/L	0.040	0.0017	1	02/16/21 13:00	02/17/21 06:55	7439-96-5	
Potassium	**29.0**	mg/L	0.20	0.056	1	02/16/21 13:00	02/17/21 06:55	7440-09-7	
Sodium	**13.4**	mg/L	1.0	0.26	1	02/16/21 13:00	02/17/21 06:55	7440-23-5	
Calcium	**773**	mg/L	10.0	0.70	10	02/16/21 13:00	02/17/21 21:58	7440-70-2	
Magnesium	**11.0**	mg/L	0.50	0.076	10	02/16/21 13:00	02/17/21 21:58	7439-95-4	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Cobalt	ND	mg/L	0.0050	0.00038	1	02/15/21 10:05	02/15/21 17:40	7440-48-4	
2320B Alkalinity	Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville								
Alkalinity,Bicarbonate (CaCO3)	**8.2**	mg/L	5.0	5.0	1		02/18/21 16:02		
Alkalinity,Carbonate (CaCO3)	**66.4**	mg/L	5.0	5.0	1		02/18/21 16:02		
Alkalinity, Total as CaCO3	**74.6**	mg/L	5.0	5.0	1		02/18/21 16:02		
4500S2D Sulfide Water	Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville								
Sulfide	ND	mg/L	0.10	0.050	1		02/16/21 04:56	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**296**	mg/L	30.0	18.0	30		02/13/21 04:26	16887-00-6	
Sulfate	**1370**	mg/L	30.0	15.0	30		02/13/21 04:26	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: PLANT HAMMOND AP-2 NR
Pace Project No.: 92521359

Sample: PMW-03 **Lab ID: 92521359006** Collected: 02/11/21 16:05 Received: 02/12/21 09:36 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Charlotte								
Performed by	**CUSTOMER**				1		02/18/21 07:57		
pH	**5.73**	Std. Units			1		02/18/21 07:57		
EPA RSK-175	Analytical Method: RSK-175 Pace Analytical Gulf Coast								
Carbon dioxide	**15700**	ug/L	900	127	1		02/26/21 16:19	124-38-9	
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Iron	**16.6**	mg/L	0.040	0.016	1	02/16/21 13:00	02/17/21 07:25	7439-89-6	
Manganese	**1.6**	mg/L	0.040	0.0017	1	02/16/21 13:00	02/17/21 07:25	7439-96-5	
Potassium	**28.7**	mg/L	0.20	0.056	1	02/16/21 13:00	02/17/21 07:25	7440-09-7	
Sodium	**14.9**	mg/L	1.0	0.26	1	02/16/21 13:00	02/17/21 07:25	7440-23-5	
Calcium	**237**	mg/L	1.0	0.070	1	02/16/21 13:00	02/17/21 07:25	7440-70-2	
Magnesium	**31.8**	mg/L	0.050	0.0076	1	02/16/21 13:00	02/17/21 07:25	7439-95-4	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Boron	**3.2**	mg/L	0.040	0.0052	1	02/15/21 10:05	03/03/21 12:32	7440-42-8	
Cobalt	**0.062**	mg/L	0.0050	0.00038	1	02/15/21 10:05	02/15/21 17:46	7440-48-4	
Molybdenum	**0.0031J**	mg/L	0.010	0.00069	1	02/15/21 10:05	02/15/21 17:46	7439-98-7	
2320B Alkalinity	Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville								
Alkalinity,Bicarbonate (CaCO3)	ND	mg/L	5.0	5.0	1		02/18/21 16:15		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		02/18/21 16:15		
Alkalinity, Total as CaCO3	ND	mg/L	5.0	5.0	1		02/18/21 16:15		
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2011 Pace Analytical Services - Asheville								
Total Dissolved Solids	**1210**	mg/L	50.0	50.0	1		02/17/21 19:55		
4500S2D Sulfide Water	Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville								
Sulfide	ND	mg/L	0.10	0.050	1		02/18/21 02:47	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**91.5**	mg/L	1.0	0.60	1		02/16/21 00:31	16887-00-6	
Fluoride	**0.37**	mg/L	0.10	0.050	1		02/16/21 00:31	16984-48-8	
Sulfate	**638**	mg/L	14.0	7.0	14		02/16/21 14:16	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: PLANT HAMMOND AP-2 NR
Pace Project No.: 92521359

Sample: TPZ-02 **Lab ID: 92521359007** Collected: 02/12/21 12:04 Received: 02/15/21 09:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Charlotte								
Performed by	**CUSTOMER**				1		02/18/21 07:57		
pH	**6.75**	Std. Units			1		02/18/21 07:57		
EPA RSK-175	Analytical Method: RSK-175 Pace Analytical Gulf Coast								
Carbon dioxide	**31700**	ug/L	4500	635	5		03/05/21 16:54	124-38-9	
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Iron	**54.9**	mg/L	0.040	0.016	1	02/16/21 13:00	02/17/21 07:29	7439-89-6	
Manganese	**4.0**	mg/L	0.040	0.0017	1	02/16/21 13:00	02/17/21 07:29	7439-96-5	
Potassium	**13.0**	mg/L	0.20	0.056	1	02/16/21 13:00	02/17/21 07:29	7440-09-7	
Sodium	**24.6**	mg/L	1.0	0.26	1	02/16/21 13:00	02/17/21 07:29	7440-23-5	
Calcium	**429**	mg/L	10.0	0.70	10	02/16/21 13:00	02/17/21 22:03	7440-70-2	
Magnesium	**80.3**	mg/L	0.50	0.076	10	02/16/21 13:00	02/17/21 22:03	7439-95-4	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Cobalt	**0.0091**	mg/L	0.0050	0.00038	1	02/17/21 09:52	02/18/21 21:06	7440-48-4	
2320B Alkalinity	Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville								
Alkalinity,Bicarbonate (CaCO3)	**36.7**	mg/L	5.0	5.0	1		02/18/21 17:17		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		02/18/21 17:17		
Alkalinity, Total as CaCO3	**36.7**	mg/L	5.0	5.0	1		02/18/21 17:17		
4500S2D Sulfide Water	Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville								
Sulfide	ND	mg/L	0.10	0.050	1		02/18/21 02:49	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**115**	mg/L	23.0	13.8	23		02/17/21 05:59	16887-00-6	
Sulfate	**1330**	mg/L	23.0	11.5	23		02/17/21 05:59	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: PLANT HAMMOND AP-2 NR
Pace Project No.: 92521359

QC Batch: 704011 — Analysis Method: RSK-175
QC Batch Method: RSK-175 — Analysis Description: EPA RSK 175 CO2
Laboratory: Pace Analytical Gulf Coast
Associated Lab Samples: 92521359001, 92521359002, 92521359003, 92521359004, 92521359005

METHOD BLANK: 2145390 — Matrix: Water
Associated Lab Samples: 92521359001, 92521359002, 92521359003, 92521359004, 92521359005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Carbon dioxide	ug/L	ND	900	127	02/14/21 12:06	

LABORATORY CONTROL SAMPLE & LCSD: 2145391 2145392

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Carbon dioxide	ug/L	8700	8180	8740	94	100	38-147	7	40	

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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: PLANT HAMMOND AP-2 NR
Pace Project No.: 92521359

QC Batch: 704752
QC Batch Method: RSK-175
Analysis Method: RSK-175
Analysis Description: EPA RSK 175 CO2
Laboratory: Pace Analytical Gulf Coast
Associated Lab Samples: 92521359006

METHOD BLANK: 2149556 Matrix: Water
Associated Lab Samples: 92521359006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Carbon dioxide	ug/L	ND	900	127	02/26/21 15:56	

LABORATORY CONTROL SAMPLE & LCSD: 2149557 2149558

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Carbon dioxide	ug/L	8700	6200	6890	71	79	38-147	11	40	

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REPORT OF LABORATORY ANALYSIS

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(770)734-4200

QUALITY CONTROL DATA

Project: PLANT HAMMOND AP-2 NR
Pace Project No.: 92521359

QC Batch: 705314
QC Batch Method: RSK-175
Analysis Method: RSK-175
Analysis Description: EPA RSK 175 CO2
Laboratory: Pace Analytical Gulf Coast
Associated Lab Samples: 92521359007

METHOD BLANK: 2152532 Matrix: Water
Associated Lab Samples: 92521359007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Carbon dioxide	ug/L	ND	900	127	03/05/21 16:21	

LABORATORY CONTROL SAMPLE & LCSD: 2152533 2152534

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Carbon dioxide	ug/L	8700	7700	7090	89	81	38-147	8	40	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: PLANT HAMMOND AP-2 NR
Pace Project No.: 92521359

QC Batch: 600338
QC Batch Method: EPA 3010A
Analysis Method: EPA 6010D
Analysis Description: 6010D ATL
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92521359001, 92521359002, 92521359003, 92521359004, 92521359005, 92521359006, 92521359007

METHOD BLANK: 3164531 Matrix: Water
Associated Lab Samples: 92521359001, 92521359002, 92521359003, 92521359004, 92521359005, 92521359006, 92521359007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	0.070	02/17/21 06:00	
Iron	mg/L	ND	0.040	0.016	02/17/21 06:00	
Magnesium	mg/L	ND	0.050	0.0076	02/17/21 06:00	
Manganese	mg/L	ND	0.040	0.0017	02/17/21 06:00	
Potassium	mg/L	ND	0.20	0.056	02/17/21 06:00	
Sodium	mg/L	ND	1.0	0.26	02/17/21 06:00	

LABORATORY CONTROL SAMPLE: 3164532

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	mg/L	1	1.0	103	80-120	
Iron	mg/L	1	0.98	98	80-120	
Magnesium	mg/L	1	0.98	98	80-120	
Manganese	mg/L	1	0.99	99	80-120	
Potassium	mg/L	1	0.97	97	80-120	
Sodium	mg/L	1	1.0	102	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3164533 3164534

Parameter	Units	92521359001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Calcium	mg/L	277	1	1	286	289	858	1140	75-125	1	20	M1
Iron	mg/L	3.0	1	1	4.1	4.1	114	115	75-125	0	20	
Magnesium	mg/L	37.2	1	1	38.3	39.7	108	248	75-125	4	20	M1
Manganese	mg/L	0.33	1	1	1.3	1.3	100	101	75-125	1	20	
Potassium	mg/L	5.0	1	1	6.1	6.3	112	126	75-125	2	20	M1
Sodium	mg/L	3.5	1	1	4.7	4.8	115	126	75-125	2	20	M1

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REPORT OF LABORATORY ANALYSIS

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Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: PLANT HAMMOND AP-2 NR
Pace Project No.: 92521359

QC Batch: 599971
QC Batch Method: EPA 3005A
Analysis Method: EPA 6020B
Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92521359001, 92521359002, 92521359003, 92521359004, 92521359005, 92521359006

METHOD BLANK: 3162772 Matrix: Water
Associated Lab Samples: 92521359001, 92521359002, 92521359003, 92521359004, 92521359005, 92521359006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Boron	mg/L	ND	0.040	0.0052	02/15/21 14:17	
Cobalt	mg/L	ND	0.0050	0.00038	02/15/21 14:17	
Molybdenum	mg/L	ND	0.010	0.00069	02/15/21 14:17	

LABORATORY CONTROL SAMPLE: 3162773

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron	mg/L	1	1.0	103	80-120	
Cobalt	mg/L	0.1	0.10	101	80-120	
Molybdenum	mg/L	0.1	0.10	100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3162774 3162775

Parameter	Units	92520706023 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	1.0	102	102	75-125	0	20	
Cobalt	mg/L	ND	0.1	0.1	0.10	0.10	103	104	75-125	0	20	
Molybdenum	mg/L	ND	0.1	0.1	0.10	0.10	105	101	75-125	4	20	

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REPORT OF LABORATORY ANALYSIS

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Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: PLANT HAMMOND AP-2 NR
Pace Project No.: 92521359

QC Batch: 600602
QC Batch Method: EPA 3005A
Analysis Method: EPA 6020B
Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92521359007

METHOD BLANK: 3165498 Matrix: Water
Associated Lab Samples: 92521359007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Cobalt	mg/L	ND	0.0050	0.00038	02/18/21 19:29	

LABORATORY CONTROL SAMPLE: 3165499

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Cobalt	mg/L	0.1	0.093	93	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3165500 3165501

Parameter	Units	92521574001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Cobalt	mg/L	ND	0.1	0.1	0.095	0.097	95	97	75-125	2	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: PLANT HAMMOND AP-2 NR
Pace Project No.: 92521359

QC Batch: 599289
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: 92521359001, 92521359002

METHOD BLANK: 3159302 Matrix: Water
Associated Lab Samples: 92521359001, 92521359002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	02/11/21 12:08	

LABORATORY CONTROL SAMPLE: 3159303

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	404	101	84-108	

SAMPLE DUPLICATE: 3159917

Parameter	Units	92521556001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	331	337	2	10	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: PLANT HAMMOND AP-2 NR
Pace Project No.: 92521359

QC Batch: 600596
QC Batch Method: SM 2320B-2011
Analysis Method: SM 2320B-2011
Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92521359001, 92521359002

METHOD BLANK: 3165442 Matrix: Water
Associated Lab Samples: 92521359001, 92521359002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	ND	5.0	5.0	02/17/21 12:17	
Alkalinity,Bicarbonate (CaCO3)	mg/L	ND	5.0	5.0	02/17/21 12:17	
Alkalinity,Carbonate (CaCO3)	mg/L	ND	5.0	5.0	02/17/21 12:17	

LABORATORY CONTROL SAMPLE: 3165443

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	50	50.7	101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3165444 3165445

Parameter	Units	92520226007 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	48.9	49.2	98	98	80-120	1	25	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3165446 3165447

Parameter	Units	92520229010 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	143	50	50	194	200	103	114	80-120	3	25	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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QUALITY CONTROL DATA

Project: PLANT HAMMOND AP-2 NR
Pace Project No.: 92521359

QC Batch: 600890 | Analysis Method: SM 2320B-2011
QC Batch Method: SM 2320B-2011 | Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92521359003, 92521359004, 92521359005, 92521359006, 92521359007

METHOD BLANK: 3166949 Matrix: Water
Associated Lab Samples: 92521359003, 92521359004, 92521359005, 92521359006, 92521359007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	ND	5.0	5.0	02/18/21 13:37	
Alkalinity,Bicarbonate (CaCO3)	mg/L	ND	5.0	5.0	02/18/21 13:37	
Alkalinity,Carbonate (CaCO3)	mg/L	ND	5.0	5.0	02/18/21 13:37	

LABORATORY CONTROL SAMPLE: 3166950

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3166951 3166952

Parameter	Units	92521472001 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	21.9	50	50	72.8	73.5	102	103	80-120	1	25	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3166953 3166954

Parameter	Units	92522145001 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	22.6	50	50	73.5	73.8	102	102	80-120	0	25	

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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: PLANT HAMMOND AP-2 NR
Pace Project No.: 92521359

QC Batch: 600758
QC Batch Method: SM 2540C-2011
Analysis Method: SM 2540C-2011
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92521359006

METHOD BLANK: 3166471 Matrix: Water
Associated Lab Samples: 92521359006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	25.0	25.0	02/17/21 19:54	

LABORATORY CONTROL SAMPLE: 3166472

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	250	232	93	90-110	

SAMPLE DUPLICATE: 3166473

Parameter	Units	92521359006 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	1210	1210	0	25	

SAMPLE DUPLICATE: 3166474

Parameter	Units	92522288010 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	30.0	45.0	40	25	D6

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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QUALITY CONTROL DATA

Project: PLANT HAMMOND AP-2 NR
Pace Project No.: 92521359

QC Batch: 599213
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: 92521359001, 92521359002

METHOD BLANK: 3159141 Matrix: Water
Associated Lab Samples: 92521359001, 92521359002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide	mg/L	ND	0.10	0.050	02/11/21 05:30	

LABORATORY CONTROL SAMPLE: 3159142

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: 3159143 3159144

Parameter	Units	92520663005 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	0.21	0.20	38	38	80-120	0	10	M1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3159145 3159146

Parameter	Units	92520935003 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	0.49	0.49	99	99	80-120	0	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: PLANT HAMMOND AP-2 NR
Pace Project No.: 92521359

QC Batch: 600173
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: 92521359003, 92521359004, 92521359005

METHOD BLANK: 3164004 Matrix: Water
Associated Lab Samples: 92521359003, 92521359004, 92521359005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide	mg/L	ND	0.10	0.050	02/16/21 04:49	

LABORATORY CONTROL SAMPLE: 3164005

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide	mg/L	0.5	0.49	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3164006 3164007

Parameter	Units	92521856001 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	0.47	0.47	92	92	80-120	0	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3164008 3164009

Parameter	Units	92521856002 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	0.42	0.42	82	82	80-120	0	10	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: PLANT HAMMOND AP-2 NR
Pace Project No.: 92521359

QC Batch: 600833
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: 92521359006, 92521359007

METHOD BLANK: 3166788 Matrix: Water
Associated Lab Samples: 92521359006, 92521359007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide	mg/L	ND	0.10	0.050	02/18/21 02:39	

LABORATORY CONTROL SAMPLE: 3166789

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide	mg/L	0.5	0.52	103	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3166790 3166791

Parameter	Units	92521912002 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	96	96	80-120	0	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3166792 3166793

Parameter	Units	92522081001 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	0.19	0.19	35	35	80-120	0	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

QUALITY CONTROL DATA

Project: PLANT HAMMOND AP-2 NR
Pace Project No.: 92521359

QC Batch: 599257
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: 92521359001, 92521359002

METHOD BLANK: 3159217 Matrix: Water
Associated Lab Samples: 92521359001, 92521359002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	02/11/21 13:11	
Fluoride	mg/L	ND	0.10	0.050	02/11/21 13:11	
Sulfate	mg/L	ND	1.0	0.50	02/11/21 13:11	

LABORATORY CONTROL SAMPLE: 3159218

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	51.1	102	90-110	
Fluoride	mg/L	2.5	2.6	105	90-110	
Sulfate	mg/L	50	49.7	99	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3159221 3159222

Parameter	Units	92521143004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	4.7	50	50	57.8	58.2	106	107	90-110	1	10	
Fluoride	mg/L	ND	2.5	2.5	2.3	2.4	93	96	90-110	4	10	
Sulfate	mg/L	51.1	50	50	81.8	81.9	62	62	90-110	0	10	M1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3159223 3159224

Parameter	Units	92521359001 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	67.3	67.4	103	103	90-110	0	10	
Fluoride	mg/L	2.1	2.5	2.5	4.4	4.4	92	91	90-110	0	10	
Sulfate	mg/L	489	50	50	518	517	59	57	90-110	0	10	M6

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 AP-2 NR
Pace Project No.: 92521359

QC Batch: 599653
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: 92521359003, 92521359004, 92521359005

METHOD BLANK: 3161218 Matrix: Water
Associated Lab Samples: 92521359003, 92521359004, 92521359005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	02/12/21 12:49	
Sulfate	mg/L	ND	1.0	0.50	02/12/21 12:49	

LABORATORY CONTROL SAMPLE: 3161219

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	51.3	103	90-110	
Sulfate	mg/L	50	53.0	106	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3161220 3161221

Parameter	Units	92521478001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	6.8	50	50	61.1	59.0	109	104	90-110	3	10	
Sulfate	mg/L	12.5	50	50	68.0	65.9	111	107	90-110	3	10	M1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3161241 3161242

Parameter	Units	92521574001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	4.3	50	50	59.5	60.0	110	111	90-110	1	10	M1
Sulfate	mg/L	423	50	50	510	440	175	33	90-110	15	10	M6,R1

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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: PLANT HAMMOND AP-2 NR
Pace Project No.: 92521359

QC Batch: 599863
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: 92521359006

METHOD BLANK: 3162426 Matrix: Water
Associated Lab Samples: 92521359006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	02/15/21 22:21	
Fluoride	mg/L	ND	0.10	0.050	02/15/21 22:21	
Sulfate	mg/L	ND	1.0	0.50	02/15/21 22:21	

LABORATORY CONTROL SAMPLE: 3162427

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	2.6	105	90-110	
Sulfate	mg/L	50	52.2	104	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3162428 3162429

Parameter	Units	92521957001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	118	50	50	165	170	95	103	90-110	3	10	
Fluoride	mg/L	0.41	2.5	2.5	2.7	2.8	93	95	90-110	2	10	
Sulfate	mg/L	104	50	50	151	155	94	103	90-110	3	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3162430 3162431

Parameter	Units	92521151008 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	37.7	50	50	89.5	88.8	104	102	90-110	1	10	
Fluoride	mg/L	0.15	2.5	2.5	2.7	2.6	102	97	90-110	5	10	
Sulfate	mg/L	67.5	50	50	112	113	89	90	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

QUALITY CONTROL DATA

Project: PLANT HAMMOND AP-2 NR
Pace Project No.: 92521359

QC Batch: 600235
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: 92521359007

METHOD BLANK: 3164171 Matrix: Water
Associated Lab Samples: 92521359007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	02/16/21 14:16	
Sulfate	mg/L	ND	1.0	0.50	02/16/21 14:16	

LABORATORY CONTROL SAMPLE: 3164172

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	48.8	98	90-110	
Sulfate	mg/L	50	49.5	99	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3164173 3164174

Parameter	Units	92522138001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	11.0	50	50	59.9	60.4	98	99	90-110	1	10	
Sulfate	mg/L	9.1	50	50	59.2	59.7	100	101	90-110	1	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3164175 3164176

Parameter	Units	92521578011 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	1.1	50	50	50.5	51.1	99	100	90-110	1	10	
Sulfate	mg/L	7.9	50	50	58.2	58.7	101	102	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: PLANT HAMMOND AP-2 NR
Pace Project No.: 92521359

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: 92521359

[1] The RSK-175 analyses for sample 22102230601, PMW-03 was performed 1 day outside of holding time. (Ruth Welsh 03/02/2021 07:44)

[1] The sample was received outside of holding time. The PM authorized the laboratory to proceed with the analyses. (Ruth Welsh 03/04/2021 16:18)

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.
M6	Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.
R1	RPD value was outside control limits.

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

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: PLANT HAMMOND AP-2 NR
Pace Project No.: 92521359

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92521359001	PMW-04				
92521359002	PMW-04/FILTERED				
92521359003	HGWC-18				
92521359005	TPZ-01				
92521359006	PMW-03				
92521359007	TPZ-02				
92521359001	PMW-04	RSK-175	704011		
92521359002	PMW-04/FILTERED	RSK-175	704011		
92521359003	HGWC-18	RSK-175	704011		
92521359004	DUP-3	RSK-175	704011		
92521359005	TPZ-01	RSK-175	704011		
92521359006	PMW-03	RSK-175	704752		
92521359007	TPZ-02	RSK-175	705314		
92521359001	PMW-04	EPA 3010A	600338	EPA 6010D	600407
92521359002	PMW-04/FILTERED	EPA 3010A	600338	EPA 6010D	600407
92521359003	HGWC-18	EPA 3010A	600338	EPA 6010D	600407
92521359004	DUP-3	EPA 3010A	600338	EPA 6010D	600407
92521359005	TPZ-01	EPA 3010A	600338	EPA 6010D	600407
92521359006	PMW-03	EPA 3010A	600338	EPA 6010D	600407
92521359007	TPZ-02	EPA 3010A	600338	EPA 6010D	600407
92521359001	PMW-04	EPA 3005A	599971	EPA 6020B	600018
92521359002	PMW-04/FILTERED	EPA 3005A	599971	EPA 6020B	600018
92521359003	HGWC-18	EPA 3005A	599971	EPA 6020B	600018
92521359004	DUP-3	EPA 3005A	599971	EPA 6020B	600018
92521359005	TPZ-01	EPA 3005A	599971	EPA 6020B	600018
92521359006	PMW-03	EPA 3005A	599971	EPA 6020B	600018
92521359007	TPZ-02	EPA 3005A	600602	EPA 6020B	600714
92521359001	PMW-04	SM 2450C-2011	599289		
92521359002	PMW-04/FILTERED	SM 2450C-2011	599289		
92521359001	PMW-04	SM 2320B-2011	600596		
92521359002	PMW-04/FILTERED	SM 2320B-2011	600596		
92521359003	HGWC-18	SM 2320B-2011	600890		
92521359004	DUP-3	SM 2320B-2011	600890		
92521359005	TPZ-01	SM 2320B-2011	600890		
92521359006	PMW-03	SM 2320B-2011	600890		
92521359007	TPZ-02	SM 2320B-2011	600890		
92521359006	PMW-03	SM 2540C-2011	600758		
92521359001	PMW-04	SM 4500-S2D-2011	599213		
92521359002	PMW-04/FILTERED	SM 4500-S2D-2011	599213		
92521359003	HGWC-18	SM 4500-S2D-2011	600173		
92521359004	DUP-3	SM 4500-S2D-2011	600173		
92521359005	TPZ-01	SM 4500-S2D-2011	600173		

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

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: PLANT HAMMOND AP-2 NR
Pace Project No.: 92521359

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92521359006	**PMW-03**	SM 4500-S2D-2011	600833		
92521359007	**TPZ-02**	SM 4500-S2D-2011	600833		
92521359001	**PMW-04**	EPA 300.0 Rev 2.1 1993	599257		
92521359002	**PMW-04/FILTERED**	EPA 300.0 Rev 2.1 1993	599257		
92521359003	**HGWC-18**	EPA 300.0 Rev 2.1 1993	599653		
92521359004	**DUP-3**	EPA 300.0 Rev 2.1 1993	599653		
92521359005	**TPZ-01**	EPA 300.0 Rev 2.1 1993	599653		
92521359006	**PMW-03**	EPA 300.0 Rev 2.1 1993	599863		
92521359007	**TPZ-02**	EPA 300.0 Rev 2.1 1993	600235		

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

Laboratory receiving samples:

Asheville ☐ Eden ☐ Greenwood ☐ Huntersville ☐ Raleigh ☐ Mechanicsville ☐ Atlanta ☑ Kernersville ☐

Sample Condition Upon Receipt

Client Name: GA Power

Project #: WO# : 92521359

92521359

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

Custody Seal Present? ☐ Yes ☑ No **Seals Intact?** ☐ Yes ☐ No

Date/Initials Person Examining Contents: 2/10/21 cw

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

Biological Tissue Frozen? ☐ Yes ☑ No ☐ N/A

Thermometer: ☑ IR Gun ID: 230 ☑ Wet ☐ Blue ☐ None

Type of Ice:

Cooler Temp: 3.8°C **Correction Factor:** Add/Subtract (°C) 0.0

Cooler Temp Corrected (°C): 3.8

Temp should be above freezing to 6°C

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

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

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

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

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

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? ☐ Yes ☐ No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: Date/Time:

Project Manager SCURF Review: Date:

Project Manager SRF Review: Date:

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: 1 of 1

Section A Required Client Information:

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

Section B Required Project Information:

Report To:	SCS Contacts
Copy To:	Geosyntec Contacts
Purchase Order No:	
Project Name:	Plant Hammond AP-2 NR
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 ~~OGR~~

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 (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, Sulfate	Metals: Ca, Co, Fe, Mg, Mn, K, Na	Carb Alk, Bicarb Alk, Total Alk	Sulfide	Dissolved (free) CO2	Molybdenum	Boron, Calcium	Fluoride	TDS			Residual Chlorine (Y/N)	Pace Project No./ Lab I.D. 42524759
1	~~HGWC-18~~	WT	G			–	–		7	6		1					1	N	X	X	X	X	X						N	pH =
2	PMW-03	WT	G	2/11/21	1336	–	–	17	8	6		1					1	N	X	X	X	X	X	X	X	X				N	pH = 5.73 006
3	~~PMW-04~~	WT	G			–	–		8	6		1					1	N	X	X	X	X	X	X	X	X				N	pH =
4	~~TPZ-01~~	WT	G			–	–		7	5		1					1	N	X	X	X	X	X							N	pH =
5	~~TPZ-02~~	WT	G			–	–		7	5		1					1	N	X	X	X	X	X							N	pH =
6	Dup-3	WT	G			–	–		7	6		1					1	N	X	X	X	X	X							N	pH =
7																															
8																															
9																															
10																															
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.	Thomas Heasley GSI	2/12/21	0845	/geo	2/12/21	0845	
	/geo	2/12/21	0936	/Pace	2/12/21	0936	
	/Pace	2/12/21	1352		2/12/21	1352	

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Thomas Heasley

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 02/11/21

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

Pace Analytical
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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:

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

Section B Required Project Information:

Report To: SCS Contacts
Copy To: Geosyntec Contacts
Purchase Order No.:
Project Name: Plant Hammond AP-2 NR
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 (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, Sulfate	Metals: Ca, Co, Fe, Mg, Mn, K, Na	Carb Alk, Bicarb Alk, Total Alk	Sulfide	Dissolved (free) CO2	Molybdenum	Boron, Calcium	Fluoride	TDS			Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
																		N	N	N	N	N	N	N	N	N				
1	~~HGWC-18~~	WT	G			–	–		7	6		1							X	X	X	X	X							N	92521359
2	~~PMW-03~~	WT	G			–	–		8	6		1							X	X	X	X	X	X	X	X	X			N	pH =
3	~~PMW-04~~	WT	G	2-1-21	1704	–	–		8	6		1						1	X	X	X	X	X	X	X	X	X			N	pH = 7.13
4	~~TPZ-01~~	WT	G			–	–		7	5		1						1	X	X	X	X	X							N	pH =
5	TPZ-02	WT	G			–	–		7	5		1						1	X	X	X	X	X							N	pH =
6	~~Dup-3~~	WT	G			–	–		7	5		1						1	X	X	X	X	X							N	pH =
7	PMW-04 / filtered	WT	G	2-9-21	1704				8	6		1						1	X	X	X	X	X	X	X	X	X				pH: 7.13
8																															
9																															
10																															
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.	Sampler	2-10-21	0833	Pace	2/10/21	0833	
		2/10/21	0920	Pace	2/10/21	0936	
	Pace	2/10/21	1220				

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Aaron Reeder
SIGNATURE of SAMPLER: DATE Signed (MM/DD/YY): 02-09-2021

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

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

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: 1 of 1

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-2 NR	Pace Project Manager: Kevin Herring
Requested Due Date/TAT: 10 Day	Project Number: GW6581B	Pace Profile #:

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	Chloride, Sulfate	Metals: Ca, Co, Fe, Mg, Mn, K, Na	Carb Alk, Bicarb Alk, Total Alk	Sulfide	Dissolved (free) CO2	Molybdenum	Boron, Calcium	Fluoride	TDS	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D. 92521054
1	HGWC-18	WT	G	2/10/21	1223	–	–	17	7	5		1					1		X	X	X	X	X					N	pH = 4.55 003
2	~~PMW-03~~	WT	G			–	–		7	5		1					1		X	X	X	X	X	X	X	X	X	N	pH =
3	~~PMW-04~~	WT	G						7	5		1					1		X	X	X	X	X	X	X	X	X	N	pH =
4	~~TPZ-01~~	WT	G						7	5		1					1		X	X	X	X	X					N	pH =
5	TPZ-02	WT	G			–	–		7	5		1					1		X	X	X	X	X					N	pH =
6	Dup-3	WT	G	2/10/21	–	–	–	–	7	5		1					1		X	X	X	X	X					N	pH = 004
7																													
8																													
9																													
10																													
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 Russo	2/11/21	0830				
(2)	~~Chad Russo~~	~~2/11/21~~	~~0830~~	Pace	2/11/21	0917	
	Pace	2/11/21	1320				

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER: Chad Russo
SIGNATURE of SAMPLER: Chad Russo
DATE Signed (MM/DD/YY): 2/10/2021

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 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 AP-2 NR
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 OCR

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, Sulfate	Metals: Ca, Co, Fe, Mg, Mn, K, Na	Carb Alk, Bicarb Alk, Total Alk	Sulfide	Dissolved (free) CO2	Molybdenum	Boron, Calcium	Fluoride	TDS	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	~~HGWC-18~~	WT	G			–	–		7	5		1					1		X	X	X	X	X					N	pH =
2	~~PMW-03~~	WT	G			–	–		8	5		1					1		X	X	X	X	X	X	X	X	X	N	pH =
3	~~PMW-04~~	WT	G			–	–		8	5		1					1		X	X	X	X	X	X	X	X	X	N	pH =
4	TPZ-01	WT	G	2-10-21	1510	–	–		7	5		1					1		X	X	X	X	X					N	pH = 9.38 005
5	~~TPZ-02~~	WT	G			–	–		7	5		1					1		X	X	X	X	X					N	pH =
6	~~Dup-3~~	WT	G			–	–		7	5		1					1		X	X	X	X	X					N	pH =
7																													
8																													
9	A. Reeder			2-10-2021																									
10																													
11																													
12																													

Residual Chlorine (Y/N): 42521954

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	2-11-21	0830	/Pace	2/11/21	0830	
	/Pace	2/11/21	0915	/Pace	2/11/21	0919	
	/Pace	2/11/21	1320				

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Aaron Reeder

SIGNATURE of SAMPLER: [signature]

DATE Signed (MM/DD/YY): 02/10/2021

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

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

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

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CHAIN-OF-CUSTODY / Analytical Request Document

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Page: 1 of 1

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-2 NR	Pace Project Manager: Kevin Herring
Requested Due Date/TAT: 10 Day	Project Number: GW6581B	Pace Profile #:

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

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, Sulfate	Metals: Ca, Co, Fe, Mg, Mn, K, Na	Carb Alk, Bicarb Alk, Total Alk	Sulfide	Dissolved (free) CO2	Molybdenum	Boron, Calcium	Fluoride	TDS	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D. 6252054
1	HGWC-18	WT	G						7	5		1					1		X	X	X	X	X					N	pH =
2	PMW-03	WT	G						8	6		1					1		X	X	X	X	X	X	X	X	X	N	pH =
3	PMW-04	WT	G						8	6		1					1		X	X	X	X	X	X	X	X	X	N	pH =
4	TPZ-01	WT	G						7	5		1					1		X	X	X	X	X					N	pH =
5	TPZ-02	WT	G	2/12/21	1264			16	7	5		1					1		X	X	X	X	X					N	pH = 6.75
6	Dup-3	WT	G						7	5		1					1		X	X	X	X	X					N	pH =
7																													
8																													
9																													
10																													
11																													
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 thorugh any wells not sampled, and note when the last sample for the event has been taken.	[signature]	2/12/21	0943	[signature] / Pace	2/12/21	0945				
	[signature] / Pace	2/15/21	1303	[signature]	2/15/21	1303	1.9	Y	N	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Chad Rossi

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 2/12/21

*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
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

April 07, 2021

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

RE: Project: HAMMOND AP-2 NR
Pace Project No.: 92528809

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory between March 19, 2021 and March 22, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

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

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

Sincerely,

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

Enclosures

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

REPORT OF LABORATORY ANALYSIS

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

CERTIFICATIONS

Project: HAMMOND AP-2 NR
Pace Project No.: 92528809

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

REPORT OF LABORATORY ANALYSIS

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

SAMPLE SUMMARY

Project: HAMMOND AP-2 NR
Pace Project No.: 92528809

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92528809001	**PMW-04**	Water	03/18/21 15:27	03/19/21 13:40
92528809002	**PMW-03**	Water	03/19/21 13:15	03/22/21 15:41
92528809003	**PMW-03 FILTERED**	Water	03/19/21 13:15	03/22/21 15:41
92528809004	**TPZ-01**	Water	03/19/21 09:40	03/22/21 15:41
92528809005	**TPZ-02**	Water	03/22/21 09:53	03/22/21 15:41

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

SAMPLE ANALYTE COUNT

Project: HAMMOND AP-2 NR
Pace Project No.: 92528809

Lab ID	Sample ID	Method	Analysts	Analytes Reported
92528809001	**PMW-04**	EPA 6010D	DRB	1
		EPA 6020B	CW1	3
		SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92528809002	**PMW-03**	EPA 6010D	DRB	1
		EPA 6020B	CW1	3
		SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92528809003	**PMW-03 FILTERED**	EPA 6010D	DRB	1
		EPA 6020B	CW1	3
		SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92528809004	**TPZ-01**	EPA 6010D	KH	1
		EPA 6020B	CW1	3
		SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92528809005	**TPZ-02**	EPA 6010D	DRB	1
		EPA 6020B	CW1	3
		SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3

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

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

SUMMARY OF DETECTION

Project: HAMMOND AP-2 NR
Pace Project No.: 92528809

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92528809001	**PMW-04**					
	Performed by	CUSTOMER			03/19/21 16:32	
	pH	7.62	Std. Units		03/19/21 16:32	
EPA 6010D	Calcium	282	mg/L	1.0	03/22/21 16:54	
EPA 6020B	Boron	9.6	mg/L	0.20	03/25/21 12:27	
EPA 6020B	Cobalt	0.0021J	mg/L	0.025	03/25/21 12:27	D3
EPA 6020B	Molybdenum	7.1	mg/L	0.50	04/06/21 17:43	
SM 2450C-2011	Total Dissolved Solids	1170	mg/L	20.0	03/25/21 11:09	
EPA 300.0 Rev 2.1 1993	Chloride	38.5	mg/L	1.0	03/23/21 02:27	
EPA 300.0 Rev 2.1 1993	Fluoride	2.1	mg/L	0.10	03/23/21 02:27	
EPA 300.0 Rev 2.1 1993	Sulfate	649	mg/L	14.0	03/23/21 12:54	
92528809002	**PMW-03**					
	Performed by	CUSTOMER			03/22/21 17:05	
	pH	5.59	Std. Units		03/22/21 17:05	
EPA 6010D	Calcium	229	mg/L	1.0	03/23/21 18:47	
EPA 6020B	Boron	3.0	mg/L	0.040	03/25/21 11:45	
EPA 6020B	Cobalt	0.049	mg/L	0.025	03/25/21 15:36	
EPA 6020B	Molybdenum	0.0074J	mg/L	0.010	03/25/21 11:45	
SM 2450C-2011	Total Dissolved Solids	1090	mg/L	20.0	03/26/21 09:32	
EPA 300.0 Rev 2.1 1993	Chloride	85.7	mg/L	1.0	03/24/21 07:03	M6
EPA 300.0 Rev 2.1 1993	Fluoride	0.090J	mg/L	0.10	03/24/21 07:03	
EPA 300.0 Rev 2.1 1993	Sulfate	609	mg/L	12.0	03/24/21 13:30	M6
92528809003	**PMW-03 FILTERED**					
	Performed by	CUSTOMER			03/22/21 17:05	
	pH	5.59	Std. Units		03/22/21 17:05	
EPA 6010D	Calcium	230	mg/L	1.0	03/23/21 18:52	
EPA 6020B	Boron	3.0	mg/L	0.040	03/25/21 11:50	
EPA 6020B	Cobalt	0.049	mg/L	0.0050	03/25/21 11:50	
EPA 6020B	Molybdenum	0.0021J	mg/L	0.010	03/25/21 11:50	
SM 2450C-2011	Total Dissolved Solids	1070	mg/L	20.0	03/26/21 09:32	
EPA 300.0 Rev 2.1 1993	Chloride	86.2	mg/L	1.0	03/24/21 07:48	
EPA 300.0 Rev 2.1 1993	Fluoride	0.097J	mg/L	0.10	03/24/21 07:48	
EPA 300.0 Rev 2.1 1993	Sulfate	624	mg/L	12.0	03/24/21 14:11	
92528809004	**TPZ-01**					
	Performed by	CUSTOMER			03/22/21 17:05	
	pH	9.73	Std. Units		03/22/21 17:05	
EPA 6010D	Calcium	789	mg/L	10.0	03/24/21 14:49	
EPA 6020B	Boron	16.3	mg/L	0.40	03/25/21 12:40	
EPA 6020B	Molybdenum	3.2	mg/L	0.10	03/25/21 12:40	
SM 2450C-2011	Total Dissolved Solids	2040	mg/L	100	03/26/21 09:32	
EPA 300.0 Rev 2.1 1993	Chloride	309	mg/L	20.0	03/24/21 14:24	
EPA 300.0 Rev 2.1 1993	Fluoride	0.12	mg/L	0.10	03/24/21 08:03	
EPA 300.0 Rev 2.1 1993	Sulfate	1320	mg/L	20.0	03/24/21 14:24	

REPORT OF LABORATORY ANALYSIS

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

SUMMARY OF DETECTION

Project: HAMMOND AP-2 NR
Pace Project No.: 92528809

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92528809005	**TPZ-02**					
	Performed by	CUSTOMER			03/22/21 17:05	
	pH	6.64	Std. Units		03/22/21 17:05	
EPA 6010D	Calcium	427	mg/L	5.0	03/23/21 19:07	
EPA 6020B	Boron	8.0	mg/L	0.040	03/25/21 12:02	
EPA 6020B	Cobalt	0.0042J	mg/L	0.025	03/25/21 12:08	D3
EPA 6020B	Molybdenum	0.018	mg/L	0.010	03/25/21 12:02	
SM 2450C-2011	Total Dissolved Solids	1680	mg/L	100	03/26/21 09:32	
EPA 300.0 Rev 2.1 1993	Chloride	129	mg/L	15.0	03/24/21 15:06	
EPA 300.0 Rev 2.1 1993	Fluoride	0.054J	mg/L	0.10	03/24/21 09:30	
EPA 300.0 Rev 2.1 1993	Sulfate	1220	mg/L	15.0	03/24/21 15:06	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: HAMMOND AP-2 NR
Pace Project No.: 92528809

Sample: PMW-04 **Lab ID: 92528809001** Collected: 03/18/21 15:27 Received: 03/19/21 13:40 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Charlotte								
Performed by	**CUSTOMER**				1		03/19/21 16:32		
pH	**7.62**	Std. Units			1		03/19/21 16:32		
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Calcium	**282**	mg/L	1.0	0.070	1	03/22/21 10:04	03/22/21 16:54	7440-70-2	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Boron	**9.6**	mg/L	0.20	0.026	5	03/24/21 13:05	03/25/21 12:27	7440-42-8	
Cobalt	**0.0021J**	mg/L	0.025	0.0019	5	03/24/21 13:05	03/25/21 12:27	7440-48-4	D3
Molybdenum	**7.1**	mg/L	0.50	0.034	50	03/24/21 13:05	04/06/21 17:43	7439-98-7	
2540C Total Dissolved Solids	Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	**1170**	mg/L	20.0	20.0	1		03/25/21 11:09		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**38.5**	mg/L	1.0	0.60	1		03/23/21 02:27	16887-00-6	
Fluoride	**2.1**	mg/L	0.10	0.050	1		03/23/21 02:27	16984-48-8	
Sulfate	**649**	mg/L	14.0	7.0	14		03/23/21 12:54	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-2 NR
Pace Project No.: 92528809

Sample: PMW-03 **Lab ID: 92528809002** Collected: 03/19/21 13:15 Received: 03/22/21 15:41 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Charlotte								
Performed by	**CUSTOMER**				1		03/22/21 17:05		
pH	**5.59**	Std. Units			1		03/22/21 17:05		
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Calcium	**229**	mg/L	1.0	0.070	1	03/23/21 09:55	03/23/21 18:47	7440-70-2	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Boron	**3.0**	mg/L	0.040	0.0052	1	03/24/21 13:05	03/25/21 11:45	7440-42-8	
Cobalt	**0.049**	mg/L	0.025	0.0019	5	03/24/21 13:05	03/25/21 15:36	7440-48-4	
Molybdenum	**0.0074J**	mg/L	0.010	0.00069	1	03/24/21 13:05	03/25/21 11:45	7439-98-7	
2540C Total Dissolved Solids	Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	**1090**	mg/L	20.0	20.0	1		03/26/21 09:32		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**85.7**	mg/L	1.0	0.60	1		03/24/21 07:03	16887-00-6	M6
Fluoride	**0.090J**	mg/L	0.10	0.050	1		03/24/21 07:03	16984-48-8	
Sulfate	**609**	mg/L	12.0	6.0	12		03/24/21 13:30	14808-79-8	M6

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
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ANALYTICAL RESULTS

Project: HAMMOND AP-2 NR
Pace Project No.: 92528809

Sample: PMW-03 FILTERED **Lab ID: 92528809003** Collected: 03/19/21 13:15 Received: 03/22/21 15:41 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Charlotte								
Performed by	**CUSTOMER**				1		03/22/21 17:05		
pH	**5.59**	Std. Units			1		03/22/21 17:05		
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Calcium	**230**	mg/L	1.0	0.070	1	03/23/21 09:55	03/23/21 18:52	7440-70-2	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Boron	**3.0**	mg/L	0.040	0.0052	1	03/24/21 13:05	03/25/21 11:50	7440-42-8	
Cobalt	**0.049**	mg/L	0.0050	0.00038	1	03/24/21 13:05	03/25/21 11:50	7440-48-4	
Molybdenum	**0.0021J**	mg/L	0.010	0.00069	1	03/24/21 13:05	03/25/21 11:50	7439-98-7	
2540C Total Dissolved Solids	Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	**1070**	mg/L	20.0	20.0	1		03/26/21 09:32		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**86.2**	mg/L	1.0	0.60	1		03/24/21 07:48	16887-00-6	
Fluoride	**0.097J**	mg/L	0.10	0.050	1		03/24/21 07:48	16984-48-8	
Sulfate	**624**	mg/L	12.0	6.0	12		03/24/21 14:11	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: HAMMOND AP-2 NR
Pace Project No.: 92528809

Sample: TPZ-01 **Lab ID: 92528809004** Collected: 03/19/21 09:40 Received: 03/22/21 15:41 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Charlotte								
Performed by	**CUSTOMER**				1		03/22/21 17:05		
pH	**9.73**	Std. Units			1		03/22/21 17:05		
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Calcium	**789**	mg/L	10.0	0.70	10	03/23/21 09:55	03/24/21 14:49	7440-70-2	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Boron	**16.3**	mg/L	0.40	0.052	10	03/24/21 13:05	03/25/21 12:40	7440-42-8	
Cobalt	ND	mg/L	0.025	0.0019	5	03/24/21 13:05	03/25/21 15:42	7440-48-4	D3
Molybdenum	**3.2**	mg/L	0.10	0.0069	10	03/24/21 13:05	03/25/21 12:40	7439-98-7	
2540C Total Dissolved Solids	Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	**2040**	mg/L	100	100	1		03/26/21 09:32		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**309**	mg/L	20.0	12.0	20		03/24/21 14:24	16887-00-6	
Fluoride	**0.12**	mg/L	0.10	0.050	1		03/24/21 08:03	16984-48-8	
Sulfate	**1320**	mg/L	20.0	10.0	20		03/24/21 14:24	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: HAMMOND AP-2 NR
Pace Project No.: 92528809

Sample: TPZ-02 **Lab ID: 92528809005** Collected: 03/22/21 09:53 Received: 03/22/21 15:41 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Charlotte								
Performed by	**CUSTOMER**				1		03/22/21 17:05		
pH	**6.64**	Std. Units			1		03/22/21 17:05		
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Calcium	**427**	mg/L	5.0	0.35	5	03/23/21 09:55	03/23/21 19:07	7440-70-2	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Boron	**8.0**	mg/L	0.040	0.0052	1	03/24/21 13:05	03/25/21 12:02	7440-42-8	
Cobalt	**0.0042J**	mg/L	0.025	0.0019	5	03/24/21 13:05	03/25/21 12:08	7440-48-4	D3
Molybdenum	**0.018**	mg/L	0.010	0.00069	1	03/24/21 13:05	03/25/21 12:02	7439-98-7	
2540C Total Dissolved Solids	Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	**1680**	mg/L	100	100	1		03/26/21 09:32		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**129**	mg/L	15.0	9.0	15		03/24/21 15:06	16887-00-6	
Fluoride	**0.054J**	mg/L	0.10	0.050	1		03/24/21 09:30	16984-48-8	
Sulfate	**1220**	mg/L	15.0	7.5	15		03/24/21 15:06	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Peachtree Corners, GA 30092
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QUALITY CONTROL DATA

Project: HAMMOND AP-2 NR
Pace Project No.: 92528809

QC Batch: 608172
QC Batch Method: EPA 3010A
Analysis Method: EPA 6010D
Analysis Description: 6010D ATL
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92528809001

METHOD BLANK: 3203821 Matrix: Water
Associated Lab Samples: 92528809001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	0.070	03/22/21 15:39	

LABORATORY CONTROL SAMPLE: 3203822

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: 3203823 3203824

Parameter	Units	92528634052 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Calcium	mg/L	6180 ug/L	1	1	7.4	7.1	118	92	75-125	4	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: HAMMOND AP-2 NR
Pace Project No.: 92528809

QC Batch: 608469
QC Batch Method: EPA 3010A
Analysis Method: EPA 6010D
Analysis Description: 6010D ATL
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92528809002, 92528809003, 92528809004, 92528809005

METHOD BLANK: 3205055 Matrix: Water
Associated Lab Samples: 92528809002, 92528809003, 92528809004, 92528809005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	0.070	03/23/21 16:55	

LABORATORY CONTROL SAMPLE: 3205056

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: 3205057 3205058

Parameter	Units	92527261006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Calcium	mg/L	60.4	1	1	63.2	61.3	281	92	75-125	3	20	M1

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REPORT OF LABORATORY ANALYSIS

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(770)734-4200

QUALITY CONTROL DATA

Project: HAMMOND AP-2 NR
Pace Project No.: 92528809

QC Batch: 608900
QC Batch Method: EPA 3005A
Analysis Method: EPA 6020B
Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92528809001, 92528809002, 92528809003, 92528809004, 92528809005

METHOD BLANK: 3207065 Matrix: Water
Associated Lab Samples: 92528809001, 92528809002, 92528809003, 92528809004, 92528809005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Boron	mg/L	ND	0.040	0.0052	03/25/21 10:05	
Cobalt	mg/L	ND	0.0050	0.00038	03/25/21 10:05	
Molybdenum	mg/L	ND	0.010	0.00069	03/25/21 10:05	

LABORATORY CONTROL SAMPLE: 3207066

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron	mg/L	1	0.95	95	80-120	
Cobalt	mg/L	0.1	0.10	100	80-120	
Molybdenum	mg/L	0.1	0.11	105	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3207067 3207068

Parameter	Units	92526981001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron	mg/L	4.4	1	1	5.1	4.8	65	41	75-125	5	20	M1
Cobalt	mg/L	0.0048J	0.1	0.1	0.11	0.11	104	104	75-125	0	20	
Molybdenum	mg/L	ND	0.1	0.1	0.11	0.11	107	107	75-125	0	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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QUALITY CONTROL DATA

Project: HAMMOND AP-2 NR
Pace Project No.: 92528809

QC Batch: 608913
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: 92528809001

METHOD BLANK: 3207223 Matrix: Water
Associated Lab Samples: 92528809001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	03/25/21 11:08	

LABORATORY CONTROL SAMPLE: 3207224

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	377	94	90-111	

SAMPLE DUPLICATE: 3207225

Parameter	Units	92528809001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	1170	1110	5	10	

SAMPLE DUPLICATE: 3207226

Parameter	Units	92527612014 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	255	213	18	10	D6

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: HAMMOND AP-2 NR
Pace Project No.: 92528809

QC Batch: 609221
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: 92528809002, 92528809003, 92528809004, 92528809005

METHOD BLANK: 3208754 Matrix: Water
Associated Lab Samples: 92528809002, 92528809003, 92528809004, 92528809005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	03/26/21 09:30	

LABORATORY CONTROL SAMPLE: 3208755

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	385	96	90-111	

SAMPLE DUPLICATE: 3208757

Parameter	Units	92527612017 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	371	403	8	10	

SAMPLE DUPLICATE: 3208759

Parameter	Units	92528787009 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	250	243	3	10	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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QUALITY CONTROL DATA

Project: HAMMOND AP-2 NR
Pace Project No.: 92528809

QC Batch: 608283
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: 92528809001

METHOD BLANK: 3204500 Matrix: Water
Associated Lab Samples: 92528809001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	03/22/21 20:49	
Fluoride	mg/L	ND	0.10	0.050	03/22/21 20:49	
Sulfate	mg/L	ND	1.0	0.50	03/22/21 20:49	

LABORATORY CONTROL SAMPLE: 3204501

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	52.5	105	90-110	
Fluoride	mg/L	2.5	2.5	102	90-110	
Sulfate	mg/L	50	52.9	106	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3204502 3204503

Parameter	Units	92528546001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	18.7	50	50	69.8	70.2	102	103	90-110	1	10	
Fluoride	mg/L	10.4	2.5	2.5	12.8	12.8	96	95	90-110	0	10	
Sulfate	mg/L	1220	50	50	1340	1340	237	231	90-110	0	10	M6

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3204504 3204505

Parameter	Units	92528730001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	8.8	50	50	60.7	58.7	104	100	90-110	3	10	
Fluoride	mg/L	ND	2.5	2.5	2.6	2.5	104	99	90-110	5	10	
Sulfate	mg/L	10.4	50	50	62.6	60.5	104	100	90-110	3	10	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: HAMMOND AP-2 NR
Pace Project No.: 92528809

QC Batch: 608452
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: 92528809002, 92528809003, 92528809004, 92528809005

METHOD BLANK: 3204980 Matrix: Water
Associated Lab Samples: 92528809002, 92528809003, 92528809004, 92528809005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	03/24/21 04:36	
Fluoride	mg/L	ND	0.10	0.050	03/24/21 04:36	
Sulfate	mg/L	ND	1.0	0.50	03/24/21 04:36	

LABORATORY CONTROL SAMPLE: 3204981

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	50.0	100	90-110	
Fluoride	mg/L	2.5	2.3	93	90-110	
Sulfate	mg/L	50	49.9	100	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3204982 3204983

Parameter	Units	92528809002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	85.7	50	50	118	119	65	67	90-110	1	10	M6
Fluoride	mg/L	0.090J	2.5	2.5	2.6	2.6	100	102	90-110	2	10	
Sulfate	mg/L	609	50	50	650	660	82	103	90-110	2	10	M6

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3204984 3204985

Parameter	Units	92527492024 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	ND	50	50	48.0	51.4	96	103	90-110	7	10	
Fluoride	mg/L	ND	2.5	2.5	2.3	2.4	92	96	90-110	5	10	
Sulfate	mg/L	ND	50	50	48.0	51.2	96	102	90-110	7	10	

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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-2 NR
Pace Project No.: 92528809

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.
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-2 NR
Pace Project No.: 92528809

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92528809001	**PMW-04**				
92528809002	**PMW-03**				
92528809003	**PMW-03 FILTERED**				
92528809004	**TPZ-01**				
92528809005	**TPZ-02**				
92528809001	**PMW-04**	EPA 3010A	608172	EPA 6010D	608224
92528809002	**PMW-03**	EPA 3010A	608469	EPA 6010D	608544
92528809003	**PMW-03 FILTERED**	EPA 3010A	608469	EPA 6010D	608544
92528809004	**TPZ-01**	EPA 3010A	608469	EPA 6010D	608544
92528809005	**TPZ-02**	EPA 3010A	608469	EPA 6010D	608544
92528809001	**PMW-04**	EPA 3005A	608900	EPA 6020B	608991
92528809002	**PMW-03**	EPA 3005A	608900	EPA 6020B	608991
92528809003	**PMW-03 FILTERED**	EPA 3005A	608900	EPA 6020B	608991
92528809004	**TPZ-01**	EPA 3005A	608900	EPA 6020B	608991
92528809005	**TPZ-02**	EPA 3005A	608900	EPA 6020B	608991
92528809001	**PMW-04**	SM 2450C-2011	608913		
92528809002	**PMW-03**	SM 2450C-2011	609221		
92528809003	**PMW-03 FILTERED**	SM 2450C-2011	609221		
92528809004	**TPZ-01**	SM 2450C-2011	609221		
92528809005	**TPZ-02**	SM 2450C-2011	609221		
92528809001	**PMW-04**	EPA 300.0 Rev 2.1 1993	608283		
92528809002	**PMW-03**	EPA 300.0 Rev 2.1 1993	608452		
92528809003	**PMW-03 FILTERED**	EPA 300.0 Rev 2.1 1993	608452		
92528809004	**TPZ-01**	EPA 300.0 Rev 2.1 1993	608452		
92528809005	**TPZ-02**	EPA 300.0 Rev 2.1 1993	608452		

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

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

Sample Condition Upon Receipt

Client Name: GA Power

Project #: WO# : 92528809

92528809

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

Custody Seal Present? ☐ Yes ☑ No **Seals Intact?** ☐ Yes ☐ No

Date/Initials Person Examining Contents: 3/19/21 KRM

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

Biological Tissue Frozen? ☐ Yes ☑ No ☐ N/A

Thermometer: ☑ IR Gun ID: IR230 ☑ Wet ☐ Blue ☐ None **Type of Ice:**

Cooler Temp: 2.2 **Correction Factor:** Add/Subtract (°C) ± 0

Cooler Temp Corrected (°C): 2.2

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

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

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

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? ☐ Yes ☐ No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: Date/Time:

Project Manager SCURF Review: Date:

Project Manager SRF Review: Date:

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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: 1 of 1

Section A — Required Client Information:

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

Section B — Required Project Information:

Report To:	SCS Contacts
Copy To:	Geosyntec Contacts
Purchase Order No.:	
Project Name:	Plant Hammond AP-2 NR
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

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 (use 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	Boron, calcium, cobalt, molybdenum	TDS	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
																			N	N	N		
1	~~PMW-03~~	~~WT~~	~~G~~			–	–		3	3									X	X	X		N	pH =
2	PMW-04	WT	G	3/18/21	1527	–	–	16	3	2		1							X	X	X		N	pH = 7.60 7.62
3	~~PMW-04 Filtered~~	WT	G			–	–		3	2		1							X	X	X		N	pH =
4	TPZ-01	WT	G			–	–		3	2		1							X	X	X		N	pH =
5	TPZ-02	WT	G			–	–		3	2		1							X	X	X		N	pH =
6																								
7																								
8																								
9																								
10																								
11																								
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 thorugh any wells not sampled, and note when the last sample for the event has been taken.	Yeshuah Hawkins/Geor	3/19/21	1340	Lyn William/Pace	3/19/21	1340				
	Lyn Williams/Pace	3/19/21	1541	K. Williams/Pace	3/19/21	1541	2.2	Y	N	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Yeshuah Hawkins

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 3/18/21

*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
www.pacelabs.com

CHAIN-OF-CUSTODY / Analytical Request Document

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Phone:	Fax:
Requested Due Date/TAT:	10 Day

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Copy To:	Geosyntec Contacts
Purchase Order No.:	
Project Name:	Plant Hammond AP-2 NR
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

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): Chloride, Fluoride, Sulfate	Boron, calcium, cobalt, molybdenum	TDS	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
																			N	N	N			
1	PMW-03	WT	G	3/19/21	1315	–	–	17	3	2		1							X	X	X	N	pH = 5.59
2	~~PMW-04~~	WT	G	~~3/19/21~~		–	–		3	2		1							X	X	X	N	pH =
3	PMW-03 ~~PMW-04~~ Filtered	WT	G	3/19/21	1315	–	–	17	3	2		1							X	X	X	N	pH = 5.59
4	TPZ-01	WT	G	3/19/21	0940	–	–	13	3	2		1							X	X	X	N	pH = 9.73
5	~~TPZ-02~~	WT	G			–	–		3	2		1							X	X	X	N	pH =
6																							
7																							
8																							
9																							
10																							
11																							
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.	Thomas Wessler	3/22/21	1540	Ryan William / Pace	3/22/21	1541				
	Ryan William / Pace	3/22/21	1642	Tom Pace	3/22/21	1642	3.3	Y	N	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Thomas Wessler Vaughn Jackson

SIGNATURE of SAMPLER: (TW) (VJ) DATE Signed (MM/DD/YY): 3/19/21

*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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Requested Due Date/TAT:	10 Day

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Report To:	SCS Contacts
Copy To:	Geosyntec Contacts
Purchase Order No.:	
Project Name:	Plant Hammond AP-2 NR
Project Number:	GW65818

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

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

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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	Boron, calcium, cobalt, molybdenum	TDS	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	~~PMW-03~~	WT	G						3	2		1						N	X	X	X	N	pH =
2	~~PMW-04~~	WT	G						3	2		1						N	X	X	X	N	pH =
3	~~PMW-04 Filtered~~	WT	G						3	2		1						N	X	X	X	N	pH =
4	~~TPZ-01~~	WT	G						3	2		1						N	X	X	X	N	pH =
5	TPZ-02 Last Sample	WT	G	3/22/21	0953			18	3	2		1						N	X	X	X	N	pH = 6.64
6																							
7																							
8																							
9																							
10																							
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.	Thomas Hessler	3/22/21	1540	Ryan Williams / Pace	3/22/21	1540				
	Ryan Williams / Pace	3/22/21	1642	[signature]	3/22/21	1642	3.3	Y	N	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Thomas Hessler

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 03/22/21

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.

VALIDATION REPORTS

Geosyntec consultants

180A Market Place Boulevard
Knoxville, TN 37922
PH 865.330.0037
www.geosyntec.com

Memorandum

Date:	April 27, 2021
To:	Whitney Law
From:	Kristoffer Henderson
CC:	J. Caprio
Subject:	**Stage 2A Data Validation - Level II Data Deliverable – Pace Analytical Services, LLC Project Number 92521359**

SITE: Plant Hammond AP-2

INTRODUCTION

This report summarizes the findings of the Stage 2A data validation of five aqueous samples, one field filtered aqueous sample and one field duplicate, collected 9-12 February 2021, as part of the Plant Hammond AP on-site sampling event.

The samples were analyzed at Pace Analytical Gulf Coast, Baton Rouge, Louisiana, for the following analytical test:

- Carbon Dioxide by USEPA Standard Operating Procedure (SOP) RSK-175

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

- Metals by USEPA Methods 3010A/6010D
- Metals by USEPA Methods 3005A/6020B
- Total Dissolved Solids (TDS) by Standard Method (SM) 2450C

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

- Alkalinity by Standard Method SM 2320B
- Sulfide by SM 4500-S2D
- 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 as qualified are usable for meeting project objectives. Qualified data should be used within the limitation of the qualification.

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

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

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

Laboratory ID	Client ID
92521359001	PMW-04
92521359002	PMW-04/FILTERED
92521359003	HGWC-18
92521359004	DUP-3

Laboratory ID	Client ID
92521359005	TPZ-01
92521359006	PMW-03
92521359007	TPZ-02

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

The following issues were noted on the chain of custody (COC). No qualifications were applied based on these issues.

- A collection time was not listed on the COC for the field duplicate, DUP-3. The field duplicate was logged in with the collection time of 00:00.
- The relinquished by signature, date and time were missing for the final sample transfer on pages 2-4 of the COC.
- There was a time discrepancy for the sample transfer on page 2 of the COC. The relinquished by time was documented as 2/10/21 0930 and the received by time was documented as 2/10/21 0936.
- There was a time discrepancy for the sample transfer on page 3 of the COC. The relinquished by time was documented as 2/11/21 0830 and the received by time was documented as 2/10/21 0919.
- There was a time discrepancy for the sample transfer on page 4 of the COC. The relinquished by time was documented as 2/11/21 0915 and the received by time was documented as 2/11/21 0919.
- 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.

The field pH data included in the laboratory report were not validated.

1.0 CARBON DIOXIDE

The samples were analyzed for carbon dioxide by USEPA SOP RSK-175.

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 Carbon Dioxide Assessment
✓ Electronic Data Deliverables Review

1.1 Overall Assessment

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

1.2 Holding Time

The holding time for carbon dioxide analysis of a water sample is 14 days from sample collection to analysis. The holding times were met for the sample analyses, with the following exceptions.

The carbon dioxide analyses of samples PMW-03 and TPZ-02 were performed outside the holding time. Therefore, the carbon dioxide concentrations in samples PMW-03 and TPZ-02 were J qualified as estimated.

Sample	Analyte	Laboratory Result (µg/L)	Laboratory Flag	Validation Result (µg/L)	Validation Qualifier*	Reason Code**
PMW-03	Carbon dioxide	15700	NA	15700	J	2
TPZ-02	Carbon dioxide	31700	NA	31700	J	2

µg/L-micrograms per liter
NA-not applicable
* Validation qualifiers are defined in Attachment 1 at the end of this report
**Reason codes are defined in Attachment 2 at the end of this report

1.3 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 704011, 704752 and 705314). Carbon dioxide was not detected in the method blanks above the method detection limit (MDL).

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

MS/MSD pairs were not reported.

1.5 Laboratory Control Sample (LCS)

LCSs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Three LCS/LCS duplicate (LCSD) pairs were reported. The recovery and relative percent difference (RPD) results were within the laboratory specified acceptance criteria.

1.6 Equipment Blank

Equipment blanks were not collected with the sample set.

1.7 Field Blank

Field blanks were not collected with the sample set.

1.8 Field Duplicate

One field duplicate sample was collected with the sample set, DUP-3. Acceptable precision [RPD $\leq$ 20% or the difference between the concentrations < reporting limit (RL)] was demonstrated between the field duplicate and the original sample, HGWC-18.

1.9 Sensitivity

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

1.10 Total vs Dissolved Carbon Dioxide Assessment

One sample was reported for total and dissolved carbon dioxide (PMW-04). The total carbon dioxide concentration was greater than the dissolved carbon dioxide concentration.

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. No discrepancies were identified between the level II report and the EDD.

2.0 METALS

The samples were analyzed for metals by USEPA methods 3005A/6020B.

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

✓ Overall Assessment
✓ Holding Time
✓ Method Blank
⊗ Matrix Spike/Matrix Spike Duplicate
✓ Laboratory Control Sample
✓ Equipment Blank
✓ Field Blank
⊗ Field Duplicate
✓ Sensitivity
✓ Total vs Dissolved Metals Assessment
✓ Electronic Data Deliverables Review

2.1 Overall Assessment

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

2.2 Holding Time

The holding time for the total metals analysis of a water sample is 180 days from sample collection to analysis. The holding times for the dissolved metals analysis of a water sample are 15 minutes from collection to filtration and 180 days from sample collection to analysis. The holding times were met for the sample analyses.

2.3 Method Blank

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Three method blanks were reported (batches 600338, 599971 and 600602). Metals 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). One sample set specific MS/MSD pair was reported using sample PMW-04. The recovery and RPD results were within the laboratory specified acceptance criteria, with the following exception.

The recovery of sodium in the MSD using sample PMW-04 was high and outside the laboratory specified acceptance criteria. Therefore, the sodium concentration in sample PMW-04 was J+ qualified as estimated with high bias.

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.

For sample concentrations greater than four times the spiked concentration the MS/MSD recovery results were not considered, and no qualifications were applied due to the MS/MSD recovery results.

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	Validation Result (mg/L)	Validation Qualifier	Reason Code
PMW-04	Sodium	3.5	M1	3.5	J+	4

mg/L-milligrams per liter
M1-laboratory flag indicating matrix spike recovery exceeded the QC limits

2.5 Laboratory Control Sample

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

2.6 Equipment Blank

Equipment blanks were not collected with the sample set.

2.7 Field Blank

Field blanks were not collected with the sample set.

2.8 Field Duplicate

One field duplicate sample was collected with the sample set, DUP-3. Acceptable precision (RPD ≤ 20% or the difference between the concentrations < RL) was demonstrated between the field duplicate and the original sample, HGWC-18, with the following exception.

The RPD of iron in the field duplicate pair was greater than 20%; therefore, the iron concentrations in the field duplicate pair were J qualified as estimated.

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	RPD	Validation Result (mg/L)	Validation Qualifier	Reason Code
HGWC-18	Iron	0.22	NA	51	0.22	J	7
DUP-3	Iron	0.13	NA		0.13	J	7

mg/L-milligrams per liter
NA-not applicable

2.9 Sensitivity

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

2.10 Total vs Dissolved Metals Assessment

One sample was reported for total and dissolved metals (PMW-04). The total metals concentrations were greater than or equal to the dissolved metals concentrations or the RPD was less than 30%.

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 WET CHEMISTRY

The samples were analyzed for TDS by SM 2450C, alkalinity by SM 2320B, sulfide by SM 4500 S2D and anions (chloride, fluoride and sulfate) by USEPA method 300.0.

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

- ✓ Overall Assessment
- ✓ Holding Times
- ✓ Method Blank
- ✓ Matrix Spike/Matrix Spike Duplicate
- ✓ Laboratory Control Sample
- ✓ Equipment Blank
- ✓ Field Blank
- ✓ Field Duplicate
- ✓ Sensitivity
- ✓ Total vs Dissolved Wet Chemistry Assessment
- ✓ Electronic Data Deliverables Review

3.1 Overall Assessment

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

3.2 Holding Times

The holding times for the TDS and sulfide analysis of a water sample are 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 anions analysis of a water sample is 28 days from sample collection to analysis. The holding time was met for the sample analyses.

3.3 Method Blank

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Two method blanks were reported for TDS (batches 599289 and 600758). Two method blanks were reported for alkalinity (batches 600596 and 600890). Three method blanks were reported for sulfide (batches 599213, 600173 and 600833). Four method blanks were reported for the anions (batches 599257, 599653, 599863 and 600235). The wet chemistry parameters were not detected in the method blanks above the MDLs.

3.4 Matrix Spike/Matrix Spike Duplicate

MS/MSDs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). One sample set specific MS/MSD pair was reported for the anions using sample PMW-04. The recovery and RPD results were within the laboratory specified acceptance criteria.

Batch MS/MSD pairs were also reported for alkalinity, sulfide and 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.

For sample concentrations greater than four times the spiked concentration the MS/MSD recovery results were not considered, and no qualifications were applied due to the MS/MSD recovery results.

3.5 Laboratory Control Sample

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

3.6 Laboratory Duplicate

One sample set specific laboratory duplicate was reported for TDS using sample PMW-03. The RPD result was within the laboratory specified acceptance criteria.

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

3.7 Equipment Blank

Equipment blanks were not collected with the sample set.

3.8 Field Blank

Field blanks were not collected with the sample set.

3.9 Field Duplicate

One field duplicate sample was collected with the sample set, DUP-3. Acceptable precision (RPD $\leq$ 20% or the difference between the concentrations < RL) was demonstrated between the field duplicate and the original sample, HGWC-18.

3.10 Sensitivity

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

3.11 Total vs Dissolved Wet Chemistry Assessment

One sample was reported for total and dissolved wet chemistry parameters (PMW-04). The total wet chemistry concentrations were greater than or equal to the dissolved wet chemistry concentrations or the RPD was less than 30%.

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 or RPD recovery outside limits (LCS/LCSD)
6	Surrogate recovery outside limits
7	Field Duplicate RPD exceeded
8	Serial dilution percent difference exceeded
9	Calibration criteria not met
10	Linear range exceeded
11	Internal standard criteria not met
12	Lab duplicates RPD exceeded
13	Other
14	Lab flag removed or modified: no validation qualification required

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

Geosyntec consultants

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Memorandum

Date: April 28, 2021

To: Whitney Law

From: Kristoffer Henderson

CC: J. Caprio

Subject: Stage 2A Data Validation - Level II Data Deliverable – Pace Analytical Services, LLC Project Number 92528809

SITE: Plant Hammond AP-2

INTRODUCTION

This report summarizes the findings of the Stage 2A data validation of four aqueous samples and one field filtered aqueous sample, collected 18-22 March 2021, as part of the Plant Hammond AP on-site sampling event.

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

- Calcium by USEPA Methods 3010A/6010D
- Metals by USEPA Methods 3005A/6020B
- Total Dissolved Solids (TDS) by Standard Method (SM) 2450C

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

- Anions (Chloride, Fluoride and Sulfate) by USEPA Method 300.0

EXECUTIVE SUMMARY

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

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

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

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

Laboratory ID	Client ID
92528809001	PMW-04
92528809002	PMW-03
92528809003	PMW-03 FILTERED

Laboratory ID	Client ID
92528809004	TPZ-01
92528809005	TPZ-02

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

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.

The field pH data included in the laboratory report were not validated.

1.0 METALS

The samples were analyzed for metals by USEPA methods 3005A/6020B.

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

✓ Overall Assessment
✓ Holding Time
✓ Method Blank
✓ Matrix Spike/Matrix Spike Duplicate
✓ Laboratory Control Sample
✓ Equipment Blank
✓ Field Blank
✓ Field Duplicate
✓ Sensitivity
✓ Total vs Dissolved Metals Assessment
✓ Electronic Data Deliverables Review

1.1 Overall Assessment

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

1.2 Holding Time

The holding time for the total metals analysis of a water sample is 180 days from sample collection to analysis. The holding times for the dissolved metals analysis of a water sample are 15 minutes from collection to filtration and 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). Three method blanks were reported (batches 608172, 608469 and 608900). 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). Three batch MS/MSD pairs were reported. Since these were batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data.

1.5 Laboratory Control Sample (LCS)

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

1.6 Equipment Blank

Equipment blanks were not collected with the sample set.

1.7 Field Blank

Field blanks were not collected with the sample set.

1.8 Field Duplicate

Field duplicates were not collected with the sample set.

1.9 Sensitivity

The samples were reported to the MDLs. An elevated non-detect result was reported for cobalt in TPZ-02 due to the dilution analyzed.

1.10 Total vs Dissolved Metals Assessment

One sample was reported for total and dissolved metals (PMW-03). The total metals concentrations were greater than or equal to the dissolved metals concentrations or the relative percent difference (RPD) was less than 30%.

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. No discrepancies were identified between the level II report and the EDD.

2.0 WET CHEMISTRY

The samples were analyzed for TDS by SM 2450C and anions (chloride, fluoride and sulfate) by USEPA method 300.0.

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

✓ Overall Assessment
✓ Holding Times
✓ Method Blank
⊗ Matrix Spike/Matrix Spike Duplicate
✓ Laboratory Control Sample
✓ 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 set are considered usable for meeting project objectives. The results are considered valid; the analytical completeness defined as the ratio of the number of valid analytical results (valid analytical results include values qualified as estimated) to the total number of analytical results requested on samples submitted for these analyses, for this data set is 100%.

2.2 Holding Times

The holding times for the TDS and sulfide analysis of a water sample are 7 days from sample collection to analysis. The holding time for the fluoride analysis of a water sample is 28 days from sample collection to analysis. The holding time was met for the sample analyses.

2.3 Method Blank

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Two method blanks were reported for TDS (batches 608913 and 609221). Two method blanks were reported for the anions (batches 608283 and 608452). 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). One sample set specific MS/MSD pair was reported for the anions using sample PMW-03. The recovery and RPD results were within the laboratory specified acceptance criteria, with the following exceptions.

The chloride recoveries in the MS/MSD pair were low and outside the laboratory specified acceptance criteria. Therefore, the chloride concentration in sample PMW-03 was J- qualified as estimated with low bias. It was noted the laboratory flagged the chloride concentration M6 indicating the MS/MSD was not evaluated due to dilution. Based on the sample and spiked concentrations and professional and technical judgment, the MS/MSD results were considered for validation.

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

For sample concentrations greater than four times the spiked concentration the MS/MSD recovery results were not considered, and no qualifications were applied due to the MS/MSD recovery results.

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	Validation Result (mg/L)	Validation Qualifier*	Reason Code**
PMW-03	Chloride	85.7	M6	85.7	J-	4

mg/L-milligrams per liter
M6-laboratory flag indicating MS/MSD recovery was not evaluated due to sample dilution
* 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

2.5 Laboratory Control Sample

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

2.6 Laboratory Duplicate

One sample set specific laboratory duplicate was reported for TDS using sample PMW-04. The RPD result was within the laboratory specified acceptance criteria.

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

Equipment blanks were not collected with the sample set.

2.8 Field Blank

Field blanks were not collected with the sample set.

2.9 Field Duplicate

Field duplicates were not collected with the sample set.

2.10 Sensitivity

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

2.11 Total vs Dissolved Wet Chemistry Assessment

One sample was reported for total and dissolved wet chemistry parameters (PMW-03). The total wet chemistry concentrations were greater than or equal to the dissolved wet chemistry concentrations or the RPD was less than 30%.

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 or RPD recovery outside limits (LCS/LCSD)
6	Surrogate recovery outside limits
7	Field Duplicate RPD exceeded
8	Serial dilution percent difference exceeded
9	Calibration criteria not met
10	Linear range exceeded
11	Internal standard criteria not met
12	Lab duplicates RPD exceeded
13	Other
14	Lab flag removed or modified: no validation qualification required

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

FIELD SAMPLING REPORTS

Low-Flow Test Report:

Test Date / Time: 2/10/2021 11:48:21 AM
Project: Plant Hammond (4)
Operator Name: Chad Russo

Location Name: HGWC-18 **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 17.8 ft** **Total Depth: 27.8 ft** **Initial Depth to Water: 17.66 ft**	**Pump Type: Bladder** **Tubing Type: Polyethylene** **Pump Intake From TOC: 22.8 ft** **Estimated Total Volume Pumped: 4970 ml** **Flow Cell Volume: 90 ml** **Final Flow Rate: 200 ml/min** **Final Draw Down: 0.18 ft**	**Instrument Used: Aqua TROLL 400** **Serial Number: 728634**

Test Notes:
Seven bottles: Alkalinity, dissolved CO2, ions, metals, sulfide.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 10	+/- 10	+/- 0.3	
2/10/2021 11:48 AM	00:00	4.43 pH	16.89 °C	2,123.4 µS/cm	1.74 mg/L		122.4 mV	17.66 ft	100.00 ml/min
2/10/2021 11:53 AM	05:00	4.45 pH	17.09 °C	2,021.9 µS/cm	1.12 mg/L	5.47 NTU	132.0 mV	17.76 ft	100.00 ml/min
2/10/2021 11:58 AM	10:00	4.50 pH	17.10 °C	1,994.8 µS/cm	0.92 mg/L	2.28 NTU	221.9 mV	17.76 ft	100.00 ml/min
2/10/2021 12:03 PM	15:00	4.52 pH	17.11 °C	2,028.2 µS/cm	0.93 mg/L	1.71 NTU	242.9 mV	17.84 ft	200.00 ml/min
2/10/2021 12:08 PM	20:00	4.52 pH	17.16 °C	2,025.5 µS/cm	0.64 mg/L	1.71 NTU	152.3 mV	17.84 ft	200.00 ml/min
2/10/2021 12:13 PM	25:00	4.54 pH	17.22 °C	2,040.4 µS/cm	0.50 mg/L	1.19 NTU	151.6 mV	17.84 ft	200.00 ml/min
2/10/2021 12:18 PM	30:00	4.55 pH	17.27 °C	2,025.6 µS/cm	0.40 mg/L	1.05 NTU	248.2 mV	17.84 ft	200.00 ml/min
2/10/2021 12:20 PM	32:21	4.55 pH	17.29 °C	2,148.7 µS/cm	0.37 mg/L		175.4 mV	17.84 ft	200.00 ml/min

Samples

Sample ID:	Description:
HGWC-18	Grab

Low-Flow Test Report:

Test Date / Time: 2/9/2021 2:04:45 PM
Project: GP-Plant Hammond (10)
Operator Name: Aaron Reeder

Location Name: PMW-4 **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 13.97 ft** **Total Depth: 18.97 ft** **Initial Depth to Water: 11.31 ft**	**Pump Type: Alexis** **Tubing Type: polyethylene** **Tubing Inner Diameter: 0.17 in** **Pump Intake From TOC: 13.97 ft** **Estimated Total Volume Pumped: 27000 ml** **Flow Cell Volume: 90 ml** **Final Flow Rate: 100 ml/min** **Final Draw Down: 1.99 ft**	**Instrument Used: Aqua TROLL 400** **Serial Number: 728623**

Test Notes:
Seven bottles: Alkalinity, dissolved CO2, ions, metals, sulfide.

Weather Conditions:
Sunny

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 5	
2/9/2021 2:04 PM	00:00	7.51 pH	18.08 °C	1,493.5 µS/cm	1.22 mg/L		-12.1 mV	11.31 ft	150.00 ml/min
2/9/2021 2:09 PM	05:00	7.59 pH	18.26 °C	891.92 µS/cm	4.16 mg/L	11.00 NTU	-28.6 mV	12.99 ft	150.00 ml/min
2/9/2021 2:14 PM	10:00	7.56 pH	18.63 °C	1,401.4 µS/cm	4.86 mg/L	11.16 NTU	-68.3 mV	12.99 ft	150.00 ml/min
2/9/2021 2:19 PM	15:00	7.55 pH	18.66 °C	1,419.3 µS/cm	4.83 mg/L	9.47 NTU	-108.5 mV	12.99 ft	150.00 ml/min
2/9/2021 2:24 PM	20:00	7.54 pH	18.70 °C	1,440.1 µS/cm	4.01 mg/L	11.24 NTU	-116.9 mV	13.00 ft	150.00 ml/min
2/9/2021 2:29 PM	25:00	7.55 pH	18.97 °C	1,494.8 µS/cm	3.65 mg/L	14.90 NTU	-123.1 mV	13.00 ft	150.00 ml/min
2/9/2021 2:34 PM	30:00	7.55 pH	20.14 °C	1,501.1 µS/cm	4.12 mg/L	14.25 NTU	-108.3 mV	13.00 ft	150.00 ml/min
2/9/2021 2:39 PM	35:00	7.41 pH	18.84 °C	1,474.4 µS/cm	1.49 mg/L	17.20 NTU	-94.9 mV	13.25 ft	150.00 ml/min
2/9/2021 2:44 PM	40:00	7.39 pH	18.61 °C	1,480.8 µS/cm	1.77 mg/L	16.30 NTU	-112.3 mV	13.25 ft	150.00 ml/min
2/9/2021 2:49 PM	45:00	7.39 pH	18.61 °C	1,480.0 µS/cm	2.10 mg/L	16.40 NTU	-119.1 mV	13.25 ft	150.00 ml/min
2/9/2021 2:54 PM	50:00	7.40 pH	18.99 °C	1,475.9 µS/cm	2.17 mg/L	17.10 NTU	-126.1 mV	13.25 ft	150.00 ml/min
2/9/2021 2:59 PM	55:00	7.35 pH	19.02 °C	1,475.6 µS/cm	2.21 mg/L	17.20 NTU	-119.3 mV	13.25 ft	100.00 ml/min
2/9/2021 3:04 PM	01:00:00	7.30 pH	18.57 °C	1,476.4 µS/cm	2.17 mg/L	17.70 NTU	-113.3 mV	13.25 ft	100.00 ml/min

2/9/2021 3:09 PM	01:05:00	7.28 pH	18.12 °C	1,476.3 µS/cm	2.11 mg/L	70.30 NTU	-113.2 mV	13.25 ft	100.00 ml/min
2/9/2021 3:14 PM	01:10:00	7.27 pH	17.92 °C	1,476.3 µS/cm	2.30 mg/L	51.00 NTU	-114.1 mV	13.25 ft	100.00 ml/min
2/9/2021 3:19 PM	01:15:00	7.25 pH	17.99 °C	1,470.5 µS/cm	2.30 mg/L	33.90 NTU	-101.2 mV	13.25 ft	100.00 ml/min
2/9/2021 3:24 PM	01:20:00	7.26 pH	17.86 °C	1,468.5 µS/cm	2.41 mg/L	26.50 NTU	-105.0 mV	13.25 ft	100.00 ml/min
2/9/2021 3:29 PM	01:25:00	7.29 pH	17.80 °C	1,462.4 µS/cm	2.40 mg/L	19.90 NTU	-120.9 mV	13.25 ft	100.00 ml/min
2/9/2021 3:34 PM	01:30:00	7.24 pH	17.68 °C	1,458.5 µS/cm	2.38 mg/L	16.10 NTU	-119.3 mV	13.30 ft	100.00 ml/min
2/9/2021 3:39 PM	01:35:00	7.24 pH	17.63 °C	1,459.1 µS/cm	2.52 mg/L	15.80 NTU	-118.3 mV	13.30 ft	100.00 ml/min
2/9/2021 3:44 PM	01:40:00	7.24 pH	17.61 °C	1,484.4 µS/cm	2.51 mg/L	12.00 NTU	-104.9 mV	13.30 ft	100.00 ml/min
2/9/2021 3:49 PM	01:45:00	7.22 pH	17.55 °C	1,462.1 µS/cm	2.44 mg/L	11.31 NTU	-116.1 mV	13.30 ft	100.00 ml/min
2/9/2021 3:54 PM	01:50:00	7.21 pH	17.59 °C	1,458.1 µS/cm	2.49 mg/L	9.28 NTU	-103.6 mV	13.30 ft	100.00 ml/min
2/9/2021 3:59 PM	01:55:00	7.22 pH	17.59 °C	1,457.2 µS/cm	2.52 mg/L	12.70 NTU	-118.0 mV	13.30 ft	100.00 ml/min
2/9/2021 4:04 PM	02:00:00	7.29 pH	17.59 °C	1,461.8 µS/cm	2.40 mg/L	8.58 NTU	-126.7 mV	13.30 ft	100.00 ml/min
2/9/2021 4:09 PM	02:05:00	7.30 pH	17.94 °C	1,471.1 µS/cm	2.60 mg/L	8.00 NTU	-126.1 mV	13.30 ft	100.00 ml/min
2/9/2021 4:14 PM	02:10:00	7.28 pH	18.45 °C	1,459.1 µS/cm	2.43 mg/L	8.53 NTU	-123.0 mV	13.30 ft	100.00 ml/min
2/9/2021 4:19 PM	02:15:00	7.22 pH	18.44 °C	1,458.6 µS/cm	2.23 mg/L	21.40 NTU	-115.3 mV	13.30 ft	100.00 ml/min
2/9/2021 4:24 PM	02:20:00	7.21 pH	18.45 °C	1,457.1 µS/cm	2.31 mg/L	18.10 NTU	-110.6 mV	13.30 ft	100.00 ml/min
2/9/2021 4:29 PM	02:25:00	7.17 pH	17.84 °C	1,460.3 µS/cm	2.24 mg/L	13.90 NTU	-107.6 mV	13.30 ft	100.00 ml/min
2/9/2021 4:34 PM	02:30:00	7.17 pH	17.84 °C	1,460.9 µS/cm	2.23 mg/L	17.70 NTU	-105.3 mV	13.30 ft	100.00 ml/min
2/9/2021 4:39 PM	02:35:00	7.15 pH	18.12 °C	1,452.7 µS/cm	2.18 mg/L	12.00 NTU	-104.4 mV	13.30 ft	100.00 ml/min
2/9/2021 4:44 PM	02:40:00	7.14 pH	18.35 °C	1,450.3 µS/cm	2.14 mg/L	12.10 NTU	-103.6 mV	13.30 ft	100.00 ml/min
2/9/2021 4:49 PM	02:45:00	7.15 pH	18.30 °C	1,454.1 µS/cm	2.20 mg/L	13.10 NTU	-103.0 mV	13.30 ft	100.00 ml/min
2/9/2021 4:54 PM	02:50:00	7.14 pH	18.39 °C	1,450.0 µS/cm	2.24 mg/L	13.20 NTU	-102.1 mV	13.30 ft	100.00 ml/min
2/9/2021 4:59 PM	02:55:00	7.09 pH	18.40 °C	1,441.1 µS/cm	2.23 mg/L	10.18 NTU	-100.1 mV	13.30 ft	100.00 ml/min
2/9/2021 5:04 PM	03:00:00	7.13 pH	18.35 °C	1,441.8 µS/cm	2.17 mg/L	10.47 NTU	-99.6 mV	13.30 ft	100.00 ml/min

Samples

Sample ID:	Description:
PMW-04/non-filtered	

PMW-04/filtered	

Low-Flow Test Report:

Test Date / Time: 2/10/2021 10:00:08 AM
Project: GP-Plant Hammond (11)
Operator Name: Aaron Reeder

Location Name: TPZ-1 **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 10 ft** **Total Depth: 20.3 ft** **Initial Depth to Water: 8.71 ft**	**Pump Type: Alexis** **Tubing Type: polyethylene** **Tubing Inner Diameter: 0.17 in** **Pump Intake From TOC: 12.5 ft** **Estimated Total Volume Pumped: 10500 ml** **Flow Cell Volume: 90 ml** **Final Flow Rate: 150 ml/min** **Final Draw Down: 2.99 ft**	**Instrument Used: Aqua TROLL 400** **Serial Number: 728623**

Test Notes:
Seven bottles: Alkalinity, dissolved CO2, ions, metals, sulfide.

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 %	+/- 0.2	+/- 5	+/- 10	+/- 5	
2/10/2021 10:00 AM	00:00	9.29 pH	15.66 °C	3,188.1 µS/cm	1.90 mg/L		104.4 mV	8.71 ft	150.00 ml/min
2/10/2021 10:05 AM	05:00	9.31 pH	15.84 °C	3,193.7 µS/cm	1.97 mg/L	11.10 NTU	98.7 mV	11.01 ft	150.00 ml/min
2/10/2021 10:10 AM	10:00	9.31 pH	16.07 °C	3,191.7 µS/cm	1.86 mg/L	12.90 NTU	107.9 mV	11.70 ft	150.00 ml/min
2/10/2021 10:15 AM	15:00	9.32 pH	16.16 °C	3,186.2 µS/cm	1.93 mg/L	12.80 NTU	105.4 mV	11.70 ft	150.00 ml/min
2/10/2021 10:20 AM	20:00	9.32 pH	16.20 °C	3,195.7 µS/cm	1.87 mg/L	12.30 NTU	92.6 mV	11.70 ft	150.00 ml/min
2/10/2021 10:25 AM	25:00	9.32 pH	16.25 °C	3,196.0 µS/cm	1.88 mg/L	11.60 NTU	101.2 mV	11.70 ft	150.00 ml/min
2/10/2021 10:30 AM	30:00	9.34 pH	16.38 °C	3,202.1 µS/cm	1.58 mg/L	12.50 NTU	99.1 mV	11.70 ft	150.00 ml/min
2/10/2021 10:35 AM	35:00	9.34 pH	16.56 °C	3,202.6 µS/cm	1.62 mg/L	11.79 NTU	88.0 mV	11.70 ft	150.00 ml/min
2/10/2021 10:40 AM	40:00	9.35 pH	16.83 °C	3,292.8 µS/cm	1.52 mg/L	10.28 NTU	86.3 mV	11.70 ft	150.00 ml/min
2/10/2021 10:45 AM	45:00	9.35 pH	17.05 °C	2,913.5 µS/cm	1.30 mg/L	8.92 NTU	84.4 mV	11.70 ft	150.00 ml/min
2/10/2021 10:50 AM	50:00	9.36 pH	17.10 °C	3,200.9 µS/cm	1.46 mg/L	7.35 NTU	83.2 mV	11.70 ft	150.00 ml/min
2/10/2021 10:55 AM	55:00	9.36 pH	17.27 °C	3,202.8 µS/cm	1.42 mg/L	6.25 NTU	82.0 mV	11.70 ft	150.00 ml/min
2/10/2021 11:00 AM	01:00:00	9.38 pH	17.45 °C	3,203.2 µS/cm	1.23 mg/L	5.74 NTU	80.5 mV	11.70 ft	150.00 ml/min

2/10/2021 11:05 AM	01:05:00	9.37 pH	17.59 °C	3,293.3 µS/cm	1.30 mg/L	4.54 NTU	79.5 mV	11.70 ft	150.00 ml/min
2/10/2021 11:10 AM	01:10:00	9.38 pH	17.67 °C	3,216.6 µS/cm	1.23 mg/L	4.41 NTU	78.3 mV	11.70 ft	150.00 ml/min

Samples

Sample ID:	Description:
TPZ-1	Grab

Low-Flow Test Report:

Test Date / Time: 2/12/2021 11:19:12 AM
Project: Plant Hammond (8)
Operator Name: Chad Russo

Location Name: TPZ-02 **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Initial Depth to Water: 35.76 ft**	**Pump Type: Bladder** **Tubing Type: Polyethylene** **Pump Intake From TOC: 43 ft** **Estimated Total Volume Pumped: 3935 ml** **Flow Cell Volume: 90 ml** **Final Flow Rate: 100 ml/min** **Final Draw Down: 0.33 ft**	**Instrument Used: Aqua TROLL 400** **Serial Number: 728634**

Test Notes:
Seven bottles: Alkalinity, dissolved CO2, ions, metals, sulfide.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 10	+/- 10	+/- 0.3	
2/12/2021 11:19 AM	00:00	6.34 pH	13.06 °C	2,409.1 µS/cm	3.51 mg/L		-55.0 mV	35.76 ft	100.00 ml/min
2/12/2021 11:20 AM	01:42	6.40 pH	13.93 °C	2,518.6 µS/cm	2.06 mg/L		-60.1 mV	35.76 ft	100.00 ml/min
2/12/2021 11:25 AM	06:42	6.57 pH	15.60 °C	2,519.9 µS/cm	0.82 mg/L	16.30 NTU	-61.2 mV	36.09 ft	100.00 ml/min
2/12/2021 11:28 AM	09:21	6.62 pH	15.84 °C	2,516.0 µS/cm	0.71 mg/L		-60.8 mV	36.09 ft	100.00 ml/min
2/12/2021 11:33 AM	14:21	6.67 pH	16.22 °C	2,505.7 µS/cm	0.52 mg/L	10.12 NTU	-88.3 mV	36.09 ft	100.00 ml/min
2/12/2021 11:38 AM	19:21	6.70 pH	15.88 °C	2,505.5 µS/cm	0.50 mg/L	9.68 NTU	-60.5 mV	36.09 ft	100.00 ml/min
2/12/2021 11:43 AM	24:21	6.72 pH	16.39 °C	2,505.7 µS/cm	0.36 mg/L	5.40 NTU	-87.8 mV	36.09 ft	100.00 ml/min
2/12/2021 11:48 AM	29:21	6.74 pH	16.49 °C	2,485.4 µS/cm	0.31 mg/L	5.78 NTU	-87.9 mV	36.09 ft	100.00 ml/min
2/12/2021 11:53 AM	34:21	6.74 pH	16.37 °C	2,474.2 µS/cm	0.29 mg/L	5.24 NTU	-59.1 mV	36.09 ft	100.00 ml/min
2/12/2021 11:58 AM	39:21	6.75 pH	16.36 °C	2,473.0 µS/cm	0.27 mg/L	4.95 NTU	-84.8 mV	36.09 ft	100.00 ml/min

Samples

Sample ID:	Description:
TPZ-02	Grab

Low-Flow Test Report:

Test Date / Time: 3/18/2021 1:48:12 PM
Project: GP-Plant Hammond
Operator Name: Vashish Taukoor

Location Name: PMW-04 **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 8.97 ft** **Total Depth: 18.97 ft** **Initial Depth to Water: 8.96 ft**	**Pump Type: Peri** **Tubing Type: Polyethylene** **Pump Intake From TOC: 13 ft** **Estimated Total Volume Pumped: 11.5 Liter** **Flow Cell Volume: 90 ml** **Final Flow Rate: 100 ml/min** **Final Draw Down: 4.00 ft**	**Instrument Used: Aqua TROLL 400** **Serial Number: 728563**

Test Notes:
Three bottles: Metals, TDS, Inorganics.
Prepurged for 20 min @ 100 ml/min

Weather Conditions:
Windy
Cloudy
65 deg F

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
3/18/2021 1:48 PM	00:00	7.30 pH	17.80 °C	1,396.4 µS/cm	0.25 mg/L	5.67 NTU	-94.1 mV	11.65 ft	100.00 ml/min
3/18/2021 1:53 PM	05:00	7.32 pH	17.93 °C	1,403.6 µS/cm	0.30 mg/L	5.46 NTU	-126.3 mV	11.85 ft	100.00 ml/min
3/18/2021 1:58 PM	10:00	7.35 pH	18.02 °C	1,397.1 µS/cm	0.29 mg/L	4.96 NTU	-126.7 mV	11.95 ft	100.00 ml/min
3/18/2021 2:03 PM	15:00	7.37 pH	17.44 °C	1,405.3 µS/cm	0.29 mg/L	5.63 NTU	-90.0 mV	12.10 ft	100.00 ml/min
3/18/2021 2:08 PM	20:00	7.38 pH	17.63 °C	1,420.4 µS/cm	0.27 mg/L	24.00 NTU	-127.3 mV	12.20 ft	100.00 ml/min
3/18/2021 2:13 PM	25:00	7.37 pH	17.90 °C	1,414.5 µS/cm	0.30 mg/L	26.30 NTU	-89.1 mV	12.32 ft	100.00 ml/min
3/18/2021 2:18 PM	30:00	7.38 pH	18.37 °C	1,416.5 µS/cm	0.30 mg/L	23.70 NTU	-92.2 mV	12.54 ft	100.00 ml/min
3/18/2021 2:22 PM	34:00	7.39 pH	18.39 °C	1,413.3 µS/cm	0.26 mg/L		-92.8 mV		100.00 ml/min
3/18/2021 2:23 PM	35:18	7.40 pH	18.44 °C	1,415.7 µS/cm	0.26 mg/L	21.50 NTU	-91.8 mV	12.65 ft	100.00 ml/min
3/18/2021 2:28 PM	40:18	7.42 pH	18.25 °C	1,416.7 µS/cm	0.28 mg/L	19.00 NTU	-94.7 mV	12.70 ft	100.00 ml/min
3/18/2021 2:33 PM	45:18	7.44 pH	18.40 °C	1,421.1 µS/cm	0.27 mg/L	16.80 NTU	-132.6 mV	12.75 ft	100.00 ml/min
3/18/2021 2:38 PM	50:18	7.48 pH	17.90 °C	1,426.0 µS/cm	0.20 mg/L	13.20 NTU	-99.7 mV	12.80 ft	100.00 ml/min

3/18/2021 2:43 PM	55:18	7.50 pH	17.63 °C	1,426.6 µS/cm	0.27 mg/L	11.60 NTU	-98.4 mV	12.81 ft	100.00 ml/min
3/18/2021 2:48 PM	01:00:18	7.52 pH	17.44 °C	1,432.4 µS/cm	0.24 mg/L	9.00 NTU	-99.9 mV	12.82 ft	100.00 ml/min
3/18/2021 2:53 PM	01:05:18	7.52 pH	17.45 °C	1,430.0 µS/cm	0.25 mg/L	8.21 NTU	-135.2 mV	12.89 ft	100.00 ml/min
3/18/2021 2:58 PM	01:10:18	7.55 pH	17.54 °C	1,443.6 µS/cm	0.27 mg/L	6.89 NTU	-103.2 mV	12.93 ft	100.00 ml/min
3/18/2021 3:00 PM	01:12:38	7.55 pH	17.54 °C	1,435.8 µS/cm	0.27 mg/L		-103.8 mV		100.00 ml/min
3/18/2021 3:05 PM	01:17:38	7.57 pH	17.21 °C	1,442.5 µS/cm	0.28 mg/L	6.16 NTU	-138.3 mV	12.95 ft	100.00 ml/min
3/18/2021 3:10 PM	01:22:38	7.59 pH	16.82 °C	1,453.4 µS/cm	0.26 mg/L	5.22 NTU	-139.6 mV	12.95 ft	100.00 ml/min
3/18/2021 3:15 PM	01:27:38	7.60 pH	16.49 °C	1,454.6 µS/cm	0.29 mg/L	4.66 NTU	-104.8 mV	12.93 ft	100.00 ml/min
3/18/2021 3:20 PM	01:32:38	7.61 pH	16.38 °C	1,458.3 µS/cm	0.25 mg/L	3.97 NTU	-105.6 mV	12.93 ft	100.00 ml/min
3/18/2021 3:25 PM	01:37:38	7.62 pH	16.64 °C	1,464.4 µS/cm	0.21 mg/L	3.44 NTU	-108.7 mV	12.96 ft	100.00 ml/min

Samples

Sample ID:	Description:
PMW-04	Grab Sample.

Low-Flow Test Report:

Test Date / Time: 3/19/2021 8:36:39 AM
Project: GP-Plant Hammond
Operator Name: Vashish Taukoor

Location Name: TPZ-01 **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 10.3 ft Total Depth: 20.3 ft** **Initial Depth to Water: 9.98 ft**	**Pump Type: Peri** **Tubing Type: Polyethylene** **Pump Intake From TOC: 15 ft** **Estimated Total Volume Pumped: 6.5 Liter** **Flow Cell Volume: 90 ml** **Final Flow Rate: 100 ml/min** **Final Draw Down: 1.72 ft**	**Instrument Used: Aqua TROLL 400** **Serial Number: 728563**

Test Notes:
Three bottles: Metals, TDS, Inorganics.
Prepurged for 5 min @ 100 ml/min

Weather Conditions:
Cloudy
45 deg F

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
3/19/2021 8:36 AM	00:00	9.64 pH	13.79 °C	3,209.4 µS/cm	1.13 mg/L	1.49 NTU	95.6 mV	10.30 ft	100.00 ml/min
3/19/2021 8:41 AM	05:00	9.68 pH	13.04 °C	3,248.1 µS/cm	0.38 mg/L	1.27 NTU	55.4 mV	10.85 ft	100.00 ml/min
3/19/2021 8:46 AM	10:00	9.68 pH	13.24 °C	3,252.9 µS/cm	0.35 mg/L	1.25 NTU	48.5 mV	11.25 ft	100.00 ml/min
3/19/2021 8:51 AM	15:00	9.70 pH	13.22 °C	3,253.1 µS/cm	0.84 mg/L	1.13 NTU	39.3 mV	11.65 ft	100.00 ml/min
3/19/2021 8:56 AM	20:00	9.70 pH	13.48 °C	3,256.5 µS/cm	0.95 mg/L	1.04 NTU	37.7 mV	12.05 ft	100.00 ml/min
3/19/2021 9:01 AM	25:00	9.71 pH	13.23 °C	3,241.3 µS/cm	1.67 mg/L	0.94 NTU	36.5 mV	12.20 ft	100.00 ml/min
3/19/2021 9:06 AM	30:00	9.73 pH	12.21 °C	3,261.0 µS/cm	1.12 mg/L	0.86 NTU	34.4 mV	12.10 ft	100.00 ml/min
3/19/2021 9:11 AM	35:00	9.74 pH	12.20 °C	3,279.8 µS/cm	0.43 mg/L	0.68 NTU	34.5 mV	11.95 ft	100.00 ml/min
3/19/2021 9:16 AM	40:00	9.73 pH	12.12 °C	3,222.1 µS/cm	1.49 mg/L	0.76 NTU	33.2 mV	11.90 ft	100.00 ml/min
3/19/2021 9:21 AM	45:00	9.74 pH	12.08 °C	3,283.5 µS/cm	0.40 mg/L	0.67 NTU	30.9 mV	11.80 ft	100.00 ml/min
3/19/2021 9:24 AM	47:34	9.73 pH	12.26 °C	3,295.6 µS/cm	0.42 mg/L		32.6 mV		100.00 ml/min
3/19/2021 9:29 AM	52:34	9.73 pH	12.54 °C	3,278.8 µS/cm	0.29 mg/L	0.65 NTU	27.2 mV	11.75 ft	100.00 ml/min
3/19/2021 9:34 AM	57:34	9.73 pH	12.59 °C	3,298.4 µS/cm	0.26 mg/L	0.64 NTU	26.0 mV	11.70 ft	100.00 ml/min

3/19/2021 9:39 AM	01:02:34	9.73 pH	12.99 °C	3,293.9 µS/cm	0.26 mg/L	0.55 NTU	24.1 mV	11.70 ft	100.00 ml/min

Samples

Sample ID:	Description:
TPZ-01	Grab Sample.

Low-Flow Test Report:

Test Date / Time: 3/22/2021 9:03:54 AM
Project: GP-Plant Hammond
Operator Name: Thomas Kessler

Location Name: TPZ-02 **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 5 ft** **Top of Screen: 40 ft** **Total Depth: 46.8 ft** **Initial Depth to Water: 33.5 ft**	**Pump Type: Bladder** **Tubing Type: polyethylene** **Pump Intake From TOC: 42.5 ft** **Estimated Total Volume Pumped: 4.5 Liter** **Flow Cell Volume: 90 ml** **Final Flow Rate: 100 ml/min** **Final Draw Down: 0.42 ft**	**Instrument Used: Aqua TROLL 400** **Serial Number: 728566**

Test Notes:
Three bottles: Metals, TDS, Inorganics.

Weather Conditions:
Sunny, 45 Degrees.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
3/22/2021 9:03 AM	00:00	6.68 pH	16.36 °C	2,176.5 µS/cm	3.54 mg/L	16.00 NTU	-40.0 mV	33.50 ft	200.00 ml/min
3/22/2021 9:08 AM	05:00	6.71 pH	16.68 °C	2,241.3 µS/cm	2.19 mg/L	12.80 NTU	-54.2 mV	33.85 ft	200.00 ml/min
3/22/2021 9:13 AM	10:00	6.72 pH	17.27 °C	2,246.7 µS/cm	1.64 mg/L	11.80 NTU	-77.5 mV	33.88 ft	200.00 ml/min
3/22/2021 9:18 AM	15:00	6.68 pH	17.78 °C	2,276.1 µS/cm	1.27 mg/L	10.25 NTU	-69.1 mV	33.88 ft	200.00 ml/min
3/22/2021 9:23 AM	20:00	6.69 pH	17.81 °C	2,306.0 µS/cm	1.06 mg/L	9.25 NTU	-95.8 mV	33.90 ft	200.00 ml/min
3/22/2021 9:28 AM	25:00	6.70 pH	17.84 °C	2,328.7 µS/cm	0.95 mg/L	8.49 NTU	-87.9 mV	33.91 ft	200.00 ml/min
3/22/2021 9:33 AM	30:00	6.71 pH	17.99 °C	2,330.6 µS/cm	0.79 mg/L	7.39 NTU	-90.9 mV	33.92 ft	200.00 ml/min
3/22/2021 9:38 AM	35:00	6.69 pH	18.08 °C	2,332.1 µS/cm	0.65 mg/L	5.98 NTU	-90.5 mV	33.92 ft	200.00 ml/min
3/22/2021 9:43 AM	40:00	6.65 pH	17.95 °C	2,332.5 µS/cm	0.54 mg/L	4.28 NTU	-86.4 mV	33.92 ft	200.00 ml/min
3/22/2021 9:48 AM	45:00	6.64 pH	17.97 °C	2,327.3 µS/cm	0.44 mg/L	3.40 NTU	-83.9 mV	33.92 ft	200.00 ml/min

Samples

Sample ID:	Description:

TPZ-02	Grab Sample.

CALIBRATION REPORT

Calibration Report

Instrument	Aqua TROLL 400
Serial Number	728623
Created	2/9/2021

Sensor	**RDO**
Serial Number	728756
Last Calibrated	2/9/2021

Calibration Details

Slope	1.067573
Offset	0.00 mg/L

Calibration point 100%

Concentration	10.68 mg/L
Temperature	9.04 °C
Barometric Pressure	1,000.5 mbar

Sensor	**Conductivity**
Serial Number	728623
Last Calibrated	2/9/2021

Calibration Details

Cell Constant	1.008
Reference Temperature	25.00 °C
TDS Conversion Factor (ppm)	0.65

Sensor	**Level**
Serial Number	724054
Last Calibrated	Factory Defaults

Sensor	**pH/ORP**
Serial Number	20794
Last Calibrated	2/9/2021

Calibration Details

Total Calibration Points	3

Calibration Point 1

pH of Buffer	4.00 pH
pH mV	136.6 mV
Temperature	6.59 °C

Calibration Point 2

pH of Buffer	7.06 pH
pH mV	-31.6 mV
Temperature	8.52 °C

Calibration Point 3

pH of Buffer	10.12 pH
pH mV	-195.7 mV
Temperature	8.91 °C

Slope and Offset 1

Slope	-55 mV/pH
Offset	-28.3 mV

Slope and Offset 2

Slope	-53.6 mV/pH
Offset	-28.4 mV

ORP

ORP Solution	ORP Standard
Offset	1.5 mV
Temperature	8.85 °C

Calibration Report

Instrument	Aqua TROLL 400
Serial Number	728541
Created	2/11/2021

Sensor	**RDO**
Serial Number	728741
Last Calibrated	2/11/2021

Calibration Details

Slope	1.134456
Offset	0.00 mg/L

Calibration point 100%

Concentration	8.76 mg/L
Temperature	14.96 °C
Barometric Pressure	997.61 mbar

Sensor	**Conductivity**
Serial Number	728541
Last Calibrated	2/11/2021

Calibration Details

Cell Constant	0.986
Reference Temperature	25.00 °C
TDS Conversion Factor (ppm)	0.65

Sensor	**Level**
Serial Number	724053
Last Calibrated	Factory Defaults

Sensor	**pH/ORP**
Serial Number	20773
Last Calibrated	2/11/2021

Calibration Details

Total Calibration Points	3

Calibration Point 1

pH of Buffer	4.00 pH
pH mV	153.8 mV
Temperature	14.31 °C

Calibration Point 2

pH of Buffer	7.06 pH
pH mV	-7.2 mV
Temperature	14.90 °C

Calibration Point 3

pH of Buffer	10.08 pH
pH mV	-178.9 mV
Temperature	15.21 °C

Slope and Offset 1

Slope	-52.59 mV/pH
Offset	-4.0 mV

Slope and Offset 2

Slope	-56.87 mV/pH
Offset	-3.8 mV

ORP

ORP Solution	ORP Standard
Offset	-1.9 mV
Temperature	15.25 °C

Calibration Report

Instrument	Aqua TROLL 400
Serial Number	728634
Created	2/12/2021

Sensor	**RDO**
Serial Number	728749
Last Calibrated	2/12/2021

Calibration Details

Slope	1.091179
Offset	0.00 mg/L

Calibration point 100%

Concentration	8.81 mg/L
Temperature	15.42 °C
Barometric Pressure	998.92 mbar

Sensor	**Conductivity**
Serial Number	728634
Last Calibrated	2/12/2021

Calibration Details

Cell Constant	0.986
Reference Temperature	25.00 °C
TDS Conversion Factor (ppm)	0.65

Sensor	**Level**
Serial Number	728331
Last Calibrated	Factory Defaults

Sensor	**pH/ORP**
Serial Number	20797
Last Calibrated	2/12/2021

Calibration Details

Total Calibration Points	3

Calibration Point 1

pH of Buffer	4.00 pH
pH mV	153.9 mV
Temperature	14.66 °C

Calibration Point 2

pH of Buffer	7.02 pH
pH mV	-3.8 mV
Temperature	15.12 °C

Calibration Point 3

pH of Buffer	10.08 pH
pH mV	-173.3 mV
Temperature	15.39 °C

Slope and Offset 1

Slope	-52.24 mV/pH
Offset	-2.8 mV

Slope and Offset 2

Slope	-55.38 mV/pH
Offset	-2.7 mV

ORP

ORP Solution	ZoBell's
Offset	8.7 mV
Temperature	14.91 °C

Calibration Report

Instrument	Aqua TROLL 400
Serial Number	728550
Created	3/18/2021

Sensor	**RDO**
Serial Number	728776
Last Calibrated	3/18/2021

Calibration Details

Slope	1.17151
Offset	0.00 mg/L

Calibration point 100%

Concentration	7.65 mg/L
Temperature	18.17 °C
Barometric Pressure	985.37 mbar

Sensor	**Conductivity**
Serial Number	728550
Last Calibrated	3/18/2021

Calibration Details

Cell Constant	1.003
Reference Temperature	25.00 °C
TDS Conversion Factor (ppm)	0.65

Sensor	**Level**
Serial Number	718937
Last Calibrated	Factory Defaults

Sensor	**pH/ORP**
Serial Number	20796
Last Calibrated	3/18/2021

Calibration Details

Total Calibration Points	3

Calibration Point 1

pH of Buffer	4.00 pH
pH mV	135.9 mV
Temperature	17.54 °C

Calibration Point 2

pH of Buffer	7.02 pH
pH mV	-16.4 mV
Temperature	17.56 °C

Calibration Point 3

pH of Buffer	10.04 pH
pH mV	-184.4 mV
Temperature	17.55 °C

Slope and Offset 1

Slope	-50.45 mV/pH
Offset	-15.4 mV

Slope and Offset 2

Slope	-55.6 mV/pH
Offset	-15.3 mV

ORP

ORP Solution	ORP Standard
Offset	18.6 mV
Temperature	17.55 °C

Calibration Report

Instrument	Aqua TROLL 400
Serial Number	728550
Created	3/18/2021

Sensor	**RDO**
Serial Number	728776
Last Calibrated	3/18/2021

Calibration Details

Slope	1.17151
Offset	0.00 mg/L

Calibration point 100%

Concentration	7.65 mg/L
Temperature	18.17 °C
Barometric Pressure	985.37 mbar

Sensor	**Conductivity**
Serial Number	728550
Last Calibrated	3/18/2021

Calibration Details

Cell Constant	1.003
Reference Temperature	25.00 °C
TDS Conversion Factor (ppm)	0.65

Sensor	**Level**
Serial Number	718937
Last Calibrated	Factory Defaults

Sensor	**pH/ORP**
Serial Number	20796
Last Calibrated	3/18/2021

Calibration Details

Total Calibration Points	3

Calibration Point 1

pH of Buffer	4.00 pH
pH mV	131.5 mV
Temperature	20.26 °C

Calibration Point 2

pH of Buffer	7.02 pH
pH mV	-18.3 mV
Temperature	20.22 °C

Calibration Point 3

pH of Buffer	10.04 pH
pH mV	-186.4 mV
Temperature	20.10 °C

Slope and Offset 1

Slope	-49.59 mV/pH
Offset	-17.3 mV

Slope and Offset 2

Slope	-55.67 mV/pH
Offset	-17.1 mV

ORP

ORP Solution	ORP Standard
Offset	18.6 mV
Temperature	17.55 °C

Calibration Report

Instrument	Aqua TROLL 400
Serial Number	728566
Created	3/18/2021

Sensor	**RDO**
Serial Number	728781
Last Calibrated	3/18/2021

Calibration Details

Slope	1.165792
Offset	0.00 mg/L

Calibration point 100%

Concentration	8.13 mg/L
Temperature	16.56 °C
Barometric Pressure	985.61 mbar

Sensor	**Conductivity**
Serial Number	728566
Last Calibrated	3/18/2021

Calibration Details

Cell Constant	0.983
Reference Temperature	25.00 °C
TDS Conversion Factor (ppm)	0.65

Sensor	**Level**
Serial Number	728330
Last Calibrated	Factory Defaults

Sensor	**pH/ORP**
Serial Number	20793
Last Calibrated	3/18/2021

Calibration Details

Total Calibration Points	3

Calibration Point 1

pH of Buffer	4.00 pH
pH mV	149.7 mV
Temperature	15.18 °C

Calibration Point 2

pH of Buffer	7.06 pH
pH mV	-6.1 mV
Temperature	14.94 °C

Calibration Point 3

pH of Buffer	10.08 pH
pH mV	-176.8 mV
Temperature	14.90 °C

Slope and Offset 1

Slope	-50.9 mV/pH
Offset	-3.0 mV

Slope and Offset 2

Slope	-56.54 mV/pH
Offset	-2.7 mV

ORP

ORP Solution	ORP Standard
Offset	-0.4 mV
Temperature	14.85 °C

Calibration Report

Instrument	Aqua TROLL 400
Serial Number	728563
Created	3/18/2021

Sensor	**RDO**
Serial Number	728772
Last Calibrated	3/18/2021

Calibration Details

Slope	1.057647
Offset	0.00 mg/L

Calibration point 100%

Concentration	8.93 mg/L
Temperature	16.78 °C
Barometric Pressure	985.96 mbar

Sensor	**Conductivity**
Serial Number	728563
Last Calibrated	3/18/2021

Calibration Details

Cell Constant	1.008
Reference Temperature	25.00 °C
TDS Conversion Factor (ppm)	0.65

Sensor	**Level**
Serial Number	728332
Last Calibrated	Factory Defaults

Sensor	**pH/ORP**
Serial Number	20788
Last Calibrated	3/18/2021

Calibration Details

Total Calibration Points	3

Calibration Point 1

pH of Buffer	4.00 pH
pH mV	153.1 mV
Temperature	16.74 °C

Calibration Point 2

pH of Buffer	7.02 pH
pH mV	-6.9 mV
Temperature	17.03 °C

Calibration Point 3

pH of Buffer	10.08 pH
pH mV	-175.9 mV
Temperature	17.09 °C

Slope and Offset 1

Slope	-52.98 mV/pH
Offset	-5.9 mV

Slope and Offset 2

Slope	-55.22 mV/pH
Offset	-5.8 mV

ORP

ORP Solution	ZoBell's
Offset	14.8 mV
Temperature	17.05 °C

Calibration Report

Instrument	Aqua TROLL 400
Serial Number	728563
Created	3/18/2021

Sensor	**RDO**
Serial Number	728772
Last Calibrated	3/18/2021

Calibration Details

Slope	1.057647
Offset	0.00 mg/L

Calibration point 100%

Concentration	8.93 mg/L
Temperature	16.78 °C
Barometric Pressure	985.96 mbar

Sensor	**Conductivity**
Serial Number	728563
Last Calibrated	3/18/2021

Calibration Details

Cell Constant	1.008
Reference Temperature	25.00 °C
TDS Conversion Factor (ppm)	0.65

Sensor	**Level**
Serial Number	728332
Last Calibrated	Factory Defaults

Sensor	**pH/ORP**
Serial Number	20788
Last Calibrated	3/18/2021

Calibration Details

Total Calibration Points	3

Calibration Point 1

pH of Buffer	4.00 pH
pH mV	150.6 mV
Temperature	19.64 °C

Calibration Point 2

pH of Buffer	7.02 pH
pH mV	-7.0 mV
Temperature	19.50 °C

Calibration Point 3

pH of Buffer	10.04 pH
pH mV	-173.6 mV
Temperature	19.50 °C

Slope and Offset 1

Slope	-52.19 mV/pH
Offset	-6.0 mV

Slope and Offset 2

Slope	-55.16 mV/pH
Offset	-5.9 mV

ORP

ORP Solution	ZoBell's
Offset	14.8 mV
Temperature	17.05 °C

Calibration Report

Instrument	Aqua TROLL 400
Serial Number	728550
Created	3/19/2021

Sensor	**RDO**
Serial Number	728776
Last Calibrated	3/19/2021

Calibration Details

Slope	1.119871
Offset	0.00 mg/L

Calibration point 100%

Concentration	8.53 mg/L
Temperature	15.61 °C
Barometric Pressure	996.88 mbar

Sensor	**Conductivity**
Serial Number	728550
Last Calibrated	3/19/2021

Calibration Details

Cell Constant	1.009
Reference Temperature	25.00 °C
TDS Conversion Factor (ppm)	0.65

Sensor	**Level**
Serial Number	718937
Last Calibrated	Factory Defaults

Sensor	**pH/ORP**
Serial Number	20796
Last Calibrated	3/19/2021

Calibration Details

Total Calibration Points	3

Calibration Point 1

pH of Buffer	4.00 pH
pH mV	130.5 mV
Temperature	14.93 °C

Calibration Point 2

pH of Buffer	7.02 pH
pH mV	-16.4 mV
Temperature	15.04 °C

Calibration Point 3

pH of Buffer	10.08 pH
pH mV	-182.7 mV
Temperature	15.12 °C

Slope and Offset 1

Slope	-48.66 mV/pH
Offset	-15.4 mV

Slope and Offset 2

Slope	-54.33 mV/pH
Offset	-15.3 mV

ORP

ORP Solution	ORP Standard
Offset	15.6 mV
Temperature	15.14 °C

Calibration Report

Instrument	Aqua TROLL 400
Serial Number	728566
Created	3/19/2021

Sensor	**RDO**
Serial Number	728781
Last Calibrated	3/19/2021

Calibration Details

Slope	1.147331
Offset	0.00 mg/L

Calibration point 100%

Concentration	9.77 mg/L
Temperature	9.61 °C
Barometric Pressure	996.81 mbar

Sensor	**Conductivity**
Serial Number	728566
Last Calibrated	3/19/2021

Calibration Details

Cell Constant	0.97
Reference Temperature	25.00 °C
TDS Conversion Factor (ppm)	0.65

Sensor	**Level**
Serial Number	728330
Last Calibrated	Factory Defaults

Sensor	**pH/ORP**
Serial Number	20793
Last Calibrated	3/19/2021

Calibration Details

Total Calibration Points	3

Calibration Point 1

pH of Buffer	4.00 pH
pH mV	145.0 mV
Temperature	9.99 °C

Calibration Point 2

pH of Buffer	7.06 pH
pH mV	-8.4 mV
Temperature	10.17 °C

Calibration Point 3

pH of Buffer	10.12 pH
pH mV	-175.4 mV
Temperature	10.38 °C

Slope and Offset 1

Slope	-50.16 mV/pH
Offset	-5.4 mV

Slope and Offset 2

Slope	-54.56 mV/pH
Offset	-5.2 mV

ORP

ORP Solution	ORP Standard
Offset	-6.5 mV
Temperature	10.30 °C

Calibration Report

Instrument	Aqua TROLL 400
Serial Number	728563
Created	3/19/2021

Sensor	**RDO**
Serial Number	728772
Last Calibrated	3/19/2021

Calibration Details

Slope	1.068346
Offset	0.00 mg/L

Calibration point 100%

Concentration	8.96 mg/L
Temperature	16.66 °C
Barometric Pressure	996.69 mbar

Sensor	**Conductivity**
Serial Number	728563
Last Calibrated	3/19/2021

Calibration Details

Cell Constant	1.035
Reference Temperature	25.00 °C
TDS Conversion Factor (ppm)	0.65

Sensor	**Level**
Serial Number	728332
Last Calibrated	Factory Defaults

Sensor	**pH/ORP**
Serial Number	20788
Last Calibrated	3/19/2021

Calibration Details

Total Calibration Points	3

Calibration Point 1

pH of Buffer	4.00 pH
pH mV	156.3 mV
Temperature	20.75 °C

Calibration Point 2

pH of Buffer	7.02 pH
pH mV	-3.2 mV
Temperature	19.37 °C

Calibration Point 3

pH of Buffer	10.04 pH
pH mV	-165.8 mV
Temperature	18.69 °C

Slope and Offset 1

Slope	-52.79 mV/pH
Offset	-2.1 mV

Slope and Offset 2

Slope	-53.86 mV/pH
Offset	-2.1 mV

ORP

ORP Solution	ZoBell's
Offset	14.2 mV
Temperature	18.68 °C

Calibration Report

Instrument	Aqua TROLL 400
Serial Number	728566
Created	3/22/2021

Sensor	**RDO**
Serial Number	728781
Last Calibrated	3/22/2021

Calibration Details

Slope	1.134625
Offset	0.00 mg/L

Calibration point 100%

Concentration	10.14 mg/L
Temperature	8.80 °C
Barometric Pressure	1,004.0 mbar

Sensor	**Conductivity**
Serial Number	728566
Last Calibrated	3/22/2021

Calibration Details

Cell Constant	0.947
Reference Temperature	25.00 °C
TDS Conversion Factor (ppm)	0.65

Sensor	**Level**
Serial Number	728330
Last Calibrated	Factory Defaults

Sensor	**pH/ORP**
Serial Number	20793
Last Calibrated	3/22/2021

Calibration Details

Total Calibration Points	3

Calibration Point 1

pH of Buffer	4.00 pH
pH mV	144.9 mV
Temperature	7.93 °C

Calibration Point 2

pH of Buffer	7.06 pH
pH mV	-5.9 mV
Temperature	8.48 °C

Calibration Point 3

pH of Buffer	10.12 pH
pH mV	-175.0 mV
Temperature	8.95 °C

Slope and Offset 1

Slope	-49.28 mV/pH
Offset	-2.9 mV

Slope and Offset 2

Slope	-55.26 mV/pH
Offset	-2.6 mV

ORP

ORP Solution	ORP Standard
Offset	-7.5 mV
Temperature	9.16 °C

APPENDIX D

SiREM Report

SiREM
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130 Stone Rd. W
Guelph, ON N1G 3Z2
(519) 822-2265

Certificate of Analysis
SiREMNA™ Parameters

Customer: Geosyntec Consultants Inc.

SiREM Reference: S-7677

Customer Project ID: Hammond AP-2 ACP Evaluation

Final Report Issued: 27 August 2021

Site Sampling Date: 26 and 27 January 2021 and 2 February 2021

INTRODUCTION

Geosyntec Consultants Inc. (Geosyntec) retained SiREM to perform SiREMNA™ testing including anion exchange capacity (AEC), cation exchange capacity (CEC), total sulfur, total sulfide, organic carbon content, total metals, X-Ray Diffraction (XRD), Scanning Electron Microscopy (SEM) with Energy Dispersive X-Ray analysis (EDXA) and sequential extraction procedure (SEP) from geologic materials collected at the Hammond AP-2 ACP Site (the Site).

Site geologic materials were collected on 26 and 27 January 2021 and 2 February 2021. SiREM received the samples on 23 March 2021 in good condition with a measured temperature of 14°C. Refer to Attachment A for Chain of Custody documentation received with the samples.

The site materials were stored in a cold room at 4°C upon arrival until testing commenced. On 25 March 2021 geologic material samples were individually homogenized and subsampled in a chemical fume hood prior to shipping to an external laboratory for analysis. Samples for SEP were stored in the cold room until the results from the total metals analysis were received. Samples for SEP were then subsampled in a chemical fume hood and shipped to the external laboratory for analysis. The samples were shipped to external laboratories for analysis as outlined in the summary table below. Prior to performing the XRD analysis, SGS performed whole rock analysis on the samples to have as a reference for the mineral identification by XRD. Refer to Attachment B for the original external laboratory reports.

METHOD SUMMARY TABLE

Parameter	Method	Laboratory
Total sulfur, total sulfide and organic carbon content	ASTM E1915-13	SGS, Lakefield, Ontario
Total metals	EPA 200.8	
Whole Rock Analysis	Borate Fusion and Xray Fluorescence Spectrometry	
XRD	Rietveld refinement method	
SEM and EDXA	SGS Internal method	
CEC	EPA method SW9081	SGS, Guelph, Ontario
Sequential extraction procedure	Methods SW846 6010B and 3010A for SEP Steps 1-7	Test America, Knoxville, Tennessee
AEC	Modified EPA method SW9081	Specialty Analytical, Clackamas, Oregon

METHOD REFERENCES

ASTM W1915-13: Standard Test Methods for Analysis of Metal Bearing Ores and Related Materials for Carbon, Sulfur, and Acid-Base Characteristics

EPA 200.8: Determination of Trace Elements in Waters and Wastes by Inductively Coupled Plasma-Mass Spectrometry

The Rietveld Method of Mineral Identification by XRD (ME-LR-MIN-MET-MN-D05) is the method used by SGS and is accredited to the requirements of ISO/IEC 17025

Borate Fusion and Xray Fluorescence Spectrometry is the method used by SGS and is accredited to the requirements of ISO/IEC 17025

SEM-EDS analysis is conducted using the Tescan Vega II SEM which is equipped with an Oxford EDS detector

EPA 9081: Cation-Exchange Capacity of Soils (Sodium Acetate)

SW846: *Test methods for evaluating solid waste, physical/chemical methods*, Third Edition, November 1986, and its updates.

EPA 6010B: Inductively Coupled Plasma – Atomic Emission Spectroscopy

EPA 3010A: Acid Digestion of Aqueous Samples and Extracts for Total Metals for Analysis by FLAA or ICP Spectroscopy

Modified EPA 9081: Anion-Exchange Capacity of Soils. Sodium nitrate used in place of sodium acetate to exchange anions, washed with isopropyl alcohol and nitrate extracted with sodium chloride. Nitrate analyzed by SM4500-NO_3-F.

TABLES

SiREM
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130 Stone Rd. W
Guelph, ON N1G 3Z2
(519) 822-2265

Analytical Results

SiREM File Reference: S-7677

Client: Geosyntec Consultants Inc.
Client Project Number: GW6581B/14;GW6581/22
Date Samples Received: March 23, 2021
Date Samples Analyzed: April 4, 12, 13 and 29, 2021

Client Sample ID	Laboratory Sample ID	Client Sample Date	Anion Exchange Capacity	Cation Exchange Capcity	Total Sulfur	Total Sulfide	Total Organic Carbon
			meq/100g	meq/100g	%	%	%
DPT11_AP2_012721_30-40	21-3167	27-Jan-21	6.78	8.98	0.034	0.04	0.11
DPT08_AP2_012621_10-20	21-3168	26-Jan-21	5.96	6.61	0.033	0.05	0.16
DPT07_AP2_020221_10-20	21-3169	2-Feb-21	6.84	10.25	0.811	0.85	1.06
DPT09_AP2_012621_20-30	21-3174	26-Jan-21	5.17	11.91	0.030	0.04	0.48
DPT10_AP2_012721_25-35	21-3175	27-Jan-21	6.19	10.62	0.014	< 0.04	0.15

Comments:
% - percent
< - compound not detected, the associated value is the detection limit
meq/100g - milliequivalents per 100 grams

Analyst:

Kela Ashworth, B.Sc.
Senior Laboratory Technician

Results approved:

Michael Healey, B.Sc.
Laboratory Supervisor I

Date:

27-Aug-21

SiREM
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Analytical Results - Total Metals

SiREM File Reference: S- S-7677

Client: Geosyntec Consultants Inc.
Client Project Number: GW6581B/14;GW6581/22
Date Samples Received: March 23, 2021
Date Samples Analyzed: April 15, 2021

Client Sample ID	Laboratory Sample ID	Client Sample Date	Molybdenum	Lithium	Cobalt	Arsenic	Iron	Aluminum	Manganese
			µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g
DPT11_AP2_012721_30-40	21-3167	27-Jan-21	1.0	27	7	4.6	39,000	57,000	190
DPT08_AP2_012621_10-20	21-3168	26-Jan-21	1.0	45	10	8.2	24,000	48,000	230
DPT07_AP2_020221_10-20	21-3169	2-Feb-21	2.2	46	14	9.4	31,000	77,000	170
DPT09_AP2_012621_20-30	21-3174	26-Jan-21	0.8	35	13	4.7	27,000	59,000	380
DPT10_AP2_012721_25-35	21-3175	27-Jan-21	0.9	33	14	5.3	36,000	69,000	540

Comments:
µg/g - microgram per gram

Analyst:

Kela Ashworth, B.Sc.
Senior Laboratory Technician

Results approved:

Michael Healey, B.Sc.
Laboratory Supervisor I

Date:

27-Aug-21

SiREM
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(519) 822-2265

Analytical Results - Whole Rock Analysis

SiREM File Reference: S- S-7677

Client: Geosyntec Consultants Inc.
Client Project Number: GW6581B/14;GW6581/22
Date Samples Received: March 23, 2021
Date Samples Analyzed: April 6, 2021

Client Sample ID	Laboratory Sample ID	Client Sample Date	Quartz (SiO2)	Aluminum Oxide (Al2O3)	Ferric Oxide (Fe2O3)	Magnesium Oxide (MgO)	Calcium Oxide (CaO)	Sodium Oxide (Na2O)	Potassium Oxide (K2O)	Titanium Dioxide (TiO2)	Phosphorous Pentoxide (P2O5)	Manganese Oxide (MnO)	Chromium (III) Oxide (Cr2O3)	Vanadium Oxide (V2O5)	Loss on Ignition
			%	%	%	%	%	%	%	%	%	%	%	%	%
DPT11_AP2_012721_30-40	21-3167	27-Jan-21	72.2	11.9	6.23	0.61	0.19	0.12	1.40	0.97	0.09	0.02	< 0.01	0.02	5.90
DPT08_AP2_012621_10-20	21-3168	26-Jan-21	78.6	10.3	3.90	0.46	0.14	0.14	1.53	0.60	0.07	0.04	0.01	< 0.01	4.03
DPT07_AP2_020221_10-20	21-3169	2-Feb-21	65.6	16.3	4.99	1.04	0.24	0.39	2.70	0.74	0.11	0.02	0.03	0.02	7.11
DPT09_AP2_012621_20-30	21-3174	26-Jan-21	72.9	12.0	4.17	0.66	0.38	0.26	1.54	0.96	0.07	0.06	< 0.01	0.01	6.11
DPT10_AP2_012721_25-35	21-3175	27-Jan-21	67.3	14.2	5.66	1.03	0.43	0.56	2.21	1.02	0.12	0.07	0.01	0.01	6.69

Comments:
< - compound not detected, the associated value is the reporting limit.
% - percent

Analyst:

Kela Ashworth, B.Sc.
Senior Laboratory Technician

Results approved:

Michael Healey, B.Sc.
Laboratory Supervisor I

Date:

27-Aug-21

SiREM
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Analytical Results - Rietveld Quantitative X-Ray Diffraction

SiREM File Reference: S- S-7677

Client: Geosyntec Consultants Inc.
Client Project Number: GW6581B/14;GW6581/22
Date Samples Received: March 23, 2021
Date Samples Analyzed: April 16, 2021

Client Sample ID	Laboratory Sample ID	Client Sample Date	Quartz	Kaolinite	Muscovite	Microcline	Rutile	Albite	Anatase	Pyrite	Orthoclase	Calcite	Diopside
			wt %	wt %	wt %	wt %	wt %	wt %	wt %	wt %	wt %	wt %	wt %
DPT11_AP2_012721_30-40	21-3167	27-Jan-21	59.3	19.1	16.4	1.5	0.9	2.3	0.5	-	-	-	-
DPT08_AP2_012621_10-20	21-3168	26-Jan-21	65.6	12.7	17.2	1.7	0.5	2.1	0.2	-	-	-	-
DPT07_AP2_020221_10-20	21-3169	2-Feb-21	43.7	12.7	33.1	3.0	1.1	4.5	0.8	1.3	-	-	-
DPT09_AP2_012621_20-30	21-3174	26-Jan-21	62.6	20.4	7.9	-	0.3	4.3	1.0	0.4	0.6	0.2	2.4
DPT10_AP2_012721_25-35	21-3175	27-Jan-21	45.1	22.0	23.0	-	0.7	7.0	0.4	-	1.9	-	-

Comments:
-- not identified by analyst
wt % - weight percent

Analyst:

Kela Ashworth, B.Sc.
Senior Laboratory Technician

Results approved:

Michael Healey, B.Sc.
Laboratory Supervisor I

Date:

27-Aug-21

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Analytical Results - Sequential Extraction Procedure

SiREM File Reference: S- S-7677

Client: Geosyntec Consultants Inc.
Client Project Number: GW6581B/14;GW6581/22
Date Samples Received: March 23, 2021
Date Samples Analyzed: April 20, 2021

Client Sample ID	Laboratory Sample ID	Client Sample Date	SEP Step 1	SEP Step 2	SEP Step 3	SEP Step 4	SEP Step 5	SEP Step 6	SEP Step 7	SEP Sum of Steps 1-7	Total
			Cobalt	Cobalt	Cobalt	Cobalt	Cobalt	Cobalt	Cobalt	Cobalt	Cobalt
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
DPT11_AP2_012721_30-40	21-3167	27-Jan-21	<0.23	<0.24	0.33 J	2.1 J	<0.77	2.0 J	1.4 J	5.9	7.0 J
DPT08_AP2_012621_10-20	21-3168	26-Jan-21	1 J	0.3 J	5.7	2.6 J	<0.68	1.8 J	0.41 J	12	7.5
DPT07_AP2_020221_10-20	21-3169	2-Feb-21	7.7 J	0.79 J	0.25 J	0.68 J	2.2 J	2.2 J	0.64 J	14	11

Comments:
< - compound not detected, the associated value is the method detection limit.
J - result is less than the reporting limit, but greater than or equal to the method detection limit and the concentration is an approximate value.
mg/kg - milligram per kilogram

Analyst:

Kela Ashworth, B.Sc.
Senior Laboratory Technician

Results approved:

Michael Healey, B.Sc.
Laboratory Supervisor I

Date:

27-Aug-21

ATTACHMENT A: Chain of Custody Documentation

SiREM

Chain-of-Custody Form

siremlab.com

130 Stone Road West
Guelph ON, Canada N1G 3Z2
(519) 822-2265

Lab # S-7677

*Project Name: Hammond AP1 AP2 AP3 ACM evaluation	*Project #: GW6581B/14; GW6581/22
*Project Manager: Whitney Law	*Company: Geosyntec Consultants
*Email Address: wlaw@geosyntec.com	
Address (Street): 1255 Roberts Blvd, NW, Suite 200	
City: Kennesaw	State/Province: GA	Country: USA
*Phone #: 678-202-9573	
*Sampler's Signature	*Sampler's Printed Name

Analysis

Client Sample ID	Sampling Date	Sampling Time	Matrix	# of Containers	Anion exchange capacity (AEC)	Cation exchange capacity (CEC)	Total sulfur	Total sulfide	Organic carbon content	X-ray diff., SEM, EDXA	Total metal conc (see notes					Other Information
					2	2	2	2	2	2	2					
DPT07_AP1_012821_32-42	1/28/21		S	2	X	X	X	X	X	X	X					Rept total conc for: Mo, Li, F, As, Fe, Al, Mg
DPT11_AP2_012721_30-40	01/27/21		S	2	X	X	X	X	X	X	X					Rept total conc for: Mo, Co, Li, Fe, Al, Mg
DPT08_AP2_012621_10-20	1/26/21		S	2	X	X	X	X	X	X	X					Rept total conc for: Mo, Co, Li, Fe, Al, Mg
DPT07_AP2_020221_10-20	2/2/21		S	2	X	X	X	X	X	X	X					Rept total conc for: Mo, Co, Li, Fe, Al, Mg
DPT01_AP3_012921_10-18	1/29/21		S	2	X	X	X	X	X	X	X					Rept total conc for: Mo, Li, Fe, Al, Mn
DPT03_AP3_020121_13-18	2/1/21		S	1	X	X	X	X	X	X	X					Rept total conc for: Mo, Li, Fe, Al, Mn
DPT02_AP3_020121_13-18	2/1/21		S	1	X	X	X	X	X	X	X					Rept total conc for: Mo, Li, Fe, Al, Mn
DPT04_AP3_020121_13-21	2/1/21		S	2	X	X	X	X	X	X	X					Rept total conc for: Mo, Li, Fe, Al, Mn
DPT09_AP2_012621_20-30	1/26/21		S	2	X	X	X	X	X	X	X					Rept total conc for: Mo, Co, Li, Fe, Al, Mg
DPT10_AP2_012721_25-35	1/27/21		S	2	X	X	X	X	X	X	X					Rept total conc for: Mo, Co, Li, Fe, Al, Mg

WL 3/18/21

Preservative Key

0. None
1. HCL
2. Other ICE
3. Other
4. Other
5. Other
6. Other

Billing Information

P.O. #

*Bill To: Speak with PM on how to partition invoice

Turnaround Time Requested

Normal [X]
Rush [ ]

For Lab Use Only

Cooler Condition: Good.
Cooler Temperature: 14°C
Custody Seals: Yes [ ] No [X]

For Lab Use Only

Proposal #:

Relinquished By:	Received By:	Relinquished By:	Received By:	Relinquished By:	Received By:
Signature: WLaw	Signature: NBrent	Signature:	Signature:	Signature:	Signature:
Printed Name: Whitney Law	Printed Name: Natasha Brent	Printed Name:	Printed Name:	Printed Name:	Printed Name:
Firm: Geosyntec Consultants	Firm: ~~FedEx~~ SiREM	Firm:	Firm:	Firm:	Firm:
Date/Time: 3/18/21, 16:00	Date/Time: 23 Mar 21 13:55	Date/Time:	Date/Time:	Date/Time:	Date/Time:

Distribution: White - return to Originator: Yellow - Lab Copy: Pink - Retained by Client

** Mandatory Fields*

ATTACHMENT B: External Laboratory Reports

SGS Canada Inc.
P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - KOL 2HO
Phone: 705-652-2000 FAX: 705-652-6365

Project : S-7677

16-April-2021

SiREM Laboratory
Attn : Kela Ashworth

130 Stone Rd. W
Guelph, ON
N1G 3Z2, Canada

Phone: 519-822-2265
Fax:519-822-3151

Date Rec. : 26 March 2021
LR Report: **CA14601-MAR21**

Copy: #1

CERTIFICATE OF ANALYSIS

Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: S-7677_1_DPT 07AP1	6: S-7677_2_DPT 11AP2	7: S-7677_3_DPT 08AP2	8: S-7677_4_DPT 07AP2	9: S-7677_5_DPT 01AP3
Sample Date & Time					25-Mar-21	25-Mar-21	25-Mar-21	25-Mar-21	25-Mar-21
Ag [µg/g]	15-Apr-21	19:04	16-Apr-21	10:28	< 1	< 1	< 1	< 1	< 1
Al [µg/g]	15-Apr-21	19:04	16-Apr-21	10:28	42000	57000	48000	77000	67000
As [µg/g]	15-Apr-21	19:04	16-Apr-21	10:28	7.8	4.6	8.2	9.4	6.7
Ba [µg/g]	15-Apr-21	19:04	16-Apr-21	10:28	220	260	200	280	180
Be [µg/g]	15-Apr-21	19:04	16-Apr-21	10:28	1.1	1.3	1.3	2.4	4.2
Bi [µg/g]	15-Apr-21	19:04	16-Apr-21	10:28	0.18	0.25	0.20	0.37	0.30
Ca [µg/g]	15-Apr-21	19:04	16-Apr-21	10:28	830	1300	1100	1900	1900
Cd [µg/g]	15-Apr-21	19:04	16-Apr-21	10:28	0.02	0.03	0.33	0.58	0.15
Co [µg/g]	15-Apr-21	19:04	16-Apr-21	10:28	7	7	10	14	21
Cr [µg/g]	15-Apr-21	19:04	16-Apr-21	10:28	40	56	57	150	70
Cu [µg/g]	15-Apr-21	19:04	16-Apr-21	10:28	8.2	13	13	22	32
Fe [µg/g]	15-Apr-21	19:04	16-Apr-21	10:28	20000	39000	24000	31000	37000
K [µg/g]	15-Apr-21	19:04	16-Apr-21	10:28	7900	10000	11000	20000	18000
Li [µg/g]	15-Apr-21	19:04	16-Apr-21	10:28	24	27	45	46	55
Mg [µg/g]	15-Apr-21	19:04	16-Apr-21	10:28	1600	3500	2500	5800	8500
Mn [µg/g]	15-Apr-21	19:04	16-Apr-21	10:28	100	190	230	170	780
Mo [µg/g]	15-Apr-21	19:04	16-Apr-21	10:28	1.4	1.0	1.0	2.2	0.6
Ni [µg/g]	15-Apr-21	19:04	16-Apr-21	10:28	14	19	24	55	51
Pb [µg/g]	15-Apr-21	19:04	16-Apr-21	10:28	15	18	16	19	17
Sb [µg/g]	15-Apr-21	19:04	16-Apr-21	10:28	< 0.8	< 0.8	< 0.8	1.2	< 0.8
Se [µg/g]	15-Apr-21	19:04	16-Apr-21	10:28	< 0.7	< 0.7	< 0.7	4.7	< 0.7
Sn [µg/g]	15-Apr-21	19:04	16-Apr-21	10:28	< 6	< 6	< 6	< 6	< 6
Sr [µg/g]	15-Apr-21	19:04	16-Apr-21	10:28	38	40	79	150	39
Ti [µg/g]	15-Apr-21	19:04	16-Apr-21	10:28	3500	3900	2600	3300	2900
Tl [µg/g]	15-Apr-21	19:04	16-Apr-21	10:28	0.34	0.47	0.36	0.64	0.49
U [µg/g]	15-Apr-21	19:04	16-Apr-21	10:28	2.0	2.6	1.6	3.0	3.3
V [µg/g]	15-Apr-21	19:04	16-Apr-21	10:28	53	67	71	150	84
Y [µg/g]	15-Apr-21	19:04	16-Apr-21	10:28	16	16	14	30	36
Zn [µg/g]	15-Apr-21	19:04	16-Apr-21	10:28	39	49	59	120	84
S [%]	12-Apr-21	10:54	13-Apr-21	11:02	0.022	0.034	0.033	0.811	0.023
C [%]	12-Apr-21	10:54	13-Apr-21	11:00	0.078	0.128	0.167	1.09	0.201
Sulphide [%]	13-Apr-21	07:21	13-Apr-21	11:02	< 0.04	0.04	0.05	0.85	< 0.04
TOC [%]	12-Apr-21	13:24	13-Apr-21	11:00	0.066	0.114	0.155	1.06	0.174

OnLine LIMS

00024905

SGS Canada Inc.
P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - KOL 2HO
Phone: 705-652-2000 FAX: 705-652-6365

Project : S-7677

LR Report : **CA14601-MAR21**

Analysis	10: S-7677_6_DPT 03AP3	11: S-7677_7_DPT 02AP3	12: S-7677_8_DPT 04AP3	13: S-7677_9_DPT 09AP2	14: S-7677_10_DP T10AP2
Sample Date & Time	25-Mar-21	25-Mar-21	25-Mar-21	25-Mar-21	25-Mar-21
Ag [µg/g]	< 1	< 1	< 1	< 1	< 1
Al [µg/g]	47000	57000	71000	59000	69000
As [µg/g]	6.7	7.3	8.7	4.7	5.3
Ba [µg/g]	230	280	310	410	500
Be [µg/g]	2.2	2.3	3.6	1.9	1.8
Bi [µg/g]	0.13	0.27	0.30	0.25	0.25
Ca [µg/g]	12000	19000	3500	2600	3000
Cd [µg/g]	0.15	0.08	0.28	0.36	0.14
Co [µg/g]	14	12	18	13	14
Cr [µg/g]	46	48	83	60	57
Cu [µg/g]	20	25	30	14	24
Fe [µg/g]	33000	31000	42000	27000	36000
K [µg/g]	26000	33000	34000	12000	17000
Li [µg/g]	280	210	110	35	33
Mg [µg/g]	25000	25000	13000	3800	5800
Mn [µg/g]	430	640	510	380	540
Mo [µg/g]	0.6	3.6	2.0	0.8	0.9
Ni [µg/g]	35	35	67	25	24
Pb [µg/g]	11	13	15	20	20
Sb [µg/g]	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8
Se [µg/g]	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7
Sn [µg/g]	< 6	< 6	< 6	< 6	< 6
Sr [µg/g]	63	130	70	55	66
Ti [µg/g]	2500	2700	2700	3800	4000
Tl [µg/g]	0.43	0.49	0.70	0.57	0.62
U [µg/g]	2.7	3.5	3.1	2.9	2.9
V [µg/g]	69	67	92	75	81
Y [µg/g]	16	29	32	31	25
Zn [µg/g]	60	67	95	85	82
S [%]	0.008	0.005	0.006	0.030	0.014
C [%]	0.526	1.05	0.208	0.496	0.179
Sulphide [%]	< 0.04	< 0.04	< 0.04	0.04	< 0.04
TOC [%]	0.293	0.601	0.188	0.479	0.151

Catharine Arnold

CHARTERED CHEMIST — CATHARINE ARNOLD — THE CHEMICAL PROFESSION OF ONTARIO

Catharine Arnold, B.Sc., C.Chem
Project Specialist,
Environment, Health & Safety

OnLine LIMS

0002464905

SGS	**Minerals** **Geochemistry** **Lakefield Laboratory**	Revision **2.7** Doc Type **Method Summary** Method No: **GO/GC/GT_XR** Code **F76V** Service **Testing** Issued Date **23/Sep/2014** Approved by **K. Patel**
Minerals	**Preparation and Determination of Major Element Oxides, LOI and Rare Earth Oxides in Oxide Ores, and Process Control and Trade Products by Borate Fusion and Xray Fluorescence Spectrometry** [SiO_2, Al_2O_3, Fe_2O_3, MgO, CaO, Na_2O, K_2O, P_2O_5, MnO, TiO_2, Cr_2O_3; V_2O_5; LOI; additions BaO; Ce_2O_3; Nd_2O_3, La_2O_3; Pr_2O_3, Sm_2O_3; Nb_2O_5,ThO_2, Ta_2O_5; SnO_2; SrO; ZrO_2; HfO_2; Y_2O_3; WO_3; U_3O_8; Co; Ni ; XRF]	

1. **Parameter(s) measured, unit(s):**
   Silicon Dioxide (SiO_2), Aluminum Oxide (Al_2O_3), Iron(III) Oxide (Fe_2O_3), Magnesium Oxide (MgO), Calcium Oxide (CaO), Sodium Oxide (Na_2O), Potassium Oxide (K_2O), Phosphorus Pentoxide (P_2O_5), Manganese Oxide (MnO), Titanium Dioxide (TiO_2), Chromium (III) Oxide (Cr_2O_3), Vanadium Oxide (V_2O_5), LOI, in %
   Barium Oxide (BaO), Cerium (III) Oxide(Ce_2O_3), Neodymium Oxide (Nd_2O_3), Lanthanum Oxide (La_2O_3), Praseodymium Oxide (Pr_2O_3), Samarium Oxide (Sm_2O_3), Niobium Pentoxide (Nb_2O_5), Thorium Dioxide (ThO_2), Tantalum Pentoxide (Ta_2O_5), Tin Dioxide (SnO_2) Uranium Oxide (U_3O_8), Cobalt (Co), Nickel (Ni), Strontium Oxide (SrO), Zirconium Dioxide (ZrO_2), Hafnium Oxide (HfO_2), Yttrium Oxide (Y_2O_3), Tungsten Trioxide (WO_3) in % can be added as additions

2. **Typical sample size:**
   0.2 to 0.5g, 1g additional for LOI analysis

3. **Type of sample applicable (media):**
   Rocks, oxide ores, concentrates and catalysts

4. **Sample preparation technique used:**
   Samples are crushed and pulverized according to client specified instructions or default preparation procedures. This method is used to report, in percentage, the whole rock suite (SiO_2, Al_2O_3, Fe_2O_3, MgO, CaO, Na_2O, K_2O, P_2O_5, MnO, TiO_2, Cr_2O_3 ,V_2O_5). Sample preparation entails the formation of a homogenous glass disk by the fusion of the sample and a lithium tetraborate/lithium metaborate mixture. The LOI is determined separately and gravimetrically at 1000°C.

5. **Method of analysis used:**
   The prepared disks are analyzed by wavelength dispersion X-ray fluorescence (WD-XRF). The

LOI is included in the matrix correction calculations, which are performed by the XRF software.

6. Data reduction by:

Computer, on line, data fed to Laboratory Information Management System with secure audit trail.

.

7. Figures of Merit:

This method has been fully validated for the range of samples typically analyzed. Method validation includes the use of reference materials, replicates, duplicates and blanks to calculate accuracy, precision, linearity, range, limit of detection, reporting limit, specificity and measurement uncertainty.

The reporting limits has been determined according to the following

Element	Report Limit %
SiO2	0.01
Al2O3	0.01
MgO	0.01
Na2O	0.01
K2O	0.01
CaO	0.01
P2O5	0.01
TiO2	0.01
Cr2O3	0.01
V2O5	0.01
Fe2O3	0.01
MnO	0.01
LOI	-10

*upper limit for all elements is 100%. A negative LOI indicates a gain on ignition

8. Quality control:

Quality control materials include method blanks, replicates and reference materials and are randomly inserted with the frequency set according to method protocols at ~12% for ore grade analysis and 18% for process control analysis. Quality control materials will also include BRM (Barren reference materials, or preparations blanks) and preparation duplicates if samples have been taken through the sample reduction process. Party quality samples are assayed in replicate, umpire quality samples are in triplicate. Calibration materials that cover the range upon method set-up; calibration check performed daily.

9. Accreditation:

The Standards Council of Canada has accredited this test in conformance with the requirements of ISO/IEC 17025. See www.scc.ca/en/search/palcan for scope of accreditation.

Note: Scopes of accreditation are site specific, please check with the local representative.

SGS Canada Inc.
P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - KOL 2HO
Phone: 705-652-2000 FAX: 705-652-6365

Project : S-7677

06-April-2021

SiREM Laboratory
Attn : Kela Ashworth

130 Stone Rd. W, Guelph
Canada, N1G 3Z2
Phone: 519-822-2265, Fax:519-822-3151

Date Rec. : 26 March 2021
LR Report: **CA14602-MAR21**
Reference: P.O# 800003210A

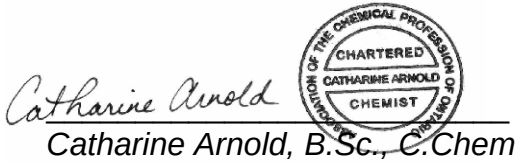
Copy: #1

CERTIFICATE OF ANALYSIS
Final Report

Analysis	5: S-7677_1_DPT 07AP1	6: S-7677_2_DPT 11AP2	7: S-7677_3_DPT 08AP2	8: S-7677_4_DPT 07AP2	9: S-7677_5_DPT 01AP3	10: S-7677_6_DPT 03AP3	11: S-7677_7_DPT 02AP3	12: S-7677_8_DPT 04AP3	13: S-7677_9_DPT 09AP2	14: S-7677_10_DPT 10AP2
Sample Date & Time	25-Mar-21	25-Mar-21	25-Mar-21	25-Mar-21	25-Mar-21	25-Mar-21	25-Mar-21	25-Mar-21	25-Mar-21	25-Mar-21
SiO2 [%]	80.8	72.2	78.6	65.6	66.9	63.5	60.9	62.7	72.9	67.3
Al2O3 [%]	9.02	11.9	10.3	16.3	14.1	11.4	11.9	14.4	12.0	14.2
Fe2O3 [%]	3.21	6.23	3.90	4.99	5.98	5.42	5.01	6.63	4.17	5.66
MgO [%]	0.29	0.61	0.46	1.04	1.54	4.94	4.49	2.28	0.66	1.03
CaO [%]	0.12	0.19	0.14	0.24	0.30	1.94	2.96	0.52	0.38	0.43
Na2O [%]	0.10	0.12	0.14	0.39	0.07	0.09	0.27	0.25	0.26	0.56
K2O [%]	1.07	1.40	1.53	2.70	2.43	3.76	4.39	4.53	1.54	2.21
TiO2 [%]	0.90	0.97	0.60	0.74	0.64	0.50	0.57	0.54	0.96	1.02
P2O5 [%]	0.04	0.09	0.07	0.11	0.20	0.25	0.28	0.31	0.07	0.12
MnO [%]	0.01	0.02	0.04	0.02	0.10	0.05	0.09	0.06	0.06	0.07
Cr2O3 [%]	< 0.01	< 0.01	0.01	0.03	< 0.01	0.02	0.02	0.02	< 0.01	0.01
V2O5 [%]	0.02	0.02	< 0.01	0.02	0.02	0.02	< 0.01	0.01	0.01	0.01
LOI [%]	4.02	5.90	4.03	7.11	7.35	7.89	8.73	6.97	6.11	6.69
Sum [%]	99.6	99.6	99.8	99.3	99.7	99.7	99.6	99.2	99.1	99.4

SGS Canada Inc.
P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - KOL 2HO
Phone: 705-652-2000 FAX: 705-652-6365

Project : S-7677
LR Report : **CA14602-MAR21**



Catharine Arnold, B.Sc., C.Chem
Project Specialist,
Environment, Health & Safety

OnLine LIMS

0002451948

Quantitative X-Ray Diffraction by Rietveld Refinement

Report Prepared for:	*Environmental Services*
Project Number/ LIMS No.	*Custom MIN/MI5060-MAR21*
Sample Receipt:	*March 30, 2021*
Sample Analysis:	*April 12, 2021*
Reporting Date:	*May 5, 2021*

Instrument:	BRUKER AXS D8 Advance Diffractometer
Test Conditions:	Co radiation, 35 kV, 40 mA Regular Scanning: Step: 0.02°, Step time: 1s, 2θ range: 3-80°
Interpretations :	PDF2/PDF4 powder diffraction databases issued by the International Center for Diffraction Data (ICDD). DiffracPIus Eva and Topas software.
Detection Limit :	0.5-2%. Strongly dependent on crystallinity.

Contents:

1) Method Summary
2) Quantitative XRD Results
3) XRD Pattern(s)

Kim Gibbs, H.B.Sc., P.Geo.
Senior Mineralogist

Huyun Zhou, Ph.D., P.Geo.
Senior Mineralogist

ACCREDITATION: SGS Minerals Services Lakefield is accredited to the requirements of ISO/IEC 17025 for specific tests as listed on our scope of accreditation, including geochemical, mineralogical and trade mineral tests. To view a list of the accredited methods, please visit the following website and search SGS Canada - Minerals Services - Lakefield: http://palcan.scc.ca/SpecsSearch/GLSearchForm.do.

Method Summary

The Rietveld Method of Mineral Identification by XRD (ME-LR-MIN-MET-MN-D05) method used by SGS Minerals Services is accredited to the requirements of ISO/IEC 17025.

Mineral Identification and Interpretation:

Mineral identification and interpretation involves matching the diffraction pattern of an unknown material to patterns of single-phase reference materials. The reference patterns are compiled by the Joint Committee on Powder Diffraction Standards - International Center for Diffraction Data (JCPDS-ICDD) database and released on software as Powder Diffraction Files (PDF).

Interpretations do not reflect the presence of non-crystalline and/or amorphous compounds, except when internal standards have been added by request. Mineral proportions may be strongly influenced by crystallinity, crystal structure and preferred orientations. Mineral or compound identification and quantitative analysis results should be accompanied by supporting chemical assay data or other additional tests.

Quantitative Rietveld Analysis:

Quantitative Rietveld Analysis is performed by using Topas 4.2 (Bruker AXS), a graphics based profile analysis program built around a non-linear least squares fitting system, to determine the amount of different phases present in a multicomponent sample. Whole pattern analyses are predicated by the fact that the X-ray diffraction pattern is a total sum of both instrumental and specimen factors. Unlike other peak intensity-based methods, the Rietveld method uses a least squares approach to refine a theoretical line profile until it matches the obtained experimental patterns.

Rietveld refinement is completed with a set of minerals specifically identified for the sample. Zero values indicate that the mineral was included in the refinement calculations, but the calculated concentration was less than 0.05wt%. Minerals not identified by the analyst are not included in refinement calculations for specific samples and are indicated with a dash.

Summary of Rietveld Quantitative Analysis X-Ray Diffraction Results

Mineral/Compound	S-7677_1_DPT07AP1 MAR5060-01 (wt %)	S-7677_2_DPT11AP2 MAR5060-02 (wt %)	S-7677_3_DPT08AP2 MAR5060-03 (wt %)	S-7677_4_DPT07AP2 MAR5060-04 (wt %)	S-7677_5_DPT01AP3 MAR5060-05 (wt %)
Quartz	68.9	59.3	65.6	43.7	46.1
Kaolinite	15.8	19.1	12.7	12.7	17.1
Muscovite	10.9	16.4	17.2	33.1	26.9
Microcline	1.9	1.5	1.7	3.0	5.1
Rutile	0.4	0.9	0.5	1.1	1.1
Albite	1.8	2.3	2.1	4.5	2.4
Anatase	0.2	0.5	0.2	0.8	1.2
Pyrite	-	-	-	1.3	-
Orthoclase	-	-	-	-	-
Calcite	-	-	-	-	-
Montmorillonite	-	-	-	-	-
Diopside	-	-	-	-	-
Biotite	-	-	-	-	-
TOTAL	100	100	100	100	100

Zero values indicate that the mineral was included in the refinement, but the calculated concentration is below a measurable value.

Dashes indicate that the mineral was not identified by the analyst and not included in the refinement calculation for the sample.

The weight percent quantities indicated have been normalized to a sum of 100%. The quantity of amorphous material has not been determined.

Mineral/Compound	Formula
Quartz	SiO_2
Kaolinite	$Al_2Si_2O_5(OH)_4$
Muscovite	$KAl_2(AlSi_3O_{10})(OH)_2$
Microcline	$KAlSi_3O_8$
Rutile	TiO_2
Albite	$NaAlSi_3O_8$
Anatase	TiO_2
Pyrite	FeS_2
Orthoclase	$KAlSi_3O_8$
Calcite	$CaCO_3$
Montmorillonite	$(Na,Ca)_{0.3}(Al,Mg)_2Si_4O$ $_{..}(OH)_{..}nH_2O$
Diopside	$CaMgSi_2O_6$
Biotite	$K(Mg,Fe)_3(AlSi_3O_{10})(O$ $H)_{..}$

Summary of Rietveld Quantitative Analysis X-Ray Diffraction Results

Mineral/Compound	S-7677_6_DPT03AP3 MAR5060-06 (wt %)	S-7677_7_DPT02AP3 MAR5060-07 (wt %)	S-7677_8_DPT04AP3 MAR5060-08 (wt %)	S-7677_9_DPT09AP2 MAR5060-09 (wt %)	S-7677_10_DPT10AP2 MAR5060-10 (wt %)
Quartz	45.0	36.6	37.2	62.6	45.1
Kaolinite	16.2	17.7	21.8	20.4	22.0
Muscovite	9.0	8.0	8.7	7.9	23.0
Microcline	-	-	-	-	-
Rutile	0.6	0.9	0.9	0.3	0.7
Albite	2.1	3.8	3.9	4.3	7.0
Anatase	0.7	0.7	0.9	1.0	0.4
Pyrite	-	-	-	0.4	-
Orthoclase	16.5	20.4	20.4	0.6	1.9
Calcite	3.8	2.8	0.3	0.2	-
Montmorillonite	6.2	0.5	0.7	-	-
Diopside	-	3.8	3.2	2.4	-
Biotite	-	4.7	2.0	-	-
TOTAL	100	100	100	100	100

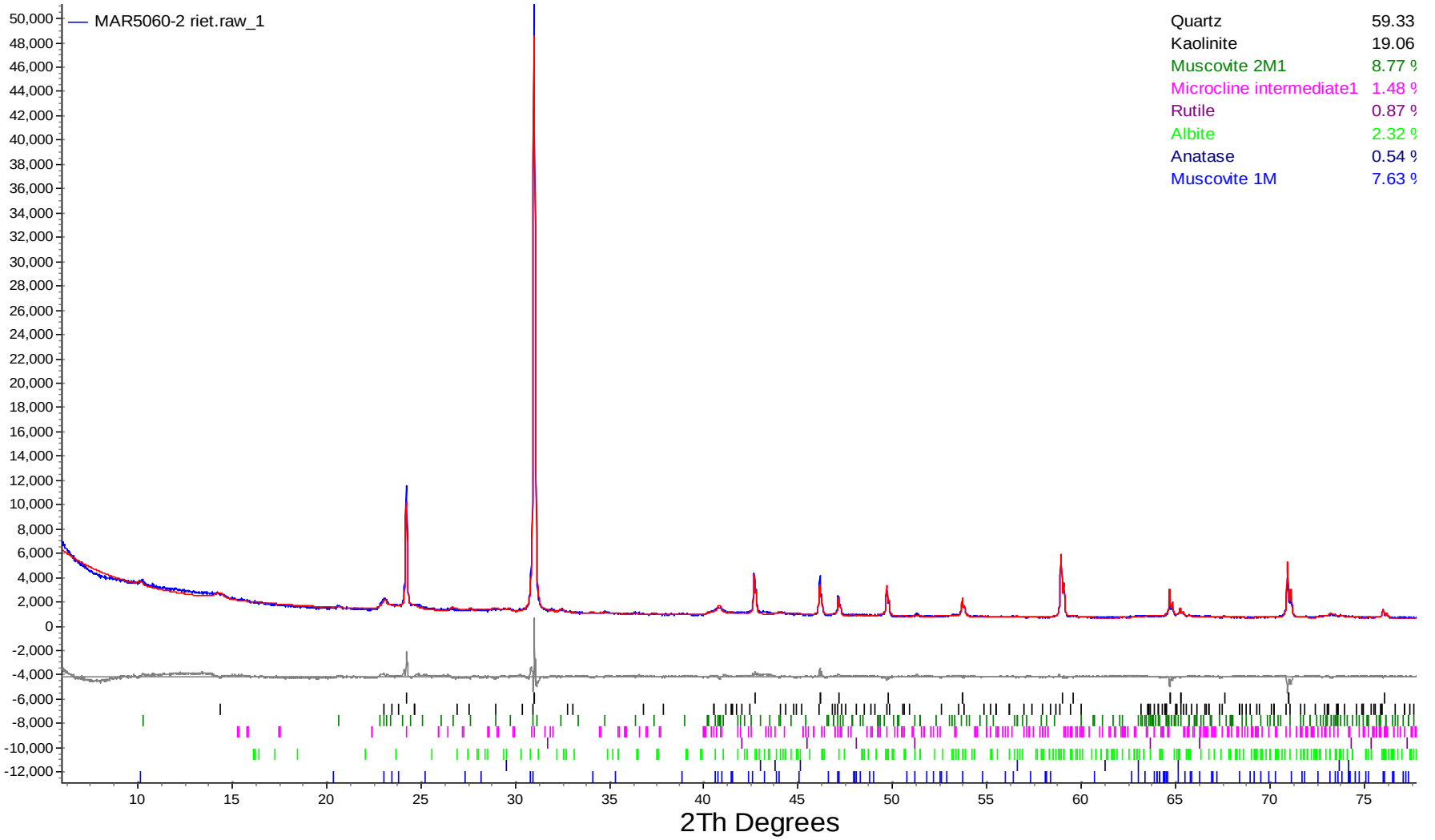
Zero values indicate that the mineral was included in the refinement, but the calculated concentration is below a measurable value.

Dashes indicate that the mineral was not identified by the analyst and not included in the refinement calculation for the sample.

The weight percent quantities indicated have been normalized to a sum of 100%. The quantity of amorphous material has not been determined.

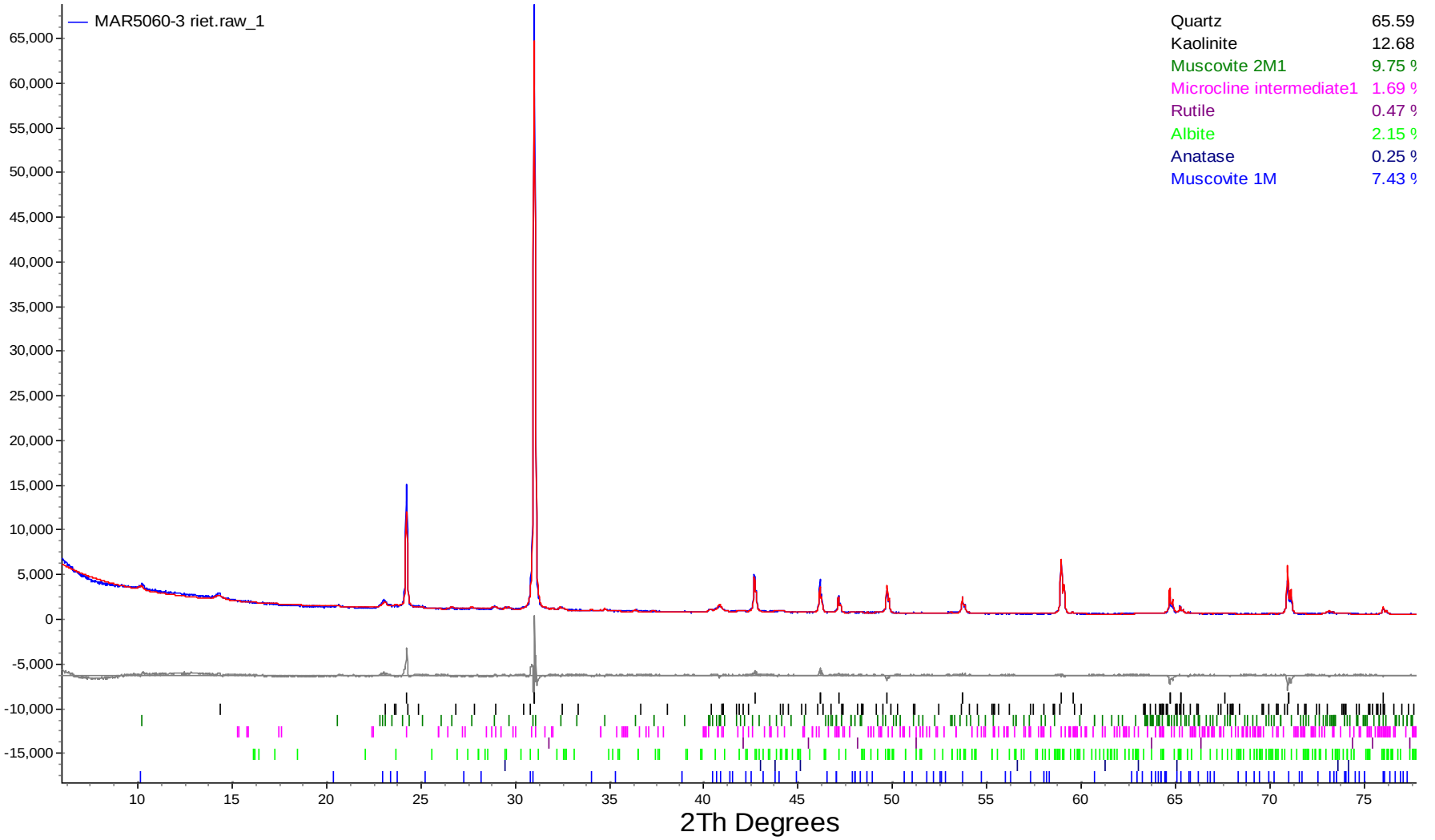
Mineral/Compound	Formula
Quartz	SiO_2
Kaolinite	$Al_2Si_2O_5(OH)_4$
Muscovite	$KAl_2(AlSi_3O_{10})(OH)_2$
Microcline	$KAlSi_3O_8$
Rutile	TiO_2
Albite	$NaAlSi_3O_8$
Anatase	TiO_2
Pyrite	FeS_2
Orthoclase	$KAlSi_3O_8$
Calcite	$CaCO_3$
Montmorillonite	$(Na,Ca)_{0.3}(Al,Mg)_2Si_4O_{10}(OH)_2 \cdot nH_2O$
Diopside	$CaMgSi_2O_6$
Biotite	$K(Mg,Fe)_3(AlSi_3O_{10})(OH)_2$

S-7677_2_DPT11AP2



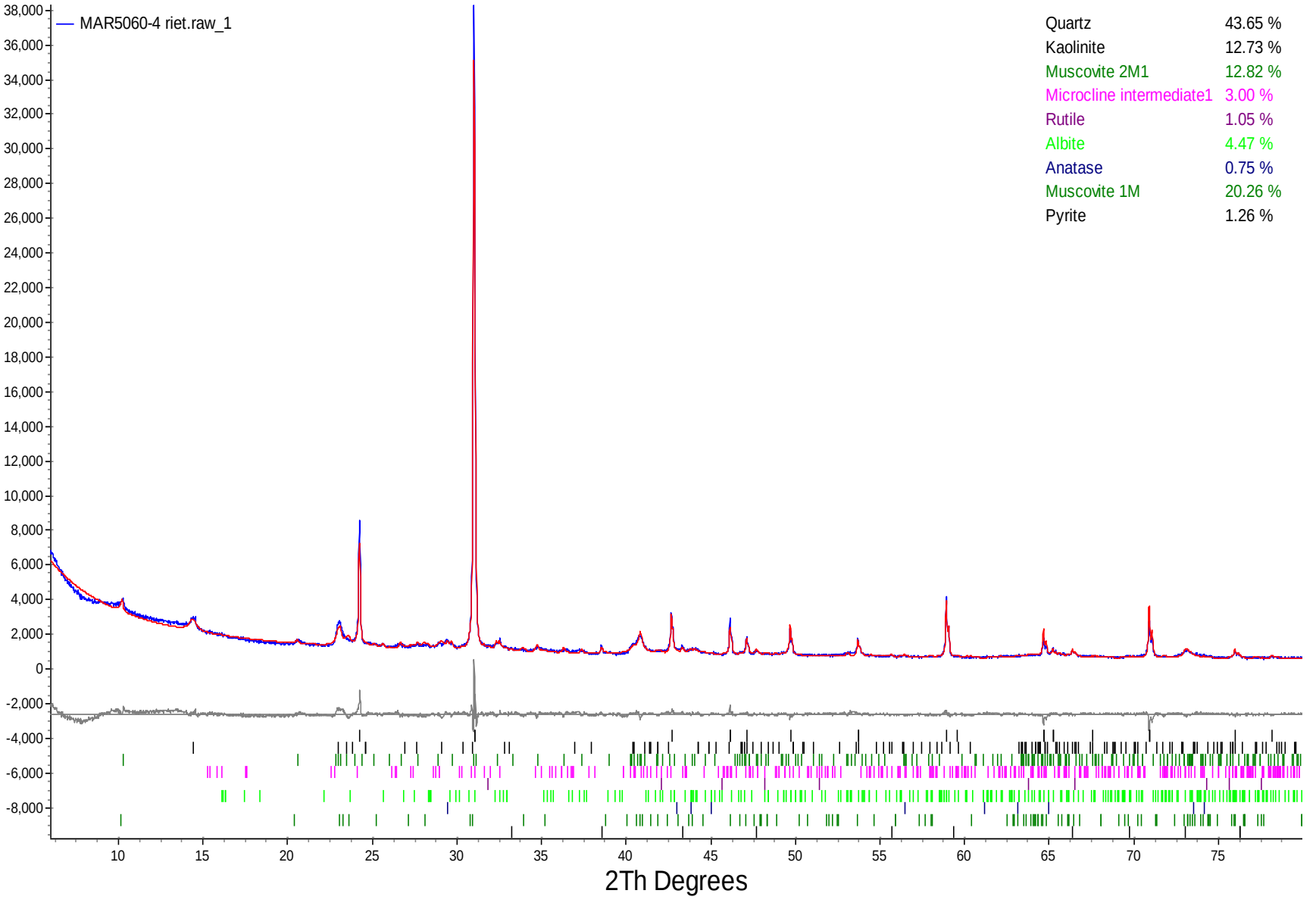
Quartz	59.33
Kaolinite	19.06
Muscovite 2M1	8.77 %
Microcline intermediate1	1.48 %
Rutile	0.87 %
Albite	2.32 %
Anatase	0.54 %
Muscovite 1M	7.63 %

S-7677_3_DPT08AP2



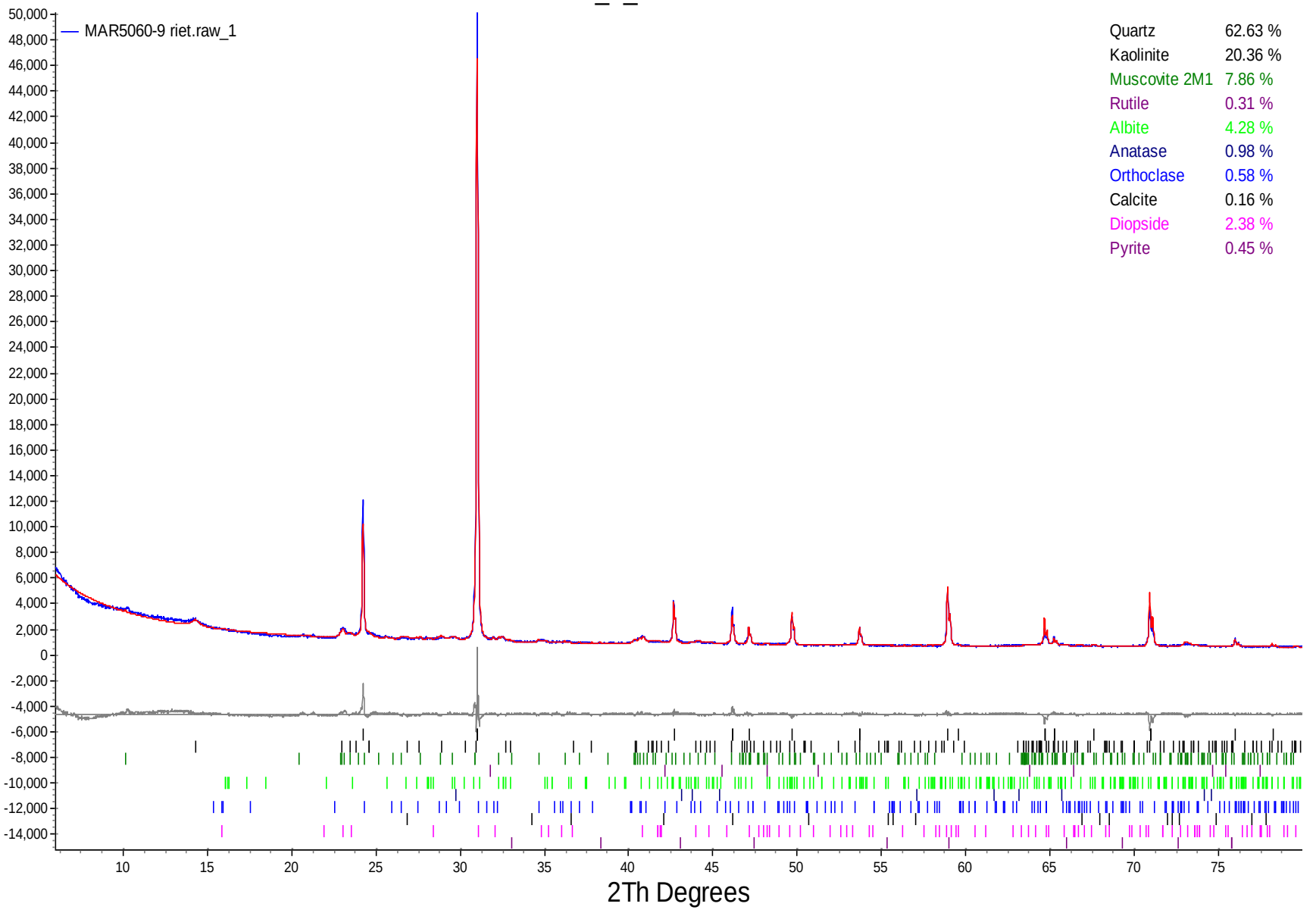
Quartz	65.59
Kaolinite	12.68
Muscovite 2M1	9.75 %
Microcline intermediate1	1.69 %
Rutile	0.47 %
Albite	2.15 %
Anatase	0.25 %
Muscovite 1M	7.43 %

S-7677_4_DPT07AP2



Quartz	43.65 %
Kaolinite	12.73 %
Muscovite 2M1	12.82 %
Microcline intermediate1	3.00 %
Rutile	1.05 %
Albite	4.47 %
Anatase	0.75 %
Muscovite 1M	20.26 %
Pyrite	1.26 %

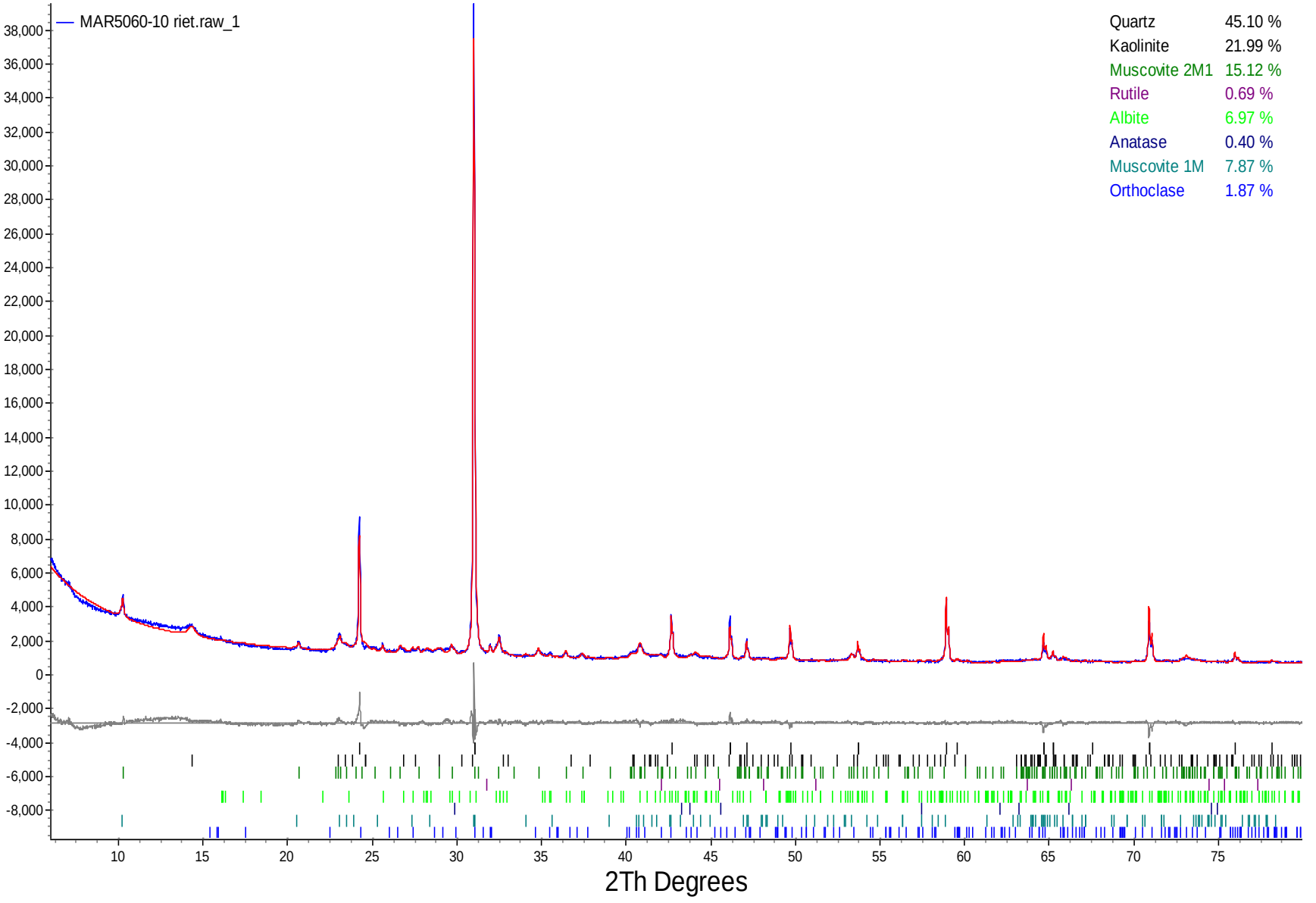
S-7677_9_DPT09AP2



Quartz	62.63 %
Kaolinite	20.36 %
Muscovite 2M1	7.86 %
Rutile	0.31 %
Albite	4.28 %
Anatase	0.98 %
Orthoclase	0.58 %
Calcite	0.16 %
Diopside	2.38 %
Pyrite	0.45 %

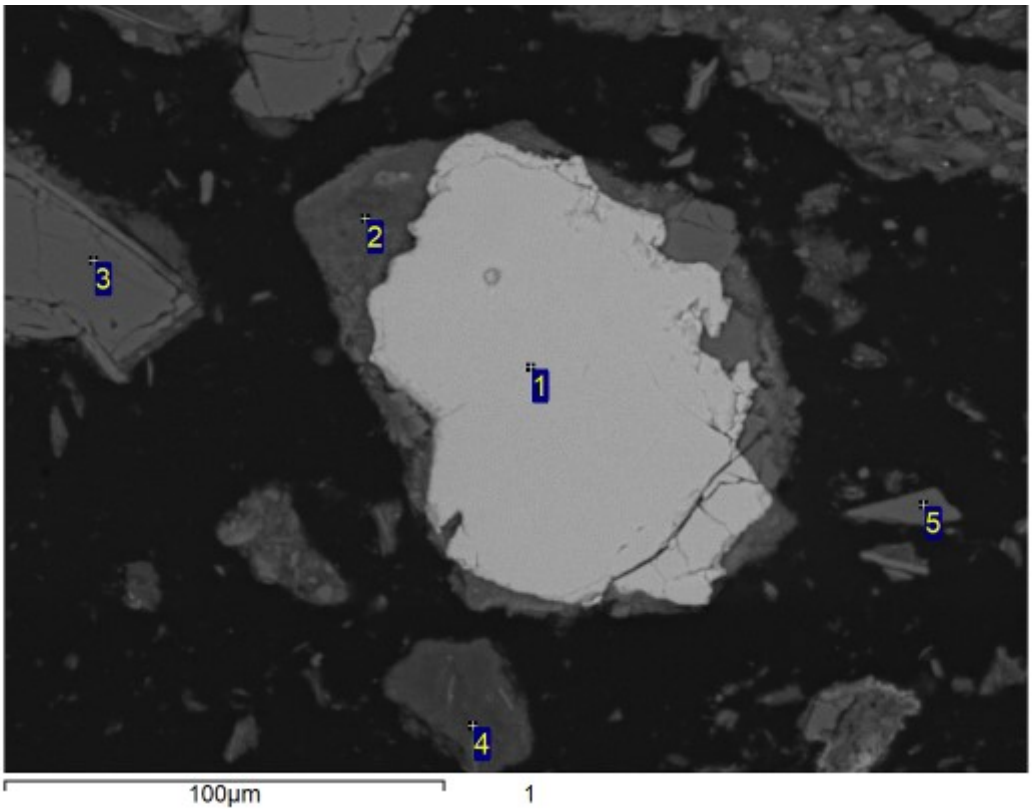
Environmental Services
Custom MIN/MI5060-MAR21
05/05/2021

S-7677_10_DPT10AP2



Quartz	45.10 %
Kaolinite	21.99 %
Muscovite 2M1	15.12 %
Rutile	0.69 %
Albite	6.97 %
Anatase	0.40 %
Muscovite 1M	7.87 %
Orthoclase	1.87 %

Sample Notes:
S-7677_2_DPT11AP2

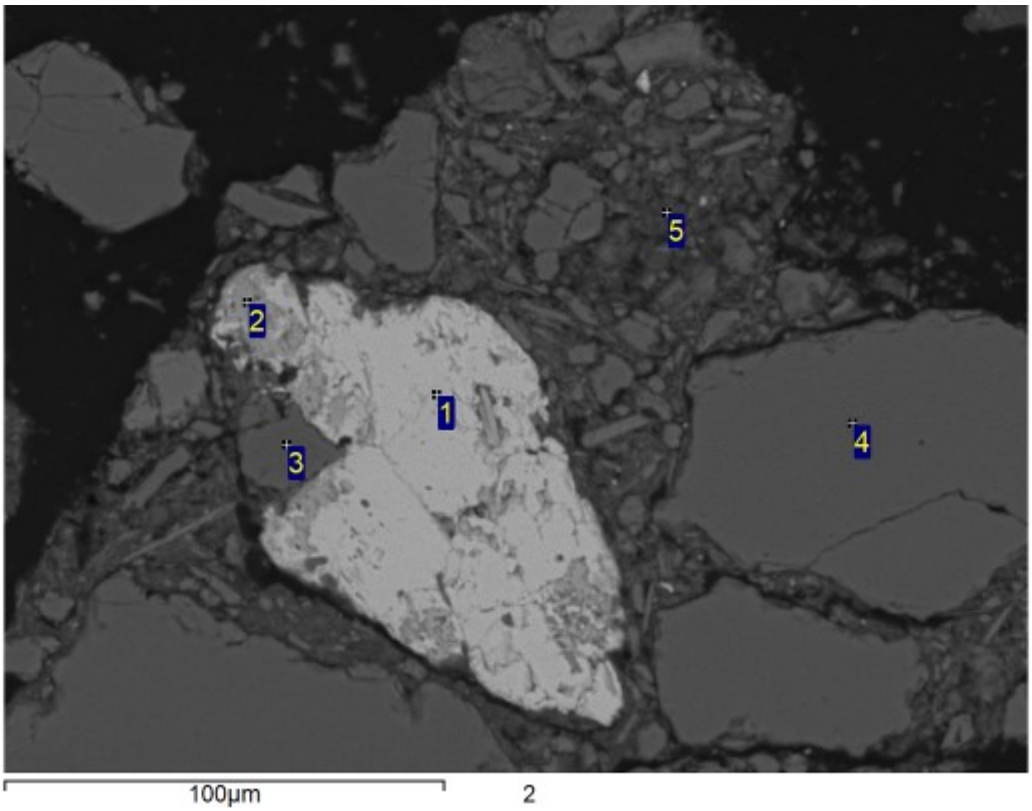


Processing option : All elements analysed (Normalised)

Spectrum	O	Mg	Al	Si	S	Cl	K	Ca	Ti	Mn	Fe	Total	Mineral ID
1	33.6								32.2	3.2	31.0	100.0	Ilmenite
2	47.1	0.5	14.5	19.5	0.6		1.2		0.5		16.0	100.0	Fe-Oxide/Oxyhydroxide/Kaolinite mixture
3	51.0			49.0								100.0	Quartz
4	46.2		17.5	24.5	1.5	0.4	1.7	0.5	0.4		7.3	100.0	Fe-Oxide/Oxyhydroxide/Kaolinite mixture
5	51.8			48.2								100.0	Quartz

All results in weight%

Sample Notes:
S-7677_2_DPT11AP2

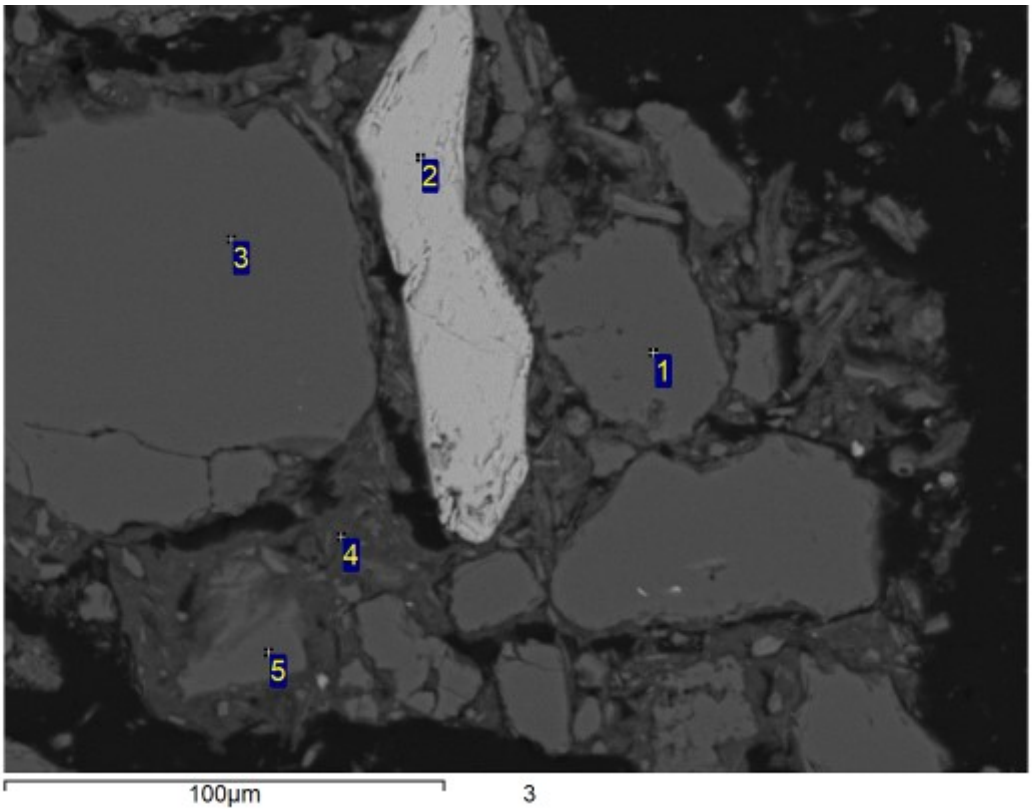


Processing option : All elements analysed (Normalised)

Spectrum	O	Al	Si	K	Ti	Mn	Fe	Total	Mineral ID
1	34.1				31.4	3.6	31.0	100.0	Ilmenite
2	40.7				58.7		0.6	100.0	Rutile
3	51.3		48.7					100.0	Quartz
4	51.3		48.7					100.0	Quartz
5	43.2	8.7	40.3	4.0	0.6		3.2	100.0	Muscovite

All results in weight%

Sample Notes:
S-7677_2_DPT11AP2

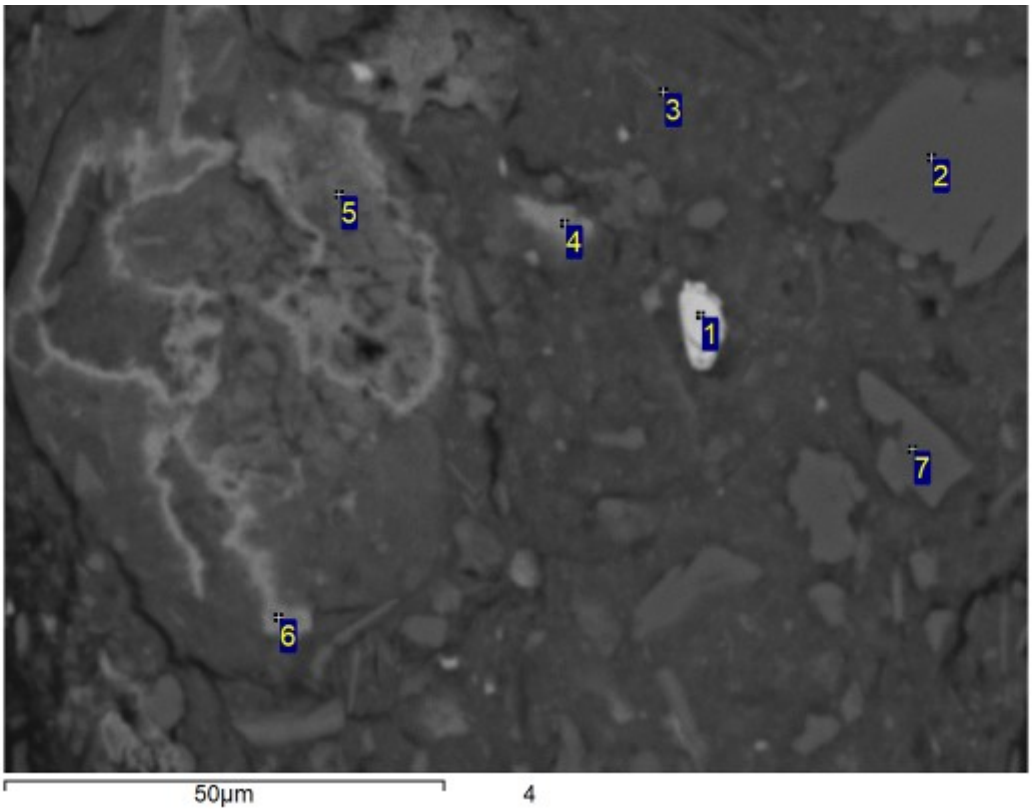


Processing option : All elements analysed (Normalised)

Spectrum	O	Mg	Al	Si	K	Ti	Mn	Fe	Total	Mineral ID
1	51.3			48.7					100.0	Quartz
2	32.8					30.0	1.6	35.6	100.0	Ilmenite
3	51.0			49.0					100.0	Quartz
4	44.6	0.6	19.3	28.4	2.1	1.5		3.4	100.0	Muscovite
5	51.6			48.4					100.0	Quartz

All results in weight%

Sample Notes:
S-7677_2_DPT11AP2

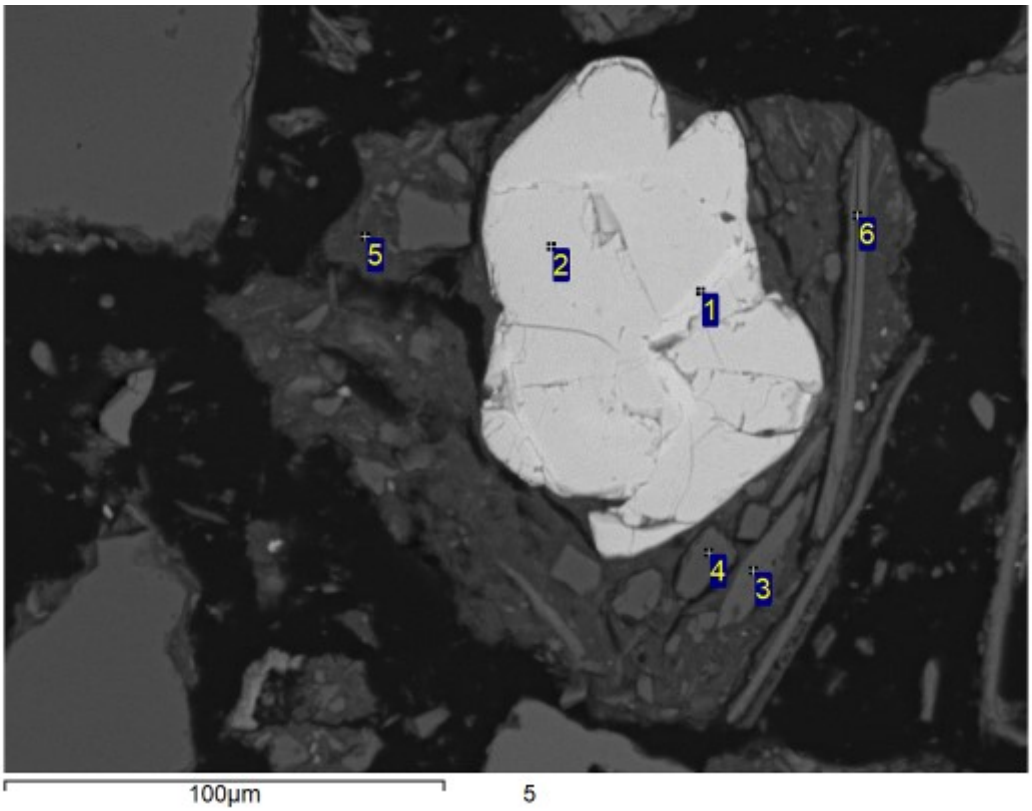


Processing option : All elements analysed (Normalised)

Spectrum	O	Mg	Al	Si	S	K	Fe	Zr	Total	Mineral ID
1	33.7			15.9			0.6	49.7	100.0	Zircon
2	51.2			48.8					100.0	Quartz
3	39.0	0.6	16.9	22.5		2.3	18.8		100.0	Fe-Oxide/Oxyhydroxide/Kaolinite mixture
4	41.8		8.2	11.1	0.4	0.5	38.0		100.0	Fe-Oxide/Oxyhydroxide/Kaolinite mixture
5	37.6		12.8	11.2	0.5	1.0	36.9		100.0	Fe-Oxide/Oxyhydroxide/Kaolinite mixture
6	40.9		10.0	8.8	0.6	0.6	39.1		100.0	Fe-Oxide/Oxyhydroxide/Kaolinite mixture
7	53.2			46.8					100.0	Quartz

All results in weight%

Sample Notes:
S-7677_2_DPT11AP2

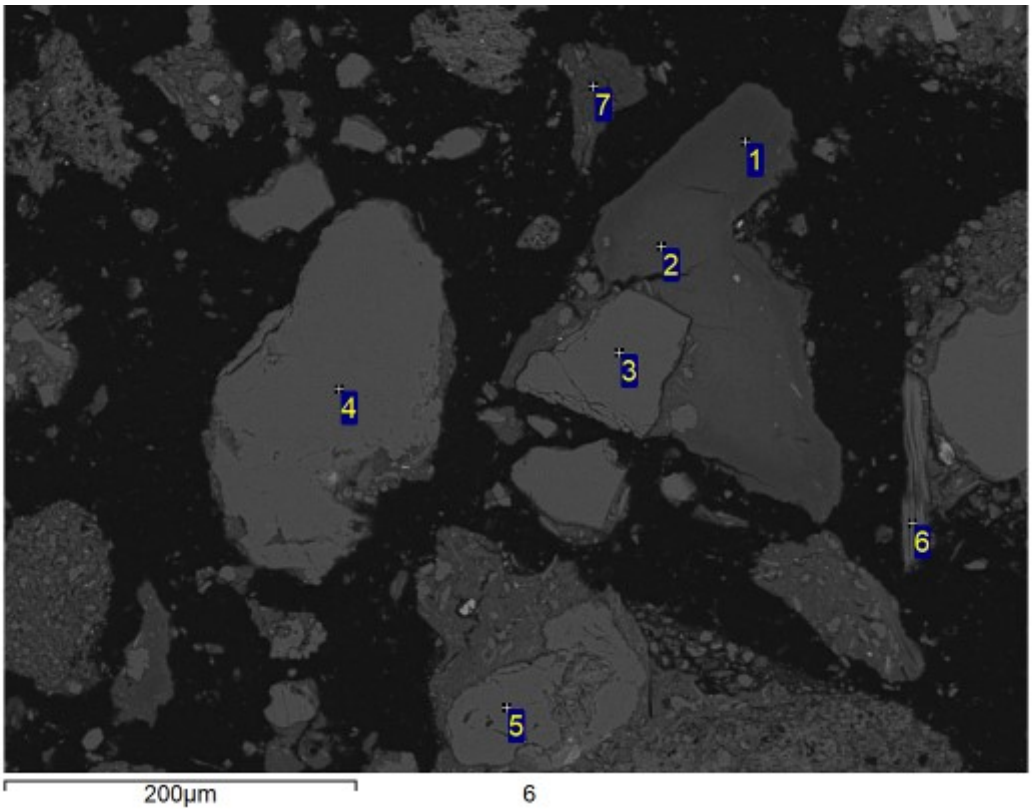


Processing option : All elements analysed (Normalised)

Spectrum	O	Na	Mg	Al	Si	S	K	Ti	Fe	Zr	Hf	Total	Mineral ID
1	32.6				16.1					48.9	2.4	100.0	Zircon
2	33.3				16.0					50.8		100.0	Zircon
3	48.7	0.6	0.8	17.5	23.1		7.8	0.6	0.9			100.0	Mica
4	52.8				47.2							100.0	Quartz
5	45.0			16.9	31.9	0.7	1.8	0.6	3.1			100.0	Kaolinite/Mica
6	47.7	0.4	0.5	17.9	23.7		8.3	0.3	1.1			100.0	Mica

All results in weight%

Sample Notes:
S-7677_2_DPT11AP2

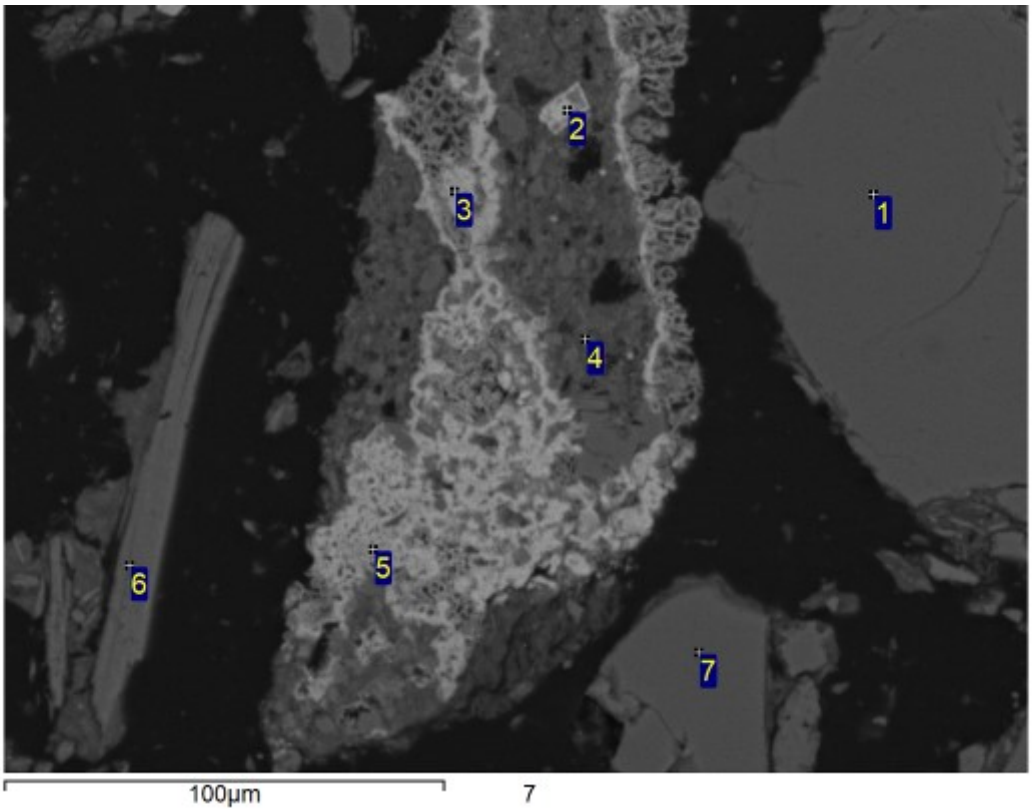


Processing option : All elements analysed (Normalised)

Spectrum	O	Mg	Al	Si	S	Cl	K	Ti	Fe	Total	Mineral ID
1	45.1	0.7	18.1	23.2	2.3		1.3	0.4	8.9	100.0	Fe-Oxide/Oxyhydroxide/Kaolinite mixture
2	44.2	0.7	18.6	24.0			1.4	0.7	10.4	100.0	Fe-Oxide/Oxyhydroxide/Kaolinite mixture
3	51.3			48.7						100.0	Quartz
4	51.1			48.9						100.0	Quartz
5	49.9			49.4					0.7	100.0	Quartz
6	45.9	0.6	17.7	23.1		0.5	9.0	0.6	2.6	100.0	Mica
7	40.8		10.5	44.9	1.1		1.5		1.2	100.0	Kaolinite/Mica

All results in weight%

Sample Notes:
S-7677_2_DPT11AP2

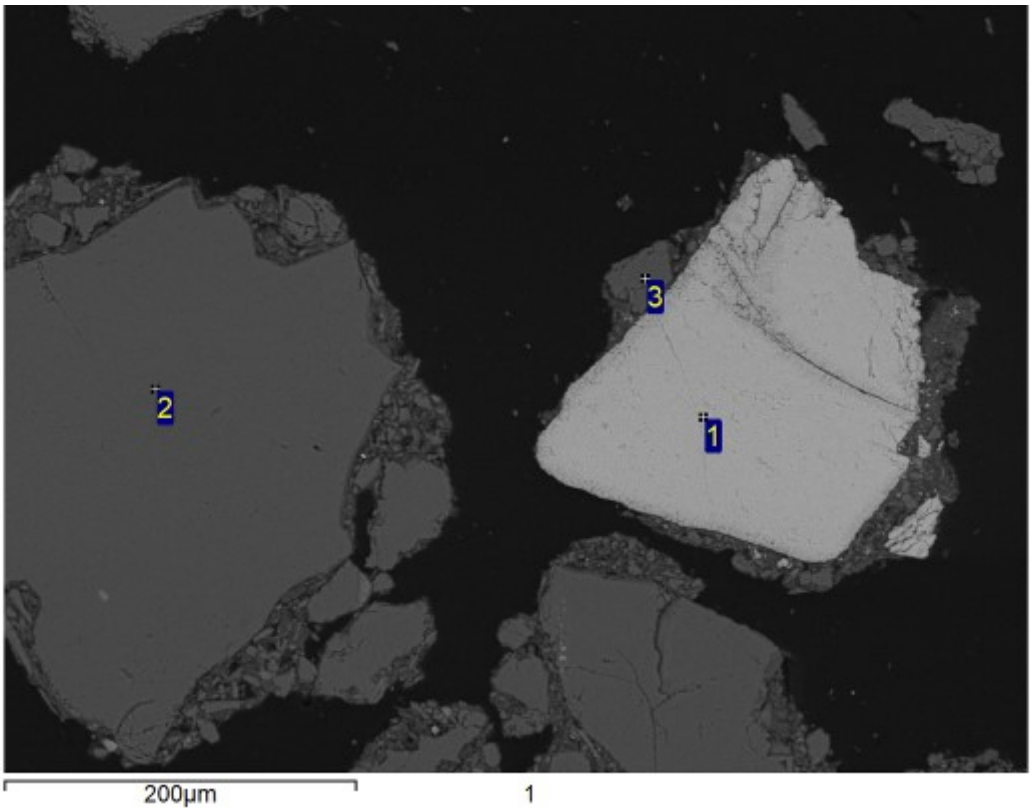


Processing option : All elements analysed (Normalised)

Spectrum	O	Na	Mg	Al	Si	P	K	Ti	Fe	Total	Mineral ID
1	51.3				48.7					100.0	Quartz
2	36.1			1.1	2.7				60.0	100.0	Fe-Oxide/Oxyhydroxide
3	39.2			1.5	2.7	0.4			56.2	100.0	Fe-Oxide/Oxyhydroxide
4	53.1		1.1	4.5	38.1		1.2		2.1	100.0	Quartz
5	35.4			2.6	3.5	0.8			57.8	100.0	Fe-Oxide/Oxyhydroxide
6	48.7	1.4		18.6	22.6		7.3	0.4	1.0	100.0	K-Feldspar
7	51.4				48.6					100.0	Quartz

All results in weight%

Sample Notes:
S-7677_3_DPT08AP2

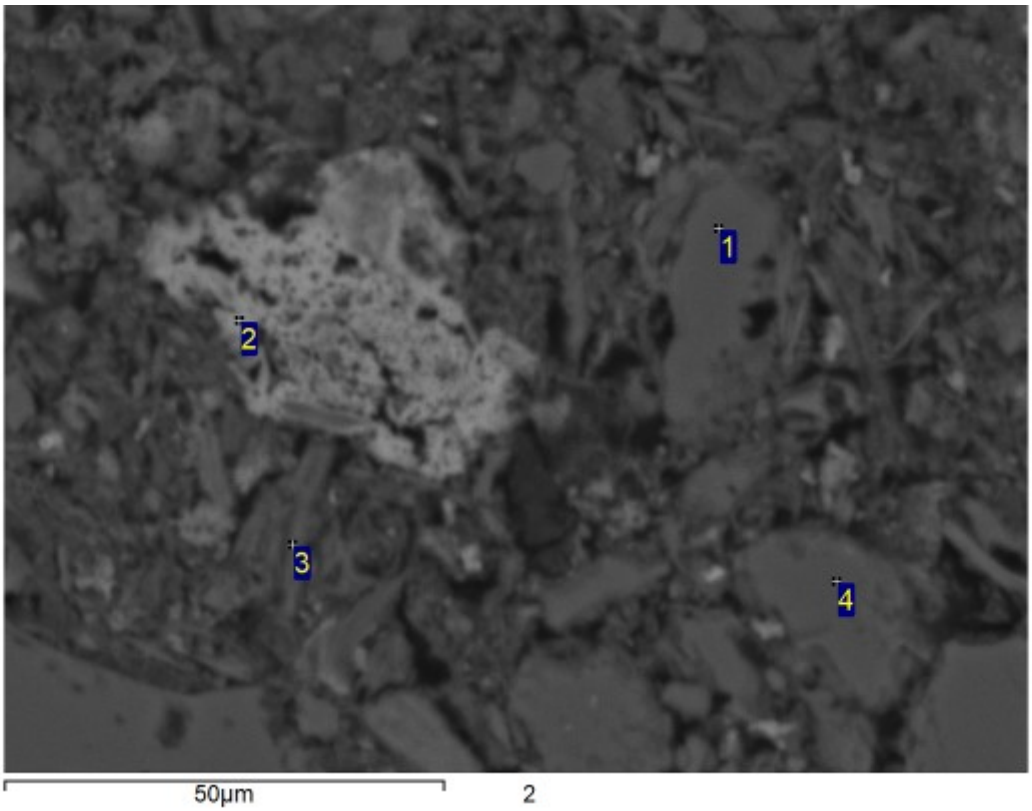


Processing option : All elements analysed (Normalised)

Spectrum	O	Si	Ti	Mn	Fe	Total	Mineral ID
1	33.0		31.2	0.6	35.2	100.0	Ilmenite
2	51.2	48.8				100.0	Quartz
3	51.0	49.0				100.0	Quartz

All results in weight%

Sample Notes:
S-7677_3_DPT08AP2

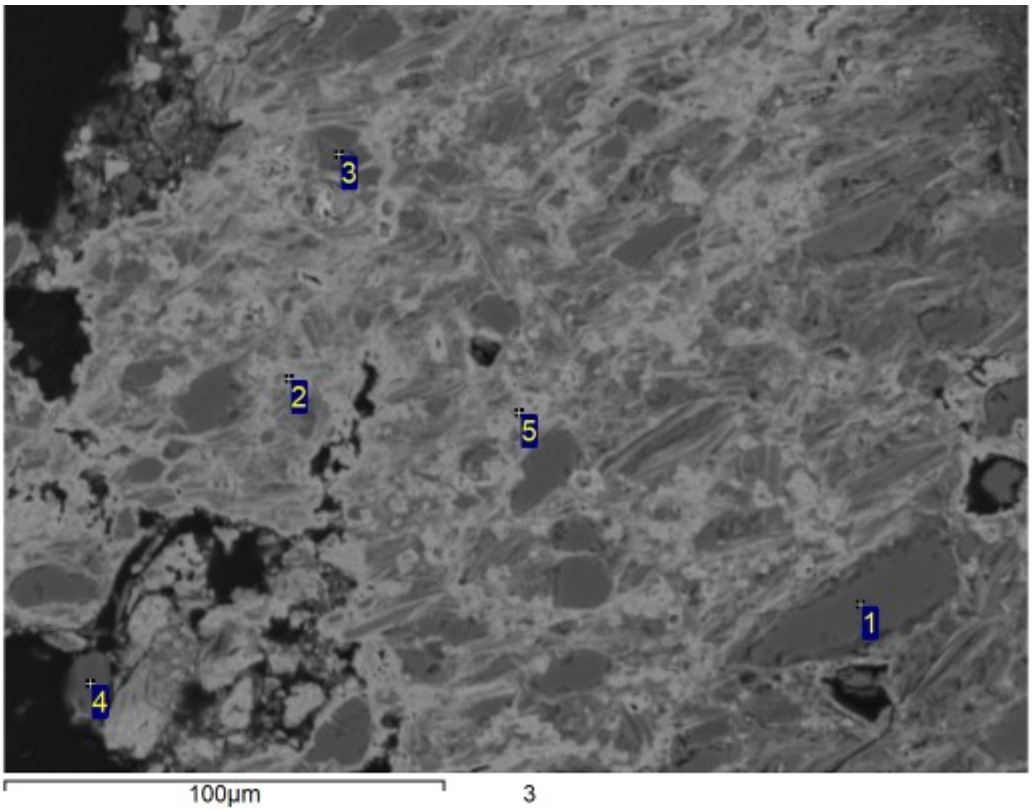


Processing option : All elements analysed (Normalised)

Spectrum	O	Na	Mg	Al	Si	P	K	Fe	Total	Mineral ID
1	52.3				47.7				100.0	Quartz
2	41.8			4.5	3.3	0.7		49.7	100.0	Fe-Oxide/Oxyhydroxide
3	45.9	0.5	0.8	16.7	26.8		5.5	3.8	100.0	Mica
4	52.1				47.9				100.0	Quartz

All results in weight%

Sample Notes:
S-7677_3_DPT08AP2

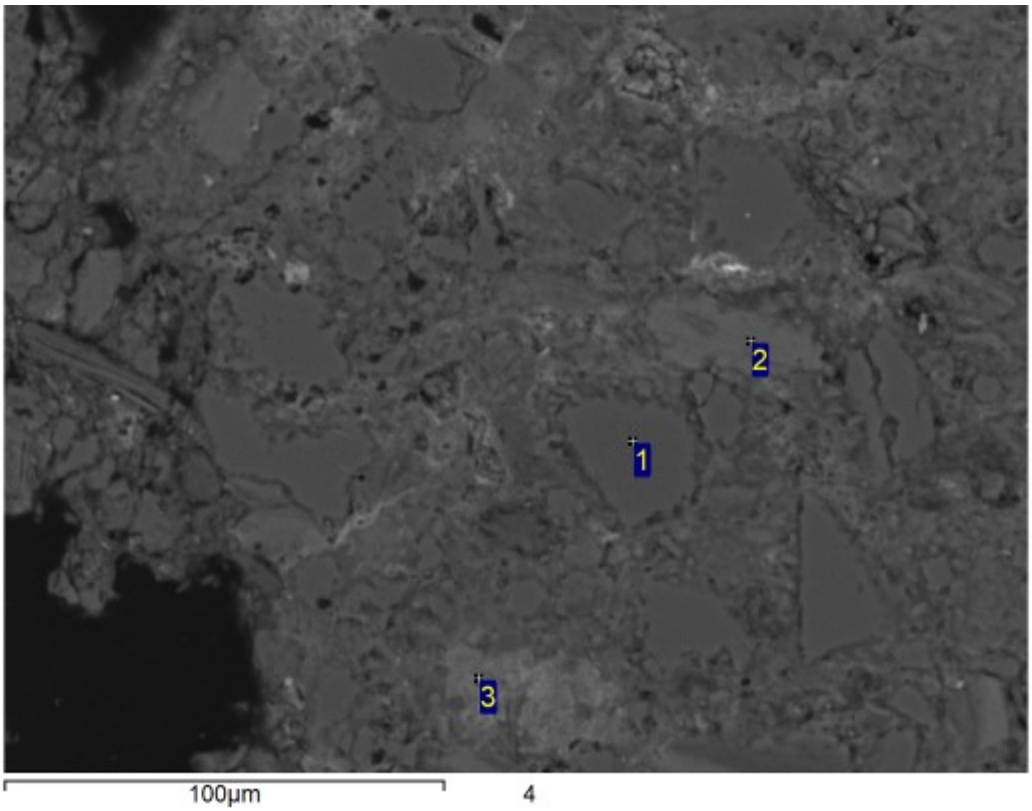


Processing option : All elements analysed (Normalised)

Spectrum	O	Al	Si	P	K	Fe	Total	Mineral ID
1	51.2		48.3			0.5	100.0	Quartz
2	43.4	3.6	4.9	0.4	0.5	47.2	100.0	Fe-Oxide/Oxyhydroxide
3	53.0	0.5	44.8			1.7	100.0	Quartz
4	50.4		48.9			0.7	100.0	Quartz
5	43.6	6.0	8.3		1.4	40.7	100.0	Fe-Oxide/Oxyhydroxide

All results in weight%

Sample Notes:
S-7677_3_DPT08AP2

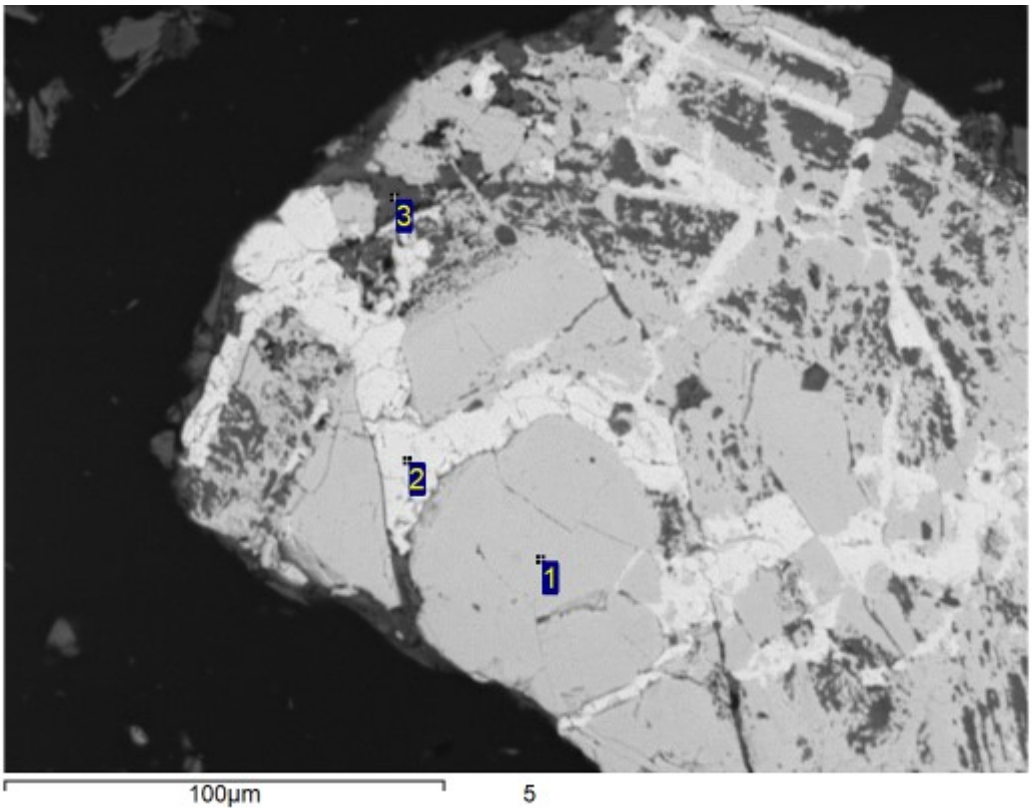


Processing option : All elements analysed (Normalised)

Spectrum	O	Mg	Al	Si	K	Ca	Fe	Total	Mineral ID
1	51.3			48.7				100.0	Quartz
2	47.6	1.1	15.2	23.3	9.0		3.8	100.0	K-feldspar
3	41.6	1.5	11.4	16.4	0.6	0.7	27.9	100.0	Fe-Oxide/Oxyhydroxide/Kaolinite mixture

All results in weight%

Sample Notes:
S-7677_3_DPT08AP2

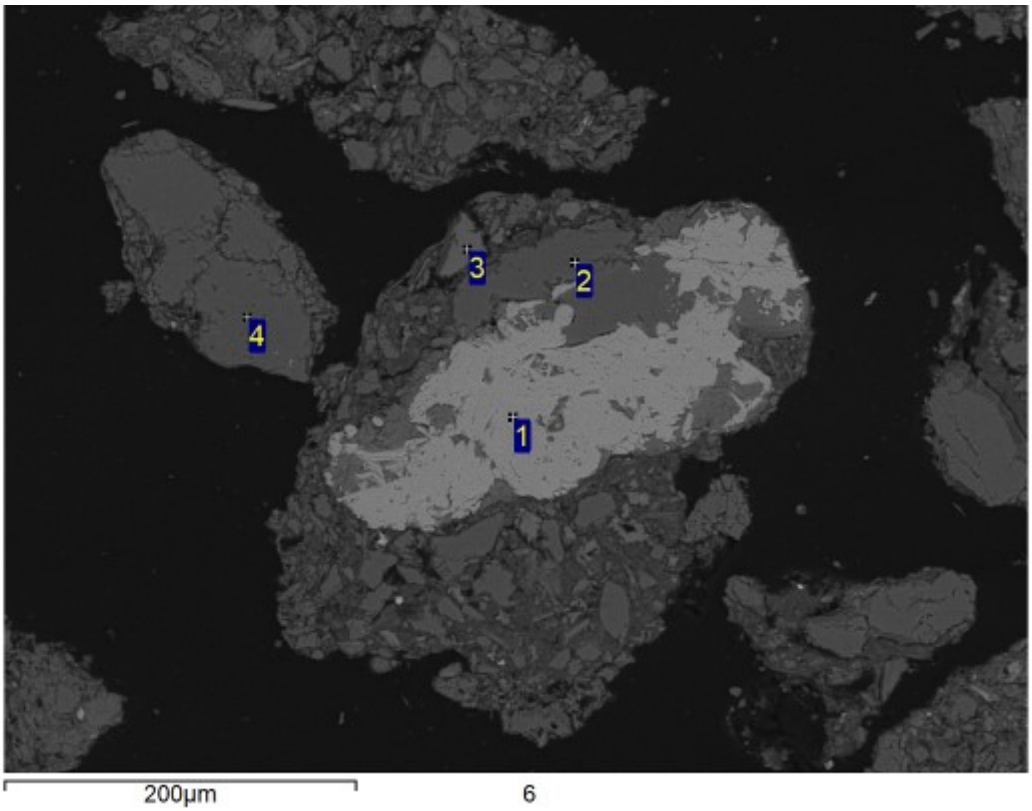


Processing option : All elements analysed (Normalised)

Spectrum	O	Si	P	Y	Zr	Yb	Ta	Total	Mineral ID
1	33.1	15.8			51.1			100.0	Zircon
2	40.1		18.0	35.6		3.4	2.9	100.0	Xenotime
3	50.6	46.7			2.7			100.0	Quartz

All results in weight%

Sample Notes:
S-7677_3_DPT08AP2

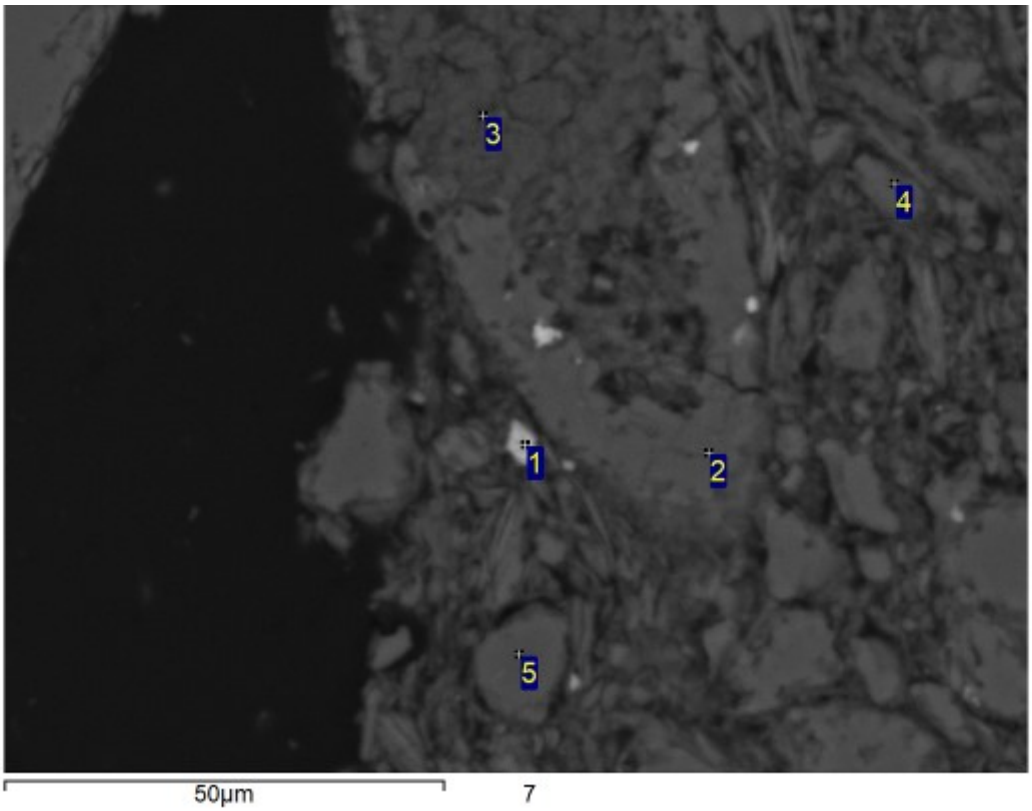


Processing option : All elements analysed (Normalised)

Spectrum	O	Al	Si	K	Ti	Fe	Total	Mineral ID
1	41.0				59.0		100.0	Rutile
2	51.2		48.8				100.0	Quartz
3	44.5	9.5	32.0	14.0			100.0	K-Feldspar
4	51.2	3.6	42.7	1.7	0.3	0.4	100.0	Quartz

All results in weight%

Sample Notes:
S-7677_3_DPT08AP2

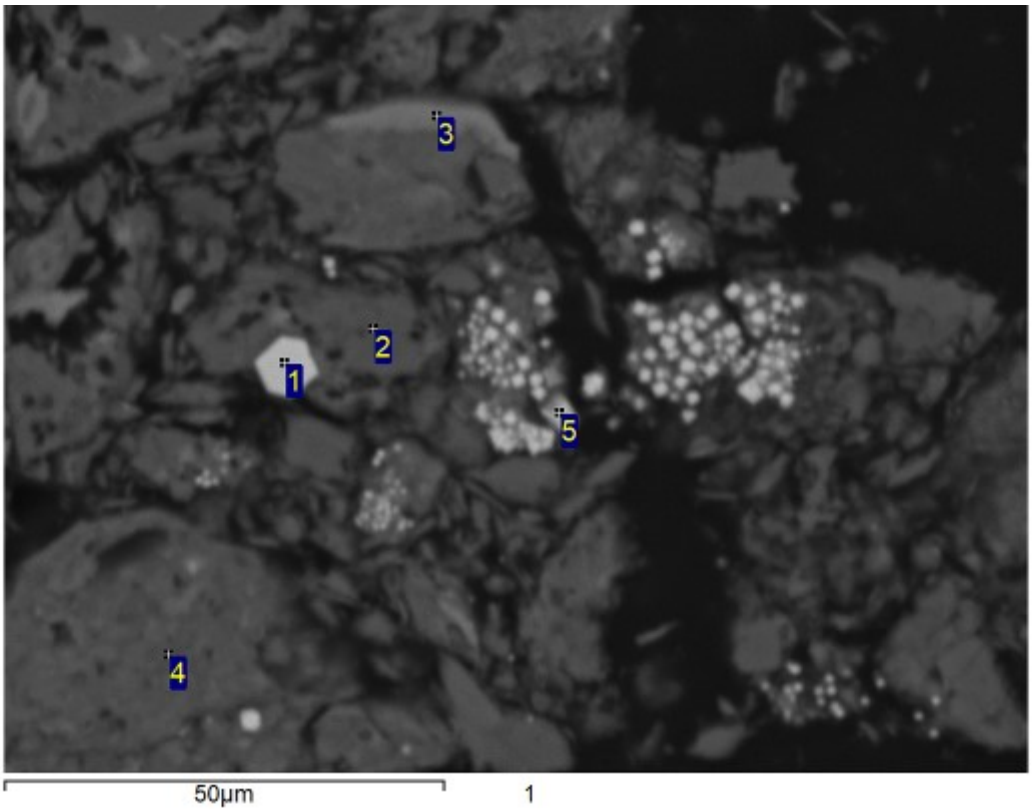


Processing option : All elements analysed (Normalised)

Spectrum	O	Al	Si	S	K	Fe	As	Total	Mineral ID
1	10.2	1.5	3.1	47.3		36.3	1.6	100.0	Pyrite
2	51.0	0.3	48.7					100.0	Quartz
3	51.1	23.1	25.8					100.0	Kaolinite
4	49.0	1.4	49.4		0.2			100.0	Quartz
5	52.2		47.8					100.0	Quartz

All results in weight%

Sample Notes:
S-7677_4_DPT07AP2

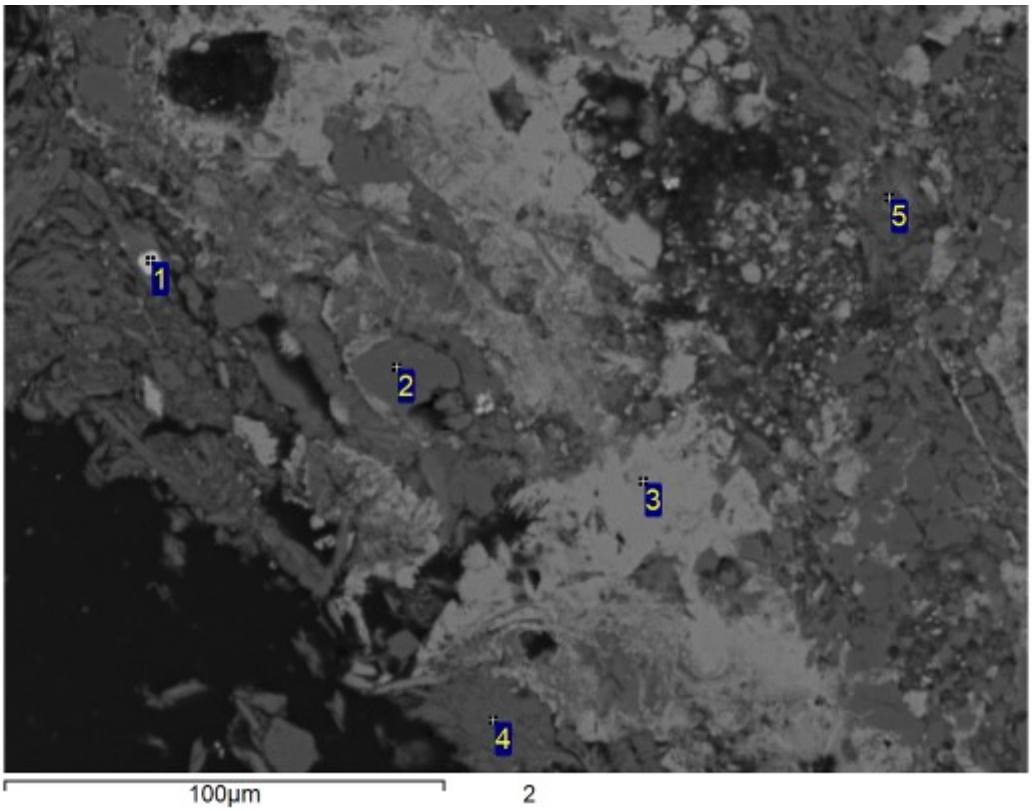


Processing option : All elements analysed (Normalised)

Spectrum	O	Na	Mg	Al	Si	S	K	Ti	Fe	Total	Mineral ID
1						55.5			44.5	100.0	Pyrite
2	51.9			3.3	43.4		0.8		0.6	100.0	Quartz
3	44.7		3.8	13.4	13.9		0.6		23.6	100.0	Chlorite?
4	47.3	0.4	1.1	13.9	30.2		5.0	0.3	1.9	100.0	K-Feldspar
5	8.2			1.0	1.6	49.2			39.9	100.0	Pyrite

All results in weight%

Sample Notes:
S-7677_4_DPT07AP2

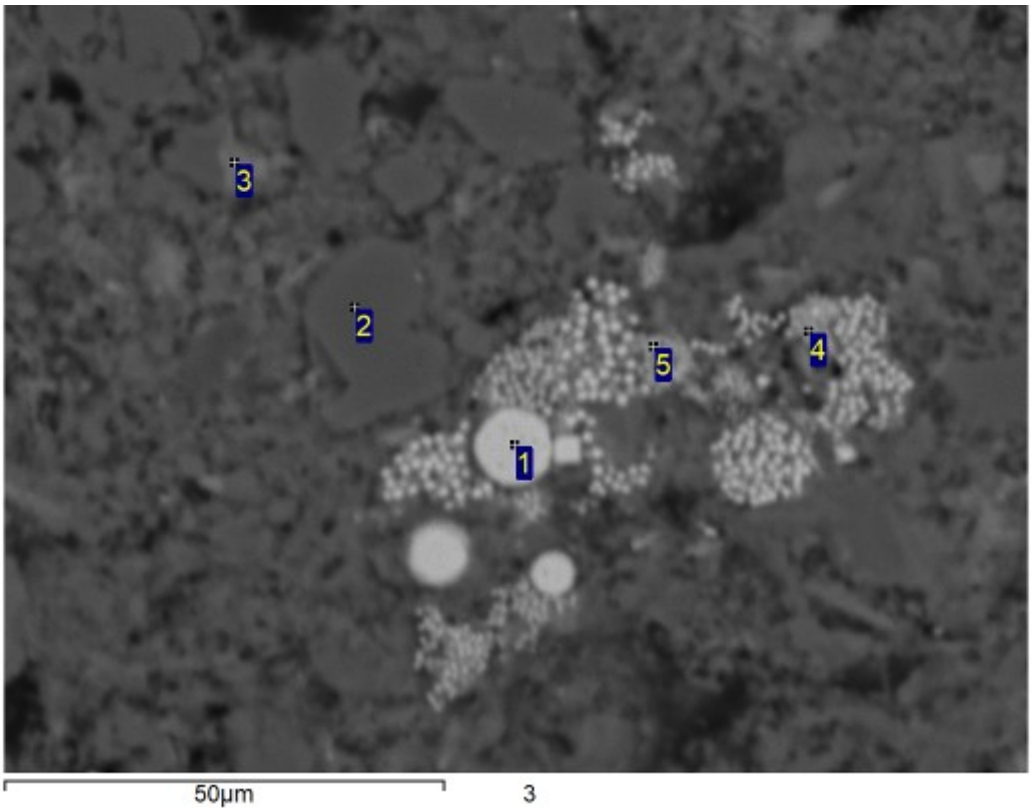


Processing option : All elements analysed (Normalised)

Spectrum	O	Na	Mg	Al	Si	S	K	Ca	Mn	Fe	Total	Mineral ID
1						54.9				45.1	100.0	Pyrite
2	47.9	8.1		9.9	33.1			0.4		0.5	100.0	Albite
3	42.9							5.0	2.7	49.5	100.0	Siderite?
4	46.3	0.4	1.3	18.0	26.3		4.1			3.6	100.0	Altered K-Feldspar
5	51.4	0.3	0.7	10.3	32.4		2.9			2.1	100.0	Altered K-Feldspar

All results in weight%

Sample Notes:
S-7677_4_DPT07AP2

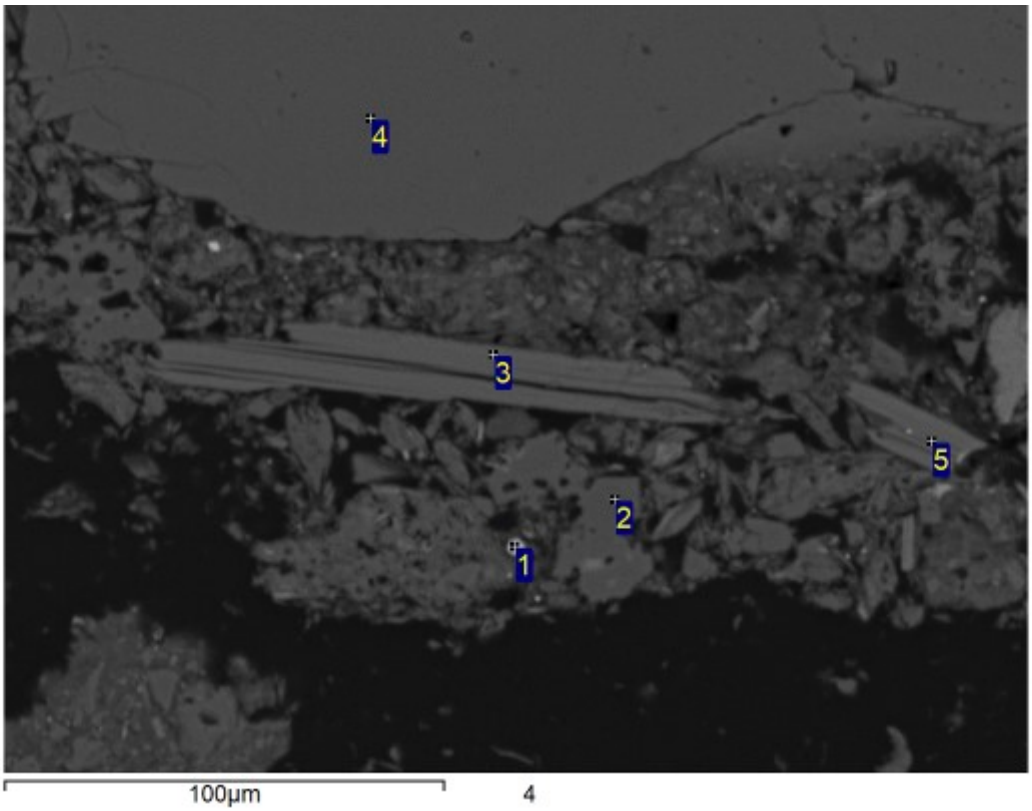


Processing option : All elements analysed (Normalised)

Spectrum	O	Mg	Al	Si	S	K	Ti	Fe	Total	Mineral ID
1					54.8			45.2	100.0	Pyrite
2	51.2			48.8					100.0	Quartz
3	43.5	2.7	10.0	21.7				22.2	100.0	Fe-Oxide/Oxyhydroxide/Kaolinite mixture
4	29.7	1.3	4.4	16.5	22.5	0.4	0.5	24.7	100.0	Pyrite/Kaolinite mixture
5	28.7	1.5	5.4	7.2	27.1			30.1	100.0	Pyrite/Kaolinite mixture

All results in weight%

Sample Notes:
S-7677_4_DPT07AP2

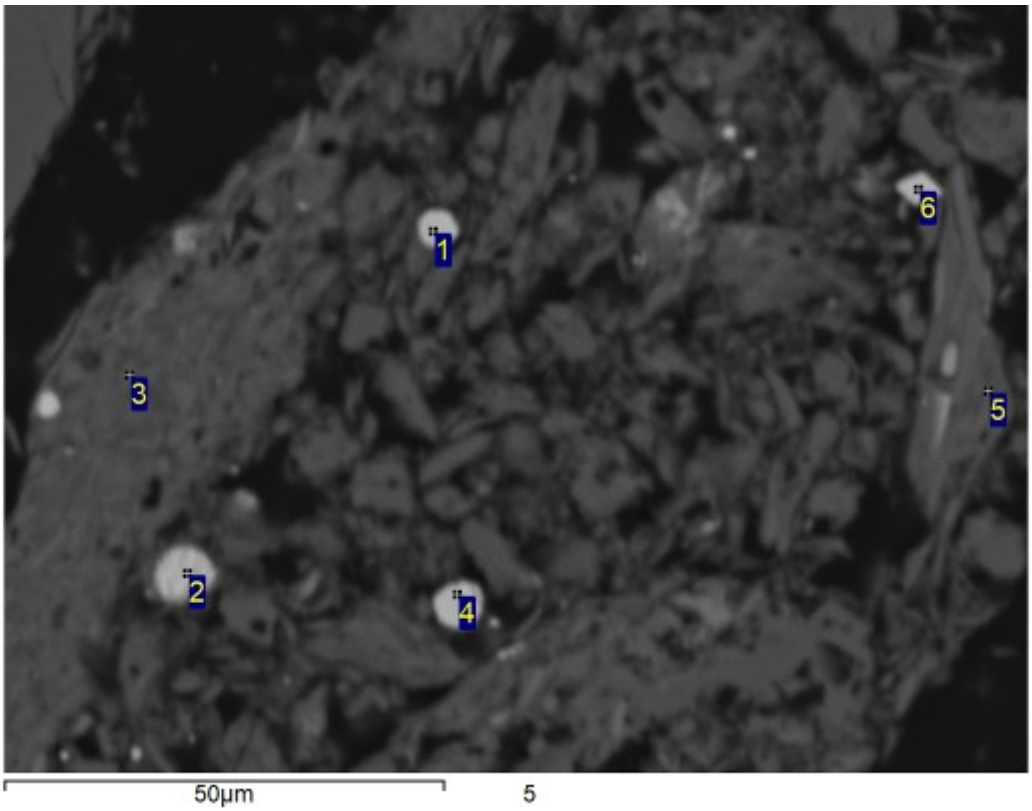


Processing option : All elements analysed (Normalised)

Spectrum	O	Na	Mg	Al	Si	S	K	Ca	Ti	Fe	Total	Mineral ID
1					0.9	56.2				43.0	100.0	Pyrite
2	54.5				34.0			11.1		0.4	100.0	Quartz
3	48.4	0.6		18.8	22.8		8.3		0.4	0.8	100.0	Mica
4	50.1				49.9						100.0	Quartz
5	48.1	0.4	0.8	16.6	22.7		8.2		0.5	2.6	100.0	Mica

All results in weight%

Sample Notes:
S-7677_4_DPT07AP2

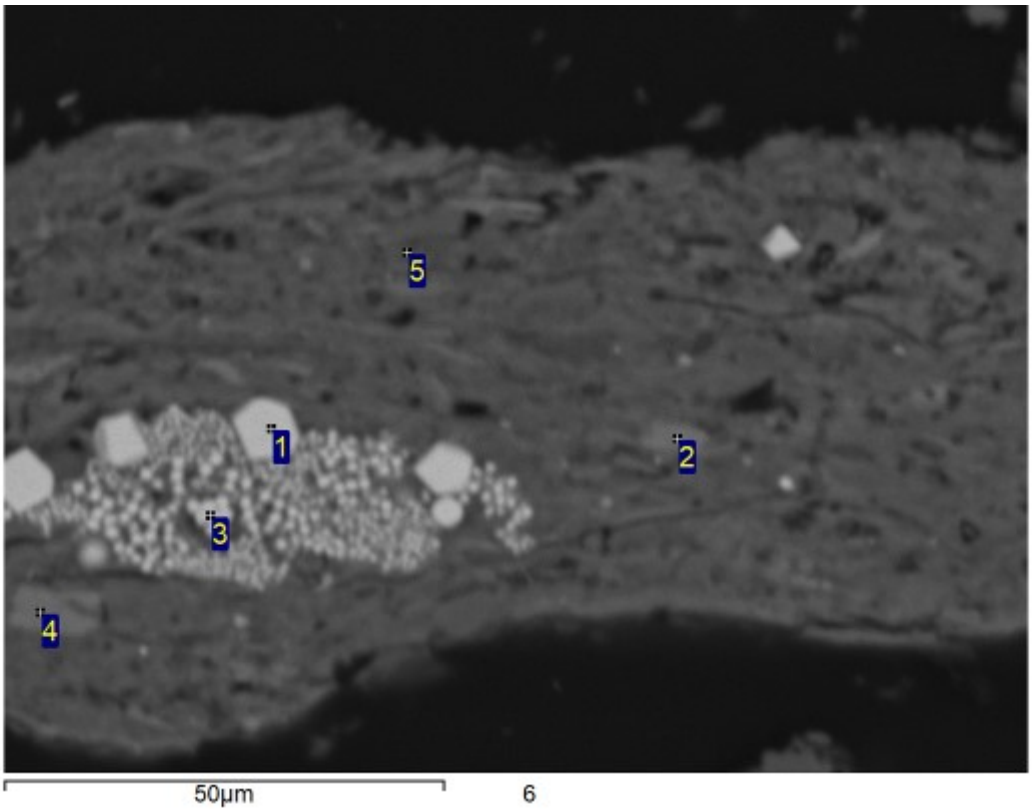


Processing option : All elements analysed (Normalised)

Spectrum	O	Mg	Al	Si	S	K	Ca	Ti	Mn	Fe	Total	Mineral ID
1				0.7	54.8					44.4	100.0	Pyrite
2			0.5	1.1	54.1					44.3	100.0	Pyrite
3	48.7	1.1	14.3	27.8		5.1		0.4		2.6	100.0	Mica
4			0.8	1.5	52.9					44.7	100.0	Pyrite
5	47.8	1.0	11.8	33.7		3.3	0.5			2.0	100.0	Mica
6	22.7		6.6	11.9	31.0	2.0			0.4	25.3	100.0	Pyrite/K-Feldspar Mixture

All results in weight%

Sample Notes:
S-7677_4_DPT07AP2

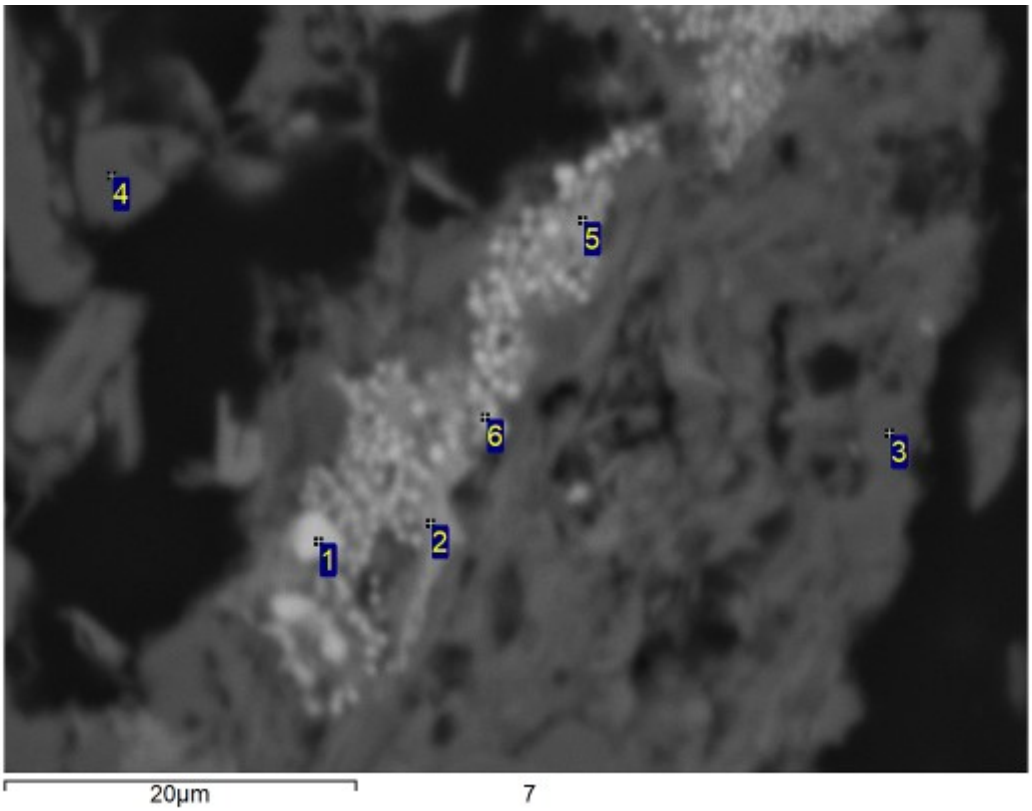


Processing option : All elements analysed (Normalised)

Spectrum	O	Mg	Al	Si	S	K	Ti	Mn	Fe	Total	Mineral ID
1					54.9				45.1	100.0	Pyrite
2	44.3	5.3	12.6	14.4		0.5		0.4	22.6	100.0	Chlorite
3	6.2		1.7	2.3	49.3				40.5	100.0	Pyrite
4	44.3	6.3	11.3	13.6					24.5	100.0	Chlorite
5	44.0	1.1	12.3	32.2		4.2	1.0		5.3	100.0	Mica

All results in weight%

Sample Notes:
S-7677_4_DPT07AP2

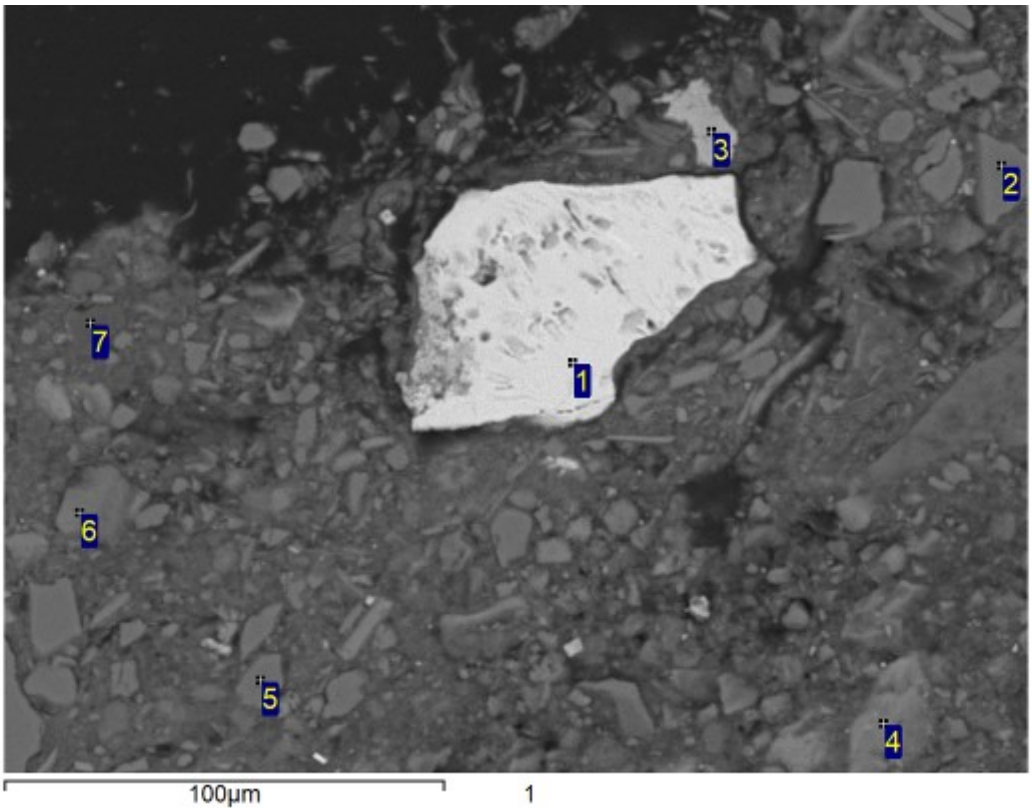


Processing option : All elements analysed (Normalised)

Spectrum	O	Na	Mg	Al	Si	S	K	Fe	Total	Mineral ID
1				0.5	1.0	54.6		43.9	100.0	Pyrite
2	18.9		0.7	5.0	8.7	29.5	0.9	36.4	100.0	Pyrite
3	52.2			2.7	44.0		0.7	0.4	100.0	Quartz
4	47.1	8.1		9.9	34.9				100.0	Kaolinite
5	24.3		1.2	4.0	5.9	30.7	0.3	33.5	100.0	Pyrite/Kaolinite mixture
6	24.9			4.5	7.7	32.3	0.5	30.1	100.0	Pyrite/Kaolinite mixture

All results in weight%

Sample Notes:
S-7677_9_DPT09AP2

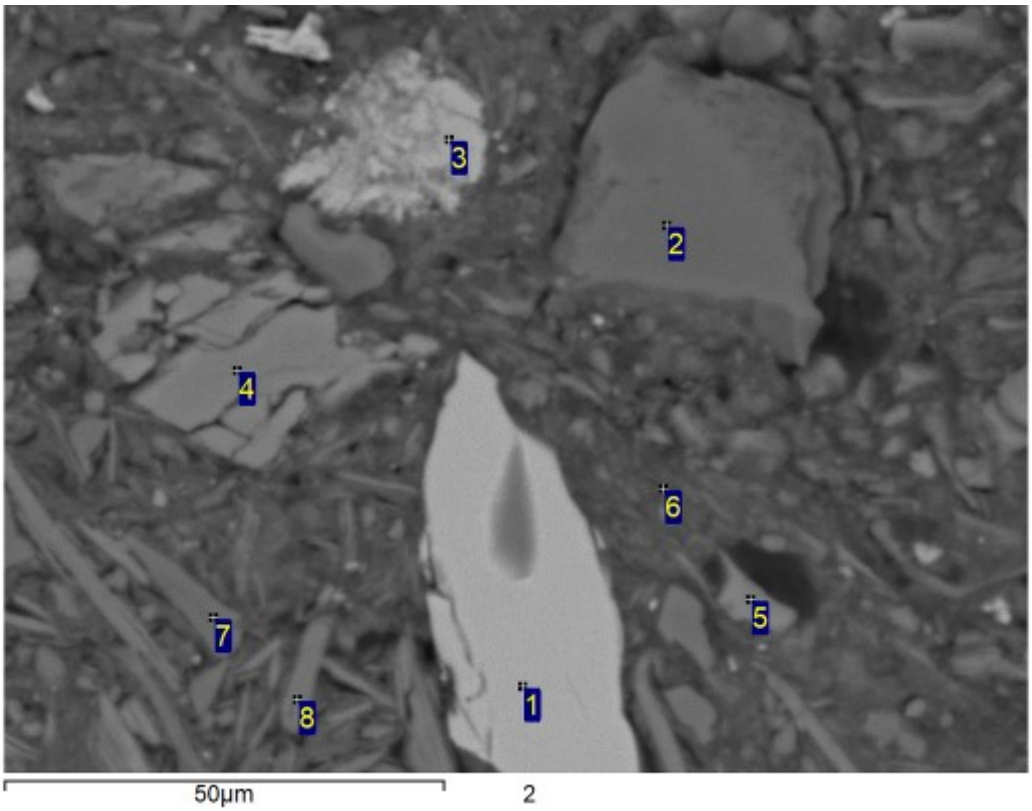


Processing option : All elements analysed (Normalised)

Spectrum	O	Na	Mg	Al	Si	K	Ca	Ti	Mn	Fe	Total	Mineral ID
1	33.5							29.4	0.8	36.3	100.0	Ilmenite
2	51.2				48.8						100.0	Quartz
3	41.6			0.6	0.6		3.8		17.8	35.6	100.0	Fe-Mn-Oxide?
4	46.4		6.4	11.0	16.6		0.9	1.0		17.5	100.0	Fe-Oxide/Chlorite
5	51.6				48.4						100.0	Quartz
6	45.4	1.0	0.7	17.1	27.2	6.8				1.7	100.0	K-Feldspar
7	61.4			36.3	2.3						100.0	Al-Oxide

All results in weight%

Sample Notes:
S-7677_9_DPT09AP2

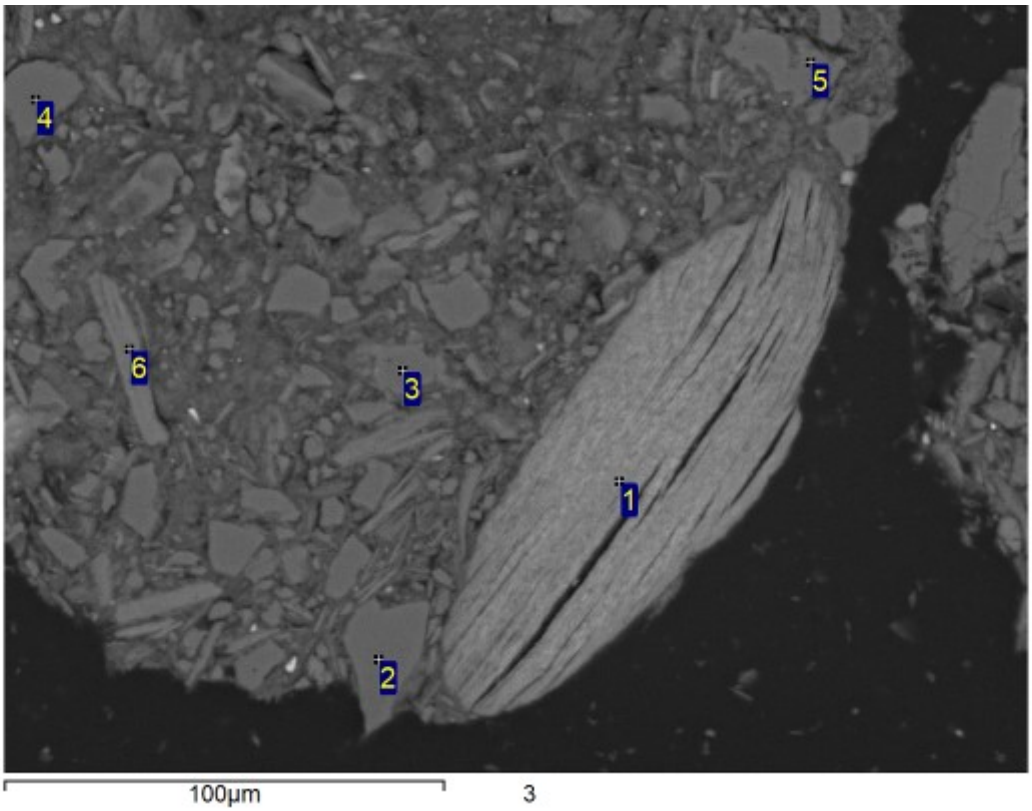


Processing option : All elements analysed (Normalised)

Spectrum	O	Na	Mg	Al	Si	Cl	K	Ca	Ti	Mn	Fe	Total	Mineral ID
1	41.0								59.0			100.0	Rutile
2	51.0				49.0							100.0	Quartz
3	41.8			0.9	1.7			3.1		16.8	35.8	100.0	Fe-Mn-Oxide?
4	45.0	0.4		9.6	31.8		13.1					100.0	K-Feldspar
5	46.4	0.3		9.7	31.2		12.4					100.0	K-Feldspar
6	50.3		0.8	16.2	24.6	0.3	2.4	0.4	0.6		4.4	100.0	Fe-Oxide/K-Feldspar mixture
7	51.5				48.5							100.0	Quartz
8	48.6	0.6	0.9	17.3	23.2		6.8		0.6		1.9	100.0	K-Feldspar

All results in weight%

Sample Notes:
S-7677_9_DPT09AP2

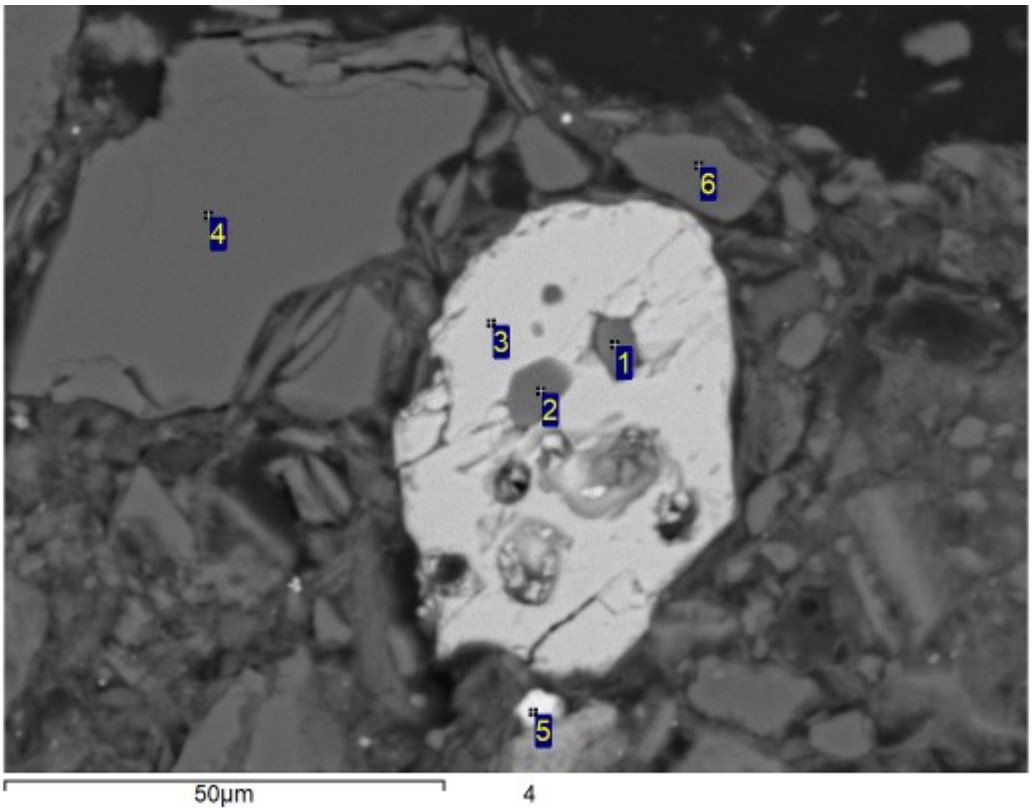


Processing option : All elements analysed (Normalised)

Spectrum	O	Mg	Al	Si	K	Ca	Ti	Fe	Total	Mineral ID
1	42.6	3.6	7.2	13.3	0.4	0.9	1.2	30.7	100.0	Mica
2	51.1			48.9					100.0	Quartz
3	51.3			48.7					100.0	Quartz
4	50.9			49.1					100.0	Quartz
5	51.8			48.2					100.0	Quartz
6	43.2	1.1	16.6	25.5	9.3			4.3	100.0	Mica

All results in weight%

Sample Notes:
S-7677_9_DPT09AP2

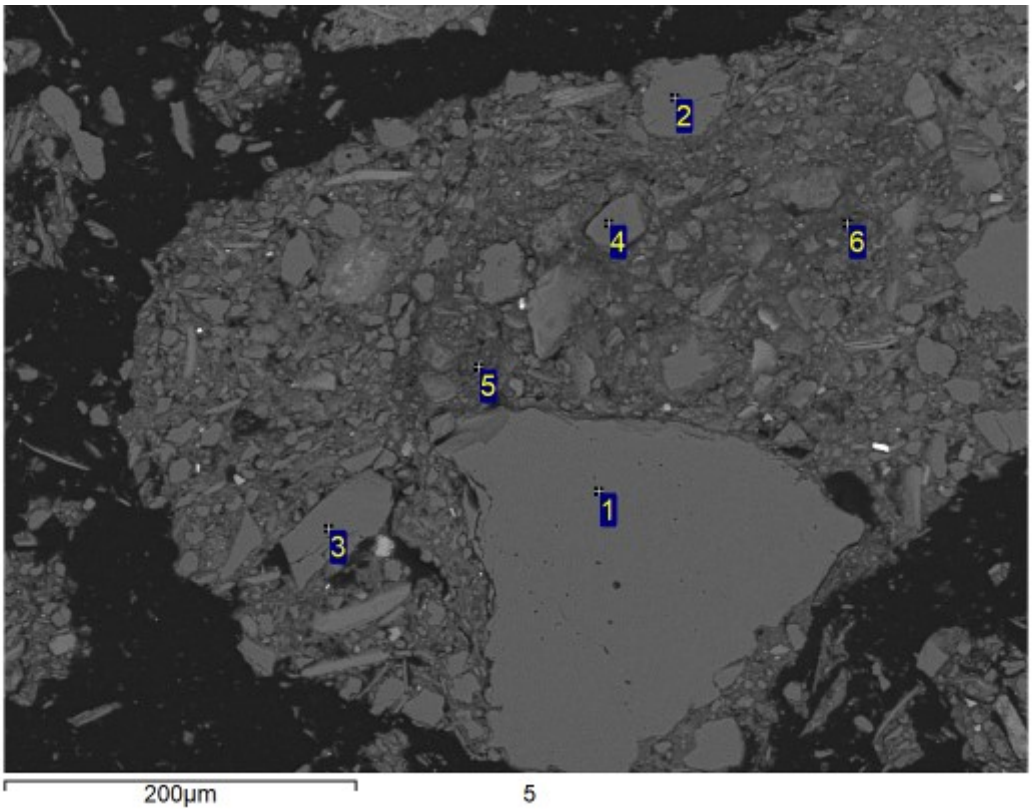


Processing option : All elements analysed (Normalised)

Spectrum	O	Na	Al	Si	Ca	Ti	Mn	Fe	Zr	Total	Mineral ID
1	53.1			44.6		1.3		1.0		100.0	Quartz
2	47.2	5.2	12.8	27.2	5.0	1.5		1.2		100.0	Plagioclase
3	33.4					31.2	1.1	34.3		100.0	Ilmenite
4	51.4			48.6						100.0	Quartz
5	41.4		1.2	14.8		0.4		0.5	41.7	100.0	Zircon
6	51.4			48.6						100.0	Quartz

All results in weight%

Sample Notes:
S-7677_9_DPT09AP2

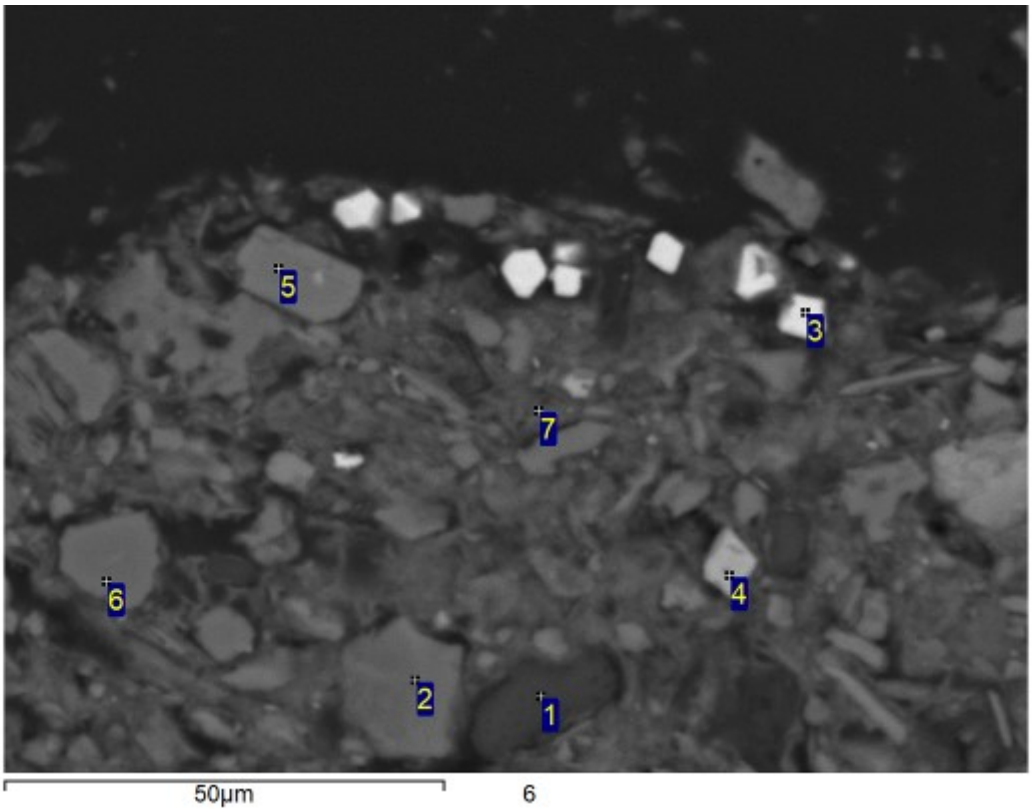


Processing option : All elements analysed (Normalised)

Spectrum	O	Mg	Al	Si	S	Cl	K	Ti	Fe	Total	Mineral ID
1	51.1			48.9						100.0	Quartz
2	45.5			54.5						100.0	Quartz
3	51.0			49.0						100.0	Quartz
4	50.4			49.6						100.0	Quartz
5	47.5	0.8	14.1	29.4	0.7		3.4	0.6	3.6	100.0	Fe-Oxide/Mica mixture
6	36.3	1.0	14.3	29.2	1.0	0.8	3.3		14.2	100.0	Fe-Oxide/Mica mixture

All results in weight%

Sample Notes:
S-7677_9_DPT09AP2

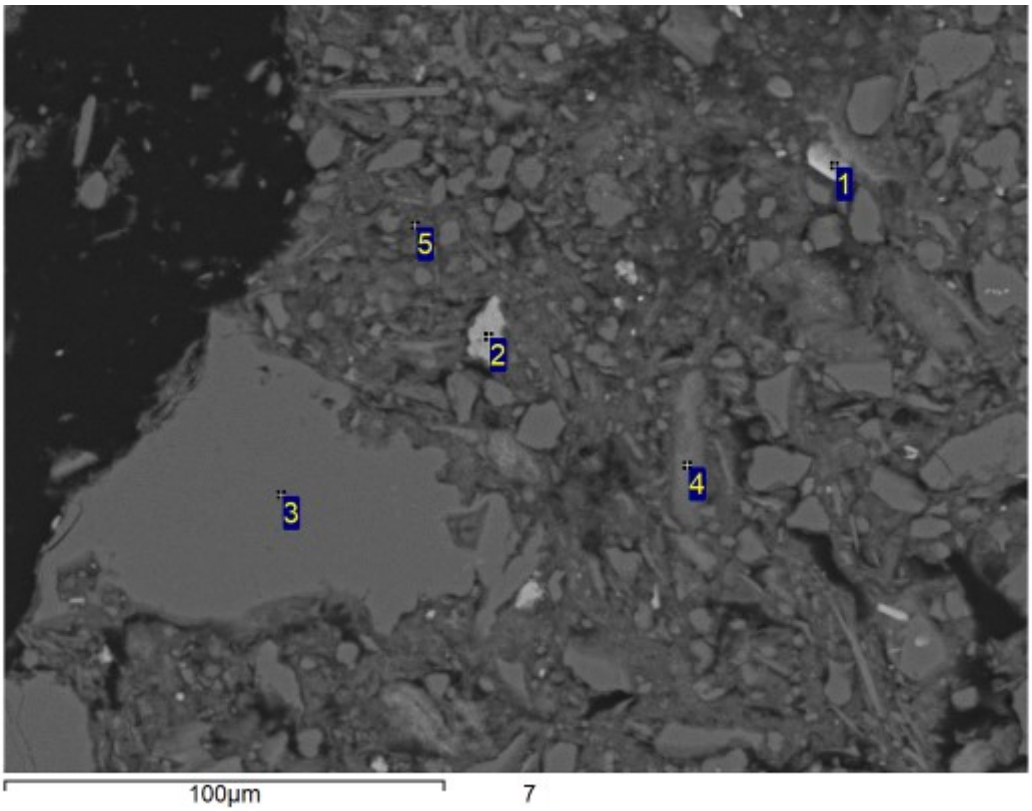


Processing option : All elements analysed (Normalised)

Spectrum	O	Mg	Al	Si	S	Cl	K	Ca	Ti	Fe	Ta	Total	Mineral ID
1	53.9	1.1	8.2	14.2	2.7		0.8	8.8	2.9	7.3		100.0	Altered amphibole?
2	55.4			44.6								100.0	Quartz
3					55.0					43.8	1.2	100.0	Pyrite
4	45.1		0.5	2.9					51.6			100.0	Rutile
5	47.2		18.6	23.4			9.6			1.2		100.0	K-Feldspar
6	50.1		1.3	47.9			0.3			0.3		100.0	Quartz
7	48.1	0.6	17.9	27.8		0.4	2.2	0.4		2.6		100.0	Altered K-Feldspar/Micas

All results in weight%

Sample Notes:
S-7677_9_DPT09AP2

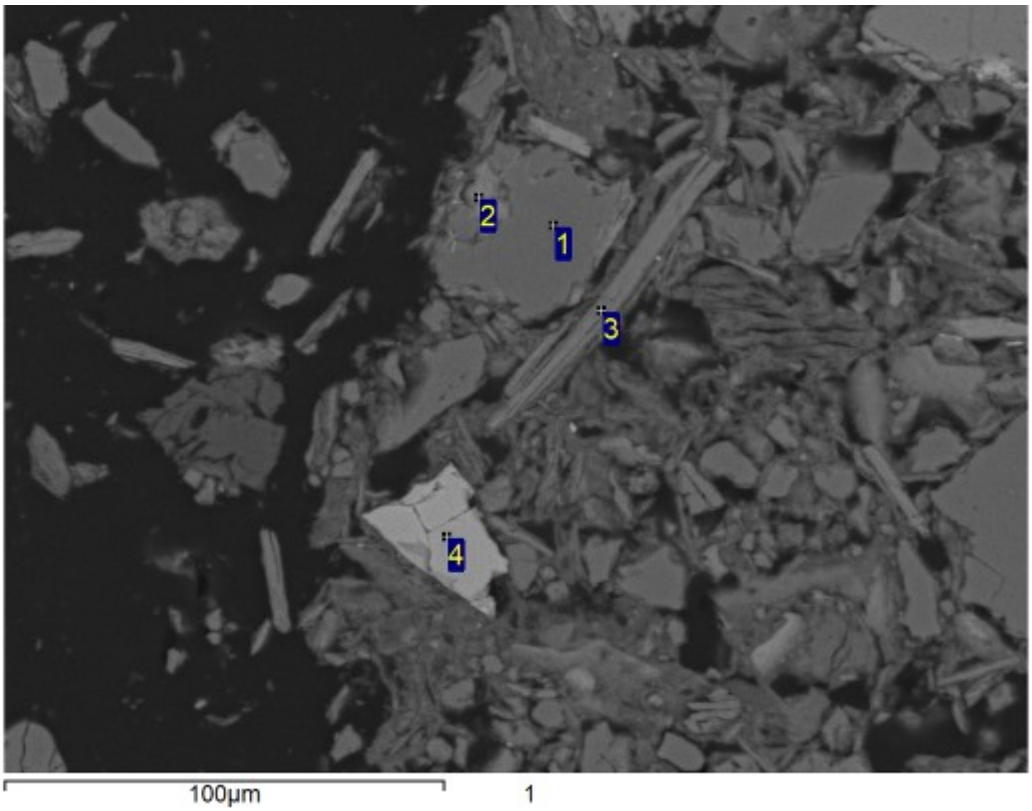


Processing option : All elements analysed (Normalised)

Spectrum	O	Na	Mg	Al	Si	K	Ti	Mn	Fe	Total	Mineral ID
1	49.7			0.7	1.0		29.5	1.8	17.4	100.0	Ilmenite
2	43.5			2.4	3.5	1.0	48.5		1.1	100.0	Rutile
3	50.8				49.2					100.0	Quartz
4	48.0	0.9	0.7	16.6	24.0	5.7			4.0	100.0	Mica
5	40.0		1.2	16.1	26.9	3.8	0.6		11.5	100.0	Fe-Oxide/K-Feldspar mixture

All results in weight%

Sample Notes:
S-7677_10_DPT10AP2

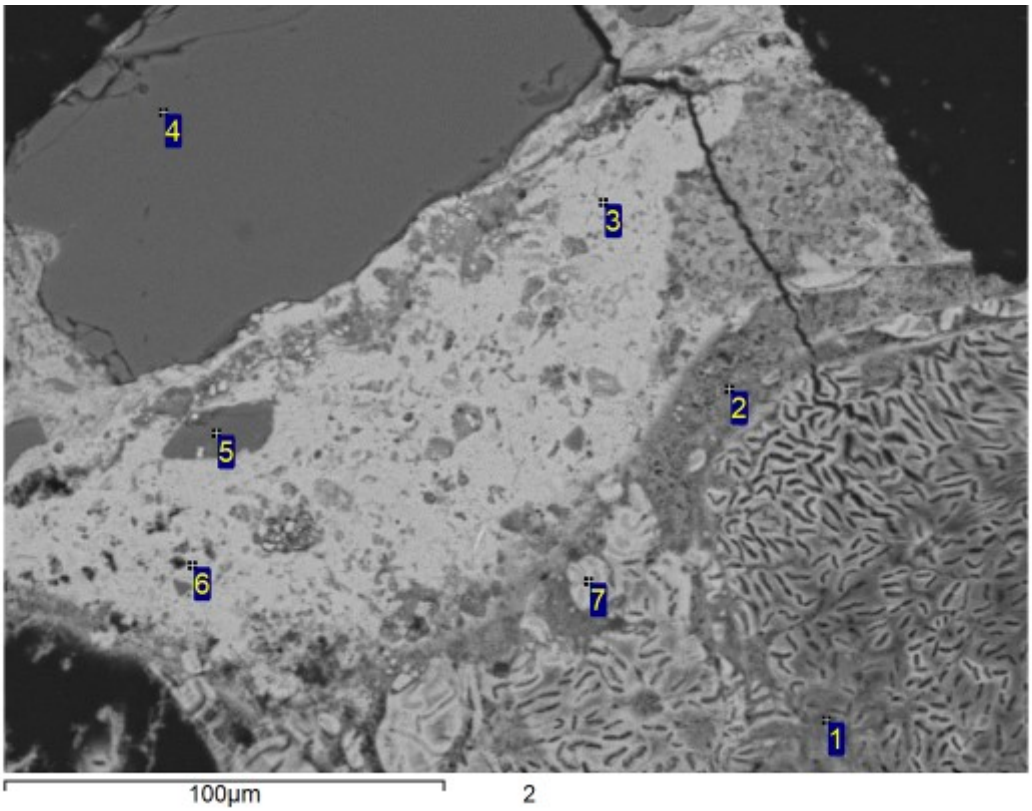


Processing option : All elements analysed (Normalised)

Spectrum	O	Na	Mg	Al	Si	K	Ca	Ti	Mn	Fe	Total	Mineral ID
1	50.7				49.3						100.0	Quartz
2	49.9		6.5	9.5	15.3					18.8	100.0	Biotite
3	45.1	0.6	0.7	17.7	24.6	8.5		0.4		2.4	100.0	K-Feldspar
4	39.4		1.4	11.0	18.9		1.7		2.7	24.9	100.0	Garnet

All results in weight%

Sample Notes:
S-7677_10_DPT10AP2

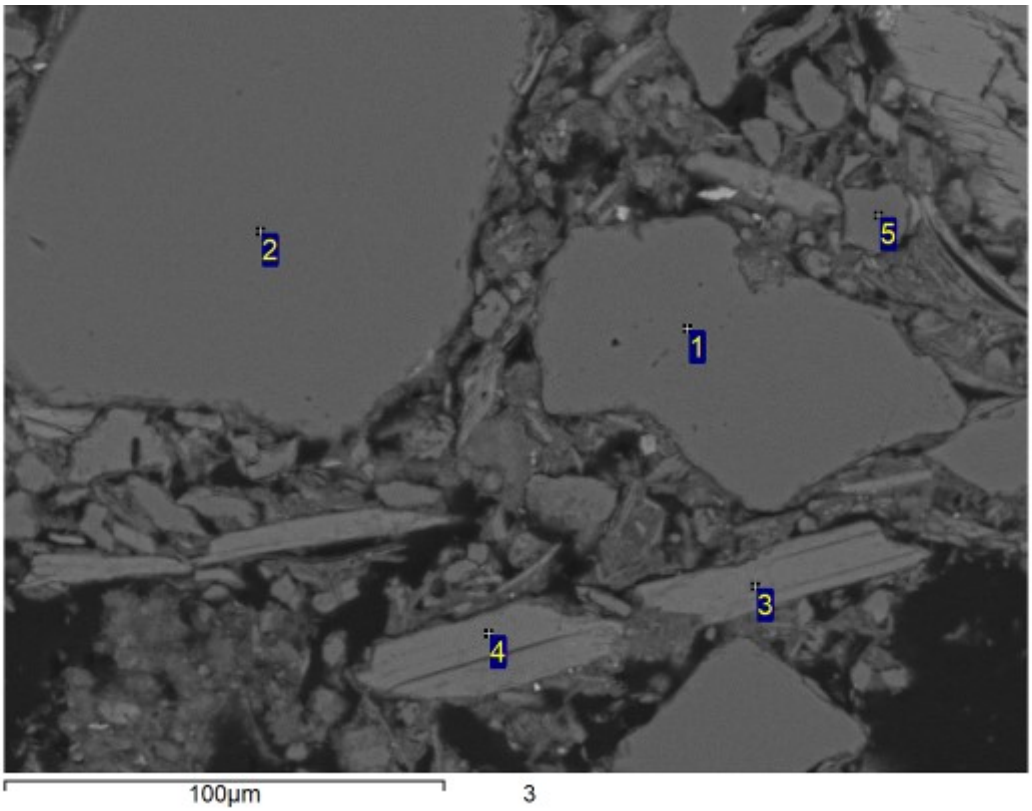


Processing option : All elements analysed (Normalised)

Spectrum	O	Al	Si	P	Cl	Fe	Total	Mineral ID
1	31.4	1.5	2.7	1.4	0.7	62.3	100.0	Fe-Oxide/Oxyhydroxide
2	33.6	1.6	2.3	1.3	0.7	60.5	100.0	Fe-Oxide/Oxyhydroxide
3	40.2	0.9	3.1			55.8	100.0	Fe-Oxide/Oxyhydroxide
4	51.2		48.8				100.0	Quartz
5	51.0		48.2			0.9	100.0	Quartz
6	40.0		2.7	0.6		56.7	100.0	Fe-Oxide/Oxyhydroxide
7	34.8		2.6	0.7		61.8	100.0	Fe-Oxide/Oxyhydroxide

All results in weight%

Sample Notes:
S-7677_10_DPT10AP2

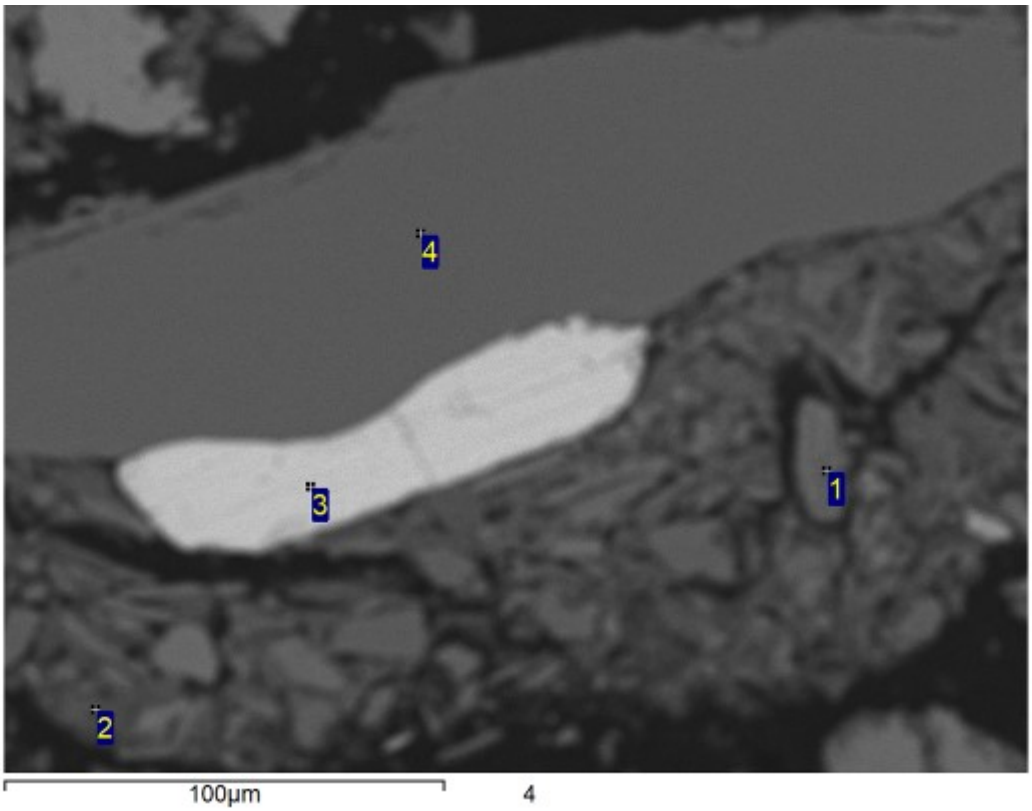


Processing option : All elements analysed (Normalised)

Spectrum	O	Na	Mg	Al	Si	K	Ti	Fe	Total	Mineral ID
1	50.9				49.1				100.0	Quartz
2	50.7				49.3				100.0	Quartz
3	48.5		0.8	16.6	22.7	8.8	0.6	1.9	100.0	Muscovite
4	47.3	0.4	0.9	17.1	23.1	8.8	0.7	1.8	100.0	Muscovite
5	46.0		0.4	1.6	49.4			2.4	100.0	Quartz

All results in weight%

Sample Notes:
S-7677_10_DPT10AP2

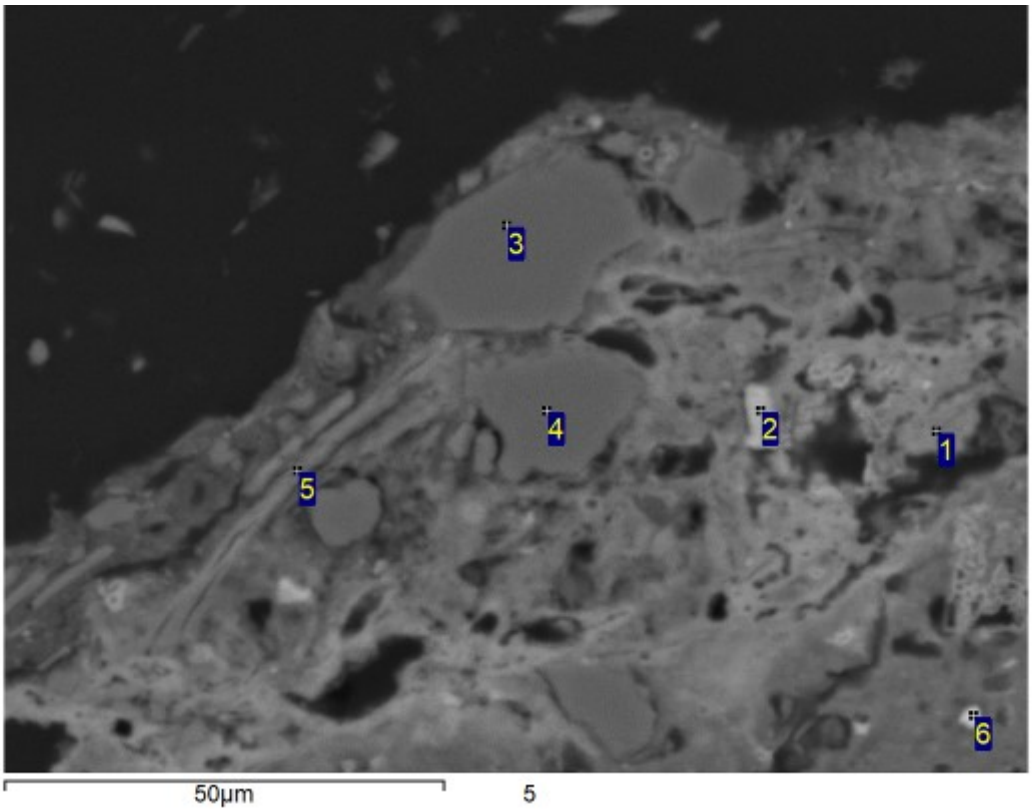


Processing option : All elements analysed (Normalised)

Spectrum	O	Na	Mg	Al	Si	K	Ti	Fe	Total	Mineral ID
1	48.0	0.4	0.8	16.2	23.0	8.0	0.3	3.2	100.0	Muscovite
2	43.1		1.1	16.0	26.9	2.1	0.9	9.8	100.0	Fe-Oxide/Oxyhydroxide/K-Feldspar mixture
3	32.7						12.6	54.7	100.0	Ilmenite
4	51.9				48.1				100.0	Quartz

All results in weight%

Sample Notes:
S-7677_10_DPT10AP2

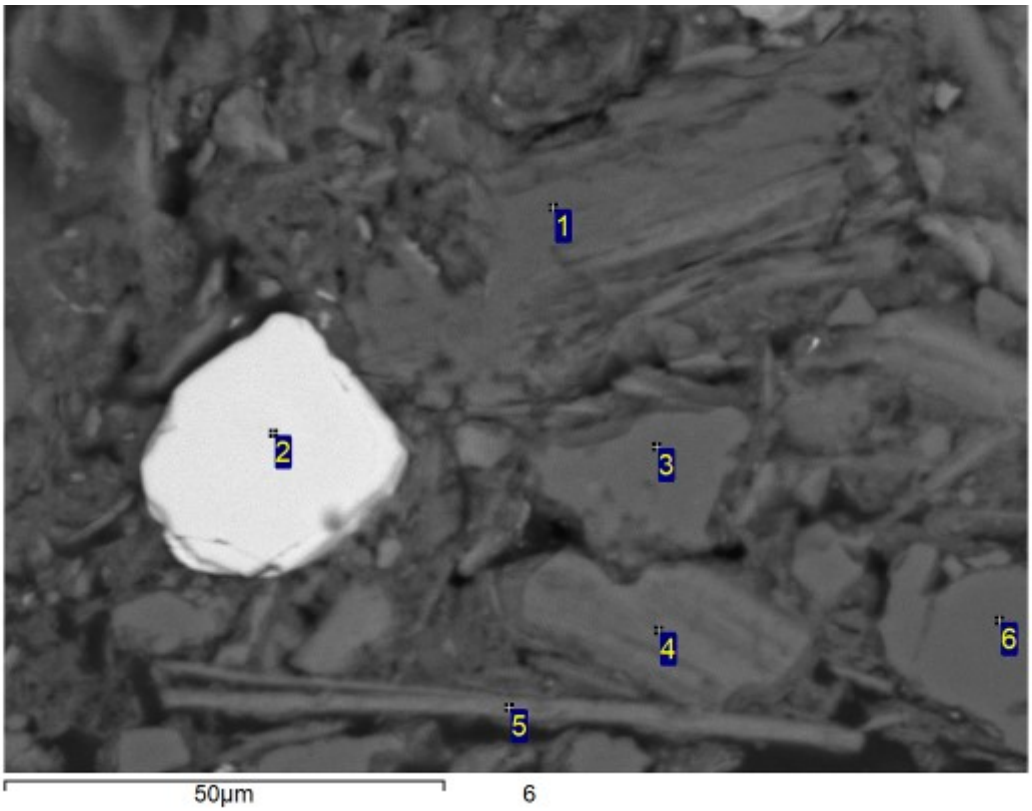


Processing option : All elements analysed (Normalised)

Spectrum	O	Mg	Al	Si	P	K	Ca	Ti	Cr	Mn	Fe	Zn	Total	Mineral ID
1	42.0	3.8	8.7	17.7		0.3	0.9			0.6	26.0		100.0	Fe-Oxide /Oxyhydroxide/Kaolinite mixture
2	42.6		4.6	4.2	0.7						47.9		100.0	Fe-Oxide
3	50.6			49.4									100.0	Quartz
4	50.0			50.0									100.0	Quartz
5	45.8	6.1	10.6	20.2		3.2		0.9			13.1		100.0	Mica
6	42.3	0.7	5.8	6.8		0.9			22.3	1.3	18.5	1.4	100.0	Chromite

All results in weight%

Sample Notes:
S-7677_10_DPT10AP2

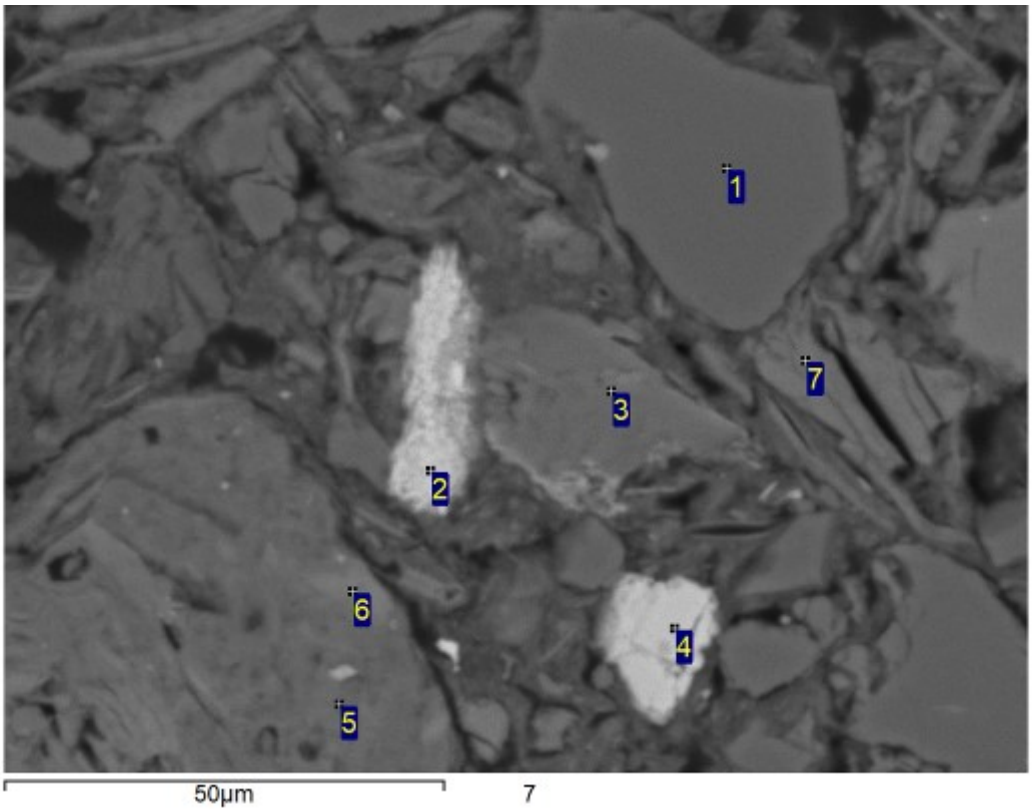


Processing option : All elements analysed (Normalised)

Spectrum	O	Na	Mg	Al	Si	K	Ti	Fe	Zr	Hf	Total	Mineral ID
1	55.0			19.7	22.6	0.5		2.2			100.0	Kaolinite
2	32.3				15.6				50.4	1.7	100.0	Zircon
3	52.1				47.9						100.0	Quartz
4	49.4		0.9	17.6	23.3	7.6		1.2			100.0	Mica
5	46.6	0.4	0.8	17.3	24.3	8.0	0.4	2.2			100.0	Mica
6	50.9				49.1						100.0	Quartz

All results in weight%

Sample Notes:
S-7677_10_DPT10AP2



Processing option : All elements analysed (Normalised)

Spectrum	O	Na	Mg	Al	Si	K	Ca	Ti	Mn	Fe	Total	Mineral ID
1	50.9				49.1						100.0	Quartz
2	31.1			0.7	0.9			1.8		65.4	100.0	Fe-Oxide/Oxyhydroxide
3	49.3	0.9	0.4	18.2	21.9	7.1				2.2	100.0	K-Feldspar
4	33.3							30.1	1.4	35.2	100.0	Ilmenite
5	46.9		2.8	10.4	29.3	2.1	0.4			8.2	100.0	Fe-Oxide/Oxyhydroxide/Mica mixture
6	47.8		5.3	12.1	17.8	1.5	0.5			15.1	100.0	Fe-Oxide/Oxyhydroxide/Mica mixture
7	47.3		6.0	11.5	21.3	2.8	0.7	1.3		9.1	100.0	Fe-Oxide/Oxyhydroxide/Mica mixture

All results in weight%

Analysis Report

GS21-00731

F402001 SGS LAKEFIELD RESEARCH
PO BOX 4300
185 CONCESSION STREET
LAKEFIELD, ONTARIO ON K0L 2H0
CANADA

Received: 31-Mar-2021
Completed: 29-Apr-2021
Order Reference: Kela Ashworth - S767 CEC

Laboratory ID:	GS21-00731.001	GS21-00731.002	GS21-00731.003	GS21-00731.004	GS21-00731.005	GS21-00731.006
Client Sample #:	S-7677-1	S-7677-2	S-7677-3	S-7677-4	S-7677-5	S-7677-6
Description:	S-7677_1_DPT07AP1	S-7677_2_DPT11AP2	S-7677_3_DPT08AP2	S-7677_4_DPT07AP2	S-7677_5_DPT01AP3	S-7677_6_DPT03AP3
CEC Actual (meq/100g)	7.83	8.98	6.61	10.25	13.47	18.13

Report File Reference Number: 0000168864

NOTE:
The analysis report above refers to the time and place of testing, and strictly to the supplied sample(s) only, without reference to any other matter. This report does not evidence or refer to any consignment or shipment or/and SGS sampling and inspection.

Signed and dated in Guelph, ON
On 29-Apr-2021

For and on behalf of SGS Canada Inc., Agriculture and Food

Jack Legg, CCA-ON, 4R NMS
Branch Manager, Agronomist

Analysis Report

GS21-00731

F402001 SGS LAKEFIELD RESEARCH
PO BOX 4300
185 CONCESSION STREET
LAKEFIELD, ONTARIO ON K0L 2H0
CANADA

Received: 31-Mar-2021
Completed: 29-Apr-2021
Order Reference: Kela Ashworth - S767 CEC

Laboratory ID:	GS21-00731.007	GS21-00731.008	GS21-00731.009	GS21-00731.010
Client Sample #:	S-7677-7	S-7677-8	S-7677-9	S-7677-10
Description:	S-7677_7_DPT02AP3	S-7677_8_DPT04AP3	S-7677_9_DPT09AP2	S-7677_10_DPT10AP2
CEC Actual (meq/100g)	23.97	41.80	11.91	10.62

Report File Reference Number: 0000168864

NOTE:
The analysis report above refers to the time and place of testing, and strictly to the supplied sample(s) only, without reference to any other matter. This report does not evidence or refer to any consignment or shipment or/and SGS sampling and inspection.

Signed and dated in Guelph, ON
On 29-Apr-2021

For and on behalf of SGS Canada Inc., Agriculture and Food

Jack Legg, CCA-ON, 4R NMS
Branch Manager, Agronomist

Specialty Analytical

9011 SE Jannsen Rd
Clackamas, OR 97015
TEL: (503) 607-1331
Website: www.specialtyanalytical.com

April 06, 2021

Kela Ashworth
SiREM Lab
130 Stone Road West
Guelph, Ontario N1G3Z2
TEL: (519) 822-2265
FAX

RE: S-7677 Order No.: 2103288

Dear Kela Ashworth:

There were no problems with the analysis and all data for associated QC met EPA or laboratory specifications, except where noted in the Case Narrative, or as qualified with flags. Results apply only to the samples analyzed. Without approval of the laboratory, the reproduction of this report is only permitted in its entirety.

If you have any questions regarding these tests, please feel free to call.

Sincerely,

Marty French
Lab Director

CLIENT: SiREM Lab
Project: S-7677

Lab ID: 2103288-001 **Matrix:** SOIL
Client Sample ID S-7677_1_DPT07AP1 **Collection Date:** 3/25/2021

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ANION EXCHANGE CAPACITY				**SW9081**		Analyst: **EG**
Anion Exchange Capacity	5.13	0.000200		meq/100g	1	4/1/2021 10:38:06 AM

Lab ID: 2103288-002 **Matrix:** SOIL
Client Sample ID S-7677_2_DPT11AP2 **Collection Date:** 3/25/2021

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ANION EXCHANGE CAPACITY				**SW9081**		Analyst: **EG**
Anion Exchange Capacity	6.78	0.000200		meq/100g	1	4/1/2021 10:39:06 AM

Lab ID: 2103288-003 **Matrix:** SOIL
Client Sample ID S-7677_3_DPT08AP2 **Collection Date:** 3/25/2021

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ANION EXCHANGE CAPACITY				**SW9081**		Analyst: **EG**
Anion Exchange Capacity	5.96	0.000200		meq/100g	1	4/1/2021 10:40:06 AM

Lab ID: 2103288-004 **Matrix:** SOIL
Client Sample ID S-7677_4_DPT07AP2 **Collection Date:** 3/25/2021

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ANION EXCHANGE CAPACITY				**SW9081**		Analyst: **EG**
Anion Exchange Capacity	6.84	0.000200		meq/100g	1	4/1/2021 10:41:06 AM

Lab ID: 2103288-005 **Matrix:** SOIL
Client Sample ID S-7677_5_DPT01AP3 **Collection Date:** 3/25/2021

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ANION EXCHANGE CAPACITY				**SW9081**		Analyst: **EG**
Anion Exchange Capacity	6.76	0.000200		meq/100g	1	4/1/2021 10:43:06 AM

CLIENT: SiREM Lab
Project: S-7677

Lab ID: 2103288-006 **Matrix:** SOIL
Client Sample ID S-7677_6_DPT03AP3 **Collection Date:** 3/25/2021

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ANION EXCHANGE CAPACITY				**SW9081**		Analyst: **EG**
Anion Exchange Capacity	7.16	0.000200		meq/100g	1	4/1/2021 10:44:06 AM

Lab ID: 2103288-007 **Matrix:** SOIL
Client Sample ID S-7677_7_DPT02AP3 **Collection Date:** 3/25/2021

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ANION EXCHANGE CAPACITY				**SW9081**		Analyst: **EG**
Anion Exchange Capacity	7.18	0.000200		meq/100g	1	4/1/2021 10:45:06 AM

Lab ID: 2103288-008 **Matrix:** SOIL
Client Sample ID S-7677_8_DPT04AP3 **Collection Date:** 3/25/2021

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ANION EXCHANGE CAPACITY				**SW9081**		Analyst: **EG**
Anion Exchange Capacity	7.65	0.000200		meq/100g	1	4/1/2021 10:46:06 AM

Lab ID: 2103288-009 **Matrix:** SOIL
Client Sample ID S-7677_9_DPT09AP2 **Collection Date:** 3/25/2021

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ANION EXCHANGE CAPACITY				**SW9081**		Analyst: **EG**
Anion Exchange Capacity	5.17	0.000200		meq/100g	1	4/1/2021 10:47:06 AM

Lab ID: 2103288-010 **Matrix:** SOIL
Client Sample ID S-7677_10_DPT10AP2 **Collection Date:** 3/25/2021

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ANION EXCHANGE CAPACITY				**SW9081**		Analyst: **EG**
Anion Exchange Capacity	6.19	0.000200		meq/100g	1	4/1/2021 10:48:06 AM

QC SUMMARY REPORT

Specialty Analytical

WO#: **2103288**

4/6/2021

Client: SiREM Lab

Project: S-7677 **TestCode:** **AEC_S**

Sample ID	**2103288-004ADUP**	SampType:	**DUP**	TestCode:	**AEC_S**	Units:	**meq/100g**	Prep Date:		RunNo:	**39875**
Client ID:	**S-7677_4_DPT07AP**	Batch ID:	**R39875**	TestNo:	**SW9081**			Analysis Date:	**4/1/2021**	SeqNo:	**513304**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Anion Exchange Capacity	7.21	0.000200						6.836	5.36	20	

Specialty Analytical
9011 SE Jannsen Rd
Clackamas, Oregon 97015
TEL: 503-607-1331 FAX: 503-607-1336
Website: www.specialtyanalytical.com

Sample Receipt Checklist

Client Name SIREM Work Order Numbe 2103288

RcptNo: 1 Date and Time Receive 3/29/2021 9:11:17 AM Received by Katherine Lynch

Completed by Reviewed by:

Completed Date: 3/29/2021 9:24:09 AM Reviewed Date: 3/29/2021 3:51:52 PM

Carrier name FedEx

Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	Not Presen ☐
Are matrices correctly identified on Chain of custody?	Yes ☑	No ☐	
Is it clear what analyses were requested?	Yes ☑	No ☐	
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Presen ☑
Samples in proper container/bottle?	Yes ☑	No ☐	
Were correct preservatives used and noted?	Yes ☐	No ☐	NA ☑
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
Were container lables complete (ID, Pres, Date)?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
All samples received at a temp. of > 0° C to 6.0° C?	Yes ☐	No ☑	NA ☐
Response when temperature is outside of range:			
Preservative added to bottles:			
Sample Temp. taken and recorded upon receipt?	Yes ☑	No ☐	To 10.1 º
Water - Were bubbles absent in VOC vials?	Yes ☐	No ☐	No Vials ☑
Water - Was there Chlorine Present?	Yes ☐	No ☐	NA ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	NA ☑
Are Samples considered acceptable?	Yes ☑	No ☐	
Custody Seals present?	Yes ☐	No ☑	
Traffic Report or Packing Lists present?	Yes ☐	No ☑	
Airbill or Sticker?	Air Bill ☐	Sticker ☐	Not Present ☑
Airbill No:			
Sample Tags Present?	Yes ☐	No ☑	
Sample Tags Listed on COC?	Yes ☐	No ☑	
Tag Numbers:			
Sample Condition?	Intact ☑	Broken ☐	Leaking ☐

Case Number: SDG: SAS:

Adjusted? _____ Checked b

Any No and/or NA (not applicable) response must be detailed in the comments section be

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Sample Receipt Checklist

Client Contacted?	☑ Yes	☐ No	☐ NA	Person Contacted:	Comments:
Contact Mode:	☐ Phone:	☐ Fax:	☑ Email:	☐ In Person:	Samples received in cooler with ice packs. Client contacted.
Client Instructions:					
Date Contacted:	3/29/2021	Contacted By:	Katherine Lynch		
Regarding:	Temp of samples upon receipt				
CorrectiveAction:					

Specialty Analytical
9011 SE Jannsen Rd
Clackamas, OR 97015
Phone: 503-607-1331
Fax: 503-607-1336

Chain of Custody Record

Date: | Page: 1 of: 1 | Laboratory Project No (internal): 2103288

Project Name: | Temperature on Receipt: 10.1 °C

Client: SiREM Lab | Project No: S-7677 PO No: | Cooling: Yes Cooler + Ice | Shipped Via: FedEx

Address: 130 Stone Road West | Collected by: Kela Ashworth | Custody Seal: Y / (N) Intact / Broken Cooler / Bottle

City, State, Zip: Guelph, Ontario, N1G 3Z2 | State Collected: OR ☐ WA ☐ OTHER | MDL ☐ TIER IV ☐ EDD ☐

Telephone: 519-822-2265 | Report To (PM): Kela Ashworth | Sample Disposal: ☐ Return to client ☒ Disposal by lab (after 60 days)

AP Email: accountspayablecan@siremlab.com | PM Email: kashworth@siremlab.com

					Requested Tests												
Sample Name	Sample Date	Sample Time	Sample Matrix*	# of Containers	Anion Exchange Capacity										Anion Exchange Capacity		Comments
1 S-7677_1_DPT07AP1	25-Mar-21		S	1	✓												
2 S-7677_2_DPT11AP2	25-Mar-21		S	1	✓												
3 S-7677_3_DPT08AP2	25-Mar-21		S	1	✓												
4 S-7677_4_DPT07AP2	25-Mar-21		S	1	✓												
5 S-7677_5_DPT01AP3	25-Mar-21		S	1	✓												
6 S-7677_6_DPT03AP3	25-Mar-21		S	1	✓												
7 S-7677_7_DPT02AP3	25-Mar-21		S	1	✓												
8 S-7677_8_DPT04AP3	25-Mar-21		S	1	✓												
9 S-7677_9_DPT09AP2	25-Mar-21		S	1	✓												
10 S-7677_10_DPT10AP2	25-Mar-21		S	1	✓												

*Matrix: A = Air, AQ = Aqueous, L = Liquid, O = Oil, P = Product, S = Soil, SD = Sediment, SL = Solid, W = Water, DW = Drinking Water, GW = Ground Water, SW = Storm Water, WW = Waste Water, M = Miscellaneous

Turn-around Time: Standard (5-7 Business): ✓ 3 Day: ☐ 2 Day: ☐ Next Day: ☐ Same Day: ☐

Expedited turn-around requests should be coordinated in advance

Relinquished	Date/Time	Received	Date/Time
x Kela Ashworth	25 March 21 / 16:30	x	3-29-2021 9:10
x		x	
x		x	

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TEL: 503-607-1331 FAX: 503-607-1336
Website: www.specialtyanalytical.com

Definition Only

WO#: **2103288**
Date: **4/6/2021**

Definitions:

KEY TO FLAGS

A: This sample contains a Gasoline Range Organic not identified as a specific hydrocarbon product. The result was qualified against gasoline calibration standards.

A1: This sample contains a Diesel Range Organic not identified as a specific hydrocarbon product. The result was qualified against diesel calibration standards.

A2: This sample contains a Lube Oil Range Organic not identified as a specific hydrocarbon product. The result was qualified against lube oil calibration standards.

A3: The results was determined to be Non-Detect based on hydrocarbon pattern recognition. The product was carry-over from another hydrocarbon type.

A4: The product appears to be aged or degraded.

B: The blank exhibited a positive result greater than the reporting limit for this compound.

CN: See Case Narrative.

E: Result exceeds the calibration range for this compound. The result should be considered an estimate.

F: The positive result for this hydrocarbon is due to single component contamination. The product does not match any hydrocarbon in the fuels library.

FS: Follow-up testing is suggested.

G: Result may be biased high due to biogenic interferences. Clean up is recommended.

H: Sample was analyzed outside recommended holding time.

HT: At client's request, samples was analyzed outside of recommended holding time.

HP: Sample was analyzed outside recommended holding time due to VOA having pH >2.

J: The results for this analyte is between the MDL and the PQL and should be considered an

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Definition Only

WO#: **2103288**
Date: **4/6/2021**

Definitions:

estimated concentration.

K: Diesel result is biased high due to amount of Oil contained in the sample.

L: Diesel result is biased high due to amount of Gasoline contained in the sample.

M: Oil result is biased high due to amount of Diesel contained in the sample.

N: Gasoline result is biased high due to amount of Diesel contained in the sample.

MC: Sample concentration is greater than 4x the spiked value, the spiked value is considered insignificant.

MI: Result is outside control limits due to matrix interference.

NH: Sample matrix is non-homogeneous

MSA: Value determined by Method of Standard Addition.

O: Laboratory Control Standard (LCS) exceeded laboratory control limits but meets CCV criteria. Data meets EPA requirements.

Q: Detection levels elevated due to sample matrix.

R: RPD control limits were exceeded

RF: Duplicate failed due to result being at or near the method-reporting limit.

RP: Matrix spike values exceed established QC limits; post digestion spike is in control.

S: Recovery is outside control limits.

SC: CCV or LCS exceeded high recovery control limits, but associated samples are non-detect. Data meets EPA requirements.

SL: LCS exceeded recovery control limits, but associated MS/MSD passing. Data meets EPA requirements.

eurofins | Environment Testing America

ANALYTICAL REPORT

Eurofins TestAmerica, Knoxville
5815 Middlebrook Pike
Knoxville, TN 37921
Tel: (865)291-3000

Laboratory Job ID: 140-22793-1
Client Project/Site: S-7677 SiREMNA
Revision: 1

For:
Sirem, div of Geosyntec Consultants
130 Stone Rd West
Guelph, Ontario N1G 3Z2

Attn: Kela Ashworth

Ryan Henry

Authorized for release by:
7/14/2021 4:34:00 PM

Ryan Henry, Project Manager I
(865)291-3000
williamr.henry@eurofinset.com

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Definitions/Glossary

Client: Sirem, div of Geosyntec Consultants
Job ID: 140-22793-1
Project/Site: S-7677 SiREMNA

Qualifiers

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job ID: 140-22793-1

Laboratory: Eurofins TestAmerica, Knoxville

Narrative

Job Narrative
140-22793-1

Receipt
The samples were received on 4/22/2021 at 10:30am and arrived in good condition. The temperature of the cooler at receipt was 9.6º C.

Receipt Exceptions
The following samples were received at the laboratory outside the required temperature criteria: S-7677_2_DPT11AP2 (140-22793-1), S-7677_3_DPT08AP2 (140-22793-2) and S-7677_4_DPT07AP2 (140-22793-3). The client was contacted regarding this issue, and the laboratory was instructed to proceed with analysis.

Metals
7 Step Sequential Extraction Procedure

These soil samples were prepared and analyzed using Eurofins TestAmerica Knoxville standard operating procedure KNOX-MT-0008, "7 Step Sequential Extraction Procedure". SW-846 Method 6010B as incorporated in Eurofins TestAmerica Knoxville standard operating procedure KNOX-MT-0007 was used to perform the final instrument analyses.

An aliquot of each sample was sequentially extracted using the steps listed below:

· Step 1 - Exchangeable Fraction: A 5 gram aliquot of sample was extracted with 25 mL of 1M magnesium sulfate (MgSO4), centrifuged and filtered. 5 mL of the resulting leachate was digested using method 3010A and analyzed by method 6010B. Results are reported in mg/kg on a dry weight basis.
· Step 2 - Carbonate Fraction: The sample residue from step 1 was extracted with 25 mL of 1M sodium acetate/acetic acid (NaOAc/HOAc) at pH 5, centrifuged and filtered. 5 mL of the resulting leachate was digested using method 3010A and analyzed by method 6010B. Results are reported in mg/kg on a dry weight basis.
· Step 3 - Non-crystalline Materials Fraction: The sample residue from step 2 was extracted with 25 mL of 0.2M ammonium oxalate (pH 3), centrifuged and filtered. 5 mL of the resulting leachate was digested using method 3010A and analyzed by method 6010B. Results are reported in mg/kg on a dry weight basis.
· Step 4 - Metal Hydroxide Fraction: The sample residue from step 3 was extracted with 25 mL of 1M hydroxylamine hydrochloride solution in 25% v/v acetic acid, centrifuged and filtered. 5 mL of the resulting leachate was digested using method 3010A and analyzed by method 6010B. Results are reported in mg/kg on a dry weight basis.
· Step 5 - Organic-bound Fraction: The sample residue from step 4 was extracted three times with 25 mL of 5% sodium hypochlorite (NaClO) at pH 9.5, centrifuged and filtered. The resulting leachates were combined and 5 mL were digested using method 3010A and analyzed by method 6010B. Results are reported in mg/kg on a dry weight basis.
· Step 6 - Acid/Sulfide Fraction: The sample residue from step 5 was extracted with 25 mL of a 3:1:2 v/v solution of HCl-HNO3-H2O, centrifuged and filtered. 5 mL of the resulting leachate was diluted to 50 mL with reagent water and analyzed by method 6010B. Results are reported in mg/kg on a dry weight basis.
· Step 7 - Residual Fraction: A 1.0 g aliquot of the sample residue from step 6 was digested using HF, HNO3, HCl and H3BO3. The digestate was analyzed by ICP using method 6010B. Results are reported in mg/kg on a dry weight basis.

In addition, a 1.0 g aliquot of the original sample was digested using HF, HNO3, HCl and H3BO3. The digestate was analyzed by ICP using method 6010B. Total metal results are reported in mg/kg on a dry weight basis.

Results were calculated using the following equation:

Result, µg/g or mg/Kg, dry weight = (C × V × V1 × D) / (W × S × V2)

Where:
C = Concentration from instrument readout, µg/mL
V = Final volume of digestate, mL
D = Instrument dilution factor
V1 = Total volume of leachate, mL
V2 = Volume of leachate digested, mL

Job ID: 140-22793-1 (Continued)

Laboratory: Eurofins TestAmerica, Knoxville (Continued)

W = Wet weight of sample, g
S = Percent solids/100

A method blank, laboratory control sample and laboratory control sample duplicate were prepared and analyzed with each SEP step in order to provide information about both the presence of elements of interest in the extraction solutions, and the recovery of elements of interest from the extraction solutions. Results outside of laboratory QC limits do not reflect out of control performance, but rather the effect of the extraction solution upon the analyte.

A laboratory sample duplicate was prepared and analyzed with each batch of samples in order to provide information regarding the reproducibility of the procedure.

SEP Report Notes:

The final report lists the results for each step, the result for the total digestion of the sample, and a sum of the results of steps 1 through 7 by element.

Magnesium was not reported for step 1 because the extraction solution for this step (magnesium sulfate) contains high levels of magnesium. Sodium was not reported for steps 2 and 5 since the extraction solutions for these steps contain high levels of sodium. The sum of steps 1 through 7 is much higher than the total result for sodium and magnesium due to the magnesium and sodium introduced by the extraction solutions.

The digestates for steps 1, 2 and 5 were analyzed at a dilution due to instrument problems caused by the high solids content of the digestates. The reporting limits were adjusted accordingly.

Methods 6010B, 6010B SEP: The following samples were diluted due to the presence of titanium which interferes with Cobalt: S-7677_2_DPT11AP2 (140-22793-1), S-7677_3_DPT08AP2 (140-22793-2) and S-7677_4_DPT07AP2 (140-22793-3). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Sample Summary

Client: Sirem, div of Geosyntec Consultants
Project/Site: S-7677 SiREMNA

Job ID: 140-22793-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
140-22793-1	S-7677_2_DPT11AP2	Solid	04/20/21 00:00	04/22/21 10:30	
140-22793-2	S-7677_3_DPT08AP2	Solid	04/20/21 00:00	04/22/21 10:30	
140-22793-3	S-7677_4_DPT07AP2	Solid	04/20/21 00:00	04/22/21 10:30	

Client Sample ID: S-7677_2_DPT11AP2
Lab Sample ID: 140-22793-1
Date Collected: 04/20/21 00:00
Matrix: Solid
Date Received: 04/22/21 10:30
Percent Solids: 78.0

Method: 6010B SEP - SEP Metals (ICP) - Step 1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	ND		13	0.23	mg/Kg	☼	04/29/21 08:00	05/05/21 13:39	4

Method: 6010B SEP - SEP Metals (ICP) - Step 2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	ND		9.6	0.24	mg/Kg	☼	04/30/21 08:00	05/05/21 15:16	3

Method: 6010B SEP - SEP Metals (ICP) - Step 3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	**0.33**	**J**	3.2	0.058	mg/Kg	☼	05/03/21 08:00	05/05/21 16:35	1

Method: 6010B SEP - SEP Metals (ICP) - Step 4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	**2.1**	**J**	3.2	0.068	mg/Kg	☼	05/04/21 08:00	05/10/21 14:47	1

Method: 6010B SEP - SEP Metals (ICP) - Step 5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	ND		48	0.77	mg/Kg	☼	05/06/21 08:00	05/10/21 16:25	5

Method: 6010B SEP - SEP Metals (ICP) - Step 6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	**2.0**	**J**	3.2	0.059	mg/Kg	☼	05/06/21 08:00	05/10/21 17:44	1

Method: 6010B SEP - SEP Metals (ICP) - Step 7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	**1.4**	**J**	16	0.17	mg/Kg	☼	05/10/21 08:00	05/11/21 17:59	5

Method: 6010B SEP - SEP Metals (ICP) - Sum of Steps 1-7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	**5.9**		2.5	0.023	mg/Kg			05/13/21 10:05	1

Method: 6010B - SEP Metals (ICP) - Total

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	**7.0**	**J**	16	0.17	mg/Kg	☼	04/27/21 08:00	05/11/21 19:03	5

Client Sample ID: S-7677_3_DPT08AP2
Lab Sample ID: 140-22793-2

Date Collected: 04/20/21 00:00
Matrix: Solid

Date Received: 04/22/21 10:30
Percent Solids: 88.1

Method: 6010B SEP - SEP Metals (ICP) - Step 1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	1.0	J	11	0.20	mg/Kg	☼	04/29/21 08:00	05/05/21 13:58	4

Method: 6010B SEP - SEP Metals (ICP) - Step 2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	0.30	J	8.5	0.21	mg/Kg	☼	04/30/21 08:00	05/05/21 15:21	3

Method: 6010B SEP - SEP Metals (ICP) - Step 3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	5.7		2.8	0.051	mg/Kg	☼	05/03/21 08:00	05/05/21 16:55	1

Method: 6010B SEP - SEP Metals (ICP) - Step 4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	2.6	J	2.8	0.060	mg/Kg	☼	05/04/21 08:00	05/10/21 15:06	1

Method: 6010B SEP - SEP Metals (ICP) - Step 5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	ND		43	0.68	mg/Kg	☼	05/06/21 08:00	05/10/21 16:30	5

Method: 6010B SEP - SEP Metals (ICP) - Step 6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	1.8	J	2.8	0.052	mg/Kg	☼	05/06/21 08:00	05/10/21 18:04	1

Method: 6010B SEP - SEP Metals (ICP) - Step 7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	0.41	J	5.7	0.059	mg/Kg	☼	05/10/21 08:00	05/11/21 18:04	2

Method: 6010B SEP - SEP Metals (ICP) - Sum of Steps 1-7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	12		2.5	0.023	mg/Kg			05/13/21 10:05	1

Method: 6010B - SEP Metals (ICP) - Total

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	7.5		5.7	0.059	mg/Kg	☼	04/27/21 08:00	05/11/21 19:08	2

Client Sample ID: S-7677_4_DPT07AP2
Lab Sample ID: 140-22793-3

Date Collected: 04/20/21 00:00
Matrix: Solid

Date Received: 04/22/21 10:30
Percent Solids: 84.0

Method: 6010B SEP - SEP Metals (ICP) - Step 1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	7.7	J	12	0.21	mg/Kg	☼	04/29/21 08:00	05/05/21 14:03	4

Method: 6010B SEP - SEP Metals (ICP) - Step 2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	0.79	J	8.9	0.23	mg/Kg	☼	04/30/21 08:00	05/05/21 15:26	3

Method: 6010B SEP - SEP Metals (ICP) - Step 3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	0.25	J	3.0	0.054	mg/Kg	☼	05/03/21 08:00	05/05/21 17:00	1

Method: 6010B SEP - SEP Metals (ICP) - Step 4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	0.68	J	3.0	0.063	mg/Kg	☼	05/04/21 08:00	05/10/21 15:11	1

Method: 6010B SEP - SEP Metals (ICP) - Step 5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	2.2	J	45	0.71	mg/Kg	☼	05/06/21 08:00	05/10/21 16:35	5

Method: 6010B SEP - SEP Metals (ICP) - Step 6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	2.2	J	3.0	0.055	mg/Kg	☼	05/06/21 08:00	05/10/21 18:09	1

Method: 6010B SEP - SEP Metals (ICP) - Step 7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	0.64	J	6.0	0.062	mg/Kg	☼	05/10/21 08:00	05/11/21 18:08	2

Method: 6010B SEP - SEP Metals (ICP) - Sum of Steps 1-7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	14		2.5	0.023	mg/Kg			05/13/21 10:05	1

Method: 6010B - SEP Metals (ICP) - Total

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	11		6.0	0.062	mg/Kg	☼	04/27/21 08:00	05/11/21 19:13	2

Default Detection Limits

Client: Sirem, div of Geosyntec Consultants
Job ID: 140-22793-1
Project/Site: S-7677 SiREMNA

Method: 6010B SEP - SEP Metals (ICP) - Step 1
Prep: 3010A
SEP: Exchangeable

Analyte	RL	MDL	Units
Cobalt	2.5	0.045	mg/Kg

Method: 6010B SEP - SEP Metals (ICP) - Step 2
Prep: 3010A
SEP: Carbonate

Analyte	RL	MDL	Units
Cobalt	2.5	0.063	mg/Kg

Method: 6010B SEP - SEP Metals (ICP) - Step 3
Prep: 3010A
SEP: Non-Crystalline

Analyte	RL	MDL	Units
Cobalt	2.5	0.045	mg/Kg

Method: 6010B SEP - SEP Metals (ICP) - Step 4
Prep: 3010A
SEP: Metal Hydroxide

Analyte	RL	MDL	Units
Cobalt	2.5	0.053	mg/Kg

Method: 6010B SEP - SEP Metals (ICP) - Step 5
Prep: 3010A
SEP: Organic-Bound

Analyte	RL	MDL	Units
Cobalt	7.5	0.12	mg/Kg

Method: 6010B SEP - SEP Metals (ICP) - Step 6
SEP: Acid/Sulfide

Analyte	RL	MDL	Units
Cobalt	2.5	0.046	mg/Kg

Method: 6010B SEP - SEP Metals (ICP) - Step 7
Prep: Residual

Analyte	RL	MDL	Units
Cobalt	2.5	0.026	mg/Kg

Method: 6010B SEP - SEP Metals (ICP) - Sum of Steps 1-7

Analyte	RL	MDL	Units
Cobalt	2.5	0.023	mg/Kg

Method: 6010B - SEP Metals (ICP) - Total
Prep: Total

Analyte	RL	MDL	Units
Cobalt	2.5	0.026	mg/Kg

Method: 6010B - SEP Metals (ICP) - Total

Lab Sample ID: MB 140-49213/13-A
Matrix: Solid
Analysis Batch: 49736

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 49213

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	ND		2.5	0.026	mg/Kg		04/27/21 08:00	05/11/21 12:55	1

Lab Sample ID: LCS 140-49213/14-A
Matrix: Solid
Analysis Batch: 49736

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 49213

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cobalt	5.00	5.03		mg/Kg		101	80 - 125

Lab Sample ID: LCSD 140-49213/15-A
Matrix: Solid
Analysis Batch: 49736

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 49213

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cobalt	5.00	5.04		mg/Kg		101	80 - 125	0	30

Method: 6010B SEP - SEP Metals (ICP)

Lab Sample ID: MB 140-49214/12-B ^4
Matrix: Solid
Analysis Batch: 49543

Client Sample ID: Method Blank
Prep Type: Step 1
Prep Batch: 49305

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	ND		10	0.18	mg/Kg		04/29/21 08:00	05/05/21 13:00	4

Lab Sample ID: LCS 140-49214/13-B ^5
Matrix: Solid
Analysis Batch: 49543

Client Sample ID: Lab Control Sample
Prep Type: Step 1
Prep Batch: 49305

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cobalt	5.00	4.82	J	mg/Kg		96	80 - 120

Lab Sample ID: LCSD 140-49214/14-B ^5
Matrix: Solid
Analysis Batch: 49543

Client Sample ID: Lab Control Sample Dup
Prep Type: Step 1
Prep Batch: 49305

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cobalt	5.00	4.81	J	mg/Kg		96	80 - 120	0	30

Lab Sample ID: MB 140-49306/12-B ^3
Matrix: Solid
Analysis Batch: 49543

Client Sample ID: Method Blank
Prep Type: Step 2
Prep Batch: 49358

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	ND		7.5	0.19	mg/Kg		04/30/21 08:00	05/05/21 14:22	3

Method: 6010B SEP - SEP Metals (ICP) (Continued)

Lab Sample ID: LCS 140-49306/13-B ^5
Matrix: Solid
Analysis Batch: 49543

Client Sample ID: Lab Control Sample
Prep Type: Step 2
Prep Batch: 49358

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cobalt	5.00	4.44	J	mg/Kg		89	80 - 120

Lab Sample ID: LCSD 140-49306/14-B ^5
Matrix: Solid
Analysis Batch: 49543

Client Sample ID: Lab Control Sample Dup
Prep Type: Step 2
Prep Batch: 49358

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cobalt	5.00	4.49	J	mg/Kg		90	80 - 120	1	30

Lab Sample ID: MB 140-49359/12-B
Matrix: Solid
Analysis Batch: 49543

Client Sample ID: Method Blank
Prep Type: Step 3
Prep Batch: 49393

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	ND		2.5	0.045	mg/Kg		05/03/21 08:00	05/05/21 15:56	1

Lab Sample ID: LCS 140-49359/13-B
Matrix: Solid
Analysis Batch: 49543

Client Sample ID: Lab Control Sample
Prep Type: Step 3
Prep Batch: 49393

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cobalt	5.00	4.75		mg/Kg		95	80 - 120

Lab Sample ID: LCSD 140-49359/14-B
Matrix: Solid
Analysis Batch: 49543

Client Sample ID: Lab Control Sample Dup
Prep Type: Step 3
Prep Batch: 49393

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cobalt	5.00	4.69		mg/Kg		94	80 - 120	1	30

Lab Sample ID: MB 140-49394/12-B
Matrix: Solid
Analysis Batch: 49686

Client Sample ID: Method Blank
Prep Type: Step 4
Prep Batch: 49441

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	ND		2.5	0.053	mg/Kg		05/04/21 08:00	05/10/21 14:08	1

Lab Sample ID: LCS 140-49394/13-B
Matrix: Solid
Analysis Batch: 49686

Client Sample ID: Lab Control Sample
Prep Type: Step 4
Prep Batch: 49441

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cobalt	5.00	5.32		mg/Kg		106	80 - 120

Lab Sample ID: LCSD 140-49394/14-B
Matrix: Solid
Analysis Batch: 49686

Client Sample ID: Lab Control Sample Dup
Prep Type: Step 4
Prep Batch: 49441

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cobalt	5.00	5.15		mg/Kg		103	80 - 120	3	30

Method: 6010B SEP - SEP Metals (ICP)

Lab Sample ID: MB 140-49442/12-B ^5
Matrix: Solid
Analysis Batch: 49686

Client Sample ID: Method Blank
Prep Type: Step 5
Prep Batch: 49541

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	ND		38	0.60	mg/Kg		05/06/21 08:00	05/10/21 15:31	5

Lab Sample ID: LCS 140-49442/13-B ^5
Matrix: Solid
Analysis Batch: 49686

Client Sample ID: Lab Control Sample
Prep Type: Step 5
Prep Batch: 49541

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cobalt	15.0	0.795	J	mg/Kg		5	1 - 60

Lab Sample ID: LCSD 140-49442/14-B ^5
Matrix: Solid
Analysis Batch: 49686

Client Sample ID: Lab Control Sample Dup
Prep Type: Step 5
Prep Batch: 49541

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cobalt	15.0	0.638	J	mg/Kg		4	1 - 60	22	30

Lab Sample ID: MB 140-49542/12-A
Matrix: Solid
Analysis Batch: 49686

Client Sample ID: Method Blank
Prep Type: Step 6
Prep Batch: 49542

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	ND		2.5	0.046	mg/Kg		05/06/21 08:00	05/10/21 17:05	1

Lab Sample ID: LCS 140-49542/13-A
Matrix: Solid
Analysis Batch: 49686

Client Sample ID: Lab Control Sample
Prep Type: Step 6
Prep Batch: 49542

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cobalt	5.00	4.97		mg/Kg		99	80 - 120

Lab Sample ID: LCSD 140-49542/14-A
Matrix: Solid
Analysis Batch: 49686

Client Sample ID: Lab Control Sample Dup
Prep Type: Step 6
Prep Batch: 49542

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cobalt	5.00	4.74		mg/Kg		95	80 - 120	5	30

Lab Sample ID: MB 140-49611/12-A
Matrix: Solid
Analysis Batch: 49736

Client Sample ID: Method Blank
Prep Type: Step 7
Prep Batch: 49611

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	ND		2.5	0.026	mg/Kg		05/10/21 08:00	05/11/21 12:41	1

Lab Sample ID: LCS 140-49611/13-A
Matrix: Solid
Analysis Batch: 49736

Client Sample ID: Lab Control Sample
Prep Type: Step 7
Prep Batch: 49611

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cobalt	5.00	5.06		mg/Kg		101	80 - 125

Client: Sirem, div of Geosyntec Consultants
Project/Site: S-7677 SiREMNA

Job ID: 140-22793-1

Method: 6010B SEP - SEP Metals (ICP)

Lab Sample ID: LCSD 140-49611/14-A
Matrix: Solid
Analysis Batch: 49736

Client Sample ID: Lab Control Sample Dup
Prep Type: Step 7
Prep Batch: 49611

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cobalt			5.00	5.01		mg/Kg		100	80 - 125	1	30

QC Association Summary

Client: Sirem, div of Geosyntec Consultants
Project/Site: S-7677 SiREMNA

Job ID: 140-22793-1

Metals

Prep Batch: 49213

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-22793-1	S-7677_2_DPT11AP2	Total/NA	Solid	Total	
140-22793-2	S-7677_3_DPT08AP2	Total/NA	Solid	Total	
140-22793-3	S-7677_4_DPT07AP2	Total/NA	Solid	Total	
MB 140-49213/13-A	Method Blank	Total/NA	Solid	Total	
LCS 140-49213/14-A	Lab Control Sample	Total/NA	Solid	Total	
LCSD 140-49213/15-A	Lab Control Sample Dup	Total/NA	Solid	Total	

SEP Batch: 49214

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-22793-1	S-7677_2_DPT11AP2	Step 1	Solid	Exchangeable	
140-22793-2	S-7677_3_DPT08AP2	Step 1	Solid	Exchangeable	
140-22793-3	S-7677_4_DPT07AP2	Step 1	Solid	Exchangeable	
MB 140-49214/12-B ^4	Method Blank	Step 1	Solid	Exchangeable	
LCS 140-49214/13-B ^5	Lab Control Sample	Step 1	Solid	Exchangeable	
LCSD 140-49214/14-B ^5	Lab Control Sample Dup	Step 1	Solid	Exchangeable	

Prep Batch: 49305

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-22793-1	S-7677_2_DPT11AP2	Step 1	Solid	3010A	49214
140-22793-2	S-7677_3_DPT08AP2	Step 1	Solid	3010A	49214
140-22793-3	S-7677_4_DPT07AP2	Step 1	Solid	3010A	49214
MB 140-49214/12-B ^4	Method Blank	Step 1	Solid	3010A	49214
LCS 140-49214/13-B ^5	Lab Control Sample	Step 1	Solid	3010A	49214
LCSD 140-49214/14-B ^5	Lab Control Sample Dup	Step 1	Solid	3010A	49214

SEP Batch: 49306

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-22793-1	S-7677_2_DPT11AP2	Step 2	Solid	Carbonate	
140-22793-2	S-7677_3_DPT08AP2	Step 2	Solid	Carbonate	
140-22793-3	S-7677_4_DPT07AP2	Step 2	Solid	Carbonate	
MB 140-49306/12-B ^3	Method Blank	Step 2	Solid	Carbonate	
LCS 140-49306/13-B ^5	Lab Control Sample	Step 2	Solid	Carbonate	
LCSD 140-49306/14-B ^5	Lab Control Sample Dup	Step 2	Solid	Carbonate	

Prep Batch: 49358

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-22793-1	S-7677_2_DPT11AP2	Step 2	Solid	3010A	49306
140-22793-2	S-7677_3_DPT08AP2	Step 2	Solid	3010A	49306
140-22793-3	S-7677_4_DPT07AP2	Step 2	Solid	3010A	49306
MB 140-49306/12-B ^3	Method Blank	Step 2	Solid	3010A	49306
LCS 140-49306/13-B ^5	Lab Control Sample	Step 2	Solid	3010A	49306
LCSD 140-49306/14-B ^5	Lab Control Sample Dup	Step 2	Solid	3010A	49306

SEP Batch: 49359

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-22793-1	S-7677_2_DPT11AP2	Step 3	Solid	Non-Crystalline	
140-22793-2	S-7677_3_DPT08AP2	Step 3	Solid	Non-Crystalline	
140-22793-3	S-7677_4_DPT07AP2	Step 3	Solid	Non-Crystalline	
MB 140-49359/12-B	Method Blank	Step 3	Solid	Non-Crystalline	
LCS 140-49359/13-B	Lab Control Sample	Step 3	Solid	Non-Crystalline	
LCSD 140-49359/14-B	Lab Control Sample Dup	Step 3	Solid	Non-Crystalline	

Metals

Prep Batch: 49393

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-22793-1	S-7677_2_DPT11AP2	Step 3	Solid	3010A	49359
140-22793-2	S-7677_3_DPT08AP2	Step 3	Solid	3010A	49359
140-22793-3	S-7677_4_DPT07AP2	Step 3	Solid	3010A	49359
MB 140-49359/12-B	Method Blank	Step 3	Solid	3010A	49359
LCS 140-49359/13-B	Lab Control Sample	Step 3	Solid	3010A	49359
LCSD 140-49359/14-B	Lab Control Sample Dup	Step 3	Solid	3010A	49359

SEP Batch: 49394

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-22793-1	S-7677_2_DPT11AP2	Step 4	Solid	Metal Hydroxide	
140-22793-2	S-7677_3_DPT08AP2	Step 4	Solid	Metal Hydroxide	
140-22793-3	S-7677_4_DPT07AP2	Step 4	Solid	Metal Hydroxide	
MB 140-49394/12-B	Method Blank	Step 4	Solid	Metal Hydroxide	
LCS 140-49394/13-B	Lab Control Sample	Step 4	Solid	Metal Hydroxide	
LCSD 140-49394/14-B	Lab Control Sample Dup	Step 4	Solid	Metal Hydroxide	

Prep Batch: 49441

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-22793-1	S-7677_2_DPT11AP2	Step 4	Solid	3010A	49394
140-22793-2	S-7677_3_DPT08AP2	Step 4	Solid	3010A	49394
140-22793-3	S-7677_4_DPT07AP2	Step 4	Solid	3010A	49394
MB 140-49394/12-B	Method Blank	Step 4	Solid	3010A	49394
LCS 140-49394/13-B	Lab Control Sample	Step 4	Solid	3010A	49394
LCSD 140-49394/14-B	Lab Control Sample Dup	Step 4	Solid	3010A	49394

SEP Batch: 49442

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-22793-1	S-7677_2_DPT11AP2	Step 5	Solid	Organic-Bound	
140-22793-2	S-7677_3_DPT08AP2	Step 5	Solid	Organic-Bound	
140-22793-3	S-7677_4_DPT07AP2	Step 5	Solid	Organic-Bound	
MB 140-49442/12-B ^5	Method Blank	Step 5	Solid	Organic-Bound	
LCS 140-49442/13-B ^5	Lab Control Sample	Step 5	Solid	Organic-Bound	
LCSD 140-49442/14-B ^5	Lab Control Sample Dup	Step 5	Solid	Organic-Bound	

Prep Batch: 49541

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-22793-1	S-7677_2_DPT11AP2	Step 5	Solid	3010A	49442
140-22793-2	S-7677_3_DPT08AP2	Step 5	Solid	3010A	49442
140-22793-3	S-7677_4_DPT07AP2	Step 5	Solid	3010A	49442
MB 140-49442/12-B ^5	Method Blank	Step 5	Solid	3010A	49442
LCS 140-49442/13-B ^5	Lab Control Sample	Step 5	Solid	3010A	49442
LCSD 140-49442/14-B ^5	Lab Control Sample Dup	Step 5	Solid	3010A	49442

SEP Batch: 49542

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-22793-1	S-7677_2_DPT11AP2	Step 6	Solid	Acid/Sulfide	
140-22793-2	S-7677_3_DPT08AP2	Step 6	Solid	Acid/Sulfide	
140-22793-3	S-7677_4_DPT07AP2	Step 6	Solid	Acid/Sulfide	
MB 140-49542/12-A	Method Blank	Step 6	Solid	Acid/Sulfide	
LCS 140-49542/13-A	Lab Control Sample	Step 6	Solid	Acid/Sulfide	
LCSD 140-49542/14-A	Lab Control Sample Dup	Step 6	Solid	Acid/Sulfide	

Metals

Analysis Batch: 49543

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-22793-1	S-7677_2_DPT11AP2	Step 1	Solid	6010B SEP	49305
140-22793-1	S-7677_2_DPT11AP2	Step 2	Solid	6010B SEP	49358
140-22793-1	S-7677_2_DPT11AP2	Step 3	Solid	6010B SEP	49393
140-22793-2	S-7677_3_DPT08AP2	Step 1	Solid	6010B SEP	49305
140-22793-2	S-7677_3_DPT08AP2	Step 2	Solid	6010B SEP	49358
140-22793-2	S-7677_3_DPT08AP2	Step 3	Solid	6010B SEP	49393
140-22793-3	S-7677_4_DPT07AP2	Step 1	Solid	6010B SEP	49305
140-22793-3	S-7677_4_DPT07AP2	Step 2	Solid	6010B SEP	49358
140-22793-3	S-7677_4_DPT07AP2	Step 3	Solid	6010B SEP	49393
MB 140-49214/12-B ^4	Method Blank	Step 1	Solid	6010B SEP	49305
MB 140-49306/12-B ^3	Method Blank	Step 2	Solid	6010B SEP	49358
MB 140-49359/12-B	Method Blank	Step 3	Solid	6010B SEP	49393
LCS 140-49214/13-B ^5	Lab Control Sample	Step 1	Solid	6010B SEP	49305
LCS 140-49306/13-B ^5	Lab Control Sample	Step 2	Solid	6010B SEP	49358
LCS 140-49359/13-B	Lab Control Sample	Step 3	Solid	6010B SEP	49393
LCSD 140-49214/14-B ^5	Lab Control Sample Dup	Step 1	Solid	6010B SEP	49305
LCSD 140-49306/14-B ^5	Lab Control Sample Dup	Step 2	Solid	6010B SEP	49358
LCSD 140-49359/14-B	Lab Control Sample Dup	Step 3	Solid	6010B SEP	49393

Prep Batch: 49611

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-22793-1	S-7677_2_DPT11AP2	Step 7	Solid	Residual	
140-22793-2	S-7677_3_DPT08AP2	Step 7	Solid	Residual	
140-22793-3	S-7677_4_DPT07AP2	Step 7	Solid	Residual	
MB 140-49611/12-A	Method Blank	Step 7	Solid	Residual	
LCS 140-49611/13-A	Lab Control Sample	Step 7	Solid	Residual	
LCSD 140-49611/14-A	Lab Control Sample Dup	Step 7	Solid	Residual	

Analysis Batch: 49686

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-22793-1	S-7677_2_DPT11AP2	Step 4	Solid	6010B SEP	49441
140-22793-1	S-7677_2_DPT11AP2	Step 5	Solid	6010B SEP	49541
140-22793-1	S-7677_2_DPT11AP2	Step 6	Solid	6010B SEP	49542
140-22793-2	S-7677_3_DPT08AP2	Step 4	Solid	6010B SEP	49441
140-22793-2	S-7677_3_DPT08AP2	Step 5	Solid	6010B SEP	49541
140-22793-2	S-7677_3_DPT08AP2	Step 6	Solid	6010B SEP	49542
140-22793-3	S-7677_4_DPT07AP2	Step 4	Solid	6010B SEP	49441
140-22793-3	S-7677_4_DPT07AP2	Step 5	Solid	6010B SEP	49541
140-22793-3	S-7677_4_DPT07AP2	Step 6	Solid	6010B SEP	49542
MB 140-49394/12-B	Method Blank	Step 4	Solid	6010B SEP	49441
MB 140-49442/12-B ^5	Method Blank	Step 5	Solid	6010B SEP	49541
MB 140-49542/12-A	Method Blank	Step 6	Solid	6010B SEP	49542
LCS 140-49394/13-B	Lab Control Sample	Step 4	Solid	6010B SEP	49441
LCS 140-49442/13-B ^5	Lab Control Sample	Step 5	Solid	6010B SEP	49541
LCS 140-49542/13-A	Lab Control Sample	Step 6	Solid	6010B SEP	49542
LCSD 140-49394/14-B	Lab Control Sample Dup	Step 4	Solid	6010B SEP	49441
LCSD 140-49442/14-B ^5	Lab Control Sample Dup	Step 5	Solid	6010B SEP	49541
LCSD 140-49542/14-A	Lab Control Sample Dup	Step 6	Solid	6010B SEP	49542

Client: Sirem, div of Geosyntec Consultants
Job ID: 140-22793-1
Project/Site: S-7677 SiREMNA

Metals

Analysis Batch: 49736

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-22793-1	S-7677_2_DPT11AP2	Step 7	Solid	6010B SEP	49611
140-22793-1	S-7677_2_DPT11AP2	Total/NA	Solid	6010B	49213
140-22793-2	S-7677_3_DPT08AP2	Step 7	Solid	6010B SEP	49611
140-22793-2	S-7677_3_DPT08AP2	Total/NA	Solid	6010B	49213
140-22793-3	S-7677_4_DPT07AP2	Step 7	Solid	6010B SEP	49611
140-22793-3	S-7677_4_DPT07AP2	Total/NA	Solid	6010B	49213
MB 140-49213/13-A	Method Blank	Total/NA	Solid	6010B	49213
MB 140-49611/12-A	Method Blank	Step 7	Solid	6010B SEP	49611
LCS 140-49213/14-A	Lab Control Sample	Total/NA	Solid	6010B	49213
LCS 140-49611/13-A	Lab Control Sample	Step 7	Solid	6010B SEP	49611
LCSD 140-49213/15-A	Lab Control Sample Dup	Total/NA	Solid	6010B	49213
LCSD 140-49611/14-A	Lab Control Sample Dup	Step 7	Solid	6010B SEP	49611

Analysis Batch: 49785

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-22793-1	S-7677_2_DPT11AP2	Sum of Steps 1-7	Solid	6010B SEP	
140-22793-2	S-7677_3_DPT08AP2	Sum of Steps 1-7	Solid	6010B SEP	
140-22793-3	S-7677_4_DPT07AP2	Sum of Steps 1-7	Solid	6010B SEP	

General Chemistry

Analysis Batch: 49285

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-22793-1	S-7677_2_DPT11AP2	Total/NA	Solid	Moisture	
140-22793-2	S-7677_3_DPT08AP2	Total/NA	Solid	Moisture	
140-22793-3	S-7677_4_DPT07AP2	Total/NA	Solid	Moisture	

Lab Chronicle

Client: Sirem, div of Geosyntec Consultants
Project/Site: S-7677 SiREMNA

Job ID: 140-22793-1

Client Sample ID: S-7677_2_DPT11AP2

Lab Sample ID: 140-22793-1

Date Collected: 04/20/21 00:00
Matrix: Solid
Date Received: 04/22/21 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Sum of Steps 1-7	Analysis	6010B SEP		1			49785	05/13/21 10:05	DKW	TAL KNX
	Instrument ID: NOEQUIP									
Total/NA	Analysis	Moisture		1			49285	04/28/21 07:50	BKD	TAL KNX
	Instrument ID: NOEQUIP									

Client Sample ID: S-7677_2_DPT11AP2

Lab Sample ID: 140-22793-1

Date Collected: 04/20/21 00:00
Matrix: Solid
Date Received: 04/22/21 10:30
Percent Solids: 78.0

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	Total			1.000 g	50 mL	49213	04/27/21 08:00	KNC	TAL KNX
Total/NA	Analysis	6010B		5			49736	05/11/21 19:03	KNC	TAL KNX
	Instrument ID: DUO									
Step 1	SEP	Exchangeable			5.000 g	25 mL	49214	04/28/21 08:00	KNC	TAL KNX
Step 1	Prep	3010A			5 mL	50 mL	49305	04/29/21 08:00	KNC	TAL KNX
Step 1	Analysis	6010B SEP		4			49543	05/05/21 13:39	KNC	TAL KNX
	Instrument ID: DUO									
Step 2	SEP	Carbonate			5.000 g	25 mL	49306	04/29/21 08:00	KNC	TAL KNX
Step 2	Prep	3010A			5.00 mL	50.0 mL	49358	04/30/21 08:00	KNC	TAL KNX
Step 2	Analysis	6010B SEP		3			49543	05/05/21 15:16	KNC	TAL KNX
	Instrument ID: DUO									
Step 3	SEP	Non-Crystalline			5.00 g	25.0 mL	49359	04/30/21 08:00	KNC	TAL KNX
Step 3	Prep	3010A			5.00 mL	50.0 mL	49393	05/03/21 08:00	KNC	TAL KNX
Step 3	Analysis	6010B SEP		1			49543	05/05/21 16:35	KNC	TAL KNX
	Instrument ID: DUO									
Step 4	SEP	Metal Hydroxide			5.00 g	25.0 mL	49394	05/03/21 08:00	KNC	TAL KNX
Step 4	Prep	3010A			5.00 mL	50.0 mL	49441	05/04/21 08:00	KNC	TAL KNX
Step 4	Analysis	6010B SEP		1			49686	05/10/21 14:47	KNC	TAL KNX
	Instrument ID: DUO									
Step 5	SEP	Organic-Bound			5.00 g	75.00 mL	49442	05/04/21 08:00	KNC	TAL KNX
Step 5	Prep	3010A			5.00 mL	50.0 mL	49541	05/06/21 08:00	KNC	TAL KNX
Step 5	Analysis	6010B SEP		5			49686	05/10/21 16:25	KNC	TAL KNX
	Instrument ID: DUO									
Step 6	SEP	Acid/Sulfide			5.00 g	250.0 mL	49542	05/06/21 08:00	KNC	TAL KNX
Step 6	Analysis	6010B SEP		1			49686	05/10/21 17:44	KNC	TAL KNX
	Instrument ID: DUO									
Step 7	Prep	Residual			1.000 g	50 mL	49611	05/10/21 08:00	KNC	TAL KNX
Step 7	Analysis	6010B SEP		5			49736	05/11/21 17:59	KNC	TAL KNX
	Instrument ID: DUO									

Lab Chronicle

Client: Sirem, div of Geosyntec Consultants
Project/Site: S-7677 SiREMNA

Job ID: 140-22793-1

Client Sample ID: S-7677_3_DPT08AP2

Lab Sample ID: 140-22793-2

Date Collected: 04/20/21 00:00

Matrix: Solid

Date Received: 04/22/21 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Sum of Steps 1-7	Analysis	6010B SEP		1			49785	05/13/21 10:05	DKW	TAL KNX
	Instrument ID: NOEQUIP									
Total/NA	Analysis	Moisture		1			49285	04/28/21 07:50	BKD	TAL KNX
	Instrument ID: NOEQUIP									

Client Sample ID: S-7677_3_DPT08AP2

Lab Sample ID: 140-22793-2

Date Collected: 04/20/21 00:00

Matrix: Solid

Date Received: 04/22/21 10:30

Percent Solids: 88.1

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	Total			1.000 g	50 mL	49213	04/27/21 08:00	KNC	TAL KNX
Total/NA	Analysis	6010B		2			49736	05/11/21 19:08	KNC	TAL KNX
	Instrument ID: DUO									
Step 1	SEP	Exchangeable			5.000 g	25 mL	49214	04/28/21 08:00	KNC	TAL KNX
Step 1	Prep	3010A			5 mL	50 mL	49305	04/29/21 08:00	KNC	TAL KNX
Step 1	Analysis	6010B SEP		4			49543	05/05/21 13:58	KNC	TAL KNX
	Instrument ID: DUO									
Step 2	SEP	Carbonate			5.000 g	25 mL	49306	04/29/21 08:00	KNC	TAL KNX
Step 2	Prep	3010A			5.00 mL	50.0 mL	49358	04/30/21 08:00	KNC	TAL KNX
Step 2	Analysis	6010B SEP		3			49543	05/05/21 15:21	KNC	TAL KNX
	Instrument ID: DUO									
Step 3	SEP	Non-Crystalline			5.00 g	25.0 mL	49359	04/30/21 08:00	KNC	TAL KNX
Step 3	Prep	3010A			5.00 mL	50.0 mL	49393	05/03/21 08:00	KNC	TAL KNX
Step 3	Analysis	6010B SEP		1			49543	05/05/21 16:55	KNC	TAL KNX
	Instrument ID: DUO									
Step 4	SEP	Metal Hydroxide			5.00 g	25.0 mL	49394	05/03/21 08:00	KNC	TAL KNX
Step 4	Prep	3010A			5.00 mL	50.0 mL	49441	05/04/21 08:00	KNC	TAL KNX
Step 4	Analysis	6010B SEP		1			49686	05/10/21 15:06	KNC	TAL KNX
	Instrument ID: DUO									
Step 5	SEP	Organic-Bound			5.00 g	75.00 mL	49442	05/04/21 08:00	KNC	TAL KNX
Step 5	Prep	3010A			5.00 mL	50.0 mL	49541	05/06/21 08:00	KNC	TAL KNX
Step 5	Analysis	6010B SEP		5			49686	05/10/21 16:30	KNC	TAL KNX
	Instrument ID: DUO									
Step 6	SEP	Acid/Sulfide			5.00 g	250.0 mL	49542	05/06/21 08:00	KNC	TAL KNX
Step 6	Analysis	6010B SEP		1			49686	05/10/21 18:04	KNC	TAL KNX
	Instrument ID: DUO									
Step 7	Prep	Residual			1.000 g	50 mL	49611	05/10/21 08:00	KNC	TAL KNX
Step 7	Analysis	6010B SEP		2			49736	05/11/21 18:04	KNC	TAL KNX
	Instrument ID: DUO									

Lab Chronicle

Client: Sirem, div of Geosyntec Consultants
Project/Site: S-7677 SiREMNA

Job ID: 140-22793-1

Client Sample ID: S-7677_4_DPT07AP2

Lab Sample ID: 140-22793-3
Date Collected: 04/20/21 00:00
Matrix: Solid
Date Received: 04/22/21 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Sum of Steps 1-7	Analysis	6010B SEP		1			49785	05/13/21 10:05	DKW	TAL KNX
	Instrument ID: NOEQUIP									
Total/NA	Analysis	Moisture		1			49285	04/28/21 07:50	BKD	TAL KNX
	Instrument ID: NOEQUIP									

Client Sample ID: S-7677_4_DPT07AP2

Lab Sample ID: 140-22793-3
Date Collected: 04/20/21 00:00
Matrix: Solid
Date Received: 04/22/21 10:30
Percent Solids: 84.0

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	Total			1.000 g	50 mL	49213	04/27/21 08:00	KNC	TAL KNX
Total/NA	Analysis	6010B		2			49736	05/11/21 19:13	KNC	TAL KNX
	Instrument ID: DUO									
Step 1	SEP	Exchangeable			5.000 g	25 mL	49214	04/28/21 08:00	KNC	TAL KNX
Step 1	Prep	3010A			5 mL	50 mL	49305	04/29/21 08:00	KNC	TAL KNX
Step 1	Analysis	6010B SEP		4			49543	05/05/21 14:03	KNC	TAL KNX
	Instrument ID: DUO									
Step 2	SEP	Carbonate			5.000 g	25 mL	49306	04/29/21 08:00	KNC	TAL KNX
Step 2	Prep	3010A			5.00 mL	50.0 mL	49358	04/30/21 08:00	KNC	TAL KNX
Step 2	Analysis	6010B SEP		3			49543	05/05/21 15:26	KNC	TAL KNX
	Instrument ID: DUO									
Step 3	SEP	Non-Crystalline			5.00 g	25.0 mL	49359	04/30/21 08:00	KNC	TAL KNX
Step 3	Prep	3010A			5.00 mL	50.0 mL	49393	05/03/21 08:00	KNC	TAL KNX
Step 3	Analysis	6010B SEP		1			49543	05/05/21 17:00	KNC	TAL KNX
	Instrument ID: DUO									
Step 4	SEP	Metal Hydroxide			5.00 g	25.0 mL	49394	05/03/21 08:00	KNC	TAL KNX
Step 4	Prep	3010A			5.00 mL	50.0 mL	49441	05/04/21 08:00	KNC	TAL KNX
Step 4	Analysis	6010B SEP		1			49686	05/10/21 15:11	KNC	TAL KNX
	Instrument ID: DUO									
Step 5	SEP	Organic-Bound			5.00 g	75.00 mL	49442	05/04/21 08:00	KNC	TAL KNX
Step 5	Prep	3010A			5.00 mL	50.0 mL	49541	05/06/21 08:00	KNC	TAL KNX
Step 5	Analysis	6010B SEP		5			49686	05/10/21 16:35	KNC	TAL KNX
	Instrument ID: DUO									
Step 6	SEP	Acid/Sulfide			5.00 g	250.0 mL	49542	05/06/21 08:00	KNC	TAL KNX
Step 6	Analysis	6010B SEP		1			49686	05/10/21 18:09	KNC	TAL KNX
	Instrument ID: DUO									
Step 7	Prep	Residual			1.000 g	50 mL	49611	05/10/21 08:00	KNC	TAL KNX
Step 7	Analysis	6010B SEP		2			49736	05/11/21 18:08	KNC	TAL KNX
	Instrument ID: DUO									

Lab Chronicle

Client: Sirem, div of Geosyntec Consultants
Project/Site: S-7677 SiREMNA

Job ID: 140-22793-1

Client Sample ID: Method Blank
Lab Sample ID: MB 140-49213/13-A
Date Collected: N/A
Matrix: Solid
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	Total			1.000 g	50 mL	49213	04/27/21 08:00	KNC	TAL KNX
Total/NA	Analysis	6010B		1			49736	05/11/21 12:55	KNC	TAL KNX
	Instrument ID: DUO									

Client Sample ID: Method Blank
Lab Sample ID: MB 140-49214/12-B ^4
Date Collected: N/A
Matrix: Solid
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 1	SEP	Exchangeable			5.000 g	25 mL	49214	04/28/21 08:00	KNC	TAL KNX
Step 1	Prep	3010A			5 mL	50 mL	49305	04/29/21 08:00	KNC	TAL KNX
Step 1	Analysis	6010B SEP		4			49543	05/05/21 13:00	KNC	TAL KNX
	Instrument ID: DUO									

Client Sample ID: Method Blank
Lab Sample ID: MB 140-49306/12-B ^3
Date Collected: N/A
Matrix: Solid
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 2	SEP	Carbonate			5.000 g	25 mL	49306	04/29/21 08:00	KNC	TAL KNX
Step 2	Prep	3010A			5.00 mL	50.0 mL	49358	04/30/21 08:00	KNC	TAL KNX
Step 2	Analysis	6010B SEP		3			49543	05/05/21 14:22	KNC	TAL KNX
	Instrument ID: DUO									

Client Sample ID: Method Blank
Lab Sample ID: MB 140-49359/12-B
Date Collected: N/A
Matrix: Solid
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 3	SEP	Non-Crystalline			5.00 g	25.0 mL	49359	04/30/21 08:00	KNC	TAL KNX
Step 3	Prep	3010A			5.00 mL	50.0 mL	49393	05/03/21 08:00	KNC	TAL KNX
Step 3	Analysis	6010B SEP		1			49543	05/05/21 15:56	KNC	TAL KNX
	Instrument ID: DUO									

Client Sample ID: Method Blank
Lab Sample ID: MB 140-49394/12-B
Date Collected: N/A
Matrix: Solid
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 4	SEP	Metal Hydroxide			5.00 g	25.0 mL	49394	05/03/21 08:00	KNC	TAL KNX
Step 4	Prep	3010A			5.00 mL	50.0 mL	49441	05/04/21 08:00	KNC	TAL KNX
Step 4	Analysis	6010B SEP		1			49686	05/10/21 14:08	KNC	TAL KNX
	Instrument ID: DUO									

Lab Chronicle

Client: Sirem, div of Geosyntec Consultants
Project/Site: S-7677 SiREMNA

Job ID: 140-22793-1

Client Sample ID: Method Blank
Lab Sample ID: MB 140-49442/12-B ^5
Date Collected: N/A
Matrix: Solid
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 5	SEP	Organic-Bound			5.00 g	75.00 mL	49442	05/04/21 08:00	KNC	TAL KNX
Step 5	Prep	3010A			5.00 mL	50.0 mL	49541	05/06/21 08:00	KNC	TAL KNX
Step 5	Analysis	6010B SEP		5			49686	05/10/21 15:31	KNC	TAL KNX
	Instrument ID: DUO									

Client Sample ID: Method Blank
Lab Sample ID: MB 140-49542/12-A
Date Collected: N/A
Matrix: Solid
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 6	SEP	Acid/Sulfide			5.00 g	250.0 mL	49542	05/06/21 08:00	KNC	TAL KNX
Step 6	Analysis	6010B SEP		1			49686	05/10/21 17:05	KNC	TAL KNX
	Instrument ID: DUO									

Client Sample ID: Method Blank
Lab Sample ID: MB 140-49611/12-A
Date Collected: N/A
Matrix: Solid
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 7	Prep	Residual			1.000 g	50 mL	49611	05/10/21 08:00	KNC	TAL KNX
Step 7	Analysis	6010B SEP		1			49736	05/11/21 12:41	KNC	TAL KNX
	Instrument ID: DUO									

Client Sample ID: Lab Control Sample
Lab Sample ID: LCS 140-49213/14-A
Date Collected: N/A
Matrix: Solid
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	Total			1.000 g	50 mL	49213	04/27/21 08:00	KNC	TAL KNX
Total/NA	Analysis	6010B		1			49736	05/11/21 13:00	KNC	TAL KNX
	Instrument ID: DUO									

Client Sample ID: Lab Control Sample
Lab Sample ID: LCS 140-49214/13-B ^5
Date Collected: N/A
Matrix: Solid
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 1	SEP	Exchangeable			5.000 g	25 mL	49214	04/28/21 08:00	KNC	TAL KNX
Step 1	Prep	3010A			5 mL	50 mL	49305	04/29/21 08:00	KNC	TAL KNX
Step 1	Analysis	6010B SEP		5			49543	05/05/21 13:05	KNC	TAL KNX
	Instrument ID: DUO									

Lab Chronicle

Client: Sirem, div of Geosyntec Consultants
Project/Site: S-7677 SiREMNA

Job ID: 140-22793-1

Client Sample ID: Lab Control Sample
Lab Sample ID: LCS 140-49306/13-B ^5
Date Collected: N/A
Matrix: Solid
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 2	SEP	Carbonate			5.000 g	25 mL	49306	04/29/21 08:00	KNC	TAL KNX
Step 2	Prep	3010A			5.00 mL	50.0 mL	49358	04/30/21 08:00	KNC	TAL KNX
Step 2	Analysis	6010B SEP		5			49543	05/05/21 14:27	KNC	TAL KNX
	Instrument ID: DUO									

Client Sample ID: Lab Control Sample
Lab Sample ID: LCS 140-49359/13-B
Date Collected: N/A
Matrix: Solid
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 3	SEP	Non-Crystalline			5.00 g	25.0 mL	49359	04/30/21 08:00	KNC	TAL KNX
Step 3	Prep	3010A			5.00 mL	50.0 mL	49393	05/03/21 08:00	KNC	TAL KNX
Step 3	Analysis	6010B SEP		1			49543	05/05/21 16:01	KNC	TAL KNX
	Instrument ID: DUO									

Client Sample ID: Lab Control Sample
Lab Sample ID: LCS 140-49394/13-B
Date Collected: N/A
Matrix: Solid
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 4	SEP	Metal Hydroxide			5.00 g	25.0 mL	49394	05/03/21 08:00	KNC	TAL KNX
Step 4	Prep	3010A			5.00 mL	50.0 mL	49441	05/04/21 08:00	KNC	TAL KNX
Step 4	Analysis	6010B SEP		1			49686	05/10/21 14:13	KNC	TAL KNX
	Instrument ID: DUO									

Client Sample ID: Lab Control Sample
Lab Sample ID: LCS 140-49442/13-B ^5
Date Collected: N/A
Matrix: Solid
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 5	SEP	Organic-Bound			5.00 g	75.00 mL	49442	05/04/21 08:00	KNC	TAL KNX
Step 5	Prep	3010A			5.00 mL	50.0 mL	49541	05/06/21 08:00	KNC	TAL KNX
Step 5	Analysis	6010B SEP		5			49686	05/10/21 15:36	KNC	TAL KNX
	Instrument ID: DUO									

Client Sample ID: Lab Control Sample
Lab Sample ID: LCS 140-49542/13-A
Date Collected: N/A
Matrix: Solid
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 6	SEP	Acid/Sulfide			5.00 g	250.0 mL	49542	05/06/21 08:00	KNC	TAL KNX
Step 6	Analysis	6010B SEP		1			49686	05/10/21 17:10	KNC	TAL KNX
	Instrument ID: DUO									

Lab Chronicle

Client: Sirem, div of Geosyntec Consultants
Project/Site: S-7677 SiREMNA

Job ID: 140-22793-1

Client Sample ID: Lab Control Sample
Lab Sample ID: LCS 140-49611/13-A
Date Collected: N/A
Matrix: Solid
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 7	Prep	Residual			1.000 g	50 mL	49611	05/10/21 08:00	KNC	TAL KNX
Step 7	Analysis	6010B SEP		1			49736	05/11/21 12:46	KNC	TAL KNX
	Instrument ID: DUO									

Client Sample ID: Lab Control Sample Dup
Lab Sample ID: LCSD 140-49213/15-A
Date Collected: N/A
Matrix: Solid
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	Total			1.000 g	50 mL	49213	04/27/21 08:00	KNC	TAL KNX
Total/NA	Analysis	6010B		1			49736	05/11/21 13:05	KNC	TAL KNX
	Instrument ID: DUO									

Client Sample ID: Lab Control Sample Dup
Lab Sample ID: LCSD 140-49214/14-B ^5
Date Collected: N/A
Matrix: Solid
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 1	SEP	Exchangeable			5.000 g	25 mL	49214	04/28/21 08:00	KNC	TAL KNX
Step 1	Prep	3010A			5 mL	50 mL	49305	04/29/21 08:00	KNC	TAL KNX
Step 1	Analysis	6010B SEP		5			49543	05/05/21 13:10	KNC	TAL KNX
	Instrument ID: DUO									

Client Sample ID: Lab Control Sample Dup
Lab Sample ID: LCSD 140-49306/14-B ^5
Date Collected: N/A
Matrix: Solid
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 2	SEP	Carbonate			5.000 g	25 mL	49306	04/29/21 08:00	KNC	TAL KNX
Step 2	Prep	3010A			5.00 mL	50.0 mL	49358	04/30/21 08:00	KNC	TAL KNX
Step 2	Analysis	6010B SEP		5			49543	05/05/21 14:32	KNC	TAL KNX
	Instrument ID: DUO									

Client Sample ID: Lab Control Sample Dup
Lab Sample ID: LCSD 140-49359/14-B
Date Collected: N/A
Matrix: Solid
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 3	SEP	Non-Crystalline			5.00 g	25.0 mL	49359	04/30/21 08:00	KNC	TAL KNX
Step 3	Prep	3010A			5.00 mL	50.0 mL	49393	05/03/21 08:00	KNC	TAL KNX
Step 3	Analysis	6010B SEP		1			49543	05/05/21 16:05	KNC	TAL KNX
	Instrument ID: DUO									

Lab Chronicle

Client: Sirem, div of Geosyntec Consultants
Project/Site: S-7677 SiREMNA

Job ID: 140-22793-1

Client Sample ID: Lab Control Sample Dup
Lab Sample ID: LCSD 140-49394/14-B
Date Collected: N/A
Matrix: Solid
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 4	SEP	Metal Hydroxide			5.00 g	25.0 mL	49394	05/03/21 08:00	KNC	TAL KNX
Step 4	Prep	3010A			5.00 mL	50.0 mL	49441	05/04/21 08:00	KNC	TAL KNX
Step 4	Analysis	6010B SEP		1			49686	05/10/21 14:17	KNC	TAL KNX
	Instrument ID: DUO									

Client Sample ID: Lab Control Sample Dup
Lab Sample ID: LCSD 140-49442/14-B ^5
Date Collected: N/A
Matrix: Solid
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 5	SEP	Organic-Bound			5.00 g	75.00 mL	49442	05/04/21 08:00	KNC	TAL KNX
Step 5	Prep	3010A			5.00 mL	50.0 mL	49541	05/06/21 08:00	KNC	TAL KNX
Step 5	Analysis	6010B SEP		5			49686	05/10/21 15:41	KNC	TAL KNX
	Instrument ID: DUO									

Client Sample ID: Lab Control Sample Dup
Lab Sample ID: LCSD 140-49542/14-A
Date Collected: N/A
Matrix: Solid
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 6	SEP	Acid/Sulfide			5.00 g	250.0 mL	49542	05/06/21 08:00	KNC	TAL KNX
Step 6	Analysis	6010B SEP		1			49686	05/10/21 17:15	KNC	TAL KNX
	Instrument ID: DUO									

Client Sample ID: Lab Control Sample Dup
Lab Sample ID: LCSD 140-49611/14-A
Date Collected: N/A
Matrix: Solid
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 7	Prep	Residual			1.000 g	50 mL	49611	05/10/21 08:00	KNC	TAL KNX
Step 7	Analysis	6010B SEP		1			49736	05/11/21 12:50	KNC	TAL KNX
	Instrument ID: DUO									

Laboratory References:
TAL KNX = Eurofins TestAmerica, Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Accreditation/Certification Summary

Client: Sirem, div of Geosyntec Consultants
Job ID: 140-22793-1
Project/Site: S-7677 SiREMNA

Laboratory: Eurofins TestAmerica, Knoxville

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
	AFCEE	N/A	
ANAB	Dept. of Defense ELAP	L2311	02-13-22
ANAB	Dept. of Energy	L2311.01	02-13-22
ANAB	ISO/IEC 17025	L2311	02-13-22
Arkansas DEQ	State	88-0688	06-17-21
California	State	2423	06-30-22
Colorado	State	TN00009	02-28-22
Connecticut	State	PH-0223	09-30-21
Florida	NELAP	E87177	06-30-21
Georgia (DW)	State	906	12-11-22
Hawaii	State	NA	12-11-21
Kansas	NELAP	E-10349	10-31-21
Kentucky (DW)	State	90101	12-31-21
Louisiana	NELAP	83979	06-30-21
Louisiana (DW)	State	LA019	12-31-21
Maryland	State	277	03-31-22
Michigan	State	9933	12-11-22
Nevada	State	TN00009	07-12-21
New Hampshire	NELAP	299919	01-17-22
New Jersey	NELAP	TN001	06-30-21
New York	NELAP	10781	03-31-22
North Carolina (DW)	State	21705	07-31-21
North Carolina (WW/SW)	State	64	12-31-21
Ohio VAP	State	CL0059	06-02-23
Oklahoma	State	9415	08-31-21
Oregon	NELAP	TNI0189	01-01-22
Pennsylvania	NELAP	68-00576	12-31-21
Tennessee	State	02014	12-11-22
Texas	NELAP	T104704380-18-12	08-31-21
US Fish & Wildlife	US Federal Programs	058448	07-31-21
USDA	US Federal Programs	P330-19-00236	08-20-22
Utah	NELAP	TN00009	07-31-21
Virginia	NELAP	460176	09-14-21
Washington	State	C593	01-19-22
West Virginia (DW)	State	9955C	01-02-22
West Virginia DEP	State	345	04-30-22
Wisconsin	State	998044300	08-31-21

Method Summary

Client: Sirem, div of Geosyntec Consultants
Project/Site: S-7677 SiREMNA

Job ID: 140-22793-1

Method	Method Description	Protocol	Laboratory
6010B	SEP Metals (ICP) - Total	SW846	TAL KNX
6010B SEP	SEP Metals (ICP)	SW846	TAL KNX
Moisture	Percent Moisture	EPA	TAL KNX
3010A	Preparation, Total Metals	SW846	TAL KNX
Acid/Sulfide	Sequential Extraction Procedure, Acid/Sulfide Fraction	TAL-KNOX	TAL KNX
Carbonate	Sequential Extraction Procedure, Carbonate Fraction	TAL-KNOX	TAL KNX
Exchangeable	Sequential Extraction Procedure, Exchangeable Fraction	TAL-KNOX	TAL KNX
Metal Hydroxide	Sequential Extraction Procedure, Metal Hydroxide Fraction	TAL-KNOX	TAL KNX
Non-Crystalline	Sequential Extraction Procedure, Non-crystalline Materials	TAL-KNOX	TAL KNX
Organic-Bound	Sequential Extraction Procedure, Organic Bound Fraction	TAL-KNOX	TAL KNX
Residual	Sequential Extraction Procedure, Residual Fraction	TAL-KNOX	TAL KNX
Total	Preparation, Total Material	TAL-KNOX	TAL KNX

Protocol References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL-KNOX = TestAmerica Laboratories, Knoxville, Facility Standard Operating Procedure.

Laboratory References:

TAL KNX = Eurofins TestAmerica, Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Eurofins TestAmerica, Knoxville
5815 Middlebrook Pike

Knoxville, TN 37921-5947
phone 865.291.3000 fax 865.584.4315

Chain of Custody Record

eurofins | Environment Testing America

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

TestAmerica Laboratories, Inc. d/b/a Eurofins TestAmerica

Client Contact	Project Manager: Kela Ashworth	Site Contact:	Date:	COC No:
SiREM	Email: kashworth@siremlab.com	Lab Contact:	Carrier:	1 of 1 COCs
130 Stone Road West	Tel/Fax:			TALS Project #:
Guelph, Ontario, N1G 2Z3	Analysis Turnaround Time			Sampler:
519-822-2265	☐ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
(xxx) xxx-xxxx FAX	TAT if different from Below _____			Walk-in Client:
Project Name: S-7677 SiREMNA	☐ 2 weeks			Lab Sampling:
Site:	☐ 1 week			
P O # 800003206	☐ 2 days			Job / SDG No.:
	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	Sequential Extraction Procedure	Sample Specific Notes:
S-7677_2_DPT11AP2	20-Apr-21			S	1			X	SEP for Cobalt
S-7677_3_DPT08AP2				S	1			X	SEP for Cobalt
S-7677_4_DPT07AP2				S	1			X	SEP for Cobalt
S-7677_5_DPT01AP3				S	1			X	SEP for Lithium & Molybdenum
S-7677_6_DPT03AP3				S	1			X	SEP for Lithium & Molybdenum
S-7677_7_DPT02AP3				S	1			X	SEP for Lithium & Molybdenum
NO CUSTODY SEALS									
RECEIVED AT RT 9.8/CT 9.6°C									
BKD 4-22-21									
COOLER FEDEX # 773497438746 INT PO									

140-22793 Chain of Custody

Preservation Used: 1= Ice, 2= HCl; 3= H_2SO_4; 4=HNO_3; 5=NaOH; 6= Other _____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☐ Non-Hazard ☐ Flammable ☐ Skin ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☐ Disposal by Lab ☐ Archive for _____ Months

Special Instructions/QC Requirements & Comments:

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd:_____ Corr'd:_____ Therm ID No.:_____

	Company:	Date/Time:		Company:	Date/Time:
Relinquished by: Kela Ashworth	SiREM	16:30 21 Apr 21	Received by:	FEDEX	4-22-21 10:30
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

Form No. CA-C-WI-002, Rev. 4.35, dated 10/6/2020

7/14/2021 (Rev. 1)

Loc: 140
22793

EUROFINS/TESTAMERICA KNOXVILLE SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST **Log In Number:**

Review Items	Yes	No	NA	If No, what was the problem?
1. Are the shipping containers intact?	/			☐ **Containers, Broken**
2. Were ambient air containers received intact?			/	☐ Checked in lab
3. The coolers/containers custody seal if present, is it intact?			/	☐ Yes ☐ NA
4. Is the cooler temperature within limits? (> freezing temp. of water to 6 °C, VOST: 10°C) Thermometer ID : SC70 Correction factor: -0.2°C		/		☐ **Cooler Out of Temp, Client Contacted, Proceed/Cancel** ☐ **Cooler Out of Temp, Same Day Receipt**
5. Were all of the sample containers received intact?	/			☐ **Containers, Broken**
6. Were samples received in appropriate containers?	/			☐ **Containers, Improper; Client Contacted; Proceed/Cancel**
7. Do sample container labels match COC? (IDs, Dates, Times)	/			☐ **COC & Samples Do Not Match** ☐ **COC Incorrect/Incomplete** ☐ **COC Not Received**
8. Were all of the samples listed on the COC received?	/			☐ **Sample Received, Not on COC** ☐ **Sample on COC, Not Received**
9. Is the date/time of sample collection noted?	/			☐ **COC; No Date/Time; Client Contacted**
10. Was the sampler identified on the COC?			/	☐ **Sampler Not Listed on COC**
11. Is the client and project name/# identified?	/			☐ **COC Incorrect/Incomplete**
12. Are tests/parameters listed for each sample?	/			☐ **COC No tests on COC**
13. Is the matrix of the samples noted?	/			☐ **COC Incorrect/Incomplete**
14. Was COC relinquished? (Signed/Dated/Timed)	/			☐ **COC Incorrect/Incomplete**
15. Were samples received within holding time?	/			☐ **Holding Time - Receipt**
16. Were samples received with correct chemical preservative (excluding Encore)?			/	☐ **pH Adjusted, pH Included (See box 16A)** ☐ **Incorrect Preservative**
17. Were VOA samples received without headspace?			/	☐ **Headspace (VOA only)**
18. Did you check for residual chlorine, if necessary? (e.g. 1613B, 1668) Chlorine test strip lot number:			/	☐ **Residual Chlorine**
19. For 1613B water samples is pH<9?			/	☐ If no, notify lab to adjust
20. For rad samples was sample activity info. Provided?			/	☐ Project missing info

Comments/Actions Taken

Labeling Verified by: **Date:**

pH test strip lot number:

	Box 16A: pH Preservation	Box 18A: Residual Chlorine
Preservative:		
Lot Number:		
Exp Date:		
Analyst:		
Date:		
Time:		

Project #: 140006308 PM Instructions: NA

Sample Receiving Associate: Date: 4-22-21

QA026R32.doc, 062719

7/14/2021 (Rev. 1)

APPENDIX C

Laboratory Analytical and Field Sampling Reports

LABORATORY ANALYTICAL RESULTS

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

January 11, 2021

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

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

Dear Joju Abraham:

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

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

- Pace Analytical Services - Greensburg

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

Sincerely,

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

Enclosures

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

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

CERTIFICATIONS

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

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
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE SUMMARY

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

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

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

SAMPLE ANALYTE COUNT

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

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

PASI-PA = Pace Analytical Services - Greensburg

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

SUMMARY OF DETECTION

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

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

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS - RADIOCHEMISTRY

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

Sample: HGWA-43D **Lab ID: 92512541001** Collected: 12/15/20 12:25 Received: 12/17/20 08:48 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
		Pace Analytical Services - Greensburg				
Radium-226	EPA 9315	**0.162 ± 0.236 (0.511) C:88% T:NA**	pCi/L	01/06/21 07:00	13982-63-3	
		Pace Analytical Services - Greensburg				
Radium-228	EPA 9320	**0.879 ± 0.484 (0.887) C:69% T:83%**	pCi/L	01/05/21 13:26	15262-20-1	
		Pace Analytical Services - Greensburg				
Total Radium	Total Radium Calculation	**1.04 ± 0.720 (1.40)**	pCi/L	01/06/21 14:34	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS - RADIOCHEMISTRY

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

Sample: HGWA-44D **Lab ID: 92512541002** Collected: 12/15/20 16:18 Received: 12/17/20 08:48 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.359 ± 0.268 (0.453) C:92% T:NA**	pCi/L	01/06/21 07:27	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.341 ± 0.410 (0.868) C:68% T:86%**	pCi/L	01/05/21 13:26	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.700 ± 0.678 (1.32)**	pCi/L	01/06/21 14:34	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS - RADIOCHEMISTRY

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

Sample: EB-01 **Lab ID: 92512541003** Collected: 12/15/20 18:02 Received: 12/17/20 08:48 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.0278 ± 0.302 (0.765) C:89% T:NA**	pCi/L	01/06/21 07:00	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.226 ± 0.391 (0.853) C:72% T:88%**	pCi/L	01/05/21 13:26	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.254 ± 0.693 (1.62)**	pCi/L	01/06/21 14:34	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS - RADIOCHEMISTRY

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

Sample: HGWA-42D **Lab ID: 92512541004** Collected: 12/15/20 16:35 Received: 12/17/20 08:48 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.0287 ± 0.234 (0.607) C:82% T:NA**	pCi/L	01/06/21 06:59	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.232 ± 0.407 (0.889) C:74% T:73%**	pCi/L	01/05/21 13:26	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.261 ± 0.641 (1.50)**	pCi/L	01/06/21 14:34	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL - RADIOCHEMISTRY

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

QC Batch: 428750
QC Batch Method: EPA 9320
Analysis Method: EPA 9320
Analysis Description: 9320 Radium 228
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 92512541001, 92512541002, 92512541003, 92512541004

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

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

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

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL - RADIOCHEMISTRY

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

QC Batch: 429175
QC Batch Method: EPA 9315
Analysis Method: EPA 9315
Analysis Description: 9315 Total Radium
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 92512541001, 92512541002, 92512541003, 92512541004

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

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

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-2 BKG 03 RADS
Pace Project No.: 92512541

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

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

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

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval). Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

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

QUALITY CONTROL DATA CROSS REFERENCE TABLE

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

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

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

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

Sample Condition Upon Receipt

Client Name: GA Power **Project #:** WO#: 92512541

92512541

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

Custody Seal Present? ☐ Yes ☑ No **Seals Intact?** ☐ Yes ☐ No

Date/Initials Person Examining Contents: 12/17/15

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

Biological Tissue Frozen? ☐ Yes ☑ No ☐ N/A

Thermometer: ☑ IR Gun ID: 214 ☐ Wet ☐ Blue ☐ None

Cooler Temp: 4.2 **Correction Factor:** Add/Subtract (°C) 0.1 **Type of Ice:**

Cooler Temp Corrected (°C): 4.3

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

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

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

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

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

COMMENTS/SAMPLE DISCREPANCY **Field Data Required?** ☐ Yes ☐ No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: _____ Date/Time: _____

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

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

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

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

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

Project **WO#: 92512541**

PM: KLH1 Due Date: 01/11/21

CLIENT: GA-GA Power

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)	BP4C-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	AG3A(DG3A)-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unp (N/A)	DG9P-40 mL VOA H3PO4 (N/A)	VOAK (6 vials per kit)-5035 kit (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A – lab)	SP2T-250 mL Sterile Plastic (N/A – lab)	BP1N	BP3A-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved vials (N/A)	VSGU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)
1		1	1			1																			2				
2																													
3																													
4																													
5																													
6																													
7																													
8																													
9																													
10																													
11																													
12																													

pH Adjustment Log for Preserved Samples

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

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

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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:

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

Section B Required Project Information:

Report To:	SCS Contacts
Copy To:	Geosyntec Contacts
Purchase Order No.:	
Project Name:	Plant Hammond AP-2 BKG 03
Project Number:	GW65818

Section C Invoice Information:

Attention:	Southern Co.
Company Name:	
Address:	
Pace Quote Reference:	
Pace Project Manager:	Kevin Herring
Pace Profile #:	10839-4

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 #	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	Full App. III&IV Metals 6010/6020	RAD 226/228	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D. 92512591
1	WT	G			-	-		5	2		3							X	X	X	X	N	pH=
2	WT	G	12/15	1225	-	-	17	5	2		3							X	X	X	X	N	pH= 7.39
3	WT	G	12/15	1618	-	-	16	5	2		3							X	X	X	X	N	pH= 7.87
4	WT	G	12/15	1802	-	-	5	5	2		3							X	X	X	X	N	
5																							
6																							
7																							
8																							
9																							
10																							
11																							
12																							

Requested Analysis Filtered (Y/N)

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.	Thomas Kessler / Geosyntec	12/17	0646	/ Pace	12/17/20	8:48a
*Full App. III & IV Metals=Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Pb, Li, Hg, Mo, Se, Tl	/ Pace	12/17/20	1102		12/17/20	1102
One sample set submitted for HGWA-43D and HGWA-44D but they will be reported for AP-1/2/3 SDGs						
One sample set submitted for EB-01 but it will be reported for AP-1/2/3/4 SDGs						

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: Thomas Kessler

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 12/15/20

*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: 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-2 BKG 03	Pace Project Manager:	Kevin Herring
Requested Due Date/TAT:	10 Day	Project Number:	GW6581B	Pace Profile #:	10839-4

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

Site Location STATE: GA

Requested Analysis Filtered (Y/N)

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	Chloride, Fluoride, Sulfate	TDS	Full App. II&IV Metals 6010/6020	RAD 226/228	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
																				N	N	N	N		
1	HGWA-42D		WT	G	12/15/2020	1635	-	-	17	5	2		3							X	X	X	X	N	pH = 7.64
2	~~HGWA-43D~~		WT	G			-	-		5	2		3							X	X	X	X	N	pH =
3	HGWA-44D		WT	G			-	-		5	2		3							X	X	X	X	N	pH = 7.52 12/15
4	EB-01		WT	G	12/15/2020	1802	-	-	6	5	2		3							X	X	X	X	N	
5																									
6																									
7																									
8																									
9																									
10																									
11																									
12																									

4251254l

Pace Project No./ Lab I.D.

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.	Shawn Lin / Geosyntec	12/15/2020	18:15	Thomas Kressler/Geo	12/15	1815	
*Full App. II & IV Metals=Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Pb, Li, Hg, Mo, Se, Tl	Thomas Kressler/Geo	12/15 2217	0846	[signature] Pace	12/16/20	8:45	
One sample set submitted for HGWA-43D and HGWA-44D but they will be reported for AP-1/2/3 SDGs	[signature] Pace	12/17/20	1102	[signature]	12/17/20	NO2	
One sample set submitted for EB-01 but it will be reported for AP-1/2/3/4 SDGs							

SAMPLER NAME AND SIGNATURE			Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
PRINT Name of SAMPLER:	Shawn Lin					
SIGNATURE of SAMPLER:	[signature]	DATE Signed (MM/DD/YY): 12/15/2020				

*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.

Quality Control Sample Performance Assessment

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Analyst Must Manually Enter All Fields Highlighted in Yellow.

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

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

Laboratory Control Sample Assessment	LCSD (Y or N)?	N
	LCS58138	LCSD58138
Count Date:	1/6/2021	
Spike I.D.:	19-033	
Decay Corrected Spike Concentration (pCi/mL):	24.041	
Volume Used (mL):	0.10	
Aliquot Volume (L, g, F):	0.515	
Target Conc. (pCi/L, g, F):	4.669	
Uncertainty (Calculated):	0.056	
Result (pCi/L, g, F):	4.726	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.782	
Numerical Performance Indicator:	0.14	
Percent Recovery:	101.21%	
Status vs Numerical Indicator:	N/A	
Status vs Recovery:	Pass	
Upper % Recovery Limits:	125%	
Lower % Recovery Limits:	75%	

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

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

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

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

Comments:

~~***Batch must be re-prepped due to unacceptable precision.~~ N/A
LAM 1/6/21

KLB
1-6-2021

LAM 1/6/21

Quality Control Sample Performance Assessment

Pace Analytical™ www.pacelabs.com

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

Analyst Must Manually Enter All Fields Highlighted in Yellow.

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

Laboratory Control Sample Assessment	LCSD (Y or N)?	Y
	LCS58138	LCSD58138
Count Date:	1/6/2021	1/6/2021
Spike I.D.:	19-033	19-033
Decay Corrected Spike Concentration (pCi/mL):	24.041	24.041
Volume Used (mL):	0.10	0.10
Aliquot Volume (L, g, F):	0.515	0.507
Target Conc. (pCi/L, g, F):	4.669	4.743
Uncertainty (Calculated):	0.056	0.057
Result (pCi/L, g, F):	4.726	4.173
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.782	0.736
Numerical Performance Indicator:	0.14	-1.51
Percent Recovery:	101.21%	87.98%
Status vs Numerical Indicator:	N/A	N/A
Status vs Recovery:	Pass	Pass
Upper % Recovery Limits:	125%	125%
Lower % Recovery Limits:	75%	75%

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

Duplicate Sample Assessment		
Sample I.D.:	LCS58138	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	LCSD58138	
Sample Result (pCi/L, g, F):	4.726	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.782	
Sample Duplicate Result (pCi/L, g, F):	4.173	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.736	
Are sample and/or duplicate results below RL?	NO	
Duplicate Numerical Performance Indicator:	1.009	92512557001
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	13.99%	92512557001DUP
Duplicate Status vs Numerical Indicator:	N/A	
Duplicate Status vs RPD:	Pass	
% RPD Limit:	25%	

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

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

Comments:

KB 1-6-2021

LAM 1/6/21

Quality Control Sample Performance Assessment

Pace Analytical
www.pacelabs.com

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

Analyst Must Manually Enter All Fields Highlighted in Yellow.

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

Laboratory Control Sample Assessment	LCSD (Y or N)?	Y
	LCS58095	LCSD58095
Count Date:	1/5/2021	1/5/2021
Spike I.D.:	20-030	20-030
Decay Corrected Spike Concentration (pCi/mL):	37.002	37.002
Volume Used (mL):	0.10	0.10
Aliquot Volume (L, g, F):	0.803	0.801
Target Conc. (pCi/L, g, F):	4.610	4.617
Uncertainty (Calculated):	0.226	0.226
Result (pCi/L, g, F):	5.581	5.412
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	1.255	1.220
Numerical Performance Indicator:	1.49	1.25
Percent Recovery:	121.08%	117.21%
Status vs Numerical Indicator:	N/A	N/A
Status vs Recovery:	Pass	Pass
Upper % Recovery Limits:	135%	135%
Lower % Recovery Limits:	60%	60%

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

Duplicate Sample Assessment		
Sample I.D.:	LCS58095	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	LCSD58095	
Sample Result (pCi/L, g, F):	5.581	
Sample Result 2 Sigma CSU (pCi/L, g, F):	1.255	
Sample Duplicate Result (pCi/L, g, F):	5.412	
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	1.220	
Are sample and/or duplicate results below RL?	NO	
Duplicate Numerical Performance Indicator:	0.190	
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	3.25%	
Duplicate Status vs Numerical Indicator:	Pass	
Duplicate Status vs RPD:	Pass	
% RPD Limit:	36%	

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

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

Comments:
*The method blank result is below the reporting limit for this analysis and is acceptable.

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

January 04, 2021

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

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

Dear Joju Abraham:

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

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

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

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

Sincerely,

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

Enclosures

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

REPORT OF LABORATORY ANALYSIS

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

CERTIFICATIONS

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

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

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
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SAMPLE SUMMARY

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

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

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SAMPLE ANALYTE COUNT

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

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

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

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

SUMMARY OF DETECTION

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

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

REPORT OF LABORATORY ANALYSIS

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

SUMMARY OF DETECTION

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

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

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
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ANALYTICAL RESULTS

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

Sample: HGWA-43D **Lab ID: 92512574001** Collected: 12/15/20 12:25 Received: 12/17/20 08:48 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Charlotte								
Performed by	**CUSTOMER**				1		01/04/21 15:35		
pH	**7.39**	Std. Units			1		01/04/21 15:35		
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Calcium	**62.6**	mg/L	1.0	0.070	1	12/24/20 13:26	12/24/20 23:57	7440-70-2	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	**0.00031J**	mg/L	0.0030	0.00028	1	12/24/20 10:19	12/28/20 17:38	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	12/24/20 10:19	12/28/20 17:38	7440-38-2	
Barium	**0.29**	mg/L	0.010	0.00071	1	12/24/20 10:19	12/28/20 17:38	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	12/24/20 10:19	12/28/20 17:38	7440-41-7	
Boron	**0.052J**	mg/L	0.10	0.0052	1	12/24/20 10:19	12/28/20 17:38	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	12/24/20 10:19	12/28/20 17:38	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	12/24/20 10:19	12/28/20 17:38	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	12/24/20 10:19	12/28/20 17:38	7440-48-4	
Lead	**0.000082J**	mg/L	0.0050	0.000036	1	12/24/20 10:19	12/28/20 17:38	7439-92-1	
Lithium	**0.0019J**	mg/L	0.030	0.00081	1	12/24/20 10:19	12/28/20 17:38	7439-93-2	
Molybdenum	**0.0044J**	mg/L	0.010	0.00069	1	12/24/20 10:19	12/28/20 17:38	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	12/24/20 10:19	12/28/20 17:38	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	12/24/20 10:19	12/28/20 17:38	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00050	0.000078	1	12/22/20 07:10	12/22/20 12:57	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	**289**	mg/L	10.0	10.0	1		12/19/20 12:19		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**4.7**	mg/L	1.0	0.60	1		12/23/20 19:30	16887-00-6	
Fluoride	**0.21**	mg/L	0.10	0.050	1		12/23/20 19:30	16984-48-8	
Sulfate	**38.8**	mg/L	1.0	0.50	1		12/23/20 19:30	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-2 BKG 03
Pace Project No.: 92512574

Sample: HGWA-44D **Lab ID: 92512574002** Collected: 12/15/20 16:18 Received: 12/17/20 08:48 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Charlotte								
Performed by	**CUSTOMER**				1		01/04/21 15:35		
pH	**7.87**	Std. Units			1		01/04/21 15:35		
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Calcium	**28.7**	mg/L	1.0	0.070	1	12/24/20 13:26	12/25/20 00:03	7440-70-2	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	**0.00047J**	mg/L	0.0030	0.00028	1	12/24/20 10:19	12/28/20 17:43	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	12/24/20 10:19	12/28/20 17:43	7440-38-2	
Barium	**0.39**	mg/L	0.010	0.00071	1	12/24/20 10:19	12/28/20 17:43	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	12/24/20 10:19	12/28/20 17:43	7440-41-7	
Boron	**0.31**	mg/L	0.10	0.0052	1	12/24/20 10:19	12/28/20 17:43	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	12/24/20 10:19	12/28/20 17:43	7440-43-9	
Chromium	**0.00072J**	mg/L	0.010	0.00055	1	12/24/20 10:19	12/28/20 17:43	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	12/24/20 10:19	12/28/20 17:43	7440-48-4	
Lead	**0.00011J**	mg/L	0.0050	0.000036	1	12/24/20 10:19	12/28/20 17:43	7439-92-1	
Lithium	**0.028J**	mg/L	0.030	0.00081	1	12/24/20 10:19	12/28/20 17:43	7439-93-2	
Molybdenum	**0.0019J**	mg/L	0.010	0.00069	1	12/24/20 10:19	12/28/20 17:43	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	12/24/20 10:19	12/28/20 17:43	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	12/24/20 10:19	12/28/20 17:43	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00050	0.000078	1	12/22/20 07:10	12/22/20 13:00	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	**295**	mg/L	10.0	10.0	1		12/19/20 12:19		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**9.4**	mg/L	1.0	0.60	1		12/23/20 19:45	16887-00-6	
Fluoride	**0.67**	mg/L	0.10	0.050	1		12/23/20 19:45	16984-48-8	
Sulfate	**6.7**	mg/L	1.0	0.50	1		12/23/20 19:45	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-2 BKG 03
Pace Project No.: 92512574

Sample: EB-01 **Lab ID: 92512574003** Collected: 12/15/20 18:02 Received: 12/17/20 08:48 Matrix: Water

Parameters	Results	Units	Report 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	**0.12J**	mg/L	1.0	0.070	1	12/24/20 13:26	12/25/20 00:28	7440-70-2	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00028	1	12/24/20 10:19	12/29/20 10:21	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	12/24/20 10:19	12/29/20 10:21	7440-38-2	
Barium	ND	mg/L	0.010	0.00071	1	12/24/20 10:19	12/29/20 10:21	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	12/24/20 10:19	12/29/20 10:21	7440-41-7	
Boron	ND	mg/L	0.10	0.0052	1	12/24/20 10:19	12/29/20 10:21	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	12/24/20 10:19	12/29/20 10:21	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	12/24/20 10:19	12/29/20 10:21	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	12/24/20 10:19	12/29/20 10:21	7440-48-4	
Lead	ND	mg/L	0.0050	0.000036	1	12/24/20 10:19	12/29/20 10:21	7439-92-1	
Lithium	ND	mg/L	0.030	0.00081	1	12/24/20 10:19	12/29/20 10:21	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	12/24/20 10:19	12/29/20 10:21	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	12/24/20 10:19	12/29/20 10:21	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	12/24/20 10:19	12/29/20 10:21	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00050	0.000078	1	12/22/20 07:10	12/22/20 13:02	7439-97-6	
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		12/19/20 12:19		
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		12/23/20 20:00	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		12/23/20 20:00	16984-48-8	
Sulfate	ND	mg/L	1.0	0.50	1		12/23/20 20:00	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

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

Sample: HGWA-42D **Lab ID: 92512574004** Collected: 12/15/20 16:35 Received: 12/17/20 08:48 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Charlotte								
Performed by	**CUSTOMER**				1		01/04/21 15:35		
pH	**7.64**	Std. Units			1		01/04/21 15:35		
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Calcium	**47.3**	mg/L	1.0	0.070	1	12/24/20 13:26	12/25/20 00:34	7440-70-2	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	**0.00035J**	mg/L	0.0030	0.00028	1	12/24/20 10:19	12/29/20 10:26	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	12/24/20 10:19	12/29/20 10:26	7440-38-2	
Barium	**0.19**	mg/L	0.010	0.00071	1	12/24/20 10:19	12/29/20 10:26	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	12/24/20 10:19	12/29/20 10:26	7440-41-7	
Boron	**0.043J**	mg/L	0.10	0.0052	1	12/24/20 10:19	12/29/20 10:26	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	12/24/20 10:19	12/29/20 10:26	7440-43-9	
Chromium	**0.0025J**	mg/L	0.010	0.00055	1	12/24/20 10:19	12/29/20 10:26	7440-47-3	
Cobalt	**0.00049J**	mg/L	0.0050	0.00038	1	12/24/20 10:19	12/29/20 10:26	7440-48-4	
Lead	**0.00045J**	mg/L	0.0050	0.000036	1	12/24/20 10:19	12/29/20 10:26	7439-92-1	
Lithium	**0.0080J**	mg/L	0.030	0.00081	1	12/24/20 10:19	12/29/20 10:26	7439-93-2	
Molybdenum	**0.00082J**	mg/L	0.010	0.00069	1	12/24/20 10:19	12/29/20 10:26	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	12/24/20 10:19	12/29/20 10:26	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	12/24/20 10:19	12/29/20 10:26	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00050	0.000078	1	12/22/20 07:10	12/22/20 13:04	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	**193**	mg/L	10.0	10.0	1		12/19/20 12:21		
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		12/23/20 20:14	16887-00-6	
Fluoride	**0.11**	mg/L	0.10	0.050	1		12/23/20 20:14	16984-48-8	
Sulfate	**10.9**	mg/L	1.0	0.50	1		12/23/20 20:14	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-2 BKG 03
Pace Project No.: 92512574

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

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

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

LABORATORY CONTROL SAMPLE: 3113410

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3113411 3113412

Parameter	Units	92512572002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Calcium	mg/L	28.7	1	1	30.4	29.3	173	61	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-2 BKG 03
Pace Project No.: 92512574

QC Batch: 589337
QC Batch Method: EPA 3005A
Analysis Method: EPA 6020B
Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92512574001, 92512574002, 92512574003, 92512574004

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

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

LABORATORY CONTROL SAMPLE: 3113102

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3113103 3113104

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

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3113103 3113104

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

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

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

QC Batch: 588542
QC Batch Method: EPA 7470A
Analysis Method: EPA 7470A
Analysis Description: 7470 Mercury
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92512574001, 92512574002, 92512574003, 92512574004

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

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

LABORATORY CONTROL SAMPLE: 3109730

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3109731 3109732

Parameter	Units	92512574004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	mg/L	ND	0.0025	0.0025	0.0022	0.0023	89	90	75-125	1	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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QUALITY CONTROL DATA

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

QC Batch: 588373 | Analysis Method: SM 2450C-2011
QC Batch Method: SM 2450C-2011 | Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92512574001, 92512574002, 92512574003, 92512574004

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

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

LABORATORY CONTROL SAMPLE: 3109058

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

SAMPLE DUPLICATE: 3109059

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

SAMPLE DUPLICATE: 3109063

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

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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QUALITY CONTROL DATA

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

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

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

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

LABORATORY CONTROL SAMPLE: 3112053

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3112054 3112055

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3112056 3112057

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

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REPORT OF LABORATORY ANALYSIS

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

QUALIFIERS

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

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

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

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

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
M6	Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.

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

QUALITY CONTROL DATA CROSS REFERENCE TABLE

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

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

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

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

Sample Condition Upon Receipt

Client Name: GA Power

Project #

WO# : 92512574

92512574

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

Custody Seal Present? ☐ Yes ☑ No Seals Intact? ☐ Yes ☐ No

Date/Initials Person Examining Contents: 12/17/15

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

Biological Tissue Frozen? ☐ Yes ☑ No ☐ N/A

Thermometer: ☑ IR Gun ID: 214

☐ Wet ☐ Blue ☐ None

Type of Ice:

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

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

Cooler Temp Corrected (°C): 4.3

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

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

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

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

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? ☐ Yes ☐ No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: _____ Date/Time: _____

Project Manager SCURF Review: _____ Date: _____

Project Manager SRF Review: _____ Date: _____

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

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

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

Projer **WO#: 92512574**

PM: KLH1 Due Date: 01/04/21

CLIENT: GA-GA Power

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

pH Adjustment Log for Preserved Samples

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

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

Pace Analytical
www.pace-labs.com

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:

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

Section B Required Project Information:

Report To:	SCS Contacts
Copy To:	Geosyntec Contacts
Purchase Order No.:	
Project Name:	Plant Hammond AP-2 BKG 03
Project Number:	GW6581B

Section C Invoice Information:

Attention:	Southern Co.
Company Name:	
Address:	
Pace Quote Reference:	
Pace Project Manager:	Kevin Herring
Pace Profile #:	10839-4

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: 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	SAMPLE TYPE	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	Full App. III&IV Metals 6010/6020*	RAD 226/228	Residual Chlorine (Y/N)
																		Y/N	N	N	N	N	
1	~~HGWA-42D~~	WT	G			-	-		5	2		3							X	X	X	X	N
2	HGWA-43D	WT	G	12/15	1225	-	-	17	5	2		3							X	X	X	X	N
3	HGWA-44D	WT	G	12/15	1618	-	-	16	5	2		3							X	X	X	X	N
4	EB-01	WT	G	12/15	1802	-	-	5	5	2		3							X	X	X	X	N
5																							
6																							
7																							
8																							
9																							
10																							
11																							
12																							

Requested Analysis Filtered (Y/N)

Residual Chlorine (Y/N)

4251254 Pace Project No./ Lab I.D.

1	~~pH =~~
2	pH = 2.39
3	pH = 7.87
4	pH =

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.	Thomas Hessler / Geosyntec	12/17	0646	/ Pace	12/17/12	8:48a	
*Full App. III & IV Metals=Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Pb, Li, Hg, Mo, Se, Tl	/ Pace	12/17/12	1102		12/17/12	1102	
One sample set submitted for HGWA-43D and HGWA-44D but they will be reported for AP-1/2/3 SDGs							
One sample set submitted for EB-01 but it will be reported for AP-1/2/3/4 SDGs							

SAMPLER NAME AND SIGNATURE		Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
PRINT Name of SAMPLER:	Thomas Hessler				
SIGNATURE of SAMPLER:	DATE Signed (MM/DD/YY): 12/15/12				

*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: 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-2 BKG 03	Pace Project Manager:	Kevin Herring
Requested Due Date/TAT:	10 Day	Project Number:	GW6581B	Pace Profile #:	10839-4

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

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

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	Full App. III&IV Metals 6010/6020*	RAD 226/228	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
																		Y/N	N	N	N	N		
1	HGWA-42D	WT	G	12/15/2020	1635	-	-	17	5	2		3							X	X	X	X	N	pH = 7.64
2	HGWA-43D	WT	G			-	-		5	2		3							X	X	X	X	N	pH =
3	HGWA-44D	WT	G			-	-		5	2		3							X	X	X	X	N	pH = SG 12/15
4	EB-01	WT	G	12/15/2020	1502	-	-	10	5	2		3							X	X	X	X	N	
5																								
6																								
7																								
8																								
9																								
10																								
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.	Shawn Lin / Geosyntec	12/15/2020	18:15	Thomas Kressler/Geo	12/15	1815	
*Full App. III & IV Metals=Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Pb, Li, Hg, Mo, Se, Tl	Thomas Kressler/Geo	12/15	0846	[illegible]/Pace	12/16/20	8:48	
One sample set submitted for HGWA-43D and HGWA-44D but they will be reported for AP-1/2/3 SDGs	[illegible]/Pace	12/17/20	1102	[illegible] 12/17/20		NO2	
One sample set submitted for EB-01 but it will be reported for AP-1/2/3/4 SDGs							

SAMPLER NAME AND SIGNATURE			Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
PRINT Name of SAMPLER:	Shawn Lin					
SIGNATURE of SAMPLER:	[signature]	DATE Signed (MM/DD/YY): 12/15/2020				

*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
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

February 15, 2021

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

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

Dear Joju Abraham:

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

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

- Pace Analytical Services - Greensburg

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

Sincerely,

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

Enclosures

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

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

CERTIFICATIONS

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

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
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE SUMMARY

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

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

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

SAMPLE ANALYTE COUNT

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

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

PASI-PA = Pace Analytical Services - Greensburg

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

SUMMARY OF DETECTION

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

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

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS - RADIOCHEMISTRY

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

Sample: HGWA-42D **Lab ID: 92517863001** Collected: 01/20/21 10:15 Received: 01/21/21 11:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.143 ± 0.250 (0.565) C:82% T:NA**	pCi/L	02/09/21 08:43	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.702 ± 0.395 (0.726) C:71% T:93%**	pCi/L	02/12/21 11:38	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.845 ± 0.645 (1.29)**	pCi/L	02/12/21 14:52	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS - RADIOCHEMISTRY

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

Sample: HGWA-43D **Lab ID: 92517863002** Collected: 01/19/21 16:45 Received: 01/21/21 11:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.203 ± 0.224 (0.445) C:90% T:NA**	pCi/L	02/09/21 07:43	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.482 ± 0.373 (0.741) C:82% T:84%**	pCi/L	02/04/21 11:54	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.685 ± 0.597 (1.19)**	pCi/L	02/10/21 10:25	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS - RADIOCHEMISTRY

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

Sample: HGWA-44D **Lab ID: 92517863003** Collected: 01/19/21 17:42 Received: 01/21/21 11:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.259 ± 0.225 (0.402) C:101% T:NA**	pCi/L	02/09/21 07:43	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.531 ± 0.589 (1.24) C:73% T:80%**	pCi/L	02/04/21 14:43	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.790 ± 0.814 (1.64)**	pCi/L	02/10/21 10:25	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS - RADIOCHEMISTRY

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

Sample: EB-01 **Lab ID: 92517863004** Collected: 01/20/21 14:00 Received: 01/21/21 11:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.0391 ± 0.180 (0.466) C:86% T:NA**	pCi/L	02/09/21 07:43	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.365 ± 0.434 (0.916) C:78% T:72%**	pCi/L	02/04/21 14:59	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.404 ± 0.614 (1.38)**	pCi/L	02/10/21 10:25	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL - RADIOCHEMISTRY

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

QC Batch: 433216
QC Batch Method: EPA 9320
Analysis Method: EPA 9320
Analysis Description: 9320 Radium 228
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 92517863001

METHOD BLANK: 2091814
Matrix: Water
Associated Lab Samples: 92517863001

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

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

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL - RADIOCHEMISTRY

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

QC Batch: 432561
QC Batch Method: EPA 9320
Analysis Method: EPA 9320
Analysis Description: 9320 Radium 228
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 92517863002, 92517863003, 92517863004

METHOD BLANK: 2088957 Matrix: Water
Associated Lab Samples: 92517863002, 92517863003, 92517863004

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

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

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL - RADIOCHEMISTRY

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

QC Batch: 433326
QC Batch Method: EPA 9315
Analysis Method: EPA 9315
Analysis Description: 9315 Total Radium
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 92517863001, 92517863002, 92517863003, 92517863004

METHOD BLANK: 2092294
Matrix: Water
Associated Lab Samples: 92517863001, 92517863002, 92517863003, 92517863004

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

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

REPORT OF LABORATORY ANALYSIS

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

QUALIFIERS

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

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

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

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

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval). Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

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

QUALITY CONTROL DATA CROSS REFERENCE TABLE

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

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

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

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

Sample Condition Upon Receipt

Client Name: GA Power

Project #: WO# : 92517863

92517863

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

Custody Seal Present? ☐ Yes ☑ No **Seals Intact?** ☐ Yes ☐ No

Date/Initials Person Examining Contents: 12/21/21 CSH

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

Biological Tissue Frozen? ☐ Yes ☑ No ☐ N/A

Thermometer: ☑ IR Gun ID: 233 ☑ Wet ☐ Blue ☐ None

Type of Ice:

Cooler Temp: 4.1 **Correction Factor:** Add/Subtract (°C) -0.2

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

Cooler Temp Corrected (°C): 3.9

USDA Regulated Soil (☐ N/A, water sample)
Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)? ☐ Yes ☐ No

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

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

COMMENTS/SAMPLE DISCREPANCY **Field Data Required?** ☐ Yes ☐ No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: _____ **Date/Time:** _____

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

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

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

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

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

Project # **WO#: 92517863**

PM: KLH1 Due Date: 02/11/21

CLIENT: GA-GA Power

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

pH Adjustment Log for Preserved Samples

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

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

Pace Analytical
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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 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 AP-2 BKG 04
Project Number:	GW6581B

Section C Invoice Information:

Attention:	Southern Co.
Company Name:	
Address:	
Pace Quote Reference:	
Pace Project Manager:	Kevin Herring
Pace Profile #:	10839-4

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	Chloride, Fluoride, Sulfate	TDS	Full App. III&IV Metals 6010/6020	RAD 226/228	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
																		Y/N	N	N	N	N		92517883
1	HGWA-42D	WT	G	1/20/21	0945	–	–	17.6	5	2		3						X	X	X	X		N	pH = 7.68
2	HGWA-43D	WT	G	1/19/21	1645	–	–	14.7	5	2		3						X	X	X	X		N	pH = 7.39
3	HGWA-44D	WT	G			–	–		5	2		3						X	X	X	X		N	pH =
4	EB-01	WT	G			–	–		5	2		3						X	X	X	X		N	pH =
5																								
6																								
7																								
8																								
9																								
10																								
11																								
12																								

1/21/21

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.		1/21/21	1130	Pam	1/21/21	1130	
*Full App. III & IV Metals=Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Pb, Li, Hg, Mo, Se, Tl	Pace	1/21/21	1326		1/21/21	1326	
One sample set submitted for HGWA-43D and HGWA-44D but they will be reported for AP-1/2/3 SDGs							
One sample set submitted for EB-01 but it will be reported for AP-1/2/3/4 SDGs							

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Connor Sain

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 1/20/21

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

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Page: 2 of 3

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Phone:	Fax:
Requested Due Date/TAT:	10 Day

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Copy To:	Geosyntec Contacts
Purchase Order No.:	
Project Name:	Plant Hammond AP-2 BKG 04
Project Number:	GW6581B

Section C Invoice Information:

Attention:	Southern Co.
Company Name:	
Address:	
Pace Quote Reference:	
Pace Project Manager:	Kevin Herring
Pace Profile #:	10839-4

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

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 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	Full App. III&IV Metals 6010/6020*	RAD 226/228	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D. 92617863
	Requested Analysis Filtered (Y/N)									Y/N	N	N	N	N									
1	HGWA-42D	WT	G			–	–		5	2		3						X	X	X	X	N	pH =
2	HGWA-43D	WT	G			–	–		5	2		3						X	X	X	X	N	pH =
3	HGWA-44D	WT	G	1/19	1742	–	–	14	5	2		3						X	X	X	X	N	pH = 7.86
4	EB-01	WT	G			–	–		5	2		3						X	X	X	X	N	
5																							
6																							
7																							
8																							
9																							
10																							
11																							
12																							

CR
1/19/2021

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
Please note dry well's, strike thorugh any wells not sampled, and note when the last sample for the event has been taken. *Full App. III & IV Metals=Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Pb, Li, Hg, Mo, Se, Tl	GPC	1/20/21	1600	GPC	1/21/21	1692	
One sample set submitted for HGWA-43D and HGWA-44D but they will be reported for AP-1/2/3 SDGs	Pace	1/21/21	1130	Pace	1/21/21	1130	
One sample set submitted for EB-01 but it will be reported for AP-1/2/3/4 SDGs		1/21/21	1320		1/21/21	1326	

SAMPLER NAME AND SIGNATURE				
PRINT Name of SAMPLER:	Chad Rutt	Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
SIGNATURE of SAMPLER:		DATE Signed (MM/DD/YY): 1/19/21				

*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
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Copy To:	Geosyntec Contacts
Purchase Order No.:	
Project Name:	Plant Hammond AP-2 BKG 04
Project Number:	GW6581B

Section C Invoice Information:

Attention:	Southern Co.
Company Name:	
Address:	
Pace Quote Reference:	
Pace Project Manager:	Kevin Herring
Pace Profile #:	10839-4

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	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	Full App. III&IV Metals 6010/6020	RAD 226/228	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
																			N	N	N	N		9251765
1	HGWA-42D	WT	G						5	2		3							X	X	X	X	N	pH =
2	HGWA-43D	WT	G						5	2		3							X	X	X	X	N	pH =
3	HGWA-44D	WT	G						5	2		3							X	X	X	X	N	pH =
4	EB-01	WT	G	1/20	1400	–	–	–	5	2		3							X	X	X	X	N	
5																								
6																								
7																								
8																								
9																								
10																								
11																								
12																								

1/20/2021

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.		1/21/21	1600	GEO	1/21/21	1600	
*Full App. III & IV Metals=Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Pb, Li, Hg, Mo, Se, Tl	GEO	1/21/21	1130	Pace	1/21/21	1130	
One sample set submitted for HGWA-43D and HGWA-44D but they will be reported for AP-1/2/3 SDGs	Pace	1/21/21	1326		1/21/21	1326	
One sample set submitted for EB-01 but it will be reported for AP-1/2/3/4 SDGs							

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Chad Gosso

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 1/20/21

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.

Quality Control Sample Performance Assessment

Pace Analytical
www.pacelabs.com

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

Analyst Must Manually Enter All Fields Highlighted in Yellow.

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

Laboratory Control Sample Assessment	LCSD (Y or N)?	Y
	LCS58611	LCSD58611
Count Date:	2/12/2021	2/12/2021
Spike I.D.:	21-003	21-003
Decay Corrected Spike Concentration (pCi/mL):	38.853	38.853
Volume Used (mL):	0.10	0.10
Aliquot Volume (L, g, F):	0.806	0.812
Target Conc. (pCi/L, g, F):	4.818	4.785
Uncertainty (Calculated):	0.236	0.234
Result (pCi/L, g, F):	5.366	4.659
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	1.169	1.056
Numerical Performance Indicator:	0.90	-0.23
Percent Recovery:	111.36%	97.38%
Status vs Numerical Indicator:	N/A	N/A
Status vs Recovery:	Pass	Pass
Upper % Recovery Limits:	135%	135%
Lower % Recovery Limits:	60%	60%

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

Duplicate Sample Assessment		
Sample I.D.:	LCS58611	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	LCSD58611	
Sample Result (pCi/L, g, F):	5.366	
Sample Result 2 Sigma CSU (pCi/L, g, F):	1.169	
Sample Duplicate Result (pCi/L, g, F):	4.659	
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	1.056	
Are sample and/or duplicate results below RL?	NO	
Duplicate Numerical Performance Indicator:	0.879	
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	13.40%	
Duplicate Status vs Numerical Indicator:	Pass	
Duplicate Status vs RPD:	Pass	
% RPD Limit:	36%	

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

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

Comments:

2/12/21

Quality Control Sample Performance Assessment

Pace Analytical
www.pacelabs.com

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

Analyst Must Manually Enter All Fields Highlighted in Yellow.

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

Laboratory Control Sample Assessment	LCSD (Y or N)?	Y
	LCS58638	LCSD58638
Count Date:	2/9/2021	2/9/2021
Spike I.D.:	19-033	19-033
Decay Corrected Spike Concentration (pCi/mL):	24.040	24.040
Volume Used (mL):	0.10	0.10
Aliquot Volume (L, g, F):	0.505	0.507
Target Conc. (pCi/L, g, F):	4.765	4.742
Uncertainty (Calculated):	0.057	0.057
Result (pCi/L, g, F):	4.773	5.375
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.808	0.863
Numerical Performance Indicator:	0.02	1.44
Percent Recovery:	100.16%	113.37%
Status vs Numerical Indicator:	N/A	N/A
Status vs Recovery:	Pass	Pass
Upper % Recovery Limits:	125%	125%
Lower % Recovery Limits:	75%	75%

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

Duplicate Sample Assessment		
Sample I.D.:	LCS58638	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	LCSD58638	
Sample Result (pCi/L, g, F):	4.773	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.808	
Sample Duplicate Result (pCi/L, g, F):	5.375	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.863	
Are sample and/or duplicate results below RL?	NO	
Duplicate Numerical Performance Indicator:	-0.999	
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	12.37%	
Duplicate Status vs Numerical Indicator:	N/A	
Duplicate Status vs RPD:	Pass	
% RPD Limit:	25%	

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

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

Comments:

2/9/21

Quality Control Sample Performance Assessment

Pace Analytical
www.pacelabs.com

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

Analyst Must Manually Enter All Fields Highlighted in Yellow.

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

Laboratory Control Sample Assessment	LCSD (Y or N)?	N
	LCS58638	LCSD58638
Count Date:	2/9/2021	
Spike I.D.:	19-033	
Decay Corrected Spike Concentration (pCi/mL):	24.040	
Volume Used (mL):	0.10	
Aliquot Volume (L, g, F):	0.505	
Target Conc. (pCi/L, g, F):	4.765	
Uncertainty (Calculated):	0.057	
Result (pCi/L, g, F):	4.773	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.808	
Numerical Performance Indicator:	0.02	
Percent Recovery:	100.16%	
Status vs Numerical Indicator:	N/A	
Status vs Recovery:	Pass	
Upper % Recovery Limits:	125%	
Lower % Recovery Limits:	75%	

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

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

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

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

Comments:

NI < 3 acceptable

***Batch must be re-prepped due to unacceptable precision.

JJY 2/9/21

Quality Control Sample Performance Assessment

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

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	2088957
MB concentration:	0.423
M/B 2 Sigma CSU:	0.354
MB MDC:	0.709
MB Numerical Performance Indicator:	2.34
MB Status vs Numerical Indicator:	Warning
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	Y
	LCS58538	LCSD58538
Count Date:	2/4/2021	2/4/2021
Spike I.D.:	20-030	20-030
Decay Corrected Spike Concantration (pCi/mL):	36.635	36.635
Volume Used (mL):	0.10	0.10
Aliquot Volume (L, g, F):	0.803	0.806
Target Conc. (pCi/L, g, F):	4.563	4.543
Uncertainty (Calculated):	0.224	0.223
Result (pCi/L, g, F):	2.734	3.105
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	0.942	0.887
Numerical Performance Indicator:	-3.70	-3.08
Percent Recovery:	59.92%	68.36%
Status vs Numerical Indicator:	Fail**	N/A
Status vs Recovery:	Fail Low**	Pass
Upper % Recovery Limits:	135%	135%
Lower % Recovery Limits:	60%	60%

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

Duplicate Sample Assessment		
Sample I.D.:	LCS58538	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	LCSD58538	
Sample Result (pCi/L, g, F):	2.734	
Sample Result 2 Sigma CSU (pCi/L, g, F):	0.942	
Sample Duplicate Result (pCi/L, g, F):	3.105	
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	0.887	
Are sample and/or duplicate results below RL?	NO	
Duplicate Numerical Performance Indicator:	-0.563	
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	13.15%	
Duplicate Status vs Numerical Indicator:	Pass	
Duplicate Status vs RPD:	Pass	
% RPD Limit:	36%	

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

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

Comments:

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

Quality Control Sample Performance Assessment

Pace Analytical
www.pacelabs.com

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

Analyst Must Manually Enter All Fields Highlighted in Yellow.

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

Laboratory Control Sample Assessment	LCSD (Y or N)?	Y
	LCS58538	LCSD58538
Count Date:	2/8/2021	2/8/2021
Spike I.D.:	20-030	20-030
Decay Corrected Spike Concentration (pCi/mL):	36.590	36.590
Volume Used (mL):	0.10	0.10
Aliquot Volume (L, g, F):	0.803	0.806
Target Conc. (pCi/L, g, F):	4.557	4.538
Uncertainty (Calculated):	0.223	0.222
Result (pCi/L, g, F):	4.275	4.409
	1.024	1.024
Numerical Performance Indicator:	-0.53	-0.24
Percent Recovery:	93.80%	97.18%
Status vs Numerical Indicator:	N/A	N/A
Status vs Recovery:	Pass	Pass
Upper % Recovery Limits:	135%	135%
Lower % Recovery Limits:	60%	60%

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

Duplicate Sample Assessment		
Sample I.D.:	LCS58538	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	LCSD58538	
Sample Result (pCi/L, g, F):	4.275	
	1.024	
Sample Duplicate Result (pCi/L, g, F):	4.409	
	1.024	
Are sample and/or duplicate results below RL?	NO	
Duplicate Numerical Performance Indicator:	-0.182	
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	3.53%	
Duplicate Status vs Numerical Indicator:	Pass	
Duplicate Status vs RPD:	Pass	
% RPD Limit:	36%	

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

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

Comments:

2/9/21

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

February 04, 2021

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

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

Dear Joju Abraham:

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

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

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

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

Sincerely,

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

Enclosures

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

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
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CERTIFICATIONS

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

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

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

SAMPLE SUMMARY

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

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

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

SAMPLE ANALYTE COUNT

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

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

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

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

SUMMARY OF DETECTION

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

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

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

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

Sample: HGWA-42D **Lab ID: 92517891001** Collected: 01/20/21 10:15 Received: 01/21/21 11:30 Matrix: Water

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

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

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

Sample: HGWA-43D **Lab ID: 92517891002** Collected: 01/19/21 16:45 Received: 01/21/21 11:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Charlotte								
Performed by	**CUSTOMER**				1		02/04/21 09:43		
pH	**7.39**	Std. Units			1		02/04/21 09:43		
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Calcium	**60.1**	mg/L	1.0	0.070	1	02/01/21 11:28	02/02/21 09:19	7440-70-2	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	**0.00029J**	mg/L	0.0030	0.00028	1	02/02/21 09:23	02/02/21 19:23	7440-36-0	B
Arsenic	**0.0011J**	mg/L	0.0050	0.00078	1	02/02/21 09:23	02/02/21 19:23	7440-38-2	
Barium	**0.32**	mg/L	0.010	0.00071	1	02/02/21 09:23	02/02/21 19:23	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	02/02/21 09:23	02/02/21 19:23	7440-41-7	
Boron	**0.049J**	mg/L	0.10	0.0052	1	02/02/21 09:23	02/02/21 19:23	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	02/02/21 09:23	02/02/21 19:23	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	02/02/21 09:23	02/02/21 19:23	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	02/02/21 09:23	02/02/21 19:23	7440-48-4	
Lead	**0.000044J**	mg/L	0.0050	0.000036	1	02/02/21 09:23	02/02/21 19:23	7439-92-1	
Lithium	**0.0025J**	mg/L	0.030	0.00081	1	02/02/21 09:23	02/02/21 19:23	7439-93-2	
Molybdenum	**0.0038J**	mg/L	0.010	0.00069	1	02/02/21 09:23	02/02/21 19:23	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	02/02/21 09:23	02/02/21 19:23	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	02/02/21 09:23	02/02/21 19:23	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00050	0.000078	1	01/26/21 07:45	01/26/21 10:33	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	**270**	mg/L	10.0	10.0	1		01/22/21 09:38		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**4.1**	mg/L	1.0	0.60	1		01/24/21 23:50	16887-00-6	
Fluoride	**0.16**	mg/L	0.10	0.050	1		01/24/21 23:50	16984-48-8	
Sulfate	**37.3**	mg/L	1.0	0.50	1		01/24/21 23:50	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-2 BKG 04
Pace Project No.: 92517891

Sample: HGWA-44D **Lab ID: 92517891003** Collected: 01/19/21 17:42 Received: 01/21/21 11:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Charlotte								
Performed by	**CUSTOMER**				1		02/04/21 09:43		
pH	**7.86**	Std. Units			1		02/04/21 09:43		
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Calcium	**33.0**	mg/L	1.0	0.070	1	02/01/21 11:28	02/02/21 14:34	7440-70-2	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	**0.00067J**	mg/L	0.0030	0.00028	1	02/02/21 09:23	02/02/21 19:29	7440-36-0	B
Arsenic	ND	mg/L	0.0050	0.00078	1	02/02/21 09:23	02/02/21 19:29	7440-38-2	
Barium	**0.41**	mg/L	0.010	0.00071	1	02/02/21 09:23	02/02/21 19:29	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	02/02/21 09:23	02/02/21 19:29	7440-41-7	
Boron	**0.40**	mg/L	0.10	0.0052	1	02/02/21 09:23	02/02/21 19:29	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	02/02/21 09:23	02/02/21 19:29	7440-43-9	
Chromium	**0.0011J**	mg/L	0.010	0.00055	1	02/02/21 09:23	02/02/21 19:29	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	02/02/21 09:23	02/02/21 19:29	7440-48-4	
Lead	**0.00019J**	mg/L	0.0050	0.000036	1	02/02/21 09:23	02/02/21 19:29	7439-92-1	
Lithium	**0.034**	mg/L	0.030	0.00081	1	02/02/21 09:23	02/02/21 19:29	7439-93-2	
Molybdenum	**0.0035J**	mg/L	0.010	0.00069	1	02/02/21 09:23	02/02/21 19:29	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	02/02/21 09:23	02/02/21 19:29	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	02/02/21 09:23	02/02/21 19:29	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00050	0.000078	1	01/26/21 07:45	01/26/21 10:35	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	**278**	mg/L	10.0	10.0	1		01/22/21 09:39		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**9.5**	mg/L	1.0	0.60	1		01/25/21 00:04	16887-00-6	
Fluoride	**0.74**	mg/L	0.10	0.050	1		01/25/21 00:04	16984-48-8	
Sulfate	**7.4**	mg/L	1.0	0.50	1		01/25/21 00:04	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-2 BKG 04
Pace Project No.: 92517891

Sample: EB-01 **Lab ID: 92517891004** Collected: 01/20/21 14:00 Received: 01/21/21 11:30 Matrix: Water

Parameters	Results	Units	Report 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	0.070	1	02/01/21 11:28	02/02/21 14:39	7440-70-2	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00028	1	02/02/21 09:23	02/02/21 19:34	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	02/02/21 09:23	02/02/21 19:34	7440-38-2	
Barium	ND	mg/L	0.010	0.00071	1	02/02/21 09:23	02/02/21 19:34	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	02/02/21 09:23	02/02/21 19:34	7440-41-7	
Boron	ND	mg/L	0.10	0.0052	1	02/02/21 09:23	02/02/21 19:34	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	02/02/21 09:23	02/02/21 19:34	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	02/02/21 09:23	02/02/21 19:34	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	02/02/21 09:23	02/02/21 19:34	7440-48-4	
Lead	ND	mg/L	0.0050	0.000036	1	02/02/21 09:23	02/02/21 19:34	7439-92-1	
Lithium	ND	mg/L	0.030	0.00081	1	02/02/21 09:23	02/02/21 19:34	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	02/02/21 09:23	02/02/21 19:34	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	02/02/21 09:23	02/02/21 19:34	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	02/02/21 09:23	02/02/21 19:34	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00050	0.000078	1	01/26/21 07:45	01/26/21 10:38	7439-97-6	
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		01/22/21 16:44		
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		01/25/21 00:19	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		01/25/21 00:19	16984-48-8	
Sulfate	ND	mg/L	1.0	0.50	1		01/25/21 00:19	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

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

QC Batch: 596653
QC Batch Method: EPA 3010A
Analysis Method: EPA 6010D
Analysis Description: 6010D ATL
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92517891001, 92517891002, 92517891003, 92517891004

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

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

LABORATORY CONTROL SAMPLE: 3146678

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3146679 3146681

Parameter	Units	92517740001 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	159	152	244	-497	75-125	5	20	M1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3146682 3146683

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

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

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
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QUALITY CONTROL DATA

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

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

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

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

LABORATORY CONTROL SAMPLE: 3147680

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3147681 3147682

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

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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QUALITY CONTROL DATA

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3147681 3147682

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

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

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

QC Batch: 594784
QC Batch Method: EPA 7470A
Analysis Method: EPA 7470A
Analysis Description: 7470 Mercury
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92517891001, 92517891002, 92517891003, 92517891004

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

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

LABORATORY CONTROL SAMPLE: 3138046

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3138047 3138048

Parameter	Units	92517891001 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	0.0027	94	106	75-125	12	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-2 BKG 04
Pace Project No.: 92517891

QC Batch: 594633
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: 92517891002, 92517891003

METHOD BLANK: 3137200 Matrix: Water
Associated Lab Samples: 92517891002, 92517891003

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

LABORATORY CONTROL SAMPLE: 3137201

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

SAMPLE DUPLICATE: 3137203

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

SAMPLE DUPLICATE: 3137350

Parameter	Units	92517894002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	64.0	67.0	5	10	

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-2 BKG 04
Pace Project No.: 92517891

QC Batch: 594779
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: 92517891001, 92517891004

METHOD BLANK: 3137995 Matrix: Water
Associated Lab Samples: 92517891001, 92517891004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	01/22/21 16:40	

LABORATORY CONTROL SAMPLE: 3137996

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	394	98	84-108	

SAMPLE DUPLICATE: 3137997

Parameter	Units	92517969001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	ND	ND		10	

SAMPLE DUPLICATE: 3138171

Parameter	Units	92517909004 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	289	270	7	10	

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-2 BKG 04
Pace Project No.: 92517891

QC Batch: 594878
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: 92517891002, 92517891003, 92517891004

METHOD BLANK: 3138480 Matrix: Water
Associated Lab Samples: 92517891002, 92517891003, 92517891004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	01/24/21 21:50	
Fluoride	mg/L	ND	0.10	0.050	01/24/21 21:50	
Sulfate	mg/L	ND	1.0	0.50	01/24/21 21:50	

LABORATORY CONTROL SAMPLE: 3138481

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	52.9	106	90-110	
Fluoride	mg/L	2.5	2.4	95	90-110	
Sulfate	mg/L	50	54.7	109	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3138482 3138483

Parameter	Units	92517740005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	ND	50	50	53.9	53.4	108	107	90-110	1	10	
Fluoride	mg/L	ND	2.5	2.5	2.6	2.5	103	98	90-110	5	10	
Sulfate	mg/L	ND	50	50	55.4	54.9	111	110	90-110	1	10	M1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3138484 3138485

Parameter	Units	92517704001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	377	50	50	439	424	124	93	90-110	3	10	M6
Fluoride	mg/L	0.23	2.5	2.5	ND	ND	-9	-9	90-110		10	M1
Sulfate	mg/L	597	50	50	676	646	158	99	90-110	4	10	M6

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-2 BKG 04
Pace Project No.: 92517891

QC Batch: 595172
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: 92517891001

METHOD BLANK: 3139608 Matrix: Water
Associated Lab Samples: 92517891001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	01/26/21 18:25	
Fluoride	mg/L	ND	0.10	0.050	01/26/21 18:25	
Sulfate	mg/L	ND	1.0	0.50	01/26/21 18:25	

LABORATORY CONTROL SAMPLE: 3139609

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	49.7	99	90-110	
Fluoride	mg/L	2.5	2.3	93	90-110	
Sulfate	mg/L	50	51.5	103	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3139610 3139611

Parameter	Units	92517999001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	6.1	50	50	58.6	58.9	105	106	90-110	1	10	
Fluoride	mg/L	ND	2.5	2.5	2.6	2.6	102	102	90-110	0	10	
Sulfate	mg/L	5.0	50	50	59.1	59.4	108	109	90-110	1	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3139612 3139613

Parameter	Units	92517909004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	3.5	50	50	56.5	56.6	106	106	90-110	0	10	
Fluoride	mg/L	0.22	2.5	2.5	2.5	2.5	92	93	90-110	0	10	
Sulfate	mg/L	14.2	50	50	67.4	67.7	106	107	90-110	1	10	

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-2 BKG 04
Pace Project No.: 92517891

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

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

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

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

B	Analyte was detected in the associated method blank.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
M6	Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.

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

QUALITY CONTROL DATA CROSS REFERENCE TABLE

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

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92517891001	**HGWA-42D**				
92517891002	**HGWA-43D**				
92517891003	**HGWA-44D**				
92517891001	**HGWA-42D**	EPA 3010A	596653	EPA 6010D	596772
92517891002	**HGWA-43D**	EPA 3010A	596653	EPA 6010D	596772
92517891003	**HGWA-44D**	EPA 3010A	596653	EPA 6010D	596772
92517891004	**EB-01**	EPA 3010A	596653	EPA 6010D	596772
92517891001	**HGWA-42D**	EPA 3005A	596887	EPA 6020B	597015
92517891002	**HGWA-43D**	EPA 3005A	596887	EPA 6020B	597015
92517891003	**HGWA-44D**	EPA 3005A	596887	EPA 6020B	597015
92517891004	**EB-01**	EPA 3005A	596887	EPA 6020B	597015
92517891001	**HGWA-42D**	EPA 7470A	594784	EPA 7470A	595259
92517891002	**HGWA-43D**	EPA 7470A	594784	EPA 7470A	595259
92517891003	**HGWA-44D**	EPA 7470A	594784	EPA 7470A	595259
92517891004	**EB-01**	EPA 7470A	594784	EPA 7470A	595259
92517891001	**HGWA-42D**	SM 2450C-2011	594779		
92517891002	**HGWA-43D**	SM 2450C-2011	594633		
92517891003	**HGWA-44D**	SM 2450C-2011	594633		
92517891004	**EB-01**	SM 2450C-2011	594779		
92517891001	**HGWA-42D**	EPA 300.0 Rev 2.1 1993	595172		
92517891002	**HGWA-43D**	EPA 300.0 Rev 2.1 1993	594878		
92517891003	**HGWA-44D**	EPA 300.0 Rev 2.1 1993	594878		
92517891004	**EB-01**	EPA 300.0 Rev 2.1 1993	594878		

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

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

Sample Condition Upon Receipt

Client Name: GA Power **Project #:** WO# : 92517891

92517891

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

Custody Seal Present? ☐ Yes ☑ No **Seals Intact?** ☐ Yes ☐ No

Date/Initials Person Examining Contents: 1/21/21 CJH

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☑ ~~None~~ ☐ Other

Biological Tissue Frozen? ☐ Yes ☑ No ☐ N/A

Thermometer: ☑ ~~IR~~ Gun ID: 233 **Type of Ice:** ☑ ~~Wet~~ ☐ Blue ☐ None

Cooler Temp: 4.1 **Correction Factor:** Add/Subtract (°C) -0.2

Cooler Temp Corrected (°C): 3.9

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

USDA Regulated Soil (☐ N/A, water sample)
Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)? ☐ Yes ☐ No

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

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

COMMENTS/SAMPLE DISCREPANCY Field Data Required? ☐ Yes ☐ No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: _____ Date/Time: _____

Project Manager SCURF Review: _____ Date: _____

Project Manager SRF Review: _____ Date: _____

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

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

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

Project # **WO#: 92517891**

PM: KLH1 Due Date: 02/04/21

CLIENT: GA-GA Power

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)	BP4C-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	AG3A(DG3A)-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unp (N/A)	DG9P-40 mL VOA H3PO4 (N/A)	VOAK (6 vials per kit)-5035 kit (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A – lab)	SP2T-250 mL SterilePlastic (N/A – lab)	1221M	BP3A-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved vials (N/A)	VSGU-20 mL Scintillation vials (N/A)	~~DG9U-40 mL Amber Unpreserved vials (N/A)~~
1		1	1			1																			2				
2		1	1			1																			2				
3		1	1			1																			2				
4		1	1			1																			2				
5																													
6																													
7																													
8																													
9																													
10																													
11																													
12																													

pH Adjustment Log for Preserved Samples

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

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

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 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 AP-2 BKG 04	Pace Project Manager:	Kevin Herring
Requested Due Date/TAT:	10 Day	Project Number:	GW6581B	Pace Profile #:	10839-4

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

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

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	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	Chloride, Fluoride, Sulfate	TDS	Full App. III&IV Metals 6010/6020*	RAD 226/228	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
										Preservatives								Requested Analysis Filtered (Y/N)						42517891
1	HGWA-42D	WT	G	1/20/21	0945	–	–	17.6	5	2		3							X	X	X	X	N	pH = 7.68
2	HGWA-43D	WT	G	1/19/21	1645	–	–	14.7	5	2		3							X	X	X	X	N	pH = 7.39
3	~~HGWA-44D~~	WT	G			–	–		5	2		3							X	X	X	X	N	pH =
4	~~EB-01~~	WT	G			–	–		5	2		3							X	X	X	X	N	
5																								
6																								
7																								
8																								
9																								
10																								
11																								
12																								

1/20/21

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.		1/21/21	1130	/ Pam	1/21/21	1130	
*Full App. III & IV Metals=Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Pb, Li, Hg, Mo, Se, Tl	/ Pace	1/21/21	1326		1/21/21	1326	
One sample set submitted for HGWA-43D and HGWA-44D but they will be reported for AP-1/2/3 SDGs							
One sample set submitted for EB-01 but it will be reported for AP-1/2/3/4 SDGs							

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Connor Cain

SIGNATURE of SAMPLER: DATE Signed (MM/DD/YY): 1/20/21

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.

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 AP-2 BKG 04
Project Number:	GW6581B

Section C Invoice Information:

Attention:	Southern Co.
Company Name:	
Address:	
Pace Quote Reference:	
Pace Project Manager:	Kevin Herring
Pace Profile #:	10839-4

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	Chloride, Fluoride, Sulfate	TDS	Full App. III&IV Metals 6010/6020*	RAD 226/228	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
																		Requested Analysis Filtered (Y/N)	N	N	N	N		62517891
1	HGWA-42D	WT	G			--	--		5	2		3							X	X	X	X	N	pH =
2	HGWA-43D	WT	G			--	--		5	2		3							X	X	X	X	N	pH =
3	HGWA-44D	WT	G	1/19	1742	--	--	14	5	2		3							X	X	X	X	N	pH = 7.86
4	EB-01	WT	G			--	--		5	2		3							X	X	X	X	N	
5																								
6																								
7																								
8																								
9																								
10																								
11																								
12																								

CR
1/19/2021

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		1/20/21	1600	/GEC	1/22/21	1600	
*Full App. III & IV Metals=Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Pb, Li, Hg, Mo, Se, Tl	/GEC	1/21/21	1130	/Pace	1/21/21	1130	
One sample set submitted for HGWA-43D and HGWA-44D but they will be reported for AP-1/2/3 SDGs	/Pace	1/21/21	1320		1/21/21	1326	
One sample set submitted for EB-01 but it will be reported for AP-1/2/3/4 SDGs							

SAMPLER NAME AND SIGNATURE		Temp in °C	Received on ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
PRINT Name of SAMPLER:	Chad Russo				
SIGNATURE of SAMPLER:					
~~DATE~~ Signed (MM/DD/YY):	1/19/21				

*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

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:		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-2 BKG 04	Pace Project Manager:	Kevin Herring
Requested Due Date/TAT:	10 Day	Project Number:	GW6581B	Pace Profile #:	10839-4

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

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 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	Full App. III&IV Metals 6010/6020*	RAD 226/228	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
										Requested Analysis Filtered (Y/N)								N	N	N	N			
1	HGWA-42D	WT	G						5	2		3						X	X	X	X	N	pH =
2	HGWA-43D	WT	G			–	–		5	2		3						X	X	X	X	N	pH =
3	HGWA-44D	WT	G			–	–		5	2		3						X	X	X	X	N	pH =
4	EB-01	WT	G	1/20	1400	–	–	–	5	2		3						X	X	X	X	N	
5																							
6																							
7																							
8																							
9																							
10																							
11																							
12																							

5 — 1/20/2021

92517691 Pace Project No./ Lab I.D.

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.	GPC	1/20/21	1600	GPC	1/20/21	1600	
*Full App. III & IV Metals=Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Pb, Li, Hg, Mo, Se, Tl	GPC	1/21/21	1130	Pace	1/21/21	1136	
One sample set submitted for HGWA-43D and HGWA-44D but they will be reported for AP-1/2/3 SDGs	Pace	1/21/21	1326		1/21/21	1326	
One sample set submitted for EB-01 but it will be reported for AP-1/2/3/4 SDGs							

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Chad Easter

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 1/20/21

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.

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

March 12, 2021

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

RE: Project: HAMMOND AP-2 APP IV RADS
Pace Project No.: 92521125

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory between February 09, 2021 and February 17, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

- Pace Analytical Services - Greensburg

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

Sincerely,

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

Enclosures

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

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

CERTIFICATIONS

Project: HAMMOND AP-2 APP IV RADS
Pace Project No.: 92521125

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
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE SUMMARY

Project: HAMMOND AP-2 APP IV RADS
Pace Project No.: 92521125

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92521125001	**HGWA-1**	Water	02/08/21 16:13	02/09/21 12:33
92521125002	**HGWA-4**	Water	02/08/21 15:54	02/09/21 12:33
92521125003	**HGWA-42D**	Water	02/08/21 17:36	02/09/21 12:33
92521125004	**HGWA-2**	Water	02/09/21 10:38	02/10/21 09:56
92521125005	**HGWA-3**	Water	02/09/21 11:56	02/10/21 09:56
92521125006	**HGWA-5**	Water	02/09/21 10:46	02/10/21 09:56
92521125007	**HGWA-6**	Water	02/09/21 12:00	02/10/21 09:56
92521125008	**HGWA-43D**	Water	02/09/21 17:58	02/10/21 09:56
92521125009	**HGWA-44D**	Water	02/09/21 13:09	02/10/21 09:56
92521125010	**HGWC-16**	Water	02/10/21 15:02	02/11/21 09:19
92521125011	**HGWC-18**	Water	02/11/21 12:57	02/12/21 09:36
92521125012	**MW-21D**	Water	02/11/21 14:53	02/12/21 09:36
92521125013	**DUP-2**	Water	02/11/21 00:00	02/12/21 09:36
92521125014	**HGWC-14**	Water	02/11/21 15:12	02/12/21 09:36
92521125015	**HGWC-17**	Water	02/11/21 11:30	02/12/21 09:36
92521125016	**MW-37D**	Water	02/11/21 13:09	02/12/21 09:36
92521125017	**FB-2**	Water	02/11/21 08:45	02/12/21 09:36
92521125018	**HGWC-15**	Water	02/12/21 15:01	02/15/21 09:45
92521125019	**MW-23D**	Water	02/12/21 13:54	02/15/21 09:45
92521125020	**MW-33**	Water	02/12/21 10:32	02/15/21 09:45
92521125021	**EB-1**	Water	02/12/21 15:35	02/15/21 09:45
92521125022	**MW-22**	Water	02/15/21 15:43	02/17/21 11:54
92521125023	**MW-35**	Water	02/15/21 11:35	02/17/21 11:54

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

SAMPLE ANALYTE COUNT

Project: HAMMOND AP-2 APP IV RADS
Pace Project No.: 92521125

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92521125001	**HGWA-1**	EPA 9315	JJY	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92521125002	**HGWA-4**	EPA 9315	JJY	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92521125003	**HGWA-42D**	EPA 9315	JJY	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92521125004	**HGWA-2**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92521125005	**HGWA-3**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92521125006	**HGWA-5**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92521125007	**HGWA-6**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92521125008	**HGWA-43D**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92521125009	**HGWA-44D**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92521125010	**HGWC-16**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92521125011	**HGWC-18**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92521125012	**MW-21D**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92521125013	**DUP-2**	EPA 9315	LAL	1	PASI-PA

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

SAMPLE ANALYTE COUNT

Project: HAMMOND AP-2 APP IV RADS
Pace Project No.: 92521125

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92521125014	**HGWC-14**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92521125015	**HGWC-17**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92521125016	**MW-37D**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92521125017	**FB-2**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92521125018	**HGWC-15**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92521125019	**MW-23D**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92521125020	**MW-33**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92521125021	**EB-1**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92521125022	**MW-22**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92521125023	**MW-35**	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
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SUMMARY OF DETECTION

Project: HAMMOND AP-2 APP IV RADS
Pace Project No.: 92521125

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92521125001	**HGWA-1**					
EPA 9315	Radium-226	0.0455 ± 0.0937 (0.218) C:84% T:NA	pCi/L		03/02/21 07:38	
EPA 9320	Radium-228	0.177 ± 0.371 (0.820) C:77% T:86%	pCi/L		02/24/21 15:30	
Total Radium Calculation	Total Radium	0.223 ± 0.465 (1.04)	pCi/L		03/02/21 16:35	
92521125002	**HGWA-4**					
EPA 9315	Radium-226	0.167 ± 0.126 (0.227) C:94% T:NA	pCi/L		03/02/21 07:38	
EPA 9320	Radium-228	0.391 ± 0.353 (0.715) C:77% T:90%	pCi/L		02/24/21 15:30	
Total Radium Calculation	Total Radium	0.558 ± 0.479 (0.942)	pCi/L		03/02/21 16:35	
92521125003	**HGWA-42D**					
EPA 9315	Radium-226	0.0896 ± 0.0987 (0.196) C:83% T:NA	pCi/L		03/02/21 07:38	
EPA 9320	Radium-228	0.339 ± 0.323 (0.656) C:74% T:87%	pCi/L		02/24/21 15:30	
Total Radium Calculation	Total Radium	0.429 ± 0.422 (0.852)	pCi/L		03/02/21 16:35	
92521125004	**HGWA-2**					
EPA 9315	Radium-226	0.465 ± 0.189 (0.205) C:80% T:NA	pCi/L		03/08/21 08:33	
EPA 9320	Radium-228	0.256 ± 0.375 (0.807) C:77% T:89%	pCi/L		03/02/21 15:44	
Total Radium Calculation	Total Radium	0.721 ± 0.564 (1.01)	pCi/L		03/08/21 12:26	

REPORT OF LABORATORY ANALYSIS

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

SUMMARY OF DETECTION

Project: HAMMOND AP-2 APP IV RADS
Pace Project No.: 92521125

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92521125005	**HGWA-3**					
EPA 9315	Radium-226	0.161 ± 0.133 (0.248) C:80% T:NA	pCi/L		03/08/21 08:34	
EPA 9320	Radium-228	0.286 ± 0.395 (0.847) C:75% T:86%	pCi/L		03/02/21 15:44	
Total Radium Calculation	Total Radium	0.447 ± 0.528 (1.10)	pCi/L		03/08/21 12:26	
92521125006	**HGWA-5**					
EPA 9315	Radium-226	0.181 ± 0.139 (0.252) C:78% T:NA	pCi/L		03/08/21 08:33	
EPA 9320	Radium-228	0.189 ± 0.359 (0.788) C:81% T:88%	pCi/L		03/02/21 15:44	
Total Radium Calculation	Total Radium	0.370 ± 0.498 (1.04)	pCi/L		03/08/21 12:26	
92521125007	**HGWA-6**					
EPA 9315	Radium-226	0.0318 ± 0.0942 (0.231) C:78% T:NA	pCi/L		03/08/21 08:34	
EPA 9320	Radium-228	0.292 ± 0.351 (0.744) C:75% T:86%	pCi/L		03/02/21 11:23	
Total Radium Calculation	Total Radium	0.324 ± 0.445 (0.975)	pCi/L		03/08/21 12:26	
92521125008	**HGWA-43D**					
EPA 9315	Radium-226	0.138 ± 0.105 (0.176) C:87% T:NA	pCi/L		03/08/21 08:14	
EPA 9320	Radium-228	-0.0292 ± 0.272 (0.643) C:77% T:86%	pCi/L		03/02/21 11:24	
Total Radium Calculation	Total Radium	0.138 ± 0.377 (0.819)	pCi/L		03/08/21 12:26	

REPORT OF LABORATORY ANALYSIS

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

SUMMARY OF DETECTION

Project: HAMMOND AP-2 APP IV RADS
Pace Project No.: 92521125

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92521125009	**HGWA-44D**					
EPA 9315	Radium-226	0.171 ± 0.126 (0.217) C:84% T:NA	pCi/L		03/08/21 08:28	
EPA 9320	Radium-228	0.315 ± 0.398 (0.849) C:77% T:81%	pCi/L		03/02/21 11:24	
Total Radium Calculation	Total Radium	0.486 ± 0.524 (1.07)	pCi/L		03/08/21 12:26	
92521125010	**HGWC-16**					
EPA 9315	Radium-226	0.133 ± 0.110 (0.195) C:88% T:NA	pCi/L		03/08/21 08:07	
EPA 9320	Radium-228	0.640 ± 0.370 (0.674) C:75% T:87%	pCi/L		03/02/21 11:24	
Total Radium Calculation	Total Radium	0.773 ± 0.480 (0.869)	pCi/L		03/08/21 12:26	
92521125011	**HGWC-18**					
EPA 9315	Radium-226	0.729 ± 0.225 (0.179) C:82% T:NA	pCi/L		03/11/21 09:58	
EPA 9320	Radium-228	0.379 ± 0.381 (0.789) C:80% T:84%	pCi/L		03/03/21 16:04	
Total Radium Calculation	Total Radium	1.11 ± 0.606 (0.968)	pCi/L		03/11/21 12:05	
92521125012	**MW-21D**					
EPA 9315	Radium-226	0.0461 ± 0.0797 (0.179) C:90% T:NA	pCi/L		03/11/21 08:13	
EPA 9320	Radium-228	0.271 ± 0.360 (0.768) C:77% T:84%	pCi/L		03/03/21 16:04	
Total Radium Calculation	Total Radium	0.317 ± 0.440 (0.947)	pCi/L		03/11/21 12:05	

REPORT OF LABORATORY ANALYSIS

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

SUMMARY OF DETECTION

Project: HAMMOND AP-2 APP IV RADS
Pace Project No.: 92521125

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92521125013	**DUP-2**					
EPA 9315	Radium-226	0.0950 ± 0.100 (0.198) C:89% T:NA	pCi/L		03/11/21 08:14	
EPA 9320	Radium-228	0.678 ± 0.580 (1.18) C:79% T:83%	pCi/L		03/03/21 19:09	
Total Radium Calculation	Total Radium	0.773 ± 0.680 (1.38)	pCi/L		03/11/21 12:05	
92521125014	**HGWC-14**					
EPA 9315	Radium-226	0.211 ± 0.148 (0.268) C:92% T:NA	pCi/L		03/11/21 08:14	
EPA 9320	Radium-228	0.519 ± 0.631 (1.34) C:81% T:73%	pCi/L		03/03/21 19:09	
Total Radium Calculation	Total Radium	0.730 ± 0.779 (1.61)	pCi/L		03/11/21 12:05	
92521125015	**HGWC-17**					
EPA 9315	Radium-226	0.249 ± 0.147 (0.235) C:86% T:NA	pCi/L		03/11/21 08:14	
EPA 9320	Radium-228	0.582 ± 0.643 (1.35) C:79% T:70%	pCi/L		03/03/21 19:09	
Total Radium Calculation	Total Radium	0.831 ± 0.790 (1.59)	pCi/L		03/11/21 12:05	
92521125016	**MW-37D**					
EPA 9315	Radium-226	0.120 ± 0.0993 (0.172) C:88% T:NA	pCi/L		03/11/21 08:14	
EPA 9320	Radium-228	-0.00471 ± 0.555 (1.28) C:81% T:76%	pCi/L		03/03/21 19:09	
Total Radium Calculation	Total Radium	0.120 ± 0.654 (1.45)	pCi/L		03/11/21 12:05	

REPORT OF LABORATORY ANALYSIS

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

SUMMARY OF DETECTION

Project: HAMMOND AP-2 APP IV RADS
Pace Project No.: 92521125

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92521125017	**FB-2**					
EPA 9315	Radium-226	0.0191 ± 0.0760 (0.192) C:86% T:NA	pCi/L		03/11/21 08:14	
EPA 9320	Radium-228	0.943 ± 0.566 (1.06) C:82% T:87%	pCi/L		03/03/21 19:09	
Total Radium Calculation	Total Radium	0.962 ± 0.642 (1.25)	pCi/L		03/11/21 12:05	
92521125018	**HGWC-15**					
EPA 9315	Radium-226	0.0642 ± 0.0865 (0.182) C:83% T:NA	pCi/L		03/11/21 08:14	
EPA 9320	Radium-228	1.59 ± 0.818 (1.47) C:80% T:67%	pCi/L		03/03/21 19:10	
Total Radium Calculation	Total Radium	1.65 ± 0.905 (1.65)	pCi/L		03/11/21 12:05	
92521125019	**MW-23D**					
EPA 9315	Radium-226	0.0716 ± 0.0829 (0.165) C:89% T:NA	pCi/L		03/11/21 08:14	
EPA 9320	Radium-228	1.14 ± 0.727 (1.38) C:77% T:67%	pCi/L		03/03/21 19:10	
Total Radium Calculation	Total Radium	1.21 ± 0.810 (1.55)	pCi/L		03/11/21 12:05	
92521125020	**MW-33**					
EPA 9315	Radium-226	0.376 ± 0.154 (0.161) C:88% T:NA	pCi/L		03/11/21 08:15	
EPA 9320	Radium-228	1.88 ± 0.788 (1.27) C:76% T:76%	pCi/L		03/03/21 19:10	
Total Radium Calculation	Total Radium	2.26 ± 0.942 (1.43)	pCi/L		03/11/21 12:05	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: HAMMOND AP-2 APP IV RADS
Pace Project No.: 92521125

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92521125021	**EB-1**					
EPA 9315	Radium-226	0.0746 ± 0.100 (0.213) C:80% T:NA	pCi/L		03/11/21 08:15	
EPA 9320	Radium-228	2.12 ± 0.734 (1.06) C:81% T:90%	pCi/L		03/03/21 19:10	
Total Radium Calculation	Total Radium	2.19 ± 0.834 (1.27)	pCi/L		03/11/21 12:05	
92521125022	**MW-22**					
EPA 9315	Radium-226	0.0625 ± 0.0842 (0.178) C:91% T:NA	pCi/L		03/11/21 08:21	
EPA 9320	Radium-228	0.152 ± 0.350 (0.779) C:78% T:82%	pCi/L		03/04/21 15:09	
Total Radium Calculation	Total Radium	0.215 ± 0.434 (0.957)	pCi/L		03/11/21 10:51	
92521125023	**MW-35**					
EPA 9315	Radium-226	0.456 ± 0.182 (0.221) C:88% T:NA	pCi/L		03/11/21 08:21	
EPA 9320	Radium-228	1.06 ± 0.435 (0.684) C:78% T:92%	pCi/L		03/04/21 15:09	
Total Radium Calculation	Total Radium	1.52 ± 0.617 (0.905)	pCi/L		03/11/21 10:51	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 APP IV RADS
Pace Project No.: 92521125

Sample: HGWA-1 **Lab ID: 92521125001** Collected: 02/08/21 16:13 Received: 02/09/21 12:33 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.0455 ± 0.0937 (0.218) C:84% T:NA**	pCi/L	03/02/21 07:38	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.177 ± 0.371 (0.820) C:77% T:86%**	pCi/L	02/24/21 15:30	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.223 ± 0.465 (1.04)**	pCi/L	03/02/21 16:35	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 APP IV RADS
Pace Project No.: 92521125

Sample: HGWA-4 **Lab ID: 92521125002** Collected: 02/08/21 15:54 Received: 02/09/21 12:33 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.167 ± 0.126 (0.227) C:94% T:NA**	pCi/L	03/02/21 07:38	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.391 ± 0.353 (0.715) C:77% T:90%**	pCi/L	02/24/21 15:30	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.558 ± 0.479 (0.942)**	pCi/L	03/02/21 16:35	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 APP IV RADS
Pace Project No.: 92521125

Sample: HGWA-42D **Lab ID: 92521125003** Collected: 02/08/21 17:36 Received: 02/09/21 12:33 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.0896 ± 0.0987 (0.196) C:83% T:NA**	pCi/L	03/02/21 07:38	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.339 ± 0.323 (0.656) C:74% T:87%**	pCi/L	02/24/21 15:30	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.429 ± 0.422 (0.852)**	pCi/L	03/02/21 16:35	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 APP IV RADS
Pace Project No.: 92521125

Sample: HGWA-2 **Lab ID: 92521125004** Collected: 02/09/21 10:38 Received: 02/10/21 09:56 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.465 ± 0.189 (0.205) C:80% T:NA**	pCi/L	03/08/21 08:33	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.256 ± 0.375 (0.807) C:77% T:89%**	pCi/L	03/02/21 15:44	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.721 ± 0.564 (1.01)**	pCi/L	03/08/21 12:26	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 APP IV RADS
Pace Project No.: 92521125

Sample: HGWA-3 **Lab ID: 92521125005** Collected: 02/09/21 11:56 Received: 02/10/21 09:56 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.161 ± 0.133 (0.248) C:80% T:NA**	pCi/L	03/08/21 08:34	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.286 ± 0.395 (0.847) C:75% T:86%**	pCi/L	03/02/21 15:44	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.447 ± 0.528 (1.10)**	pCi/L	03/08/21 12:26	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 APP IV RADS
Pace Project No.: 92521125

Sample: HGWA-5 **Lab ID: 92521125006** Collected: 02/09/21 10:46 Received: 02/10/21 09:56 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.181 ± 0.139 (0.252) C:78% T:NA**	pCi/L	03/08/21 08:33	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.189 ± 0.359 (0.788) C:81% T:88%**	pCi/L	03/02/21 15:44	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.370 ± 0.498 (1.04)**	pCi/L	03/08/21 12:26	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 APP IV RADS
Pace Project No.: 92521125

Sample: HGWA-6 **Lab ID: 92521125007** Collected: 02/09/21 12:00 Received: 02/10/21 09:56 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.0318 ± 0.0942 (0.231) C:78% T:NA**	pCi/L	03/08/21 08:34	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.292 ± 0.351 (0.744) C:75% T:86%**	pCi/L	03/02/21 11:23	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.324 ± 0.445 (0.975)**	pCi/L	03/08/21 12:26	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 APP IV RADS
Pace Project No.: 92521125

Sample: HGWA-43D **Lab ID: 92521125008** Collected: 02/09/21 17:58 Received: 02/10/21 09:56 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.138 ± 0.105 (0.176) C:87% T:NA**	pCi/L	03/08/21 08:14	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**-0.0292 ± 0.272 (0.643) C:77% T:86%**	pCi/L	03/02/21 11:24	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.138 ± 0.377 (0.819)**	pCi/L	03/08/21 12:26	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 APP IV RADS
Pace Project No.: 92521125

Sample: HGWA-44D **Lab ID: 92521125009** Collected: 02/09/21 13:09 Received: 02/10/21 09:56 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.171 ± 0.126 (0.217) C:84% T:NA**	pCi/L	03/08/21 08:28	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.315 ± 0.398 (0.849) C:77% T:81%**	pCi/L	03/02/21 11:24	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.486 ± 0.524 (1.07)**	pCi/L	03/08/21 12:26	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 APP IV RADS
Pace Project No.: 92521125

Sample: HGWC-16 **Lab ID: 92521125010** Collected: 02/10/21 15:02 Received: 02/11/21 09:19 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	**0.133 ± 0.110 (0.195) C:88% T:NA**	pCi/L	03/08/21 08:07	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.640 ± 0.370 (0.674) C:75% T:87%**	pCi/L	03/02/21 11:24	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.773 ± 0.480 (0.869)**	pCi/L	03/08/21 12:26	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 APP IV RADS
Pace Project No.: 92521125

Sample: HGWC-18 **Lab ID: 92521125011** Collected: 02/11/21 12:57 Received: 02/12/21 09:36 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.729 ± 0.225 (0.179) C:82% T:NA**	pCi/L	03/11/21 09:58	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.379 ± 0.381 (0.789) C:80% T:84%**	pCi/L	03/03/21 16:04	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.11 ± 0.606 (0.968)**	pCi/L	03/11/21 12:05	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 APP IV RADS
Pace Project No.: 92521125

Sample: MW-21D **Lab ID: 92521125012** Collected: 02/11/21 14:53 Received: 02/12/21 09:36 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.0461 ± 0.0797 (0.179) C:90% T:NA**	pCi/L	03/11/21 08:13	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.271 ± 0.360 (0.768) C:77% T:84%**	pCi/L	03/03/21 16:04	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.317 ± 0.440 (0.947)**	pCi/L	03/11/21 12:05	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 APP IV RADS
Pace Project No.: 92521125

Sample: DUP-2 **Lab ID: 92521125013** Collected: 02/11/21 00:00 Received: 02/12/21 09:36 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.0950 ± 0.100 (0.198) C:89% T:NA**	pCi/L	03/11/21 08:14	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.678 ± 0.580 (1.18) C:79% T:83%**	pCi/L	03/03/21 19:09	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.773 ± 0.680 (1.38)**	pCi/L	03/11/21 12:05	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 APP IV RADS
Pace Project No.: 92521125

Sample: HGWC-14 **Lab ID: 92521125014** Collected: 02/11/21 15:12 Received: 02/12/21 09:36 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.211 ± 0.148 (0.268) C:92% T:NA**	pCi/L	03/11/21 08:14	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.519 ± 0.631 (1.34) C:81% T:73%**	pCi/L	03/03/21 19:09	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.730 ± 0.779 (1.61)**	pCi/L	03/11/21 12:05	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 APP IV RADS
Pace Project No.: 92521125

Sample: HGWC-17 **Lab ID: 92521125015** Collected: 02/11/21 11:30 Received: 02/12/21 09:36 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.249 ± 0.147 (0.235) C:86% T:NA**	pCi/L	03/11/21 08:14	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.582 ± 0.643 (1.35) C:79% T:70%**	pCi/L	03/03/21 19:09	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.831 ± 0.790 (1.59)**	pCi/L	03/11/21 12:05	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 APP IV RADS
Pace Project No.: 92521125

Sample: MW-37D **Lab ID: 92521125016** Collected: 02/11/21 13:09 Received: 02/12/21 09:36 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.120 ± 0.0993 (0.172) C:88% T:NA**	pCi/L	03/11/21 08:14	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**-0.00471 ± 0.555 (1.28) C:81% T:76%**	pCi/L	03/03/21 19:09	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.120 ± 0.654 (1.45)**	pCi/L	03/11/21 12:05	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 APP IV RADS
Pace Project No.: 92521125

Sample: FB-2 **Lab ID: 92521125017** Collected: 02/11/21 08:45 Received: 02/12/21 09:36 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.0191 ± 0.0760 (0.192) C:86% T:NA**	pCi/L	03/11/21 08:14	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.943 ± 0.566 (1.06) C:82% T:87%**	pCi/L	03/03/21 19:09	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.962 ± 0.642 (1.25)**	pCi/L	03/11/21 12:05	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 APP IV RADS
Pace Project No.: 92521125

Sample: HGWC-15 **Lab ID: 92521125018** Collected: 02/12/21 15:01 Received: 02/15/21 09:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.0642 ± 0.0865 (0.182) C:83% T:NA**	pCi/L	03/11/21 08:14	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**1.59 ± 0.818 (1.47) C:80% T:67%**	pCi/L	03/03/21 19:10	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.65 ± 0.905 (1.65)**	pCi/L	03/11/21 12:05	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 APP IV RADS
Pace Project No.: 92521125

Sample: MW-23D **Lab ID: 92521125019** Collected: 02/12/21 13:54 Received: 02/15/21 09:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.0716 ± 0.0829 (0.165) C:89% T:NA**	pCi/L	03/11/21 08:14	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**1.14 ± 0.727 (1.38) C:77% T:67%**	pCi/L	03/03/21 19:10	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.21 ± 0.810 (1.55)**	pCi/L	03/11/21 12:05	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 APP IV RADS
Pace Project No.: 92521125

Sample: MW-33 **Lab ID: 92521125020** Collected: 02/12/21 10:32 Received: 02/15/21 09:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.376 ± 0.154 (0.161) C:88% T:NA**	pCi/L	03/11/21 08:15	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**1.88 ± 0.788 (1.27) C:76% T:76%**	pCi/L	03/03/21 19:10	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**2.26 ± 0.942 (1.43)**	pCi/L	03/11/21 12:05	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 APP IV RADS
Pace Project No.: 92521125

Sample: EB-1 **Lab ID: 92521125021** Collected: 02/12/21 15:35 Received: 02/15/21 09:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.0746 ± 0.100 (0.213) C:80% T:NA**	pCi/L	03/11/21 08:15	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**2.12 ± 0.734 (1.06) C:81% T:90%**	pCi/L	03/03/21 19:10	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**2.19 ± 0.834 (1.27)**	pCi/L	03/11/21 12:05	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 APP IV RADS
Pace Project No.: 92521125

Sample: MW-22 **Lab ID: 92521125022** Collected: 02/15/21 15:43 Received: 02/17/21 11:54 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.0625 ± 0.0842 (0.178) C:91% T:NA**	pCi/L	03/11/21 08:21	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.152 ± 0.350 (0.779) C:78% T:82%**	pCi/L	03/04/21 15:09	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.215 ± 0.434 (0.957)**	pCi/L	03/11/21 10:51	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 APP IV RADS
Pace Project No.: 92521125

Sample: MW-35 **Lab ID: 92521125023** Collected: 02/15/21 11:35 Received: 02/17/21 11:54 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.456 ± 0.182 (0.221) C:88% T:NA**	pCi/L	03/11/21 08:21	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**1.06 ± 0.435 (0.684) C:78% T:92%**	pCi/L	03/04/21 15:09	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.52 ± 0.617 (0.905)**	pCi/L	03/11/21 10:51	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-2 APP IV RADS
Pace Project No.: 92521125

QC Batch: 435459
QC Batch Method: EPA 9315
Analysis Method: EPA 9315
Analysis Description: 9315 Total Radium
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 92521125001, 92521125002, 92521125003

METHOD BLANK: 2102227 Matrix: Water
Associated Lab Samples: 92521125001, 92521125002, 92521125003

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.276 ± 0.140 (0.180) C:89% T:NA	pCi/L	03/02/21 07:53	

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-2 APP IV RADS
Pace Project No.: 92521125

QC Batch: 435786
QC Batch Method: EPA 9315
Analysis Method: EPA 9315
Analysis Description: 9315 Total Radium
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 92521125004, 92521125005, 92521125006, 92521125007, 92521125008, 92521125009, 92521125010

METHOD BLANK: 2103744
Matrix: Water
Associated Lab Samples: 92521125004, 92521125005, 92521125006, 92521125007, 92521125008, 92521125009, 92521125010

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	-0.0425 ± 0.0687 (0.225) C:93% T:NA	pCi/L	03/08/21 08:35	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-2 APP IV RADS
Pace Project No.: 92521125

QC Batch: 435116
QC Batch Method: EPA 9320
Analysis Method: EPA 9320
Analysis Description: 9320 Radium 228
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 92521125001, 92521125002, 92521125003

METHOD BLANK: 2100680 Matrix: Water
Associated Lab Samples: 92521125001, 92521125002, 92521125003

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.356 ± 0.369 (0.763) C:72% T:87%	pCi/L	02/24/21 15:29	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-2 APP IV RADS
Pace Project No.: 92521125

QC Batch: 435836
QC Batch Method: EPA 9320
Analysis Method: EPA 9320
Analysis Description: 9320 Radium 228
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 92521125011, 92521125012, 92521125013, 92521125014, 92521125015, 92521125016, 92521125017, 92521125018, 92521125019, 92521125020, 92521125021

METHOD BLANK: 2103905
Matrix: Water
Associated Lab Samples: 92521125011, 92521125012, 92521125013, 92521125014, 92521125015, 92521125016, 92521125017, 92521125018, 92521125019, 92521125020, 92521125021

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.253 ± 0.323 (0.687) C:83% T:83%	pCi/L	03/03/21 16:05	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-2 APP IV RADS
Pace Project No.: 92521125

QC Batch: 435838
QC Batch Method: EPA 9320
Analysis Method: EPA 9320
Analysis Description: 9320 Radium 228
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 92521125022, 92521125023

METHOD BLANK: 2103907 Matrix: Water
Associated Lab Samples: 92521125022, 92521125023

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.298 ± 0.350 (0.738) C:76% T:86%	pCi/L	03/04/21 11:53	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-2 APP IV RADS
Pace Project No.: 92521125

QC Batch: 435837
QC Batch Method: EPA 9315
Analysis Method: EPA 9315
Analysis Description: 9315 Total Radium
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 92521125022, 92521125023

METHOD BLANK: 2103906 Matrix: Water
Associated Lab Samples: 92521125022, 92521125023

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.144 ± 0.106 (0.177) C:91% T:NA	pCi/L	03/11/21 08:18	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-2 APP IV RADS
Pace Project No.: 92521125

QC Batch: 435835
QC Batch Method: EPA 9315
Analysis Method: EPA 9315
Analysis Description: 9315 Total Radium
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 92521125011, 92521125012, 92521125013, 92521125014, 92521125015, 92521125016, 92521125017, 92521125018, 92521125019, 92521125020, 92521125021

METHOD BLANK: 2103903 Matrix: Water
Associated Lab Samples: 92521125011, 92521125012, 92521125013, 92521125014, 92521125015, 92521125016, 92521125017, 92521125018, 92521125019, 92521125020, 92521125021

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0385 ± 0.0817 (0.191) C:95% T:NA	pCi/L	03/11/21 08:12	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-2 APP IV RADS
Pace Project No.: 92521125

QC Batch: 435787
QC Batch Method: EPA 9320
Analysis Method: EPA 9320
Analysis Description: 9320 Radium 228
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 92521125004, 92521125005, 92521125006, 92521125007, 92521125008, 92521125009, 92521125010

METHOD BLANK: 2103745 Matrix: Water
Associated Lab Samples: 92521125004, 92521125005, 92521125006, 92521125007, 92521125008, 92521125009, 92521125010

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.345 ± 0.339 (0.700) C:84% T:79%	pCi/L	03/02/21 12:33	

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: HAMMOND AP-2 APP IV RADS
Pace Project No.: 92521125

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

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

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

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval). Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: HAMMOND AP-2 APP IV RADS
Pace Project No.: 92521125

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92521125001	**HGWA-1**	EPA 9315	435459		
92521125002	**HGWA-4**	EPA 9315	435459		
92521125003	**HGWA-42D**	EPA 9315	435459		
92521125004	**HGWA-2**	EPA 9315	435786		
92521125005	**HGWA-3**	EPA 9315	435786		
92521125006	**HGWA-5**	EPA 9315	435786		
92521125007	**HGWA-6**	EPA 9315	435786		
92521125008	**HGWA-43D**	EPA 9315	435786		
92521125009	**HGWA-44D**	EPA 9315	435786		
92521125010	**HGWC-16**	EPA 9315	435786		
92521125011	**HGWC-18**	EPA 9315	435835		
92521125012	**MW-21D**	EPA 9315	435835		
92521125013	**DUP-2**	EPA 9315	435835		
92521125014	**HGWC-14**	EPA 9315	435835		
92521125015	**HGWC-17**	EPA 9315	435835		
92521125016	**MW-37D**	EPA 9315	435835		
92521125017	**FB-2**	EPA 9315	435835		
92521125018	**HGWC-15**	EPA 9315	435835		
92521125019	**MW-23D**	EPA 9315	435835		
92521125020	**MW-33**	EPA 9315	435835		
92521125021	**EB-1**	EPA 9315	435835		
92521125022	**MW-22**	EPA 9315	435837		
92521125023	**MW-35**	EPA 9315	435837		
92521125001	**HGWA-1**	EPA 9320	435116		
92521125002	**HGWA-4**	EPA 9320	435116		
92521125003	**HGWA-42D**	EPA 9320	435116		
92521125004	**HGWA-2**	EPA 9320	435787		
92521125005	**HGWA-3**	EPA 9320	435787		
92521125006	**HGWA-5**	EPA 9320	435787		
92521125007	**HGWA-6**	EPA 9320	435787		
92521125008	**HGWA-43D**	EPA 9320	435787		
92521125009	**HGWA-44D**	EPA 9320	435787		
92521125010	**HGWC-16**	EPA 9320	435787		
92521125011	**HGWC-18**	EPA 9320	435836		
92521125012	**MW-21D**	EPA 9320	435836		
92521125013	**DUP-2**	EPA 9320	435836		
92521125014	**HGWC-14**	EPA 9320	435836		
92521125015	**HGWC-17**	EPA 9320	435836		
92521125016	**MW-37D**	EPA 9320	435836		
92521125017	**FB-2**	EPA 9320	435836		
92521125018	**HGWC-15**	EPA 9320	435836		
92521125019	**MW-23D**	EPA 9320	435836		
92521125020	**MW-33**	EPA 9320	435836		
92521125021	**EB-1**	EPA 9320	435836		
92521125022	**MW-22**	EPA 9320	435838		

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: HAMMOND AP-2 APP IV RADS
Pace Project No.: 92521125

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92521125023	**MW-35**	EPA 9320	435838		
92521125001	**HGWA-1**	Total Radium Calculation	436928		
92521125002	**HGWA-4**	Total Radium Calculation	436928		
92521125003	**HGWA-42D**	Total Radium Calculation	436928		
92521125004	**HGWA-2**	Total Radium Calculation	437634		
92521125005	**HGWA-3**	Total Radium Calculation	437634		
92521125006	**HGWA-5**	Total Radium Calculation	437634		
92521125007	**HGWA-6**	Total Radium Calculation	437634		
92521125008	**HGWA-43D**	Total Radium Calculation	437634		
92521125009	**HGWA-44D**	Total Radium Calculation	437634		
92521125010	**HGWC-16**	Total Radium Calculation	437634		
92521125011	**HGWC-18**	Total Radium Calculation	438252		
92521125012	**MW-21D**	Total Radium Calculation	438252		
92521125013	**DUP-2**	Total Radium Calculation	438252		
92521125014	**HGWC-14**	Total Radium Calculation	438252		
92521125015	**HGWC-17**	Total Radium Calculation	438252		
92521125016	**MW-37D**	Total Radium Calculation	438252		
92521125017	**FB-2**	Total Radium Calculation	438252		
92521125018	**HGWC-15**	Total Radium Calculation	438252		
92521125019	**MW-23D**	Total Radium Calculation	438252		
92521125020	**MW-33**	Total Radium Calculation	438252		
92521125021	**EB-1**	Total Radium Calculation	438252		
92521125022	**MW-22**	Total Radium Calculation	438242		
92521125023	**MW-35**	Total Radium Calculation	438242		

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

Laboratory receiving samples:

Asheville ☐ Eden ☐ Greenwood ☐ Huntersville ☐ Raleigh ☐ Mechanicsville ☐ Atlanta ☑ Kernersville ☐

Sample Condition Upon Receipt

Client Name: GA Power

Project #: WO# : 92521125

92521125

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

Custody Seal Present? ☐ Yes ☒ No **Seals Intact?** ☐ Yes ☐ No

Date/Initials Person Examining Contents: MP 2/9/21

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

Biological Tissue Frozen? ☐ Yes ☒ No ☐ N/A

Thermometer: ☐ IR Gun ID: 233

Type of Ice: ☒ Wet ☐ Blue ☐ None

Cooler Temp: 3.6 **Correction Factor: Add/Subtract (°C)** +0.4

Cooler Temp Corrected (°C): 4.0

Temp should be above freezing to 6°C

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

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

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

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

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

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? ☐ Yes ☐ No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: Date/Time:

Project Manager SCURF Review: Date:

Project Manager SRF Review: Date:

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: 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 AP-2 App. IV Scan
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

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): N	N	N	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D. 92521125
1	HGWA-1	WT	G	1/9/21	1615	--	--	17	4	1		3							Fluoride X	Full App.IV Metals 6020/7470* X	RAD 228/226 X	N	pH = 7.11
2	HGWA-2	WT	G			--	--		4	1		3							X	X	X	N	pH =
3	HGWA-3	WT	G			--	--		4	1		3							X	X	X	N	pH =
4	HGWA-4	WT	G			--	--		4	1		3							X	X	X	N	pH =
5	HGWA-5	WT	G			--	--		4	1		3							X	X	X	N	pH =
6	HGWA-6	WT	G			--	--		4	1		3							X	X	X	N	pH =
7	HGWA-42D	WT	G			--	--		4	1		3							X	X	X	N	pH =
8	HGWA-43D	WT	G			--	--	2/9/21	4	1		3							X	X	X	N	pH =
9	HGWA-44D	WT	G			--	--		4	1		3							X	X	X	N	pH =
10	HGWC-14	WT	G			--	--		4	1		3							X	X	X	N	pH =
11	HGWC-15	WT	G			--	--		4	1		3							X	X	X	N	pH =
12	HGWC-16	WT	G			--	--		4	1		3							X	X	X	N	pH =

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.		2/9/21	1234	Pace	2/9/21	1233				
*Full App. IV Metals=Sb, As, Ba, Be, Cd, Cr, Co, Pb, Li, Hg, Mo, Se, Tl	Pace	2/9/21	1545	Pace	2/9/21	1545	3.6	Y	N	Y
One sample set submitted for HGWA-1/2/3/43D/44D and EB-1 but they will be reported for AP-1/2 SDGs										

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Chad Ross

SIGNATURE of SAMPLER: DATE Signed (MM/DD/YY): 2/9/2021

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

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CHAIN-OF-CUSTODY / Analytical Request Document

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Page: 2 of 5

Section A Required Client Information:

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

Section B Required Project Information:

Report To:	SCS Contacts
Copy To:	Geosyntec Contacts
Purchase Order No.:	
Project Name:	Plant Hammond AP-2 App. IV Scan
Project Number:	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

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	Full App.IV Metals 6020/7470*	RAD 226/228	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D. 925425
1	~~HGWA-1~~	WT	G			–	–		4	1		3						N	X	X	X	N	pH =
2	~~HGWA-2~~	WT	G			–	–		4	1		3						N	X	X	X	N	pH =
3	~~HGWA-3~~	WT	G			–	–		4	1		3						N	X	X	X	N	pH =
4	HGWA-4	WT	G	2-8-21	1554	–	–		4	1		3						N	X	X	X	N	pH = 4.94
5	~~HGWA-5~~	WT	G			–	–		4	1		3						N	X	X	X	N	pH =
6	~~HGWA-6~~	WT	G			–	–		4	1		3						N	X	X	X	N	pH =
7	~~HGWA-43D~~	WT	G			–	–		4	1		3						N	X	X	X	N	pH =
8	~~HGWA-43E~~	WT	G			–	–		4	1		3						N	X	X	X	N	pH =
9	~~HGWA-44D~~	WT	G			–	–		4	1		3						N	X	X	X	N	pH =
10	~~BGWC-14~~	WT	G			–	–		4	1		3						N	X	X	X	N	pH =
11	~~HGWC-15~~	WT	G			–	–		4	1		3						N	X	X	X	N	pH =
12	~~HGWC-16~~	WT	G			–	–		4	1		3						N	X	X	X	N	pH =

ADDITIONAL COMMENTS

Please note dry wells, strike thorugh any wells not sampled, and note when the last sample for the event has been taken
*Full App. IV Metals=Sb, As, Ba, Be, Cd, Cr, Co, Pb, Li, Hg, Mo, Se, Tl
One sample set submitted for HGWA-1/2/3/43D/44D and EB-1 but they will be reported for AP-1/2 SDGs

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)
[signature] /Pace	2/9/21	1231	[signature] /Pace	2/9/21	1233				
[signature] /Pace	2/9/21	1545	[signature] /Pace	2/10/21	1545	3.6	Y	N	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Aaron Reeder

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 02/08/2021

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

Pace Analytical
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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:	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-2 App. IV Scan	Pace Project Manager: Kevin Herring
Requested Due Date/TAT: 10 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: 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	Analysis Test: Fluoride	Full App.IV Metals 6020/7470*	RAD 228/228	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D. 9252125
1	HGWA-1	WT	G						4	1		3							X	X	X	N	pH =
2	HGWA-2	WT	G			–	–		4	1		3							X	X	X	N	pH =
3	HGWA-3	WT	G			–	–		4	1		3							X	X	X	N	pH =
4	HGWA-4	WT	G			–	–		4	1		3							X	X	X	N	pH =
5	HGWA-5	WT	G			–	–		4	1		3							X	X	X	N	pH =
6	HGWA-6	WT	G			–	–		4	1		3							X	X	X	N	pH =
7	HGWA-42D	WT	G	2/8/21	1736	–	–	15	4	1		3							X	X	X	N	pH = 7.64
8	HGWA-43D	WT	G						4	1		3							X	X	X	N	pH =
9	HGWA-44D	WT	G			–	–		4	1		3							X	X	X	N	pH =
10	HGWC-14	WT	G			–	–		4	1		3							X	X	X	N	pH =
11	HGWC-15	WT	G			–	–		4	1		3							X	X	X	N	pH =
12	HGWC-16	WT	G			–	–		4	1		3							X	X	X	N	pH =

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.	Thomas Hester / Tetra	2/9/21	1231	/ Pace	2/9/21	1233				
*Full App. IV Metals=Sb, As, Ba, Be, Cd, Cr, Co, Pb, Li, Hg, Mo, Se, Tl	/ Pace	2/9/21	1545	/ Pace	2/9/21	1545	3.6	Y	N	Y
One sample set submitted for HGWA-1/2/3/43D/44D and EB-1 but they will be reported for AP-1/2 SDGs										

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Thomas Hester

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 2/9/21

*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: 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 AP-2 App. IV Scan
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

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	Full App IV Metals 6020/7470	RAD 226/228	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
																		Requested Analysis Filtered (Y/N)	N	N	N		9252125
1	~~HGWA-1~~	WT	G																			N	pH =
2	HGWA-2	WT	G	2/9/21	1036	–	–	16	4	1		3							X	X	X	N	pH = 5.42
3	HGWA-3	WT	G	2/9/21	1156	–	–	19	4	1		3							X	X	X	N	pH = 7.23
4	~~HGWA-4~~	WT	G			–	–		4	1		3							X	X	X	N	pH =
5	~~HGWA-5~~	WT	G			–	–		4	1		3							X	X	X	N	pH =
6	~~HGWA-6~~	WT	G			–	–		4	1		3							X	X	X	N	pH =
7	~~HGWA-42D~~	WT	G			–	–		4	1		3							X	X	X	N	pH =
8	~~HGWA-43D~~	WT	G			–	–		4	1		3							X	X	X	N	pH =
9	~~HGWA-44D~~	WT	G			–	–		4	1		3							X	X	X	N	pH =
10	~~HGWC-14~~	WT	G			–	–		4	1		3							X	X	X	N	pH =
11	~~HGWC-15~~	WT	G			–	–		4	1		3							X	X	X	N	pH =
12	~~HGWC-16~~	WT	G			–	–		4	1		3							X	X	X	N	pH =

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.	[signature] / Geos	2/19/21	1754	[signature]	2/19/21	1754	
*Full App. IV Metals=Sb, As, Ba, Be, Cd, Cr, Co, Pb, Li, Hg, Mo, Se, Tl	[signature]	2/10/21	0937	[signature] / Pace	2/10/21	0936	
One sample set submitted for HGWA-1/2/3/43D/44D and EB-1 but they will be reported for AP-1/2 SDGs	[signature] / Pace	2/10/21	1220	[signature]	2/10/21	1220	

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: [signature]

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 2/9/21

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

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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 AP-2 App. IV Scan
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

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	Full App.IV Metals 6020/7470	RAD 228/228	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
																		Requested Analysis Filtered (Y/N)	N	N	N		42621126
1	HGWA-1	WT	G			--	--		4	1		3							X	X	X	N	pH =
2	HGWA-2	WT	G			--	--		4	1		3							X	X	X	N	pH =
3	HGWA-3	WT	G			--	--		4	1		3							X	X	X	N	pH =
4	HGWA-4	WT	G			--	--		4	1		3							X	X	X	N	pH =
5	HGWA-5	WT	G	2-9-21	1046	--	--		4	1		3							X	X	X	N	pH =
6	HGWA-6	WT	G	2-9-21	1200	--	--		4	1		3							X	X	X	N	pH = 6.35
7	HGWA-42D	WT	G			--	--		4	1		3							X	X	X	N	pH = 7.40
8	HGWA-43D	WT	G			--	--		4	1		3							X	X	X	N	pH =
9	HGWA-44D	WT	G			--	--		4	1		3							X	X	X	N	pH =
10	HGWC-14	WT	G			--	--		4	1		3							X	X	X	N	pH =
11	HGWC-15	WT	G			--	--		4	1		3							X	X	X	N	pH =
12	HGWC-16	WT	G			--	--		4	1		3							X	X	X	N	pH =

ADDITIONAL COMMENTS

Please note dry wells, strike thorugh any wells not sampled, and note when the last sample for the event has been taken.
*Full App. IV Metals=Sb, As, Ba, Be, Cd, Cr, Co, Pb, Li, Hg, Mo, Se, Tl
One sample set submitted for HGWA-1/2/3/43D/44D and EB-1 but they will be reported for AP-1/2 SDGs

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
/Sampler	2-10-21	0833	/geo	2/10/21	0833
	2/10/21	0933	/Pace	2/10/21	0936
/Pace	2/11/21	1220		2/11/21	1220

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: Aaron Reeder
SIGNATURE of SAMPLER: DATE Signed (MM/DD/YY): 02/09/2021

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

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CHAIN-OF-CUSTODY / Analytical Request Document

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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 AP-2 App. IV Scan
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

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	Full App.IV Metals 6020/7470*	RAD 228/226	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
																		Y/N	N	N	N		9252127
1	HGWA-1	WT	G			–	–		4	1		3							X	X	X	N	pH=
2	HGWA-2	WT	G			–	–		4	1		3							X	X	X	N	pH=
3	HGWA-3	WT	G			–	–		4	1		3							X	X	X	N	pH=
4	HGWA-4	WT	G			–	–		4	1		3							X	X	X	N	pH=
5	HGWA-5	WT	G			–	–		4	1		3							X	X	X	N	pH=
6	HGWA-6	WT	G			–	–		4	1		3							X	X	X	N	pH=
7	HGWA-42D	WT	G			–	–		4	1		3							X	X	X	N	pH=
8	HGWA-43D	WT	G	2/9/21	1758	–	–	16	4	1		3							X	X	X	N	pH=
9	HGWA-44D	WT	G	2/9/21	1309	–	–	17	4	1		3							X	X	X	N	pH = 7.44
10	HGWC-14	WT	G			–	–		4	1		3							X	X	X	N	pH = 7.84
11	HGWC-15	WT	G			–	–		4	1		3							X	X	X	N	pH =
12	HGWC-16	WT	G			–	2/9/21		4	1		3							X	X	X	N	pH =

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.		2/10/21	0953	/Pace	2/10/21	0936	
*Full App. IV Metals=Sb, As, Ba, Be, Cd, Cr, Co, Pb, Li, Hg, Mo, Se, Tl	/Pace	2/10/21	1220	/Pace	2/10/21	1220	
One sample set submitted for HGWA-1/2/3/430/44D and EB-1 but they will be reported for AP-1/2 SDGs							

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Chad Russo

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 2/9/2021

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

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

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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 AP-2 App. IV Scan
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

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 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	Full App.IV Metals 6020/7470*	RAD 226/228	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
																		Y/N	N	N	N		6272125
1	HGWA-1	WT	G						4	1		3							X	X	X	N	pH =
2	HGWA-2	WT	G						4	1		3							X	X	X	N	pH =
3	HGWA-3	WT	G						4	1		3							X	X	X	N	pH =
4	HGWA-4	WT	G						4	1		3							X	X	X	N	pH =
5	HGWA-5	WT	G						4	1		3							X	X	X	N	pH =
6	HGWA-6	WT	G						4	1		3							X	X	X	N	pH =
7	HGWA-42D	WT	G						4	1		3							X	X	X	N	pH =
8	HGWA-43D	WT	G						4	1		3							X	X	X	N	pH =
9	HGWA-44D	WT	G						4	1		3							X	X	X	N	pH =
10	HGWC-14	WT	G						4	1		3							X	X	X	N	pH =
11	HGWC-15	WT	G						4	1		3							X	X	X	N	pH =
12	HGWC-16	WT	G	2-10-21	0503				4	1		3							X	X	X	N	pH = 7.08

Received - 2-10-21 1503

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	2-11-21	0830	IGEO	2/11/21	0830	
*Full App. IV Metals=Sb, As, Ba, Be, Cd, Cr, Co, Pb, Li, Hg, Mo, Se, Tl	IGEO	2/11/21	0915	Pace	2/11/21	0919	
One sample set submitted for HGWA-1/2/3/43D/44D and EB-1 but they will be reported for AP-1/2 SDGs	Pace	2/11/21	1320				

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Sampler

SIGNATURE of SAMPLER: DATE Signed (MM/DD/YY): 02/10/2021

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

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

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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 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 AP-2 App. IV Scan
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

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: Fluoride	Full App.IV Metals 6020/7470	RAD 226/228	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
	Requested Analysis Filtered (Y/N)																	Y/N	N	N	N	
1	~~HGWC-17~~	WT	G																			92521125
2	HGWC-18	WT	G	2/11/21	1257			16	4	1		3						X	X	X	N	pH =
3	MW-21D	WT	G	2/11/21	1453			17	4	1		3						X	X	X	N	pH = 4.53 011
4	~~MW-22~~	WT	G						4	1		3						X	X	X	N	pH = 6.87 012
5	~~MW-23D~~	WT	G						4	1		3						X	X	X	N	pH =
6	MW-33	WT	G						4	1		3						X	X	X	N	pH =
7	~~MW-35~~	WT	G						4	1		3						X	X	X	N	pH =
8	~~MW-37D~~	WT	G						4	1		3						X	X	X	N	pH =
9	Dup-2	WT	G	2/11/21					4	1		3						X	X	X	N	pH =
10	EB-1	WT	G						4	1		3						X	X	X	N	013
11	FB-2	WT	G						4	1		3						X	X	X	N	
12																					N	

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 Jones / Pace	2/12/21	0936	[illegible] / Pace	2/12/21	0936	
*Full App. IV Metals=Sb, As, Ba, Be, Cd, Cr, Co, Pb, Li, Hg, Mo, Se, Tl	[illegible] / Pace	2/12/21	1362	Christie Hall	2/12/21	1358	
One sample set submitted for HGWA-1/2/3/43D/44D and EB-1 but they will be reported for AP-1/2 SDGs							

SAMPLER NAME AND SIGNATURE		Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
PRINT Name of SAMPLER:	Chad Jones				
SIGNATURE of SAMPLER:					
DATE Signed (MM/DD/YY):	2/11/2021				

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

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CHAIN-OF-CUSTODY / Analytical Request Document

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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 AP-2 App. IV Scan	Pace Project Manager: Kevin Herring
Requested Due Date/TAT: 10 Day	Project Number: GW6581B	Pace Profile #:

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

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): Fluoride	Full App.IV Metals 6020/7470*	RAD 226/228	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D. 9252425
1	HGWA-1		WT	G			–	–		4	1		3						X	X	X	N	pH =
2	HGWA-2		WT	G			–	–		4	1		3						X	X	X	N	pH =
3	HGWA-3		WT	G			–	–		4	1		3						X	X	X	N	pH =
4	HGWA-4		WT	G			–	–		4	1		3						X	X	X	N	pH =
5	HGWA-5		WT	G			–	–		4	1		3						X	X	X	N	pH =
6	HGWA-6		WT	G			–	–		4	1		3						X	X	X	N	pH =
7	HGWA-42D		WT	G			–	–		4	1		3						X	X	X	N	pH =
8	HGWA-43D		WT	G			–	–		4	1		3						X	X	X	N	pH =
9	HGWA-44D		WT	G			–	–		4	1		3						X	X	X	N	pH =
10	HGWC-14		WT	G	2-11-21	1512	–	–		4	1		3						X	X	X	N	pH = 4.84
11	HGWC-15		WT	G			–	–		4	1		3						X	X	X	N	pH =
12	HGWC-16		WT	G			–	–		4	1		3						X	X	X	N	pH =

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.	Sampler	2-12-21	0845	Pace	2/12/21	0845				
*Full App. IV Metals=Sb, As, Ba, Be, Cd, Cr, Co, Pb, Li, Hg, Mo, Se, Tl	Pace	2/12/21	0936	Pace	2/12/21	0936				
One sample set submitted for HGWA-1/2/3/43D/44D and EB-1 but they will be reported for AP-1/2 SDGs	Pace	2/12/21	1352	Charles Hale	2/12/21	1352				

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Aaron Rosier

SIGNATURE of SAMPLER: DATE Signed (MM/DD/YY): 02/11/2021

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

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CHAIN-OF-CUSTODY / Analytical Request Document

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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 AP-2 App. IV Scan
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

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: Fluoride	Full App.IV Metals 6020/7470*	RAD 226/228	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
	Requested Analysis Filtered (Y/N)																	N	N	N		
1	HGWC-17	WT	G	2-11-21	1130	–	–		4	1		3						X	X	X	N	pH = 6.31 925211205
2	HGWC-18	WT	G			–	–		4	1		3						X	X	X	N	pH =
3	MW-21D	WT	G			–	–		4	1		3						X	X	X	N	pH =
4	MW-22	WT	G			–	–		4	1		3						X	X	X	N	pH =
5	MW-23D	WT	G			–	–		4	1		3						X	X	X	N	pH =
6	MW-33	WT	G			–	–		4	1		3						X	X	X	N	pH =
7	MW-35	WT	G			–	–		4	1		3						X	X	X	N	pH =
8	MW-37D	WT	G	2-11-21	1309	–	–		4	1		3						X	X	X	N	pH =
9	Dup-2	WT	G			–	–		4	1		3						X	X	X	N	pH = 7.42 016
10	EB-1	WT	G			–	–		4	1		3						X	X	X	N	
11	FB-2	WT	G	2-11-21	0845	–	–		4	1		3						X	X	X	N	017
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.	Sampler	2-12-21	0845	Pace	2/12/21	0845	
*Full App. IV Metals=Sb, As, Ba, Be, Cd, Cr, Co, Pb, Li, Hg, Mo, Se, Tl	Pace	2/12/21	0936	Pace	2/12/21	0936	
One sample set submitted for HGWA-1/2/3/43D/44D and EB-1 but they will be reported for AP-1/2 SDGs	Pace	2/12/21	1352		2/12/21	1352	

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Aaron [redacted]er

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 02/11/2021

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

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

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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 AP-2 App. IV Scan
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 GA EPD
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)	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
																		Fluoride	Full App.IV Metals 6020/7470	RAD 226/228	
1	HGWA-1	WT	G			–	–		4	1		3						N	N	N	
2	HGWA-2	WT	G			–	–		4	1		3						X	X	X	N pH =
3	HGWA-3	WT	G			–	–		4	1		3						X	X	X	N pH =
4	HGWA-4	WT	G			–	–		4	1		3						X	X	X	N pH =
5	HGWA-5	WT	G			–	–		4	1		3						X	X	X	N pH =
6	HGWA-6	WT	G			2/12/21	–		4	1		3						X	X	X	N pH =
7	HGWA-42D	WT	G			–	–		4	1		3						X	X	X	N pH =
8	HGWA-43D	WT	G			–	–		4	1		3						X	X	X	N pH =
9	HGWA-44D	WT	G			–	–		4	1		3						X	X	X	N pH =
10	HGWC-14	WT	G			–	–		4	1		3						X	X	X	N pH =
11	HGWC-15	WT	G	2/12/21	1501	–	–	IC	4	1		3						X	X	X	N pH =
12	HGWC-16	WT	G			–	–		4	1		3						X	X	X	N pH = 5.99 018

4252125

Pace Project No./ Lab I.D.

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.	1500	2/15/21	0945	/Pace	2/15/21	0945	
*Full App. IV Metals=Sb, As, Ba, Be, Cd, Cr, Co, Pb, Li, Hg, Mo, Se, Tl	/Pace						
One sample set submitted for HGWA-1/2/3/43D/44D and EB-1 but they will be reported for AP-1/2 SDGs							

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER: Chad Russo
SIGNATURE of SAMPLER:
DATE Signed (MM/DD/YY): 2/12/21

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

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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 AP-2 App. IV Scan
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 ~~GA~~
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	Full App.IV Metals 6020/7470*	RAD 220/228	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
																		Requested Analysis Filtered (Y/N)	N	N	N		925262K
1	HGWC-17	WT	G						4	1		3							X	X	X	N	pH =
2	HGWC-18	WT	G						4	1		3							X	X	X	N	pH =
3	MW-21D	WT	G						4	1		3							X	X	X	N	pH =
4	MW-22	WT	G						4	1		3							X	X	X	N	pH =
5	MW-23D	WT	G	2/12/21	1354			16	4	1		3							X	X	X	N	pH =
6	MW-33	WT	G						4	1		3							X	X	X	N	pH = 6.80
7	MW-35	WT	G						4	1		3							X	X	X	N	pH =
8	MW-37D	WT	G						4	1		3							X	X	X	N	pH =
9	Dup-2	WT	G						4	1		3							X	X	X	N	pH =
10	EB-1	WT	G						4	1		3							X	X	X	N	
11	FB-2	WT	G						4	1		3							X	X	X	N	
12									4	1		3							X	X	X	N	

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.	[illegible] Geo	2/12/21					
*Full App. IV Metals=Sb, As, Ba, Be, Cd, Cr, Co, Pb, Li, Hg, Mo, Se, Tl		2/12/21	0945	Pace	2/15/21	0945	
One sample set submitted for HGWA-1/2/3/43D/44D and EB-1 but they will be reported for AP-1/2 SDGs							

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER: [illegible] RIXSO
SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 2/12/21

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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Page: 3 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 AP-2 App. IV Scan	Pace Project Manager: Kevin Herring
Requested Due Date/TAT: 10 Day	Project Number: GW6581B	Pace Profile #:

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

Site Location STATE: GA

Requested Analysis Filtered (Y/N)

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: Fluoride	Full App.IV Metals 6020/7470*	RAD 226/228	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
																		N	N	N		
1	HGWC-17	WT	G			-	-		4	1		3						X	X	X	N	pH =
2	HGWC-18	WT	G			-	-		4	1		3						X	X	X	N	pH =
3	MW-21D	WT	G			-	-		4	1		3						X	X	X	N	pH =
4	MW-22	WT	G			-	-		4	1		3						X	X	X	N	pH =
5	MW-23D	WT	G			-	-		4	1		3						X	X	X	N	pH = 4.40
6	MW-33	WT	G	2-12-21	1032	-	-		4	1		3						X	X	X	N	pH =
7	MW-35	WT	G			-	-		4	1		3						X	X	X	N	pH =
8	MW-37D	WT	G			-	-		4	1		3						X	X	X	N	
9	Dup-2	WT	G			-	-		4	1		3						X	X	X	N	
10	EB-1	WT	G	2-12-21	1535	-	-		4	1		3						X	X	X	N	
11	EB-2	WT	G			-	-		4	1		3						X	X	X	N	
12																						

Pace Project No./ Lab I.D.: 4252425

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
Please note dry wells, strike through any wells not sampled, and note when the last sample for the event has been taken.	Sampler	2-12-21	1600	LGC	2/12/21	1600
*Full App. IV Metals=Sb, As, Ba, Be, Cd, Cr, Co, Pb, Li, Hg, Mo, Se, Tl	LGC	2/15/21	0945	Pace	2/15/21	0946
One sample set submitted for HGWA-1/2/3/43D/44D and EB-1 but they will be reported for AP-1/2 SDGs						

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: Aaron Rexter

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 02/12/2021

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

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:	10 Day

Section B Required Project Information:

Report To:	SCS Contacts
Copy To:	Geosyntec Contacts
Purchase Order No.:	
Project Name:	Plant Hammond AP-2 App. IV Scan
Project Number:	GW6581B

Section C Invoice Information:

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

Page: 1 of 1

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	Full App.IV Metals 6020/7470*	RAD 228/228	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
																		Requested Analysis Filtered (Y/N)	N	N	N		92521125
1	HGWC-17	WT	G			-	-		4	1		3							X	X	X	N	pH=
2	HGWC-18	WT	G			-	-		4	1		3							X	X	X	N	pH=
3	MW-21D	WT	G			-	-		4	1		3							X	X	X	N	pH=
4	MW-22	WT	G	2/15/21	1543	-	-	15	4	1		3							X	X	X	N	pH = 5.98 022
5	MW-23D	WT	G			-	-		4	1		3							X	X	X	N	pH=
6	MW-33	WT	G			-	-		4	1		3							X	X	X	N	pH=
7	MW-35	WT	G	2/15/21	1135	-	-	15	4	1		3							X	X	X	N	pH = 4.82 023
8	MW-37D	WT	G			-	-		4	1		3							X	X	X	N	pH =
9	Dup-2	WT	G			-	-		4	1		3							X	X	X	N	
10	EB-1	WT	G			-	-		4	1		3							X	X	X	N	
11	FB-2	WT	G			-	-		4	1		3						2/15/21	X	X	X	N	
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 Russo	2/17/21	1154	[illegible] / Pace	2/17/21	1154				
*Full App. IV Metals=Sb, As, Ba, Be, Cd, Cr, Co, Pb, Li, Hg, Mo, Se, Tl	[illegible] / Pace	2/17/21	1608	[illegible] / Pace	2/17/21	1608	4.9	Y	IV	Y
One sample set submitted for HGWA-1/2/3/43D/44D and EB-1 but they will be reported for AP-1/2 SDGs										

SAMPLER NAME AND SIGNATURE			Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
PRINT Name of SAMPLER:	Chad Russo					
SIGNATURE of SAMPLER:	[signature]	DATE Signed (MM/DD/YY): 2/15/2021				

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

Quality Control Sample Performance Assessment

Pace Analytical
www.pacelabs.com

Test:	Ra-226
Analyst:	JJY
Date:	2/19/2021
Worklist:	58877
Matrix:	DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	2102227
MB concentration:	0.276
M/B Counting Uncertainty:	0.134
MB MDC:	0.180
MB Numerical Performance Indicator:	4.05
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	See Comment*

Laboratory Control Sample Assessment	LCSD (Y or N)?	Y
	LCS58877	LCSD58877
Count Date:	3/2/2021	3/2/2021
Spike I.D.:	19-033	19-033
Decay Corrected Spike Concentration (pCi/mL):	24.040	24.040
Volume Used (mL):	0.10	0.10
Aliquot Volume (L, g, F):	0.502	0.501
Target Conc. (pCi/L, g, F):	4.789	4.798
Uncertainty (Calculated):	0.057	0.058
Result (pCi/L, g, F):	5.300	4.626
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.555	0.517
Numerical Performance Indicator:	1.80	-0.65
Percent Recovery:	110.67%	96.42%
Status vs Numerical Indicator:	N/A	N/A
Status vs Recovery:	Pass	Pass
Upper % Recovery Limits:	125%	125%
Lower % Recovery Limits:	75%	75%

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

Duplicate Sample Assessment		
Sample I.D.:	LCS58877	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	LCSD58877	
Sample Result (pCi/L, g, F):	5.300	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.555	
Sample Duplicate Result (pCi/L, g, F):	4.626	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.517	
Are sample and/or duplicate results below RL?	NO	
Duplicate Numerical Performance Indicator:	1.742	92520873006
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	13.77%	92520873006DUP
Duplicate Status vs Numerical Indicator:	N/A	
Duplicate Status vs RPD:	Pass	
% RPD Limit:	25%	

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

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

Comments:
*The method blank result is below the reporting limit for this analysis and is acceptable.

CMW 3/2/2021

LAM 3/2/21

Quality Control Sample Performance Assessment

Pace Analytical
www.pacelabs.com

Test:	Ra-226
Analyst:	JJY
Date:	2/19/2021
Worklist:	58877
Matrix:	DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	2102227
MB concentration:	0.276
M/B Counting Uncertainty:	0.134
MB MDC:	0.180
MB Numerical Performance Indicator:	4.05
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	See Comment*

Laboratory Control Sample Assessment	LCSD (Y or N)?	N
	LCS58877	LCSD58877
Count Date:	3/2/2021	
Spike I.D.:	19-033	
Decay Corrected Spike Concentration (pCi/mL):	24.040	
Volume Used (mL):	0.10	
Aliquot Volume (L, g, F):	0.502	
Target Conc. (pCi/L, g, F):	4.789	
Uncertainty (Calculated):	0.057	
Result (pCi/L, g, F):	5.300	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.555	
Numerical Performance Indicator:	1.80	
Percent Recovery:	110.67%	
Status vs Numerical Indicator:	N/A	
Status vs Recovery:	Pass	
Upper % Recovery Limits:	125%	
Lower % Recovery Limits:	75%	

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

Duplicate Sample Assessment		
Sample I.D.:	92520873006	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	92520873006DUP	
Sample Result (pCi/L, g, F):	0.162	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.140	
Sample Duplicate Result (pCi/L, g, F):	0.006	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.075	
Are sample and/or duplicate results below RL?	See Below ##	
Duplicate Numerical Performance Indicator:	1.924	92520873006
Duplicate RPD:	185.80%	92520873006DUP
Duplicate Status vs Numerical Indicator:	N/A	
Duplicate Status vs RPD:	Fail***	
% RPD Limit:	25%	

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

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

Comments:
*The method blank result is below the reporting limit for this analysis and is acceptable.

~~***Batch must be re-prepped due to unacceptable precision.~~ N/A VAM 3/2/21

VAM 3/2/21

VAM 3/2/21

Quality Control Sample Performance Assessment

Pace Analytical™ www.pacelabs.com

Test:	Ra-228
Analyst:	VAL
Date:	2/22/2021
Worklist:	58851
Matrix:	WT

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	2100680
MB concentration:	0.356
M/B 2 Sigma CSU:	0.369
MB MDC:	0.763
MB Numerical Performance Indicator:	1.89
MB Status vs Numerical Indicator:	Pass
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	Y
	LCS58851	LCSD58851
Count Date:	2/24/2021	2/24/2021
Spike I.D.:	21-003	21-003
Decay Corrected Spike Concentration (pCi/mL):	38.698	38.698
Volume Used (mL):	0.10	0.10
Aliquot Volume (L, g, F):	0.813	0.821
Target Conc. (pCi/L, g, F):	4.759	4.711
Uncertainty (Calculated):	0.233	0.231
Result (pCi/L, g, F):	4.358	5.382
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	1.031	1.179
Numerical Performance Indicator:	-0.74	1.09
Percent Recovery:	91.58%	114.23%
Status vs Numerical Indicator:	N/A	N/A
Status vs Recovery:	Pass	Pass
Upper % Recovery Limits:	135%	135%
Lower % Recovery Limits:	60%	60%

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

Duplicate Sample Assessment		
Sample I.D.:	LCS58851	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	LCSD58851	
Sample Result (pCi/L, g, F):	4.358	
Sample Result 2 Sigma CSU (pCi/L, g, F):	1.031	
Sample Duplicate Result (pCi/L, g, F):	5.382	
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	1.179	
Are sample and/or duplicate results below RL?	NO	
Duplicate Numerical Performance Indicator:	-1.281	
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	22.01%	
Duplicate Status vs Numerical Indicator:	Pass	
Duplicate Status vs RPD:	Pass	
% RPD Limit:	36%	

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

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

Comments:

2/25/21

2/25/21

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

March 04, 2021

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

RE: Project: HAMMOND AP-2 APP IV
Pace Project No.: 92521143

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory between February 09, 2021 and February 17, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

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

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

Sincerely,

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

Enclosures

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

REPORT OF LABORATORY ANALYSIS

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

CERTIFICATIONS

Project: HAMMOND AP-2 APP IV
Pace Project No.: 92521143

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

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

SAMPLE SUMMARY

Project: HAMMOND AP-2 APP IV
Pace Project No.: 92521143

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92521143001	**HGWA-1**	Water	02/08/21 16:13	02/09/21 12:33
92521143002	**HGWA-4**	Water	02/08/21 15:54	02/09/21 12:33
92521143003	**HGWA-42D**	Water	02/08/21 17:36	02/09/21 12:33
92521143004	**HGWA-2**	Water	02/09/21 10:38	02/10/21 09:56
92521143005	**HGWA-3**	Water	02/09/21 11:56	02/10/21 09:56
92521143006	**HGWA-5**	Water	02/09/21 10:46	02/10/21 09:56
92521143007	**HGWA-6**	Water	02/09/21 12:00	02/10/21 09:56
92521143008	**HGWA-43D**	Water	02/09/21 17:58	02/10/21 09:56
92521143009	**HGWA-44D**	Water	02/09/21 13:09	02/10/21 09:56
92521143010	**HGWC-16**	Water	02/10/21 15:02	02/11/21 09:19
92521143011	**HGWC-18**	Water	02/11/21 12:57	02/12/21 09:36
92521143012	**MW-21D**	Water	02/11/21 14:53	02/12/21 09:36
92521143013	**DUP-2**	Water	02/11/21 00:00	02/12/21 09:36
92521143014	**HGWC-14**	Water	02/11/21 15:12	02/12/21 09:36
92521143015	**HGWC-17**	Water	02/11/21 11:30	02/12/21 09:36
92521143016	**MW-37D**	Water	02/11/21 13:09	02/12/21 09:36
92521143017	**FB-2**	Water	02/11/21 08:45	02/12/21 09:36
92521143018	**HGWC-15**	Water	02/12/21 15:01	02/15/21 09:45
92521143019	**MW-23D**	Water	02/12/21 13:54	02/15/21 09:45
92521143020	**MW-33**	Water	02/12/21 10:32	02/15/21 09:45
92521143021	**EB-1**	Water	02/12/21 15:35	02/15/21 09:45
92521143022	**MW-22**	Water	02/15/21 15:43	02/17/21 11:54
92521143023	**MW-35**	Water	02/15/21 11:35	02/17/21 11:54

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

SAMPLE ANALYTE COUNT

Project: HAMMOND AP-2 APP IV
Pace Project No.: 92521143

Lab ID	Sample ID	Method	Analysts	Analytes Reported
92521143001	**HGWA-1**	EPA 6020B	CW1	12
		EPA 7470A	VB	1
		EPA 300.0 Rev 2.1 1993	JLH	1
92521143002	**HGWA-4**	EPA 6020B	CW1	12
		EPA 7470A	VB	1
		EPA 300.0 Rev 2.1 1993	JLH	1
92521143003	**HGWA-42D**	EPA 6020B	CW1	12
		EPA 7470A	VB	1
		EPA 300.0 Rev 2.1 1993	JLH	1
92521143004	**HGWA-2**	EPA 6020B	CW1	12
		EPA 7470A	VB	1
		EPA 300.0 Rev 2.1 1993	CDC	1
92521143005	**HGWA-3**	EPA 6020B	CW1	12
		EPA 7470A	VB	1
		EPA 300.0 Rev 2.1 1993	CDC	1
92521143006	**HGWA-5**	EPA 6020B	CW1	12
		EPA 7470A	VB	1
		EPA 300.0 Rev 2.1 1993	CDC	1
92521143007	**HGWA-6**	EPA 6020B	CW1	12
		EPA 7470A	VB	1
		EPA 300.0 Rev 2.1 1993	CDC	1
92521143008	**HGWA-43D**	EPA 6020B	CW1	12
		EPA 7470A	VB	1
		EPA 300.0 Rev 2.1 1993	CDC	1
92521143009	**HGWA-44D**	EPA 6020B	CW1	12
		EPA 7470A	VB	1
		EPA 300.0 Rev 2.1 1993	CDC	1
92521143010	**HGWC-16**	EPA 6020B	CW1	12
		EPA 7470A	VB	1
		EPA 300.0 Rev 2.1 1993	CDC	1
92521143011	**HGWC-18**	EPA 6020B	CW1	12
		EPA 7470A	VB	1
		EPA 300.0 Rev 2.1 1993	JLH	1
92521143012	**MW-21D**	EPA 6020B	CW1	12
		EPA 7470A	VB	1
		EPA 300.0 Rev 2.1 1993	JLH	1
92521143013	**DUP-2**	EPA 6020B	CW1	12

REPORT OF LABORATORY ANALYSIS

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

SAMPLE ANALYTE COUNT

Project: HAMMOND AP-2 APP IV
Pace Project No.: 92521143

Lab ID	Sample ID	Method	Analysts	Analytes Reported
		EPA 7470A	VB	1
		EPA 300.0 Rev 2.1 1993	JLH	1
92521143014	**HGWC-14**	EPA 6020B	CW1	12
		EPA 7470A	VB	1
		EPA 300.0 Rev 2.1 1993	JLH	1
92521143015	**HGWC-17**	EPA 6020B	CW1	12
		EPA 7470A	VB	1
		EPA 300.0 Rev 2.1 1993	JLH	1
92521143016	**MW-37D**	EPA 6020B	CW1	12
		EPA 7470A	VB	1
		EPA 300.0 Rev 2.1 1993	JLH	1
92521143017	**FB-2**	EPA 6020B	CW1	12
		EPA 7470A	VB	1
		EPA 300.0 Rev 2.1 1993	JLH	1
92521143018	**HGWC-15**	EPA 6020B	CW1	12
		EPA 7470A	VB	1
		EPA 300.0 Rev 2.1 1993	JLH	1
92521143019	**MW-23D**	EPA 6020B	CW1	12
		EPA 7470A	VB	1
		EPA 300.0 Rev 2.1 1993	JLH	1
92521143020	**MW-33**	EPA 6020B	CW1	12
		EPA 7470A	VB	1
		EPA 300.0 Rev 2.1 1993	JLH	1
92521143021	**EB-1**	EPA 6020B	CW1	12
		EPA 7470A	VB	1
		EPA 300.0 Rev 2.1 1993	JLH	1
92521143022	**MW-22**	EPA 6020B	CW1	12
		EPA 7470A	VB	1
		EPA 300.0 Rev 2.1 1993	CDC	1
92521143023	**MW-35**	EPA 6020B	CW1	12
		EPA 7470A	VB	1
		EPA 300.0 Rev 2.1 1993	CDC	1

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

REPORT OF LABORATORY ANALYSIS

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

SUMMARY OF DETECTION

Project: HAMMOND AP-2 APP IV
Pace Project No.: 92521143

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92521143001	**HGWA-1**					
	Performed by	CUSTOMER			02/24/21 07:43	
	pH	7.11	Std. Units		02/24/21 07:43	
EPA 6020B	Barium	0.032	mg/L	0.010	02/23/21 18:06	
EPA 6020B	Lead	0.000058J	mg/L	0.0050	02/23/21 18:06	
EPA 6020B	Lithium	0.00086J	mg/L	0.030	02/23/21 18:06	
EPA 300.0 Rev 2.1 1993	Fluoride	0.078J	mg/L	0.10	02/10/21 17:59	
92521143002	**HGWA-4**					
	Performed by	CUSTOMER			02/24/21 07:43	
	pH	4.94	Std. Units		02/24/21 07:43	
EPA 6020B	Barium	0.040	mg/L	0.010	02/23/21 18:12	
EPA 6020B	Beryllium	0.00023J	mg/L	0.0030	02/23/21 18:12	
EPA 6020B	Cobalt	0.00074J	mg/L	0.0050	02/23/21 18:12	
EPA 6020B	Lead	0.00024J	mg/L	0.0050	02/23/21 18:12	
EPA 6020B	Lithium	0.0013J	mg/L	0.030	02/23/21 18:12	
92521143003	**HGWA-42D**					
	Performed by	CUSTOMER			02/24/21 07:43	
	pH	7.64	Std. Units		02/24/21 07:43	
EPA 6020B	Antimony	0.0019J	mg/L	0.0030	02/23/21 18:35	B
EPA 6020B	Barium	0.19	mg/L	0.010	02/23/21 18:35	
EPA 6020B	Chromium	0.00078J	mg/L	0.010	02/23/21 18:35	
EPA 6020B	Lead	0.000081J	mg/L	0.0050	02/23/21 18:35	
EPA 6020B	Lithium	0.0098J	mg/L	0.030	02/23/21 18:35	
EPA 300.0 Rev 2.1 1993	Fluoride	0.096J	mg/L	0.10	02/10/21 18:14	
92521143004	**HGWA-2**					
	Performed by	CUSTOMER			02/24/21 07:43	
	pH	5.42	Std. Units		02/24/21 07:43	
EPA 6020B	Antimony	0.00062J	mg/L	0.0030	02/23/21 18:41	B
EPA 6020B	Barium	0.12	mg/L	0.010	02/23/21 18:41	
EPA 6020B	Beryllium	0.00014J	mg/L	0.0030	02/23/21 18:41	
EPA 6020B	Cadmium	0.00016J	mg/L	0.0025	02/23/21 18:41	
EPA 6020B	Cobalt	0.020	mg/L	0.0050	02/23/21 18:41	
EPA 6020B	Lead	0.000094J	mg/L	0.0050	02/23/21 18:41	
EPA 6020B	Lithium	0.0012J	mg/L	0.030	02/23/21 18:41	
92521143005	**HGWA-3**					
	Performed by	CUSTOMER			02/24/21 07:43	
	pH	7.23	Std. Units		02/24/21 07:43	
EPA 6020B	Antimony	0.00031J	mg/L	0.0030	02/23/21 18:46	B
EPA 6020B	Barium	0.13	mg/L	0.010	02/23/21 18:46	
EPA 6020B	Lithium	0.0032J	mg/L	0.030	02/23/21 18:46	
EPA 300.0 Rev 2.1 1993	Fluoride	0.074J	mg/L	0.10	02/11/21 18:16	

REPORT OF LABORATORY ANALYSIS

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

SUMMARY OF DETECTION

Project: HAMMOND AP-2 APP IV
Pace Project No.: 92521143

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92521143006	**HGWA-5**					
	Performed by	CUSTOMER			02/24/21 07:43	
	pH	6.35	Std. Units		02/24/21 07:43	
EPA 6020B	Barium	0.046	mg/L	0.010	02/23/21 19:04	
EPA 6020B	Cobalt	0.00071J	mg/L	0.0050	02/23/21 19:04	
EPA 6020B	Lithium	0.0030J	mg/L	0.030	02/23/21 19:04	
EPA 300.0 Rev 2.1 1993	Fluoride	0.053J	mg/L	0.10	02/11/21 18:32	
92521143007	**HGWA-6**					
	Performed by	CUSTOMER			02/24/21 07:43	
	pH	7.40	Std. Units		02/24/21 07:43	
EPA 6020B	Barium	0.21	mg/L	0.010	02/23/21 19:09	
EPA 6020B	Lithium	0.010J	mg/L	0.030	02/23/21 19:09	
92521143008	**HGWA-43D**					
	Performed by	CUSTOMER			02/24/21 07:43	
	pH	7.44	Std. Units		02/24/21 07:43	
EPA 6020B	Antimony	0.00037J	mg/L	0.0030	02/23/21 19:15	B
EPA 6020B	Arsenic	0.0017J	mg/L	0.0050	02/23/21 19:15	B
EPA 6020B	Barium	0.34	mg/L	0.010	02/23/21 19:15	
EPA 6020B	Chromium	0.00095J	mg/L	0.010	02/23/21 19:15	
EPA 6020B	Lead	0.00029J	mg/L	0.0050	02/23/21 19:15	
EPA 6020B	Lithium	0.0026J	mg/L	0.030	02/23/21 19:15	
EPA 6020B	Molybdenum	0.0045J	mg/L	0.010	02/23/21 19:15	
EPA 300.0 Rev 2.1 1993	Fluoride	0.19	mg/L	0.10	02/11/21 19:36	
92521143009	**HGWA-44D**					
	Performed by	CUSTOMER			02/24/21 07:43	
	pH	7.84	Std. Units		02/24/21 07:43	
EPA 6020B	Antimony	0.00042J	mg/L	0.0030	02/23/21 19:21	B
EPA 6020B	Arsenic	0.00083J	mg/L	0.0050	02/23/21 19:21	B
EPA 6020B	Barium	0.46	mg/L	0.010	02/23/21 19:21	
EPA 6020B	Chromium	0.00066J	mg/L	0.010	02/23/21 19:21	
EPA 6020B	Lead	0.00010J	mg/L	0.0050	02/23/21 19:21	
EPA 6020B	Lithium	0.026J	mg/L	0.030	02/23/21 19:21	
EPA 6020B	Molybdenum	0.0038J	mg/L	0.010	02/23/21 19:21	
EPA 300.0 Rev 2.1 1993	Fluoride	0.44	mg/L	0.10	02/11/21 19:52	
92521143010	**HGWC-16**					
	Performed by	CUSTOMER			02/24/21 07:43	
	pH	7.08	Std. Units		02/24/21 07:43	
EPA 6020B	Arsenic	0.0012J	mg/L	0.0050	02/23/21 19:27	B
EPA 6020B	Barium	0.11	mg/L	0.010	02/23/21 19:27	
EPA 6020B	Lead	0.000094J	mg/L	0.0050	02/23/21 19:27	
EPA 6020B	Lithium	0.0038J	mg/L	0.030	02/23/21 19:27	
EPA 300.0 Rev 2.1 1993	Fluoride	0.21	mg/L	0.10	02/12/21 22:35	M1

REPORT OF LABORATORY ANALYSIS

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

SUMMARY OF DETECTION

Project: HAMMOND AP-2 APP IV
Pace Project No.: 92521143

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92521143011	**HGWC-18**					
	Performed by	CUSTOMER			02/24/21 07:43	
	pH	4.53	Std. Units		02/24/21 07:43	
EPA 6020B	Arsenic	0.0069	mg/L	0.0050	02/23/21 19:32	B
EPA 6020B	Barium	0.030	mg/L	0.010	02/23/21 19:32	
EPA 6020B	Beryllium	0.0036	mg/L	0.0030	02/23/21 19:32	
EPA 6020B	Cadmium	0.0016J	mg/L	0.0025	02/23/21 19:32	
EPA 6020B	Cobalt	0.14	mg/L	0.0050	02/23/21 19:32	
EPA 6020B	Lead	0.00098J	mg/L	0.0050	02/23/21 19:32	
EPA 6020B	Lithium	0.011J	mg/L	0.030	02/23/21 19:32	
EPA 6020B	Selenium	0.023	mg/L	0.010	02/23/21 19:32	
EPA 300.0 Rev 2.1 1993	Fluoride	0.71	mg/L	0.10	02/16/21 11:21	
92521143012	**MW-21D**					
	Performed by	CUSTOMER			02/24/21 07:43	
	pH	6.87	Std. Units		02/24/21 07:43	
EPA 6020B	Arsenic	0.0010J	mg/L	0.0050	02/23/21 19:38	B
EPA 6020B	Barium	0.044	mg/L	0.010	02/23/21 19:38	
EPA 6020B	Lead	0.00066J	mg/L	0.0050	02/23/21 19:38	
EPA 6020B	Lithium	0.021J	mg/L	0.030	02/23/21 19:38	
EPA 6020B	Molybdenum	0.016	mg/L	0.010	02/23/21 19:38	
92521143013	**DUP-2**					
EPA 6020B	Arsenic	0.00095J	mg/L	0.0050	02/23/21 19:44	B
EPA 6020B	Barium	0.043	mg/L	0.010	02/23/21 19:44	
EPA 6020B	Lithium	0.022J	mg/L	0.030	02/23/21 19:44	
EPA 6020B	Molybdenum	0.016	mg/L	0.010	02/23/21 19:44	
92521143014	**HGWC-14**					
	Performed by	CUSTOMER			02/24/21 07:43	
	pH	4.84	Std. Units		02/24/21 07:43	
EPA 6020B	Antimony	0.00043J	mg/L	0.0030	02/23/21 19:49	B
EPA 6020B	Arsenic	0.0062	mg/L	0.0050	02/23/21 19:49	B
EPA 6020B	Barium	0.020	mg/L	0.010	02/23/21 19:49	
EPA 6020B	Beryllium	0.00044J	mg/L	0.0030	02/23/21 19:49	
EPA 6020B	Cobalt	0.033	mg/L	0.0050	02/23/21 19:49	
EPA 6020B	Lead	0.0015J	mg/L	0.0050	02/23/21 19:49	
EPA 6020B	Selenium	0.0072J	mg/L	0.010	02/23/21 19:49	
EPA 6020B	Thallium	0.00026J	mg/L	0.0010	02/23/21 19:49	
EPA 300.0 Rev 2.1 1993	Fluoride	0.059J	mg/L	0.10	02/16/21 12:04	
92521143015	**HGWC-17**					
	Performed by	CUSTOMER			02/24/21 07:43	
	pH	6.31	Std. Units		02/24/21 07:43	
EPA 6020B	Arsenic	0.0012J	mg/L	0.0050	02/23/21 19:55	B
EPA 6020B	Barium	0.025	mg/L	0.010	02/23/21 19:55	
EPA 6020B	Beryllium	0.000067J	mg/L	0.0030	02/23/21 19:55	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
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SUMMARY OF DETECTION

Project: HAMMOND AP-2 APP IV
Pace Project No.: 92521143

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92521143015	**HGWC-17**					
EPA 6020B	Chromium	0.00074J	mg/L	0.010	02/23/21 19:55	
EPA 6020B	Cobalt	0.012	mg/L	0.0050	02/23/21 19:55	
EPA 6020B	Lead	0.00018J	mg/L	0.0050	02/23/21 19:55	
EPA 6020B	Lithium	0.0013J	mg/L	0.030	02/23/21 19:55	
EPA 300.0 Rev 2.1 1993	Fluoride	0.058J	mg/L	0.10	02/16/21 12:47	
92521143016	**MW-37D**					
	Performed by	CUSTOMER			02/24/21 07:43	
	pH	7.42	Std. Units		02/24/21 07:43	
EPA 6020B	Antimony	0.00079J	mg/L	0.0030	02/24/21 15:16	
EPA 6020B	Arsenic	0.0023J	mg/L	0.0050	02/24/21 15:16	
EPA 6020B	Barium	0.14	mg/L	0.010	02/24/21 15:16	
EPA 6020B	Chromium	0.0014J	mg/L	0.010	02/24/21 15:16	
EPA 6020B	Cobalt	0.00048J	mg/L	0.0050	02/24/21 15:16	
EPA 6020B	Lead	0.00039J	mg/L	0.0050	02/24/21 15:16	
EPA 6020B	Lithium	0.034	mg/L	0.030	02/24/21 15:16	
EPA 6020B	Molybdenum	0.019	mg/L	0.010	02/24/21 15:16	
EPA 300.0 Rev 2.1 1993	Fluoride	0.077J	mg/L	0.10	02/16/21 13:02	
92521143017	**FB-2**					
EPA 6020B	Arsenic	0.00091J	mg/L	0.0050	02/24/21 15:22	
92521143018	**HGWC-15**					
	Performed by	CUSTOMER			02/24/21 07:43	
	pH	5.99	Std. Units		02/24/21 07:43	
EPA 6020B	Barium	0.014	mg/L	0.010	02/24/21 15:45	
EPA 6020B	Cadmium	0.0014J	mg/L	0.0025	02/24/21 15:45	
EPA 6020B	Cobalt	0.019	mg/L	0.0050	02/24/21 15:45	
EPA 6020B	Lithium	0.036	mg/L	0.030	02/24/21 15:45	
EPA 300.0 Rev 2.1 1993	Fluoride	0.053J	mg/L	0.10	02/16/21 20:31	
92521143019	**MW-23D**					
	Performed by	CUSTOMER			02/24/21 07:43	
	pH	6.80	Std. Units		02/24/21 07:43	
EPA 6020B	Arsenic	0.0010J	mg/L	0.0050	02/24/21 15:51	
EPA 6020B	Barium	0.056	mg/L	0.010	02/24/21 15:51	
EPA 6020B	Cadmium	0.00045J	mg/L	0.0025	02/24/21 15:51	
EPA 6020B	Cobalt	0.0010J	mg/L	0.0050	02/24/21 15:51	
EPA 6020B	Lithium	0.0023J	mg/L	0.030	02/24/21 15:51	
EPA 6020B	Molybdenum	0.0039J	mg/L	0.010	02/24/21 15:51	
92521143020	**MW-33**					
	Performed by	CUSTOMER			02/24/21 07:43	
	pH	4.40	Std. Units		02/24/21 07:43	
EPA 6020B	Antimony	0.00046J	mg/L	0.0030	02/24/21 15:57	
EPA 6020B	Arsenic	0.0059	mg/L	0.0050	02/24/21 15:57	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: HAMMOND AP-2 APP IV
Pace Project No.: 92521143

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92521143020	**MW-33**					
EPA 6020B	Barium	0.025	mg/L	0.010	02/24/21 15:57	
EPA 6020B	Beryllium	0.0010J	mg/L	0.0030	02/24/21 15:57	
EPA 6020B	Cadmium	0.00017J	mg/L	0.0025	02/24/21 15:57	
EPA 6020B	Cobalt	0.055	mg/L	0.0050	02/24/21 15:57	
EPA 6020B	Lead	0.0018J	mg/L	0.0050	02/24/21 15:57	
EPA 6020B	Lithium	0.0011J	mg/L	0.030	02/24/21 15:57	
EPA 6020B	Selenium	0.011	mg/L	0.010	02/24/21 15:57	
EPA 6020B	Thallium	0.00025J	mg/L	0.0010	02/24/21 15:57	
EPA 300.0 Rev 2.1 1993	Fluoride	0.25	mg/L	0.10	02/16/21 21:00	
92521143022	**MW-22**					
	Performed by	CUSTOMER			02/24/21 07:43	
	pH	5.48	Std. Units		02/24/21 07:43	
EPA 6020B	Barium	0.017	mg/L	0.010	02/24/21 17:26	
EPA 6020B	Beryllium	0.000062J	mg/L	0.0030	02/24/21 17:26	
EPA 6020B	Cadmium	0.0020J	mg/L	0.0025	02/24/21 17:26	
EPA 6020B	Cobalt	0.038	mg/L	0.0050	02/24/21 17:26	
EPA 6020B	Lead	0.000036J	mg/L	0.0050	02/24/21 17:26	
EPA 6020B	Lithium	0.0011J	mg/L	0.030	02/24/21 17:26	
92521143023	**MW-35**					
	Performed by	CUSTOMER			02/24/21 07:43	
	pH	4.82	Std. Units		02/24/21 07:43	
EPA 6020B	Antimony	0.00041J	mg/L	0.0030	02/24/21 17:32	
EPA 6020B	Arsenic	0.0050	mg/L	0.0050	02/24/21 17:32	
EPA 6020B	Barium	0.026	mg/L	0.010	02/24/21 17:32	
EPA 6020B	Beryllium	0.00060J	mg/L	0.0030	02/24/21 17:32	
EPA 6020B	Cadmium	0.0017J	mg/L	0.0025	02/24/21 17:32	
EPA 6020B	Cobalt	0.095	mg/L	0.0050	02/24/21 17:32	
EPA 6020B	Lead	0.00055J	mg/L	0.0050	02/24/21 17:32	
EPA 6020B	Lithium	0.0043J	mg/L	0.030	02/24/21 17:32	
EPA 6020B	Selenium	0.010	mg/L	0.010	02/24/21 17:32	
EPA 300.0 Rev 2.1 1993	Fluoride	0.093J	mg/L	0.10	02/20/21 17:59	

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: HAMMOND AP-2 APP IV
Pace Project No.: 92521143

Sample: HGWA-1 **Lab ID: 92521143001** Collected: 02/08/21 16:13 Received: 02/09/21 12:33 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Charlotte								
Performed by	**CUSTOMER**				1		02/24/21 07:43		
pH	**7.11**	Std. Units			1		02/24/21 07:43		
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00028	1	02/23/21 11:55	02/23/21 18:06	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	02/23/21 11:55	02/23/21 18:06	7440-38-2	
Barium	**0.032**	mg/L	0.010	0.00071	1	02/23/21 11:55	02/23/21 18:06	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	02/23/21 11:55	02/23/21 18:06	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00012	1	02/23/21 11:55	02/23/21 18:06	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	02/23/21 11:55	02/23/21 18:06	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	02/23/21 11:55	02/23/21 18:06	7440-48-4	
Lead	**0.000058J**	mg/L	0.0050	0.000036	1	02/23/21 11:55	02/23/21 18:06	7439-92-1	
Lithium	**0.00086J**	mg/L	0.030	0.00081	1	02/23/21 11:55	02/23/21 18:06	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	02/23/21 11:55	02/23/21 18:06	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	02/23/21 11:55	02/23/21 18:06	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	02/23/21 11:55	02/23/21 18:06	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00050	0.000078	1	02/17/21 15:30	02/18/21 12:38	7439-97-6	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Fluoride	**0.078J**	mg/L	0.10	0.050	1		02/10/21 17:59	16984-48-8	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: HAMMOND AP-2 APP IV
Pace Project No.: 92521143

Sample: HGWA-4 **Lab ID: 92521143002** Collected: 02/08/21 15:54 Received: 02/09/21 12:33 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Charlotte								
Performed by	**CUSTOMER**				1		02/24/21 07:43		
pH	**4.94**	Std. Units			1		02/24/21 07:43		
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00028	1	02/23/21 11:55	02/23/21 18:12	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	02/23/21 11:55	02/23/21 18:12	7440-38-2	
Barium	**0.040**	mg/L	0.010	0.00071	1	02/23/21 11:55	02/23/21 18:12	7440-39-3	
Beryllium	**0.00023J**	mg/L	0.0030	0.000046	1	02/23/21 11:55	02/23/21 18:12	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00012	1	02/23/21 11:55	02/23/21 18:12	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	02/23/21 11:55	02/23/21 18:12	7440-47-3	
Cobalt	**0.00074J**	mg/L	0.0050	0.00038	1	02/23/21 11:55	02/23/21 18:12	7440-48-4	
Lead	**0.00024J**	mg/L	0.0050	0.000036	1	02/23/21 11:55	02/23/21 18:12	7439-92-1	
Lithium	**0.0013J**	mg/L	0.030	0.00081	1	02/23/21 11:55	02/23/21 18:12	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	02/23/21 11:55	02/23/21 18:12	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	02/23/21 11:55	02/23/21 18:12	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	02/23/21 11:55	02/23/21 18:12	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00050	0.000078	1	02/17/21 15:30	02/18/21 12:52	7439-97-6	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Fluoride	ND	mg/L	0.10	0.050	1		02/16/21 01:29	16984-48-8	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: HAMMOND AP-2 APP IV
Pace Project No.: 92521143

Sample: HGWA-42D **Lab ID: 92521143003** Collected: 02/08/21 17:36 Received: 02/09/21 12:33 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Charlotte								
Performed by	**CUSTOMER**				1		02/24/21 07:43		
pH	**7.64**	Std. Units			1		02/24/21 07:43		
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	**0.0019J**	mg/L	0.0030	0.00028	1	02/23/21 11:55	02/23/21 18:35	7440-36-0	B
Arsenic	ND	mg/L	0.0050	0.00078	1	02/23/21 11:55	02/23/21 18:35	7440-38-2	
Barium	**0.19**	mg/L	0.010	0.00071	1	02/23/21 11:55	02/23/21 18:35	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	02/23/21 11:55	02/23/21 18:35	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00012	1	02/23/21 11:55	02/23/21 18:35	7440-43-9	
Chromium	**0.00078J**	mg/L	0.010	0.00055	1	02/23/21 11:55	02/23/21 18:35	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	02/23/21 11:55	02/23/21 18:35	7440-48-4	
Lead	**0.000081J**	mg/L	0.0050	0.000036	1	02/23/21 11:55	02/23/21 18:35	7439-92-1	
Lithium	**0.0098J**	mg/L	0.030	0.00081	1	02/23/21 11:55	02/23/21 18:35	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	02/23/21 11:55	02/23/21 18:35	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	02/23/21 11:55	02/23/21 18:35	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	02/23/21 11:55	02/23/21 18:35	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00050	0.000078	1	02/17/21 15:30	02/18/21 12:54	7439-97-6	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Fluoride	**0.096J**	mg/L	0.10	0.050	1		02/10/21 18:14	16984-48-8	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: HAMMOND AP-2 APP IV
Pace Project No.: 92521143

Sample: HGWA-2 **Lab ID: 92521143004** Collected: 02/09/21 10:38 Received: 02/10/21 09:56 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Charlotte								
Performed by	**CUSTOMER**				1		02/24/21 07:43		
pH	**5.42**	Std. Units			1		02/24/21 07:43		
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	**0.00062J**	mg/L	0.0030	0.00028	1	02/23/21 11:55	02/23/21 18:41	7440-36-0	B
Arsenic	ND	mg/L	0.0050	0.00078	1	02/23/21 11:55	02/23/21 18:41	7440-38-2	
Barium	**0.12**	mg/L	0.010	0.00071	1	02/23/21 11:55	02/23/21 18:41	7440-39-3	
Beryllium	**0.00014J**	mg/L	0.0030	0.000046	1	02/23/21 11:55	02/23/21 18:41	7440-41-7	
Cadmium	**0.00016J**	mg/L	0.0025	0.00012	1	02/23/21 11:55	02/23/21 18:41	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	02/23/21 11:55	02/23/21 18:41	7440-47-3	
Cobalt	**0.020**	mg/L	0.0050	0.00038	1	02/23/21 11:55	02/23/21 18:41	7440-48-4	
Lead	**0.000094J**	mg/L	0.0050	0.000036	1	02/23/21 11:55	02/23/21 18:41	7439-92-1	
Lithium	**0.0012J**	mg/L	0.030	0.00081	1	02/23/21 11:55	02/23/21 18:41	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	02/23/21 11:55	02/23/21 18:41	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	02/23/21 11:55	02/23/21 18:41	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	02/23/21 11:55	02/23/21 18:41	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00050	0.000078	1	02/17/21 15:30	02/18/21 12:57	7439-97-6	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Fluoride	ND	mg/L	0.10	0.050	1		02/11/21 17:28	16984-48-8	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: HAMMOND AP-2 APP IV
Pace Project No.: 92521143

Sample: HGWA-3 **Lab ID: 92521143005** Collected: 02/09/21 11:56 Received: 02/10/21 09:56 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Charlotte								
Performed by	**CUSTOMER**				1		02/24/21 07:43		
pH	**7.23**	Std. Units			1		02/24/21 07:43		
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	**0.00031J**	mg/L	0.0030	0.00028	1	02/23/21 11:55	02/23/21 18:46	7440-36-0	B
Arsenic	ND	mg/L	0.0050	0.00078	1	02/23/21 11:55	02/23/21 18:46	7440-38-2	
Barium	**0.13**	mg/L	0.010	0.00071	1	02/23/21 11:55	02/23/21 18:46	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	02/23/21 11:55	02/23/21 18:46	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00012	1	02/23/21 11:55	02/23/21 18:46	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	02/23/21 11:55	02/23/21 18:46	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	02/23/21 11:55	02/23/21 18:46	7440-48-4	
Lead	ND	mg/L	0.0050	0.000036	1	02/23/21 11:55	02/23/21 18:46	7439-92-1	
Lithium	**0.0032J**	mg/L	0.030	0.00081	1	02/23/21 11:55	02/23/21 18:46	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	02/23/21 11:55	02/23/21 18:46	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	02/23/21 11:55	02/23/21 18:46	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	02/23/21 11:55	02/23/21 18:46	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00050	0.000078	1	02/17/21 15:30	02/18/21 12:59	7439-97-6	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Fluoride	**0.074J**	mg/L	0.10	0.050	1		02/11/21 18:16	16984-48-8	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: HAMMOND AP-2 APP IV
Pace Project No.: 92521143

Sample: HGWA-5 **Lab ID: 92521143006** Collected: 02/09/21 10:46 Received: 02/10/21 09:56 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Charlotte								
Performed by	**CUSTOMER**				1		02/24/21 07:43		
pH	**6.35**	Std. Units			1		02/24/21 07:43		
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00028	1	02/23/21 11:55	02/23/21 19:04	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	02/23/21 11:55	02/23/21 19:04	7440-38-2	
Barium	**0.046**	mg/L	0.010	0.00071	1	02/23/21 11:55	02/23/21 19:04	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	02/23/21 11:55	02/23/21 19:04	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00012	1	02/23/21 11:55	02/23/21 19:04	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	02/23/21 11:55	02/23/21 19:04	7440-47-3	
Cobalt	**0.00071J**	mg/L	0.0050	0.00038	1	02/23/21 11:55	02/23/21 19:04	7440-48-4	
Lead	ND	mg/L	0.0050	0.000036	1	02/23/21 11:55	02/23/21 19:04	7439-92-1	
Lithium	**0.0030J**	mg/L	0.030	0.00081	1	02/23/21 11:55	02/23/21 19:04	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	02/23/21 11:55	02/23/21 19:04	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	02/23/21 11:55	02/23/21 19:04	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	02/23/21 11:55	02/23/21 19:04	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00050	0.000078	1	02/17/21 15:30	02/18/21 13:02	7439-97-6	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Fluoride	**0.053J**	mg/L	0.10	0.050	1		02/11/21 18:32	16984-48-8	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: HAMMOND AP-2 APP IV
Pace Project No.: 92521143

Sample: HGWA-6 **Lab ID: 92521143007** Collected: 02/09/21 12:00 Received: 02/10/21 09:56 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Charlotte								
Performed by	**CUSTOMER**				1		02/24/21 07:43		
pH	**7.40**	Std. Units			1		02/24/21 07:43		
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00028	1	02/23/21 11:55	02/23/21 19:09	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	02/23/21 11:55	02/23/21 19:09	7440-38-2	
Barium	**0.21**	mg/L	0.010	0.00071	1	02/23/21 11:55	02/23/21 19:09	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	02/23/21 11:55	02/23/21 19:09	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00012	1	02/23/21 11:55	02/23/21 19:09	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	02/23/21 11:55	02/23/21 19:09	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	02/23/21 11:55	02/23/21 19:09	7440-48-4	
Lead	ND	mg/L	0.0050	0.000036	1	02/23/21 11:55	02/23/21 19:09	7439-92-1	
Lithium	**0.010J**	mg/L	0.030	0.00081	1	02/23/21 11:55	02/23/21 19:09	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	02/23/21 11:55	02/23/21 19:09	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	02/23/21 11:55	02/23/21 19:09	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	02/23/21 11:55	02/23/21 19:09	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00050	0.000078	1	02/17/21 15:30	02/18/21 13:04	7439-97-6	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Fluoride	ND	mg/L	0.10	0.050	1		02/11/21 18:48	16984-48-8	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: HAMMOND AP-2 APP IV
Pace Project No.: 92521143

Sample: HGWA-43D **Lab ID: 92521143008** Collected: 02/09/21 17:58 Received: 02/10/21 09:56 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Charlotte								
Performed by	**CUSTOMER**				1		02/24/21 07:43		
pH	**7.44**	Std. Units			1		02/24/21 07:43		
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	**0.00037J**	mg/L	0.0030	0.00028	1	02/23/21 11:55	02/23/21 19:15	7440-36-0	B
Arsenic	**0.0017J**	mg/L	0.0050	0.00078	1	02/23/21 11:55	02/23/21 19:15	7440-38-2	B
Barium	**0.34**	mg/L	0.010	0.00071	1	02/23/21 11:55	02/23/21 19:15	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	02/23/21 11:55	02/23/21 19:15	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00012	1	02/23/21 11:55	02/23/21 19:15	7440-43-9	
Chromium	**0.00095J**	mg/L	0.010	0.00055	1	02/23/21 11:55	02/23/21 19:15	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	02/23/21 11:55	02/23/21 19:15	7440-48-4	
Lead	**0.00029J**	mg/L	0.0050	0.000036	1	02/23/21 11:55	02/23/21 19:15	7439-92-1	
Lithium	**0.0026J**	mg/L	0.030	0.00081	1	02/23/21 11:55	02/23/21 19:15	7439-93-2	
Molybdenum	**0.0045J**	mg/L	0.010	0.00069	1	02/23/21 11:55	02/23/21 19:15	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	02/23/21 11:55	02/23/21 19:15	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	02/23/21 11:55	02/23/21 19:15	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00050	0.000078	1	02/17/21 15:30	02/18/21 13:06	7439-97-6	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Fluoride	**0.19**	mg/L	0.10	0.050	1		02/11/21 19:36	16984-48-8	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: HAMMOND AP-2 APP IV
Pace Project No.: 92521143

Sample: HGWA-44D **Lab ID: 92521143009** Collected: 02/09/21 13:09 Received: 02/10/21 09:56 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Charlotte								
Performed by	**CUSTOMER**				1		02/24/21 07:43		
pH	**7.84**	Std. Units			1		02/24/21 07:43		
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	**0.00042J**	mg/L	0.0030	0.00028	1	02/23/21 11:55	02/23/21 19:21	7440-36-0	B
Arsenic	**0.00083J**	mg/L	0.0050	0.00078	1	02/23/21 11:55	02/23/21 19:21	7440-38-2	B
Barium	**0.46**	mg/L	0.010	0.00071	1	02/23/21 11:55	02/23/21 19:21	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	02/23/21 11:55	02/23/21 19:21	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00012	1	02/23/21 11:55	02/23/21 19:21	7440-43-9	
Chromium	**0.00066J**	mg/L	0.010	0.00055	1	02/23/21 11:55	02/23/21 19:21	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	02/23/21 11:55	02/23/21 19:21	7440-48-4	
Lead	**0.00010J**	mg/L	0.0050	0.000036	1	02/23/21 11:55	02/23/21 19:21	7439-92-1	
Lithium	**0.026J**	mg/L	0.030	0.00081	1	02/23/21 11:55	02/23/21 19:21	7439-93-2	
Molybdenum	**0.0038J**	mg/L	0.010	0.00069	1	02/23/21 11:55	02/23/21 19:21	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	02/23/21 11:55	02/23/21 19:21	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	02/23/21 11:55	02/23/21 19:21	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00050	0.000078	1	02/17/21 15:30	02/18/21 13:09	7439-97-6	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Fluoride	**0.44**	mg/L	0.10	0.050	1		02/11/21 19:52	16984-48-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: HAMMOND AP-2 APP IV
Pace Project No.: 92521143

Sample: HGWC-16 **Lab ID: 92521143010** Collected: 02/10/21 15:02 Received: 02/11/21 09:19 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Charlotte								
Performed by	**CUSTOMER**				1		02/24/21 07:43		
pH	**7.08**	Std. Units			1		02/24/21 07:43		
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00028	1	02/23/21 11:55	02/23/21 19:27	7440-36-0	
Arsenic	**0.0012J**	mg/L	0.0050	0.00078	1	02/23/21 11:55	02/23/21 19:27	7440-38-2	B
Barium	**0.11**	mg/L	0.010	0.00071	1	02/23/21 11:55	02/23/21 19:27	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	02/23/21 11:55	02/23/21 19:27	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00012	1	02/23/21 11:55	02/23/21 19:27	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	02/23/21 11:55	02/23/21 19:27	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	02/23/21 11:55	02/23/21 19:27	7440-48-4	
Lead	**0.000094J**	mg/L	0.0050	0.000036	1	02/23/21 11:55	02/23/21 19:27	7439-92-1	
Lithium	**0.0038J**	mg/L	0.030	0.00081	1	02/23/21 11:55	02/23/21 19:27	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	02/23/21 11:55	02/23/21 19:27	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	02/23/21 11:55	02/23/21 19:27	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	02/23/21 11:55	02/23/21 19:27	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00050	0.000078	1	02/17/21 15:30	02/18/21 13:11	7439-97-6	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Fluoride	**0.21**	mg/L	0.10	0.050	1		02/12/21 22:35	16984-48-8	M1

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: HAMMOND AP-2 APP IV
Pace Project No.: 92521143

Sample: HGWC-18 **Lab ID: 92521143011** Collected: 02/11/21 12:57 Received: 02/12/21 09:36 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Charlotte								
Performed by	**CUSTOMER**				1		02/24/21 07:43		
pH	**4.53**	Std. Units			1		02/24/21 07:43		
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00028	1	02/23/21 11:55	02/23/21 19:32	7440-36-0	
Arsenic	**0.0069**	mg/L	0.0050	0.00078	1	02/23/21 11:55	02/23/21 19:32	7440-38-2	B
Barium	**0.030**	mg/L	0.010	0.00071	1	02/23/21 11:55	02/23/21 19:32	7440-39-3	
Beryllium	**0.0036**	mg/L	0.0030	0.000046	1	02/23/21 11:55	02/23/21 19:32	7440-41-7	
Cadmium	**0.0016J**	mg/L	0.0025	0.00012	1	02/23/21 11:55	02/23/21 19:32	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	02/23/21 11:55	02/23/21 19:32	7440-47-3	
Cobalt	**0.14**	mg/L	0.0050	0.00038	1	02/23/21 11:55	02/23/21 19:32	7440-48-4	
Lead	**0.00098J**	mg/L	0.0050	0.000036	1	02/23/21 11:55	02/23/21 19:32	7439-92-1	
Lithium	**0.011J**	mg/L	0.030	0.00081	1	02/23/21 11:55	02/23/21 19:32	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	02/23/21 11:55	02/23/21 19:32	7439-98-7	
Selenium	**0.023**	mg/L	0.010	0.0016	1	02/23/21 11:55	02/23/21 19:32	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	02/23/21 11:55	02/23/21 19:32	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00050	0.000078	1	02/17/21 15:30	02/18/21 13:18	7439-97-6	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Fluoride	**0.71**	mg/L	0.10	0.050	1		02/16/21 11:21	16984-48-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: HAMMOND AP-2 APP IV
Pace Project No.: 92521143

Sample: MW-21D **Lab ID: 92521143012** Collected: 02/11/21 14:53 Received: 02/12/21 09:36 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Charlotte								
Performed by	**CUSTOMER**				1		02/24/21 07:43		
pH	**6.87**	Std. Units			1		02/24/21 07:43		
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00028	1	02/23/21 11:55	02/23/21 19:38	7440-36-0	
Arsenic	**0.0010J**	mg/L	0.0050	0.00078	1	02/23/21 11:55	02/23/21 19:38	7440-38-2	B
Barium	**0.044**	mg/L	0.010	0.00071	1	02/23/21 11:55	02/23/21 19:38	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	02/23/21 11:55	02/23/21 19:38	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00012	1	02/23/21 11:55	02/23/21 19:38	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	02/23/21 11:55	02/23/21 19:38	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	02/23/21 11:55	02/23/21 19:38	7440-48-4	
Lead	**0.00066J**	mg/L	0.0050	0.000036	1	02/23/21 11:55	02/23/21 19:38	7439-92-1	
Lithium	**0.021J**	mg/L	0.030	0.00081	1	02/23/21 11:55	02/23/21 19:38	7439-93-2	
Molybdenum	**0.016**	mg/L	0.010	0.00069	1	02/23/21 11:55	02/23/21 19:38	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	02/23/21 11:55	02/23/21 19:38	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	02/23/21 11:55	02/23/21 19:38	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00050	0.000078	1	02/17/21 15:30	02/18/21 13:21	7439-97-6	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Fluoride	ND	mg/L	0.10	0.050	1		02/16/21 11:35	16984-48-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: HAMMOND AP-2 APP IV
Pace Project No.: 92521143

Sample: DUP-2 **Lab ID: 92521143013** Collected: 02/11/21 00:00 Received: 02/12/21 09:36 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00028	1	02/23/21 11:55	02/23/21 19:44	7440-36-0	
Arsenic	**0.00095J**	mg/L	0.0050	0.00078	1	02/23/21 11:55	02/23/21 19:44	7440-38-2	B
Barium	**0.043**	mg/L	0.010	0.00071	1	02/23/21 11:55	02/23/21 19:44	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	02/23/21 11:55	02/23/21 19:44	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00012	1	02/23/21 11:55	02/23/21 19:44	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	02/23/21 11:55	02/23/21 19:44	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	02/23/21 11:55	02/23/21 19:44	7440-48-4	
Lead	ND	mg/L	0.0050	0.000036	1	02/23/21 11:55	02/23/21 19:44	7439-92-1	
Lithium	**0.022J**	mg/L	0.030	0.00081	1	02/23/21 11:55	02/23/21 19:44	7439-93-2	
Molybdenum	**0.016**	mg/L	0.010	0.00069	1	02/23/21 11:55	02/23/21 19:44	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	02/23/21 11:55	02/23/21 19:44	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	02/23/21 11:55	02/23/21 19:44	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00050	0.000078	1	02/17/21 15:30	02/18/21 13:23	7439-97-6	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Fluoride	ND	mg/L	0.10	0.050	1		02/16/21 11:49	16984-48-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: HAMMOND AP-2 APP IV
Pace Project No.: 92521143

Sample: HGWC-14 **Lab ID: 92521143014** Collected: 02/11/21 15:12 Received: 02/12/21 09:36 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Charlotte								
Performed by	**CUSTOMER**				1		02/24/21 07:43		
pH	**4.84**	Std. Units			1		02/24/21 07:43		
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	**0.00043J**	mg/L	0.0030	0.00028	1	02/23/21 11:55	02/23/21 19:49	7440-36-0	B
Arsenic	**0.0062**	mg/L	0.0050	0.00078	1	02/23/21 11:55	02/23/21 19:49	7440-38-2	B
Barium	**0.020**	mg/L	0.010	0.00071	1	02/23/21 11:55	02/23/21 19:49	7440-39-3	
Beryllium	**0.00044J**	mg/L	0.0030	0.000046	1	02/23/21 11:55	02/23/21 19:49	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00012	1	02/23/21 11:55	02/23/21 19:49	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	02/23/21 11:55	02/23/21 19:49	7440-47-3	
Cobalt	**0.033**	mg/L	0.0050	0.00038	1	02/23/21 11:55	02/23/21 19:49	7440-48-4	
Lead	**0.0015J**	mg/L	0.0050	0.000036	1	02/23/21 11:55	02/23/21 19:49	7439-92-1	
Lithium	ND	mg/L	0.030	0.00081	1	02/23/21 11:55	02/23/21 19:49	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	02/23/21 11:55	02/23/21 19:49	7439-98-7	
Selenium	**0.0072J**	mg/L	0.010	0.0016	1	02/23/21 11:55	02/23/21 19:49	7782-49-2	
Thallium	**0.00026J**	mg/L	0.0010	0.00014	1	02/23/21 11:55	02/23/21 19:49	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00050	0.000078	1	02/17/21 15:30	02/18/21 13:25	7439-97-6	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Fluoride	**0.059J**	mg/L	0.10	0.050	1		02/16/21 12:04	16984-48-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: HAMMOND AP-2 APP IV
Pace Project No.: 92521143

Sample: HGWC-17 **Lab ID: 92521143015** Collected: 02/11/21 11:30 Received: 02/12/21 09:36 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Charlotte								
Performed by	**CUSTOMER**				1		02/24/21 07:43		
pH	**6.31**	Std. Units			1		02/24/21 07:43		
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00028	1	02/23/21 11:55	02/23/21 19:55	7440-36-0	
Arsenic	**0.0012J**	mg/L	0.0050	0.00078	1	02/23/21 11:55	02/23/21 19:55	7440-38-2	B
Barium	**0.025**	mg/L	0.010	0.00071	1	02/23/21 11:55	02/23/21 19:55	7440-39-3	
Beryllium	**0.000067J**	mg/L	0.0030	0.000046	1	02/23/21 11:55	02/23/21 19:55	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00012	1	02/23/21 11:55	02/23/21 19:55	7440-43-9	
Chromium	**0.00074J**	mg/L	0.010	0.00055	1	02/23/21 11:55	02/23/21 19:55	7440-47-3	
Cobalt	**0.012**	mg/L	0.0050	0.00038	1	02/23/21 11:55	02/23/21 19:55	7440-48-4	
Lead	**0.00018J**	mg/L	0.0050	0.000036	1	02/23/21 11:55	02/23/21 19:55	7439-92-1	
Lithium	**0.0013J**	mg/L	0.030	0.00081	1	02/23/21 11:55	02/23/21 19:55	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	02/23/21 11:55	02/23/21 19:55	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	02/23/21 11:55	02/23/21 19:55	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	02/23/21 11:55	02/23/21 19:55	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00050	0.000078	1	02/17/21 15:30	02/18/21 13:28	7439-97-6	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Fluoride	**0.058J**	mg/L	0.10	0.050	1		02/16/21 12:47	16984-48-8	

REPORT OF LABORATORY ANALYSIS

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110 Technology Parkway
Peachtree Corners, GA 30092
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ANALYTICAL RESULTS

Project: HAMMOND AP-2 APP IV
Pace Project No.: 92521143

Sample: MW-37D **Lab ID: 92521143016** Collected: 02/11/21 13:09 Received: 02/12/21 09:36 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Charlotte								
Performed by	**CUSTOMER**				1		02/24/21 07:43		
pH	**7.42**	Std. Units			1		02/24/21 07:43		
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	**0.00079J**	mg/L	0.0030	0.00028	1	02/23/21 13:13	02/24/21 15:16	7440-36-0	
Arsenic	**0.0023J**	mg/L	0.0050	0.00078	1	02/23/21 13:13	02/24/21 15:16	7440-38-2	
Barium	**0.14**	mg/L	0.010	0.00071	1	02/23/21 13:13	02/24/21 15:16	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	02/23/21 13:13	02/24/21 15:16	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00012	1	02/23/21 13:13	02/24/21 15:16	7440-43-9	
Chromium	**0.0014J**	mg/L	0.010	0.00055	1	02/23/21 13:13	02/24/21 15:16	7440-47-3	
Cobalt	**0.00048J**	mg/L	0.0050	0.00038	1	02/23/21 13:13	02/24/21 15:16	7440-48-4	
Lead	**0.00039J**	mg/L	0.0050	0.000036	1	02/23/21 13:13	02/24/21 15:16	7439-92-1	
Lithium	**0.034**	mg/L	0.030	0.00081	1	02/23/21 13:13	02/24/21 15:16	7439-93-2	
Molybdenum	**0.019**	mg/L	0.010	0.00069	1	02/23/21 13:13	02/24/21 15:16	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	02/23/21 13:13	02/24/21 15:16	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	02/23/21 13:13	02/24/21 15:16	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00050	0.000078	1	02/22/21 02:15	02/23/21 14:11	7439-97-6	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Fluoride	**0.077J**	mg/L	0.10	0.050	1		02/16/21 13:02	16984-48-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
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ANALYTICAL RESULTS

Project: HAMMOND AP-2 APP IV
Pace Project No.: 92521143

Sample: FB-2 **Lab ID: 92521143017** Collected: 02/11/21 08:45 Received: 02/12/21 09:36 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00028	1	02/23/21 13:13	02/24/21 15:22	7440-36-0	
Arsenic	**0.00091J**	mg/L	0.0050	0.00078	1	02/23/21 13:13	02/24/21 15:22	7440-38-2	
Barium	ND	mg/L	0.010	0.00071	1	02/23/21 13:13	02/24/21 15:22	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	02/23/21 13:13	02/24/21 15:22	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00012	1	02/23/21 13:13	02/24/21 15:22	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	02/23/21 13:13	02/24/21 15:22	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	02/23/21 13:13	02/24/21 15:22	7440-48-4	
Lead	ND	mg/L	0.0050	0.000036	1	02/23/21 13:13	02/24/21 15:22	7439-92-1	
Lithium	ND	mg/L	0.030	0.00081	1	02/23/21 13:13	02/24/21 15:22	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	02/23/21 13:13	02/24/21 15:22	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	02/23/21 13:13	02/24/21 15:22	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	02/23/21 13:13	02/24/21 15:22	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00050	0.000078	1	02/22/21 02:15	02/23/21 14:14	7439-97-6	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Fluoride	ND	mg/L	0.10	0.050	1		02/16/21 17:46	16984-48-8	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: HAMMOND AP-2 APP IV
Pace Project No.: 92521143

Sample: HGWC-15 **Lab ID: 92521143018** Collected: 02/12/21 15:01 Received: 02/15/21 09:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Charlotte								
Performed by	**CUSTOMER**				1		02/24/21 07:43		
pH	**5.99**	Std. Units			1		02/24/21 07:43		
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00028	1	02/23/21 13:13	02/24/21 15:45	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	02/23/21 13:13	02/24/21 15:45	7440-38-2	
Barium	**0.014**	mg/L	0.010	0.00071	1	02/23/21 13:13	02/24/21 15:45	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	02/23/21 13:13	02/24/21 15:45	7440-41-7	
Cadmium	**0.0014J**	mg/L	0.0025	0.00012	1	02/23/21 13:13	02/24/21 15:45	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	02/23/21 13:13	02/24/21 15:45	7440-47-3	
Cobalt	**0.019**	mg/L	0.0050	0.00038	1	02/23/21 13:13	02/24/21 15:45	7440-48-4	
Lead	ND	mg/L	0.0050	0.000036	1	02/23/21 13:13	02/24/21 15:45	7439-92-1	
Lithium	**0.036**	mg/L	0.030	0.00081	1	02/23/21 13:13	02/24/21 15:45	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	02/23/21 13:13	02/24/21 15:45	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	02/23/21 13:13	02/24/21 15:45	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	02/23/21 13:13	02/24/21 15:45	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00050	0.000078	1	02/22/21 02:15	02/23/21 14:16	7439-97-6	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Fluoride	**0.053J**	mg/L	0.10	0.050	1		02/16/21 20:31	16984-48-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
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ANALYTICAL RESULTS

Project: HAMMOND AP-2 APP IV
Pace Project No.: 92521143

Sample: MW-23D **Lab ID: 92521143019** Collected: 02/12/21 13:54 Received: 02/15/21 09:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Charlotte								
Performed by	**CUSTOMER**				1		02/24/21 07:43		
pH	**6.80**	Std. Units			1		02/24/21 07:43		
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00028	1	02/23/21 13:13	02/24/21 15:51	7440-36-0	
Arsenic	**0.0010J**	mg/L	0.0050	0.00078	1	02/23/21 13:13	02/24/21 15:51	7440-38-2	
Barium	**0.056**	mg/L	0.010	0.00071	1	02/23/21 13:13	02/24/21 15:51	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	02/23/21 13:13	02/24/21 15:51	7440-41-7	
Cadmium	**0.00045J**	mg/L	0.0025	0.00012	1	02/23/21 13:13	02/24/21 15:51	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	02/23/21 13:13	02/24/21 15:51	7440-47-3	
Cobalt	**0.0010J**	mg/L	0.0050	0.00038	1	02/23/21 13:13	02/24/21 15:51	7440-48-4	
Lead	ND	mg/L	0.0050	0.000036	1	02/23/21 13:13	02/24/21 15:51	7439-92-1	
Lithium	**0.0023J**	mg/L	0.030	0.00081	1	02/23/21 13:13	02/24/21 15:51	7439-93-2	
Molybdenum	**0.0039J**	mg/L	0.010	0.00069	1	02/23/21 13:13	02/24/21 15:51	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	02/23/21 13:13	02/24/21 15:51	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	02/23/21 13:13	02/24/21 15:51	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00050	0.000078	1	02/22/21 02:15	02/23/21 14:19	7439-97-6	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Fluoride	ND	mg/L	0.10	0.050	1		02/16/21 20:45	16984-48-8	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: HAMMOND AP-2 APP IV
Pace Project No.: 92521143

Sample: MW-33 **Lab ID: 92521143020** Collected: 02/12/21 10:32 Received: 02/15/21 09:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Charlotte								
Performed by	**CUSTOMER**				1		02/24/21 07:43		
pH	**4.40**	Std. Units			1		02/24/21 07:43		
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	**0.00046J**	mg/L	0.0030	0.00028	1	02/23/21 13:13	02/24/21 15:57	7440-36-0	
Arsenic	**0.0059**	mg/L	0.0050	0.00078	1	02/23/21 13:13	02/24/21 15:57	7440-38-2	
Barium	**0.025**	mg/L	0.010	0.00071	1	02/23/21 13:13	02/24/21 15:57	7440-39-3	
Beryllium	**0.0010J**	mg/L	0.0030	0.000046	1	02/23/21 13:13	02/24/21 15:57	7440-41-7	
Cadmium	**0.00017J**	mg/L	0.0025	0.00012	1	02/23/21 13:13	02/24/21 15:57	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	02/23/21 13:13	02/24/21 15:57	7440-47-3	
Cobalt	**0.055**	mg/L	0.0050	0.00038	1	02/23/21 13:13	02/24/21 15:57	7440-48-4	
Lead	**0.0018J**	mg/L	0.0050	0.000036	1	02/23/21 13:13	02/24/21 15:57	7439-92-1	
Lithium	**0.0011J**	mg/L	0.030	0.00081	1	02/23/21 13:13	02/24/21 15:57	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	02/23/21 13:13	02/24/21 15:57	7439-98-7	
Selenium	**0.011**	mg/L	0.010	0.0016	1	02/23/21 13:13	02/24/21 15:57	7782-49-2	
Thallium	**0.00025J**	mg/L	0.0010	0.00014	1	02/23/21 13:13	02/24/21 15:57	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00050	0.000078	1	02/22/21 02:15	02/23/21 14:21	7439-97-6	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Fluoride	**0.25**	mg/L	0.10	0.050	1		02/16/21 21:00	16984-48-8	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: HAMMOND AP-2 APP IV
Pace Project No.: 92521143

Sample: EB-1 **Lab ID: 92521143021** Collected: 02/12/21 15:35 Received: 02/15/21 09:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00028	1	02/23/21 13:13	02/24/21 16:02	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	02/23/21 13:13	02/24/21 16:02	7440-38-2	
Barium	ND	mg/L	0.010	0.00071	1	02/23/21 13:13	02/24/21 16:02	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	02/23/21 13:13	02/24/21 16:02	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00012	1	02/23/21 13:13	02/24/21 16:02	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	02/23/21 13:13	02/24/21 16:02	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	02/23/21 13:13	02/24/21 16:02	7440-48-4	
Lead	ND	mg/L	0.0050	0.000036	1	02/23/21 13:13	02/24/21 16:02	7439-92-1	
Lithium	ND	mg/L	0.030	0.00081	1	02/23/21 13:13	02/24/21 16:02	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	02/23/21 13:13	02/24/21 16:02	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	02/23/21 13:13	02/24/21 16:02	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	02/23/21 13:13	02/24/21 16:02	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00050	0.000078	1	02/22/21 09:50	02/22/21 13:46	7439-97-6	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Fluoride	ND	mg/L	0.10	0.050	1		02/16/21 21:15	16984-48-8	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: HAMMOND AP-2 APP IV
Pace Project No.: 92521143

Sample: MW-22 **Lab ID: 92521143022** Collected: 02/15/21 15:43 Received: 02/17/21 11:54 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Charlotte								
Performed by	**CUSTOMER**				1		02/24/21 07:43		
pH	**5.48**	Std. Units			1		02/24/21 07:43		
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00028	1	02/23/21 13:13	02/24/21 17:26	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	02/23/21 13:13	02/24/21 17:26	7440-38-2	
Barium	**0.017**	mg/L	0.010	0.00071	1	02/23/21 13:13	02/24/21 17:26	7440-39-3	
Beryllium	**0.000062J**	mg/L	0.0030	0.000046	1	02/23/21 13:13	02/24/21 17:26	7440-41-7	
Cadmium	**0.0020J**	mg/L	0.0025	0.00012	1	02/23/21 13:13	02/24/21 17:26	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	02/23/21 13:13	02/24/21 17:26	7440-47-3	
Cobalt	**0.038**	mg/L	0.0050	0.00038	1	02/23/21 13:13	02/24/21 17:26	7440-48-4	
Lead	**0.000036J**	mg/L	0.0050	0.000036	1	02/23/21 13:13	02/24/21 17:26	7439-92-1	
Lithium	**0.0011J**	mg/L	0.030	0.00081	1	02/23/21 13:13	02/24/21 17:26	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	02/23/21 13:13	02/24/21 17:26	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	02/23/21 13:13	02/24/21 17:26	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	02/23/21 13:13	02/24/21 17:26	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00050	0.000078	1	02/22/21 09:50	02/22/21 14:01	7439-97-6	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Fluoride	ND	mg/L	0.10	0.050	1		02/20/21 17:14	16984-48-8	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: HAMMOND AP-2 APP IV
Pace Project No.: 92521143

Sample: MW-35 **Lab ID: 92521143023** Collected: 02/15/21 11:35 Received: 02/17/21 11:54 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Charlotte								
Performed by	**CUSTOMER**				1		02/24/21 07:43		
pH	**4.82**	Std. Units			1		02/24/21 07:43		
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	**0.00041J**	mg/L	0.0030	0.00028	1	02/23/21 13:13	02/24/21 17:32	7440-36-0	
Arsenic	**0.0050**	mg/L	0.0050	0.00078	1	02/23/21 13:13	02/24/21 17:32	7440-38-2	
Barium	**0.026**	mg/L	0.010	0.00071	1	02/23/21 13:13	02/24/21 17:32	7440-39-3	
Beryllium	**0.00060J**	mg/L	0.0030	0.000046	1	02/23/21 13:13	02/24/21 17:32	7440-41-7	
Cadmium	**0.0017J**	mg/L	0.0025	0.00012	1	02/23/21 13:13	02/24/21 17:32	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	02/23/21 13:13	02/24/21 17:32	7440-47-3	
Cobalt	**0.095**	mg/L	0.0050	0.00038	1	02/23/21 13:13	02/24/21 17:32	7440-48-4	
Lead	**0.00055J**	mg/L	0.0050	0.000036	1	02/23/21 13:13	02/24/21 17:32	7439-92-1	
Lithium	**0.0043J**	mg/L	0.030	0.00081	1	02/23/21 13:13	02/24/21 17:32	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	02/23/21 13:13	02/24/21 17:32	7439-98-7	
Selenium	**0.010**	mg/L	0.010	0.0016	1	02/23/21 13:13	02/24/21 17:32	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	02/23/21 13:13	02/24/21 17:32	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00050	0.000078	1	02/22/21 09:50	02/22/21 14:03	7439-97-6	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Fluoride	**0.093J**	mg/L	0.10	0.050	1		02/20/21 17:59	16984-48-8	

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: HAMMOND AP-2 APP IV
Pace Project No.: 92521143

QC Batch: 601892
QC Batch Method: EPA 3005A
Analysis Method: EPA 6020B
Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92521143001, 92521143002, 92521143003, 92521143004, 92521143005, 92521143006, 92521143007, 92521143008, 92521143009, 92521143010, 92521143011, 92521143012, 92521143013, 92521143014, 92521143015

METHOD BLANK: 3171327 Matrix: Water
Associated Lab Samples: 92521143001, 92521143002, 92521143003, 92521143004, 92521143005, 92521143006, 92521143007, 92521143008, 92521143009, 92521143010, 92521143011, 92521143012, 92521143013, 92521143014, 92521143015

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	0.00030J	0.0030	0.00028	02/23/21 17:55	
Arsenic	mg/L	0.00094J	0.0050	0.00078	02/23/21 17:55	
Barium	mg/L	ND	0.010	0.00071	02/23/21 17:55	
Beryllium	mg/L	ND	0.0030	0.000046	02/23/21 17:55	
Cadmium	mg/L	ND	0.0025	0.00012	02/23/21 17:55	
Chromium	mg/L	ND	0.010	0.00055	02/23/21 17:55	
Cobalt	mg/L	ND	0.0050	0.00038	02/23/21 17:55	
Lead	mg/L	ND	0.0050	0.000036	02/23/21 17:55	
Lithium	mg/L	ND	0.030	0.00081	02/23/21 17:55	
Molybdenum	mg/L	ND	0.010	0.00069	02/23/21 17:55	
Selenium	mg/L	ND	0.010	0.0016	02/23/21 17:55	
Thallium	mg/L	ND	0.0010	0.00014	02/23/21 17:55	

LABORATORY CONTROL SAMPLE: 3171328

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.11	108	80-120	
Arsenic	mg/L	0.1	0.096	96	80-120	
Barium	mg/L	0.1	0.10	100	80-120	
Beryllium	mg/L	0.1	0.098	98	80-120	
Cadmium	mg/L	0.1	0.10	102	80-120	
Chromium	mg/L	0.1	0.10	102	80-120	
Cobalt	mg/L	0.1	0.10	101	80-120	
Lead	mg/L	0.1	0.10	101	80-120	
Lithium	mg/L	0.1	0.097	97	80-120	
Molybdenum	mg/L	0.1	0.10	102	80-120	
Selenium	mg/L	0.1	0.094	94	80-120	
Thallium	mg/L	0.1	0.098	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3171329 3171330

Parameter	Units	92521143002 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	108	104	75-125	3	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-2 APP IV
Pace Project No.: 92521143

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3171329 3171330

Parameter	Units	92521143002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	mg/L	ND	0.1	0.1	0.097	0.093	97	93	75-125	5	20	
Barium	mg/L	0.040	0.1	0.1	0.14	0.14	99	96	75-125	2	20	
Beryllium	mg/L	0.00023J	0.1	0.1	0.095	0.090	95	90	75-125	6	20	
Cadmium	mg/L	ND	0.1	0.1	0.10	0.098	101	98	75-125	3	20	
Chromium	mg/L	ND	0.1	0.1	0.10	0.098	101	98	75-125	3	20	
Cobalt	mg/L	0.00074J	0.1	0.1	0.10	0.098	100	97	75-125	3	20	
Lead	mg/L	0.00024J	0.1	0.1	0.10	0.098	101	98	75-125	3	20	
Lithium	mg/L	0.0013J	0.1	0.1	0.094	0.091	93	89	75-125	4	20	
Molybdenum	mg/L	ND	0.1	0.1	0.10	0.099	103	99	75-125	4	20	
Selenium	mg/L	ND	0.1	0.1	0.093	0.091	93	91	75-125	3	20	
Thallium	mg/L	ND	0.1	0.1	0.098	0.095	98	95	75-125	3	20	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: HAMMOND AP-2 APP IV
Pace Project No.: 92521143

QC Batch: 601924
QC Batch Method: EPA 3005A
Analysis Method: EPA 6020B
Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92521143016, 92521143017, 92521143018, 92521143019, 92521143020, 92521143021, 92521143022, 92521143023

METHOD BLANK: 3171451 Matrix: Water
Associated Lab Samples: 92521143016, 92521143017, 92521143018, 92521143019, 92521143020, 92521143021, 92521143022, 92521143023

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00028	02/24/21 14:31	
Arsenic	mg/L	ND	0.0050	0.00078	02/24/21 14:31	
Barium	mg/L	ND	0.010	0.00071	02/24/21 14:31	
Beryllium	mg/L	ND	0.0030	0.000046	02/24/21 14:31	
Cadmium	mg/L	ND	0.0025	0.00012	02/24/21 14:31	
Chromium	mg/L	ND	0.010	0.00055	02/24/21 14:31	
Cobalt	mg/L	ND	0.0050	0.00038	02/24/21 14:31	
Lead	mg/L	ND	0.0050	0.000036	02/24/21 14:31	
Lithium	mg/L	ND	0.030	0.00081	02/24/21 14:31	
Molybdenum	mg/L	ND	0.010	0.00069	02/24/21 14:31	
Selenium	mg/L	ND	0.010	0.0016	02/24/21 14:31	
Thallium	mg/L	ND	0.0010	0.00014	02/24/21 14:31	

LABORATORY CONTROL SAMPLE: 3171452

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.11	107	80-120	
Arsenic	mg/L	0.1	0.094	94	80-120	
Barium	mg/L	0.1	0.10	100	80-120	
Beryllium	mg/L	0.1	0.099	99	80-120	
Cadmium	mg/L	0.1	0.098	98	80-120	
Chromium	mg/L	0.1	0.097	97	80-120	
Cobalt	mg/L	0.1	0.098	98	80-120	
Lead	mg/L	0.1	0.098	98	80-120	
Lithium	mg/L	0.1	0.10	101	80-120	
Molybdenum	mg/L	0.1	0.10	102	80-120	
Selenium	mg/L	0.1	0.093	93	80-120	
Thallium	mg/L	0.1	0.097	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3171453 3171454

Parameter	Units	92521151006 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	102	104	75-125	2	20	
Arsenic	mg/L	ND	0.1	0.1	0.098	0.10	98	101	75-125	3	20	
Barium	mg/L	0.069	0.1	0.1	0.16	0.17	95	96	75-125	1	20	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: HAMMOND AP-2 APP IV
Pace Project No.: 92521143

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3171453 3171454

Parameter	Units	92521151006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Beryllium	mg/L	0.000081J	0.1	0.1	0.093	0.096	93	96	75-125	4	20	
Cadmium	mg/L	ND	0.1	0.1	0.097	0.10	97	101	75-125	4	20	
Chromium	mg/L	0.0014J	0.1	0.1	0.099	0.10	98	99	75-125	1	20	
Cobalt	mg/L	0.00081J	0.1	0.1	0.096	0.099	95	98	75-125	2	20	
Lead	mg/L	0.00056J	0.1	0.1	0.095	0.096	95	95	75-125	1	20	
Lithium	mg/L	0.0032J	0.1	0.1	0.098	0.10	95	98	75-125	3	20	
Molybdenum	mg/L	0.051	0.1	0.1	0.15	0.15	101	99	75-125	1	20	
Selenium	mg/L	ND	0.1	0.1	0.093	0.098	92	98	75-125	6	20	
Thallium	mg/L	ND	0.1	0.1	0.093	0.094	93	94	75-125	2	20	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: HAMMOND AP-2 APP IV
Pace Project No.: 92521143

QC Batch: 600377
QC Batch Method: EPA 7470A
Analysis Method: EPA 7470A
Analysis Description: 7470 Mercury
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92521143001, 92521143002, 92521143003, 92521143004, 92521143005, 92521143006, 92521143007, 92521143008, 92521143009, 92521143010, 92521143011, 92521143012, 92521143013, 92521143014, 92521143015

METHOD BLANK: 3164783 Matrix: Water
Associated Lab Samples: 92521143001, 92521143002, 92521143003, 92521143004, 92521143005, 92521143006, 92521143007, 92521143008, 92521143009, 92521143010, 92521143011, 92521143012, 92521143013, 92521143014, 92521143015

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00050	0.000078	02/18/21 12:33	

LABORATORY CONTROL SAMPLE: 3164784

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	0.0025	0.0024	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3164785 3164786

Parameter	Units	92521143001 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	0.0025	0.0026	99	104	75-125	5	20	

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REPORT OF LABORATORY ANALYSIS

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Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: HAMMOND AP-2 APP IV
Pace Project No.: 92521143

QC Batch: 601295
QC Batch Method: EPA 7470A
Analysis Method: EPA 7470A
Analysis Description: 7470 Mercury
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92521143016, 92521143017, 92521143018, 92521143019, 92521143020

METHOD BLANK: 3168813 Matrix: Water
Associated Lab Samples: 92521143016, 92521143017, 92521143018, 92521143019, 92521143020

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00050	0.000078	02/23/21 13:14	

LABORATORY CONTROL SAMPLE: 3168814

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	0.0025	0.0023	92	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3168815 3168816

Parameter	Units	92521578011 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	mg/L	ND	0.0025	0.0025	0.0022	0.0022	88	89	75-125	1	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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QUALITY CONTROL DATA

Project: HAMMOND AP-2 APP IV
Pace Project No.: 92521143

QC Batch: 601590
QC Batch Method: EPA 7470A
Analysis Method: EPA 7470A
Analysis Description: 7470 Mercury
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92521143021, 92521143022, 92521143023

METHOD BLANK: 3170068 Matrix: Water
Associated Lab Samples: 92521143021, 92521143022, 92521143023

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00050	0.000078	02/22/21 13:27	

LABORATORY CONTROL SAMPLE: 3170069

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3170070 3170071

Parameter	Units	92521143021 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	mg/L	ND	0.0025	0.0025	0.0022	0.0023	85	90	75-125	6	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: HAMMOND AP-2 APP IV
Pace Project No.: 92521143

QC Batch: 598903
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: 92521143001, 92521143003

METHOD BLANK: 3157390 Matrix: Water
Associated Lab Samples: 92521143001, 92521143003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Fluoride	mg/L	ND	0.10	0.050	02/10/21 16:04	

LABORATORY CONTROL SAMPLE: 3157391

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3157392 3157393

Parameter	Units	92520887002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Fluoride	mg/L	0.42	2.5	2.5	2.9	2.9	100	98	90-110	1	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3157394 3157395

Parameter	Units	92521223018 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	2.2	2.2	85	88	90-110	2	10	M1

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: HAMMOND AP-2 APP IV
Pace Project No.: 92521143

QC Batch: 599257
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: 92521143004, 92521143005, 92521143006, 92521143007, 92521143008, 92521143009

METHOD BLANK: 3159217 Matrix: Water
Associated Lab Samples: 92521143004, 92521143005, 92521143006, 92521143007, 92521143008, 92521143009

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Fluoride	mg/L	ND	0.10	0.050	02/11/21 13:11	

LABORATORY CONTROL SAMPLE: 3159218

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Fluoride	mg/L	2.5	2.6	105	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3159221 3159222

Parameter	Units	92521143004 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	2.3	2.4	93	96	90-110	4	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3159223 3159224

Parameter	Units	92521359001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Fluoride	mg/L	2.1	2.5	2.5	4.4	4.4	92	91	90-110	0	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-2 APP IV
Pace Project No.: 92521143

QC Batch: 599664
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: 92521143010

METHOD BLANK: 3161257 Matrix: Water
Associated Lab Samples: 92521143010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Fluoride	mg/L	ND	0.10	0.050	02/12/21 15:24	

LABORATORY CONTROL SAMPLE: 3161258

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Fluoride	mg/L	2.5	2.6	103	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3161259 3161260

Parameter	Units	92521578009 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Fluoride	mg/L	0.066J	2.5	2.5	2.4	2.5	93	99	90-110	6	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3161575 3161576

Parameter	Units	92521143010 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Fluoride	mg/L	0.21	2.5	2.5	2.3	2.5	84	91	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

QUALITY CONTROL DATA

Project: HAMMOND AP-2 APP IV
Pace Project No.: 92521143

QC Batch: 599863
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: 92521143002

METHOD BLANK: 3162426 Matrix: Water
Associated Lab Samples: 92521143002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Fluoride	mg/L	ND	0.10	0.050	02/15/21 22:21	

LABORATORY CONTROL SAMPLE: 3162427

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Fluoride	mg/L	2.5	2.6	105	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3162428 3162429

Parameter	Units	92521957001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Fluoride	mg/L	0.41	2.5	2.5	2.7	2.8	93	95	90-110	2	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3162430 3162431

Parameter	Units	92521151008 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Fluoride	mg/L	0.15	2.5	2.5	2.7	2.6	102	97	90-110	5	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-2 APP IV
Pace Project No.: 92521143

QC Batch: 599864
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: 92521143011, 92521143012, 92521143013, 92521143014, 92521143015, 92521143016

METHOD BLANK: 3162432 Matrix: Water
Associated Lab Samples: 92521143011, 92521143012, 92521143013, 92521143014, 92521143015, 92521143016

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Fluoride	mg/L	ND	0.10	0.050	02/16/21 05:34	

LABORATORY CONTROL SAMPLE: 3162433

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3162434 3162435

Parameter	Units	92521875004 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	2.6	104	104	90-110	1	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3162436 3162437

Parameter	Units	92522062001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Fluoride	mg/L	219 ug/L	2.5	2.5	3.2	3.2	119	121	90-110	1	10	M1

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REPORT OF LABORATORY ANALYSIS

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(770)734-4200

QUALITY CONTROL DATA

Project: HAMMOND AP-2 APP IV
Pace Project No.: 92521143

QC Batch: 600235
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: 92521143017, 92521143018, 92521143019, 92521143020, 92521143021

METHOD BLANK: 3164171 Matrix: Water
Associated Lab Samples: 92521143017, 92521143018, 92521143019, 92521143020, 92521143021

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Fluoride	mg/L	ND	0.10	0.050	02/16/21 14:16	

LABORATORY CONTROL SAMPLE: 3164172

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Fluoride	mg/L	2.5	2.4	97	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3164173 3164174

Parameter	Units	92522138001 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	2.4	2.5	95	97	90-110	2	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3164175 3164176

Parameter	Units	92521578011 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Fluoride	mg/L	0.068J	2.5	2.5	2.6	2.6	100	100	90-110	1	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-2 APP IV
Pace Project No.: 92521143

QC Batch: 601397
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: 92521143022, 92521143023

METHOD BLANK: 3169354 Matrix: Water
Associated Lab Samples: 92521143022, 92521143023

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Fluoride	mg/L	ND	0.10	0.050	02/20/21 16:44	

LABORATORY CONTROL SAMPLE: 3169355

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Fluoride	mg/L	2.5	2.4	98	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3169356 3169357

Parameter	Units	92521143022 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	104	105	90-110	1	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3169358 3169359

Parameter	Units	92521151025 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Fluoride	mg/L	0.071J	2.5	2.5	2.4	2.4	95	95	90-110	0	10	

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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-2 APP IV
Pace Project No.: 92521143

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

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

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

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

B	Analyte was detected in the associated method blank.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

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

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: HAMMOND AP-2 APP IV
Pace Project No.: 92521143

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92521143001	**HGWA-1**				
92521143002	**HGWA-4**				
92521143003	**HGWA-42D**				
92521143004	**HGWA-2**				
92521143005	**HGWA-3**				
92521143006	**HGWA-5**				
92521143007	**HGWA-6**				
92521143008	**HGWA-43D**				
92521143009	**HGWA-44D**				
92521143010	**HGWC-16**				
92521143011	**HGWC-18**				
92521143012	**MW-21D**				
92521143014	**HGWC-14**				
92521143015	**HGWC-17**				
92521143016	**MW-37D**				
92521143018	**HGWC-15**				
92521143019	**MW-23D**				
92521143020	**MW-33**				
92521143022	**MW-22**				
92521143023	**MW-35**				
92521143001	**HGWA-1**	EPA 3005A	601892	EPA 6020B	601999
92521143002	**HGWA-4**	EPA 3005A	601892	EPA 6020B	601999
92521143003	**HGWA-42D**	EPA 3005A	601892	EPA 6020B	601999
92521143004	**HGWA-2**	EPA 3005A	601892	EPA 6020B	601999
92521143005	**HGWA-3**	EPA 3005A	601892	EPA 6020B	601999
92521143006	**HGWA-5**	EPA 3005A	601892	EPA 6020B	601999
92521143007	**HGWA-6**	EPA 3005A	601892	EPA 6020B	601999
92521143008	**HGWA-43D**	EPA 3005A	601892	EPA 6020B	601999
92521143009	**HGWA-44D**	EPA 3005A	601892	EPA 6020B	601999
92521143010	**HGWC-16**	EPA 3005A	601892	EPA 6020B	601999
92521143011	**HGWC-18**	EPA 3005A	601892	EPA 6020B	601999
92521143012	**MW-21D**	EPA 3005A	601892	EPA 6020B	601999
92521143013	**DUP-2**	EPA 3005A	601892	EPA 6020B	601999
92521143014	**HGWC-14**	EPA 3005A	601892	EPA 6020B	601999
92521143015	**HGWC-17**	EPA 3005A	601892	EPA 6020B	601999
92521143016	**MW-37D**	EPA 3005A	601924	EPA 6020B	602022
92521143017	**FB-2**	EPA 3005A	601924	EPA 6020B	602022
92521143018	**HGWC-15**	EPA 3005A	601924	EPA 6020B	602022
92521143019	**MW-23D**	EPA 3005A	601924	EPA 6020B	602022
92521143020	**MW-33**	EPA 3005A	601924	EPA 6020B	602022
92521143021	**EB-1**	EPA 3005A	601924	EPA 6020B	602022
92521143022	**MW-22**	EPA 3005A	601924	EPA 6020B	602022
92521143023	**MW-35**	EPA 3005A	601924	EPA 6020B	602022
92521143001	**HGWA-1**	EPA 7470A	600377	EPA 7470A	600865
92521143002	**HGWA-4**	EPA 7470A	600377	EPA 7470A	600865
92521143003	**HGWA-42D**	EPA 7470A	600377	EPA 7470A	600865
92521143004	**HGWA-2**	EPA 7470A	600377	EPA 7470A	600865

Pace Analytical Services, LLC
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(770)734-4200

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: HAMMOND AP-2 APP IV
Pace Project No.: 92521143

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92521143005	**HGWA-3**	EPA 7470A	600377	EPA 7470A	600865
92521143006	**HGWA-5**	EPA 7470A	600377	EPA 7470A	600865
92521143007	**HGWA-6**	EPA 7470A	600377	EPA 7470A	600865
92521143008	**HGWA-43D**	EPA 7470A	600377	EPA 7470A	600865
92521143009	**HGWA-44D**	EPA 7470A	600377	EPA 7470A	600865
92521143010	**HGWC-16**	EPA 7470A	600377	EPA 7470A	600865
92521143011	**HGWC-18**	EPA 7470A	600377	EPA 7470A	600865
92521143012	**MW-21D**	EPA 7470A	600377	EPA 7470A	600865
92521143013	**DUP-2**	EPA 7470A	600377	EPA 7470A	600865
92521143014	**HGWC-14**	EPA 7470A	600377	EPA 7470A	600865
92521143015	**HGWC-17**	EPA 7470A	600377	EPA 7470A	600865
92521143016	**MW-37D**	EPA 7470A	601295	EPA 7470A	601814
92521143017	**FB-2**	EPA 7470A	601295	EPA 7470A	601814
92521143018	**HGWC-15**	EPA 7470A	601295	EPA 7470A	601814
92521143019	**MW-23D**	EPA 7470A	601295	EPA 7470A	601814
92521143020	**MW-33**	EPA 7470A	601295	EPA 7470A	601814
92521143021	**EB-1**	EPA 7470A	601590	EPA 7470A	601621
92521143022	**MW-22**	EPA 7470A	601590	EPA 7470A	601621
92521143023	**MW-35**	EPA 7470A	601590	EPA 7470A	601621
92521143001	**HGWA-1**	EPA 300.0 Rev 2.1 1993	598903		
92521143002	**HGWA-4**	EPA 300.0 Rev 2.1 1993	599863		
92521143003	**HGWA-42D**	EPA 300.0 Rev 2.1 1993	598903		
92521143004	**HGWA-2**	EPA 300.0 Rev 2.1 1993	599257		
92521143005	**HGWA-3**	EPA 300.0 Rev 2.1 1993	599257		
92521143006	**HGWA-5**	EPA 300.0 Rev 2.1 1993	599257		
92521143007	**HGWA-6**	EPA 300.0 Rev 2.1 1993	599257		
92521143008	**HGWA-43D**	EPA 300.0 Rev 2.1 1993	599257		
92521143009	**HGWA-44D**	EPA 300.0 Rev 2.1 1993	599257		
92521143010	**HGWC-16**	EPA 300.0 Rev 2.1 1993	599664		
92521143011	**HGWC-18**	EPA 300.0 Rev 2.1 1993	599864		
92521143012	**MW-21D**	EPA 300.0 Rev 2.1 1993	599864		
92521143013	**DUP-2**	EPA 300.0 Rev 2.1 1993	599864		
92521143014	**HGWC-14**	EPA 300.0 Rev 2.1 1993	599864		
92521143015	**HGWC-17**	EPA 300.0 Rev 2.1 1993	599864		
92521143016	**MW-37D**	EPA 300.0 Rev 2.1 1993	599864		
92521143017	**FB-2**	EPA 300.0 Rev 2.1 1993	600235		
92521143018	**HGWC-15**	EPA 300.0 Rev 2.1 1993	600235		
92521143019	**MW-23D**	EPA 300.0 Rev 2.1 1993	600235		
92521143020	**MW-33**	EPA 300.0 Rev 2.1 1993	600235		
92521143021	**EB-1**	EPA 300.0 Rev 2.1 1993	600235		
92521143022	**MW-22**	EPA 300.0 Rev 2.1 1993	601397		
92521143023	**MW-35**	EPA 300.0 Rev 2.1 1993	601397		

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

Laboratory receiving samples:

Asheville ☐ Eden ☐ Greenwood ☐ Huntersville ☐ Raleigh ☐ Mechanicsville ☐ Atlanta ☑ Kernersville ☐

Sample Condition Upon Receipt

Client Name: GA Power

Project #: WO# : 92521143

92521143

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

Custody Seal Present? ☐ Yes ☑ No **Seals Intact?** ☐ Yes ☐ No

Date/Initials Person Examining Contents: MP 2/9/21

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

Biological Tissue Frozen? ☐ Yes ☑ No ☐ N/A

Thermometer: ☐ IR Gun ID: 233 **Type of Ice:** ☑ Wet ☐ Blue ☐ None

Cooler Temp: 3.6 **Correction Factor:** Add/Subtract (°C) +0.4

Cooler Temp Corrected (°C): 4.0

Temp should be above freezing to 6°C

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

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

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

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

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

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? ☐ Yes ☐ No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: Date/Time:

Project Manager SCURF Review: Date:

Project Manager SRF Review: Date:

Pace Analytical
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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 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 AP-2 App. IV Scan
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

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 (use 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	Full App.IV Metals 6020/7470*	RAD 228/228	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D. 92521143
																			N	N	N		
1	HGWA-1	WT	G	2/9/2021	1610	–	–	17	4	1		3							X	X	X	N	pH = 7.11
2	HGWA-2	WT	G			–	–		4	1		3							X	X	X	N	pH =
3	HGWA-3	WT	G			–	–		4	1		3							X	X	X	N	pH =
4	HGWA-4	WT	G			–	–		4	1		3							X	X	X	N	pH =
5	HGWA-5	WT	G			–	–		4	1		3							X	X	X	N	pH =
6	HGWA-6	WT	G			–	–		4	1		3							X	X	X	N	pH =
7	HGWA-42D	WT	G			–	–		4	1		3							X	X	X	N	pH =
8	HGWA-43D	WT	G			–	–	2/9/2021	4	1		3							X	X	X	N	pH =
9	HGWA-44D	WT	G			–	–		4	1		3							X	X	X	N	pH =
10	HGWC-14	WT	G			–	–		4	1		3							X	X	X	N	pH =
11	HGWC-15	WT	G			–	–		4	1		3							X	X	X	N	pH =
12	HGWC-16	WT	G			–	–		4	1		3							X	X	X	N	pH =

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.		2/9/21	1578	/Pace	2/9/21	1233				
*Full App. IV Metals=Sb, As, Ba, Be, Cd, Cr, Co, Pb, Li, Hg, Mo, Se, Tl	/Pace	2/9/21	1545	/Pace	2/9/21	1545	3.6	Y	N	Y
One sample set submitted for HGWA-1/2/3/43D/44D and EB-1 but they will be reported for AP-1/2 SDGs										

SAMPLER NAME AND SIGNATURE		Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
PRINT Name of SAMPLER:	Chad Russo				
SIGNATURE of SAMPLER:					
DATE Signed (MM/DD/YY):	2/9/2021				

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

Pace Analytical
www.pacelabs.com

CHAIN-OF-CUSTODY / Analytical Request Document

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Page: 2 of 5

Section A — Required Client Information:

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

Section B — Required Project Information:

Report To:	SCS Contacts
Copy To:	Geosyntec Contacts
Purchase Order No.:	
Project Name:	Plant Hammond AP-2 App. IV Scan
Project Number:	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 (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	Full App.IV Metals 6020/7470*	RAD 226/228	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
																		N	N	N	N		9252143
1	~~HGWA-1~~	WT	G			–	–		4	1		3							X	X	X	N	pH =
2	~~HGWA-2~~	WT	G			–	–		4	1		3							X	X	X	N	pH =
3	~~HGWA-3~~	WT	G			–	–		4	1		3							X	X	X	N	pH =
4	HGWA-4	WT	G	2-8-21	1554	–	–		4	1		3							X	X	X	N	pH = 4.94
5	~~HGWA-5~~	WT	G			–	–		4	1		3							X	X	X	N	pH =
6	~~HGWA-6~~	WT	G			–	–		4	1		3							X	X	X	N	pH =
7	~~HGWA-42D~~	WT	G			–	–		4	1		3							X	X	X	N	pH =
8	~~HGWA-43D~~	WT	G			–	–		4	1		3							X	X	X	N	pH =
9	~~HGWA-44D~~	WT	G			–	–		4	1		3							X	X	X	N	pH =
10	~~HGWC-14~~	WT	G			–	–		4	1		3							X	X	X	N	pH =
11	~~HGWC-15~~	WT	G			–	–		4	1		3							X	X	X	N	pH =
12	~~HGWC-16~~	WT	G			–	–		4	1		3							X	X	X	N	pH =

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 samole for the event has been taken.		2/9/21	1231	/ Pace	2/9/21	1233				
*Full App. IV Metals=Sb, As, Ba, Be, Cd, Cr, Co, Pb, Li, Hg, Mo, Se, Tl	/ Pace	2/9/21	1545	/ Pace	2/9/21	1545	3.6	Y	N	Y
One sample set submitted for HGWA-1/2/3/43D/44D and EB-1 but they will be reported for AP-1/2 SDGs										
							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: Aaron Reeder

SIGNATURE of SAMPLER: DATE Signed (MM/DD/YY): 02/08/2021

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

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

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Page: 3 of 3

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Email To:	SCS Contacts
Phone:	Fax:
Requested Due Date/TAT:	10 Day

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Copy To:	Geosyntec Contacts
Purchase Order No.:	
Project Name:	Plant Hammond AP-2 App. IV Scan
Project Number:	GW8581B

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 GA EPD

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
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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	Full App.IV Metals 6020/7470*	RAD 226/228	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
																			N	N	N		92521143
1	HGWA-1	WT	G						4	1		3							X	X	X	N	pH =
2	HGWA-2	WT	G						4	1		3							X	X	X	N	pH =
3	HGWA-3	WT	G						4	1		3							X	X	X	N	pH =
4	HGWA-4	WT	G						4	1		3							X	X	X	N	pH =
5	HGWA-5	WT	G						4	1		3							X	X	X	N	pH =
6	HGWA-6	WT	G						4	1		3							X	X	X	N	pH =
7	HGWA-42D	WT	G	2/8/21	1736			15	4	1		3							X	X	X	N	pH = 7.64
8	HGWA-43D	WT	G						4	1		3							X	X	X	N	pH =
9	HGWA-44D	WT	G						4	1		3							X	X	X	N	pH =
10	HGWC-14	WT	G						4	1		3							X	X	X	N	pH =
11	HGWC-15	WT	G						4	1		3							X	X	X	N	pH =
12	HGWC-16	WT	G						4	1		3							X	X	X	N	pH =

ADDITIONAL COMMENTS

Please note dry wells, strike through any wells not sampled, and note when the last sample for the event has been taken.
*Full App. IV Metals=Sb, As, Ba, Be, Cd, Cr, Co, Pb, Li, Hg, Mo, Se, Tl
One sample set submitted for HGWA-1/2/3/43D/44D and EB-1 but they will be reported for AP-1/2 SDGs

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
Thomas Hessler / Geosyntec	2/9/21	1231	/ Pace	2/9/21	1233
/ Pace	2/9/21	1545	/ Pace	2/9/21	1545

SAMPLE CONDITIONS

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

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Thomas Hessler
SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 2/8/21

*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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Page: 1 of 3

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Phone:	Fax:
Requested Due Date/TAT:	10 Day

Section B Required Project Information:

Report To:	SCS Contacts
Copy To:	Geosyntec Contacts
Purchase Order No.:	
Project Name:	Plant Hammond AP-2 App. IV Scan
Project Number:	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 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	Requested Analysis Filtered (Y/N): Fluoride N	Full App IV Metals 6020/7470* N	RAD 9320/9315 N	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	~~HGWA-1~~	WT	G																			N	pH =
2	HGWA-2	WT	G	2/9/21	1036	–	–	16	4	1		3							X	X	X	N	pH = 5.42
3	HGWA-3	WT	G	2/9/21	1156	–	–	19	4	1		3							X	X	X	N	pH = 7.23
4	~~HGWA-4~~	WT	G																X	X	X	N	pH =
5	~~HGWA-5~~	WT	G																X	X	X	N	pH =
6	~~HGWA-6~~	WT	G																X	X	X	N	pH =
7	~~HGWA-12D~~	WT	G																X	X	X	N	pH =
8	~~HGWA-13D~~	WT	G																X	X	X	N	pH =
9	~~HGWA-44D~~	WT	G																X	X	X	N	pH =
10	~~HGWC-14~~	WT	G																X	X	X	N	pH =
11	~~HGWC-15~~	WT	G																X	X	X	N	pH =
12	~~HGWC-16~~	WT	G																X	X	X	N	pH =

9252143

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.		2/9/21	1759		2/9/21	1759	
*Full App. IV Metals=Sb, As, Ba, Be, Cd, Cr, Co, Pb, Li, Hg, Mo, Se, Tl		2/10/21	0937	Pace	2/10/21	0936	
One sample set submitted for HGWA-1/2/3/43D/44D and EB-1 but they will be reported for AP-1/2 SDGs	Pace	2/10/21	1220		2/10/21	1220	

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER:

SIGNATURE of SAMPLER: DATE Signed (MM/DD/YY): 2/9/21

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

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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 AP-2 App. IV Scan
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

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	Full App IV Metals 6020/7470*	RAD 228/228	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D. 92521143
1	HGWA-1	WT	G			--	--		4	1		3							X	X	X	N	pH =
2	HGWA-2	WT	G			--	--		4	1		3							X	X	X	N	pH =
3	HGWA-3	WT	G			--	--		4	1		3							X	X	X	N	pH =
4	HGWA-4	WT	G			--	--		4	1		3							X	X	X	N	pH =
5	HGWA-5	WT	G	2-9-21	1046	--	--		4	1		3							X	X	X	N	pH =
6	HGWA-6	WT	G	2-9-21	1200	--	--		4	1		3							X	X	X	N	pH = 6.35
7	HGWA-42D	WT	G			--	--		4	1		3							X	X	X	N	pH = 7.40
8	HGWA-43D	WT	G			--	--		4	1		3							X	X	X	N	pH =
9	HGWA-44D	WT	G			--	--		4	1		3							X	X	X	N	pH =
10	HGWC-14	WT	G			--	--		4	1		3							X	X	X	N	pH =
11	HGWC-15	WT	G			--	--		4	1		3							X	X	X	N	pH =
12	HGWC-16	WT	G			--	--		4	1		3							X	X	X	N	pH =

ADDITIONAL COMMENTS

Please note dry wells, strike thorugh any wells not sampled, and note when the last sample for the event has been taken.
*Full App. IV Metals=Sb, As, Ba, Be, Cd, Cr, Co, Pb, Li, Hg, Mo, Se, Tl
One sample set submitted for HGWA-1/2/3/43D/44D and EB-1 but they will be reported for AP-1/2 SDGs

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
Sampler	2-10-21	0833	Geo	2/10/21	0835
	2/10/21	0933	Pace	2/10/21	0936
Pace	2/11/21	1220		2/9/21	1220

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Aaron Reeder

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 02/09/2021

SAMPLE CONDITIONS

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

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to 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: 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 AP-2 App. IV Scan
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 CSR

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 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	Full App.IV Metals 6020/7470*	RAD 226/228	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
																		Y/N	N	N	N		9252143
1	HGWA-1	WT	G			–	–		4	1		3							X	X	X	N	pH=
2	HGWA-2	WT	G			–	–		4	1		3							X	X	X	N	pH=
3	HGWA-3	WT	G			–	–		4	1		3							X	X	X	N	pH=
4	HGWA-4	WT	G			–	–		4	1		3							X	X	X	N	pH=
5	HGWA-5	WT	G			–	–		4	1		3							X	X	X	N	pH=
6	HGWA-6	WT	G			–	–		4	1		3							X	X	X	N	pH=
7	HGWA-42D	WT	G			–	–		4	1		3							X	X	X	N	pH=
8	HGWA-43D	WT	G	2/9/21	1758	–	–	16	4	1		3							X	X	X	N	pH=
9	HGWA-44D	WT	G	2/9/21	1309	–	–	17	4	1		3							X	X	X	N	pH= 7.44
10	HGWC-14	WT	G			–	–		4	1		3							X	X	X	N	pH= 7.34
11	HGWC-15	WT	G			–	–		4	1		3							X	X	X	N	pH=
12	HGWC-16	WT	G			–	2/9/21		4	1		3							X	X	X	N	pH=

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.		2/10/21	0903	/Pace	2/11/21	0936	
*Full App. IV Metals=Sb, As, Ba, Be, Cd, Cr, Co, Pb, Li, Hg, Mo, Se, Tl	/Pace	2/10/21	1220	/Pace	2/10/21	1220	
One sample set submitted for HGWA-1/2/3/43D/44D and EB-1 but they will be reported for AP-1/2 SDGs							

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Chad Russo

SIGNATURE of SAMPLER: /Pace

DATE Signed (MM/DD/YY): 2/9/2021

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

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

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Page: 1 of 1

Section A — Required Client Information:

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

Section B — Required Project Information:

Report To:	SCS Contacts
Copy To:	Geosyntec Contacts
Purchase Order No.:	
Project Name:	Plant Hammond AP-2 App. IV Scan
Project Number:	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

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

Pace Project No./ Lab I.D. 92524143

ITEM #	SAMPLE ID	MATRIX CODE	SAMPLE TYPE	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	Full App.IV Metals 6020/7470	RAD 226/228	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
																		N	N	N		
1	HGWA-1	WT	G						4	1		3							X	X	X	N	pH =
2	HGWA-2	WT	G						4	1		3							X	X	X	N	pH =
3	HGWA-3	WT	G						4	1		3							X	X	X	N	pH =
4	HGWA-4	WT	G						4	1		3							X	X	X	N	pH =
5	HGWA-5	WT	G						4	1		3							X	X	X	N	pH =
6	HGWA-6	WT	G						4	1		3							X	X	X	N	pH =
7	HGWA-42D	WT	G						4	1		3							X	X	X	N	pH =
8	HGWA-43D	WT	G						4	1		3							X	X	X	N	pH =
9	HGWA-44D	WT	G						4	1		3							X	X	X	N	pH =
10	HGWC-14	WT	G						4	1		3							X	X	X	N	pH =
11	HGWC-15	WT	G						4	1		3							X	X	X	N	pH =
12	HGWC-16	WT	G	2-10-21	1503				4	1		3							X	X	X	N	pH = 7.08

Received 2-10-21 10-30

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	2-11-21	0830	/GEO	2/11/21	0830	
*Full App. IV Metals=Sb, As, Ba, Be, Cd, Cr, Co, Pb, Li, Hg, Mo, Se, Tl	/GEO	2/11/21	0915	/Pace	2/11/21	0919	
One sample set submitted for HGWA-1/2/3/43D/44D and EB-1 but they will be reported for AP-1/2 SDGs	/Pace	2/11/21	1320				

SAMPLER NAME AND SIGNATURE			Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
PRINT Name of SAMPLER:	Sampler					
SIGNATURE of SAMPLER:		DATE Signed (MM/DD/YY): 02/10/2021				

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

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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 AP-2 App. IV Scan
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

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 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	Full App.IV Metals 6020/7470*	RAD 226/228	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
	Requested Analysis Filtered (Y/N)																	Y/N	N	N	N		
1	~~HGWC-17~~	WT	G			–	–		4	1		3							X	X	X	N	9252147
2	HGWC-18	WT	G	2/11/21	1257	–	–	16	4	1		3							X	X	X	N	pH =
3	MW-21D	WT	G	2/11/21	1453	–	–	17	4	1		3							X	X	X	N	pH = 4.53 01
4	~~MW-22~~	WT	G			–	–		4	1		3							X	X	X	N	pH = 6.87 02
5	~~MW-23D~~	WT	G			–	–		4	1		3							X	X	X	N	pH =
6	~~MW-33~~	WT	G			–	–		4	1		3							X	X	X	N	pH =
7	~~MW-35~~	WT	G			–	–		4	1		3							X	X	X	N	pH =
8	~~MW-37D~~	WT	G			–	–		4	1		3							X	X	X	N	pH =
9	Dup-2	WT	G	2/11/21	–	–	–		4	1		3							X	X	X	N	pH =
10	~~EB-1~~	WT	G						4	1		3							X	X	X	N	03
11	FB-2	WT	G			–	–		4	1		3							X	X	X	N	
12					2/11/21																	N	

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.	/Geo	2/12/21	0936	/Pace	2/12/21	0936	
*Full App. IV Metals=Sb, As, Ba, Be, Cd, Cr, Co, Pb, Li, Hg, Mo, Se, Tl	/Pace	2/12/21	1352		2/12/21	1352	
One sample set submitted for HGWA-1/2/3/43D/44D and EB-1 but they will be reported for AP-1/2 SDGs							

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Chad Rutso

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 2/11/2021

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

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

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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 AP-2 App. IV Scan
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 DSR

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	Full App.IV Metals 6020/7470*	RAD 226/228	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
																		Requested Analysis Filtered (Y/N)	N	N	N		92521143
1	HGWA-1	WT	G			--	--		4	1		3							X	X	X	N	pH =
2	HGWA-2	WT	G			--	--		4	1		3							X	X	X	N	pH =
3	HGWA-3	WT	G			--	--		4	1		3							X	X	X	N	pH =
4	HGWA-4	WT	G			--	--		4	1		3							X	X	X	N	pH =
5	HGWA-5	WT	G			--	--		4	1		3							X	X	X	N	pH =
6	HGWA-6	WT	G			--	--		4	1		3							X	X	X	N	pH =
7	HGWA-42D	WT	G			--	--		4	1		3							X	X	X	N	pH =
8	HGWA-43D	WT	G			--	--		4	1		3							X	X	X	N	pH =
9	HGWA-44D	WT	G			--	--		4	1		3							X	X	X	N	pH =
10	HGWC-14	WT	G	2-11-21	1512	--	--		4	1		3							X	X	X	N	pH = 4.84
11	HGWC-15	WT	G			--	--		4	1		3							X	X	X	N	pH =
12	HGWC-16	WT	G			--	--		4	1		3							X	X	X	N	pH =

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	2-12-21	0845		2/12/21	0845	
*Full App. IV Metals=Sb, As, Ba, Be, Cd, Cr, Co, Pb, Li, Hg, Mo Se, Tl		2/12/21	0936		2/12/21	0936	
One sample set submitted for HGWA-1/2/3/43D/44D and EB-1 but they will be reported for AP-1/2 SDGs	Pace	2/12/21	1362		2/12/21	1352	

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Aaron Rieser

SIGNATURE of SAMPLER: DATE Signed (MM/DD/YY): 02/11/2021

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

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

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CHAIN-OF-CUSTODY / Analytical Request Document

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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 AP-2 App. IV Scan
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 (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	Full App.IV Metals 6020/7470*	RAD 226/228	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D. (252114)
																		Y/N	N	N	N		
1	HGWC-17	WT	G	2-11-21	1130	–	–		4	1		3							X	X	X	N	pH = 6.31 015
2	HGWC-18	WT	G			–	–		4	1		3							X	X	X	N	pH =
3	MW-21D	WT	G			–	–		4	1		3							X	X	X	N	pH =
4	MW-22	WT	G			–	–		4	1		3							X	X	X	N	pH =
5	MW-23D	WT	G			–	–		4	1		3							X	X	X	N	pH =
6	MW-33	WT	G			–	–		4	1		3							X	X	X	N	pH =
7	MW-35	WT	G			–	–		4	1		3							X	X	X	N	pH =
8	MW-37D	WT	G	2-11-21	1309	–	–		4	1		3							X	X	X	N	pH =
9	Dup-2	WT	G			–	–		4	1		3							X	X	X	N	pH = 7.42 016
10	EB-1	WT	G			–	–		4	1		3							X	X	X	N	
11	FB-2	WT	G	2-11-21	0845	–	–		4	1		3							X	X	X	N	
12																			X	X	X	N	017

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	2-12-21	0845		2/12/21	0845	
*Full App. IV Metals=Sb, As, Ba, Be, Cd, Cr, Co, Pb, Li, Hg, Mo, Se, Tl		2/12/21	0936		2/12/21	0936	
One sample set submitted for HGWA-1/2/3/43D/44D and EB-1 but they will be reported for AP-1/2 SDGs	Pace	2/12/21	1352		2/12/21	1352	

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER: Aaron
SIGNATURE of SAMPLER:
DATE Signed (MM/DD/YY): 02/11/2021

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

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

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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 AP-2 App. IV Scan
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

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	Full App.IV Metals 6020/7470	RAD 226/228	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
																		Requested Analysis Filtered (Y/N)	N	N	N		4252145
1	HGWA-1	WT	G			–	–		4	1		3							X	X	X	N	pH =
2	HGWA-2	WT	G			–	–		4	1		3							X	X	X	N	pH =
3	HGWA-3	WT	G			–	–		4	1		3							X	X	X	N	pH =
4	HGWA-4	WT	G			–	–		4	1		3							X	X	X	N	pH =
5	HGWA-5	WT	G			–	–		4	1		3							X	X	X	N	pH =
6	HGWA-6	WT	G			2/12/21	–		4	1		3							X	X	X	N	pH =
7	HGWA-42D	WT	G			–	–		4	1		3							X	X	X	N	pH =
8	HGWA-43D	WT	G			–	–		4	1		3							X	X	X	N	pH =
9	HGWA-44D	WT	G			–	–		4	1		3							X	X	X	N	pH =
10	HGWC-14	WT	G			–	–		4	1		3							X	X	X	N	pH =
11	HGWC-15	WT	G	2/12/21	1501	–	–	18	4	1		3							X	X	X	N	pH = 5.99
12	HGWC-16	WT	G			–	–		4	1		3							X	X	X	N	pH =

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] /Pace	2/15/21	0945	[signature] /Pace	2/15/21	0945	
*Full App. IV Metals=Sb, As, Ba, Be, Cd, Cr, Co, Pb, Li, Hg, Mo, Se, Tl	[signature] /Pace						
One sample set submitted for HGWA-1/2/3/43D/44D and EB-1 but they will be reported for AP-1/2 SDGs							

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER: Chad Russo
SIGNATURE of SAMPLER: [signature]
DATE Signed (MM/DD/YY): 2/12/21

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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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 AP-2 App. IV Scan
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 GSA
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	Full App.IV Metals 6020/7470	RAD 226/228	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D. 4252443
1	HGWC-17	WT	G						4	1		3						N	X	X	X	N	pH =
2	HGWC-18	WT	G				2/9/21		4	1		3						N	X	X	X	N	pH =
3	MW-21D	WT	G						4	1		3						N	X	X	X	N	pH =
4	MW-22	WT	G						4	1		3						N	X	X	X	N	pH =
5	MW-23D	WT	G	2/12/21	1354			16	4	1		3						N	X	X	X	N	pH = 6.80 DLG
6	MW-33	WT	G						4	1		3						N	X	X	X	N	pH =
7	MW-35	WT	G						4	1		3						N	X	X	X	N	pH =
8	MW-37D	WT	G						4	1		3						N	X	X	X	N	pH =
9	Dup-2	WT	G						4	1		3						N	X	X	X	N	
10	EB-1	WT	G				2/13/21		4	1		3						N	X	X	X	N	
11	FB-2	WT	G						4	1		3						N	X	X	X	N	
12																						N	

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]	2/15/21	0945	[signature] / Pace	2/15/21	0945	
*Full App. IV Metals=Sb, As, Ba, Be, Cd, Cr, Co, Pb, Li, Hg, Mo, Se, Tl							
One sample set submitted for HGWA-1/2/3/43D/44D and EB-1 but they will be reported for AP-1/2 SDGs							

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER: Chad Rixse
SIGNATURE of SAMPLER: [signature]
DATE Signed (MM/DD/YY): 2/12/21

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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Page: 3 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 AP-2 App. IV Scan	Pace Project Manager: Kevin Herring
Requested Due Date/TAT: 10 Day	Project Number: GW6581B	Pace Profile #:

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

Site Location STATE: GA

Requested Analysis Filtered (Y/N)

ITEM #	Section D Required Client Information — 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 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	Analyses Test Y/N	Fluoride	Full App.IV Metals 6020/7470*	RAD 226/228	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
	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																	N	N	N	N		92521143
1	HGWC-17	WT	G			–	–		4	1		3						X	X	X		N	pH =
2	HGWC-18	WT	G			–	–		4	1		3						X	X	X		N	pH =
3	MW-21D	WT	G			–	–		4	1		3						X	X	X		N	pH =
4	MW-22	WT	G			–	–		4	1		3						X	X	X		N	pH =
5	MW-23D	WT	G			–	–		4	1		3						X	X	X		N	pH = 4.40
6	MW-33	WT	G	2-12-21	1032	–	–		4	1		3						X	X	X		N	pH =
7	MW-35	WT	G			–	–		4	1		3						X	X	X		N	pH =
8	MW-37D	WT	G			–	–		4	1		3						X	X	X		N	pH =
9	Dup-2	WT	G			–	–		4	1		3						X	X	X		N	
10	EB-1	WT	G	2-12-21	1535	–	–		4	1		3						X	X	X		N	
11	EB-2	WT	G			–	–		4	1		3						X	X	X		N	
12																							

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.	[signature] / SAMPlor	2-12-21	1600	[signature] 1960	2/12/21	1600	
*Full App. IV Metals=Sb, As, Ba, Be, Cd, Cr, Co, Pb, Li, Hg, Mo, Se, Tl	[signature] 1960	2/15/21	0945	[signature] Pace	2/15/21	0945	
One sample set submitted for HGWA-1/2/3/43D/44D and EB-1 but they will be reported for AP-1/2 SDGs.							

SAMPLER NAME AND SIGNATURE		Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
PRINT Name of SAMPLER: Aaron Rendar					
SIGNATURE of SAMPLER: [signature]	DATE Signed (MM/DD/YY): 02/12/2021				

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

Pace Analytical
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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 AP-2 App. IV Scan
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 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
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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	Full App.IV Metals 6020/7470*	RAD 226/228	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
																		Requested Analysis Filtered (Y/N)	N	N	N		92521143
1	HGWC-17	WT	G			–	–		4	1		3							X	X	X	N	pH=
2	~~HGWC-18~~	WT	G			–	–		4	1		3							X	X	X	N	pH=
3	MW-21D	WT	G			–	–		4	1		3							X	X	X	N	pH=
4	MW-22	WT	G	2/15/21	1543	–	–	15	4	1		3							X	X	X	N	pH= 5.98 022
6	~~MW-23D~~	WT	G			–	–		4	1		3							X	X	X	N	pH=
6	~~MW-33~~	WT	G			–	–		4	1		3							X	X	X	N	pH=
7	MW-35	WT	G	2/15/21	1135	–	–	15	4	1		3							X	X	X	N	pH= 4.82 023
8	~~MW-37D~~	WT	G			–	–		4	1		3							X	X	X	N	pH=
9	Dup-2	WT	G			–	–		4	1		3							X	X	X	N	
10	EB-1	WT	G			–	–		4	1		3							X	X	X	N	
11	FB-2	WT	G			–	–		4	1		3						2/15/21	X	X	X	N	
12																							

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.	Chad Isco / Pace	2/17/21	1154	[illegible] / Pace	2/17/21	1154				
*Full App. IV Metals=Sb, As, Ba, Be, Cd, Cr, Co, Pb, Li, Hg, Mo, Se, Tl	[illegible] / Pace	2/17/21	1608	[illegible] / Pace	2/17/21	1608	4.4	Y	N	Y
One sample set submitted for HGWA-1/2/3/43D/44D and EB-1 but they will be reported for AP-1/2 SDGs										

SAMPLER NAME AND SIGNATURE		Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
PRINT Name of SAMPLER:	Chad Russo				
SIGNATURE of SAMPLER:	[signature] DATE Signed (MM/DD/YY): 2/15/2021				

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

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

April 15, 2021

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

RE: Project: HAMMOND AP-2 SEMIANNUAL
Pace Project No.: 92527256

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory between March 11, 2021 and March 22, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

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

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

Sincerely,

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

Enclosures

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

REPORT OF LABORATORY ANALYSIS

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

CERTIFICATIONS

Project: HAMMOND AP-2 SEMIANNUAL
Pace Project No.: 92527256

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

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

SAMPLE SUMMARY

Project: HAMMOND AP-2 SEMIANNUAL
Pace Project No.: 92527256

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92527256001	**HGWA-1**	Water	03/10/21 16:10	03/11/21 15:55
92527256002	**HGWA-4**	Water	03/10/21 16:21	03/11/21 15:55
92527256003	**HGWA-42D**	Water	03/10/21 14:23	03/11/21 15:55
92527256004	**HGWA-44D**	Water	03/10/21 14:30	03/11/21 15:55
92527256006	**HGWA-2**	Water	03/11/21 09:59	03/12/21 13:43
92527256007	**HGWA-3**	Water	03/11/21 11:25	03/12/21 13:43
92527256008	**HGWA-5**	Water	03/11/21 11:30	03/12/21 13:43
92527256009	**HGWA-6**	Water	03/11/21 12:39	03/12/21 13:43
92527256010	**HGWA-43D**	Water	03/11/21 09:57	03/12/21 13:43
92527256011	**MW-37D**	Water	03/12/21 10:20	03/15/21 12:00
92527256012	**HGWC-15**	Water	03/16/21 15:24	03/17/21 13:10
92527256013	**HGWC-14**	Water	03/17/21 14:28	03/18/21 13:17
92527256014	**HGWC-16**	Water	03/17/21 09:29	03/18/21 13:17
92527256015	**MW-22**	Water	03/17/21 10:00	03/18/21 13:17
92527256016	**MW-23D**	Water	03/17/21 11:49	03/18/21 13:17
92527256017	**HGWC-17**	Water	03/18/21 14:48	03/19/21 13:40
92527256018	**HGWC-18**	Water	03/18/21 10:01	03/19/21 13:40
92527256019	**MW-21D**	Water	03/18/21 12:08	03/19/21 13:40
92527256020	**MW-33**	Water	03/18/21 10:40	03/19/21 13:40
92527256021	**DUP-2**	Water	03/18/21 00:00	03/19/21 13:40
92527256022	**EB-2**	Water	03/18/21 12:50	03/19/21 13:40
92527256023	**FB-2**	Water	03/18/21 15:30	03/19/21 13:40
92527256024	**MW-35**	Water	03/19/21 12:48	03/22/21 15:41

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SAMPLE ANALYTE COUNT

Project: HAMMOND AP-2 SEMIANNUAL
Pace Project No.: 92527256

Lab ID	Sample ID	Method	Analysts	Analytes Reported
92527256001	**HGWA-1**	EPA 6010D	DRB	1
		EPA 6020B	CW1	13
		SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92527256002	**HGWA-4**	EPA 6010D	DRB	1
		EPA 6020B	CW1	13
		SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92527256003	**HGWA-42D**	EPA 6010D	DRB	1
		EPA 6020B	CW1	13
		SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92527256004	**HGWA-44D**	EPA 6010D	DRB	1
		EPA 6020B	CW1	13
		SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92527256006	**HGWA-2**	EPA 6010D	DRB	1
		EPA 6020B	CW1	13
		SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	JLH	3
92527256007	**HGWA-3**	EPA 6010D	DRB	1
		EPA 6020B	CW1	13
		SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	JLH	3
92527256008	**HGWA-5**	EPA 6010D	DRB	1
		EPA 6020B	KH	13
		SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	JLH	3
92527256009	**HGWA-6**	EPA 6010D	DRB	1
		EPA 6020B	KH	13
		SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	JLH	3
92527256010	**HGWA-43D**	EPA 6010D	DRB	1
		EPA 6020B	CW1	13
		SM 2450C-2011	AW1	1
		EPA 300.0 Rev 2.1 1993	JLH	3
92527256011	**MW-37D**	EPA 6010D	DRB	1

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SAMPLE ANALYTE COUNT

Project: HAMMOND AP-2 SEMIANNUAL
Pace Project No.: 92527256

Lab ID	Sample ID	Method	Analysts	Analytes Reported
		EPA 6020B	KH	13
		SM 2450C-2011	AW1	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92527256012	**HGWC-15**	EPA 6010D	DRB	1
		EPA 6020B	KH	13
		SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	JLH	3
92527256013	**HGWC-14**	EPA 6010D	DRB	1
		EPA 6020B	CW1, KH	13
		SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92527256014	**HGWC-16**	EPA 6010D	DRB	1
		EPA 6020B	KH	13
		SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92527256015	**MW-22**	EPA 6010D	DRB	1
		EPA 6020B	CW1, KH	13
		SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92527256016	**MW-23D**	EPA 6010D	DRB	1
		EPA 6020B	CW1, KH	13
		SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92527256017	**HGWC-17**	EPA 6010D	DRB	1
		EPA 6020B	CW1, KH	13
		SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92527256018	**HGWC-18**	EPA 6010D	DRB	1
		EPA 6020B	CW1, KH	13
		SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92527256019	**MW-21D**	EPA 6010D	DRB	1
		EPA 6020B	CW1, KH	13
		SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92527256020	**MW-33**	EPA 6010D	DRB	1
		EPA 6020B	CW1, KH	13

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SAMPLE ANALYTE COUNT

Project: HAMMOND AP-2 SEMIANNUAL
Pace Project No.: 92527256

Lab ID	Sample ID	Method	Analysts	Analytes Reported
		SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92527256021	**DUP-2**	EPA 6010D	DRB	1
		EPA 6020B	CW1, KH	13
		SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92527256022	**EB-2**	EPA 6010D	DRB	1
		EPA 6020B	KH	13
		SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92527256023	**FB-2**	EPA 6010D	DRB	1
		EPA 6020B	CW1, KH	13
		SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92527256024	**MW-35**	EPA 6010D	DRB	1
		EPA 6020B	CW1, KH	13
		SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3

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

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SUMMARY OF DETECTION

Project: HAMMOND AP-2 SEMIANNUAL
Pace Project No.: 92527256

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92527256001	**HGWA-1**					
	Performed by	CUSTOMER			03/22/21 11:59	
	pH	6.95	Std. Units		03/22/21 11:59	
EPA 6010D	Calcium	111	mg/L	1.0	03/19/21 04:13	
EPA 6020B	Barium	0.030	mg/L	0.0050	03/16/21 15:56	
EPA 6020B	Boron	0.015J	mg/L	0.040	03/16/21 15:56	
EPA 6020B	Lithium	0.00090J	mg/L	0.030	03/16/21 15:56	
EPA 6020B	Selenium	0.0047J	mg/L	0.0050	03/16/21 15:56	
SM 2450C-2011	Total Dissolved Solids	348	mg/L	10.0	03/15/21 13:14	
EPA 300.0 Rev 2.1 1993	Chloride	7.4	mg/L	1.0	03/17/21 20:51	
EPA 300.0 Rev 2.1 1993	Fluoride	0.079J	mg/L	0.10	03/17/21 20:51	
EPA 300.0 Rev 2.1 1993	Sulfate	49.6	mg/L	1.0	03/17/21 20:51	M1
92527256002	**HGWA-4**					
	Performed by	CUSTOMER			03/22/21 11:59	
	pH	5.28	Std. Units		03/22/21 11:59	
EPA 6010D	Calcium	5.9	mg/L	1.0	03/19/21 04:18	
EPA 6020B	Barium	0.036	mg/L	0.0050	03/16/21 16:01	
EPA 6020B	Beryllium	0.00017J	mg/L	0.00050	03/16/21 16:01	
EPA 6020B	Boron	0.012J	mg/L	0.040	03/16/21 16:01	
EPA 6020B	Cobalt	0.00065J	mg/L	0.0050	03/16/21 16:01	
EPA 6020B	Lead	0.00016J	mg/L	0.0010	03/16/21 16:01	
EPA 6020B	Lithium	0.0011J	mg/L	0.030	03/16/21 16:01	
SM 2450C-2011	Total Dissolved Solids	53.0	mg/L	10.0	03/15/21 13:15	
EPA 300.0 Rev 2.1 1993	Chloride	2.9	mg/L	1.0	03/17/21 21:33	
EPA 300.0 Rev 2.1 1993	Sulfate	1.2	mg/L	1.0	03/17/21 21:33	
92527256003	**HGWA-42D**					
	Performed by	CUSTOMER			03/22/21 11:59	
	pH	7.70	Std. Units		03/22/21 11:59	
EPA 6010D	Calcium	43.4	mg/L	1.0	03/19/21 04:23	
EPA 6020B	Barium	0.18	mg/L	0.0050	03/16/21 16:07	
EPA 6020B	Boron	0.048	mg/L	0.040	03/16/21 16:07	
EPA 6020B	Lithium	0.0094J	mg/L	0.030	03/16/21 16:07	
SM 2450C-2011	Total Dissolved Solids	163	mg/L	10.0	03/15/21 13:15	
EPA 300.0 Rev 2.1 1993	Chloride	3.0	mg/L	1.0	03/17/21 22:14	
EPA 300.0 Rev 2.1 1993	Fluoride	0.11	mg/L	0.10	03/17/21 22:14	
EPA 300.0 Rev 2.1 1993	Sulfate	10.8	mg/L	1.0	03/17/21 22:14	
92527256004	**HGWA-44D**					
	Performed by	CUSTOMER			03/22/21 11:59	
	pH	7.92	Std. Units		03/22/21 11:59	
EPA 6010D	Calcium	18.3	mg/L	1.0	03/19/21 04:28	
EPA 6020B	Antimony	0.00037J	mg/L	0.0030	03/16/21 16:13	B
EPA 6020B	Barium	0.26	mg/L	0.0050	03/16/21 16:13	
EPA 6020B	Boron	0.39	mg/L	0.040	03/16/21 16:13	
EPA 6020B	Lithium	0.030	mg/L	0.030	03/16/21 16:13	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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SUMMARY OF DETECTION

Project: HAMMOND AP-2 SEMIANNUAL
Pace Project No.: 92527256

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92527256004	**HGWA-44D**					
EPA 6020B	Molybdenum	0.0019J	mg/L	0.010	03/16/21 16:13	
SM 2450C-2011	Total Dissolved Solids	289	mg/L	10.0	03/15/21 13:15	
EPA 300.0 Rev 2.1 1993	Chloride	12.3	mg/L	1.0	03/17/21 22:28	
EPA 300.0 Rev 2.1 1993	Fluoride	0.65	mg/L	0.10	03/17/21 22:28	
92527256006	**HGWA-2**					
	Performed by	CUSTOMER			03/22/21 11:59	
	pH	5.80	Std. Units		03/22/21 11:59	
EPA 6010D	Calcium	43.8	mg/L	1.0	03/22/21 20:09	M1
EPA 6020B	Barium	0.070	mg/L	0.0050	03/19/21 20:54	
EPA 6020B	Beryllium	0.000086J	mg/L	0.00050	03/19/21 20:54	
EPA 6020B	Boron	0.056	mg/L	0.040	03/19/21 20:54	
EPA 6020B	Cobalt	0.013	mg/L	0.0050	03/19/21 20:54	
EPA 6020B	Lead	0.000076J	mg/L	0.0010	03/19/21 20:54	
EPA 6020B	Lithium	0.0011J	mg/L	0.030	03/19/21 20:54	
SM 2450C-2011	Total Dissolved Solids	169	mg/L	10.0	03/16/21 15:08	
EPA 300.0 Rev 2.1 1993	Chloride	5.1	mg/L	1.0	03/20/21 02:14	
EPA 300.0 Rev 2.1 1993	Fluoride	0.10	mg/L	0.10	03/20/21 02:14	
EPA 300.0 Rev 2.1 1993	Sulfate	52.9	mg/L	1.0	03/20/21 02:14	
92527256007	**HGWA-3**					
	Performed by	CUSTOMER			03/22/21 11:59	
	pH	7.33	Std. Units		03/22/21 11:59	
EPA 6010D	Calcium	83.8	mg/L	1.0	03/22/21 20:29	
EPA 6020B	Barium	0.13	mg/L	0.0050	03/19/21 21:00	
EPA 6020B	Boron	0.015J	mg/L	0.040	03/19/21 21:00	
EPA 6020B	Lithium	0.0035J	mg/L	0.030	03/19/21 21:00	
SM 2450C-2011	Total Dissolved Solids	267	mg/L	10.0	03/16/21 15:08	
EPA 300.0 Rev 2.1 1993	Chloride	5.9	mg/L	1.0	03/20/21 02:29	
EPA 300.0 Rev 2.1 1993	Sulfate	50.4	mg/L	1.0	03/20/21 02:29	
92527256008	**HGWA-5**					
	Performed by	CUSTOMER			03/22/21 11:59	
	pH	6.48	Std. Units		03/22/21 11:59	
EPA 6010D	Calcium	28.3	mg/L	1.0	04/01/21 16:07	M1
EPA 6020B	Barium	0.044	mg/L	0.0050	04/05/21 22:19	
EPA 6020B	Boron	0.0075J	mg/L	0.040	04/05/21 22:19	
EPA 6020B	Chromium	0.0011J	mg/L	0.0050	04/05/21 22:19	
EPA 6020B	Cobalt	0.0013J	mg/L	0.0050	04/05/21 22:19	
EPA 6020B	Lithium	0.0037J	mg/L	0.030	04/05/21 22:19	
SM 2450C-2011	Total Dissolved Solids	118	mg/L	10.0	03/16/21 15:08	
EPA 300.0 Rev 2.1 1993	Chloride	1.4	mg/L	1.0	03/20/21 03:14	
EPA 300.0 Rev 2.1 1993	Fluoride	0.060J	mg/L	0.10	03/20/21 03:14	
EPA 300.0 Rev 2.1 1993	Sulfate	22.7	mg/L	1.0	03/20/21 03:14	

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SUMMARY OF DETECTION

Project: HAMMOND AP-2 SEMIANNUAL
Pace Project No.: 92527256

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92527256009	**HGWA-6**					
	Performed by	CUSTOMER			03/22/21 11:59	
	pH	7.56	Std. Units		03/22/21 11:59	
EPA 6010D	Calcium	53.1	mg/L	1.0	04/01/21 16:26	
EPA 6020B	Barium	0.21	mg/L	0.0050	04/05/21 22:25	
EPA 6020B	Boron	0.018J	mg/L	0.040	04/05/21 22:25	
EPA 6020B	Lithium	0.012J	mg/L	0.030	04/05/21 22:25	
SM 2450C-2011	Total Dissolved Solids	215	mg/L	10.0	03/16/21 15:08	
EPA 300.0 Rev 2.1 1993	Chloride	1.2	mg/L	1.0	03/20/21 03:29	
EPA 300.0 Rev 2.1 1993	Fluoride	0.17	mg/L	0.10	03/20/21 03:29	
EPA 300.0 Rev 2.1 1993	Sulfate	35.5	mg/L	1.0	03/20/21 03:29	
92527256010	**HGWA-43D**					
	Performed by	CUSTOMER			03/22/21 11:59	
	pH	7.46	Std. Units		03/22/21 11:59	
EPA 6010D	Calcium	59.6	mg/L	1.0	03/22/21 20:33	
EPA 6020B	Antimony	0.00057J	mg/L	0.0030	03/19/21 21:06	
EPA 6020B	Arsenic	0.0013J	mg/L	0.0050	03/19/21 21:06	
EPA 6020B	Barium	0.32	mg/L	0.0050	03/19/21 21:06	
EPA 6020B	Boron	0.060	mg/L	0.040	03/19/21 21:06	
EPA 6020B	Lead	0.000094J	mg/L	0.0010	03/19/21 21:06	
EPA 6020B	Lithium	0.0022J	mg/L	0.030	03/19/21 21:06	
EPA 6020B	Molybdenum	0.0064J	mg/L	0.010	03/19/21 21:06	
SM 2450C-2011	Total Dissolved Solids	279	mg/L	10.0	03/17/21 17:40	
EPA 300.0 Rev 2.1 1993	Chloride	4.5	mg/L	1.0	03/20/21 04:14	
EPA 300.0 Rev 2.1 1993	Fluoride	0.20	mg/L	0.10	03/20/21 04:14	
EPA 300.0 Rev 2.1 1993	Sulfate	38.6	mg/L	1.0	03/20/21 04:14	
92527256011	**MW-37D**					
	Performed by	CUSTOMER			03/22/21 11:59	
	pH	7.50	Std. Units		03/22/21 11:59	
EPA 6010D	Calcium	170	mg/L	1.0	04/01/21 16:31	
EPA 6020B	Barium	0.12	mg/L	0.0050	04/05/21 22:48	
EPA 6020B	Boron	0.15	mg/L	0.040	04/05/21 22:48	
EPA 6020B	Lithium	0.035	mg/L	0.030	04/05/21 22:48	
EPA 6020B	Molybdenum	0.014	mg/L	0.010	04/05/21 22:48	
SM 2450C-2011	Total Dissolved Solids	890	mg/L	20.0	03/17/21 17:40	
EPA 300.0 Rev 2.1 1993	Chloride	124	mg/L	6.0	03/23/21 16:42	
EPA 300.0 Rev 2.1 1993	Fluoride	0.061J	mg/L	0.10	03/20/21 22:18	
EPA 300.0 Rev 2.1 1993	Sulfate	237	mg/L	6.0	03/23/21 16:42	
92527256012	**HGWC-15**					
	Performed by	CUSTOMER			03/22/21 11:59	
	pH	6.08	Std. Units		03/22/21 11:59	
EPA 6010D	Calcium	196	mg/L	1.0	04/01/21 16:36	
EPA 6020B	Barium	0.012	mg/L	0.0050	04/05/21 22:54	
EPA 6020B	Boron	2.4	mg/L	0.040	04/05/21 22:54	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: HAMMOND AP-2 SEMIANNUAL
Pace Project No.: 92527256

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92527256012	**HGWC-15**					
EPA 6020B	Cadmium	0.0011	mg/L	0.00050	04/05/21 22:54	
EPA 6020B	Chromium	0.0012J	mg/L	0.0050	04/05/21 22:54	
EPA 6020B	Cobalt	0.018	mg/L	0.0050	04/05/21 22:54	
EPA 6020B	Lithium	0.032	mg/L	0.030	04/05/21 22:54	
SM 2450C-2011	Total Dissolved Solids	92.0	mg/L	20.0	03/23/21 07:59	
EPA 300.0 Rev 2.1 1993	Chloride	103	mg/L	8.0	03/22/21 09:41	
EPA 300.0 Rev 2.1 1993	Sulfate	379	mg/L	8.0	03/22/21 09:41	
92527256013	**HGWC-14**					
	Performed by	CUSTOMER			04/06/21 16:57	
	pH	4.72	Std. Units		04/06/21 16:57	
EPA 6010D	Calcium	572	mg/L	10.0	04/02/21 14:00	
EPA 6020B	Barium	0.023	mg/L	0.0050	04/06/21 01:00	
EPA 6020B	Beryllium	0.00058	mg/L	0.00050	04/06/21 01:00	
EPA 6020B	Boron	11.8	mg/L	0.40	04/06/21 09:40	
EPA 6020B	Cobalt	0.034	mg/L	0.025	04/06/21 17:15	
EPA 6020B	Lead	0.0019	mg/L	0.0010	04/06/21 01:00	
EPA 6020B	Selenium	0.010J	mg/L	0.025	04/06/21 17:15	D3
EPA 6020B	Thallium	0.00034J	mg/L	0.0010	04/06/21 01:00	
SM 2450C-2011	Total Dissolved Solids	1640	mg/L	100	03/23/21 07:41	
EPA 300.0 Rev 2.1 1993	Chloride	233	mg/L	27.0	03/23/21 14:33	
EPA 300.0 Rev 2.1 1993	Fluoride	0.076J	mg/L	0.10	03/23/21 06:17	
EPA 300.0 Rev 2.1 1993	Sulfate	1300	mg/L	27.0	03/23/21 14:33	
92527256014	**HGWC-16**					
	Performed by	CUSTOMER			03/22/21 11:59	
	pH	7.19	Std. Units		03/22/21 11:59	
EPA 6010D	Calcium	198	mg/L	1.0	04/01/21 17:14	
EPA 6020B	Barium	0.12	mg/L	0.0050	04/05/21 22:59	
EPA 6020B	Boron	2.7	mg/L	0.040	04/05/21 22:59	
EPA 6020B	Lead	0.000058J	mg/L	0.0010	04/05/21 22:59	
EPA 6020B	Lithium	0.0048J	mg/L	0.030	04/05/21 22:59	
SM 2450C-2011	Total Dissolved Solids	768	mg/L	20.0	03/23/21 07:41	
EPA 300.0 Rev 2.1 1993	Chloride	93.8	mg/L	1.0	03/23/21 06:31	
EPA 300.0 Rev 2.1 1993	Sulfate	250	mg/L	5.0	03/23/21 14:48	
92527256015	**MW-22**					
	Performed by	CUSTOMER			03/22/21 11:59	
	pH	5.57	Std. Units		03/22/21 11:59	
EPA 6010D	Calcium	200	mg/L	1.0	04/01/21 17:19	
EPA 6020B	Barium	0.018	mg/L	0.0050	04/05/21 23:16	
EPA 6020B	Beryllium	0.000082J	mg/L	0.00050	04/05/21 23:16	
EPA 6020B	Boron	2.7	mg/L	0.20	04/06/21 09:46	
EPA 6020B	Cadmium	0.0022	mg/L	0.00050	04/05/21 23:16	
EPA 6020B	Chromium	0.00075J	mg/L	0.0050	04/05/21 23:16	
EPA 6020B	Cobalt	0.039	mg/L	0.0050	04/05/21 23:16	

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SUMMARY OF DETECTION

Project: HAMMOND AP-2 SEMIANNUAL
Pace Project No.: 92527256

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92527256015	**MW-22**					
EPA 6020B	Lithium	0.0012J	mg/L	0.030	04/05/21 23:16	
SM 2450C-2011	Total Dissolved Solids	998	mg/L	20.0	03/23/21 07:41	
EPA 300.0 Rev 2.1 1993	Chloride	127	mg/L	10.0	03/23/21 15:02	
EPA 300.0 Rev 2.1 1993	Sulfate	461	mg/L	10.0	03/23/21 15:02	
92527256016	**MW-23D**					
	Performed by	CUSTOMER			03/22/21 11:59	
	pH	6.86	Std. Units		03/22/21 11:59	
EPA 6010D	Calcium	341	mg/L	10.0	04/02/21 14:05	
EPA 6020B	Barium	0.058	mg/L	0.0050	04/05/21 23:22	
EPA 6020B	Boron	3.4	mg/L	0.20	04/06/21 09:52	
EPA 6020B	Cadmium	0.00057	mg/L	0.00050	04/05/21 23:22	
EPA 6020B	Chromium	0.00083J	mg/L	0.0050	04/05/21 23:22	
EPA 6020B	Cobalt	0.0011J	mg/L	0.0050	04/05/21 23:22	
EPA 6020B	Lithium	0.0024J	mg/L	0.030	04/05/21 23:22	
EPA 6020B	Molybdenum	0.0034J	mg/L	0.010	04/05/21 23:22	
SM 2450C-2011	Total Dissolved Solids	990	mg/L	100	03/23/21 07:41	
EPA 300.0 Rev 2.1 1993	Chloride	151	mg/L	10.0	03/23/21 15:16	
EPA 300.0 Rev 2.1 1993	Sulfate	486	mg/L	10.0	03/23/21 15:16	
92527256017	**HGWC-17**					
	Performed by	CUSTOMER			03/22/21 11:59	
	pH	6.43	Std. Units		03/22/21 11:59	
EPA 6010D	Calcium	266	mg/L	1.0	04/01/21 17:29	
EPA 6020B	Barium	0.027	mg/L	0.0050	04/05/21 23:28	
EPA 6020B	Beryllium	0.000048J	mg/L	0.00050	04/05/21 23:28	
EPA 6020B	Boron	6.8	mg/L	0.20	04/06/21 09:58	
EPA 6020B	Chromium	0.00069J	mg/L	0.0050	04/05/21 23:28	
EPA 6020B	Cobalt	0.012	mg/L	0.0050	04/05/21 23:28	
EPA 6020B	Lead	0.000088J	mg/L	0.0010	04/05/21 23:28	
EPA 6020B	Lithium	0.0014J	mg/L	0.030	04/05/21 23:28	
SM 2450C-2011	Total Dissolved Solids	1020	mg/L	20.0	03/25/21 11:09	
EPA 300.0 Rev 2.1 1993	Chloride	138	mg/L	9.0	03/26/21 16:17	M6
EPA 300.0 Rev 2.1 1993	Fluoride	0.057J	mg/L	0.10	03/25/21 21:46	
EPA 300.0 Rev 2.1 1993	Sulfate	447	mg/L	9.0	03/26/21 16:17	M6
92527256018	**HGWC-18**					
	Performed by	CUSTOMER			03/22/21 11:59	
	pH	4.54	Std. Units		03/22/21 11:59	
EPA 6010D	Calcium	407	mg/L	10.0	04/02/21 14:10	
EPA 6020B	Arsenic	0.0083J	mg/L	0.025	04/06/21 10:03	D3
EPA 6020B	Barium	0.031	mg/L	0.0050	04/05/21 23:34	
EPA 6020B	Beryllium	0.0038	mg/L	0.00050	04/05/21 23:34	
EPA 6020B	Boron	8.9	mg/L	0.20	04/06/21 10:03	
EPA 6020B	Cadmium	0.0015	mg/L	0.00050	04/05/21 23:34	
EPA 6020B	Cobalt	0.14	mg/L	0.025	04/06/21 10:03	

REPORT OF LABORATORY ANALYSIS

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

SUMMARY OF DETECTION

Project: HAMMOND AP-2 SEMIANNUAL
Pace Project No.: 92527256

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92527256018	**HGWC-18**					
EPA 6020B	Lead	0.00096J	mg/L	0.0010	04/05/21 23:34	
EPA 6020B	Lithium	0.013J	mg/L	0.030	04/05/21 23:34	
EPA 6020B	Selenium	0.019J	mg/L	0.025	04/06/21 10:03	D3
EPA 6020B	Thallium	0.00016J	mg/L	0.0010	04/05/21 23:34	
SM 2450C-2011	Total Dissolved Solids	1390	mg/L	100	03/25/21 11:09	
EPA 300.0 Rev 2.1 1993	Chloride	90.2	mg/L	22.0	03/26/21 17:00	
EPA 300.0 Rev 2.1 1993	Fluoride	0.64	mg/L	0.10	03/25/21 22:54	
EPA 300.0 Rev 2.1 1993	Sulfate	1050	mg/L	22.0	03/26/21 17:00	
92527256019	**MW-21D**					
	Performed by	CUSTOMER			03/22/21 11:59	
	pH	6.95	Std. Units		03/22/21 11:59	
EPA 6010D	Calcium	382	mg/L	10.0	04/02/21 14:14	
EPA 6020B	Barium	0.047	mg/L	0.0050	04/05/21 23:39	
EPA 6020B	Boron	5.7	mg/L	0.20	04/06/21 10:09	
EPA 6020B	Chromium	0.00074J	mg/L	0.0050	04/05/21 23:39	
EPA 6020B	Lead	0.000073J	mg/L	0.0010	04/05/21 23:39	
EPA 6020B	Lithium	0.026J	mg/L	0.030	04/05/21 23:39	
EPA 6020B	Molybdenum	0.016	mg/L	0.010	04/05/21 23:39	
SM 2450C-2011	Total Dissolved Solids	1390	mg/L	100	03/25/21 11:09	
EPA 300.0 Rev 2.1 1993	Chloride	208	mg/L	17.0	03/26/21 17:13	
EPA 300.0 Rev 2.1 1993	Sulfate	829	mg/L	17.0	03/26/21 17:13	
92527256020	**MW-33**					
	Performed by	CUSTOMER			04/06/21 16:57	
	pH	4.27	Std. Units		04/06/21 16:57	
EPA 6010D	Calcium	574	mg/L	10.0	04/02/21 14:19	
EPA 6020B	Arsenic	0.0054J	mg/L	0.025	04/06/21 17:20	D3
EPA 6020B	Barium	0.029	mg/L	0.0050	04/06/21 01:05	
EPA 6020B	Beryllium	0.0011	mg/L	0.00050	04/06/21 01:05	
EPA 6020B	Boron	10.2	mg/L	0.20	04/06/21 17:20	
EPA 6020B	Cadmium	0.00019J	mg/L	0.00050	04/06/21 01:05	
EPA 6020B	Cobalt	0.057	mg/L	0.025	04/06/21 17:20	
EPA 6020B	Lead	0.0017	mg/L	0.0010	04/06/21 01:05	
EPA 6020B	Lithium	0.0012J	mg/L	0.030	04/06/21 01:05	
EPA 6020B	Selenium	0.028	mg/L	0.025	04/06/21 17:20	
EPA 6020B	Thallium	0.00031J	mg/L	0.0010	04/06/21 01:05	
SM 2450C-2011	Total Dissolved Solids	1790	mg/L	100	03/25/21 11:09	
EPA 300.0 Rev 2.1 1993	Chloride	199	mg/L	29.0	03/26/21 17:27	
EPA 300.0 Rev 2.1 1993	Fluoride	0.40	mg/L	0.10	03/25/21 23:22	
EPA 300.0 Rev 2.1 1993	Sulfate	1360	mg/L	29.0	03/26/21 17:27	
92527256021	**DUP-2**					
EPA 6010D	Calcium	557	mg/L	10.0	04/02/21 14:24	
EPA 6020B	Arsenic	0.0062J	mg/L	0.025	04/06/21 17:26	D3
EPA 6020B	Barium	0.031	mg/L	0.0050	04/06/21 01:11	
EPA 6020B	Beryllium	0.0012	mg/L	0.00050	04/06/21 01:11	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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SUMMARY OF DETECTION

Project: HAMMOND AP-2 SEMIANNUAL
Pace Project No.: 92527256

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92527256021	**DUP-2**					
EPA 6020B	Boron	10.8	mg/L	0.20	04/06/21 17:26	
EPA 6020B	Cadmium	0.00014J	mg/L	0.00050	04/06/21 01:11	
EPA 6020B	Cobalt	0.057	mg/L	0.025	04/06/21 17:26	
EPA 6020B	Lead	0.0018	mg/L	0.0010	04/06/21 01:11	
EPA 6020B	Lithium	0.0012J	mg/L	0.030	04/06/21 01:11	
EPA 6020B	Selenium	0.029	mg/L	0.025	04/06/21 17:26	
EPA 6020B	Thallium	0.00033J	mg/L	0.0010	04/06/21 01:11	
SM 2450C-2011	Total Dissolved Solids	1860	mg/L	100	03/25/21 11:09	
EPA 300.0 Rev 2.1 1993	Chloride	200	mg/L	29.0	03/26/21 18:09	
EPA 300.0 Rev 2.1 1993	Fluoride	0.47	mg/L	0.10	03/25/21 23:35	
EPA 300.0 Rev 2.1 1993	Sulfate	1370	mg/L	29.0	03/26/21 18:09	
92527256022	**EB-2**					
EPA 6020B	Boron	0.026J	mg/L	0.040	04/05/21 23:45	
92527256023	**FB-2**					
EPA 6020B	Boron	0.011J	mg/L	0.040	04/05/21 23:51	
92527256024	**MW-35**					
	Performed by	CUSTOMER			04/06/21 16:57	
	pH	4.89	Std. Units		04/06/21 16:57	
EPA 6010D	Calcium	552	mg/L	10.0	04/02/21 14:29	
EPA 6020B	Barium	0.032	mg/L	0.0050	04/05/21 23:57	
EPA 6020B	Beryllium	0.00061	mg/L	0.00050	04/05/21 23:57	
EPA 6020B	Boron	11.9	mg/L	0.20	04/06/21 17:37	
EPA 6020B	Cadmium	0.0018	mg/L	0.00050	04/05/21 23:57	
EPA 6020B	Chromium	0.00083J	mg/L	0.0050	04/05/21 23:57	
EPA 6020B	Cobalt	0.10	mg/L	0.0050	04/05/21 23:57	
EPA 6020B	Lead	0.00066J	mg/L	0.0010	04/05/21 23:57	
EPA 6020B	Lithium	0.0045J	mg/L	0.030	04/05/21 23:57	
EPA 6020B	Selenium	0.016J	mg/L	0.025	04/06/21 17:37	D3
SM 2450C-2011	Total Dissolved Solids	1690	mg/L	100	03/26/21 09:32	
EPA 300.0 Rev 2.1 1993	Chloride	250	mg/L	24.0	03/26/21 13:56	
EPA 300.0 Rev 2.1 1993	Fluoride	0.082J	mg/L	0.10	03/25/21 17:17	
EPA 300.0 Rev 2.1 1993	Sulfate	1220	mg/L	24.0	03/26/21 13:56	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: HAMMOND AP-2 SEMIANNUAL
Pace Project No.: 92527256

Sample: HGWA-1 **Lab ID: 92527256001** Collected: 03/10/21 16:10 Received: 03/11/21 15:55 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Charlotte								
Performed by	**CUSTOMER**				1		03/22/21 11:59		
pH	**6.95**	Std. Units			1		03/22/21 11:59		
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Calcium	**111**	mg/L	1.0	0.070	1	03/15/21 14:10	03/19/21 04:13	7440-70-2	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00028	1	03/15/21 14:35	03/16/21 15:56	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	03/15/21 14:35	03/16/21 15:56	7440-38-2	
Barium	**0.030**	mg/L	0.0050	0.00071	1	03/15/21 14:35	03/16/21 15:56	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000046	1	03/15/21 14:35	03/16/21 15:56	7440-41-7	
Boron	**0.015J**	mg/L	0.040	0.0052	1	03/15/21 14:35	03/16/21 15:56	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00012	1	03/15/21 14:35	03/16/21 15:56	7440-43-9	
Chromium	ND	mg/L	0.0050	0.00055	1	03/15/21 14:35	03/16/21 15:56	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	03/15/21 14:35	03/16/21 15:56	7440-48-4	
Lead	ND	mg/L	0.0010	0.000036	1	03/15/21 14:35	03/16/21 15:56	7439-92-1	
Lithium	**0.00090J**	mg/L	0.030	0.00081	1	03/15/21 14:35	03/16/21 15:56	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	03/15/21 14:35	03/16/21 15:56	7439-98-7	
Selenium	**0.0047J**	mg/L	0.0050	0.0016	1	03/15/21 14:35	03/16/21 15:56	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/15/21 14:35	03/16/21 15:56	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	**348**	mg/L	10.0	10.0	1		03/15/21 13:14		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**7.4**	mg/L	1.0	0.60	1		03/17/21 20:51	16887-00-6	
Fluoride	**0.079J**	mg/L	0.10	0.050	1		03/17/21 20:51	16984-48-8	
Sulfate	**49.6**	mg/L	1.0	0.50	1		03/17/21 20:51	14808-79-8	M1

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: HAMMOND AP-2 SEMIANNUAL
Pace Project No.: 92527256

Sample: HGWA-4 **Lab ID: 92527256002** Collected: 03/10/21 16:21 Received: 03/11/21 15:55 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Charlotte								
Performed by	**CUSTOMER**				1		03/22/21 11:59		
pH	**5.28**	Std. Units			1		03/22/21 11:59		
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Calcium	**5.9**	mg/L	1.0	0.070	1	03/15/21 14:10	03/19/21 04:18	7440-70-2	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00028	1	03/15/21 14:35	03/16/21 16:01	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	03/15/21 14:35	03/16/21 16:01	7440-38-2	
Barium	**0.036**	mg/L	0.0050	0.00071	1	03/15/21 14:35	03/16/21 16:01	7440-39-3	
Beryllium	**0.00017J**	mg/L	0.00050	0.000046	1	03/15/21 14:35	03/16/21 16:01	7440-41-7	
Boron	**0.012J**	mg/L	0.040	0.0052	1	03/15/21 14:35	03/16/21 16:01	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00012	1	03/15/21 14:35	03/16/21 16:01	7440-43-9	
Chromium	ND	mg/L	0.0050	0.00055	1	03/15/21 14:35	03/16/21 16:01	7440-47-3	
Cobalt	**0.00065J**	mg/L	0.0050	0.00038	1	03/15/21 14:35	03/16/21 16:01	7440-48-4	
Lead	**0.00016J**	mg/L	0.0010	0.000036	1	03/15/21 14:35	03/16/21 16:01	7439-92-1	
Lithium	**0.0011J**	mg/L	0.030	0.00081	1	03/15/21 14:35	03/16/21 16:01	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	03/15/21 14:35	03/16/21 16:01	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0016	1	03/15/21 14:35	03/16/21 16:01	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/15/21 14:35	03/16/21 16:01	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	**53.0**	mg/L	10.0	10.0	1		03/15/21 13:15		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**2.9**	mg/L	1.0	0.60	1		03/17/21 21:33	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		03/17/21 21:33	16984-48-8	M1
Sulfate	**1.2**	mg/L	1.0	0.50	1		03/17/21 21:33	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-2 SEMIANNUAL
Pace Project No.: 92527256

Sample: HGWA-42D **Lab ID: 92527256003** Collected: 03/10/21 14:23 Received: 03/11/21 15:55 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Charlotte								
Performed by	**CUSTOMER**				1		03/22/21 11:59		
pH	**7.70**	Std. Units			1		03/22/21 11:59		
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Calcium	**43.4**	mg/L	1.0	0.070	1	03/15/21 14:10	03/19/21 04:23	7440-70-2	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00028	1	03/15/21 14:35	03/16/21 16:07	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	03/15/21 14:35	03/16/21 16:07	7440-38-2	
Barium	**0.18**	mg/L	0.0050	0.00071	1	03/15/21 14:35	03/16/21 16:07	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000046	1	03/15/21 14:35	03/16/21 16:07	7440-41-7	
Boron	**0.048**	mg/L	0.040	0.0052	1	03/15/21 14:35	03/16/21 16:07	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00012	1	03/15/21 14:35	03/16/21 16:07	7440-43-9	
Chromium	ND	mg/L	0.0050	0.00055	1	03/15/21 14:35	03/16/21 16:07	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	03/15/21 14:35	03/16/21 16:07	7440-48-4	
Lead	ND	mg/L	0.0010	0.000036	1	03/15/21 14:35	03/16/21 16:07	7439-92-1	
Lithium	**0.0094J**	mg/L	0.030	0.00081	1	03/15/21 14:35	03/16/21 16:07	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	03/15/21 14:35	03/16/21 16:07	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0016	1	03/15/21 14:35	03/16/21 16:07	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/15/21 14:35	03/16/21 16:07	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	**163**	mg/L	10.0	10.0	1		03/15/21 13:15		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**3.0**	mg/L	1.0	0.60	1		03/17/21 22:14	16887-00-6	
Fluoride	**0.11**	mg/L	0.10	0.050	1		03/17/21 22:14	16984-48-8	
Sulfate	**10.8**	mg/L	1.0	0.50	1		03/17/21 22:14	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: HAMMOND AP-2 SEMIANNUAL
Pace Project No.: 92527256

Sample: HGWA-44D **Lab ID: 92527256004** Collected: 03/10/21 14:30 Received: 03/11/21 15:55 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Charlotte								
Performed by	**CUSTOMER**				1		03/22/21 11:59		
pH	**7.92**	Std. Units			1		03/22/21 11:59		
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Calcium	**18.3**	mg/L	1.0	0.070	1	03/15/21 14:10	03/19/21 04:28	7440-70-2	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	**0.00037J**	mg/L	0.0030	0.00028	1	03/15/21 14:35	03/16/21 16:13	7440-36-0	B
Arsenic	ND	mg/L	0.0050	0.00078	1	03/15/21 14:35	03/16/21 16:13	7440-38-2	
Barium	**0.26**	mg/L	0.0050	0.00071	1	03/15/21 14:35	03/16/21 16:13	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000046	1	03/15/21 14:35	03/16/21 16:13	7440-41-7	
Boron	**0.39**	mg/L	0.040	0.0052	1	03/15/21 14:35	03/16/21 16:13	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00012	1	03/15/21 14:35	03/16/21 16:13	7440-43-9	
Chromium	ND	mg/L	0.0050	0.00055	1	03/15/21 14:35	03/16/21 16:13	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	03/15/21 14:35	03/16/21 16:13	7440-48-4	
Lead	ND	mg/L	0.0010	0.000036	1	03/15/21 14:35	03/16/21 16:13	7439-92-1	
Lithium	**0.030**	mg/L	0.030	0.00081	1	03/15/21 14:35	03/16/21 16:13	7439-93-2	
Molybdenum	**0.0019J**	mg/L	0.010	0.00069	1	03/15/21 14:35	03/16/21 16:13	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0016	1	03/15/21 14:35	03/16/21 16:13	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/15/21 14:35	03/16/21 16:13	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	**289**	mg/L	10.0	10.0	1		03/15/21 13:15		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**12.3**	mg/L	1.0	0.60	1		03/17/21 22:28	16887-00-6	
Fluoride	**0.65**	mg/L	0.10	0.050	1		03/17/21 22:28	16984-48-8	
Sulfate	ND	mg/L	1.0	0.50	1		03/17/21 22:28	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: HAMMOND AP-2 SEMIANNUAL
Pace Project No.: 92527256

Sample: HGWA-2 **Lab ID: 92527256006** Collected: 03/11/21 09:59 Received: 03/12/21 13:43 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Charlotte								
Performed by	**CUSTOMER**				1		03/22/21 11:59		
pH	**5.80**	Std. Units			1		03/22/21 11:59		
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Calcium	**43.8**	mg/L	1.0	0.070	1	03/22/21 11:22	03/22/21 20:09	7440-70-2	M1
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00028	1	03/19/21 12:10	03/19/21 20:54	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	03/19/21 12:10	03/19/21 20:54	7440-38-2	
Barium	**0.070**	mg/L	0.0050	0.00071	1	03/19/21 12:10	03/19/21 20:54	7440-39-3	
Beryllium	**0.000086J**	mg/L	0.00050	0.000046	1	03/19/21 12:10	03/19/21 20:54	7440-41-7	
Boron	**0.056**	mg/L	0.040	0.0052	1	03/19/21 12:10	03/19/21 20:54	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00012	1	03/19/21 12:10	03/19/21 20:54	7440-43-9	
Chromium	ND	mg/L	0.0050	0.00055	1	03/19/21 12:10	03/19/21 20:54	7440-47-3	
Cobalt	**0.013**	mg/L	0.0050	0.00038	1	03/19/21 12:10	03/19/21 20:54	7440-48-4	
Lead	**0.000076J**	mg/L	0.0010	0.000036	1	03/19/21 12:10	03/19/21 20:54	7439-92-1	
Lithium	**0.0011J**	mg/L	0.030	0.00081	1	03/19/21 12:10	03/19/21 20:54	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	03/19/21 12:10	03/19/21 20:54	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0016	1	03/19/21 12:10	03/19/21 20:54	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/19/21 12:10	03/19/21 20:54	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	**169**	mg/L	10.0	10.0	1		03/16/21 15:08		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**5.1**	mg/L	1.0	0.60	1		03/20/21 02:14	16887-00-6	
Fluoride	**0.10**	mg/L	0.10	0.050	1		03/20/21 02:14	16984-48-8	
Sulfate	**52.9**	mg/L	1.0	0.50	1		03/20/21 02:14	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-2 SEMIANNUAL
Pace Project No.: 92527256

Sample: HGWA-3 **Lab ID: 92527256007** Collected: 03/11/21 11:25 Received: 03/12/21 13:43 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Charlotte								
Performed by	**CUSTOMER**				1		03/22/21 11:59		
pH	**7.33**	Std. Units			1		03/22/21 11:59		
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Calcium	**83.8**	mg/L	1.0	0.070	1	03/22/21 11:22	03/22/21 20:29	7440-70-2	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00028	1	03/19/21 12:10	03/19/21 21:00	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	03/19/21 12:10	03/19/21 21:00	7440-38-2	
Barium	**0.13**	mg/L	0.0050	0.00071	1	03/19/21 12:10	03/19/21 21:00	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000046	1	03/19/21 12:10	03/19/21 21:00	7440-41-7	
Boron	**0.015J**	mg/L	0.040	0.0052	1	03/19/21 12:10	03/19/21 21:00	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00012	1	03/19/21 12:10	03/19/21 21:00	7440-43-9	
Chromium	ND	mg/L	0.0050	0.00055	1	03/19/21 12:10	03/19/21 21:00	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	03/19/21 12:10	03/19/21 21:00	7440-48-4	
Lead	ND	mg/L	0.0010	0.000036	1	03/19/21 12:10	03/19/21 21:00	7439-92-1	
Lithium	**0.0035J**	mg/L	0.030	0.00081	1	03/19/21 12:10	03/19/21 21:00	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	03/19/21 12:10	03/19/21 21:00	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0016	1	03/19/21 12:10	03/19/21 21:00	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/19/21 12:10	03/19/21 21:00	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	**267**	mg/L	10.0	10.0	1		03/16/21 15:08		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**5.9**	mg/L	1.0	0.60	1		03/20/21 02:29	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		03/20/21 02:29	16984-48-8	
Sulfate	**50.4**	mg/L	1.0	0.50	1		03/20/21 02:29	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-2 SEMIANNUAL
Pace Project No.: 92527256

Sample: HGWA-5 **Lab ID: 92527256008** Collected: 03/11/21 11:30 Received: 03/12/21 13:43 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Charlotte								
Performed by	**CUSTOMER**				1		03/22/21 11:59		
pH	**6.48**	Std. Units			1		03/22/21 11:59		
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Calcium	**28.3**	mg/L	1.0	0.070	1	04/01/21 10:32	04/01/21 16:07	7440-70-2	M1
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00028	1	04/01/21 10:34	04/05/21 22:19	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	04/01/21 10:34	04/05/21 22:19	7440-38-2	
Barium	**0.044**	mg/L	0.0050	0.00071	1	04/01/21 10:34	04/05/21 22:19	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000046	1	04/01/21 10:34	04/05/21 22:19	7440-41-7	
Boron	**0.0075J**	mg/L	0.040	0.0052	1	04/01/21 10:34	04/05/21 22:19	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00012	1	04/01/21 10:34	04/05/21 22:19	7440-43-9	
Chromium	**0.0011J**	mg/L	0.0050	0.00055	1	04/01/21 10:34	04/05/21 22:19	7440-47-3	
Cobalt	**0.0013J**	mg/L	0.0050	0.00038	1	04/01/21 10:34	04/05/21 22:19	7440-48-4	
Lead	ND	mg/L	0.0010	0.000036	1	04/01/21 10:34	04/05/21 22:19	7439-92-1	
Lithium	**0.0037J**	mg/L	0.030	0.00081	1	04/01/21 10:34	04/05/21 22:19	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	04/01/21 10:34	04/05/21 22:19	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0016	1	04/01/21 10:34	04/05/21 22:19	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	04/01/21 10:34	04/05/21 22:19	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	**118**	mg/L	10.0	10.0	1		03/16/21 15:08		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**1.4**	mg/L	1.0	0.60	1		03/20/21 03:14	16887-00-6	
Fluoride	**0.060J**	mg/L	0.10	0.050	1		03/20/21 03:14	16984-48-8	
Sulfate	**22.7**	mg/L	1.0	0.50	1		03/20/21 03:14	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: HAMMOND AP-2 SEMIANNUAL
Pace Project No.: 92527256

Sample: HGWA-6 **Lab ID: 92527256009** Collected: 03/11/21 12:39 Received: 03/12/21 13:43 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Charlotte								
Performed by	**CUSTOMER**				1		03/22/21 11:59		
pH	**7.56**	Std. Units			1		03/22/21 11:59		
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Calcium	**53.1**	mg/L	1.0	0.070	1	04/01/21 10:32	04/01/21 16:26	7440-70-2	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00028	1	04/01/21 10:34	04/05/21 22:25	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	04/01/21 10:34	04/05/21 22:25	7440-38-2	
Barium	**0.21**	mg/L	0.0050	0.00071	1	04/01/21 10:34	04/05/21 22:25	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000046	1	04/01/21 10:34	04/05/21 22:25	7440-41-7	
Boron	**0.018J**	mg/L	0.040	0.0052	1	04/01/21 10:34	04/05/21 22:25	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00012	1	04/01/21 10:34	04/05/21 22:25	7440-43-9	
Chromium	ND	mg/L	0.0050	0.00055	1	04/01/21 10:34	04/05/21 22:25	7440-47-3	M1,R1
Cobalt	ND	mg/L	0.0050	0.00038	1	04/01/21 10:34	04/05/21 22:25	7440-48-4	
Lead	ND	mg/L	0.0010	0.000036	1	04/01/21 10:34	04/05/21 22:25	7439-92-1	
Lithium	**0.012J**	mg/L	0.030	0.00081	1	04/01/21 10:34	04/05/21 22:25	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	04/01/21 10:34	04/05/21 22:25	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0016	1	04/01/21 10:34	04/05/21 22:25	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	04/01/21 10:34	04/05/21 22:25	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	**215**	mg/L	10.0	10.0	1		03/16/21 15:08		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**1.2**	mg/L	1.0	0.60	1		03/20/21 03:29	16887-00-6	
Fluoride	**0.17**	mg/L	0.10	0.050	1		03/20/21 03:29	16984-48-8	
Sulfate	**35.5**	mg/L	1.0	0.50	1		03/20/21 03:29	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-2 SEMIANNUAL
Pace Project No.: 92527256

Sample: HGWA-43D **Lab ID: 92527256010** Collected: 03/11/21 09:57 Received: 03/12/21 13:43 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Charlotte								
Performed by	**CUSTOMER**				1		03/22/21 11:59		
pH	**7.46**	Std. Units			1		03/22/21 11:59		
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Calcium	**59.6**	mg/L	1.0	0.070	1	03/22/21 11:22	03/22/21 20:33	7440-70-2	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	**0.00057J**	mg/L	0.0030	0.00028	1	03/19/21 12:10	03/19/21 21:06	7440-36-0	
Arsenic	**0.0013J**	mg/L	0.0050	0.00078	1	03/19/21 12:10	03/19/21 21:06	7440-38-2	
Barium	**0.32**	mg/L	0.0050	0.00071	1	03/19/21 12:10	03/19/21 21:06	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000046	1	03/19/21 12:10	03/19/21 21:06	7440-41-7	
Boron	**0.060**	mg/L	0.040	0.0052	1	03/19/21 12:10	03/19/21 21:06	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00012	1	03/19/21 12:10	03/19/21 21:06	7440-43-9	
Chromium	ND	mg/L	0.0050	0.00055	1	03/19/21 12:10	03/19/21 21:06	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	03/19/21 12:10	03/19/21 21:06	7440-48-4	
Lead	**0.000094J**	mg/L	0.0010	0.000036	1	03/19/21 12:10	03/19/21 21:06	7439-92-1	
Lithium	**0.0022J**	mg/L	0.030	0.00081	1	03/19/21 12:10	03/19/21 21:06	7439-93-2	
Molybdenum	**0.0064J**	mg/L	0.010	0.00069	1	03/19/21 12:10	03/19/21 21:06	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0016	1	03/19/21 12:10	03/19/21 21:06	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/19/21 12:10	03/19/21 21:06	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	**279**	mg/L	10.0	10.0	1		03/17/21 17:40		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**4.5**	mg/L	1.0	0.60	1		03/20/21 04:14	16887-00-6	
Fluoride	**0.20**	mg/L	0.10	0.050	1		03/20/21 04:14	16984-48-8	
Sulfate	**38.6**	mg/L	1.0	0.50	1		03/20/21 04:14	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: HAMMOND AP-2 SEMIANNUAL
Pace Project No.: 92527256

Sample: MW-37D **Lab ID: 92527256011** Collected: 03/12/21 10:20 Received: 03/15/21 12:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Charlotte								
Performed by	**CUSTOMER**				1		03/22/21 11:59		
pH	**7.50**	Std. Units			1		03/22/21 11:59		
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Calcium	**170**	mg/L	1.0	0.070	1	04/01/21 10:32	04/01/21 16:31	7440-70-2	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00028	1	04/01/21 10:34	04/05/21 22:48	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	04/01/21 10:34	04/05/21 22:48	7440-38-2	
Barium	**0.12**	mg/L	0.0050	0.00071	1	04/01/21 10:34	04/05/21 22:48	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000046	1	04/01/21 10:34	04/05/21 22:48	7440-41-7	
Boron	**0.15**	mg/L	0.040	0.0052	1	04/01/21 10:34	04/05/21 22:48	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00012	1	04/01/21 10:34	04/05/21 22:48	7440-43-9	
Chromium	ND	mg/L	0.0050	0.00055	1	04/01/21 10:34	04/05/21 22:48	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	04/01/21 10:34	04/05/21 22:48	7440-48-4	
Lead	ND	mg/L	0.0010	0.000036	1	04/01/21 10:34	04/05/21 22:48	7439-92-1	
Lithium	**0.035**	mg/L	0.030	0.00081	1	04/01/21 10:34	04/05/21 22:48	7439-93-2	
Molybdenum	**0.014**	mg/L	0.010	0.00069	1	04/01/21 10:34	04/05/21 22:48	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0016	1	04/01/21 10:34	04/05/21 22:48	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	04/01/21 10:34	04/05/21 22:48	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	**890**	mg/L	20.0	20.0	1		03/17/21 17:40		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**124**	mg/L	6.0	3.6	6		03/23/21 16:42	16887-00-6	
Fluoride	**0.061J**	mg/L	0.10	0.050	1		03/20/21 22:18	16984-48-8	
Sulfate	**237**	mg/L	6.0	3.0	6		03/23/21 16:42	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: HAMMOND AP-2 SEMIANNUAL
Pace Project No.: 92527256

Sample: HGWC-15 **Lab ID: 92527256012** Collected: 03/16/21 15:24 Received: 03/17/21 13:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Charlotte								
Performed by	**CUSTOMER**				1		03/22/21 11:59		
pH	**6.08**	Std. Units			1		03/22/21 11:59		
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Calcium	**196**	mg/L	1.0	0.070	1	04/01/21 10:32	04/01/21 16:36	7440-70-2	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00028	1	04/01/21 10:34	04/05/21 22:54	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	04/01/21 10:34	04/05/21 22:54	7440-38-2	
Barium	**0.012**	mg/L	0.0050	0.00071	1	04/01/21 10:34	04/05/21 22:54	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000046	1	04/01/21 10:34	04/05/21 22:54	7440-41-7	
Boron	**2.4**	mg/L	0.040	0.0052	1	04/01/21 10:34	04/05/21 22:54	7440-42-8	
Cadmium	**0.0011**	mg/L	0.00050	0.00012	1	04/01/21 10:34	04/05/21 22:54	7440-43-9	
Chromium	**0.0012J**	mg/L	0.0050	0.00055	1	04/01/21 10:34	04/05/21 22:54	7440-47-3	
Cobalt	**0.018**	mg/L	0.0050	0.00038	1	04/01/21 10:34	04/05/21 22:54	7440-48-4	
Lead	ND	mg/L	0.0010	0.000036	1	04/01/21 10:34	04/05/21 22:54	7439-92-1	
Lithium	**0.032**	mg/L	0.030	0.00081	1	04/01/21 10:34	04/05/21 22:54	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	04/01/21 10:34	04/05/21 22:54	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0016	1	04/01/21 10:34	04/05/21 22:54	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	04/01/21 10:34	04/05/21 22:54	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	**92.0**	mg/L	20.0	20.0	1		03/23/21 07:59		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**103**	mg/L	8.0	4.8	8		03/22/21 09:41	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		03/21/21 23:57	16984-48-8	
Sulfate	**379**	mg/L	8.0	4.0	8		03/22/21 09:41	14808-79-8	

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ANALYTICAL RESULTS

Project: HAMMOND AP-2 SEMIANNUAL
Pace Project No.: 92527256

Sample: HGWC-14 **Lab ID: 92527256013** Collected: 03/17/21 14:28 Received: 03/18/21 13:17 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Charlotte								
Performed by	**CUSTOMER**				1		04/06/21 16:57		
pH	**4.72**	Std. Units			1		04/06/21 16:57		
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Calcium	**572**	mg/L	10.0	0.70	10	04/01/21 10:32	04/02/21 14:00	7440-70-2	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00028	1	04/01/21 10:34	04/06/21 01:00	7440-36-0	
Arsenic	ND	mg/L	0.025	0.0039	5	04/01/21 10:34	04/06/21 17:15	7440-38-2	D3
Barium	**0.023**	mg/L	0.0050	0.00071	1	04/01/21 10:34	04/06/21 01:00	7440-39-3	
Beryllium	**0.00058**	mg/L	0.00050	0.000046	1	04/01/21 10:34	04/06/21 01:00	7440-41-7	
Boron	**11.8**	mg/L	0.40	0.052	10	04/01/21 10:34	04/06/21 09:40	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00012	1	04/01/21 10:34	04/06/21 01:00	7440-43-9	
Chromium	ND	mg/L	0.025	0.0028	5	04/01/21 10:34	04/06/21 17:15	7440-47-3	D3
Cobalt	**0.034**	mg/L	0.025	0.0019	5	04/01/21 10:34	04/06/21 17:15	7440-48-4	
Lead	**0.0019**	mg/L	0.0010	0.000036	1	04/01/21 10:34	04/06/21 01:00	7439-92-1	
Lithium	ND	mg/L	0.030	0.00081	1	04/01/21 10:34	04/06/21 01:00	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	04/01/21 10:34	04/06/21 01:00	7439-98-7	
Selenium	**0.010J**	mg/L	0.025	0.0078	5	04/01/21 10:34	04/06/21 17:15	7782-49-2	D3
Thallium	**0.00034J**	mg/L	0.0010	0.00014	1	04/01/21 10:34	04/06/21 01:00	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	**1640**	mg/L	100	100	1		03/23/21 07:41		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**233**	mg/L	27.0	16.2	27		03/23/21 14:33	16887-00-6	
Fluoride	**0.076J**	mg/L	0.10	0.050	1		03/23/21 06:17	16984-48-8	
Sulfate	**1300**	mg/L	27.0	13.5	27		03/23/21 14:33	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: HAMMOND AP-2 SEMIANNUAL
Pace Project No.: 92527256

Sample: HGWC-16 **Lab ID: 92527256014** Collected: 03/17/21 09:29 Received: 03/18/21 13:17 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Charlotte								
Performed by	**CUSTOMER**				1		03/22/21 11:59		
pH	**7.19**	Std. Units			1		03/22/21 11:59		
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Calcium	**198**	mg/L	1.0	0.070	1	04/01/21 10:32	04/01/21 17:14	7440-70-2	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00028	1	04/01/21 10:34	04/05/21 22:59	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	04/01/21 10:34	04/05/21 22:59	7440-38-2	
Barium	**0.12**	mg/L	0.0050	0.00071	1	04/01/21 10:34	04/05/21 22:59	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000046	1	04/01/21 10:34	04/05/21 22:59	7440-41-7	
Boron	**2.7**	mg/L	0.040	0.0052	1	04/01/21 10:34	04/05/21 22:59	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00012	1	04/01/21 10:34	04/05/21 22:59	7440-43-9	
Chromium	ND	mg/L	0.0050	0.00055	1	04/01/21 10:34	04/05/21 22:59	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	04/01/21 10:34	04/05/21 22:59	7440-48-4	
Lead	**0.000058J**	mg/L	0.0010	0.000036	1	04/01/21 10:34	04/05/21 22:59	7439-92-1	
Lithium	**0.0048J**	mg/L	0.030	0.00081	1	04/01/21 10:34	04/05/21 22:59	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	04/01/21 10:34	04/05/21 22:59	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0016	1	04/01/21 10:34	04/05/21 22:59	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	04/01/21 10:34	04/05/21 22:59	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	**768**	mg/L	20.0	20.0	1		03/23/21 07:41		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**93.8**	mg/L	1.0	0.60	1		03/23/21 06:31	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		03/23/21 06:31	16984-48-8	
Sulfate	**250**	mg/L	5.0	2.5	5		03/23/21 14:48	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: HAMMOND AP-2 SEMIANNUAL
Pace Project No.: 92527256

Sample: MW-22 **Lab ID: 92527256015** Collected: 03/17/21 10:00 Received: 03/18/21 13:17 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Charlotte								
Performed by	**CUSTOMER**				1		03/22/21 11:59		
pH	**5.57**	Std. Units			1		03/22/21 11:59		
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Calcium	**200**	mg/L	1.0	0.070	1	04/01/21 10:32	04/01/21 17:19	7440-70-2	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00028	1	04/01/21 10:34	04/05/21 23:16	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	04/01/21 10:34	04/05/21 23:16	7440-38-2	
Barium	**0.018**	mg/L	0.0050	0.00071	1	04/01/21 10:34	04/05/21 23:16	7440-39-3	
Beryllium	**0.000082J**	mg/L	0.00050	0.000046	1	04/01/21 10:34	04/05/21 23:16	7440-41-7	
Boron	**2.7**	mg/L	0.20	0.026	5	04/01/21 10:34	04/06/21 09:46	7440-42-8	
Cadmium	**0.0022**	mg/L	0.00050	0.00012	1	04/01/21 10:34	04/05/21 23:16	7440-43-9	
Chromium	**0.00075J**	mg/L	0.0050	0.00055	1	04/01/21 10:34	04/05/21 23:16	7440-47-3	
Cobalt	**0.039**	mg/L	0.0050	0.00038	1	04/01/21 10:34	04/05/21 23:16	7440-48-4	
Lead	ND	mg/L	0.0010	0.000036	1	04/01/21 10:34	04/05/21 23:16	7439-92-1	
Lithium	**0.0012J**	mg/L	0.030	0.00081	1	04/01/21 10:34	04/05/21 23:16	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	04/01/21 10:34	04/05/21 23:16	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0016	1	04/01/21 10:34	04/05/21 23:16	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	04/01/21 10:34	04/05/21 23:16	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	**998**	mg/L	20.0	20.0	1		03/23/21 07:41		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**127**	mg/L	10.0	6.0	10		03/23/21 15:02	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		03/23/21 06:44	16984-48-8	
Sulfate	**461**	mg/L	10.0	5.0	10		03/23/21 15:02	14808-79-8	

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ANALYTICAL RESULTS

Project: HAMMOND AP-2 SEMIANNUAL
Pace Project No.: 92527256

Sample: MW-23D **Lab ID: 92527256016** Collected: 03/17/21 11:49 Received: 03/18/21 13:17 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Charlotte								
Performed by	**CUSTOMER**				1		03/22/21 11:59		
pH	**6.86**	Std. Units			1		03/22/21 11:59		
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Calcium	**341**	mg/L	10.0	0.70	10	04/01/21 10:32	04/02/21 14:05	7440-70-2	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00028	1	04/01/21 10:34	04/05/21 23:22	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	04/01/21 10:34	04/05/21 23:22	7440-38-2	
Barium	**0.058**	mg/L	0.0050	0.00071	1	04/01/21 10:34	04/05/21 23:22	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000046	1	04/01/21 10:34	04/05/21 23:22	7440-41-7	
Boron	**3.4**	mg/L	0.20	0.026	5	04/01/21 10:34	04/06/21 09:52	7440-42-8	
Cadmium	**0.00057**	mg/L	0.00050	0.00012	1	04/01/21 10:34	04/05/21 23:22	7440-43-9	
Chromium	**0.00083J**	mg/L	0.0050	0.00055	1	04/01/21 10:34	04/05/21 23:22	7440-47-3	
Cobalt	**0.0011J**	mg/L	0.0050	0.00038	1	04/01/21 10:34	04/05/21 23:22	7440-48-4	
Lead	ND	mg/L	0.0010	0.000036	1	04/01/21 10:34	04/05/21 23:22	7439-92-1	
Lithium	**0.0024J**	mg/L	0.030	0.00081	1	04/01/21 10:34	04/05/21 23:22	7439-93-2	
Molybdenum	**0.0034J**	mg/L	0.010	0.00069	1	04/01/21 10:34	04/05/21 23:22	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0016	1	04/01/21 10:34	04/05/21 23:22	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	04/01/21 10:34	04/05/21 23:22	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	**990**	mg/L	100	100	1		03/23/21 07:41		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**151**	mg/L	10.0	6.0	10		03/23/21 15:16	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		03/23/21 06:58	16984-48-8	
Sulfate	**486**	mg/L	10.0	5.0	10		03/23/21 15:16	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: HAMMOND AP-2 SEMIANNUAL
Pace Project No.: 92527256

Sample: HGWC-17 **Lab ID: 92527256017** Collected: 03/18/21 14:48 Received: 03/19/21 13:40 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Charlotte								
Performed by	**CUSTOMER**				1		03/22/21 11:59		
pH	**6.43**	Std. Units			1		03/22/21 11:59		
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Calcium	**266**	mg/L	1.0	0.070	1	04/01/21 10:32	04/01/21 17:29	7440-70-2	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00028	1	04/01/21 10:34	04/05/21 23:28	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	04/01/21 10:34	04/05/21 23:28	7440-38-2	
Barium	**0.027**	mg/L	0.0050	0.00071	1	04/01/21 10:34	04/05/21 23:28	7440-39-3	
Beryllium	**0.000048J**	mg/L	0.00050	0.000046	1	04/01/21 10:34	04/05/21 23:28	7440-41-7	
Boron	**6.8**	mg/L	0.20	0.026	5	04/01/21 10:34	04/06/21 09:58	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00012	1	04/01/21 10:34	04/05/21 23:28	7440-43-9	
Chromium	**0.00069J**	mg/L	0.0050	0.00055	1	04/01/21 10:34	04/05/21 23:28	7440-47-3	
Cobalt	**0.012**	mg/L	0.0050	0.00038	1	04/01/21 10:34	04/05/21 23:28	7440-48-4	
Lead	**0.000088J**	mg/L	0.0010	0.000036	1	04/01/21 10:34	04/05/21 23:28	7439-92-1	
Lithium	**0.0014J**	mg/L	0.030	0.00081	1	04/01/21 10:34	04/05/21 23:28	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	04/01/21 10:34	04/05/21 23:28	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0016	1	04/01/21 10:34	04/05/21 23:28	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	04/01/21 10:34	04/05/21 23:28	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	**1020**	mg/L	20.0	20.0	1		03/25/21 11:09		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**138**	mg/L	9.0	5.4	9		03/26/21 16:17	16887-00-6	M6
Fluoride	**0.057J**	mg/L	0.10	0.050	1		03/25/21 21:46	16984-48-8	
Sulfate	**447**	mg/L	9.0	4.5	9		03/26/21 16:17	14808-79-8	M6

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: HAMMOND AP-2 SEMIANNUAL
Pace Project No.: 92527256

Sample: HGWC-18 **Lab ID: 92527256018** Collected: 03/18/21 10:01 Received: 03/19/21 13:40 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Charlotte								
Performed by	**CUSTOMER**				1		03/22/21 11:59		
pH	**4.54**	Std. Units			1		03/22/21 11:59		
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Calcium	**407**	mg/L	10.0	0.70	10	04/01/21 10:32	04/02/21 14:10	7440-70-2	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00028	1	04/01/21 10:34	04/05/21 23:34	7440-36-0	
Arsenic	**0.0083J**	mg/L	0.025	0.0039	5	04/01/21 10:34	04/06/21 10:03	7440-38-2	D3
Barium	**0.031**	mg/L	0.0050	0.00071	1	04/01/21 10:34	04/05/21 23:34	7440-39-3	
Beryllium	**0.0038**	mg/L	0.00050	0.000046	1	04/01/21 10:34	04/05/21 23:34	7440-41-7	
Boron	**8.9**	mg/L	0.20	0.026	5	04/01/21 10:34	04/06/21 10:03	7440-42-8	
Cadmium	**0.0015**	mg/L	0.00050	0.00012	1	04/01/21 10:34	04/05/21 23:34	7440-43-9	
Chromium	ND	mg/L	0.025	0.0028	5	04/01/21 10:34	04/06/21 10:03	7440-47-3	D3
Cobalt	**0.14**	mg/L	0.025	0.0019	5	04/01/21 10:34	04/06/21 10:03	7440-48-4	
Lead	**0.00096J**	mg/L	0.0010	0.000036	1	04/01/21 10:34	04/05/21 23:34	7439-92-1	
Lithium	**0.013J**	mg/L	0.030	0.00081	1	04/01/21 10:34	04/05/21 23:34	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	04/01/21 10:34	04/05/21 23:34	7439-98-7	
Selenium	**0.019J**	mg/L	0.025	0.0078	5	04/01/21 10:34	04/06/21 10:03	7782-49-2	D3
Thallium	**0.00016J**	mg/L	0.0010	0.00014	1	04/01/21 10:34	04/05/21 23:34	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	**1390**	mg/L	100	100	1		03/25/21 11:09		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**90.2**	mg/L	22.0	13.2	22		03/26/21 17:00	16887-00-6	
Fluoride	**0.64**	mg/L	0.10	0.050	1		03/25/21 22:54	16984-48-8	
Sulfate	**1050**	mg/L	22.0	11.0	22		03/26/21 17:00	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-2 SEMIANNUAL
Pace Project No.: 92527256

Sample: MW-21D **Lab ID: 92527256019** Collected: 03/18/21 12:08 Received: 03/19/21 13:40 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Charlotte								
Performed by	**CUSTOMER**				1		03/22/21 11:59		
pH	**6.95**	Std. Units			1		03/22/21 11:59		
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Calcium	**382**	mg/L	10.0	0.70	10	04/01/21 10:32	04/02/21 14:14	7440-70-2	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00028	1	04/01/21 10:34	04/05/21 23:39	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	04/01/21 10:34	04/05/21 23:39	7440-38-2	
Barium	**0.047**	mg/L	0.0050	0.00071	1	04/01/21 10:34	04/05/21 23:39	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000046	1	04/01/21 10:34	04/05/21 23:39	7440-41-7	
Boron	**5.7**	mg/L	0.20	0.026	5	04/01/21 10:34	04/06/21 10:09	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00012	1	04/01/21 10:34	04/05/21 23:39	7440-43-9	
Chromium	**0.00074J**	mg/L	0.0050	0.00055	1	04/01/21 10:34	04/05/21 23:39	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	04/01/21 10:34	04/05/21 23:39	7440-48-4	
Lead	**0.000073J**	mg/L	0.0010	0.000036	1	04/01/21 10:34	04/05/21 23:39	7439-92-1	
Lithium	**0.026J**	mg/L	0.030	0.00081	1	04/01/21 10:34	04/05/21 23:39	7439-93-2	
Molybdenum	**0.016**	mg/L	0.010	0.00069	1	04/01/21 10:34	04/05/21 23:39	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0016	1	04/01/21 10:34	04/05/21 23:39	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	04/01/21 10:34	04/05/21 23:39	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	**1390**	mg/L	100	100	1		03/25/21 11:09		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**208**	mg/L	17.0	10.2	17		03/26/21 17:13	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		03/25/21 23:08	16984-48-8	
Sulfate	**829**	mg/L	17.0	8.5	17		03/26/21 17:13	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-2 SEMIANNUAL
Pace Project No.: 92527256

Sample: MW-33 **Lab ID: 92527256020** Collected: 03/18/21 10:40 Received: 03/19/21 13:40 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Charlotte								
Performed by	**CUSTOMER**				1		04/06/21 16:57		
pH	**4.27**	Std. Units			1		04/06/21 16:57		
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Calcium	**574**	mg/L	10.0	0.70	10	04/01/21 10:32	04/02/21 14:19	7440-70-2	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00028	1	04/01/21 10:34	04/06/21 01:05	7440-36-0	
Arsenic	**0.0054J**	mg/L	0.025	0.0039	5	04/01/21 10:34	04/06/21 17:20	7440-38-2	D3
Barium	**0.029**	mg/L	0.0050	0.00071	1	04/01/21 10:34	04/06/21 01:05	7440-39-3	
Beryllium	**0.0011**	mg/L	0.00050	0.000046	1	04/01/21 10:34	04/06/21 01:05	7440-41-7	
Boron	**10.2**	mg/L	0.20	0.026	5	04/01/21 10:34	04/06/21 17:20	7440-42-8	
Cadmium	**0.00019J**	mg/L	0.00050	0.00012	1	04/01/21 10:34	04/06/21 01:05	7440-43-9	
Chromium	ND	mg/L	0.025	0.0028	5	04/01/21 10:34	04/06/21 17:20	7440-47-3	D3
Cobalt	**0.057**	mg/L	0.025	0.0019	5	04/01/21 10:34	04/06/21 17:20	7440-48-4	
Lead	**0.0017**	mg/L	0.0010	0.000036	1	04/01/21 10:34	04/06/21 01:05	7439-92-1	
Lithium	**0.0012J**	mg/L	0.030	0.00081	1	04/01/21 10:34	04/06/21 01:05	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	04/01/21 10:34	04/06/21 01:05	7439-98-7	
Selenium	**0.028**	mg/L	0.025	0.0078	5	04/01/21 10:34	04/06/21 17:20	7782-49-2	
Thallium	**0.00031J**	mg/L	0.0010	0.00014	1	04/01/21 10:34	04/06/21 01:05	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	**1790**	mg/L	100	100	1		03/25/21 11:09		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**199**	mg/L	29.0	17.4	29		03/26/21 17:27	16887-00-6	
Fluoride	**0.40**	mg/L	0.10	0.050	1		03/25/21 23:22	16984-48-8	
Sulfate	**1360**	mg/L	29.0	14.5	29		03/26/21 17:27	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-2 SEMIANNUAL
Pace Project No.: 92527256

Sample: DUP-2 **Lab ID: 92527256021** Collected: 03/18/21 00:00 Received: 03/19/21 13:40 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Calcium	**557**	mg/L	10.0	0.70	10	04/01/21 10:32	04/02/21 14:24	7440-70-2	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00028	1	04/01/21 10:34	04/06/21 01:11	7440-36-0	
Arsenic	**0.0062J**	mg/L	0.025	0.0039	5	04/01/21 10:34	04/06/21 17:26	7440-38-2	D3
Barium	**0.031**	mg/L	0.0050	0.00071	1	04/01/21 10:34	04/06/21 01:11	7440-39-3	
Beryllium	**0.0012**	mg/L	0.00050	0.000046	1	04/01/21 10:34	04/06/21 01:11	7440-41-7	
Boron	**10.8**	mg/L	0.20	0.026	5	04/01/21 10:34	04/06/21 17:26	7440-42-8	
Cadmium	**0.00014J**	mg/L	0.00050	0.00012	1	04/01/21 10:34	04/06/21 01:11	7440-43-9	
Chromium	ND	mg/L	0.025	0.0028	5	04/01/21 10:34	04/06/21 17:26	7440-47-3	D3
Cobalt	**0.057**	mg/L	0.025	0.0019	5	04/01/21 10:34	04/06/21 17:26	7440-48-4	
Lead	**0.0018**	mg/L	0.0010	0.000036	1	04/01/21 10:34	04/06/21 01:11	7439-92-1	
Lithium	**0.0012J**	mg/L	0.030	0.00081	1	04/01/21 10:34	04/06/21 01:11	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	04/01/21 10:34	04/06/21 01:11	7439-98-7	
Selenium	**0.029**	mg/L	0.025	0.0078	5	04/01/21 10:34	04/06/21 17:26	7782-49-2	
Thallium	**0.00033J**	mg/L	0.0010	0.00014	1	04/01/21 10:34	04/06/21 01:11	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	**1860**	mg/L	100	100	1		03/25/21 11:09		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**200**	mg/L	29.0	17.4	29		03/26/21 18:09	16887-00-6	
Fluoride	**0.47**	mg/L	0.10	0.050	1		03/25/21 23:35	16984-48-8	
Sulfate	**1370**	mg/L	29.0	14.5	29		03/26/21 18:09	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: HAMMOND AP-2 SEMIANNUAL
Pace Project No.: 92527256

Sample: EB-2 **Lab ID: 92527256022** Collected: 03/18/21 12:50 Received: 03/19/21 13:40 Matrix: Water

Parameters	Results	Units	Report 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	0.070	1	04/01/21 10:32	04/01/21 17:53	7440-70-2	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00028	1	04/01/21 10:34	04/05/21 23:45	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	04/01/21 10:34	04/05/21 23:45	7440-38-2	
Barium	ND	mg/L	0.0050	0.00071	1	04/01/21 10:34	04/05/21 23:45	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000046	1	04/01/21 10:34	04/05/21 23:45	7440-41-7	
Boron	**0.026J**	mg/L	0.040	0.0052	1	04/01/21 10:34	04/05/21 23:45	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00012	1	04/01/21 10:34	04/05/21 23:45	7440-43-9	
Chromium	ND	mg/L	0.0050	0.00055	1	04/01/21 10:34	04/05/21 23:45	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	04/01/21 10:34	04/05/21 23:45	7440-48-4	
Lead	ND	mg/L	0.0010	0.000036	1	04/01/21 10:34	04/05/21 23:45	7439-92-1	
Lithium	ND	mg/L	0.030	0.00081	1	04/01/21 10:34	04/05/21 23:45	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	04/01/21 10:34	04/05/21 23:45	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0016	1	04/01/21 10:34	04/05/21 23:45	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	04/01/21 10:34	04/05/21 23:45	7440-28-0	
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		03/25/21 11:10		
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		03/25/21 23:49	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		03/25/21 23:49	16984-48-8	
Sulfate	ND	mg/L	1.0	0.50	1		03/25/21 23:49	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: HAMMOND AP-2 SEMIANNUAL
Pace Project No.: 92527256

Sample: FB-2 **Lab ID: 92527256023** Collected: 03/18/21 15:30 Received: 03/19/21 13:40 Matrix: Water

Parameters	Results	Units	Report 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	0.070	1	04/01/21 10:32	04/01/21 18:13	7440-70-2	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00028	1	04/01/21 10:34	04/05/21 23:51	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	04/01/21 10:34	04/05/21 23:51	7440-38-2	
Barium	ND	mg/L	0.0050	0.00071	1	04/01/21 10:34	04/05/21 23:51	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000046	1	04/01/21 10:34	04/05/21 23:51	7440-41-7	
Boron	**0.011J**	mg/L	0.040	0.0052	1	04/01/21 10:34	04/05/21 23:51	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00012	1	04/01/21 10:34	04/05/21 23:51	7440-43-9	
Chromium	ND	mg/L	0.0050	0.00055	1	04/01/21 10:34	04/05/21 23:51	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	04/01/21 10:34	04/05/21 23:51	7440-48-4	
Lead	ND	mg/L	0.0010	0.000036	1	04/01/21 10:34	04/06/21 17:32	7439-92-1	
Lithium	ND	mg/L	0.030	0.00081	1	04/01/21 10:34	04/05/21 23:51	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	04/01/21 10:34	04/05/21 23:51	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0016	1	04/01/21 10:34	04/05/21 23:51	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	04/01/21 10:34	04/06/21 17:32	7440-28-0	
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		03/25/21 11:10		
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		03/26/21 00:02	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		03/26/21 00:02	16984-48-8	
Sulfate	ND	mg/L	1.0	0.50	1		03/26/21 00:02	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: HAMMOND AP-2 SEMIANNUAL
Pace Project No.: 92527256

Sample: MW-35 **Lab ID: 92527256024** Collected: 03/19/21 12:48 Received: 03/22/21 15:41 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Charlotte								
Performed by	**CUSTOMER**				1		04/06/21 16:57		
pH	**4.89**	Std. Units			1		04/06/21 16:57		
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Calcium	**552**	mg/L	10.0	0.70	10	04/01/21 10:32	04/02/21 14:29	7440-70-2	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00028	1	04/01/21 10:34	04/05/21 23:57	7440-36-0	
Arsenic	ND	mg/L	0.025	0.0039	5	04/01/21 10:34	04/06/21 17:37	7440-38-2	D3
Barium	**0.032**	mg/L	0.0050	0.00071	1	04/01/21 10:34	04/05/21 23:57	7440-39-3	
Beryllium	**0.00061**	mg/L	0.00050	0.000046	1	04/01/21 10:34	04/05/21 23:57	7440-41-7	
Boron	**11.9**	mg/L	0.20	0.026	5	04/01/21 10:34	04/06/21 17:37	7440-42-8	
Cadmium	**0.0018**	mg/L	0.00050	0.00012	1	04/01/21 10:34	04/05/21 23:57	7440-43-9	
Chromium	**0.00083J**	mg/L	0.0050	0.00055	1	04/01/21 10:34	04/05/21 23:57	7440-47-3	
Cobalt	**0.10**	mg/L	0.0050	0.00038	1	04/01/21 10:34	04/05/21 23:57	7440-48-4	
Lead	**0.00066J**	mg/L	0.0010	0.000036	1	04/01/21 10:34	04/05/21 23:57	7439-92-1	
Lithium	**0.0045J**	mg/L	0.030	0.00081	1	04/01/21 10:34	04/05/21 23:57	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	04/01/21 10:34	04/05/21 23:57	7439-98-7	
Selenium	**0.016J**	mg/L	0.025	0.0078	5	04/01/21 10:34	04/06/21 17:37	7782-49-2	D3
Thallium	ND	mg/L	0.0010	0.00014	1	04/01/21 10:34	04/05/21 23:57	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	**1690**	mg/L	100	100	1		03/26/21 09:32		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**250**	mg/L	24.0	14.4	24		03/26/21 13:56	16887-00-6	
Fluoride	**0.082J**	mg/L	0.10	0.050	1		03/25/21 17:17	16984-48-8	
Sulfate	**1220**	mg/L	24.0	12.0	24		03/26/21 13:56	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-2 SEMIANNUAL
Pace Project No.: 92527256

QC Batch: 606634
QC Batch Method: EPA 3010A
Analysis Method: EPA 6010D
Analysis Description: 6010D ATL
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92527256001, 92527256002, 92527256003, 92527256004

METHOD BLANK: 3196175 Matrix: Water
Associated Lab Samples: 92527256001, 92527256002, 92527256003, 92527256004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	0.070	03/19/21 03:10	

LABORATORY CONTROL SAMPLE: 3196176

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3196177 3196178

Parameter	Units	92526031001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Calcium	mg/L	207	1	1	209	202	181	-447	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

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
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QUALITY CONTROL DATA

Project: HAMMOND AP-2 SEMIANNUAL
Pace Project No.: 92527256

QC Batch: 608195
QC Batch Method: EPA 3010A
Analysis Method: EPA 6010D
Analysis Description: 6010D ATL
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92527256006, 92527256007, 92527256010

METHOD BLANK: 3204024 Matrix: Water
Associated Lab Samples: 92527256006, 92527256007, 92527256010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	0.070	03/22/21 19:59	

LABORATORY CONTROL SAMPLE: 3204025

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	mg/L	1	0.95J	95	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3204026 3204027

Parameter	Units	92527256006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Calcium	mg/L	43.8	1	1	44.4	43.0	63	-72	75-125	3	20	M1

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: HAMMOND AP-2 SEMIANNUAL
Pace Project No.: 92527256

QC Batch: 610580
QC Batch Method: EPA 3010A
Analysis Method: EPA 6010D
Analysis Description: 6010D ATL
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92527256008, 92527256009, 92527256011, 92527256012, 92527256013, 92527256014, 92527256015, 92527256016, 92527256017, 92527256018, 92527256019, 92527256020, 92527256021, 92527256022, 92527256023, 92527256024

METHOD BLANK: 3215299 Matrix: Water
Associated Lab Samples: 92527256008, 92527256009, 92527256011, 92527256012, 92527256013, 92527256014, 92527256015, 92527256016, 92527256017, 92527256018, 92527256019, 92527256020, 92527256021, 92527256022, 92527256023, 92527256024

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	0.070	04/01/21 15:57	

LABORATORY CONTROL SAMPLE: 3215300

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	mg/L	1	1.0	103	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3215301 3215302

Parameter	Units	92527256008 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Calcium	mg/L	28.3	1	1	28.4	29.3	7	102	75-125	3	20	M1

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REPORT OF LABORATORY ANALYSIS

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110 Technology Parkway
Peachtree Corners, GA 30092
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QUALITY CONTROL DATA

Project: HAMMOND AP-2 SEMIANNUAL
Pace Project No.: 92527256

QC Batch: 606644
QC Batch Method: EPA 3005A
Analysis Method: EPA 6020B
Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92527256001, 92527256002, 92527256003, 92527256004

METHOD BLANK: 3196234 Matrix: Water
Associated Lab Samples: 92527256001, 92527256002, 92527256003, 92527256004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	0.00035J	0.0030	0.00028	03/16/21 14:38	
Arsenic	mg/L	ND	0.0050	0.00078	03/16/21 14:38	
Barium	mg/L	ND	0.0050	0.00071	03/16/21 14:38	
Beryllium	mg/L	ND	0.00050	0.000046	03/16/21 14:38	
Boron	mg/L	ND	0.040	0.0052	03/16/21 14:38	
Cadmium	mg/L	ND	0.00050	0.00012	03/16/21 14:38	
Chromium	mg/L	ND	0.0050	0.00055	03/16/21 14:38	
Cobalt	mg/L	ND	0.0050	0.00038	03/16/21 14:38	
Lead	mg/L	ND	0.0010	0.000036	03/16/21 14:38	
Lithium	mg/L	ND	0.030	0.00081	03/16/21 14:38	
Molybdenum	mg/L	ND	0.010	0.00069	03/16/21 14:38	
Selenium	mg/L	ND	0.0050	0.0016	03/16/21 14:38	
Thallium	mg/L	ND	0.0010	0.00014	03/16/21 14:38	

LABORATORY CONTROL SAMPLE: 3196235

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.096	96	80-120	
Arsenic	mg/L	0.1	0.096	96	80-120	
Barium	mg/L	0.1	0.095	95	80-120	
Beryllium	mg/L	0.1	0.098	98	80-120	
Boron	mg/L	1	1.0	103	80-120	
Cadmium	mg/L	0.1	0.097	97	80-120	
Chromium	mg/L	0.1	0.10	100	80-120	
Cobalt	mg/L	0.1	0.099	99	80-120	
Lead	mg/L	0.1	0.094	94	80-120	
Lithium	mg/L	0.1	0.096	96	80-120	
Molybdenum	mg/L	0.1	0.094	94	80-120	
Selenium	mg/L	0.1	0.090	90	80-120	
Thallium	mg/L	0.1	0.093	93	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3196236 3196237

Parameter	Units	92526031002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	mg/L	0.00079J	0.1	0.1	0.098	0.099	98	98	75-125	0	20	
Arsenic	mg/L	ND	0.1	0.1	0.10	0.10	101	100	75-125	1	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: HAMMOND AP-2 SEMIANNUAL
Pace Project No.: 92527256

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3196236 3196237

Parameter	Units	92526031002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Barium	mg/L	0.016	0.1	0.1	0.11	0.11	96	95	75-125	1	20	
Beryllium	mg/L	0.000097J	0.1	0.1	0.083	0.080	82	80	75-125	3	20	
Boron	mg/L	0.36	1	1	1.2	1.2	84	83	75-125	1	20	
Cadmium	mg/L	0.017	0.1	0.1	0.11	0.11	96	95	75-125	1	20	
Chromium	mg/L	0.00080J	0.1	0.1	0.092	0.092	92	91	75-125	0	20	
Cobalt	mg/L	0.019	0.1	0.1	0.11	0.11	93	92	75-125	1	20	
Lead	mg/L	0.00017J	0.1	0.1	0.088	0.087	88	86	75-125	2	20	
Lithium	mg/L	0.026J	0.1	0.1	0.11	0.11	82	81	75-125	1	20	
Molybdenum	mg/L	ND	0.1	0.1	0.093	0.092	93	91	75-125	2	20	
Selenium	mg/L	ND	0.1	0.1	0.10	0.097	100	96	75-125	4	20	
Thallium	mg/L	ND	0.1	0.1	0.089	0.087	89	86	75-125	3	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: HAMMOND AP-2 SEMIANNUAL
Pace Project No.: 92527256

QC Batch: 607964
QC Batch Method: EPA 3005A
Analysis Method: EPA 6020B
Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92527256006, 92527256007, 92527256010

METHOD BLANK: 3202640 Matrix: Water
Associated Lab Samples: 92527256006, 92527256007, 92527256010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00028	03/19/21 19:29	
Arsenic	mg/L	ND	0.0050	0.00078	03/19/21 19:29	
Barium	mg/L	ND	0.0050	0.00071	03/19/21 19:29	
Beryllium	mg/L	ND	0.00050	0.000046	03/19/21 19:29	
Boron	mg/L	ND	0.040	0.0052	03/19/21 19:29	
Cadmium	mg/L	ND	0.00050	0.00012	03/19/21 19:29	
Chromium	mg/L	ND	0.0050	0.00055	03/19/21 19:29	
Cobalt	mg/L	ND	0.0050	0.00038	03/19/21 19:29	
Lead	mg/L	ND	0.0010	0.000036	03/19/21 19:29	
Lithium	mg/L	ND	0.030	0.00081	03/19/21 19:29	
Molybdenum	mg/L	ND	0.010	0.00069	03/19/21 19:29	
Selenium	mg/L	ND	0.0050	0.0016	03/19/21 19:29	
Thallium	mg/L	ND	0.0010	0.00014	03/19/21 19:29	

LABORATORY CONTROL SAMPLE: 3202641

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.12	120	80-120	
Arsenic	mg/L	0.1	0.11	106	80-120	
Barium	mg/L	0.1	0.11	106	80-120	
Beryllium	mg/L	0.1	0.11	109	80-120	
Boron	mg/L	1	1.0	105	80-120	
Cadmium	mg/L	0.1	0.11	107	80-120	
Chromium	mg/L	0.1	0.10	104	80-120	
Cobalt	mg/L	0.1	0.10	102	80-120	
Lead	mg/L	0.1	0.11	108	80-120	
Lithium	mg/L	0.1	0.11	107	80-120	
Molybdenum	mg/L	0.1	0.11	105	80-120	
Selenium	mg/L	0.1	0.10	103	80-120	
Thallium	mg/L	0.1	0.10	103	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3202642 3202643

Parameter	Units	92526941001 Result	MS 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	0.12	0.12	118	118	75-125	0	20	
Arsenic	mg/L	ND	0.1	0.1	0.11	0.10	107	104	75-125	2	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: HAMMOND AP-2 SEMIANNUAL
Pace Project No.: 92527256

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3202642 3202643

Parameter	Units	92526941001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Barium	mg/L	ND	0.1	0.1	0.11	0.11	107	106	75-125	1	20	
Beryllium	mg/L	ND	0.1	0.1	0.11	0.10	107	104	75-125	2	20	
Boron	mg/L	0.0052J	1	1	1.1	1.0	106	102	75-125	4	20	
Cadmium	mg/L	ND	0.1	0.1	0.10	0.10	105	104	75-125	1	20	
Chromium	mg/L	0.00062J	0.1	0.1	0.11	0.10	108	103	75-125	4	20	
Cobalt	mg/L	ND	0.1	0.1	0.11	0.10	106	101	75-125	5	20	
Lead	mg/L	ND	0.1	0.1	0.11	0.11	107	106	75-125	1	20	
Lithium	mg/L	ND	0.1	0.1	0.11	0.10	106	104	75-125	3	20	
Molybdenum	mg/L	ND	0.1	0.1	0.11	0.11	107	106	75-125	1	20	
Selenium	mg/L	ND	0.1	0.1	0.11	0.10	105	101	75-125	4	20	
Thallium	mg/L	ND	0.1	0.1	0.10	0.10	103	102	75-125	1	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: HAMMOND AP-2 SEMIANNUAL
Pace Project No.: 92527256

QC Batch: 610582
QC Batch Method: EPA 3005A
Analysis Method: EPA 6020B
Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92527256008, 92527256009, 92527256011, 92527256012, 92527256013, 92527256014, 92527256015, 92527256016, 92527256017, 92527256018, 92527256019, 92527256020, 92527256021, 92527256022, 92527256023, 92527256024

METHOD BLANK: 3215309 Matrix: Water
Associated Lab Samples: 92527256008, 92527256009, 92527256011, 92527256012, 92527256013, 92527256014, 92527256015, 92527256016, 92527256017, 92527256018, 92527256019, 92527256020, 92527256021, 92527256022, 92527256023, 92527256024

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00028	04/05/21 22:08	
Arsenic	mg/L	ND	0.0050	0.00078	04/05/21 22:08	
Barium	mg/L	ND	0.0050	0.00071	04/05/21 22:08	
Beryllium	mg/L	ND	0.00050	0.000046	04/05/21 22:08	
Boron	mg/L	ND	0.040	0.0052	04/05/21 22:08	
Cadmium	mg/L	ND	0.00050	0.00012	04/05/21 22:08	
Chromium	mg/L	ND	0.0050	0.00055	04/05/21 22:08	
Cobalt	mg/L	ND	0.0050	0.00038	04/05/21 22:08	
Lead	mg/L	ND	0.0010	0.000036	04/05/21 22:08	
Lithium	mg/L	ND	0.030	0.00081	04/05/21 22:08	
Molybdenum	mg/L	ND	0.010	0.00069	04/05/21 22:08	
Selenium	mg/L	ND	0.0050	0.0016	04/05/21 22:08	
Thallium	mg/L	ND	0.0010	0.00014	04/05/21 22:08	

LABORATORY CONTROL SAMPLE: 3215310

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.12	116	80-120	
Arsenic	mg/L	0.1	0.10	102	80-120	
Barium	mg/L	0.1	0.10	103	80-120	
Beryllium	mg/L	0.1	0.10	105	80-120	
Boron	mg/L	1	1.0	104	80-120	
Cadmium	mg/L	0.1	0.11	107	80-120	
Chromium	mg/L	0.1	0.10	105	80-120	
Cobalt	mg/L	0.1	0.10	103	80-120	
Lead	mg/L	0.1	0.10	101	80-120	
Lithium	mg/L	0.1	0.11	106	80-120	
Molybdenum	mg/L	0.1	0.10	101	80-120	
Selenium	mg/L	0.1	0.10	100	80-120	
Thallium	mg/L	0.1	0.098	98	80-120	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: HAMMOND AP-2 SEMIANNUAL
Pace Project No.: 92527256

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3215311 3215312

Parameter	Units	92527256009 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	0.12	0.11	117	114	75-125	3	20	
Arsenic	mg/L	ND	0.1	0.1	0.10	0.10	104	103	75-125	2	20	
Barium	mg/L	0.21	0.1	0.1	0.31	0.31	103	102	75-125	0	20	
Beryllium	mg/L	ND	0.1	0.1	0.10	0.10	105	102	75-125	2	20	
Boron	mg/L	0.018J	1	1	1.0	1.0	102	102	75-125	0	20	
Cadmium	mg/L	ND	0.1	0.1	0.11	0.10	105	103	75-125	3	20	
Chromium	mg/L	ND	0.1	0.1	0.10	0.14	102	143	75-125	34	20	M1,R1
Cobalt	mg/L	ND	0.1	0.1	0.10	0.10	102	104	75-125	3	20	
Lead	mg/L	ND	0.1	0.1	0.10	0.10	100	100	75-125	0	20	
Lithium	mg/L	0.012J	0.1	0.1	0.11	0.12	103	104	75-125	1	20	
Molybdenum	mg/L	ND	0.1	0.1	0.10	0.10	102	104	75-125	2	20	
Selenium	mg/L	ND	0.1	0.1	0.10	0.10	100	102	75-125	2	20	
Thallium	mg/L	ND	0.1	0.1	0.099	0.098	99	98	75-125	1	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: HAMMOND AP-2 SEMIANNUAL
Pace Project No.: 92527256

QC Batch: 606587
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: 92527256001, 92527256002, 92527256003, 92527256004

METHOD BLANK: 3195825 Matrix: Water
Associated Lab Samples: 92527256001, 92527256002, 92527256003, 92527256004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	03/15/21 13:13	

LABORATORY CONTROL SAMPLE: 3195826

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	362	90	90-111	

SAMPLE DUPLICATE: 3195827

Parameter	Units	92527234005 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	2120	2390	12	10	D6

SAMPLE DUPLICATE: 3195998

Parameter	Units	92527273001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	223	190	16	10	D6

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QUALITY CONTROL DATA

Project: HAMMOND AP-2 SEMIANNUAL
Pace Project No.: 92527256

QC Batch: 606868
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: 92527256006, 92527256007, 92527256008, 92527256009

METHOD BLANK: 3197215 Matrix: Water
Associated Lab Samples: 92527256006, 92527256007, 92527256008, 92527256009

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	03/16/21 15:05	

LABORATORY CONTROL SAMPLE: 3197216

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	386	96	90-111	

SAMPLE DUPLICATE: 3197217

Parameter	Units	92527492010 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	43.0	52.0	19	10	D6

SAMPLE DUPLICATE: 3197218

Parameter	Units	92527234015 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	149	147	1	10	

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REPORT OF LABORATORY ANALYSIS

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(770)734-4200

QUALITY CONTROL DATA

Project: HAMMOND AP-2 SEMIANNUAL
Pace Project No.: 92527256

QC Batch: 607316
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: 92527256010, 92527256011

METHOD BLANK: 3199480 Matrix: Water
Associated Lab Samples: 92527256010, 92527256011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	03/17/21 17:40	

LABORATORY CONTROL SAMPLE: 3199481

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	400	100	90-111	

SAMPLE DUPLICATE: 3199482

Parameter	Units	92527256010 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	279	278	0	10	

SAMPLE DUPLICATE: 3199483

Parameter	Units	92526996006 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	255	258	1	10	

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Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: HAMMOND AP-2 SEMIANNUAL
Pace Project No.: 92527256

QC Batch: 608136
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: 92527256012

METHOD BLANK: 3203650 Matrix: Water
Associated Lab Samples: 92527256012

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	03/23/21 07:58	

LABORATORY CONTROL SAMPLE: 3203651

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	414	104	90-111	

SAMPLE DUPLICATE: 3203652

Parameter	Units	92527612006 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	99.0	97.0	2	10	

SAMPLE DUPLICATE: 3203653

Parameter	Units	92528339001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	952	1020	7	10	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: HAMMOND AP-2 SEMIANNUAL
Pace Project No.: 92527256

QC Batch: 608146
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: 92527256013, 92527256014, 92527256015, 92527256016

METHOD BLANK: 3203677 Matrix: Water
Associated Lab Samples: 92527256013, 92527256014, 92527256015, 92527256016

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	03/23/21 07:38	

LABORATORY CONTROL SAMPLE: 3203678

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	401	100	90-111	

SAMPLE DUPLICATE: 3203679

Parameter	Units	92527268006 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	490	502	2	10	H1

SAMPLE DUPLICATE: 3203680

Parameter	Units	92528629001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	158	72.0	75	10	D6

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: HAMMOND AP-2 SEMIANNUAL
Pace Project No.: 92527256

QC Batch: 608913 | Analysis Method: SM 2450C-2011
QC Batch Method: SM 2450C-2011 | Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92527256017, 92527256018, 92527256019, 92527256020, 92527256021, 92527256022, 92527256023

METHOD BLANK: 3207223 Matrix: Water
Associated Lab Samples: 92527256017, 92527256018, 92527256019, 92527256020, 92527256021, 92527256022, 92527256023

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	03/25/21 11:08	

LABORATORY CONTROL SAMPLE: 3207224

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	377	94	90-111	

SAMPLE DUPLICATE: 3207225

Parameter	Units	92528809001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	1170	1110	5	10	

SAMPLE DUPLICATE: 3207226

Parameter	Units	92527612014 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	255	213	18	10	D6

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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QUALITY CONTROL DATA

Project: HAMMOND AP-2 SEMIANNUAL
Pace Project No.: 92527256

QC Batch: 609221
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: 92527256024

METHOD BLANK: 3208754 Matrix: Water
Associated Lab Samples: 92527256024

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	03/26/21 09:30	

LABORATORY CONTROL SAMPLE: 3208755

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	385	96	90-111	

SAMPLE DUPLICATE: 3208757

Parameter	Units	92527612017 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	371	403	8	10	

SAMPLE DUPLICATE: 3208759

Parameter	Units	92528787009 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	250	243	3	10	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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QUALITY CONTROL DATA

Project: HAMMOND AP-2 SEMIANNUAL
Pace Project No.: 92527256

QC Batch: 607170
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: 92527256001, 92527256002, 92527256003, 92527256004

METHOD BLANK: 3198670 Matrix: Water
Associated Lab Samples: 92527256001, 92527256002, 92527256003, 92527256004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	03/17/21 17:51	
Fluoride	mg/L	ND	0.10	0.050	03/17/21 17:51	
Sulfate	mg/L	ND	1.0	0.50	03/17/21 17:51	

LABORATORY CONTROL SAMPLE: 3198671

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	50.3	101	90-110	
Fluoride	mg/L	2.5	2.7	107	90-110	
Sulfate	mg/L	50	52.7	105	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3198672 3198673

Parameter	Units	92527256001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	7.4	50	50	59.6	59.8	104	105	90-110	0	10	
Fluoride	mg/L	0.079J	2.5	2.5	2.7	2.7	106	107	90-110	0	10	
Sulfate	mg/L	49.6	50	50	94.1	95.1	89	91	90-110	1	10	M1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3198674 3198675

Parameter	Units	92527256002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	2.9	50	50	54.4	53.4	103	101	90-110	2	10	
Fluoride	mg/L	ND	2.5	2.5	3.0	2.8	118	112	90-110	6	10	M1
Sulfate	mg/L	1.2	50	50	54.5	53.7	107	105	90-110	1	10	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: HAMMOND AP-2 SEMIANNUAL
Pace Project No.: 92527256

QC Batch: 607751
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: 92527256006, 92527256007, 92527256008, 92527256009, 92527256010

METHOD BLANK: 3201757 Matrix: Water
Associated Lab Samples: 92527256006, 92527256007, 92527256008, 92527256009, 92527256010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	03/19/21 17:15	
Fluoride	mg/L	ND	0.10	0.050	03/19/21 17:15	
Sulfate	mg/L	ND	1.0	0.50	03/19/21 17:15	

LABORATORY CONTROL SAMPLE: 3201758

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	50.2	100	90-110	
Fluoride	mg/L	2.5	2.3	91	90-110	
Sulfate	mg/L	50	50.2	100	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3201759 3201760

Parameter	Units	92528475003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	2510	50	50	2520	2520	27	27	90-110	0	10	M6
Fluoride	mg/L	4.6	2.5	2.5	12.1	11.9	302	294	90-110	2	10	M6
Sulfate	mg/L	1530	50	50	1510	1480	-49	-112	90-110	2	10	M6

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3201761 3201762

Parameter	Units	92527256007 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	5.9	50	50	58.9	57.5	106	103	90-110	2	10	
Fluoride	mg/L	ND	2.5	2.5	2.3	2.3	91	90	90-110	1	10	
Sulfate	mg/L	50.4	50	50	102	101	103	101	90-110	1	10	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: HAMMOND AP-2 SEMIANNUAL
Pace Project No.: 92527256

QC Batch: 607758
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: 92527256011

METHOD BLANK: 3201801 Matrix: Water
Associated Lab Samples: 92527256011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	03/20/21 19:43	
Fluoride	mg/L	ND	0.10	0.050	03/20/21 19:43	
Sulfate	mg/L	ND	1.0	0.50	03/20/21 19:43	

LABORATORY CONTROL SAMPLE: 3201802

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	50.0	100	90-110	
Fluoride	mg/L	2.5	2.6	103	90-110	
Sulfate	mg/L	50	53.0	106	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3201803 3201804

Parameter	Units	92526996007 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	8.0	50	50	57.8	58.5	99	101	90-110	1	10	
Fluoride	mg/L	0.058J	2.5	2.5	2.5	2.6	98	100	90-110	2	10	
Sulfate	mg/L	154	50	50	255	259	201	210	90-110	2	10	M6

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3201805 3201806

Parameter	Units	92527261012 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	53.9	53.4	101	100	90-110	1	10	
Fluoride	mg/L	0.83	2.5	2.5	3.5	3.5	107	106	90-110	1	10	
Sulfate	mg/L	166	50	50	183	208	33	84	90-110	13	10	M1,R1

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: HAMMOND AP-2 SEMIANNUAL
Pace Project No.: 92527256

QC Batch: 607984
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: 92527256012

METHOD BLANK: 3202745 Matrix: Water
Associated Lab Samples: 92527256012

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	03/21/21 19:26	
Fluoride	mg/L	ND	0.10	0.050	03/21/21 19:26	
Sulfate	mg/L	ND	1.0	0.50	03/21/21 19:26	

LABORATORY CONTROL SAMPLE: 3202746

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	52.2	104	90-110	
Fluoride	mg/L	2.5	2.6	104	90-110	
Sulfate	mg/L	50	52.8	106	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3202747 3202748

Parameter	Units	92527234030 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	ND	50	50	51.8	50.4	104	101	90-110	3	10	
Fluoride	mg/L	ND	2.5	2.5	2.6	2.5	104	101	90-110	3	10	
Sulfate	mg/L	ND	50	50	52.2	50.8	104	102	90-110	3	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3202749 3202750

Parameter	Units	92527612006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	1.6	50	50	52.6	51.8	102	100	90-110	1	10	
Fluoride	mg/L	0.18	2.5	2.5	2.7	2.7	99	102	90-110	2	10	
Sulfate	mg/L	7.7	50	50	57.9	57.5	100	100	90-110	1	10	

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REPORT OF LABORATORY ANALYSIS

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Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: HAMMOND AP-2 SEMIANNUAL
Pace Project No.: 92527256

QC Batch: 608285
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: 92527256013, 92527256014, 92527256015, 92527256016

METHOD BLANK: 3204508 Matrix: Water
Associated Lab Samples: 92527256013, 92527256014, 92527256015, 92527256016

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	03/23/21 04:02	
Fluoride	mg/L	ND	0.10	0.050	03/23/21 04:02	
Sulfate	mg/L	ND	1.0	0.50	03/23/21 04:02	

LABORATORY CONTROL SAMPLE: 3204509

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	50.7	101	90-110	
Fluoride	mg/L	2.5	2.5	100	90-110	
Sulfate	mg/L	50	51.8	104	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3204510 3204511

Parameter	Units	92528339002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	53.4	50	50	91.2	90.1	75	73	90-110	1	10	M6
Fluoride	mg/L	0.74	2.5	2.5	3.3	3.2	102	100	90-110	2	10	
Sulfate	mg/L	457	50	50	503	503	93	93	90-110	0	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3204512 3204513

Parameter	Units	92527612010 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	4.7	50	50	58.1	56.8	107	104	90-110	2	10	
Fluoride	mg/L	0.089J	2.5	2.5	2.8	2.7	107	104	90-110	2	10	
Sulfate	mg/L	28.3	50	50	80.9	79.7	105	103	90-110	2	10	

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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-2 SEMIANNUAL
Pace Project No.: 92527256

QC Batch: 608857
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: 92527256017, 92527256018, 92527256019, 92527256020, 92527256021, 92527256022, 92527256023

METHOD BLANK: 3206837 Matrix: Water
Associated Lab Samples: 92527256017, 92527256018, 92527256019, 92527256020, 92527256021, 92527256022, 92527256023

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	03/25/21 18:48	
Fluoride	mg/L	ND	0.10	0.050	03/25/21 18:48	
Sulfate	mg/L	ND	1.0	0.50	03/25/21 18:48	

LABORATORY CONTROL SAMPLE: 3206838

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	52.4	105	90-110	
Fluoride	mg/L	2.5	2.7	107	90-110	
Sulfate	mg/L	50	53.8	108	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3206839 3206840

Parameter	Units	92527256017 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	138	50	50	182	183	88	90	90-110	1	10	M6
Fluoride	mg/L	0.057J	2.5	2.5	2.8	2.8	108	108	90-110	0	10	
Sulfate	mg/L	447	50	50	490	492	86	91	90-110	0	10	M6

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3206841 3206842

Parameter	Units	92527612015 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	4.3	50	50	56.2	56.5	104	104	90-110	0	10	
Fluoride	mg/L	0.079J	2.5	2.5	2.7	2.7	105	106	90-110	1	10	
Sulfate	mg/L	87.8	50	50	128	129	81	82	90-110	0	10	M1

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REPORT OF LABORATORY ANALYSIS

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Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: HAMMOND AP-2 SEMIANNUAL
Pace Project No.: 92527256

QC Batch: 608960
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: 92527256024

METHOD BLANK: 3207640 Matrix: Water
Associated Lab Samples: 92527256024

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	03/25/21 13:06	
Fluoride	mg/L	ND	0.10	0.050	03/25/21 13:06	
Sulfate	mg/L	ND	1.0	0.50	03/25/21 13:06	

LABORATORY CONTROL SAMPLE: 3207641

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	51.3	103	90-110	
Fluoride	mg/L	2.5	2.5	98	90-110	
Sulfate	mg/L	50	51.7	103	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3207642 3207643

Parameter	Units	92529156001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	24.2	50	50	71.9	72.2	95	96	90-110	0	10	
Fluoride	mg/L	ND	2.5	2.5	2.5	2.5	98	98	90-110	0	10	
Sulfate	mg/L	ND	50	50	71.0	71.3	142	142	90-110	0	10	M1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3207644 3207645

Parameter	Units	92527612017 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	24.9	50	50	76.4	76.6	103	103	90-110	0	10	
Fluoride	mg/L	ND	2.5	2.5	2.6	2.6	103	102	90-110	1	10	
Sulfate	mg/L	162	50	50	209	207	93	90	90-110	1	10	

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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-2 SEMIANNUAL
Pace Project No.: 92527256

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

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

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

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

B	Analyte was detected in the associated method blank.
D3	Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.
D6	The precision between the sample and sample duplicate exceeded laboratory control limits.
H1	Analysis conducted outside the EPA method holding time.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
M6	Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.
R1	RPD value was outside control limits.

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

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: HAMMOND AP-2 SEMIANNUAL
Pace Project No.: 92527256

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92527256001	HGWA-1				
92527256002	HGWA-4				
92527256003	HGWA-42D				
92527256004	HGWA-44D				
92527256006	HGWA-2				
92527256007	HGWA-3				
92527256008	HGWA-5				
92527256009	HGWA-6				
92527256010	HGWA-43D				
92527256011	MW-37D				
92527256012	HGWC-15				
92527256013	HGWC-14				
92527256014	HGWC-16				
92527256015	MW-22				
92527256016	MW-23D				
92527256017	HGWC-17				
92527256018	HGWC-18				
92527256019	MW-21D				
92527256020	MW-33				
92527256024	MW-35				
92527256001	HGWA-1	EPA 3010A	606634	EPA 6010D	606723
92527256002	HGWA-4	EPA 3010A	606634	EPA 6010D	606723
92527256003	HGWA-42D	EPA 3010A	606634	EPA 6010D	606723
92527256004	HGWA-44D	EPA 3010A	606634	EPA 6010D	606723
92527256006	HGWA-2	EPA 3010A	608195	EPA 6010D	608261
92527256007	HGWA-3	EPA 3010A	608195	EPA 6010D	608261
92527256008	HGWA-5	EPA 3010A	610580	EPA 6010D	610784
92527256009	HGWA-6	EPA 3010A	610580	EPA 6010D	610784
92527256010	HGWA-43D	EPA 3010A	608195	EPA 6010D	608261
92527256011	MW-37D	EPA 3010A	610580	EPA 6010D	610784
92527256012	HGWC-15	EPA 3010A	610580	EPA 6010D	610784
92527256013	HGWC-14	EPA 3010A	610580	EPA 6010D	610784
92527256014	HGWC-16	EPA 3010A	610580	EPA 6010D	610784
92527256015	MW-22	EPA 3010A	610580	EPA 6010D	610784
92527256016	MW-23D	EPA 3010A	610580	EPA 6010D	610784
92527256017	HGWC-17	EPA 3010A	610580	EPA 6010D	610784
92527256018	HGWC-18	EPA 3010A	610580	EPA 6010D	610784
92527256019	MW-21D	EPA 3010A	610580	EPA 6010D	610784
92527256020	MW-33	EPA 3010A	610580	EPA 6010D	610784
92527256021	DUP-2	EPA 3010A	610580	EPA 6010D	610784
92527256022	EB-2	EPA 3010A	610580	EPA 6010D	610784
92527256023	FB-2	EPA 3010A	610580	EPA 6010D	610784
92527256024	MW-35	EPA 3010A	610580	EPA 6010D	610784
92527256001	HGWA-1	EPA 3005A	606644	EPA 6020B	606712
92527256002	HGWA-4	EPA 3005A	606644	EPA 6020B	606712
92527256003	HGWA-42D	EPA 3005A	606644	EPA 6020B	606712

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

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: HAMMOND AP-2 SEMIANNUAL
Pace Project No.: 92527256

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92527256004	**HGWA-44D**	EPA 3005A	606644	EPA 6020B	606712
92527256006	**HGWA-2**	EPA 3005A	607964	EPA 6020B	608044
92527256007	**HGWA-3**	EPA 3005A	607964	EPA 6020B	608044
92527256008	**HGWA-5**	EPA 3005A	610582	EPA 6020B	610877
92527256009	**HGWA-6**	EPA 3005A	610582	EPA 6020B	610877
92527256010	**HGWA-43D**	EPA 3005A	607964	EPA 6020B	608044
92527256011	**MW-37D**	EPA 3005A	610582	EPA 6020B	610877
92527256012	**HGWC-15**	EPA 3005A	610582	EPA 6020B	610877
92527256013	**HGWC-14**	EPA 3005A	610582	EPA 6020B	610877
92527256014	**HGWC-16**	EPA 3005A	610582	EPA 6020B	610877
92527256015	**MW-22**	EPA 3005A	610582	EPA 6020B	610877
92527256016	**MW-23D**	EPA 3005A	610582	EPA 6020B	610877
92527256017	**HGWC-17**	EPA 3005A	610582	EPA 6020B	610877
92527256018	**HGWC-18**	EPA 3005A	610582	EPA 6020B	610877
92527256019	**MW-21D**	EPA 3005A	610582	EPA 6020B	610877
92527256020	**MW-33**	EPA 3005A	610582	EPA 6020B	610877
92527256021	**DUP-2**	EPA 3005A	610582	EPA 6020B	610877
92527256022	**EB-2**	EPA 3005A	610582	EPA 6020B	610877
92527256023	**FB-2**	EPA 3005A	610582	EPA 6020B	610877
92527256024	**MW-35**	EPA 3005A	610582	EPA 6020B	610877
92527256001	**HGWA-1**	SM 2450C-2011	606587		
92527256002	**HGWA-4**	SM 2450C-2011	606587		
92527256003	**HGWA-42D**	SM 2450C-2011	606587		
92527256004	**HGWA-44D**	SM 2450C-2011	606587		
92527256006	**HGWA-2**	SM 2450C-2011	606868		
92527256007	**HGWA-3**	SM 2450C-2011	606868		
92527256008	**HGWA-5**	SM 2450C-2011	606868		
92527256009	**HGWA-6**	SM 2450C-2011	606868		
92527256010	**HGWA-43D**	SM 2450C-2011	607316		
92527256011	**MW-37D**	SM 2450C-2011	607316		
92527256012	**HGWC-15**	SM 2450C-2011	608136		
92527256013	**HGWC-14**	SM 2450C-2011	608146		
92527256014	**HGWC-16**	SM 2450C-2011	608146		
92527256015	**MW-22**	SM 2450C-2011	608146		
92527256016	**MW-23D**	SM 2450C-2011	608146		
92527256017	**HGWC-17**	SM 2450C-2011	608913		
92527256018	**HGWC-18**	SM 2450C-2011	608913		
92527256019	**MW-21D**	SM 2450C-2011	608913		
92527256020	**MW-33**	SM 2450C-2011	608913		
92527256021	**DUP-2**	SM 2450C-2011	608913		
92527256022	**EB-2**	SM 2450C-2011	608913		
92527256023	**FB-2**	SM 2450C-2011	608913		
92527256024	**MW-35**	SM 2450C-2011	609221		

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: HAMMOND AP-2 SEMIANNUAL
Pace Project No.: 92527256

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92527256001	**HGWA-1**	EPA 300.0 Rev 2.1 1993	607170		
92527256002	**HGWA-4**	EPA 300.0 Rev 2.1 1993	607170		
92527256003	**HGWA-42D**	EPA 300.0 Rev 2.1 1993	607170		
92527256004	**HGWA-44D**	EPA 300.0 Rev 2.1 1993	607170		
92527256006	**HGWA-2**	EPA 300.0 Rev 2.1 1993	607751		
92527256007	**HGWA-3**	EPA 300.0 Rev 2.1 1993	607751		
92527256008	**HGWA-5**	EPA 300.0 Rev 2.1 1993	607751		
92527256009	**HGWA-6**	EPA 300.0 Rev 2.1 1993	607751		
92527256010	**HGWA-43D**	EPA 300.0 Rev 2.1 1993	607751		
92527256011	**MW-37D**	EPA 300.0 Rev 2.1 1993	607758		
92527256012	**HGWC-15**	EPA 300.0 Rev 2.1 1993	607984		
92527256013	**HGWC-14**	EPA 300.0 Rev 2.1 1993	608285		
92527256014	**HGWC-16**	EPA 300.0 Rev 2.1 1993	608285		
92527256015	**MW-22**	EPA 300.0 Rev 2.1 1993	608285		
92527256016	**MW-23D**	EPA 300.0 Rev 2.1 1993	608285		
92527256017	**HGWC-17**	EPA 300.0 Rev 2.1 1993	608857		
92527256018	**HGWC-18**	EPA 300.0 Rev 2.1 1993	608857		
92527256019	**MW-21D**	EPA 300.0 Rev 2.1 1993	608857		
92527256020	**MW-33**	EPA 300.0 Rev 2.1 1993	608857		
92527256021	**DUP-2**	EPA 300.0 Rev 2.1 1993	608857		
92527256022	**EB-2**	EPA 300.0 Rev 2.1 1993	608857		
92527256023	**FB-2**	EPA 300.0 Rev 2.1 1993	608857		
92527256024	**MW-35**	EPA 300.0 Rev 2.1 1993	608960		

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WO# : 92527256

92527256

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-2 Semiannual	Pace Project Manager: Kevin Herring
Requested Due Date/TAT: 10 Day	Project Number: GW6561B	Pace Profile #: 10839-3

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☑ OTHER GSR

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): Chloride, Fluoride, Sulfate	App. III & IV Metals*	RAD 226/228	TDS	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	HGWA-1	WT	G	3/10/21	1610	–	–	17	5	2		3							X	X	X	X	N	pH = 6.95
2	HGWA-2	WT	G			–	–		5	2		3							X	X	X	X	N	pH =
3	HGWA-3	WT	G			–	–		5	2		3							X	X	X	X	N	pH =
4	HGWA-4	WT	G	3/10/21	1621	–	–	16	5	2		3							X	X	X	X	N	pH = 5.28
5	HGWA-5	WT	G			–	–		5	2		3							X	X	X	X	N	pH =
6	HGWA-6	WT	G			–	–		5	2		3							X	X	X	X	N	pH =
7	HGWA-42D	WT	G	3/10/21	1423	–	–	19	5	2		3							X	X	X	X	N	pH = 7.70
8	HGWA-43D	WT	G			–	–		5	2		3							X	X	X	X	N	pH =
9	HGWA-44D	WT	G	3/10/21	1430	–	–	19	5	2		3							X	X	X	X	N	pH = 7.92
10	HGWC-14	WT	G			–	–		5	2		3							X	X	X	X	N	pH =
11	HGWC-15	WT	G			–	–		5	2		3							X	X	X	X	N	pH =
12	HGWC-16	WT	G			–	–		5	2		3							X	X	X	X	N	pH =

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.	Monnica Kreston/Geos									
*App. III & IV Metals = Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Pb, Li, Mo, Se, Tl	Vashish Tauloor/Geos	3/10/21	1730	Monnica Kreston/Geos	3/10/21	1730				
One sample set submitted for HGWA-1/2/3/43D/44D but they will be reported for AP-1/2/3 SDGs	Monnica Kreston	3/11/21	1040	VA-RT/Pace	3-11-21	1040				
	VA-RT/Pace	3/11/21	1555	MR Mull	3/11/21	1555	2.0	Y	N	Y

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER: Monnica Kreston, Vashish Tauloor
SIGNATURE of SAMPLER: DATE Signed (MM/DD/YY): 03/10/21

*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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Page: ( ) of ( )

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-2 Semiannual	Pace Project Manager: Kevin Herring
Requested Due Date/TAT: 10 Day	Project Number: GW6581B	Pace Profile #: 10839-3

REGULATORY AGENCY

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

Site Location STATE: GA

Requested Analysis Filtered (Y/N)

ITEM #	Section D Required Client Information: 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 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	Y/N	Analysis Test: Chloride, Fluoride, Sulfate	App. III & IV Metals*	RAD 226/228	TDS	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
	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																	N	N	N	N	N		
1	HGWA-1	WT	G			–	–		5	2		3							X	X	X	X	N	pH =
2	HGWA-2	WT	G	3/11/21	0959	–	–	16	5	2		3							X	X	X	X	N	pH = 5.86
3	HGWA-3	WT	G	3/11/21	1125	–	–	17	5	2		3							X	X	X	X	N	pH = 7.33
4	HGWA-4	WT	G			–	–		5	2		3							X	X	X	X	N	pH =
5	HGWA-5	WT	G	3/11/21	1130	–	–	19	5	2		3							X	X	X	X	N	pH = 6.98
6	HGWA-6	WT	G	3/11/21	1239	–	–	18	5	2		3							X	X	X	X	N	pH = 7.56
7	HGWA-42D	WT	G			–	–		5	2		3							X	X	X	X	N	pH =
8	HGWA-43D	WT	G	3/11/21	0957	–	–	18	5	2		3							X	X	X	X	N	pH = 7.46
9	HGWA-44D	WT	G			–	–		5	2		3							X	X	X	X	N	pH =
10	HGWC-14	WT	G			–	–		5	2		3							X	X	X	X	N	pH =
11	HGWC-15	WT	G			–	–		5	2		3							X	X	X	X	N	pH =
12	HGWC-16	WT	G			–	–		5	2		3							X	X	X	X	N	pH =

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.	Thomas Hessler / Geosyntec	3/12/21	1310	Nikhil Thukral / GED	3/12/21	1310	
*App. III & IV Metals = Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Pb, Li, Mo, Se, Tl	Nikhil Thukral / GED	3/12/21	1343	[illegible] / Pace	3.12.21	1343	
One sample set submitted for HGWA-1/2/3/43D/44D but they will be reported for AP-1/2/3 SDGs	[illegible] / Pace	3.12.21	1639	[illegible]	3/12/21	1639	

SAMPLER NAME AND SIGNATURE		Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
PRINT Name of SAMPLER:	Thomas Hessler, Chad Russo, Nikhil Thukral				
SIGNATURE of SAMPLER:	DATE Signed (MM/DD/YY): 3/11/21				

*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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Page: 1 of 1

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-2 Semiannual	Pace Project Manager: Kevin Herring
Requested Due Date/TAT: 10 Day	Project Number: GW6581B	Pace Profile #: 10839-3

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: 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	App. III & IV Metals*	RAD 226/228	TDS	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
																		Requested Analysis Filtered (Y/N)	N	N	N	N		
1	HGWC-17	WT	G			–	–		5	2		3							X	X	X	X	N	pH =
2	HGWC-18	WT	G			–	–		5	2		3							X	X	X	X	N	pH =
3	MW-21D	WT	G			–	–		5	2		3							X	X	X	X	N	pH =
4	MW-22	WT	G			–	–		5	2		3							X	X	X	X	N	pH =
5	MW-23D	WT	G			–	–		5	2		3							X	X	X	X	N	pH =
6	MW-33	WT	G			–	–		5	2		3							X	X	X	X	N	pH =
7	MW-35	WT	G			–	–		5	2		3							X	X	X	X	N	pH =
8	MW-37D	WT	G	3/1/21	1020	–	–	18	5	2		3							X	X	X	X	N	pH = 7.50
9	Dup-2	WT	G		–				5	2		3							X	X	X	X	N	
10	~~FB-2~~	WT	G			(CK)	–		5	2		3							X	X	X	X	N	
11	FB-2	WT	G			3/12/2021			5	2		3							X	X	X	X	N	
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.	[signature] /GCo	3/15/21	1145	[signature] /Pace	3/15/21	1145	
*App. III & IV Metals = Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Pb, Li, Mo, Se, Tl	[signature] /Pace	3/15/21	1195	[signature] /Pace	3/15/21	1200	
One sample set submitted for HGWA-1/2/3/43D/44D but they will be reported for AP-1/2/3 SDGs	[signature] /Pace	3/16/21	1959	Charles Hinds	3/15/21	1498	

SAMPLER NAME AND SIGNATURE						
PRINT Name of SAMPLER: Yashish Taukoor						
SIGNATURE of SAMPLER: [signature]	DATE Signed (MM/DD/YY): 3/12/21	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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Page: 1 of 1

Section A Required Client Information:

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

Section B Required Project Information:

Report To:	SCS Contacts
Copy To:	Geosyntec Contacts
Purchase Order No.:	
Project Name:	Plant Hammond AP-2 Semiannual
Project Number:	GW6581B

Section C Invoice Information:

Attention:	Southern Co.
Company Name:	
Address:	
Pace Quote Reference:	
Pace Project Manager:	Kevin Herring
Pace Profile #:	10839-3

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☑ OTHER GSR

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): N	N	N	N	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
																			Chloride, Fluoride, Sulfate	App. III & IV Metals*	RAD 226/228	TDS		
1	HGWA-1	WT	G			--	--		5	2		3							X	X	X	X	N	pH =
2	HGWA-2	WT	G			--	--		5	2		3							X	X	X	X	N	pH =
3	HGWA-3	WT	G			--	--		5	2		3							X	X	X	X	N	pH =
4	HGWA-4	WT	G			--	--		5	2		3							X	X	X	X	N	pH =
5	HGWA-5	WT	G			--	--		5	2		3							X	X	X	X	N	pH =
6	HGWA-6	WT	G			--	--		5	2		3							X	X	X	X	N	pH =
7	HGWA-42D	WT	G			--	--		5	2		3							X	X	X	X	N	pH =
8	HGWA-43D	WT	G			--	--		5	2		3							X	X	X	X	N	pH =
9	HGWA-44D	WT	G			--	--		5	2		3							X	X	X	X	N	pH =
10	HGWC-14	WT	G			--	--		5	2		3							X	X	X	X	N	pH =
11	HGWC-15	WT	G	3/16/21	1524	--	--	17	5	2		3							X	X	X	X	N	pH = 6.08
12	HGWC-16	WT	G			--	--		5	2		3							X	X	X	X	N	pH =

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.	Thomas Heeder	3/17/21				
*App. III & IV Metals = Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Pb, Li, Mo, Se, Tl	Thomas Heeder	3/17/21	1310	Ryan Williams / Pace	3/17/21	1310
One sample set submitted for HGWA-1/2/3/43D/44D but they will be reported for AP-1/2/3 SDGs	Ryan Williams / Pace	3/17/21	1510	[illegible]	3/17/21	1510

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

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Thomas Heeder

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 3/16/21

*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: 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 AP-2 Semiannual
Project Number:	GW6581B

Section C — Invoice Information:

Attention:	Southern Co.
Company Name:	
Address:	
Pace Quote Reference:	
Pace Project Manager:	Kevin Herring
Pace Profile #:	10839-3

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	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
																		Analysis Test:	N	N	N	N		
																			Chloride, Fluoride, Sulfate	App. III & IV Metals*	RAD 226/228	TDS		
1	HGWA-1	WT	G			–	–		5	2		3							X	X	X	X	N	pH =
2	HGWA-2	WT	G			–	–		5	2		3							X	X	X	X	N	pH =
3	HGWA-3	WT	G			–	–		5	2		3							X	X	X	X	N	pH =
4	HGWA-4	WT	G			–	–		5	2		3							X	X	X	X	N	pH =
5	HGWA-5	WT	G			–	–		5	2		3							X	X	X	X	N	pH =
6	HGWA-6	WT	G			–	–		5	2		3							X	X	X	X	N	pH =
7	HGWA-42D	WT	G			–	–		5	2		3							X	X	X	X	N	pH =
8	HGWA-43D	WT	G			–	–		5	2		3							X	X	X	X	N	pH =
9	HGWA-44D	WT	G			–	–		5	2		3							X	X	X	X	N	pH =
10	HGWC-14	WT	G	3/17/21	1428	–	–	13	5	2		3							X	X	X	X	N	pH = 4.72
11	HGWC-15	WT	G			–	–		5	2		3							X	X	X	X	N	pH =
12	HGWC-16	WT	G	3/17/21	0929	–	–	17	5	2		3							X	X	X	X	N	pH = 7.19

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.	Thomas Hessler/Pace	3/18/21	1317	Lynn Williams/Pace	3/18/21	1317	
*App. III & IV Metals = Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Pb, Li, Mo, Se, Ti	Lynn Williams/Pace	3/19/21	1521	Charles Russo	3/19/21	1521	
One sample set submitted for HGWA-1/2/3/43D/44D but they will be reported for AP-1/2/3 SDGs							

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Thomas Hessler, Charles Russo

SIGNATURE of SAMPLER: DATE Signed (MM/DD/YY): 3/16/21

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

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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 AP-2 Semiannual
Project Number:	GW6581B

Section C Invoice Information:

Attention:	Southern Co.
Company Name:	
Address:	
Pace Quote Reference:	
Pace Project Manager:	Kevin Herring
Pace Profile #:	10839-3

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	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
																		Y/N	N N N N		
																		Analysis Test*	Chloride, Fluoride, Sulfate; App. III & IV Metals*; RAD 226/228; EDS		
1	HGWC-17	WT	G			–	–		5	2		3							X X X X	N	pH =
2	HGWC-18	WT	G			–	–		5	2		3							X X X X	N	pH =
3	MW-21D	WT	G			–	–		5	2		3							X X X X	N	pH = 5.57
4	MW-22	WT	G	3/17/21	1000	–	–		5	2		3							X X X X	N	pH = 6.86
5	MW-23D	WT	G	3/17/21	1149	–	–		5	2		3							X X X X	N	pH =
6	MW-33	WT	G			–	–		5	2		3							X X X X	N	pH =
7	MW-35	WT	G			–	–		5	2		3							X X X X	N	pH =
8	MW-37D	WT	G			–	–		5	2		3							X X X X	N	
9	Dup-2	WT	G		–	–	–		5	2		3							X X X X	N	
10	EB-2	WT	G			–	–		5	2		3							X X X X	N	
11	FB-2	WT	G			–	–		5	2		3							X X X X	N	
12																					

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.	Thomas Hessler/Geosyntec	3/17/21	1354	Lyn Williams/Pace	3/18/21	1317
*App. III & IV Metals = Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Pb, Li, Mo, Se, Tl	Lyn Williams/Pace	3/18/21	1621	Charles Hicks	3/18/21	1521
One sample set submitted for HGWA-1/2/3/43D/44D but they will be reported for AP-1/2/3 SDGs						

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: Thomas Hessler

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 3/18/21

*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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Email To:	SCS Contacts
Phone:	Fax:
Requested Due Date/TAT:	10 Day

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Report To:	SCS Contacts
Copy To:	Geosyntec Contacts
Purchase Order No.:	
Project Name:	Plant Hammond AP-2 Semiannual
Project Number:	GW6581B

Section C Invoice Information:

Attention:	Southern Co.
Company Name:	
Address:	
Pace Quote Reference:	
Pace Project Manager:	Kevin Herring
Pace Profile #:	10839-3

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: 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 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	App. III & IV Metals*	RAD 226/228	TDS	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
																			N	N	N	N		
1	HGWC-17	WT	G	3/17/21	1448	–	–	19	5	2		3							X	X	X	X	N	pH = 6.43
2	HGWC-18	WT	G	3/16/21	1001	–	–	16	5	2		3							X	X	X	X	N	pH = 4.54
3	MW-21D	WT	G	3/16/21	1208	–	–	18	5	2		3							X	X	X	X	N	pH = 6.95
4	MW-22	WT	G			–	–		5	2		3							X	X	X	X	N	pH =
5	~~MW-23D~~	~~WT~~	~~G~~						5	2		3							X	X	X	X	N	pH =
6	MW-33	WT	G	3/18/21	1640	–	–	19	5	2		3							X	X	X	X	N	pH = 6.27
7	~~MW-35~~	~~WT~~	~~G~~			–	–		5	2		3							X	X	X	X	N	pH =
8	~~MW-37D~~	~~WT~~	~~G~~			–	–		5	2		3							X	X	X	X	N	pH =
9	Dup-2	WT	G	3/18/21	–	–	–	19	5	2		3							X	X	X	X	N	
10	EB-2	WT	G	3/18/21	1250	–	–	19	5	2		3							X	X	X	X	N	
11	FB-2	WT	G	3/18/21	1530	–	–	19	5	2		3							X	X	X	X	N	
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 thorugh any wells not sampled, and note when the last sample for the event has been taken.	Thomas Hassler/Pace	3/19/21	1340	Lyn Williams/Pace	3/19/21	1340				
*App. III & IV Metals = Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Pb, Li, Mo, Se, Tl	Lyn Williams/Pace	3/19/21	1541	[signature]/Pace	3/19/21	1541	1.1	Y	N	Y
One sample set submitted for HGWA-1/2/3/43D/44D but they will be repaired for AP-1/2/3 SDGs										

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Thomas Hassler, & Chad Russo

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 3/18/21

*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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Page: 1 of 1

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-2 Semiannual	Pace Project Manager: Kevin Herring
Requested Due Date/TAT: 10 Day	Project Number: GW6581B	Pace Profile #: 10839-3

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

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 (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	App. III & IV Metals*	RAD 226/228	TDS	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
																		Requested Analysis Filtered (Y/N)	N	N	N	N		
1	HGWC-17	WT	G			–	–		5	2		3							X	X	X	X	N	pH =
2	HGWC-18	WT	G			–	–		5	2		3							X	X	X	X	N	pH =
3	MW-21D	WT	G			–	–		5	2		3							X	X	X	X	N	pH =
4	MW-22	WT	G			–	–		5	2		3							X	X	X	X	N	pH =
5	MW-23D	WT	G			–	–		5	2		3							X	X	X	X	N	pH =
6	MW-33	WT	G			–	–		5	2		3							X	X	X	X	N	pH =
7	MW-35	WT	G	3/19/21	1746	–	–	16	5	2		3							X	X	X	X	N	pH = 4.89
8	MW-37D	WT	G			–	–		5	2		3							X	X	X	X	N	pH =
9	Dup-2	WT	G	–	–	–	–		5	2		3							X	X	X	X	N	
10	EB-2	WT	G			–	–		5	2		3							X	X	X	X	N	
11	FB-2	WT	G			–	–		5	2		3							X	X	X	X	N	
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 thorugh any wells not sampled, and note when the last sample for the event has been taken.	Thomas Russo / Geo	3/22/21	1540	Ilya Williams / Pace	3/22/21	1540				
*App. III & IV Metals = Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Pb, Li, Mo, Se, Tl	Ilya Williams / Pace	3/22/21	1642	Geo / Pace	3/22/21	1642	3.3	Y	N	Y
One sample set submitted for HGWA-1/2/3/43D/44D but they will be reported for AP-1/2/3 SDGs										

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Chad Russo

SIGNATURE of SAMPLER: [signature]

DATE Signed (MM/DD/YY): 3/19/21

*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
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

April 16, 2021

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

RE: Project: HAMMOND AP-2 SEMIANNUAL RADS
Pace Project No.: 92527258

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory between March 11, 2021 and March 22, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

- Pace Analytical Services - Greensburg

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

Sincerely,

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

Enclosures

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

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

CERTIFICATIONS

Project: HAMMOND AP-2 SEMIANNUAL RADS
Pace Project No.: 92527258

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
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE SUMMARY

Project: HAMMOND AP-2 SEMIANNUAL RADS
Pace Project No.: 92527258

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92527258001	**HGWA-1**	Water	03/10/21 16:10	03/11/21 15:55
92527258002	**HGWA-4**	Water	03/10/21 16:21	03/11/21 15:55
92527258003	**HGWA-42D**	Water	03/10/21 14:23	03/11/21 15:55
92527258004	**HGWA-44D**	Water	03/10/21 14:30	03/11/21 15:55
92527258005	**HGWA-2**	Water	03/11/21 09:59	03/12/21 13:43
92527258006	**HGWA-3**	Water	03/11/21 11:25	03/12/21 13:43
92527258007	**HGWA-5**	Water	03/11/21 11:30	03/12/21 13:43
92527258008	**HGWA-6**	Water	03/11/21 12:39	03/12/21 13:43
92527258009	**HGWA-43D**	Water	03/11/21 09:57	03/12/21 13:43
92527258010	**MW-37D**	Water	03/12/21 10:20	03/15/21 12:00
92527258011	**HGWC-15**	Water	03/16/21 15:24	03/17/21 13:10
92527258012	**HGWC-14**	Water	03/17/21 14:28	03/18/21 13:17
92527258013	**HGWC-16**	Water	03/17/21 09:29	03/18/21 13:17
92527258014	**MW-22**	Water	03/17/21 10:00	03/18/21 13:17
92527258015	**MW-23D**	Water	03/17/21 11:49	03/18/21 13:17
92527258016	**HGWC-17**	Water	03/18/21 14:48	03/19/21 13:40
92527258017	**HGWC-18**	Water	03/18/21 10:01	03/19/21 13:40
92527258018	**MW-21D**	Water	03/18/21 12:08	03/19/21 13:40
92527258019	**MW-33**	Water	03/18/21 10:40	03/19/21 13:40
92527258020	**DUP-2**	Water	03/18/21 00:00	03/19/21 13:40
92527258021	**EB-2**	Water	03/18/21 12:50	03/19/21 13:40
92527258022	**FB-2**	Water	03/18/21 15:30	03/19/21 13:40
92527258023	**MW-35**	Water	03/19/21 12:48	03/22/21 15:41

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SAMPLE ANALYTE COUNT

Project: HAMMOND AP-2 SEMIANNUAL RADS
Pace Project No.: 92527258

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92527258001	**HGWA-1**	EPA 9315	CLA	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92527258002	**HGWA-4**	EPA 9315	CLA	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92527258003	**HGWA-42D**	EPA 9315	CLA	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92527258004	**HGWA-44D**	EPA 9315	CLA	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92527258005	**HGWA-2**	EPA 9315	CLA	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92527258006	**HGWA-3**	EPA 9315	CLA	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92527258007	**HGWA-5**	EPA 9315	CLA	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92527258008	**HGWA-6**	EPA 9315	CLA	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92527258009	**HGWA-43D**	EPA 9315	CLA	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92527258010	**MW-37D**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92527258011	**HGWC-15**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92527258012	**HGWC-14**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92527258013	**HGWC-16**	EPA 9315	LAL	1	PASI-PA

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SAMPLE ANALYTE COUNT

Project: HAMMOND AP-2 SEMIANNUAL RADS
Pace Project No.: 92527258

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92527258014	**MW-22**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92527258015	**MW-23D**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92527258016	**HGWC-17**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92527258017	**HGWC-18**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92527258018	**MW-21D**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92527258019	**MW-33**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92527258020	**DUP-2**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92527258021	**EB-2**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92527258022	**FB-2**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92527258023	**MW-35**	EPA 9315	CLA	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg

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SUMMARY OF DETECTION

Project: HAMMOND AP-2 SEMIANNUAL RADS
Pace Project No.: 92527258

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92527258001	**HGWA-1**					
EPA 9315	Radium-226	-0.0744 ± 0.0713 (0.306) C:76% T:NA	pCi/L		03/29/21 07:58	
EPA 9320	Radium-228	-0.473 ± 0.501 (1.24) C:75% T:67%	pCi/L		04/09/21 13:14	
Total Radium Calculation	Total Radium	0.000 ± 0.572 (1.55)	pCi/L		04/12/21 13:46	
92527258002	**HGWA-4**					
EPA 9315	Radium-226	0.0468 ± 0.144 (0.360) C:60% T:NA	pCi/L		03/29/21 07:58	
EPA 9320	Radium-228	0.234 ± 0.379 (0.823) C:73% T:91%	pCi/L		04/09/21 14:40	
Total Radium Calculation	Total Radium	0.281 ± 0.523 (1.18)	pCi/L		04/12/21 13:46	
92527258003	**HGWA-42D**					
EPA 9315	Radium-226	0.719 ± 0.297 (0.317) C:77% T:NA	pCi/L		03/29/21 07:58	
EPA 9320	Radium-228	0.493 ± 0.385 (0.765) C:75% T:87%	pCi/L		04/09/21 12:10	
Total Radium Calculation	Total Radium	1.21 ± 0.682 (1.08)	pCi/L		04/12/21 13:46	
92527258004	**HGWA-44D**					
EPA 9315	Radium-226	0.119 ± 0.127 (0.231) C:79% T:NA	pCi/L		03/29/21 07:58	
EPA 9320	Radium-228	0.692 ± 0.477 (0.922) C:63% T:82%	pCi/L		04/09/21 15:22	
Total Radium Calculation	Total Radium	0.811 ± 0.604 (1.15)	pCi/L		04/12/21 13:46	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: HAMMOND AP-2 SEMIANNUAL RADS
Pace Project No.: 92527258

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92527258005	**HGWA-2**					
EPA 9315	Radium-226	0.206 ± 0.172 (0.304) C:81% T:NA	pCi/L		03/29/21 07:58	
EPA 9320	Radium-228	0.531 ± 0.488 (0.990) C:58% T:71%	pCi/L		04/09/21 15:22	
Total Radium Calculation	Total Radium	0.737 ± 0.660 (1.29)	pCi/L		04/12/21 13:46	
92527258006	**HGWA-3**					
EPA 9315	Radium-226	0.128 ± 0.181 (0.393) C:82% T:NA	pCi/L		03/29/21 07:58	
EPA 9320	Radium-228	-0.0144 ± 0.302 (0.724) C:65% T:75%	pCi/L		04/09/21 15:22	
Total Radium Calculation	Total Radium	0.128 ± 0.483 (1.12)	pCi/L		04/12/21 13:46	
92527258007	**HGWA-5**					
EPA 9315	Radium-226	0.150 ± 0.162 (0.312) C:71% T:NA	pCi/L		03/29/21 07:58	
EPA 9320	Radium-228	0.920 ± 0.492 (0.877) C:65% T:79%	pCi/L		04/09/21 15:23	
Total Radium Calculation	Total Radium	1.07 ± 0.654 (1.19)	pCi/L		04/13/21 11:06	
92527258008	**HGWA-6**					
EPA 9315	Radium-226	0.244 ± 0.186 (0.309) C:77% T:NA	pCi/L		03/29/21 07:58	
EPA 9320	Radium-228	0.357 ± 0.743 (1.64) C:66% T:77%	pCi/L		04/09/21 19:20	
Total Radium Calculation	Total Radium	0.601 ± 0.929 (1.95)	pCi/L		04/13/21 15:22	

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SUMMARY OF DETECTION

Project: HAMMOND AP-2 SEMIANNUAL RADS
Pace Project No.: 92527258

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92527258009	**HGWA-43D**					
EPA 9315	Radium-226	0.118 ± 0.160 (0.335) C:68% T:NA	pCi/L		03/29/21 07:58	
EPA 9320	Radium-228	1.39 ± 0.825 (1.53) C:62% T:77%	pCi/L		04/09/21 19:20	
Total Radium Calculation	Total Radium	1.51 ± 0.985 (1.87)	pCi/L		04/13/21 15:22	
92527258010	**MW-37D**					
EPA 9315	Radium-226	0.167 ± 0.110 (0.182) C:85% T:NA	pCi/L		04/05/21 12:44	
EPA 9320	Radium-228	0.411 ± 0.479 (1.01) C:62% T:86%	pCi/L		04/09/21 15:21	
Total Radium Calculation	Total Radium	0.578 ± 0.589 (1.19)	pCi/L		04/13/21 15:22	
92527258011	**HGWC-15**					
EPA 9315	Radium-226	-0.0152 ± 0.0752 (0.202) C:79% T:NA	pCi/L		04/05/21 12:44	
EPA 9320	Radium-228	0.801 ± 0.584 (1.15) C:73% T:84%	pCi/L		04/09/21 14:40	
Total Radium Calculation	Total Radium	0.801 ± 0.659 (1.35)	pCi/L		04/12/21 13:46	
92527258012	**HGWC-14**					
EPA 9315	Radium-226	0.386 ± 0.150 (0.179) C:93% T:NA	pCi/L		04/05/21 12:44	
EPA 9320	Radium-228	1.45 ± 0.814 (1.50) C:63% T:85%	pCi/L		04/09/21 19:21	
Total Radium Calculation	Total Radium	1.84 ± 0.964 (1.68)	pCi/L		04/13/21 15:22	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: HAMMOND AP-2 SEMIANNUAL RADS
Pace Project No.: 92527258

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92527258013	**HGWC-16**					
EPA 9315	Radium-226	0.228 ± 0.117 (0.159) C:86% T:NA	pCi/L		04/05/21 12:44	
EPA 9320	Radium-228	-0.286 ± 0.753 (1.78) C:62% T:84%	pCi/L		04/09/21 19:21	
Total Radium Calculation	Total Radium	0.228 ± 0.870 (1.94)	pCi/L		04/13/21 15:22	
92527258014	**MW-22**					
EPA 9315	Radium-226	0.263 ± 0.238 (0.469) C:83% T:NA	pCi/L		04/05/21 11:55	
EPA 9320	Radium-228	0.718 ± 0.603 (1.21) C:66% T:84%	pCi/L		04/09/21 19:21	
Total Radium Calculation	Total Radium	0.981 ± 0.841 (1.68)	pCi/L		04/13/21 15:22	
92527258015	**MW-23D**					
EPA 9315	Radium-226	0.0576 ± 0.0914 (0.197) C:79% T:NA	pCi/L		04/05/21 16:08	
EPA 9320	Radium-228	0.521 ± 0.620 (1.31) C:65% T:87%	pCi/L		04/09/21 19:10	
Total Radium Calculation	Total Radium	0.579 ± 0.711 (1.51)	pCi/L		04/13/21 15:22	
92527258016	**HGWC-17**					
EPA 9315	Radium-226	0.159 ± 0.114 (0.195) C:79% T:NA	pCi/L		04/05/21 16:08	
EPA 9320	Radium-228	0.697 ± 0.751 (1.57) C:62% T:76%	pCi/L		04/09/21 19:11	
Total Radium Calculation	Total Radium	0.856 ± 0.865 (1.77)	pCi/L		04/13/21 15:22	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: HAMMOND AP-2 SEMIANNUAL RADS
Pace Project No.: 92527258

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92527258017	**HGWC-18**					
EPA 9315	Radium-226	0.580 ± 0.180 (0.159) C:88% T:NA	pCi/L		04/05/21 16:08	
EPA 9320	Radium-228	1.05 ± 0.658 (1.23) C:63% T:87%	pCi/L		04/09/21 19:11	
Total Radium Calculation	Total Radium	1.63 ± 0.838 (1.39)	pCi/L		04/13/21 15:22	
92527258018	**MW-21D**					
EPA 9315	Radium-226	0.0981 ± 0.0997 (0.196) C:86% T:NA	pCi/L		04/05/21 16:08	
EPA 9320	Radium-228	0.402 ± 0.650 (1.41) C:62% T:85%	pCi/L		04/09/21 19:12	
Total Radium Calculation	Total Radium	0.500 ± 0.750 (1.61)	pCi/L		04/13/21 15:22	
92527258019	**MW-33**					
EPA 9315	Radium-226	0.380 ± 0.148 (0.177) C:91% T:NA	pCi/L		04/05/21 16:08	
EPA 9320	Radium-228	0.353 ± 0.555 (1.20) C:62% T:86%	pCi/L		04/09/21 19:12	
Total Radium Calculation	Total Radium	0.733 ± 0.703 (1.38)	pCi/L		04/13/21 15:22	
92527258020	**DUP-2**					
EPA 9315	Radium-226	0.515 ± 0.281 (0.454) C:89% T:NA	pCi/L		04/05/21 07:54	
EPA 9320	Radium-228	0.981 ± 0.485 (0.859) C:73% T:88%	pCi/L		04/12/21 14:39	
Total Radium Calculation	Total Radium	1.50 ± 0.766 (1.31)	pCi/L		04/13/21 15:24	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: HAMMOND AP-2 SEMIANNUAL RADS
Pace Project No.: 92527258

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92527258021	**EB-2**					
EPA 9315	Radium-226	0.0433 ± 0.104 (0.250) C:86% T:NA	pCi/L		04/05/21 07:59	
EPA 9320	Radium-228	0.00182 ± 0.296 (0.687) C:70% T:107%	pCi/L		04/12/21 14:39	
Total Radium Calculation	Total Radium	0.0451 ± 0.400 (0.937)	pCi/L		04/13/21 15:24	
92527258022	**FB-2**					
EPA 9315	Radium-226	0.0160 ± 0.107 (0.283) C:89% T:NA	pCi/L		04/05/21 07:59	
EPA 9320	Radium-228	0.0823 ± 0.512 (1.16) C:67% T:75%	pCi/L		04/12/21 14:39	
Total Radium Calculation	Total Radium	0.0983 ± 0.619 (1.44)	pCi/L		04/13/21 15:24	
92527258023	**MW-35**					
EPA 9315	Radium-226	0.0487 ± 0.378 (0.928) C:94% T:NA	pCi/L		04/13/21 07:45	
EPA 9320	Radium-228	0.475 ± 0.528 (1.11) C:63% T:83%	pCi/L		04/13/21 15:44	
Total Radium Calculation	Total Radium	0.524 ± 0.906 (2.04)	pCi/L		04/14/21 11:04	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 SEMIANNUAL RADS
Pace Project No.: 92527258

Sample: HGWA-1 **Lab ID: 92527258001** Collected: 03/10/21 16:10 Received: 03/11/21 15:55 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**-0.0744 ± 0.0713 (0.306) C:76% T:NA**	pCi/L	03/29/21 07:58	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**-0.473 ± 0.501 (1.24) C:75% T:67%**	pCi/L	04/09/21 13:14	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.000 ± 0.572 (1.55)**	pCi/L	04/12/21 13:46	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 SEMIANNUAL RADS
Pace Project No.: 92527258

Sample: HGWA-4 **Lab ID: 92527258002** Collected: 03/10/21 16:21 Received: 03/11/21 15:55 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.0468 ± 0.144 (0.360) C:60% T:NA**	pCi/L	03/29/21 07:58	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.234 ± 0.379 (0.823) C:73% T:91%**	pCi/L	04/09/21 14:40	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.281 ± 0.523 (1.18)**	pCi/L	04/12/21 13:46	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 SEMIANNUAL RADS
Pace Project No.: 92527258

Sample: HGWA-42D **Lab ID: 92527258003** Collected: 03/10/21 14:23 Received: 03/11/21 15:55 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.719 ± 0.297 (0.317) C:77% T:NA**	pCi/L	03/29/21 07:58	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.493 ± 0.385 (0.765) C:75% T:87%**	pCi/L	04/09/21 12:10	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.21 ± 0.682 (1.08)**	pCi/L	04/12/21 13:46	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 SEMIANNUAL RADS
Pace Project No.: 92527258

Sample: HGWA-44D **Lab ID: 92527258004** Collected: 03/10/21 14:30 Received: 03/11/21 15:55 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.119 ± 0.127 (0.231) C:79% T:NA**	pCi/L	03/29/21 07:58	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.692 ± 0.477 (0.922) C:63% T:82%**	pCi/L	04/09/21 15:22	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.811 ± 0.604 (1.15)**	pCi/L	04/12/21 13:46	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 SEMIANNUAL RADS
Pace Project No.: 92527258

Sample: HGWA-2 **Lab ID: 92527258005** Collected: 03/11/21 09:59 Received: 03/12/21 13:43 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.206 ± 0.172 (0.304) C:81% T:NA**	pCi/L	03/29/21 07:58	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.531 ± 0.488 (0.990) C:58% T:71%**	pCi/L	04/09/21 15:22	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.737 ± 0.660 (1.29)**	pCi/L	04/12/21 13:46	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 SEMIANNUAL RADS
Pace Project No.: 92527258

Sample: HGWA-3 **Lab ID: 92527258006** Collected: 03/11/21 11:25 Received: 03/12/21 13:43 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.128 ± 0.181 (0.393) C:82% T:NA**	pCi/L	03/29/21 07:58	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**-0.0144 ± 0.302 (0.724) C:65% T:75%**	pCi/L	04/09/21 15:22	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.128 ± 0.483 (1.12)**	pCi/L	04/12/21 13:46	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 SEMIANNUAL RADS
Pace Project No.: 92527258

Sample: HGWA-5 **Lab ID: 92527258007** Collected: 03/11/21 11:30 Received: 03/12/21 13:43 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.150 ± 0.162 (0.312) C:71% T:NA**	pCi/L	03/29/21 07:58	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.920 ± 0.492 (0.877) C:65% T:79%**	pCi/L	04/09/21 15:23	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.07 ± 0.654 (1.19)**	pCi/L	04/13/21 11:06	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 SEMIANNUAL RADS
Pace Project No.: 92527258

Sample: HGWA-6 **Lab ID: 92527258008** Collected: 03/11/21 12:39 Received: 03/12/21 13:43 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.244 ± 0.186 (0.309) C:77% T:NA**	pCi/L	03/29/21 07:58	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.357 ± 0.743 (1.64) C:66% T:77%**	pCi/L	04/09/21 19:20	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.601 ± 0.929 (1.95)**	pCi/L	04/13/21 15:22	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 SEMIANNUAL RADS
Pace Project No.: 92527258

Sample: HGWA-43D **Lab ID: 92527258009** Collected: 03/11/21 09:57 Received: 03/12/21 13:43 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.118 ± 0.160 (0.335) C:68% T:NA**	pCi/L	03/29/21 07:58	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**1.39 ± 0.825 (1.53) C:62% T:77%**	pCi/L	04/09/21 19:20	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.51 ± 0.985 (1.87)**	pCi/L	04/13/21 15:22	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 SEMIANNUAL RADS
Pace Project No.: 92527258

Sample: MW-37D **Lab ID: 92527258010** Collected: 03/12/21 10:20 Received: 03/15/21 12:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.167 ± 0.110 (0.182) C:85% T:NA**	pCi/L	04/05/21 12:44	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.411 ± 0.479 (1.01) C:62% T:86%**	pCi/L	04/09/21 15:21	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.578 ± 0.589 (1.19)**	pCi/L	04/13/21 15:22	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 SEMIANNUAL RADS
Pace Project No.: 92527258

Sample: HGWC-15 **Lab ID: 92527258011** Collected: 03/16/21 15:24 Received: 03/17/21 13:10 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**-0.0152 ± 0.0752 (0.202) C:79% T:NA**	pCi/L	04/05/21 12:44	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.801 ± 0.584 (1.15) C:73% T:84%**	pCi/L	04/09/21 14:40	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.801 ± 0.659 (1.35)**	pCi/L	04/12/21 13:46	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 SEMIANNUAL RADS
Pace Project No.: 92527258

Sample: HGWC-14 **Lab ID: 92527258012** Collected: 03/17/21 14:28 Received: 03/18/21 13:17 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.386 ± 0.150 (0.179) C:93% T:NA**	pCi/L	04/05/21 12:44	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**1.45 ± 0.814 (1.50) C:63% T:85%**	pCi/L	04/09/21 19:21	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.84 ± 0.964 (1.68)**	pCi/L	04/13/21 15:22	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 SEMIANNUAL RADS
Pace Project No.: 92527258

Sample: HGWC-16 **Lab ID: 92527258013** Collected: 03/17/21 09:29 Received: 03/18/21 13:17 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.228 ± 0.117 (0.159) C:86% T:NA**	pCi/L	04/05/21 12:44	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**-0.286 ± 0.753 (1.78) C:62% T:84%**	pCi/L	04/09/21 19:21	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.228 ± 0.870 (1.94)**	pCi/L	04/13/21 15:22	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 SEMIANNUAL RADS
Pace Project No.: 92527258

Sample: MW-22 **Lab ID: 92527258014** Collected: 03/17/21 10:00 Received: 03/18/21 13:17 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.263 ± 0.238 (0.469) C:83% T:NA**	pCi/L	04/05/21 11:55	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.718 ± 0.603 (1.21) C:66% T:84%**	pCi/L	04/09/21 19:21	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.981 ± 0.841 (1.68)**	pCi/L	04/13/21 15:22	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 SEMIANNUAL RADS
Pace Project No.: 92527258

Sample: MW-23D **Lab ID: 92527258015** Collected: 03/17/21 11:49 Received: 03/18/21 13:17 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.0576 ± 0.0914 (0.197) C:79% T:NA**	pCi/L	04/05/21 16:08	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.521 ± 0.620 (1.31) C:65% T:87%**	pCi/L	04/09/21 19:10	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.579 ± 0.711 (1.51)**	pCi/L	04/13/21 15:22	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 SEMIANNUAL RADS
Pace Project No.: 92527258

Sample: HGWC-17 **Lab ID: 92527258016** Collected: 03/18/21 14:48 Received: 03/19/21 13:40 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.159 ± 0.114 (0.195) C:79% T:NA**	pCi/L	04/05/21 16:08	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.697 ± 0.751 (1.57) C:62% T:76%**	pCi/L	04/09/21 19:11	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.856 ± 0.865 (1.77)**	pCi/L	04/13/21 15:22	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 SEMIANNUAL RADS
Pace Project No.: 92527258

Sample: HGWC-18 **Lab ID: 92527258017** Collected: 03/18/21 10:01 Received: 03/19/21 13:40 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.580 ± 0.180 (0.159) C:88% T:NA**	pCi/L	04/05/21 16:08	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**1.05 ± 0.658 (1.23) C:63% T:87%**	pCi/L	04/09/21 19:11	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.63 ± 0.838 (1.39)**	pCi/L	04/13/21 15:22	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 SEMIANNUAL RADS
Pace Project No.: 92527258

Sample: MW-21D **Lab ID: 92527258018** Collected: 03/18/21 12:08 Received: 03/19/21 13:40 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.0981 ± 0.0997 (0.196) C:86% T:NA**	pCi/L	04/05/21 16:08	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.402 ± 0.650 (1.41) C:62% T:85%**	pCi/L	04/09/21 19:12	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.500 ± 0.750 (1.61)**	pCi/L	04/13/21 15:22	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 SEMIANNUAL RADS
Pace Project No.: 92527258

Sample: MW-33 **Lab ID: 92527258019** Collected: 03/18/21 10:40 Received: 03/19/21 13:40 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.380 ± 0.148 (0.177) C:91% T:NA**	pCi/L	04/05/21 16:08	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.353 ± 0.555 (1.20) C:62% T:86%**	pCi/L	04/09/21 19:12	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.733 ± 0.703 (1.38)**	pCi/L	04/13/21 15:22	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 SEMIANNUAL RADS
Pace Project No.: 92527258

Sample: DUP-2 **Lab ID: 92527258020** Collected: 03/18/21 00:00 Received: 03/19/21 13:40 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.515 ± 0.281 (0.454) C:89% T:NA**	pCi/L	04/05/21 07:54	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.981 ± 0.485 (0.859) C:73% T:88%**	pCi/L	04/12/21 14:39	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.50 ± 0.766 (1.31)**	pCi/L	04/13/21 15:24	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 SEMIANNUAL RADS
Pace Project No.: 92527258

Sample: EB-2 **Lab ID: 92527258021** Collected: 03/18/21 12:50 Received: 03/19/21 13:40 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.0433 ± 0.104 (0.250) C:86% T:NA**	pCi/L	04/05/21 07:59	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.00182 ± 0.296 (0.687) C:70% T:107%**	pCi/L	04/12/21 14:39	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.0451 ± 0.400 (0.937)**	pCi/L	04/13/21 15:24	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 SEMIANNUAL RADS
Pace Project No.: 92527258

Sample: FB-2 **Lab ID: 92527258022** Collected: 03/18/21 15:30 Received: 03/19/21 13:40 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.0160 ± 0.107 (0.283) C:89% T:NA**	pCi/L	04/05/21 07:59	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.0823 ± 0.512 (1.16) C:67% T:75%**	pCi/L	04/12/21 14:39	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.0983 ± 0.619 (1.44)**	pCi/L	04/13/21 15:24	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 SEMIANNUAL RADS
Pace Project No.: 92527258

Sample: MW-35 **Lab ID: 92527258023** Collected: 03/19/21 12:48 Received: 03/22/21 15:41 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.0487 ± 0.378 (0.928) C:94% T:NA**	pCi/L	04/13/21 07:45	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.475 ± 0.528 (1.11) C:63% T:83%**	pCi/L	04/13/21 15:44	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.524 ± 0.906 (2.04)**	pCi/L	04/14/21 11:04	7440-14-4	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-2 SEMIANNUAL RADS
Pace Project No.: 92527258

QC Batch: 441707
QC Batch Method: EPA 9315
Analysis Method: EPA 9315
Analysis Description: 9315 Total Radium
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 92527258023

METHOD BLANK: 2132285
Matrix: Water
Associated Lab Samples: 92527258023

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0366 ± 0.210 (0.420) C:94% T:NA	pCi/L	04/12/21 19:14	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-2 SEMIANNUAL RADS
Pace Project No.: 92527258

QC Batch: 440499
QC Batch Method: EPA 9315
Analysis Method: EPA 9315
Analysis Description: 9315 Total Radium
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 92527258010, 92527258011, 92527258012, 92527258013, 92527258014, 92527258015, 92527258016, 92527258017, 92527258018, 92527258019

METHOD BLANK: 2126661
Matrix: Water
Associated Lab Samples: 92527258010, 92527258011, 92527258012, 92527258013, 92527258014, 92527258015, 92527258016, 92527258017, 92527258018, 92527258019

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0900 ± 0.196 (0.458) C:77% T:NA	pCi/L	04/05/21 10:10	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-2 SEMIANNUAL RADS
Pace Project No.: 92527258

QC Batch: 440493
QC Batch Method: EPA 9320
Analysis Method: EPA 9320
Analysis Description: 9320 Radium 228
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 92527258020, 92527258021, 92527258022

METHOD BLANK: 2126652 Matrix: Water
Associated Lab Samples: 92527258020, 92527258021, 92527258022

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.217 ± 0.303 (0.649) C:71% T:96%	pCi/L	04/12/21 11:35	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-2 SEMIANNUAL RADS
Pace Project No.: 92527258

QC Batch: 442226
QC Batch Method: EPA 9320
Analysis Method: EPA 9320
Analysis Description: 9320 Radium 228
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 92527258023

METHOD BLANK: 2134501
Matrix: Water
Associated Lab Samples: 92527258023

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.347 ± 0.339 (0.697) C:71% T:89%	pCi/L	04/13/21 12:39	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-2 SEMIANNUAL RADS
Pace Project No.: 92527258

QC Batch: 440490
QC Batch Method: EPA 9320
Analysis Method: EPA 9320
Analysis Description: 9320 Radium 228
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 92527258001, 92527258002, 92527258003, 92527258011

METHOD BLANK: 2126643
Matrix: Water
Associated Lab Samples: 92527258001, 92527258002, 92527258003, 92527258011

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.738 ± 0.321 (0.495) C:74% T:97%	pCi/L	04/09/21 12:06	

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

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-2 SEMIANNUAL RADS
Pace Project No.: 92527258

QC Batch:	440500	Analysis Method:	EPA 9315
QC Batch Method:	EPA 9315	Analysis Description:	9315 Total Radium
		Laboratory:	Pace Analytical Services - Greensburg

Associated Lab Samples: 92527258020, 92527258021, 92527258022

METHOD BLANK: 2126663 Matrix: Water

Associated Lab Samples: 92527258020, 92527258021, 92527258022

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.102 ± 0.173 (0.390) C:90% T:NA	pCi/L	04/05/21 07:54	

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

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
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QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-2 SEMIANNUAL RADS
Pace Project No.: 92527258

QC Batch: 440491
QC Batch Method: EPA 9320
Analysis Method: EPA 9320
Analysis Description: 9320 Radium 228
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 92527258004, 92527258005, 92527258006, 92527258007, 92527258008, 92527258009, 92527258010, 92527258012, 92527258013, 92527258014, 92527258015, 92527258016, 92527258017, 92527258018, 92527258019

METHOD BLANK: 2126646
Matrix: Water
Associated Lab Samples: 92527258004, 92527258005, 92527258006, 92527258007, 92527258008, 92527258009, 92527258010, 92527258012, 92527258013, 92527258014, 92527258015, 92527258016, 92527258017, 92527258018, 92527258019

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.826 ± 0.447 (0.791) C:67% T:78%	pCi/L	04/09/21 15:22	

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

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-2 SEMIANNUAL RADS
Pace Project No.: 92527258

QC Batch: 439773
QC Batch Method: EPA 9315
Analysis Method: EPA 9315
Analysis Description: 9315 Total Radium
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 92527258001, 92527258002, 92527258003, 92527258004, 92527258005, 92527258006, 92527258007, 92527258008, 92527258009

METHOD BLANK: 2123469
Matrix: Water
Associated Lab Samples: 92527258001, 92527258002, 92527258003, 92527258004, 92527258005, 92527258006, 92527258007, 92527258008, 92527258009

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0133 ± 0.113 (0.309) C:70% T:NA	pCi/L	03/29/21 07:58	

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

REPORT OF LABORATORY ANALYSIS

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

QUALIFIERS

Project: HAMMOND AP-2 SEMIANNUAL RADS
Pace Project No.: 92527258

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

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

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

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval). Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

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

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: HAMMOND AP-2 SEMIANNUAL RADS
Pace Project No.: 92527258

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92527258001	**HGWA-1**	EPA 9315	439773		
92527258002	**HGWA-4**	EPA 9315	439773		
92527258003	**HGWA-42D**	EPA 9315	439773		
92527258004	**HGWA-44D**	EPA 9315	439773		
92527258005	**HGWA-2**	EPA 9315	439773		
92527258006	**HGWA-3**	EPA 9315	439773		
92527258007	**HGWA-5**	EPA 9315	439773		
92527258008	**HGWA-6**	EPA 9315	439773		
92527258009	**HGWA-43D**	EPA 9315	439773		
92527258010	**MW-37D**	EPA 9315	440499		
92527258011	**HGWC-15**	EPA 9315	440499		
92527258012	**HGWC-14**	EPA 9315	440499		
92527258013	**HGWC-16**	EPA 9315	440499		
92527258014	**MW-22**	EPA 9315	440499		
92527258015	**MW-23D**	EPA 9315	440499		
92527258016	**HGWC-17**	EPA 9315	440499		
92527258017	**HGWC-18**	EPA 9315	440499		
92527258018	**MW-21D**	EPA 9315	440499		
92527258019	**MW-33**	EPA 9315	440499		
92527258020	**DUP-2**	EPA 9315	440500		
92527258021	**EB-2**	EPA 9315	440500		
92527258022	**FB-2**	EPA 9315	440500		
92527258023	**MW-35**	EPA 9315	441707		
92527258001	**HGWA-1**	EPA 9320	440490		
92527258002	**HGWA-4**	EPA 9320	440490		
92527258003	**HGWA-42D**	EPA 9320	440490		
92527258004	**HGWA-44D**	EPA 9320	440491		
92527258005	**HGWA-2**	EPA 9320	440491		
92527258006	**HGWA-3**	EPA 9320	440491		
92527258007	**HGWA-5**	EPA 9320	440491		
92527258008	**HGWA-6**	EPA 9320	440491		
92527258009	**HGWA-43D**	EPA 9320	440491		
92527258010	**MW-37D**	EPA 9320	440491		
92527258011	**HGWC-15**	EPA 9320	440490		
92527258012	**HGWC-14**	EPA 9320	440491		
92527258013	**HGWC-16**	EPA 9320	440491		
92527258014	**MW-22**	EPA 9320	440491		
92527258015	**MW-23D**	EPA 9320	440491		
92527258016	**HGWC-17**	EPA 9320	440491		
92527258017	**HGWC-18**	EPA 9320	440491		
92527258018	**MW-21D**	EPA 9320	440491		
92527258019	**MW-33**	EPA 9320	440491		
92527258020	**DUP-2**	EPA 9320	440493		
92527258021	**EB-2**	EPA 9320	440493		
92527258022	**FB-2**	EPA 9320	440493		

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: HAMMOND AP-2 SEMIANNUAL RADS
Pace Project No.: 92527258

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92527258023	**MW-35**	EPA 9320	442226		
92527258001	**HGWA-1**	Total Radium Calculation	442893		
92527258002	**HGWA-4**	Total Radium Calculation	442893		
92527258003	**HGWA-42D**	Total Radium Calculation	442893		
92527258004	**HGWA-44D**	Total Radium Calculation	442893		
92527258005	**HGWA-2**	Total Radium Calculation	442893		
92527258006	**HGWA-3**	Total Radium Calculation	442893		
92527258007	**HGWA-5**	Total Radium Calculation	443029		
92527258008	**HGWA-6**	Total Radium Calculation	443120		
92527258009	**HGWA-43D**	Total Radium Calculation	443120		
92527258010	**MW-37D**	Total Radium Calculation	443120		
92527258011	**HGWC-15**	Total Radium Calculation	442893		
92527258012	**HGWC-14**	Total Radium Calculation	443120		
92527258013	**HGWC-16**	Total Radium Calculation	443120		
92527258014	**MW-22**	Total Radium Calculation	443120		
92527258015	**MW-23D**	Total Radium Calculation	443120		
92527258016	**HGWC-17**	Total Radium Calculation	443120		
92527258017	**HGWC-18**	Total Radium Calculation	443120		
92527258018	**MW-21D**	Total Radium Calculation	443120		
92527258019	**MW-33**	Total Radium Calculation	443120		
92527258020	**DUP-2**	Total Radium Calculation	443123		
92527258021	**EB-2**	Total Radium Calculation	443123		
92527258022	**FB-2**	Total Radium Calculation	443123		
92527258023	**MW-35**	Total Radium Calculation	443249		

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CHAIN-OF-CUSTODY / Analytical Request Do

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WO# : 92527256

92527256

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-2 Semiannual	Pace Project Manager: Kevin Herring
Requested Due Date/TAT: 10 Day	Project Number: GW6561B	Pace Profile #: 10839-3

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ 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	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	App. III & IV Metals*	RAD 226/228	TDS	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	HGWA-1	WT	G	3/10/21	1610	–	–	17	5	2		3							X	X	X	X	N	pH = 6.95
2	HGWA-2	WT	G			–	–		5	2		3							X	X	X	X	N	pH =
3	HGWA-3	WT	G			–	–		5	2		3							X	X	X	X	N	pH =
4	HGWA-4	WT	G	3/10/21	1621	–	–	16	5	2		3							X	X	X	X	N	pH = 5.28
5	HGWA-5	WT	G			–	–		5	2		3							X	X	X	X	N	pH =
6	HGWA-6	WT	G			–	–		5	2		3							X	X	X	X	N	pH =
7	HGWA-42D	WT	G	3/10/21	1423	–	–	19	5	2		3							X	X	X	X	N	pH = 7.70
8	HGWA-43D	WT	G			–	–		5	2		3							X	X	X	X	N	pH =
9	HGWA-44D	WT	G	3/10/21	1430	–	–	19	5	2		3							X	X	X	X	N	pH = 7.92
10	HGWC-14	WT	G			–	–		5	2		3							X	X	X	X	N	pH =
11	HGWC-15	WT	G			–	–		5	2		3							X	X	X	X	N	pH =
12	HGWC-16	WT	G			–	–		5	2		3							X	X	X	X	N	pH =

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

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.	Monnie Hendricks									
*App. III & IV Metals = Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Pb, Li, Mo, Se, Tl	Vashish Tauloor	3/10/21	1730	Monnie Hendricks	3/10/21	1730				
One sample set submitted for HGWA-1/2/3/43D/44D but they will be reported for AP-1/2/3 SDGs	Monnie Hendricks	3/11/21	1040	UPS FedEx Pace	3.11.21	1040				
	UPS FedEx Pace	3/11/21	1555	MR Mull	3/11/21	1555	2.0	Y	N	Y

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER: Monnie Hendricks, Vashish Tauloor
SIGNATURE of SAMPLER: DATE Signed (MM/DD/YY): 03/10/21

*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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Page: of

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-2 Semiannual	Pace Project Manager: Kevin Herring
Requested Due Date/TAT: 10 Day	Project Number: GW6581B	Pace Profile #: 10839-3

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☑ OTHER GA

Site Location STATE: GA

Requested Analysis Filtered (Y/N)

ITEM #	Section D Required Client Information: 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 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	Y/N	Analysis Test: Chloride, Fluoride, Sulfate	App. III & IV Metals*	RAD 228/228	TDS	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
	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																	N	N	N	N	N		
1	HGWA-1	WT	G			–	–		5	2		3							X	X	X	X	N	pH =
2	HGWA-2	WT	G	3/11/21	0959	–	–	16	5	2		3							X	X	X	X	N	pH = 5.86
3	HGWA-3	WT	G	3/11/21	1125	–	–	17	5	2		3							X	X	X	X	N	pH = 7.33
4	HGWA-4	WT	G			–	–		5	2		3							X	X	X	X	N	pH =
5	HGWA-5	WT	G	3/11/21	1130	–	–	15	5	2		3							X	X	X	X	N	pH = 6.98
6	HGWA-6	WT	G	3/11/21	1239	–	–	18	5	2		3							X	X	X	X	N	pH = 7.56
7	HGWA-42D	WT	G			–	–		5	2		3							X	X	X	X	N	pH =
8	HGWA-43D	WT	G	3/11/21	0957	–	–	16	5	2		3							X	X	X	X	N	pH = 7.46
9	HGWA-44D	WT	G			–	–		5	2		3							X	X	X	X	N	pH =
10	HGWC-14	WT	G			–	–		5	2		3							X	X	X	X	N	pH =
11	HGWC-15	WT	G			–	–		5	2		3							X	X	X	X	N	pH =
12	HGWC-16	WT	G			–	–		5	2		3							X	X	X	X	N	pH =

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.	Thomas Hessler / Geo	3/12/21	1310	Nikhil Thakare / GED	3/12/21	1310	
*App. III & IV Metals = Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Pb, Li, Mo, Se, Tl	Nikhil Thakare / GED	3/12/21	1343	[illegible] / Pace	3-12-21	1343	
One sample set submitted for HGWA-1/2/3/43D/44D but they will be reported for AP-1/2/3 SDGs	[illegible] / Pace	3.12.21	1639	[illegible]	3/12/21	1639	

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Thomas Hessler, Chad Russo, Nikhil Thakare

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 3/11/21

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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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-2 Semiannual	Pace Project Manager: Kevin Herring
Requested Due Date/TAT: 10 Day	Project Number: GW6581B	Pace Profile #: 10839-3

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	App. III & IV Metals*	RAD 226/228	TDS	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
																		Requested Analysis Filtered (Y/N)	N	N	N	N		
1	HGWC-17	WT	G			–	–		5	2		3							X	X	X	X	N	pH =
2	HGWC-18	WT	G			–	–		5	2		3							X	X	X	X	N	pH =
3	MW-21D	WT	G			–			5	2		3							X	X	X	X	N	pH =
4	MW-22	WT	G			–	–		5	2		3							X	X	X	X	N	pH =
5	MW-23D	WT	G			–	–		5	2		3							X	X	X	X	N	pH =
6	MW-33	WT	G			–	–		5	2		3							X	X	X	X	N	pH =
7	MW-35	WT	G			–	–		5	2		3							X	X	X	X	N	pH =
8	MW-37D	WT	G	3/1/21	1020	–	–	18	5	2		3							X	X	X	X	N	pH = 7.50
9	Dup-2	WT	G		–				5	2		3							X	X	X	X	N	
10	~~FB-2~~	WT	G			(CK)	–		5	2		3							X	X	X	X	N	
11	FB-2	WT	G			3/12/2021			5	2		3							X	X	X	X	N	
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.	[signature] /GCo	3/15/21	1145	[signature] /Pace	3/15/21	1145	
*App. III & IV Metals = Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Pb, Li, Mo, Se, Tl	[signature] /Pace	3/15/21	1195	[signature] /Pace	3/15/21	1200	
One sample set submitted for HGWA-1/2/3/43D/44D but they will be reported for AP-1/2/3 SDGs	[signature] /Pace	3/16/21	1959	Charles Hinds	3/15/21	1498	

SAMPLER NAME AND SIGNATURE					
PRINT Name of SAMPLER:	Yashish Taukoor				
SIGNATURE of SAMPLER:	[signature]	DATE Signed (MM/DD/YY):	3/12/21	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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Page: 1 of 1

Section A Required Client Information:

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

Section B Required Project Information:

Report To:	SCS Contacts
Copy To:	Geosyntec Contacts
Purchase Order No.:	
Project Name:	Plant Hammond AP-2 Semiannual
Project Number:	GW6581B

Section C Invoice Information:

Attention:	Southern Co.
Company Name:	
Address:	
Pace Quote Reference:	
Pace Project Manager:	Kevin Herring
Pace Profile #:	10839-3

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	Requested Analysis Filtered (Y/N): N	N	N	N	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
																			Chloride, Fluoride, Sulfate	App. III & IV Metals*	RAD 226/228	TDS		
1	HGWA-1	WT	G			--	--		5	2		3							X	X	X	X	N	pH =
2	HGWA-2	WT	G			--	--		5	2		3							X	X	X	X	N	pH =
3	HGWA-3	WT	G			--	--		5	2		3							X	X	X	X	N	pH =
4	HGWA-4	WT	G			--	--		5	2		3							X	X	X	X	N	pH =
5	HGWA-5	WT	G			--	--		5	2		3							X	X	X	X	N	pH =
6	HGWA-6	WT	G			--	--		5	2		3							X	X	X	X	N	pH =
7	HGWA-42D	WT	G			--	--		5	2		3							X	X	X	X	N	pH =
8	HGWA-43D	WT	G			--	--		5	2		3							X	X	X	X	N	pH =
9	HGWA-44D	WT	G			--	--		5	2		3							X	X	X	X	N	pH =
10	HGWC-14	WT	G			--	--		5	2		3							X	X	X	X	N	pH =
11	HGWC-15	WT	G	3/16/21	1524	--	--	17	5	2		3							X	X	X	X	N	pH = 6.08
12	HGWC-16	WT	G			--	--		5	2		3							X	X	X	X	N	pH =

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.	Thomas Heeder	3/17/21				
*App. III & IV Metals = Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Pb, Li, Mo, Se, Tl	Thomas Heeder	3/17/21	1310	Ryan Williams / Pace	3/17/21	1310
One sample set submitted for HGWA-1/2/3/43D/44D but they will be reported for AP-1/2/3 SDGs	Ryan Williams / Pace	3/17/21	1510	[illegible]	3/17/21	1510

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

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Thomas Heeder

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 3/16/21

*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: 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 AP-2 Semiannual
Project Number:	GW6581B

Section C — Invoice Information:

Attention:	Southern Co.
Company Name:	
Address:	
Pace Quote Reference:	
Pace Project Manager:	Kevin Herring
Pace Profile #:	10839-3

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 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	App. III & IV Metals*	RAD 226/228	TDS	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
																		Y/N	N	N	N	N		
1	HGWA-1	WT	G			–	–		5	2		3							X	X	X	X	N	pH =
2	HGWA-2	WT	G			–	–		5	2		3							X	X	X	X	N	pH =
3	HGWA-3	WT	G			–	–		5	2		3							X	X	X	X	N	pH =
4	HGWA-4	WT	G			–	–		5	2		3							X	X	X	X	N	pH =
5	HGWA-5	WT	G			–	–		5	2		3							X	X	X	X	N	pH =
6	HGWA-6	WT	G			–	–		5	2		3							X	X	X	X	N	pH =
7	HGWA-42D	WT	G			–	–		5	2		3							X	X	X	X	N	pH =
8	HGWA-43D	WT	G			–	–		5	2		3							X	X	X	X	N	pH =
9	HGWA-44D	WT	G			–	–		5	2		3							X	X	X	X	N	pH =
10	HGWC-14	WT	G	3/17/21	1428	–	–		5	2		3							X	X	X	X	N	pH = 4.72
11	HGWC-15	WT	G			–	–		5	2		3							X	X	X	X	N	pH =
12	HGWC-16	WT	G	3/17/21	0929	–	–		5	2		3							X	X	X	X	N	pH = 7.19

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.	Thomas Hessler/Kiser	3/18/21	1317	Lynn Williams/Pace	3/18/21	1317
*App. III & IV Metals = Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Pb, Li, Mo, Se, Tl	Lynn Williams/Pace	3/19/21	1521	Charles Russo	3/19/21	1521
One sample set submitted for HGWA-1/2/3/43D/44D but they will be reported for AP-1/2/3 SDGs						

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: Thomas Hessler, Charles Russo

SIGNATURE of SAMPLER: DATE Signed (MM/DD/YY): 3/16/21

*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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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 AP-2 Semiannual
Project Number: GW6581B

Section C Invoice Information:
Attention: Southern Co.
Company Name:
Address:
Pace Quote Reference:
Pace Project Manager: Kevin Herring
Pace Profile #: 10839-3

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	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
																		Y/N	N N N N		
																		Chloride, Fluoride, Sulfate	App. III & IV Metals*	RAD 226/228	EDS	
1	HGWC-17	WT	G			–	–		5	2		3						X	X	X	X	N	pH =
2	HGWC-18	WT	G			–	–		5	2		3						X	X	X	X	N	pH =
3	MW-21D	WT	G			–	–		5	2		3						X	X	X	X	N	pH = 5.57
4	MW-22	WT	G	3/17/21	1000	–	–	15	5	2		3						X	X	X	X	N	pH = 6.86
5	MW-23D	WT	G	3/17/21	1149	–	–	18	5	2		3						X	X	X	X	N	pH =
6	MW-33	WT	G			–	–		5	2		3						X	X	X	X	N	pH =
7	MW-35	WT	G			–	–		5	2		3						X	X	X	X	N	pH =
8	MW-37D	WT	G			–	–		5	2		3						X	X	X	X	N	
9	Dup-2	WT	G		–	–	–		5	2		3						X	X	X	X	N	
10	EB-2	WT	G			–	–		5	2		3						X	X	X	X	N	
11	FB-2	WT	G			–	–		5	2		3						X	X	X	X	N	
12																							

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.	Thomas Hessler/Geosyntec	3/17/21	1354	Lyn Williams/Pace	3/18/21	1317
*App. III & IV Metals = Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Pb, Li, Mo, Se, Tl	Lyn Williams/Pace	3/18/21	1621	Charles Hicks	3/18/21	1521
One sample set submitted for HGWA-1/2/3/43D/44D but they will be reported for AP-1/2/3 SDGs						

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: Thomas Hessler
SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 3/18/21

*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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Section A Required Client Information:

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

Section B Required Project Information:

Report To:	SCS Contacts
Copy To:	Geosyntec Contacts
Purchase Order No.:	
Project Name:	Plant Hammond AP-2 Semiannual
Project Number:	GW6581B

Section C Invoice Information:

Attention:	Southern Co.
Company Name:	
Address:	
Pace Quote Reference:	
Pace Project Manager:	Kevin Herring
Pace Profile #:	10839-3

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 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	App. III & IV Metals*	RAD 226/228	TDS	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
																			N	N	N	N		
1	HGWC-17	WT	G	3/18/21	1448	–	–	19	5	2		3							X	X	X	X	N	pH = 6.43
2	HGWC-18	WT	G	3/18/21	1001	–	–	16	5	2		3							X	X	X	X	N	pH = 4.54
3	MW-21D	WT	G	3/18/21	1208	–	–	18	5	2		3							X	X	X	X	N	pH = 6.95
4	MW-22	WT	G			–	–		5	2		3							X	X	X	X	N	pH =
5	~~MW-23D~~	~~WT~~	~~G~~						5	2		3							X	X	X	X	N	pH =
6	MW-33	WT	G	3/18/21	1640	–	–	19	5	2		3							X	X	X	X	N	pH = 6.27
7	~~MW-35~~	~~WT~~	~~G~~			–	–		5	2		3							X	X	X	X	N	pH =
8	~~MW-37D~~	~~WT~~	~~G~~			–	–		5	2		3							X	X	X	X	N	pH =
9	Dup-2	WT	G	3/18/21	–	–	–	19	5	2		3							X	X	X	X	N	
10	EB-2	WT	G	3/18/21	1250	–	–	19	5	2		3							X	X	X	X	N	
11	FB-2	WT	G	3/18/21	1530	–	–	19	5	2		3							X	X	X	X	N	
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.	Thomas Hassler/Geo	3/19/21	1340	Lyn Williams/Pace	3/19/21	1340				
*App. III & IV Metals = Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Pb, Li, Mo, Se, Tl	Lyn Williams/Pace	3/19/21	1541	[signature]/Pace	3/19/21	1541	1.1	Y	N	Y
One sample set submitted for HGWA-1/2/3/43D/44D but they will be repaired for AP-1/2/3 SDGs										

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Thomas Hassler, & Chad Russo

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 3/18/21

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

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Page: 1 of 1

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-2 Semiannual	Pace Project Manager: Kevin Herring
Requested Due Date/TAT: 10 Day	Project Number: GW6581B	Pace Profile #: 10839-3

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

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	App. III & IV Metals*	RAD 226/228	TDS	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
																		Requested Analysis Filtered (Y/N)	N	N	N	N		
1	HGWC-17	WT	G			–	–		5	2		3							X	X	X	X	N	pH =
2	HGWC-18	WT	G			–	–		5	2		3							X	X	X	X	N	pH =
3	MW-21D	WT	G			–	–		5	2		3							X	X	X	X	N	pH =
4	MW-22	WT	G			–	–		5	2		3							X	X	X	X	N	pH =
5	MW-23D	WT	G			–	–		5	2		3							X	X	X	X	N	pH =
6	MW-33	WT	G			–	–		5	2		3							X	X	X	X	N	pH =
7	MW-35	WT	G	3/19/21	1746	–	–	16	5	2		3							X	X	X	X	N	pH = 4.89
8	MW-37D	WT	G			–	–		5	2		3							X	X	X	X	N	pH =
9	Dup-2	WT	G	–	–	–	–		5	2		3							X	X	X	X	N	
10	EB-2	WT	G			–	–		5	2		3							X	X	X	X	N	
11	FB-2	WT	G			–	–		5	2		3							X	X	X	X	N	
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 thorugh any wells not sampled, and note when the last sample for the event has been taken.	Thomas Russo / Geo	3/22/21	1540	Ilya Williams / Pace	3/22/21	1540				
*App. III & IV Metals = Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Pb, Li, Mo, Se, Tl	Ilya Williams / Pace	3/22/21	1642	Geo / Pace	3/22/21	1642	3.3	Y	N	Y
One sample set submitted for HGWA-1/2/3/43D/44D but they will be reported for AP-1/2/3 SDGs										

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Chad Russo

SIGNATURE of SAMPLER: [signature]

DATE Signed (MM/DD/YY): 3/19/21

*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.

Quality Control Sample Performance Assessment

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test:	Ra-226
Analyst:	CLA
Date:	3/26/2021
Worklist:	59450
Matrix:	DW

Method Blank Assessment	
MB Sample ID	2123469
MB concentration:	0.013
M/B Counting Uncertainty:	0.113
MB MDC:	0.309
MB Numerical Performance Indicator:	0.23
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	Y
	LCS59450	LCSD59450
Count Date:	3/29/2021	3/29/2021
Spike I.D.:	19-033	19-033
Decay Corrected Spike Concentration (pCi/mL):	24.039	24.039
Volume Used (mL):	0.10	0.10
Aliquot Volume (L, g, F):	0.505	0.504
Target Conc. (pCi/L, g, F):	4.763	4.773
Uncertainty (Calculated):	0.057	0.057
Result (pCi/L, g, F):	4.437	5.482
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.594	0.737
Numerical Performance Indicator:	-1.07	1.88
Percent Recovery:	93.15%	114.86%
Status vs Numerical Indicator:	N/A	N/A
Status vs Recovery:	Pass	Pass
Upper % Recovery Limits:	125%	125%
Lower % Recovery Limits:	75%	75%

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

Duplicate Sample Assessment		
Sample I.D.:	LCS59450	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	LCSD59450	
Sample Result (pCi/L, g, F):	4.437	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.594	
Sample Duplicate Result (pCi/L, g, F):	5.482	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.737	
Are sample and/or duplicete results below RL?	NO	
Duplicate Numerical Performance Indicator:	-2.166	92527258001
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	20.88%	92527258001DUP
Duplicate Status vs Numerical Indicator:	N/A	
Duplicate Status vs RPD:	Pass	
% RPD Limit:	25%	

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

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

Comments:

iAm 3/29/21

Quality Control Sample Performance Assessment

Pace Analytical
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Test:	Ra-226
Analyst:	CLA
Date:	3/26/2021
Worklist:	59450
Matrix:	DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	2123469
MB concentration:	0.013
M/B Counting Uncertainty:	0.113
MB MDC:	0.309
MB Numerical Performance Indicator:	0.23
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	N
	LCS59450	LCSD59450
Count Date:	3/29/2021	
Spike I.D.:	19-033	
Decay Corrected Spike Concentration (pCi/mL):	24.039	
Volume Used (mL):	0.10	
Aliquot Volume (L, g, F):	0.505	
Target Conc. (pCi/L, g, F):	4.763	
Uncertainty (Calculated):	0.057	
Result (pCi/L, g, F):	4.437	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.594	
Numerical Performance Indicator:	-1.07	
Percent Recovery:	93.15%	
Status vs Numerical Indicator:	N/A	
Status vs Recovery:	Pass	
Upper % Recovery Limits:	125%	
Lower % Recovery Limits:	75%	

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

Duplicate Sample Assessment		
Sample I.D.:	92527258001	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	92527258001DUP	
Sample Result (pCi/L, g, F):	-0.074	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.070	
Sample Duplicate Result (pCi/L, g, F):	0.120	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.145	
Are sample and/or duplicate results below RL?	See Below ##	
Duplicate Numerical Performance Indicator:	-2.367	92527258001
Duplicate RPD:	852.72%	92527258001DUP
Duplicate Status vs Numerical Indicator:	N/A	
Duplicate Status vs RPD:	Fail***	
% RPD Limit:	25%	

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

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

Comments:

~~***Batch must be re-prepped due to unacceptable precision.~~ N/A LAM 3/29/21

CLA 3/29/21

LAM 3/29/21

Quality Control Sample Performance Assessment

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Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test:	Ra-226
Analyst:	LAL
Date:	4/5/2021
Worklist:	59560
Matrix:	DW

Method Blank Assessment	
MB Sample ID	2126661
MB concentration:	0.090
M/B Counting Uncertainty:	0.196
MB MDC:	0.458
MB Numerical Performance Indicator:	0.90
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	N
	LCS59560	LCSD59560
Count Date:	4/5/2021	
Spike I.D.:	19-033	
Decay Corrected Spike Concentration (pCi/mL):	24.039	
Volume Used (mL):	0.10	
Aliquot Volume (L, g, F):	0.504	
Target Conc. (pCi/L, g, F):	4.771	
Uncertainty (Calculated):	0.057	
Result (pCi/L, g, F):	5.065	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.277	
Numerical Performance Indicator:	2.04	
Percent Recovery:	106.17%	
Status vs Numerical Indicator:	N/A	
Status vs Recovery:	Pass	
Upper % Recovery Limits:	125%	
Lower % Recovery Limits:	75%	

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

Duplicate Sample Assessment		
Sample I.D.:	92527258011	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	92527258011DUP	
Sample Result (pCi/L, g, F):	-0.015	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.075	
Sample Duplicate Result (pCi/L, g, F):	0.050	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.058	
Are sample and/or duplicate results below RL?	See Below ##	
Duplicate Numerical Performance Indicator:	-1.338	92527258011
Duplicate RPD:	375.86%	92527258011DUP
Duplicate Status vs Numerical Indicator:	N/A	
Duplicate Status vs RPD:	Fail***	
% RPD Limit:	25%	

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

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

Comments:

~~***Batch must be re-prepped due to unacceptable precision.~~ N/A LAM 4/12/21

4/12/21

LAM 4/12/21

Quality Control Sample Performance Assessment

Pace Analytical™ www.pacelabs.com

Test:	Ra-226
Analyst:	LAL
Date:	4/5/2021
Worklist:	59560
Matrix:	DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	2126661
MB concentration:	0.090
M/B Counting Uncertainty:	0.196
MB MDC:	0.458
MB Numerical Performance Indicator:	0.90
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	Y
	LCS59560	LCSD59560
Count Date:	4/5/2021	4/5/2021
Spike I.D.:	19-033	19-033
Decay Corrected Spike Concentration (pCi/mL):	24.039	24.039
Volume Used (mL):	0.10	0.10
Aliquot Volume (L, g, F):	0.504	0.518
Target Conc. (pCi/L, g, F):	4.771	4.641
Uncertainty (Calculated):	0.057	0.056
Result (pCi/L, g, F):	5.065	4.810
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.277	0.261
Numerical Performance Indicator:	2.04	1.24
Percent Recovery:	106.17%	103.65%
Status vs Numerical Indicator:	N/A	N/A
Status vs Recovery:	Pass	Pass
Upper % Recovery Limits:	125%	125%
Lower % Recovery Limits:	75%	75%

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

Duplicate Sample Assessment		
Sample I.D.:	LCS59560	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	LCSD59560	
Sample Result (pCi/L, g, F):	5.065	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.277	
Sample Duplicate Result (pCi/L, g, F):	4.810	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.261	
Are sample and/or duplicate results below RL?	NO	
Duplicate Numerical Performance Indicator:	1.314	92527258011
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	2.40%	92527258011DUP
Duplicate Status vs Numerical Indicator:	N/A	
Duplicate Status vs RPD:	Pass	
% RPD Limit:	25%	

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

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

Comments:

4/6/21

LAM 4/6/21

Quality Control Sample Performance Assessment

Test: Ra-226
Analyst: LAL
Date: 4/1/2021
Worklist: 59561
Matrix: DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	2126663
MB concentration:	0.102
M/B Counting Uncertainty:	0.172
MB MDC:	0.390
MB Numerical Performanca Indicator:	1.16
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	Y
	LCS59561	LCSD59561
Count Date:	4/5/2021	4/5/2021
Spike I.D.:	19-033	19-033
Decay Corrected Spike Concentration (pCi/mL):	24.039	24.039
Volume Used (mL):	0.10	0.10
Aliquot Volume (L, g, F):	0.515	0.502
Target Conc. (pCi/L, g, F):	4.664	4.785
Uncertainty (Calculated):	0.056	0.057
Result (pCi/L, g, F):	4.047	4.762
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.578	0.617
Numerical Performance Indicator:	-2.08	-0.07
Percent Recovery:	86.77%	99.51%
Status vs Numerical Indicator:	N/A	N/A
Status vs Recovery:	Pass	Pass
Upper % Recovery Limits:	125%	125%
Lower % Recovery Limits:	75%	75%

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

Duplicate Sample Assessment		
Sample I.D.:	LCS59561	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	LCSD59561	
Sample Result (pCi/L, g, F):	4.047	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.578	
Sample Duplicate Result (pCi/L, g, F):	4.762	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.617	
Are sample and/or duplicate results below RL?	NO	
Duplicate Numerical Performance Indicator:	-1.655	
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	13.67%	
Duplicate Status vs Numerical Indicator:	N/A	
Duplicate Status vs RPD:	Pass	
% RPD Limit:	25%	

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

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

Comments:

LAM 4/5/21

Quality Control Sample Performance Assessment

Pace Analytical
www.pacelabs.com

Test:	Ra-226
Analyst:	CLA
Date:	4/12/2021
Worklist:	59709
Matrix:	DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	2132285
MB concentration:	0.037
M/B Counting Uncertainty:	0.210
MB MDC:	0.420
MB Numerical Performance Indicator:	0.34
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	N
	LCS59709	LCSD59709
Count Date:	4/13/2021	
Spike I.D.:	19-033	
Decey Corrected Spike Concentration (pCi/mL):	24.038	
Volume Used (mL):	0.10	
Aliquot Volume (L, g, F):	0.506	
Target Conc. (pCi/L, g, F):	4.752	
Uncertainty (Calculated):	0.057	
Result (pCi/L, g, F):	4.586	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.824	
Numerical Performance Indicator:	-0.39	
Percent Recovery:	96.50%	
Status vs Numerical Indicator:	N/A	
Status vs Recovery:	Pass	
Upper % Recovery Limits:	125%	
Lower % Recovery Limits:	75%	

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

Duplicate Sample Assessment		
Sample I.D.:	92529896015	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	92529896015DUP	
Sample Result (pCi/L, g, F):	0.581	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.304	
Sample Duplicate Result (pCi/L, g, F):	0.779	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.400	
Are sample and/or duplicate results below RL?	See Below ##	
Duplicate Numerical Performance Indicator:	-0.771	92529896015
Duplicate RPD:	~~29.07%~~ OK	92529896015DUP
Duplicate Status vs Numerical Indicator:	N/A	
Duplicate Status vs RPD:	Fail***	
% RPD Limit:	25%	

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

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

Comments:

~~***Batch must be re-prepped due to unacceptable precision.~~ N/A LAM 4/13/21

OK 4/13/21

LAM 4/13/21

Quality Control Sample Performance Assessment

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Test:	Ra-226
Analyst:	CLA
Date:	4/12/2021
Worklist:	59709
Matrix:	DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	2132285
MB concentration:	0.037
M/B Counting Uncertainty:	0.210
MB MDC:	0.420
MB Numerical Performance Indicator:	0.34
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	Y
	LCS59709	LCSD59709
Count Date:	4/13/2021	4/13/2021
Spike I.D.:	19-033	19-033
Decay Corrected Spike Concentration (pCi/mL):	24.038	24.038
Volume Used (mL):	0.10	0.10
Aliquot Volume (L, g, F):	0.506	0.501
Target Conc. (pCi/L, g, F):	4.752	4.802
Uncertainty (Calculated):	0.057	0.058
Result (pCi/L, g, F):	4.586	4.997
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.824	0.806
Numerical Performance Indicator:	-0.39	0.47
Percent Recovery:	96.50%	104.05%
Status vs Numerical Indicator:	N/A	N/A
Status vs Recovery:	Pass	Pass
Upper % Recovery Limits:	125%	125%
Lower % Recovery Limits:	75%	75%

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

Duplicate Sample Assessment		
Sample I.D.:	LCS59709	Enter Duplicate
Duplicate Sample I.D.	LCSD59709	sample IDs if
Sample Result (pCi/L, g, F):	4.586	other than
Sample Result Counting Uncertainty (pCi/L, g, F):	0.824	LCS/LCSD in
Sample Duplicate Result (pCi/L, g, F):	4.997	the space below.
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.806	
Are sample and/or duplicate results below RL?	NO	
Duplicate Numerical Performance Indicator:	-0.699	92529896015
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	7.53%	92529896015DUP
Duplicate Status vs Numerical Indicator:	N/A	
Duplicate Status vs RPD:	Pass	
% RPD Limit:	25%	

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

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

Comments:

CLA 4/13/21

LAM 4/13/21

Quality Control Sample Performance Assessment

Pace Analytical
www.pacelabs.com

Test:	Ra-228
Analyst:	VAL
Date:	4/5/2021
Worklist:	59551
Matrix:	WT

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	2126643
MB concentration:	0.738
MB 2 Sigma CSU:	0.321
MB MDC:	0.495
MB Numerical Performance Indicator:	4.51
MB Status vs Numerical Indicator:	Fail*
MB Status vs. MDC:	See Comment*

Laboratory Control Sample Assessment	LCSD (Y or N)?	Y
	LCS59551	LCSD59551
Count Date:	4/9/2021	4/9/2021
Spike I.D.:	21-003	21-003
Decay Corrected Spike Concentration (pCi/mL):	38.142	38.142
Volume Used (mL):	0.10	0.10
Aliquot Volume (L, g, F):	0.804	0.812
Target Conc. (pCi/L, g, F):	4.743	4.697
Uncertainty (Calculated):	0.232	0.230
Result (pCi/L, g, F):	5.331	5.382
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	1.169	1.184
Numerical Performance Indicator:	0.97	1.11
Percent Recovery:	112.40%	114.58%
Status vs Numerical Indicator:	N/A	N/A
Status vs Recovery:	Pass	Pass
Upper % Recovery Limits:	135%	135%
Lower % Recovery Limits:	60%	60%

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

Duplicate Sample Assessment		
Sample I.D.:	LCS59551	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	LCSD59551	
Sample Result (pCi/L, g, F):	5.331	
Sample Result 2 Sigma CSU (pCi/L, g, F):	1.169	
Sample Duplicate Result (pCi/L, g, F):	5.382	
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	1.184	
Are sample and/or duplicate results below RL?	NO	
Duplicate Numerical Performance Indicator:	-0.060	
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	1.92%	
Duplicate Status vs Numerical Indicator:	Pass	
Duplicate Status vs RPD:	Pass	
% RPD Limit:	36%	

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

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

Comments:
*The method blank result is below the reporting limit for this analysis and is acceptable. ✓

4/12/21

4/12/2021

Quality Control Sample Performance Assessment

Pace Analytical
www.pacelabs.com

Test:	Ra-228
Analyst:	VAL
Date:	4/6/2021
Worklist:	59552
Matrix:	WT

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	2126646
MB concentration:	0.826
M/B 2 Sigma CSU:	0.447
MB MDC:	0.791
MB Numerical Performance Indicator:	3.62
MB Status vs Numerical Indicator:	Fail*
MB Status vs. MDC:	See Comment*

Laboratory Control Sample Assessment	LCSD (Y or N)?	Y
	LCS59552	LCSD59552
Count Date:	4/9/2021	4/9/2021
Spike I.D.:	21-003	21-003
Decay Corrected Spike Concentration (pCi/mL):	38.140	38.140
Volume Used (mL):	0.10	0.10
Aliquot Volume (L, g, F):	0.803	0.815
Target Conc. (pCi/L, g, F):	4.752	4.682
Uncertainty (Calculated):	0.233	0.229
Result (pCi/L, g, F):	4.576	4.583
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	1.088	1.068
Numerical Performance Indicator:	-0.31	-0.18
Percent Recovery:	96.30%	97.88%
Status vs Numerical Indicator:	N/A	N/A
Status vs Recovery:	Pass	Pass
Upper % Recovery Limits:	135%	135%
Lower % Recovery Limits:	60%	60%

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

Duplicate Sample Assessment		
Sample I.D.:	LCS59552	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	LCSD59552	
Sample Result (pCi/L, g, F):	4.576	
Sample Result 2 Sigma CSU (pCi/L, g, F):	1.088	
Sample Duplicate Result (pCi/L, g, F):	4.583	
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	1.068	
Are sample and/or duplicate results below RL?	NO	
Duplicate Numerical Performance Indicator:	-0.008	
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	1.62%	
Duplicate Status vs Numerical Indicator:	Pass	
Duplicate Status vs RPD:	Pass	
% RPD Limit:	36%	

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

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

Comments:
*The method blank result is below the reporting limit for this analysis and is acceptable.

4/12/21

Quality Control Sample Performance Assessment

Pace Analytical
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Test:	Ra-228
Analyst:	VAL
Date:	4/6/2021
Worklist:	59554
Matrix:	WT

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	2126652
MB concentration:	0.217
MB 2 Sigma CSU:	0.303
MB MDC:	0.649
MB Numerical Performance Indicator:	1.40
MB Status vs Numerical Indicator:	Pass
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	y
	LCS59554	LCSD59554
Count Date:	4/12/2021	4/12/2021
Spike I.D.:	21-003	21-003
Decay Corrected Spike Concentration (pCi/mL):	38.104	38.103
Volume Used (mL):	0.10	0.10
Aliquot Volume (L, g, F):	0.815	0.823
Target Conc. (pCi/L, g, F):	4.675	4.631
Uncertainty (Calculated):	0.229	0.227
Result (pCi/L, g, F):	5.932	4.143
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	1.319	0.989
Numerical Performance Indicator:	1.84	-0.94
Percent Recovery:	126.87%	89.47%
Status vs Numerical Indicator:	N/A	N/A
Status vs Recovery:	Pass	Pass
Upper % Recovery Limits:	135%	135%
Lower % Recovery Limits:	60%	60%

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

Duplicate Sample Assessment		
Sample I.D.:	LCS59554	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicata Sample I.D.	LCSD59554	
Sample Result (pCi/L, g, F):	5.932	
Sample Result 2 Sigma CSU (pCi/L, g, F):	1.319	
Sample Duplicate Result (pCi/L, g, F):	4.143	
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	0.989	
Are sample and/or duplicate results below RL?	NO	
Duplicate Numerical Performance Indicator:	2.127	
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	34.58%	
Duplicate Status vs Numerical Indicator:	Warning	
Duplicate Status vs RPD:	Pass	
% RPD Limit:	36%	

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

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

Comments:

4/13/21

Quality Control Sample Performance Assessment

Pace Analytical
www.pacelabs.com

Test:	Ra-228
Analyst:	VAL
Date:	4/8/2021
Worklist:	59783
Matrix:	WT

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	2134502
MB concentration:	0.347
M/B 2 Sigma CSU:	0.339
MB MDC:	0.697
MB Numerical Performance Indicator:	2.00
MB Status vs Numerical Indicator:	Warning
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	Y
	LCS59783	LCSD59783
Count Date:	4/13/2021	4/13/2021
Spike I.D.:	21-003	21-003
Decay Corrected Spike Concentration (pCi/mL):	38.091	38.091
Volume Used (mL):	0.10	0.10
Aliquot Volume (L, g, F):	0.814	0.810
Target Conc. (pCi/L, g, F):	4.680	4.705
Uncertainty (Calculated):	0.229	0.231
Result (pCi/L, g, F):	4.309	3.272
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	0.978	0.808
Numerical Performance Indicator:	-0.72	-3.34
Percent Recovery:	92.09%	69.55%
Status vs Numerical Indicator:	N/A	N/A
Status vs Recovery:	Pass	Pass
Upper % Recovery Limits:	135%	135%
Lower % Recovery Limits:	60%	60%

Sample Matrix Spike Control Assessment	MS/MSD 1	MS/MSD 2
Sample Collection Date:	3/15/2021	
Sample I.D.	30413775001	
Sample MS I.D.	30413775001MS	
Sample MSD I.D.		
Spike I.D.:	21-003	
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	38.456	
Spike Volume Used in MS (mL):	0.20	
Spike Volume Used in MSD (mL):		
MS Aliquot (L, g, F):	0.808	
MS Target Conc.(pCi/L, g, F):	9.516	
MSD Aliquot (L, g, F):		
MSD Target Conc. (pCi/L, g, F):		
MS Spike Uncertainty (calculated):	0.466	
MSD Spike Uncertainty (calculated):		
Sample Result:	0.445	
Sample Result 2 Sigma CSU (pCi/L, g, F):	0.345	
Sample Matrix Spike Result:	10.659	
Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):	2.113	
Sample Matrix Spike Duplicate Result:		
Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):		
MS Numerical Performance Indicator:	0.624	
MSD Numerical Performance Indicator:		
MS Percent Recovery:	107.33%	
MSD Percent Recovery:		
MS Status vs Numerical Indicator:	Pass	
MSD Status vs Numerical Indicator:		
MS Status vs Recovery:	Pass	
MSD Status vs Recovery:		
MS/MSD Upper % Recovery Limits:	135%	
MS/MSD Lower % Recovery Limits:	60%	

Duplicate Sample Assessment		
Sample I.D.:	LCS59783	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	LCSD59783	
Sample Result (pCi/L, g, F):	4.309	
Sample Result 2 Sigma CSU (pCi/L, g, F):	0.978	
Sample Duplicate Result (pCi/L, g, F):	3.272	
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	0.808	
Are sample and/or duplicate results below RL?	NO	
Duplicate Numerical Performance Indicator:	1.602	
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	27.88%	
Duplicate Status vs Numerical Indicator:	Pass	
Duplicate Status vs RPD:	Pass	
% RPD Limit:	36%	

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

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

Comments:

4/14/21

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

April 16, 2021

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

RE: Project: HAMMOND AP-2 SEMIANNUAL RADS
Pace Project No.: 92527258

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory between March 11, 2021 and March 22, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

- Pace Analytical Services - Greensburg

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

Sincerely,

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

Enclosures

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

Pace Analytical Services, LLC
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CERTIFICATIONS

Project: HAMMOND AP-2 SEMIANNUAL RADS
Pace Project No.: 92527258

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
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SAMPLE SUMMARY

Project: HAMMOND AP-2 SEMIANNUAL RADS
Pace Project No.: 92527258

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92527258001	**HGWA-1**	Water	03/10/21 16:10	03/11/21 15:55
92527258002	**HGWA-4**	Water	03/10/21 16:21	03/11/21 15:55
92527258003	**HGWA-42D**	Water	03/10/21 14:23	03/11/21 15:55
92527258004	**HGWA-44D**	Water	03/10/21 14:30	03/11/21 15:55
92527258005	**HGWA-2**	Water	03/11/21 09:59	03/12/21 13:43
92527258006	**HGWA-3**	Water	03/11/21 11:25	03/12/21 13:43
92527258007	**HGWA-5**	Water	03/11/21 11:30	03/12/21 13:43
92527258008	**HGWA-6**	Water	03/11/21 12:39	03/12/21 13:43
92527258009	**HGWA-43D**	Water	03/11/21 09:57	03/12/21 13:43
92527258010	**MW-37D**	Water	03/12/21 10:20	03/15/21 12:00
92527258011	**HGWC-15**	Water	03/16/21 15:24	03/17/21 13:10
92527258012	**HGWC-14**	Water	03/17/21 14:28	03/18/21 13:17
92527258013	**HGWC-16**	Water	03/17/21 09:29	03/18/21 13:17
92527258014	**MW-22**	Water	03/17/21 10:00	03/18/21 13:17
92527258015	**MW-23D**	Water	03/17/21 11:49	03/18/21 13:17
92527258016	**HGWC-17**	Water	03/18/21 14:48	03/19/21 13:40
92527258017	**HGWC-18**	Water	03/18/21 10:01	03/19/21 13:40
92527258018	**MW-21D**	Water	03/18/21 12:08	03/19/21 13:40
92527258019	**MW-33**	Water	03/18/21 10:40	03/19/21 13:40
92527258020	**DUP-2**	Water	03/18/21 00:00	03/19/21 13:40
92527258021	**EB-2**	Water	03/18/21 12:50	03/19/21 13:40
92527258022	**FB-2**	Water	03/18/21 15:30	03/19/21 13:40
92527258023	**MW-35**	Water	03/19/21 12:48	03/22/21 15:41

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SAMPLE ANALYTE COUNT

Project: HAMMOND AP-2 SEMIANNUAL RADS
Pace Project No.: 92527258

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92527258001	**HGWA-1**	EPA 9315	CLA	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92527258002	**HGWA-4**	EPA 9315	CLA	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92527258003	**HGWA-42D**	EPA 9315	CLA	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92527258004	**HGWA-44D**	EPA 9315	CLA	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92527258005	**HGWA-2**	EPA 9315	CLA	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92527258006	**HGWA-3**	EPA 9315	CLA	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92527258007	**HGWA-5**	EPA 9315	CLA	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92527258008	**HGWA-6**	EPA 9315	CLA	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92527258009	**HGWA-43D**	EPA 9315	CLA	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92527258010	**MW-37D**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92527258011	**HGWC-15**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92527258012	**HGWC-14**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92527258013	**HGWC-16**	EPA 9315	LAL	1	PASI-PA

Pace Analytical Services, LLC
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SAMPLE ANALYTE COUNT

Project: HAMMOND AP-2 SEMIANNUAL RADS
Pace Project No.: 92527258

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92527258014	**MW-22**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92527258015	**MW-23D**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92527258016	**HGWC-17**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92527258017	**HGWC-18**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92527258018	**MW-21D**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92527258019	**MW-33**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92527258020	**DUP-2**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92527258021	**EB-2**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92527258022	**FB-2**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92527258023	**MW-35**	EPA 9315	CLA	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg

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SUMMARY OF DETECTION

Project: HAMMOND AP-2 SEMIANNUAL RADS
Pace Project No.: 92527258

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92527258001	**HGWA-1**					
EPA 9315	Radium-226	-0.0744 ± 0.0713 (0.306) C:76% T:NA	pCi/L		03/29/21 07:58	
EPA 9320	Radium-228	-0.473 ± 0.501 (1.24) C:75% T:67%	pCi/L		04/09/21 13:14	
Total Radium Calculation	Total Radium	0.000 ± 0.572 (1.55)	pCi/L		04/12/21 13:46	
92527258002	**HGWA-4**					
EPA 9315	Radium-226	0.0468 ± 0.144 (0.360) C:60% T:NA	pCi/L		03/29/21 07:58	
EPA 9320	Radium-228	0.234 ± 0.379 (0.823) C:73% T:91%	pCi/L		04/09/21 14:40	
Total Radium Calculation	Total Radium	0.281 ± 0.523 (1.18)	pCi/L		04/12/21 13:46	
92527258003	**HGWA-42D**					
EPA 9315	Radium-226	0.719 ± 0.297 (0.317) C:77% T:NA	pCi/L		03/29/21 07:58	
EPA 9320	Radium-228	0.493 ± 0.385 (0.765) C:75% T:87%	pCi/L		04/09/21 12:10	
Total Radium Calculation	Total Radium	1.21 ± 0.682 (1.08)	pCi/L		04/12/21 13:46	
92527258004	**HGWA-44D**					
EPA 9315	Radium-226	0.119 ± 0.127 (0.231) C:79% T:NA	pCi/L		03/29/21 07:58	
EPA 9320	Radium-228	0.692 ± 0.477 (0.922) C:63% T:82%	pCi/L		04/09/21 15:22	
Total Radium Calculation	Total Radium	0.811 ± 0.604 (1.15)	pCi/L		04/12/21 13:46	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: HAMMOND AP-2 SEMIANNUAL RADS
Pace Project No.: 92527258

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92527258005	**HGWA-2**					
EPA 9315	Radium-226	0.206 ± 0.172 (0.304) C:81% T:NA	pCi/L		03/29/21 07:58	
EPA 9320	Radium-228	0.531 ± 0.488 (0.990) C:58% T:71%	pCi/L		04/09/21 15:22	
Total Radium Calculation	Total Radium	0.737 ± 0.660 (1.29)	pCi/L		04/12/21 13:46	
92527258006	**HGWA-3**					
EPA 9315	Radium-226	0.128 ± 0.181 (0.393) C:82% T:NA	pCi/L		03/29/21 07:58	
EPA 9320	Radium-228	-0.0144 ± 0.302 (0.724) C:65% T:75%	pCi/L		04/09/21 15:22	
Total Radium Calculation	Total Radium	0.128 ± 0.483 (1.12)	pCi/L		04/12/21 13:46	
92527258007	**HGWA-5**					
EPA 9315	Radium-226	0.150 ± 0.162 (0.312) C:71% T:NA	pCi/L		03/29/21 07:58	
EPA 9320	Radium-228	0.920 ± 0.492 (0.877) C:65% T:79%	pCi/L		04/09/21 15:23	
Total Radium Calculation	Total Radium	1.07 ± 0.654 (1.19)	pCi/L		04/13/21 11:06	
92527258008	**HGWA-6**					
EPA 9315	Radium-226	0.244 ± 0.186 (0.309) C:77% T:NA	pCi/L		03/29/21 07:58	
EPA 9320	Radium-228	0.357 ± 0.743 (1.64) C:66% T:77%	pCi/L		04/09/21 19:20	
Total Radium Calculation	Total Radium	0.601 ± 0.929 (1.95)	pCi/L		04/13/21 15:22	

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SUMMARY OF DETECTION

Project: HAMMOND AP-2 SEMIANNUAL RADS
Pace Project No.: 92527258

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92527258009	**HGWA-43D**					
EPA 9315	Radium-226	0.118 ± 0.160 (0.335) C:68% T:NA	pCi/L		03/29/21 07:58	
EPA 9320	Radium-228	1.39 ± 0.825 (1.53) C:62% T:77%	pCi/L		04/09/21 19:20	
Total Radium Calculation	Total Radium	1.51 ± 0.985 (1.87)	pCi/L		04/13/21 15:22	
92527258010	**MW-37D**					
EPA 9315	Radium-226	0.167 ± 0.110 (0.182) C:85% T:NA	pCi/L		04/05/21 12:44	
EPA 9320	Radium-228	0.411 ± 0.479 (1.01) C:62% T:86%	pCi/L		04/09/21 15:21	
Total Radium Calculation	Total Radium	0.578 ± 0.589 (1.19)	pCi/L		04/13/21 15:22	
92527258011	**HGWC-15**					
EPA 9315	Radium-226	-0.0152 ± 0.0752 (0.202) C:79% T:NA	pCi/L		04/05/21 12:44	
EPA 9320	Radium-228	0.801 ± 0.584 (1.15) C:73% T:84%	pCi/L		04/09/21 14:40	
Total Radium Calculation	Total Radium	0.801 ± 0.659 (1.35)	pCi/L		04/12/21 13:46	
92527258012	**HGWC-14**					
EPA 9315	Radium-226	0.386 ± 0.150 (0.179) C:93% T:NA	pCi/L		04/05/21 12:44	
EPA 9320	Radium-228	1.45 ± 0.814 (1.50) C:63% T:85%	pCi/L		04/09/21 19:21	
Total Radium Calculation	Total Radium	1.84 ± 0.964 (1.68)	pCi/L		04/13/21 15:22	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: HAMMOND AP-2 SEMIANNUAL RADS
Pace Project No.: 92527258

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92527258013	**HGWC-16**					
EPA 9315	Radium-226	0.228 ± 0.117 (0.159) C:86% T:NA	pCi/L		04/05/21 12:44	
EPA 9320	Radium-228	-0.286 ± 0.753 (1.78) C:62% T:84%	pCi/L		04/09/21 19:21	
Total Radium Calculation	Total Radium	0.228 ± 0.870 (1.94)	pCi/L		04/13/21 15:22	
92527258014	**MW-22**					
EPA 9315	Radium-226	0.263 ± 0.238 (0.469) C:83% T:NA	pCi/L		04/05/21 11:55	
EPA 9320	Radium-228	0.718 ± 0.603 (1.21) C:66% T:84%	pCi/L		04/09/21 19:21	
Total Radium Calculation	Total Radium	0.981 ± 0.841 (1.68)	pCi/L		04/13/21 15:22	
92527258015	**MW-23D**					
EPA 9315	Radium-226	0.0576 ± 0.0914 (0.197) C:79% T:NA	pCi/L		04/05/21 16:08	
EPA 9320	Radium-228	0.521 ± 0.620 (1.31) C:65% T:87%	pCi/L		04/09/21 19:10	
Total Radium Calculation	Total Radium	0.579 ± 0.711 (1.51)	pCi/L		04/13/21 15:22	
92527258016	**HGWC-17**					
EPA 9315	Radium-226	0.159 ± 0.114 (0.195) C:79% T:NA	pCi/L		04/05/21 16:08	
EPA 9320	Radium-228	0.697 ± 0.751 (1.57) C:62% T:76%	pCi/L		04/09/21 19:11	
Total Radium Calculation	Total Radium	0.856 ± 0.865 (1.77)	pCi/L		04/13/21 15:22	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: HAMMOND AP-2 SEMIANNUAL RADS
Pace Project No.: 92527258

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92527258017	**HGWC-18**					
EPA 9315	Radium-226	0.580 ± 0.180 (0.159) C:88% T:NA	pCi/L		04/05/21 16:08	
EPA 9320	Radium-228	1.05 ± 0.658 (1.23) C:63% T:87%	pCi/L		04/09/21 19:11	
Total Radium Calculation	Total Radium	1.63 ± 0.838 (1.39)	pCi/L		04/13/21 15:22	
92527258018	**MW-21D**					
EPA 9315	Radium-226	0.0981 ± 0.0997 (0.196) C:86% T:NA	pCi/L		04/05/21 16:08	
EPA 9320	Radium-228	0.402 ± 0.650 (1.41) C:62% T:85%	pCi/L		04/09/21 19:12	
Total Radium Calculation	Total Radium	0.500 ± 0.750 (1.61)	pCi/L		04/13/21 15:22	
92527258019	**MW-33**					
EPA 9315	Radium-226	0.380 ± 0.148 (0.177) C:91% T:NA	pCi/L		04/05/21 16:08	
EPA 9320	Radium-228	0.353 ± 0.555 (1.20) C:62% T:86%	pCi/L		04/09/21 19:12	
Total Radium Calculation	Total Radium	0.733 ± 0.703 (1.38)	pCi/L		04/13/21 15:22	
92527258020	**DUP-2**					
EPA 9315	Radium-226	0.515 ± 0.281 (0.454) C:89% T:NA	pCi/L		04/05/21 07:54	
EPA 9320	Radium-228	0.981 ± 0.485 (0.859) C:73% T:88%	pCi/L		04/12/21 14:39	
Total Radium Calculation	Total Radium	1.50 ± 0.766 (1.31)	pCi/L		04/13/21 15:24	

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SUMMARY OF DETECTION

Project: HAMMOND AP-2 SEMIANNUAL RADS
Pace Project No.: 92527258

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92527258021	**EB-2**					
EPA 9315	Radium-226	0.0433 ± 0.104 (0.250) C:86% T:NA	pCi/L		04/05/21 07:59	
EPA 9320	Radium-228	0.00182 ± 0.296 (0.687) C:70% T:107%	pCi/L		04/12/21 14:39	
Total Radium Calculation	Total Radium	0.0451 ± 0.400 (0.937)	pCi/L		04/13/21 15:24	
92527258022	**FB-2**					
EPA 9315	Radium-226	0.0160 ± 0.107 (0.283) C:89% T:NA	pCi/L		04/05/21 07:59	
EPA 9320	Radium-228	0.0823 ± 0.512 (1.16) C:67% T:75%	pCi/L		04/12/21 14:39	
Total Radium Calculation	Total Radium	0.0983 ± 0.619 (1.44)	pCi/L		04/13/21 15:24	
92527258023	**MW-35**					
EPA 9315	Radium-226	0.0487 ± 0.378 (0.928) C:94% T:NA	pCi/L		04/13/21 07:45	
EPA 9320	Radium-228	0.475 ± 0.528 (1.11) C:63% T:83%	pCi/L		04/13/21 15:44	
Total Radium Calculation	Total Radium	0.524 ± 0.906 (2.04)	pCi/L		04/14/21 11:04	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 SEMIANNUAL RADS
Pace Project No.: 92527258

Sample: HGWA-1 **Lab ID: 92527258001** Collected: 03/10/21 16:10 Received: 03/11/21 15:55 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**-0.0744 ± 0.0713 (0.306) C:76% T:NA**	pCi/L	03/29/21 07:58	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**-0.473 ± 0.501 (1.24) C:75% T:67%**	pCi/L	04/09/21 13:14	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.000 ± 0.572 (1.55)**	pCi/L	04/12/21 13:46	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 SEMIANNUAL RADS
Pace Project No.: 92527258

Sample: HGWA-4 **Lab ID: 92527258002** Collected: 03/10/21 16:21 Received: 03/11/21 15:55 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.0468 ± 0.144 (0.360) C:60% T:NA**	pCi/L	03/29/21 07:58	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.234 ± 0.379 (0.823) C:73% T:91%**	pCi/L	04/09/21 14:40	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.281 ± 0.523 (1.18)**	pCi/L	04/12/21 13:46	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 SEMIANNUAL RADS
Pace Project No.: 92527258

Sample: HGWA-42D **Lab ID: 92527258003** Collected: 03/10/21 14:23 Received: 03/11/21 15:55 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.719 ± 0.297 (0.317) C:77% T:NA**	pCi/L	03/29/21 07:58	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.493 ± 0.385 (0.765) C:75% T:87%**	pCi/L	04/09/21 12:10	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.21 ± 0.682 (1.08)**	pCi/L	04/12/21 13:46	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 SEMIANNUAL RADS
Pace Project No.: 92527258

Sample: HGWA-44D **Lab ID: 92527258004** Collected: 03/10/21 14:30 Received: 03/11/21 15:55 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.119 ± 0.127 (0.231) C:79% T:NA**	pCi/L	03/29/21 07:58	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.692 ± 0.477 (0.922) C:63% T:82%**	pCi/L	04/09/21 15:22	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.811 ± 0.604 (1.15)**	pCi/L	04/12/21 13:46	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 SEMIANNUAL RADS
Pace Project No.: 92527258

Sample: HGWA-2 **Lab ID: 92527258005** Collected: 03/11/21 09:59 Received: 03/12/21 13:43 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.206 ± 0.172 (0.304) C:81% T:NA**	pCi/L	03/29/21 07:58	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.531 ± 0.488 (0.990) C:58% T:71%**	pCi/L	04/09/21 15:22	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.737 ± 0.660 (1.29)**	pCi/L	04/12/21 13:46	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 SEMIANNUAL RADS
Pace Project No.: 92527258

Sample: HGWA-3 **Lab ID: 92527258006** Collected: 03/11/21 11:25 Received: 03/12/21 13:43 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.128 ± 0.181 (0.393) C:82% T:NA**	pCi/L	03/29/21 07:58	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**-0.0144 ± 0.302 (0.724) C:65% T:75%**	pCi/L	04/09/21 15:22	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.128 ± 0.483 (1.12)**	pCi/L	04/12/21 13:46	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 SEMIANNUAL RADS
Pace Project No.: 92527258

Sample: HGWA-5 **Lab ID: 92527258007** Collected: 03/11/21 11:30 Received: 03/12/21 13:43 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.150 ± 0.162 (0.312) C:71% T:NA**	pCi/L	03/29/21 07:58	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.920 ± 0.492 (0.877) C:65% T:79%**	pCi/L	04/09/21 15:23	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.07 ± 0.654 (1.19)**	pCi/L	04/13/21 11:06	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 SEMIANNUAL RADS
Pace Project No.: 92527258

Sample: HGWA-6 **Lab ID: 92527258008** Collected: 03/11/21 12:39 Received: 03/12/21 13:43 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.244 ± 0.186 (0.309) C:77% T:NA**	pCi/L	03/29/21 07:58	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.357 ± 0.743 (1.64) C:66% T:77%**	pCi/L	04/09/21 19:20	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.601 ± 0.929 (1.95)**	pCi/L	04/13/21 15:22	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 SEMIANNUAL RADS
Pace Project No.: 92527258

Sample: HGWA-43D **Lab ID: 92527258009** Collected: 03/11/21 09:57 Received: 03/12/21 13:43 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.118 ± 0.160 (0.335) C:68% T:NA**	pCi/L	03/29/21 07:58	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**1.39 ± 0.825 (1.53) C:62% T:77%**	pCi/L	04/09/21 19:20	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.51 ± 0.985 (1.87)**	pCi/L	04/13/21 15:22	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 SEMIANNUAL RADS
Pace Project No.: 92527258

Sample: MW-37D **Lab ID: 92527258010** Collected: 03/12/21 10:20 Received: 03/15/21 12:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.167 ± 0.110 (0.182) C:85% T:NA**	pCi/L	04/05/21 12:44	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.411 ± 0.479 (1.01) C:62% T:86%**	pCi/L	04/09/21 15:21	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.578 ± 0.589 (1.19)**	pCi/L	04/13/21 15:22	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 SEMIANNUAL RADS
Pace Project No.: 92527258

Sample: HGWC-15 **Lab ID: 92527258011** Collected: 03/16/21 15:24 Received: 03/17/21 13:10 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**-0.0152 ± 0.0752 (0.202) C:79% T:NA**	pCi/L	04/05/21 12:44	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.801 ± 0.584 (1.15) C:73% T:84%**	pCi/L	04/09/21 14:40	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.801 ± 0.659 (1.35)**	pCi/L	04/12/21 13:46	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 SEMIANNUAL RADS
Pace Project No.: 92527258

Sample: HGWC-14 **Lab ID: 92527258012** Collected: 03/17/21 14:28 Received: 03/18/21 13:17 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.386 ± 0.150 (0.179) C:93% T:NA**	pCi/L	04/05/21 12:44	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**1.45 ± 0.814 (1.50) C:63% T:85%**	pCi/L	04/09/21 19:21	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.84 ± 0.964 (1.68)**	pCi/L	04/13/21 15:22	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 SEMIANNUAL RADS
Pace Project No.: 92527258

Sample: HGWC-16 **Lab ID: 92527258013** Collected: 03/17/21 09:29 Received: 03/18/21 13:17 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.228 ± 0.117 (0.159) C:86% T:NA**	pCi/L	04/05/21 12:44	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**-0.286 ± 0.753 (1.78) C:62% T:84%**	pCi/L	04/09/21 19:21	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.228 ± 0.870 (1.94)**	pCi/L	04/13/21 15:22	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 SEMIANNUAL RADS
Pace Project No.: 92527258

Sample: MW-22 **Lab ID: 92527258014** Collected: 03/17/21 10:00 Received: 03/18/21 13:17 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.263 ± 0.238 (0.469) C:83% T:NA**	pCi/L	04/05/21 11:55	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.718 ± 0.603 (1.21) C:66% T:84%**	pCi/L	04/09/21 19:21	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.981 ± 0.841 (1.68)**	pCi/L	04/13/21 15:22	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 SEMIANNUAL RADS
Pace Project No.: 92527258

Sample: MW-23D **Lab ID: 92527258015** Collected: 03/17/21 11:49 Received: 03/18/21 13:17 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.0576 ± 0.0914 (0.197) C:79% T:NA**	pCi/L	04/05/21 16:08	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.521 ± 0.620 (1.31) C:65% T:87%**	pCi/L	04/09/21 19:10	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.579 ± 0.711 (1.51)**	pCi/L	04/13/21 15:22	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 SEMIANNUAL RADS
Pace Project No.: 92527258

Sample: HGWC-17 **Lab ID: 92527258016** Collected: 03/18/21 14:48 Received: 03/19/21 13:40 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.159 ± 0.114 (0.195) C:79% T:NA**	pCi/L	04/05/21 16:08	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.697 ± 0.751 (1.57) C:62% T:76%**	pCi/L	04/09/21 19:11	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.856 ± 0.865 (1.77)**	pCi/L	04/13/21 15:22	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 SEMIANNUAL RADS
Pace Project No.: 92527258

Sample: HGWC-18 **Lab ID: 92527258017** Collected: 03/18/21 10:01 Received: 03/19/21 13:40 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.580 ± 0.180 (0.159) C:88% T:NA**	pCi/L	04/05/21 16:08	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**1.05 ± 0.658 (1.23) C:63% T:87%**	pCi/L	04/09/21 19:11	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.63 ± 0.838 (1.39)**	pCi/L	04/13/21 15:22	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 SEMIANNUAL RADS
Pace Project No.: 92527258

Sample: MW-21D **Lab ID: 92527258018** Collected: 03/18/21 12:08 Received: 03/19/21 13:40 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.0981 ± 0.0997 (0.196) C:86% T:NA**	pCi/L	04/05/21 16:08	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.402 ± 0.650 (1.41) C:62% T:85%**	pCi/L	04/09/21 19:12	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.500 ± 0.750 (1.61)**	pCi/L	04/13/21 15:22	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 SEMIANNUAL RADS
Pace Project No.: 92527258

Sample: MW-33 **Lab ID: 92527258019** Collected: 03/18/21 10:40 Received: 03/19/21 13:40 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.380 ± 0.148 (0.177) C:91% T:NA**	pCi/L	04/05/21 16:08	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.353 ± 0.555 (1.20) C:62% T:86%**	pCi/L	04/09/21 19:12	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.733 ± 0.703 (1.38)**	pCi/L	04/13/21 15:22	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 SEMIANNUAL RADS
Pace Project No.: 92527258

Sample: DUP-2 **Lab ID: 92527258020** Collected: 03/18/21 00:00 Received: 03/19/21 13:40 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.515 ± 0.281 (0.454) C:89% T:NA**	pCi/L	04/05/21 07:54	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.981 ± 0.485 (0.859) C:73% T:88%**	pCi/L	04/12/21 14:39	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.50 ± 0.766 (1.31)**	pCi/L	04/13/21 15:24	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 SEMIANNUAL RADS
Pace Project No.: 92527258

Sample: EB-2 **Lab ID: 92527258021** Collected: 03/18/21 12:50 Received: 03/19/21 13:40 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.0433 ± 0.104 (0.250) C:86% T:NA**	pCi/L	04/05/21 07:59	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.00182 ± 0.296 (0.687) C:70% T:107%**	pCi/L	04/12/21 14:39	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.0451 ± 0.400 (0.937)**	pCi/L	04/13/21 15:24	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 SEMIANNUAL RADS
Pace Project No.: 92527258

Sample: FB-2 **Lab ID: 92527258022** Collected: 03/18/21 15:30 Received: 03/19/21 13:40 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.0160 ± 0.107 (0.283) C:89% T:NA**	pCi/L	04/05/21 07:59	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.0823 ± 0.512 (1.16) C:67% T:75%**	pCi/L	04/12/21 14:39	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.0983 ± 0.619 (1.44)**	pCi/L	04/13/21 15:24	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-2 SEMIANNUAL RADS
Pace Project No.: 92527258

Sample: MW-35 **Lab ID: 92527258023** Collected: 03/19/21 12:48 Received: 03/22/21 15:41 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.0487 ± 0.378 (0.928) C:94% T:NA**	pCi/L	04/13/21 07:45	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.475 ± 0.528 (1.11) C:63% T:83%**	pCi/L	04/13/21 15:44	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.524 ± 0.906 (2.04)**	pCi/L	04/14/21 11:04	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-2 SEMIANNUAL RADS
Pace Project No.: 92527258

QC Batch: 441707
QC Batch Method: EPA 9315
Analysis Method: EPA 9315
Analysis Description: 9315 Total Radium
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 92527258023

METHOD BLANK: 2132285
Matrix: Water
Associated Lab Samples: 92527258023

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0366 ± 0.210 (0.420) C:94% T:NA	pCi/L	04/12/21 19:14	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-2 SEMIANNUAL RADS
Pace Project No.: 92527258

QC Batch: 440499
QC Batch Method: EPA 9315
Analysis Method: EPA 9315
Analysis Description: 9315 Total Radium
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 92527258010, 92527258011, 92527258012, 92527258013, 92527258014, 92527258015, 92527258016, 92527258017, 92527258018, 92527258019

METHOD BLANK: 2126661
Matrix: Water
Associated Lab Samples: 92527258010, 92527258011, 92527258012, 92527258013, 92527258014, 92527258015, 92527258016, 92527258017, 92527258018, 92527258019

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0900 ± 0.196 (0.458) C:77% T:NA	pCi/L	04/05/21 10:10	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-2 SEMIANNUAL RADS
Pace Project No.: 92527258

QC Batch: 440493
QC Batch Method: EPA 9320
Analysis Method: EPA 9320
Analysis Description: 9320 Radium 228
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 92527258020, 92527258021, 92527258022

METHOD BLANK: 2126652 Matrix: Water
Associated Lab Samples: 92527258020, 92527258021, 92527258022

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.217 ± 0.303 (0.649) C:71% T:96%	pCi/L	04/12/21 11:35	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-2 SEMIANNUAL RADS
Pace Project No.: 92527258

QC Batch: 442226
QC Batch Method: EPA 9320
Analysis Method: EPA 9320
Analysis Description: 9320 Radium 228
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 92527258023

METHOD BLANK: 2134501
Matrix: Water
Associated Lab Samples: 92527258023

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.347 ± 0.339 (0.697) C:71% T:89%	pCi/L	04/13/21 12:39	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-2 SEMIANNUAL RADS
Pace Project No.: 92527258

QC Batch: 440490
QC Batch Method: EPA 9320
Analysis Method: EPA 9320
Analysis Description: 9320 Radium 228
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 92527258001, 92527258002, 92527258003, 92527258011

METHOD BLANK: 2126643
Matrix: Water
Associated Lab Samples: 92527258001, 92527258002, 92527258003, 92527258011

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.738 ± 0.321 (0.495) C:74% T:97%	pCi/L	04/09/21 12:06	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-2 SEMIANNUAL RADS
Pace Project No.: 92527258

QC Batch:	440500	Analysis Method:	EPA 9315
QC Batch Method:	EPA 9315	Analysis Description:	9315 Total Radium
		Laboratory:	Pace Analytical Services - Greensburg

Associated Lab Samples: 92527258020, 92527258021, 92527258022

METHOD BLANK: 2126663 Matrix: Water

Associated Lab Samples: 92527258020, 92527258021, 92527258022

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.102 ± 0.173 (0.390) C:90% T:NA	pCi/L	04/05/21 07:54	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-2 SEMIANNUAL RADS
Pace Project No.: 92527258

QC Batch: 440491
QC Batch Method: EPA 9320
Analysis Method: EPA 9320
Analysis Description: 9320 Radium 228
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 92527258004, 92527258005, 92527258006, 92527258007, 92527258008, 92527258009, 92527258010, 92527258012, 92527258013, 92527258014, 92527258015, 92527258016, 92527258017, 92527258018, 92527258019

METHOD BLANK: 2126646
Matrix: Water
Associated Lab Samples: 92527258004, 92527258005, 92527258006, 92527258007, 92527258008, 92527258009, 92527258010, 92527258012, 92527258013, 92527258014, 92527258015, 92527258016, 92527258017, 92527258018, 92527258019

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.826 ± 0.447 (0.791) C:67% T:78%	pCi/L	04/09/21 15:22	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-2 SEMIANNUAL RADS
Pace Project No.: 92527258

QC Batch: 439773
QC Batch Method: EPA 9315
Analysis Method: EPA 9315
Analysis Description: 9315 Total Radium
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 92527258001, 92527258002, 92527258003, 92527258004, 92527258005, 92527258006, 92527258007, 92527258008, 92527258009

METHOD BLANK: 2123469
Matrix: Water
Associated Lab Samples: 92527258001, 92527258002, 92527258003, 92527258004, 92527258005, 92527258006, 92527258007, 92527258008, 92527258009

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0133 ± 0.113 (0.309) C:70% T:NA	pCi/L	03/29/21 07:58	

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QUALIFIERS

Project: HAMMOND AP-2 SEMIANNUAL RADS
Pace Project No.: 92527258

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

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

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

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval). Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

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

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: HAMMOND AP-2 SEMIANNUAL RADS
Pace Project No.: 92527258

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92527258001	**HGWA-1**	EPA 9315	439773		
92527258002	**HGWA-4**	EPA 9315	439773		
92527258003	**HGWA-42D**	EPA 9315	439773		
92527258004	**HGWA-44D**	EPA 9315	439773		
92527258005	**HGWA-2**	EPA 9315	439773		
92527258006	**HGWA-3**	EPA 9315	439773		
92527258007	**HGWA-5**	EPA 9315	439773		
92527258008	**HGWA-6**	EPA 9315	439773		
92527258009	**HGWA-43D**	EPA 9315	439773		
92527258010	**MW-37D**	EPA 9315	440499		
92527258011	**HGWC-15**	EPA 9315	440499		
92527258012	**HGWC-14**	EPA 9315	440499		
92527258013	**HGWC-16**	EPA 9315	440499		
92527258014	**MW-22**	EPA 9315	440499		
92527258015	**MW-23D**	EPA 9315	440499		
92527258016	**HGWC-17**	EPA 9315	440499		
92527258017	**HGWC-18**	EPA 9315	440499		
92527258018	**MW-21D**	EPA 9315	440499		
92527258019	**MW-33**	EPA 9315	440499		
92527258020	**DUP-2**	EPA 9315	440500		
92527258021	**EB-2**	EPA 9315	440500		
92527258022	**FB-2**	EPA 9315	440500		
92527258023	**MW-35**	EPA 9315	441707		
92527258001	**HGWA-1**	EPA 9320	440490		
92527258002	**HGWA-4**	EPA 9320	440490		
92527258003	**HGWA-42D**	EPA 9320	440490		
92527258004	**HGWA-44D**	EPA 9320	440491		
92527258005	**HGWA-2**	EPA 9320	440491		
92527258006	**HGWA-3**	EPA 9320	440491		
92527258007	**HGWA-5**	EPA 9320	440491		
92527258008	**HGWA-6**	EPA 9320	440491		
92527258009	**HGWA-43D**	EPA 9320	440491		
92527258010	**MW-37D**	EPA 9320	440491		
92527258011	**HGWC-15**	EPA 9320	440490		
92527258012	**HGWC-14**	EPA 9320	440491		
92527258013	**HGWC-16**	EPA 9320	440491		
92527258014	**MW-22**	EPA 9320	440491		
92527258015	**MW-23D**	EPA 9320	440491		
92527258016	**HGWC-17**	EPA 9320	440491		
92527258017	**HGWC-18**	EPA 9320	440491		
92527258018	**MW-21D**	EPA 9320	440491		
92527258019	**MW-33**	EPA 9320	440491		
92527258020	**DUP-2**	EPA 9320	440493		
92527258021	**EB-2**	EPA 9320	440493		
92527258022	**FB-2**	EPA 9320	440493		

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: HAMMOND AP-2 SEMIANNUAL RADS
Pace Project No.: 92527258

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92527258023	**MW-35**	EPA 9320	442226		
92527258001	**HGWA-1**	Total Radium Calculation	442893		
92527258002	**HGWA-4**	Total Radium Calculation	442893		
92527258003	**HGWA-42D**	Total Radium Calculation	442893		
92527258004	**HGWA-44D**	Total Radium Calculation	442893		
92527258005	**HGWA-2**	Total Radium Calculation	442893		
92527258006	**HGWA-3**	Total Radium Calculation	442893		
92527258007	**HGWA-5**	Total Radium Calculation	443029		
92527258008	**HGWA-6**	Total Radium Calculation	443120		
92527258009	**HGWA-43D**	Total Radium Calculation	443120		
92527258010	**MW-37D**	Total Radium Calculation	443120		
92527258011	**HGWC-15**	Total Radium Calculation	442893		
92527258012	**HGWC-14**	Total Radium Calculation	443120		
92527258013	**HGWC-16**	Total Radium Calculation	443120		
92527258014	**MW-22**	Total Radium Calculation	443120		
92527258015	**MW-23D**	Total Radium Calculation	443120		
92527258016	**HGWC-17**	Total Radium Calculation	443120		
92527258017	**HGWC-18**	Total Radium Calculation	443120		
92527258018	**MW-21D**	Total Radium Calculation	443120		
92527258019	**MW-33**	Total Radium Calculation	443120		
92527258020	**DUP-2**	Total Radium Calculation	443123		
92527258021	**EB-2**	Total Radium Calculation	443123		
92527258022	**FB-2**	Total Radium Calculation	443123		
92527258023	**MW-35**	Total Radium Calculation	443249		

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CHAIN-OF-CUSTODY / Analytical Request Do

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WO# : 92527256

92527256

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-2 Semiannual	Pace Project Manager: Kevin Herring
Requested Due Date/TAT: 10 Day	Project Number: GW6561B	Pace Profile #: 10839-3

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ 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	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	App. III & IV Metals*	RAD 226/228	TDS	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	HGWA-1	WT	G	3/10/21	1610	–	–	17	5	2		3							X	X	X	X	N	pH = 6.95
2	HGWA-2	WT	G			–	–		5	2		3							X	X	X	X	N	pH =
3	HGWA-3	WT	G			–	–		5	2		3							X	X	X	X	N	pH =
4	HGWA-4	WT	G	3/10/21	1621	–	–	16	5	2		3							X	X	X	X	N	pH = 5.28
5	HGWA-5	WT	G			–	–		5	2		3							X	X	X	X	N	pH =
6	HGWA-6	WT	G			–	–		5	2		3							X	X	X	X	N	pH =
7	HGWA-42D	WT	G	3/10/21	1423	–	–	19	5	2		3							X	X	X	X	N	pH = 7.70
8	HGWA-43D	WT	G			–	–		5	2		3							X	X	X	X	N	pH =
9	HGWA-44D	WT	G	3/10/21	1430	–	–	19	5	2		3							X	X	X	X	N	pH = 7.92
10	HGWC-14	WT	G			–	–		5	2		3							X	X	X	X	N	pH =
11	HGWC-15	WT	G			–	–		5	2		3							X	X	X	X	N	pH =
12	HGWC-16	WT	G			–	–		5	2		3							X	X	X	X	N	pH =

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

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.	Monnie Hendricks									
*App. III & IV Metals = Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Pb, Li, Mo, Se, Tl	Vashish Tauloor	3/10/21	1730	Monnie Hendricks	3/10/21	1730				
One sample set submitted for HGWA-1/2/3/43D/44D but they will be reported for AP-1/2/3 SDGs	Monnie Hendricks	3/11/21	1040	UPS FedEx Pace	3.11.21	1040				
	UPS FedEx Pace	3/11/21	1555	MR Mull	3/11/21	1555	2.0	Y	N	Y

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER: Monnie Hendricks, Vashish Tauloor
SIGNATURE of SAMPLER: DATE Signed (MM/DD/YY): 03/10/21

*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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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-2 Semiannual	Pace Project Manager: Kevin Herring
Requested Due Date/TAT: 10 Day	Project Number: GW6581B	Pace Profile #: 10839-3

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☑ OTHER GA

Site Location STATE: GA

Requested Analysis Filtered (Y/N)

ITEM #	Section D Required Client Information: 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 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	Y/N	Analysis Test: Chloride, Fluoride, Sulfate	App. III & IV Metals*	RAD 228/228	TDS	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
	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																	N	N	N	N	N		
1	HGWA-1	WT	G			–	–		5	2		3							X	X	X	X	N	pH =
2	HGWA-2	WT	G	3/11/21	0959	–	–	16	5	2		3							X	X	X	X	N	pH = 5.86
3	HGWA-3	WT	G	3/11/21	1125	–	–	17	5	2		3							X	X	X	X	N	pH = 7.33
4	HGWA-4	WT	G			–	–		5	2		3							X	X	X	X	N	pH =
5	HGWA-5	WT	G	3/11/21	1130	–	–	15	5	2		3							X	X	X	X	N	pH = 6.98
6	HGWA-6	WT	G	3/11/21	1239	–	–	18	5	2		3							X	X	X	X	N	pH = 7.56
7	HGWA-42D	WT	G			–	–		5	2		3							X	X	X	X	N	pH =
8	HGWA-43D	WT	G	3/11/21	0957	–	–	16	5	2		3							X	X	X	X	N	pH = 7.46
9	HGWA-44D	WT	G			–	–		5	2		3							X	X	X	X	N	pH =
10	HGWC-14	WT	G			–	–		5	2		3							X	X	X	X	N	pH =
11	HGWC-15	WT	G			–	–		5	2		3							X	X	X	X	N	pH =
12	HGWC-16	WT	G			–	–		5	2		3							X	X	X	X	N	pH =

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.	Thomas Hessler / Geo	3/12/21	1310	Nikhil Thakare / GED	3/12/21	1310	
*App. III & IV Metals = Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Pb, Li, Mo, Se, Tl	Nikhil Thakare / GED	3/12/21	1343	[illegible] / Pace	3-12-21	1343	
One sample set submitted for HGWA-1/2/3/43D/44D but they will be reported for AP-1/2/3 SDGs	[illegible] / Pace	3.12.21	1639	[illegible]	3/12/21	1639	

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Thomas Hessler, Chad Russo, Nikhil Thakare

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 3/11/21

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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Page: 1 of 1

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-2 Semiannual	Pace Project Manager: Kevin Herring
Requested Due Date/TAT: 10 Day	Project Number: GW6581B	Pace Profile #: 10839-3

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	App. III & IV Metals*	RAD 226/228	TDS	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
																		Requested Analysis Filtered (Y/N)	N	N	N	N		
1	HGWC-17	WT	G			–	–		5	2		3							X	X	X	X	N	pH =
2	HGWC-18	WT	G			–	–		5	2		3							X	X	X	X	N	pH =
3	MW-21D	WT	G			–			5	2		3							X	X	X	X	N	pH =
4	MW-22	WT	G			–	–		5	2		3							X	X	X	X	N	pH =
5	MW-23D	WT	G			–	–		5	2		3							X	X	X	X	N	pH =
6	MW-33	WT	G			–	–		5	2		3							X	X	X	X	N	pH =
7	MW-35	WT	G			–	–		5	2		3							X	X	X	X	N	pH =
8	MW-37D	WT	G	3/1/21	1020	–	–	18	5	2		3							X	X	X	X	N	pH = 7.50
9	Dup-2	WT	G		–				5	2		3							X	X	X	X	N	
10	~~FB-2~~	WT	G			(CK)	–		5	2		3							X	X	X	X	N	
11	FB-2	WT	G			3/12/2021			5	2		3							X	X	X	X	N	
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.	[signature] /GCo	3/15/21	1145	[signature] /Pace	3/15/21	1145	
*App. III & IV Metals = Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Pb, Li, Mo, Se, Tl	[signature] /Pace	3/15/21	1195	[signature] /Pace	3/15/21	1200	
One sample set submitted for HGWA-1/2/3/43D/44D but they will be reported for AP-1/2/3 SDGs	[signature] /Pace	3/16/21	1959	Charles Hinds	3/15/21	1498	

SAMPLER NAME AND SIGNATURE					
PRINT Name of SAMPLER:	Yashish Taukoor				
SIGNATURE of SAMPLER:	[signature]	DATE Signed (MM/DD/YY):	3/12/21	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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Page: 1 of 1

Section A Required Client Information:

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

Section B Required Project Information:

Report To:	SCS Contacts
Copy To:	Geosyntec Contacts
Purchase Order No.:	
Project Name:	Plant Hammond AP-2 Semiannual
Project Number:	GW6581B

Section C Invoice Information:

Attention:	Southern Co.
Company Name:	
Address:	
Pace Quote Reference:	
Pace Project Manager:	Kevin Herring
Pace Profile #:	10839-3

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	Requested Analysis Filtered (Y/N): N	N	N	N	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
																			Chloride, Fluoride, Sulfate	App. III & IV Metals*	RAD 226/228	TDS		
1	HGWA-1	WT	G			--	--		5	2		3							X	X	X	X	N	pH =
2	HGWA-2	WT	G			--	--		5	2		3							X	X	X	X	N	pH =
3	HGWA-3	WT	G			--	--		5	2		3							X	X	X	X	N	pH =
4	HGWA-4	WT	G			--	--		5	2		3							X	X	X	X	N	pH =
5	HGWA-5	WT	G			--	--		5	2		3							X	X	X	X	N	pH =
6	HGWA-6	WT	G			--	--		5	2		3							X	X	X	X	N	pH =
7	HGWA-42D	WT	G			--	--		5	2		3							X	X	X	X	N	pH =
8	HGWA-43D	WT	G			--	--		5	2		3							X	X	X	X	N	pH =
9	HGWA-44D	WT	G			--	--		5	2		3							X	X	X	X	N	pH =
10	HGWC-14	WT	G			--	--		5	2		3							X	X	X	X	N	pH =
11	HGWC-15	WT	G	3/16/21	1524	--	--	17	5	2		3							X	X	X	X	N	pH = 6.08
12	HGWC-16	WT	G			--	--		5	2		3							X	X	X	X	N	pH =

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.	Thomas Heeder	3/17/21				
*App. III & IV Metals = Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Pb, Li, Mo, Se, Tl	Thomas Heeder	3/17/21	1310	Ryan Williams / Pace	3/17/21	1310
One sample set submitted for HGWA-1/2/3/43D/44D but they will be reported for AP-1/2/3 SDGs	Ryan Williams / Pace	3/17/21	1510	[illegible]	3/17/21	1510

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

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Thomas Heeder

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 3/16/21

*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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Section A — Required Client Information:

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

Section B — Required Project Information:

Report To:	SCS Contacts
Copy To:	Geosyntec Contacts
Purchase Order No.:	
Project Name:	Plant Hammond AP-2 Semiannual
Project Number:	GW6581B

Section C — Invoice Information:

Attention:	Southern Co.
Company Name:	
Address:	
Pace Quote Reference:	
Pace Project Manager:	Kevin Herring
Pace Profile #:	10839-3

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 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	App. III & IV Metals*	RAD 226/228	TDS	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
																		Y/N	N	N	N	N		
1	HGWA-1	WT	G			–	–		5	2		3							X	X	X	X	N	pH =
2	HGWA-2	WT	G			–	–		5	2		3							X	X	X	X	N	pH =
3	HGWA-3	WT	G			–	–		5	2		3							X	X	X	X	N	pH =
4	HGWA-4	WT	G			–	–		5	2		3							X	X	X	X	N	pH =
5	HGWA-5	WT	G			–	–		5	2		3							X	X	X	X	N	pH =
6	HGWA-6	WT	G			–	–		5	2		3							X	X	X	X	N	pH =
7	HGWA-42D	WT	G			–	–		5	2		3							X	X	X	X	N	pH =
8	HGWA-43D	WT	G			–	–		5	2		3							X	X	X	X	N	pH =
9	HGWA-44D	WT	G			–	–		5	2		3							X	X	X	X	N	pH =
10	HGWC-14	WT	G	3/17/21	1428	–	–		5	2		3							X	X	X	X	N	pH = 4.72
11	HGWC-15	WT	G			–	–		5	2		3							X	X	X	X	N	pH =
12	HGWC-16	WT	G	3/17/21	0929	–	–		5	2		3							X	X	X	X	N	pH = 7.19

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.	Thomas Hessler/Kiser	3/18/21	1317	Lynn Williams/Pace	3/18/21	1317
*App. III & IV Metals = Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Pb, Li, Mo, Se, Tl	Lynn Williams/Pace	3/19/21	1521	Charles Russo	3/19/21	1521
One sample set submitted for HGWA-1/2/3/43D/44D but they will be reported for AP-1/2/3 SDGs						

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: Thomas Hessler, Charles Russo

SIGNATURE of SAMPLER: DATE Signed (MM/DD/YY): 3/16/21

*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 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 AP-2 Semiannual
Project Number: GW6581B

Section C Invoice Information:
Attention: Southern Co.
Company Name:
Address:
Pace Quote Reference:
Pace Project Manager: Kevin Herring
Pace Profile #: 10839-3

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	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
																		Y/N	N N N N		
																		Chloride, Fluoride, Sulfate	App. III & IV Metals*	RAD 226/228	EDS	
1	HGWC-17	WT	G			–	–		5	2		3						X	X	X	X	N	pH =
2	HGWC-18	WT	G			–	–		5	2		3						X	X	X	X	N	pH =
3	MW-21D	WT	G			–	–		5	2		3						X	X	X	X	N	pH = 5.57
4	MW-22	WT	G	3/17/21	1000	–	–	15	5	2		3						X	X	X	X	N	pH = 6.86
5	MW-23D	WT	G	3/17/21	1149	–	–	18	5	2		3						X	X	X	X	N	pH =
6	MW-33	WT	G			–	–		5	2		3						X	X	X	X	N	pH =
7	MW-35	WT	G			–	–		5	2		3						X	X	X	X	N	pH =
8	MW-37D	WT	G			–	–		5	2		3						X	X	X	X	N	
9	Dup-2	WT	G		–	–	–		5	2		3						X	X	X	X	N	
10	EB-2	WT	G			–	–		5	2		3						X	X	X	X	N	
11	FB-2	WT	G			–	–		5	2		3						X	X	X	X	N	
12																							

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.	Thomas Hessler/Geosyntec	3/17/21	1354	Lyn Williams/Pace	3/18/21	1317
*App. III & IV Metals = Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Pb, Li, Mo, Se, Tl	Lyn Williams/Pace	3/18/21	1621	Charles Hicks	3/18/21	1521
One sample set submitted for HGWA-1/2/3/43D/44D but they will be reported for AP-1/2/3 SDGs						

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: Thomas Hessler
SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 3/18/21

*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: 1 of 1

Section A Required Client Information:

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

Section B Required Project Information:

Report To:	SCS Contacts
Copy To:	Geosyntec Contacts
Purchase Order No.:	
Project Name:	Plant Hammond AP-2 Semiannual
Project Number:	GW6581B

Section C Invoice Information:

Attention:	Southern Co.
Company Name:	
Address:	
Pace Quote Reference:	
Pace Project Manager:	Kevin Herring
Pace Profile #:	10839-3

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 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	App. III & IV Metals*	RAD 226/228	TDS	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
																			N	N	N	N		
1	HGWC-17	WT	G	3/18/21	1448	–	–	19	5	2		3							X	X	X	X	N	pH = 6.43
2	HGWC-18	WT	G	3/18/21	1001	–	–	16	5	2		3							X	X	X	X	N	pH = 4.54
3	MW-21D	WT	G	3/18/21	1208	–	–	18	5	2		3							X	X	X	X	N	pH = 6.95
4	MW-22	WT	G			–	–		5	2		3							X	X	X	X	N	pH =
5	~~MW-23D~~	~~WT~~	~~G~~						5	2		3							X	X	X	X	N	pH =
6	MW-33	WT	G	3/18/21	1640	–	–	19	5	2		3							X	X	X	X	N	pH = 6.27
7	~~MW-35~~	~~WT~~	~~G~~			–	–		5	2		3							X	X	X	X	N	pH =
8	~~MW-37D~~	~~WT~~	~~G~~			–	–		5	2		3							X	X	X	X	N	pH =
9	Dup-2	WT	G	3/18/21	–	–	–	19	5	2		3							X	X	X	X	N	
10	EB-2	WT	G	3/18/21	1250	–	–	19	5	2		3							X	X	X	X	N	
11	FB-2	WT	G	3/18/21	1530	–	–	19	5	2		3							X	X	X	X	N	
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.	Thomas Hassler/Geo	3/19/21	1340	Lyn Williams/Pace	3/19/21	1340				
*App. III & IV Metals = Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Pb, Li, Mo, Se, Tl	Lyn Williams/Pace	3/19/21	1541	[signature]/Pace	3/19/21	1541	1.1	Y	N	Y
One sample set submitted for HGWA-1/2/3/43D/44D but they will be repaired for AP-1/2/3 SDGs										

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Thomas Hassler, & Chad Russo

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 3/18/21

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

*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: 1 of 1

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-2 Semiannual	Pace Project Manager: Kevin Herring
Requested Due Date/TAT: 10 Day	Project Number: GW6581B	Pace Profile #: 10839-3

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

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	App. III & IV Metals*	RAD 226/228	TDS	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
																		Requested Analysis Filtered (Y/N)	N	N	N	N		
1	HGWC-17	WT	G			–	–		5	2		3							X	X	X	X	N	pH =
2	HGWC-18	WT	G			–	–		5	2		3							X	X	X	X	N	pH =
3	MW-21D	WT	G			–	–		5	2		3							X	X	X	X	N	pH =
4	MW-22	WT	G			–	–		5	2		3							X	X	X	X	N	pH =
5	MW-23D	WT	G			–	–		5	2		3							X	X	X	X	N	pH =
6	MW-33	WT	G			–	–		5	2		3							X	X	X	X	N	pH =
7	MW-35	WT	G	3/19/21	1746	–	–	16	5	2		3							X	X	X	X	N	pH = 4.89
8	MW-37D	WT	G			–	–		5	2		3							X	X	X	X	N	pH =
9	Dup-2	WT	G	–	–	–	–		5	2		3							X	X	X	X	N	
10	EB-2	WT	G			–	–		5	2		3							X	X	X	X	N	
11	FB-2	WT	G			–	–		5	2		3							X	X	X	X	N	
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 thorugh any wells not sampled, and note when the last sample for the event has been taken.	Thomas Russo / Geo	3/22/21	1540	Ilya Williams / Pace	3/22/21	1540				
*App. III & IV Metals = Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Pb, Li, Mo, Se, Tl	Ilya Williams / Pace	3/22/21	1642	Geo / Pace	3/22/21	1642	3.3	Y	N	Y
One sample set submitted for HGWA-1/2/3/43D/44D but they will be reported for AP-1/2/3 SDGs										

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Chad Russo

SIGNATURE of SAMPLER: [signature]

DATE Signed (MM/DD/YY): 3/19/21

*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.

Quality Control Sample Performance Assessment

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test:	Ra-226
Analyst:	CLA
Date:	3/26/2021
Worklist:	59450
Matrix:	DW

Method Blank Assessment	
MB Sample ID	2123469
MB concentration:	0.013
M/B Counting Uncertainty:	0.113
MB MDC:	0.309
MB Numerical Performance Indicator:	0.23
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	Y
	LCS59450	LCSD59450
Count Date:	3/29/2021	3/29/2021
Spike I.D.:	19-033	19-033
Decay Corrected Spike Concentration (pCi/mL):	24.039	24.039
Volume Used (mL):	0.10	0.10
Aliquot Volume (L, g, F):	0.505	0.504
Target Conc. (pCi/L, g, F):	4.763	4.773
Uncertainty (Calculated):	0.057	0.057
Result (pCi/L, g, F):	4.437	5.482
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.594	0.737
Numerical Performance Indicator:	-1.07	1.88
Percent Recovery:	93.15%	114.86%
Status vs Numerical Indicator:	N/A	N/A
Status vs Recovery:	Pass	Pass
Upper % Recovery Limits:	125%	125%
Lower % Recovery Limits:	75%	75%

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

Duplicate Sample Assessment		
Sample I.D.:	LCS59450	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	LCSD59450	
Sample Result (pCi/L, g, F):	4.437	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.594	
Sample Duplicate Result (pCi/L, g, F):	5.482	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.737	
Are sample and/or duplicete results below RL?	NO	
Duplicate Numerical Performance Indicator:	-2.166	92527258001
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	20.88%	92527258001DUP
Duplicate Status vs Numerical Indicator:	N/A	
Duplicate Status vs RPD:	Pass	
% RPD Limit:	25%	

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

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

Comments:

iAm 3/29/21

Quality Control Sample Performance Assessment

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Test:	Ra-226
Analyst:	CLA
Date:	3/26/2021
Worklist:	59450
Matrix:	DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	2123469
MB concentration:	0.013
M/B Counting Uncertainty:	0.113
MB MDC:	0.309
MB Numerical Performance Indicator:	0.23
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	N
	LCS59450	LCSD59450
Count Date:	3/29/2021	
Spike I.D.:	19-033	
Decay Corrected Spike Concentration (pCi/mL):	24.039	
Volume Used (mL):	0.10	
Aliquot Volume (L, g, F):	0.505	
Target Conc. (pCi/L, g, F):	4.763	
Uncertainty (Calculated):	0.057	
Result (pCi/L, g, F):	4.437	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.594	
Numerical Performance Indicator:	-1.07	
Percent Recovery:	93.15%	
Status vs Numerical Indicator:	N/A	
Status vs Recovery:	Pass	
Upper % Recovery Limits:	125%	
Lower % Recovery Limits:	75%	

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

Duplicate Sample Assessment		
Sample I.D.:	92527258001	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	92527258001DUP	
Sample Result (pCi/L, g, F):	-0.074	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.070	
Sample Duplicate Result (pCi/L, g, F):	0.120	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.145	
Are sample and/or duplicate results below RL?	See Below ##	
Duplicate Numerical Performance Indicator:	-2.367	92527258001
Duplicate RPD:	852.72%	92527258001DUP
Duplicate Status vs Numerical Indicator:	N/A	
Duplicate Status vs RPD:	Fail***	
% RPD Limit:	25%	

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

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

Comments:

~~***Batch must be re-prepped due to unacceptable precision.~~ N/A LAM 3/29/21

CLA 3/29/21

LAM 3/29/21

Quality Control Sample Performance Assessment

Pace Analytical™ www.pacelabs.com

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test:	Ra-226
Analyst:	LAL
Date:	4/5/2021
Worklist:	59560
Matrix:	DW

Method Blank Assessment	
MB Sample ID	2126661
MB concentration:	0.090
M/B Counting Uncertainty:	0.196
MB MDC:	0.458
MB Numerical Performance Indicator:	0.90
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	N
	LCS59560	LCSD59560
Count Date:	4/5/2021	
Spike I.D.:	19-033	
Decay Corrected Spike Concentration (pCi/mL):	24.039	
Volume Used (mL):	0.10	
Aliquot Volume (L, g, F):	0.504	
Target Conc. (pCi/L, g, F):	4.771	
Uncertainty (Calculated):	0.057	
Result (pCi/L, g, F):	5.065	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.277	
Numerical Performance Indicator:	2.04	
Percent Recovery:	106.17%	
Status vs Numerical Indicator:	N/A	
Status vs Recovery:	Pass	
Upper % Recovery Limits:	125%	
Lower % Recovery Limits:	75%	

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

Duplicate Sample Assessment		
Sample I.D.:	92527258011	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	92527258011DUP	
Sample Result (pCi/L, g, F):	-0.015	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.075	
Sample Duplicate Result (pCi/L, g, F):	0.050	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.058	
Are sample and/or duplicate results below RL?	See Below ##	
Duplicate Numerical Performance Indicator:	-1.338	92527258011
Duplicate RPD:	375.86%	92527258011DUP
Duplicate Status vs Numerical Indicator:	N/A	
Duplicate Status vs RPD:	Fail***	
% RPD Limit:	25%	

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

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

Comments:

~~***Batch must be re-prepped due to unacceptable precision.~~ N/A LAM 4/12/21

4/12/21

LAM 4/12/21

Quality Control Sample Performance Assessment

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Test:	Ra-226
Analyst:	LAL
Date:	4/5/2021
Worklist:	59560
Matrix:	DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	2126661
MB concentration:	0.090
M/B Counting Uncertainty:	0.196
MB MDC:	0.458
MB Numerical Performance Indicator:	0.90
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	Y
	LCS59560	LCSD59560
Count Date:	4/5/2021	4/5/2021
Spike I.D.:	19-033	19-033
Decay Corrected Spike Concentration (pCi/mL):	24.039	24.039
Volume Used (mL):	0.10	0.10
Aliquot Volume (L, g, F):	0.504	0.518
Target Conc. (pCi/L, g, F):	4.771	4.641
Uncertainty (Calculated):	0.057	0.056
Result (pCi/L, g, F):	5.065	4.810
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.277	0.261
Numerical Performance Indicator:	2.04	1.24
Percent Recovery:	106.17%	103.65%
Status vs Numerical Indicator:	N/A	N/A
Status vs Recovery:	Pass	Pass
Upper % Recovery Limits:	125%	125%
Lower % Recovery Limits:	75%	75%

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

Duplicate Sample Assessment		
Sample I.D.:	LCS59560	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	LCSD59560	
Sample Result (pCi/L, g, F):	5.065	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.277	
Sample Duplicate Result (pCi/L, g, F):	4.810	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.261	
Are sample and/or duplicate results below RL?	NO	
Duplicate Numerical Performance Indicator:	1.314	92527258011
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	2.40%	92527258011DUP
Duplicate Status vs Numerical Indicator:	N/A	
Duplicate Status vs RPD:	Pass	
% RPD Limit:	25%	

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

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

Comments:

4/6/21

LAM 4/6/21

Quality Control Sample Performance Assessment

Test: Ra-226
Analyst: LAL
Date: 4/1/2021
Worklist: 59561
Matrix: DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	2126663
MB concentration:	0.102
M/B Counting Uncertainty:	0.172
MB MDC:	0.390
MB Numerical Performanca Indicator:	1.16
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	Y
	LCS59561	LCSD59561
Count Date:	4/5/2021	4/5/2021
Spike I.D.:	19-033	19-033
Decay Corrected Spike Concentration (pCi/mL):	24.039	24.039
Volume Used (mL):	0.10	0.10
Aliquot Volume (L, g, F):	0.515	0.502
Target Conc. (pCi/L, g, F):	4.664	4.785
Uncertainty (Calculated):	0.056	0.057
Result (pCi/L, g, F):	4.047	4.762
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.578	0.617
Numerical Performance Indicator:	-2.08	-0.07
Percent Recovery:	86.77%	99.51%
Status vs Numerical Indicator:	N/A	N/A
Status vs Recovery:	Pass	Pass
Upper % Recovery Limits:	125%	125%
Lower % Recovery Limits:	75%	75%

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

Duplicate Sample Assessment		
Sample I.D.:	LCS59561	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	LCSD59561	
Sample Result (pCi/L, g, F):	4.047	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.578	
Sample Duplicate Result (pCi/L, g, F):	4.762	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.617	
Are sample and/or duplicate results below RL?	NO	
Duplicate Numerical Performance Indicator:	-1.655	
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	13.67%	
Duplicate Status vs Numerical Indicator:	N/A	
Duplicate Status vs RPD:	Pass	
% RPD Limit:	25%	

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

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

Comments:

LAM 4/5/21

Quality Control Sample Performance Assessment

Pace Analytical
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Test:	Ra-226
Analyst:	CLA
Date:	4/12/2021
Worklist:	59709
Matrix:	DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	2132285
MB concentration:	0.037
M/B Counting Uncertainty:	0.210
MB MDC:	0.420
MB Numerical Performance Indicator:	0.34
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	N
	LCS59709	LCSD59709
Count Date:	4/13/2021	
Spike I.D.:	19-033	
Decey Corrected Spike Concentration (pCi/mL):	24.038	
Volume Used (mL):	0.10	
Aliquot Volume (L, g, F):	0.506	
Target Conc. (pCi/L, g, F):	4.752	
Uncertainty (Calculated):	0.057	
Result (pCi/L, g, F):	4.586	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.824	
Numerical Performance Indicator:	-0.39	
Percent Recovery:	96.50%	
Status vs Numerical Indicator:	N/A	
Status vs Recovery:	Pass	
Upper % Recovery Limits:	125%	
Lower % Recovery Limits:	75%	

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

Duplicate Sample Assessment		
Sample I.D.:	92529896015	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	92529896015DUP	
Sample Result (pCi/L, g, F):	0.581	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.304	
Sample Duplicate Result (pCi/L, g, F):	0.779	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.400	
Are sample and/or duplicate results below RL?	See Below ##	
Duplicate Numerical Performance Indicator:	-0.771	92529896015
Duplicate RPD:	~~29.07%~~ OK	92529896015DUP
Duplicate Status vs Numerical Indicator:	N/A	
Duplicate Status vs RPD:	Fail***	
% RPD Limit:	25%	

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

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

Comments:

~~***Batch must be re-prepped due to unacceptable precision.~~ N/A LAM 4/13/21

OK 4/13/21

LAM 4/13/21

Quality Control Sample Performance Assessment

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Test:	Ra-226
Analyst:	CLA
Date:	4/12/2021
Worklist:	59709
Matrix:	DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	2132285
MB concentration:	0.037
M/B Counting Uncertainty:	0.210
MB MDC:	0.420
MB Numerical Performance Indicator:	0.34
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	Y
	LCS59709	LCSD59709
Count Date:	4/13/2021	4/13/2021
Spike I.D.:	19-033	19-033
Decay Corrected Spike Concentration (pCi/mL):	24.038	24.038
Volume Used (mL):	0.10	0.10
Aliquot Volume (L, g, F):	0.506	0.501
Target Conc. (pCi/L, g, F):	4.752	4.802
Uncertainty (Calculated):	0.057	0.058
Result (pCi/L, g, F):	4.586	4.997
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.824	0.806
Numerical Performance Indicator:	-0.39	0.47
Percent Recovery:	96.50%	104.05%
Status vs Numerical Indicator:	N/A	N/A
Status vs Recovery:	Pass	Pass
Upper % Recovery Limits:	125%	125%
Lower % Recovery Limits:	75%	75%

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

Duplicate Sample Assessment		
Sample I.D.:	LCS59709	Enter Duplicate
Duplicate Sample I.D.	LCSD59709	sample IDs if
Sample Result (pCi/L, g, F):	4.586	other than
Sample Result Counting Uncertainty (pCi/L, g, F):	0.824	LCS/LCSD in
Sample Duplicate Result (pCi/L, g, F):	4.997	the space below.
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.806	
Are sample and/or duplicate results below RL?	NO	
Duplicate Numerical Performance Indicator:	-0.699	92529896015
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	7.53%	92529896015DUP
Duplicate Status vs Numerical Indicator:	N/A	
Duplicate Status vs RPD:	Pass	
% RPD Limit:	25%	

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

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

Comments:

CLA 4/13/21

LAM 4/13/21

Quality Control Sample Performance Assessment

Pace Analytical
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Test:	Ra-228
Analyst:	VAL
Date:	4/5/2021
Worklist:	59551
Matrix:	WT

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	2126643
MB concentration:	0.738
MB 2 Sigma CSU:	0.321
MB MDC:	0.495
MB Numerical Performance Indicator:	4.51
MB Status vs Numerical Indicator:	Fail*
MB Status vs. MDC:	See Comment*

Laboratory Control Sample Assessment	LCSD (Y or N)?	Y
	LCS59551	LCSD59551
Count Date:	4/9/2021	4/9/2021
Spike I.D.:	21-003	21-003
Decay Corrected Spike Concentration (pCi/mL):	38.142	38.142
Volume Used (mL):	0.10	0.10
Aliquot Volume (L, g, F):	0.804	0.812
Target Conc. (pCi/L, g, F):	4.743	4.697
Uncertainty (Calculated):	0.232	0.230
Result (pCi/L, g, F):	5.331	5.382
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	1.169	1.184
Numerical Performance Indicator:	0.97	1.11
Percent Recovery:	112.40%	114.58%
Status vs Numerical Indicator:	N/A	N/A
Status vs Recovery:	Pass	Pass
Upper % Recovery Limits:	135%	135%
Lower % Recovery Limits:	60%	60%

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

Duplicate Sample Assessment		
Sample I.D.:	LCS59551	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	LCSD59551	
Sample Result (pCi/L, g, F):	5.331	
Sample Result 2 Sigma CSU (pCi/L, g, F):	1.169	
Sample Duplicate Result (pCi/L, g, F):	5.382	
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	1.184	
Are sample and/or duplicate results below RL?	NO	
Duplicate Numerical Performance Indicator:	-0.060	
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	1.92%	
Duplicate Status vs Numerical Indicator:	Pass	
Duplicate Status vs RPD:	Pass	
% RPD Limit:	36%	

Matrix Spike/Matrix Spike Duplicate Sample Assessment		
Sample I.D.		
Sample MS I.D.		
Sample MSD I.D.		
Sample Matrix Spike Result:		
Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):		
Sample Matrix Spike Duplicate Result:		
Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):		
Duplicate Numerical Performance Indicator:		
(Based on the Percent Recoveries) MS/ MSD Duplicate RPD:		
MS/ MSD Duplicate Status vs Numerical Indicator:		
MS/ MSD Duplicate Status vs RPD:		
% RPD Limit:		

Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:
*The method blank result is below the reporting limit for this analysis and is acceptable. ✓

4/12/21

4/12/2021

Quality Control Sample Performance Assessment

Pace Analytical
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Test:	Ra-228
Analyst:	VAL
Date:	4/6/2021
Worklist:	59552
Matrix:	WT

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	2126646
MB concentration:	0.826
M/B 2 Sigma CSU:	0.447
MB MDC:	0.791
MB Numerical Performance Indicator:	3.62
MB Status vs Numerical Indicator:	Fail*
MB Status vs. MDC:	See Comment*

Laboratory Control Sample Assessment	LCSD (Y or N)?	Y
	LCS59552	LCSD59552
Count Date:	4/9/2021	4/9/2021
Spike I.D.:	21-003	21-003
Decay Corrected Spike Concentration (pCi/mL):	38.140	38.140
Volume Used (mL):	0.10	0.10
Aliquot Volume (L, g, F):	0.803	0.815
Target Conc. (pCi/L, g, F):	4.752	4.682
Uncertainty (Calculated):	0.233	0.229
Result (pCi/L, g, F):	4.576	4.583
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	1.088	1.068
Numerical Performance Indicator:	-0.31	-0.18
Percent Recovery:	96.30%	97.88%
Status vs Numerical Indicator:	N/A	N/A
Status vs Recovery:	Pass	Pass
Upper % Recovery Limits:	135%	135%
Lower % Recovery Limits:	60%	60%

Sample Matrix Spike Control Assessment	MS/MSD 1	MS/MSD 2
Sample Collection Date:		
Sample I.D.		
Sample MS I.D.		
Sample MSD I.D.		
Spike I.D.:		
MS/MSD Decay Corrected Spike Concentration (pCi/mL):		
Spike Volume Used in MS (mL):		
Spike Volume Used in MSD (mL):		
MS Aliquot (L, g, F):		
MS Target Conc.(pCi/L, g, F):		
MSD Aliquot (L, g, F):		
MSD Target Conc. (pCi/L, g, F):		
MS Spike Uncertainty (calculated):		
MSD Spike Uncertainty (calculated):		
Sample Result:		
Sample Result 2 Sigma CSU (pCi/L, g, F):		
Sample Matrix Spike Result:		
Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):		
Sample Matrix Spike Duplicate Result:		
Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):		
MS Numerical Performance Indicator:		
MSD Numerical Performance Indicator:		
MS Percent Recovery:		
MSD Percent Recovery:		
MS Status vs Numerical Indicator:		
MSD Status vs Numerical Indicator:		
MS Status vs Recovery:		
MSD Status vs Recovery:		
MS/MSD Upper % Recovery Limits:		
MS/MSD Lower % Recovery Limits:		

Duplicate Sample Assessment		
Sample I.D.:	LCS59552	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	LCSD59552	
Sample Result (pCi/L, g, F):	4.576	
Sample Result 2 Sigma CSU (pCi/L, g, F):	1.088	
Sample Duplicate Result (pCi/L, g, F):	4.583	
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	1.068	
Are sample and/or duplicate results below RL?	NO	
Duplicate Numerical Performance Indicator:	-0.008	
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	1.62%	
Duplicate Status vs Numerical Indicator:	Pass	
Duplicate Status vs RPD:	Pass	
% RPD Limit:	36%	

Matrix Spike/Matrix Spike Duplicate Sample Assessment		
Sample I.D.		
Sample MS I.D.		
Sample MSD I.D.		
Sample Matrix Spike Result:		
Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):		
Sample Matrix Spike Duplicate Result:		
Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):		
Duplicate Numerical Performance Indicator:		
(Based on the Percent Recoveries) MS/ MSD Duplicate RPD:		
MS/ MSD Duplicate Status vs Numerical Indicator:		
MS/ MSD Duplicate Status vs RPD:		
% RPD Limit:		

Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:
*The method blank result is below the reporting limit for this analysis and is acceptable.

4/12/21

Quality Control Sample Performance Assessment

Pace Analytical
www.pacelabs.com

Test:	Ra-228
Analyst:	VAL
Date:	4/6/2021
Worklist:	59554
Matrix:	WT

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	2126652
MB concentration:	0.217
MB 2 Sigma CSU:	0.303
MB MDC:	0.649
MB Numerical Performance Indicator:	1.40
MB Status vs Numerical Indicator:	Pass
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	y
	LCS59554	LCSD59554
Count Date:	4/12/2021	4/12/2021
Spike I.D.:	21-003	21-003
Decay Corrected Spike Concentration (pCi/mL):	38.104	38.103
Volume Used (mL):	0.10	0.10
Aliquot Volume (L, g, F):	0.815	0.823
Target Conc. (pCi/L, g, F):	4.675	4.631
Uncertainty (Calculated):	0.229	0.227
Result (pCi/L, g, F):	5.932	4.143
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	1.319	0.989
Numerical Performance Indicator:	1.84	-0.94
Percent Recovery:	126.87%	89.47%
Status vs Numerical Indicator:	N/A	N/A
Status vs Recovery:	Pass	Pass
Upper % Recovery Limits:	135%	135%
Lower % Recovery Limits:	60%	60%

Sample Matrix Spike Control Assessment	MS/MSD 1	MS/MSD 2
Sample Collection Date:		
Sample I.D.		
Sample MS I.D.		
Sample MSD I.D.		
Spike I.D.:		
MS/MSD Decay Corrected Spike Concentration (pCi/mL):		
Spike Volume Used in MS (mL):		
Spike Volume Used in MSD (mL):		
MS Aliquot (L, g, F):		
MS Target Conc.(pCi/L, g, F):		
MSD Aliquot (L, g, F):		
MSD Target Conc. (pCi/L, g, F):		
MS Spike Uncertainty (calculated):		
MSD Spike Uncertainty (calculated):		
Sample Result:		
Sample Result 2 Sigma CSU (pCi/L, g, F):		
Sample Matrix Spike Result:		
Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):		
Sample Matrix Spike Duplicate Result:		
Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):		
MS Numerical Performance Indicator:		
MSD Numerical Performance Indicator:		
MS Percent Recovery:		
MSD Percent Recovery:		
MS Status vs Numerical Indicator:		
MSD Status vs Numerical Indicator:		
MS Status vs Recovery:		
MSD Status vs Recovery:		
MS/MSD Upper % Recovery Limits:		
MS/MSD Lower % Recovery Limits:		

Duplicate Sample Assessment		
Sample I.D.:	LCS59554	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicata Sample I.D.	LCSD59554	
Sample Result (pCi/L, g, F):	5.932	
Sample Result 2 Sigma CSU (pCi/L, g, F):	1.319	
Sample Duplicate Result (pCi/L, g, F):	4.143	
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	0.989	
Are sample and/or duplicate results below RL?	NO	
Duplicate Numerical Performance Indicator:	2.127	
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	34.58%	
Duplicate Status vs Numerical Indicator:	Warning	
Duplicate Status vs RPD:	Pass	
% RPD Limit:	36%	

Matrix Spike/Matrix Spike Duplicate Sample Assessment		
Sample I.D.		
Sample MS I.D.		
Sample MSD I.D.		
Sample Matrix Spike Result:		
Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):		
Sample Matrix Spike Duplicate Result:		
Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):		
Duplicate Numerical Performance Indicator:		
(Based on the Percent Recoveries) MS/ MSD Duplicate RPD:		
MS/ MSD Duplicate Status vs Numerical Indicator:		
MS/ MSD Duplicate Status vs RPD:		
% RPD Limit:		

Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

4/13/21

Quality Control Sample Performance Assessment

Pace Analytical
www.pacelabs.com

Test:	Ra-228
Analyst:	VAL
Date:	4/8/2021
Worklist:	59783
Matrix:	WT

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	2134502
MB concentration:	0.347
M/B 2 Sigma CSU:	0.339
MB MDC:	0.697
MB Numerical Performance Indicator:	2.00
MB Status vs Numerical Indicator:	Warning
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	Y
	LCS59783	LCSD59783
Count Date:	4/13/2021	4/13/2021
Spike I.D.:	21-003	21-003
Decay Corrected Spike Concentration (pCi/mL):	38.091	38.091
Volume Used (mL):	0.10	0.10
Aliquot Volume (L, g, F):	0.814	0.810
Target Conc. (pCi/L, g, F):	4.680	4.705
Uncertainty (Calculated):	0.229	0.231
Result (pCi/L, g, F):	4.309	3.272
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	0.978	0.808
Numerical Performance Indicator:	-0.72	-3.34
Percent Recovery:	92.09%	69.55%
Status vs Numerical Indicator:	N/A	N/A
Status vs Recovery:	Pass	Pass
Upper % Recovery Limits:	135%	135%
Lower % Recovery Limits:	60%	60%

Sample Matrix Spike Control Assessment	MS/MSD 1	MS/MSD 2
Sample Collection Date:	3/15/2021	
Sample I.D.	30413775001	
Sample MS I.D.	30413775001MS	
Sample MSD I.D.		
Spike I.D.:	21-003	
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	38.456	
Spike Volume Used in MS (mL):	0.20	
Spike Volume Used in MSD (mL):		
MS Aliquot (L, g, F):	0.808	
MS Target Conc.(pCi/L, g, F):	9.516	
MSD Aliquot (L, g, F):		
MSD Target Conc. (pCi/L, g, F):		
MS Spike Uncertainty (calculated):	0.466	
MSD Spike Uncertainty (calculated):		
Sample Result:	0.445	
Sample Result 2 Sigma CSU (pCi/L, g, F):	0.345	
Sample Matrix Spike Result:	10.659	
Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):	2.113	
Sample Matrix Spike Duplicate Result:		
Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):		
MS Numerical Performance Indicator:	0.624	
MSD Numerical Performance Indicator:		
MS Percent Recovery:	107.33%	
MSD Percent Recovery:		
MS Status vs Numerical Indicator:	Pass	
MSD Status vs Numerical Indicator:		
MS Status vs Recovery:	Pass	
MSD Status vs Recovery:		
MS/MSD Upper % Recovery Limits:	135%	
MS/MSD Lower % Recovery Limits:	60%	

Duplicate Sample Assessment		
Sample I.D.:	LCS59783	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	LCSD59783	
Sample Result (pCi/L, g, F):	4.309	
Sample Result 2 Sigma CSU (pCi/L, g, F):	0.978	
Sample Duplicate Result (pCi/L, g, F):	3.272	
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	0.808	
Are sample and/or duplicate results below RL?	NO	
Duplicate Numerical Performance Indicator:	1.602	
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	27.88%	
Duplicate Status vs Numerical Indicator:	Pass	
Duplicate Status vs RPD:	Pass	
% RPD Limit:	36%	

Matrix Spike/Matrix Spike Duplicate Sample Assessment		
Sample I.D.		
Sample MS I.D.		
Sample MSD I.D.		
Sample Matrix Spike Result:		
Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):		
Sample Matrix Spike Duplicate Result:		
Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):		
Duplicate Numerical Performance Indicator:		
(Based on the Percent Recoveries) MS/ MSD Duplicate RPD:		
MS/ MSD Duplicate Status vs Numerical Indicator:		
MS/ MSD Duplicate Status vs RPD:		
% RPD Limit:		

Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

4/14/21

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

March 16, 2021

Kelley Sharpe
ARCADIS - Atlanta
2839 Paces Ferry Rd
STE 900
Atlanta, GA 30339

RE: Project: Plant Hammond-CCR Ash Pond
Pace Project No.: 92526544

Dear Kelley Sharpe:

Enclosed are the analytical results for sample(s) received by the laboratory on March 09, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Asheville
- Pace Analytical Services - Peachtree Corners, GA

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Maiya Parks
maiya.parks@pacelabs.com
(770)734-4200
Project Manager

Enclosures

cc: Ben Hodges, Georgia Power
Warren Johnson, ARCADIS - Atlanta

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

CERTIFICATIONS

Project: Plant Hammond-CCR Ash Pond
Pace Project No.: 92526544

Pace Analytical Services Asheville
2225 Riverside Drive, Asheville, NC 28804
Florida/NELAP Certification #: E87648
North Carolina Drinking Water Certification #: 37712
North Carolina Wastewater Certification #: 40
South Carolina Certification #: 99030001
Virginia/VELAP Certification #: 460222

Pace Analytical Services Peachtree Corners
110 Technology Pkwy, Peachtree Corners, GA 30092
Florida DOH Certification #: E87315
Georgia DW Inorganics Certification #: 812
North Carolina Certification #: 381
South Carolina Certification #: 98011001

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE SUMMARY

Project: Plant Hammond-CCR Ash Pond
Pace Project No.: 92526544

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92526544001	**AP2-Up**	Water	03/08/21 17:35	03/09/21 15:44
92526544002	**AP2-Mid**	Water	03/08/21 17:10	03/09/21 15:44
92526544003	**AP2-Down**	Water	03/08/21 14:10	03/09/21 15:44

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SAMPLE ANALYTE COUNT

Project: Plant Hammond-CCR Ash Pond
Pace Project No.: 92526544

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92526544001	**AP2-Up**	EPA 6010D	KH	4	PASI-GA
		EPA 6020B	CW1	3	PASI-GA
		SM 2450C-2011	ALW	1	PASI-GA
		EPA 9040C	AW1	1	PASI-GA
		SM 2320B-2011	ECH	3	PASI-A
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
92526544002	**AP2-Mid**	EPA 6010D	KH	4	PASI-GA
		EPA 6020B	CW1	3	PASI-GA
		SM 2450C-2011	ALW	1	PASI-GA
		EPA 9040C	AW1	1	PASI-GA
		SM 2320B-2011	ECH	3	PASI-A
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
92526544003	**AP2-Down**	EPA 6010D	KH	4	PASI-GA
		EPA 6020B	CW1	3	PASI-GA
		SM 2450C-2011	ALW	1	PASI-GA
		EPA 9040C	AW1	1	PASI-GA
		SM 2320B-2011	ECH	3	PASI-A
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A

PASI-A = Pace Analytical Services - Asheville
PASI-GA = Pace Analytical Services - Peachtree Corners, GA

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant Hammond-CCR Ash Pond
Pace Project No.: 92526544

Sample: AP2-Up **Lab ID: 92526544001** Collected: 03/08/21 17:35 Received: 03/09/21 15:44 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA							
Potassium	**0.65**	mg/L	0.20	1	03/11/21 10:50	03/12/21 04:55	7440-09-7	
Sodium	**1.8**	mg/L	1.0	1	03/11/21 10:50	03/12/21 04:55	7440-23-5	
Calcium	**25.1**	mg/L	1.0	1	03/11/21 10:50	03/12/21 04:55	7440-70-2	
Magnesium	**2.6**	mg/L	0.050	1	03/11/21 10:50	03/12/21 04:55	7439-95-4	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA							
Boron	ND	mg/L	0.040	1	03/11/21 12:04	03/11/21 17:29	7440-42-8	
Cobalt	ND	mg/L	0.0050	1	03/11/21 12:04	03/11/21 17:29	7440-48-4	
Molybdenum	ND	mg/L	0.010	1	03/11/21 12:04	03/11/21 17:29	7439-98-7	
2540C Total Dissolved Solids	Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA							
Total Dissolved Solids	**68.0**	mg/L	10.0	1		03/10/21 17:23		
9040 pH	Analytical Method: EPA 9040C Pace Analytical Services - Peachtree Corners, GA							
pH at 25 Degrees C	**7.4**	Std. Units	0.10	1		03/11/21 22:46		H3,H6
2320B Alkalinity	Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville							
Alkalinity,Bicarbonate (CaCO3)	**68.3**	mg/L	5.0	1		03/16/21 01:58		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	1		03/16/21 01:58		
Alkalinity, Total as CaCO3	**68.3**	mg/L	5.0	1		03/16/21 01:58		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville							
Chloride	**1.1**	mg/L	1.0	1		03/12/21 01:19	16887-00-6	
Fluoride	ND	mg/L	0.10	1		03/12/21 01:19	16984-48-8	
Sulfate	**5.6**	mg/L	1.0	1		03/12/21 01:19	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant Hammond-CCR Ash Pond
Pace Project No.: 92526544

Sample: AP2-Mid **Lab ID: 92526544002** Collected: 03/08/21 17:10 Received: 03/09/21 15:44 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA							
Potassium	**0.73**	mg/L	0.20	1	03/11/21 10:50	03/12/21 05:00	7440-09-7	
Sodium	**1.9**	mg/L	1.0	1	03/11/21 10:50	03/12/21 05:00	7440-23-5	
Calcium	**26.3**	mg/L	1.0	1	03/11/21 10:50	03/12/21 05:00	7440-70-2	
Magnesium	**2.8**	mg/L	0.050	1	03/11/21 10:50	03/12/21 05:00	7439-95-4	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA							
Boron	**0.049**	mg/L	0.040	1	03/11/21 12:04	03/11/21 17:35	7440-42-8	
Cobalt	ND	mg/L	0.0050	1	03/11/21 12:04	03/11/21 17:35	7440-48-4	
Molybdenum	ND	mg/L	0.010	1	03/11/21 12:04	03/11/21 17:35	7439-98-7	
2540C Total Dissolved Solids	Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA							
Total Dissolved Solids	**94.0**	mg/L	10.0	1		03/10/21 17:24		
9040 pH	Analytical Method: EPA 9040C Pace Analytical Services - Peachtree Corners, GA							
pH at 25 Degrees C	**7.5**	Std. Units	0.10	1		03/11/21 22:40		H3,H6
2320B Alkalinity	Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville							
Alkalinity,Bicarbonate (CaCO3)	**66.3**	mg/L	5.0	1		03/16/21 02:28		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	1		03/16/21 02:28		
Alkalinity, Total as CaCO3	**66.3**	mg/L	5.0	1		03/16/21 02:28		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville							
Chloride	**2.0**	mg/L	1.0	1		03/12/21 01:34	16887-00-6	
Fluoride	ND	mg/L	0.10	1		03/12/21 01:34	16984-48-8	
Sulfate	**10.8**	mg/L	1.0	1		03/12/21 01:34	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant Hammond-CCR Ash Pond
Pace Project No.: 92526544

Sample: AP2-Down **Lab ID: 92526544003** Collected: 03/08/21 14:10 Received: 03/09/21 15:44 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA							
Potassium	**0.66**	mg/L	0.20	1	03/11/21 10:50	03/12/21 05:05	7440-09-7	
Sodium	**1.9**	mg/L	1.0	1	03/11/21 10:50	03/12/21 05:05	7440-23-5	
Calcium	**25.4**	mg/L	1.0	1	03/11/21 10:50	03/12/21 05:05	7440-70-2	
Magnesium	**2.8**	mg/L	0.050	1	03/11/21 10:50	03/12/21 05:05	7439-95-4	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA							
Boron	**0.044**	mg/L	0.040	1	03/11/21 12:04	03/11/21 18:10	7440-42-8	
Cobalt	ND	mg/L	0.0050	1	03/11/21 12:04	03/11/21 18:10	7440-48-4	
Molybdenum	ND	mg/L	0.010	1	03/11/21 12:04	03/11/21 18:10	7439-98-7	
2540C Total Dissolved Solids	Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA							
Total Dissolved Solids	**81.0**	mg/L	10.0	1		03/10/21 17:24		
9040 pH	Analytical Method: EPA 9040C Pace Analytical Services - Peachtree Corners, GA							
pH at 25 Degrees C	**7.5**	Std. Units	0.10	1		03/11/21 22:00		H3,H6
2320B Alkalinity	Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville							
Alkalinity,Bicarbonate (CaCO3)	**65.0**	mg/L	5.0	1		03/16/21 02:38		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	1		03/16/21 02:38		
Alkalinity, Total as CaCO3	**65.0**	mg/L	5.0	1		03/16/21 02:38		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville							
Chloride	**1.9**	mg/L	1.0	1		03/12/21 01:49	16887-00-6	
Fluoride	ND	mg/L	0.10	1		03/12/21 01:49	16984-48-8	
Sulfate	**9.8**	mg/L	1.0	1		03/12/21 01:49	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Hammond-CCR Ash Pond
Pace Project No.: 92526544

QC Batch: 605887
QC Batch Method: EPA 3010A
Analysis Method: EPA 6010D
Analysis Description: 6010D ATL
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92526544001, 92526544002, 92526544003

METHOD BLANK: 3191972 Matrix: Water
Associated Lab Samples: 92526544001, 92526544002, 92526544003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	03/12/21 04:06	
Magnesium	mg/L	ND	0.050	03/12/21 04:06	
Potassium	mg/L	ND	0.20	03/12/21 04:06	
Sodium	mg/L	ND	1.0	03/12/21 04:06	

LABORATORY CONTROL SAMPLE: 3191973

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	mg/L	1	1.0	103	80-120	
Magnesium	mg/L	1	1.1	106	80-120	
Potassium	mg/L	1	1.1	115	80-120	
Sodium	mg/L	1	1.1	106	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3191974 3191975

Parameter	Units	92526541002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Calcium	mg/L	16.3	1	1	17.0	17.1	67	74	75-125	0	20	M1
Magnesium	mg/L	3.3	1	1	4.3	4.2	100	94	75-125	1	20	
Potassium	mg/L	0.74	1	1	1.9	1.8	113	107	75-125	4	20	
Sodium	mg/L	1.8	1	1	2.8	2.8	99	98	75-125	0	20	

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-CCR Ash Pond
Pace Project No.: 92526544

QC Batch: 605915
QC Batch Method: EPA 3005A
Analysis Method: EPA 6020B
Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92526544001, 92526544002, 92526544003

METHOD BLANK: 3192197 Matrix: Water
Associated Lab Samples: 92526544001, 92526544002, 92526544003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Boron	mg/L	ND	0.040	03/11/21 17:01	
Cobalt	mg/L	ND	0.0050	03/11/21 17:01	
Molybdenum	mg/L	ND	0.010	03/11/21 17:01	

LABORATORY CONTROL SAMPLE: 3192198

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron	mg/L	1	0.96	96	80-120	
Cobalt	mg/L	0.1	0.097	97	80-120	
Molybdenum	mg/L	0.1	0.099	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3192199 3192200

Parameter	Units	92526544002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron	mg/L	0.049	1	1	1.0	1.0	95	97	75-125	3	20	
Cobalt	mg/L	ND	0.1	0.1	0.097	0.094	96	94	75-125	3	20	
Molybdenum	mg/L	ND	0.1	0.1	0.098	0.099	98	99	75-125	1	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Hammond-CCR Ash Pond
Pace Project No.: 92526544

QC Batch: 605516
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: 92526544001, 92526544002, 92526544003

METHOD BLANK: 3189891 Matrix: Water
Associated Lab Samples: 92526544001, 92526544002, 92526544003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	03/10/21 17:21	

LABORATORY CONTROL SAMPLE: 3189892

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	370	92	90-111	

SAMPLE DUPLICATE: 3189893

Parameter	Units	92524831026 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	798	800	0	10	

SAMPLE DUPLICATE: 3189894

Parameter	Units	92526337002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	415	425	2	10	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Hammond-CCR Ash Pond
Pace Project No.: 92526544

QC Batch: 606012
QC Batch Method: EPA 9040C
Analysis Method: EPA 9040C
Analysis Description: 9040 pH
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92526544001, 92526544002, 92526544003

SAMPLE DUPLICATE: 3192744

Parameter	Units	92525947001 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	6.9	6.9	0	9	H3,H6

SAMPLE DUPLICATE: 3193332

Parameter	Units	92526541002 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	7.2	7.2	1	9	H3,H6

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-CCR Ash Pond
Pace Project No.: 92526544

QC Batch: 606758
QC Batch Method: SM 2320B-2011
Analysis Method: SM 2320B-2011
Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92526544001, 92526544002, 92526544003

METHOD BLANK: 3196779 Matrix: Water
Associated Lab Samples: 92526544001, 92526544002, 92526544003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	ND	5.0	03/16/21 01:47	
Alkalinity,Bicarbonate (CaCO3)	mg/L	ND	5.0	03/16/21 01:47	
Alkalinity,Carbonate (CaCO3)	mg/L	ND	5.0	03/16/21 01:47	

LABORATORY CONTROL SAMPLE: 3196780

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	50	49.7	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3196781 3196782

Parameter	Units	92526544001 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	68.3	50	50	116	118	96	99	80-120	1	25	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3196783 3196784

Parameter	Units	92526568008 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	17.2	50	50	68.6	68.8	103	103	80-120	0	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: Plant Hammond-CCR Ash Pond
Pace Project No.: 92526544

QC Batch: 605465
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: 92526544001, 92526544002, 92526544003

METHOD BLANK: 3189694 Matrix: Water
Associated Lab Samples: 92526544001, 92526544002, 92526544003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	03/11/21 23:04	
Fluoride	mg/L	ND	0.10	03/11/21 23:04	
Sulfate	mg/L	ND	1.0	03/11/21 23:04	

LABORATORY CONTROL SAMPLE: 3189695

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	50.7	101	90-110	
Fluoride	mg/L	2.5	2.6	105	90-110	
Sulfate	mg/L	50	51.0	102	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3189696 3189697

Parameter	Units	92526541001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	1.3	50	50	48.9	56.2	95	110	90-110	14	10	R1
Fluoride	mg/L	ND	2.5	2.5	2.5	2.9	97	113	90-110	15	10	M1,R1
Sulfate	mg/L	9.8	50	50	58.6	65.8	98	112	90-110	12	10	M1,R1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3189698 3189699

Parameter	Units	92526574005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	4.3	50	50	54.7	52.6	101	97	90-110	4	10	
Fluoride	mg/L	ND	2.5	2.5	2.6	2.5	101	98	90-110	3	10	
Sulfate	mg/L	4.3	50	50	55.1	53.2	102	98	90-110	3	10	

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-CCR Ash Pond
Pace Project No.: 92526544

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

H3	Sample was received or analysis requested beyond the recognized method holding time.
H6	Analysis initiated outside of the 15 minute EPA required holding time.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
R1	RPD value was outside control limits.

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Hammond-CCR Ash Pond
Pace Project No.: 92526544

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92526544001	**AP2-Up**	EPA 3010A	605887	EPA 6010D	605937
92526544002	**AP2-Mid**	EPA 3010A	605887	EPA 6010D	605937
92526544003	**AP2-Down**	EPA 3010A	605887	EPA 6010D	605937
92526544001	**AP2-Up**	EPA 3005A	605915	EPA 6020B	606002
92526544002	**AP2-Mid**	EPA 3005A	605915	EPA 6020B	606002
92526544003	**AP2-Down**	EPA 3005A	605915	EPA 6020B	606002
92526544001	**AP2-Up**	SM 2450C-2011	605516		
92526544002	**AP2-Mid**	SM 2450C-2011	605516		
92526544003	**AP2-Down**	SM 2450C-2011	605516		
92526544001	**AP2-Up**	EPA 9040C	606012		
92526544002	**AP2-Mid**	EPA 9040C	606012		
92526544003	**AP2-Down**	EPA 9040C	606012		
92526544001	**AP2-Up**	SM 2320B-2011	606758		
92526544002	**AP2-Mid**	SM 2320B-2011	606758		
92526544003	**AP2-Down**	SM 2320B-2011	606758		
92526544001	**AP2-Up**	EPA 300.0 Rev 2.1 1993	605465		
92526544002	**AP2-Mid**	EPA 300.0 Rev 2.1 1993	605465		
92526544003	**AP2-Down**	EPA 300.0 Rev 2.1 1993	605465		

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 : 1 Of 1

Section A – Required Client Information:		Section B – Required Project Information:		Section C – Invoice Information:	
Company:	ARCADIS - Atlanta	Report To:	Kelley Sharpe, Warren Johnson	Attention:	
Address:	2839 Paces Ferry Rd	Copy To:	Ben Hodges, Joju Abraham	Company Name:	
Atlanta, GA 30339				Address:	
Email:	kelley.sharpe@arcadis.com	Purchase Order #:	GPC11064869	Pace Quote:	
Phone:	(770)384-6584 Fax	Project Name:	Plant Hammond/CCR-Ash Pond Closure	Pace Project Manager:	maiya.parks@pacelabs.com,
Requested Due Date:		Project #:		Pace Profile #:	12590

Regulatory Agency:

State / Location: GA

ITEM #	SAMPLE ID One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique	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	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Requested Analysis Filtered (Y/N) Y/N	Analyses Test: Cobalt	Molybdenum	Major Cations	App. III Metals	Residual Chlorine (Y/N)
1	AP2-UP	WT		3.8.21	1735														X	X	X	X	
2	AP2-MID	WT		3.8.21	1710														X	X	X	X	
3	AP2-DOWN	WT		3.8.21	1410														X	X	X	X	
4																							
5																							
6																							
7																							
8																							
9																							
10																							
11																							
12																							

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

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
Appendix III: Boron, Calcium, Chloride, Fluoride, pH, Sulfate, Total Dissolved Solids (TDS)	Chad Tootingson	3.9.21	1200	Pace	3.9.21	1213	
Major Ions: Mg, Na, K, total alkalinity, bicarbonate alkalinity	Pace	3.9.21	1544	Chad Tootingson	3/9/21	1544	

WO# : 92526544

92526544

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Chad Tootingson

SIGNATURE of SAMPLER: Chad Tootingson

DATE Signed: 3.9.21

TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

Pace Analytical	Document Name: Sample Condition Upon Receipt(SCUR)	Document Revised: October 28, 2020 Page 1 of 2
	Document No.: F-CAR-CS-033-Rev.07	Issuing Authority: Pace Carolinas Quality Office

Laboratory receiving samples:
Asheville ☐ Eden ☐ Greenwood ☐ Huntersville ☐ Raleigh ☐ Mechanicsville ☐ Atlanta ☑ Kernersville ☐

Sample Condition Upon Receipt

Client Name: Arcadis

Project #: WO#: 92526544

PM: MP Due Date: 03/16/21
CLIENT: GA-ArcadAtl

Courier: ☐ Commercial ☐ Fed Ex ☑ Pace ☐ UPS ☐ USPS ☐ Other:____ ☐ Client

Custody Seal Present? ☐ Yes ☑ No **Seals Intact?** ☐ Yes ☐ No

Date/Initials Person Examining Contents: 3/9/21 CDH

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☑ None ☐ Other

Biological Tissue Frozen? ☐ Yes ☑ No ☐ N/A

Thermometer: ☐ IR Gun ID: 214 ☑ Wet ☐ Blue ☐ None

Type of Ice:

Cooler Temp: 4.0 **Correction Factor:** Add/Subtract (°C) +0.1

Cooler Temp Corrected (°C): 4.1

Temp should be above freezing to 6°C
☐ Samples out of temp criteria. Samples on ice, cooling process has begun

USDA Regulated Soil (☐ N/A, water sample)
Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)? ☐ Yes ☐ No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? ☐ Yes ☐ No

				Comments/Discrepancy:
Chain of Custody Present?	☑ Yes	☐ No	☐ N/A	1.
Samples Arrived within Hold Time?	☑ Yes	☐ No	☐ N/A	2.
Short Hold Time Analysis (<72 hr.)?	☐ Yes	☑ No	☐ N/A	3.
Rush Turn Around Time Requested?	☐ Yes	☑ No	☐ N/A	4.
Sufficient Volume?	☑ Yes	☐ No	☐ N/A	5.
Correct Containers Used?	☑ Yes	☐ No	☐ N/A	6.
-Pace Containers Used?	☑ Yes	☐ No	☐ N/A	
Containers Intact?	☑ Yes	☐ No	☐ N/A	7.
Dissolved analysis: Samples Field Filtered?	☐ Yes	☐ No	☑ N/A	8.
Sample Labels Match COC?	☑ Yes	☐ No	☐ N/A	9.
-Includes Date/Time/ID/Analysis Matrix: W				
Headspace in VOA Vials (>5-6mm)?	☐ Yes	☐ No	☑ N/A	10.
Trip Blank Present?	☐ Yes	☐ No	☑ N/A	11.
Trip Blank Custody Seals Present?	☐ Yes	☐ No	☑ N/A	

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? ☐ Yes ☐ No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: _____ Date/Time: _____

Project Manager SCURF Review: _____ **Date:** _____

Project Manager SRF Review: _____ **Date:** _____

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

March 16, 2021

Kelley Sharpe
ARCADIS - Atlanta
2839 Paces Ferry Rd
STE 900
Atlanta, GA 30339

RE: Project: Plant Hammond-CCR Ash Pond
Pace Project No.: 92526574

Dear Kelley Sharpe:

Enclosed are the analytical results for sample(s) received by the laboratory on March 09, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Asheville
- Pace Analytical Services - Peachtree Corners, GA

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Maiya Parks
maiya.parks@pacelabs.com
(770)734-4200
Project Manager

Enclosures

cc: Ben Hodges, Georgia Power
Warren Johnson, ARCADIS - Atlanta

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

CERTIFICATIONS

Project: Plant Hammond-CCR Ash Pond
Pace Project No.: 92526574

Pace Analytical Services Asheville
2225 Riverside Drive, Asheville, NC 28804
Florida/NELAP Certification #: E87648
North Carolina Drinking Water Certification #: 37712
North Carolina Wastewater Certification #: 40
South Carolina Certification #: 99030001
Virginia/VELAP Certification #: 460222

Pace Analytical Services Peachtree Corners
110 Technology Pkwy, Peachtree Corners, GA 30092
Florida DOH Certification #: E87315
Georgia DW Inorganics Certification #: 812
North Carolina Certification #: 381
South Carolina Certification #: 98011001

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE SUMMARY

Project: Plant Hammond-CCR Ash Pond
Pace Project No.: 92526574

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92526574001	**H+0.75**	Water	03/08/21 14:00	03/09/21 15:44
92526574002	**H+0.25**	Water	03/08/21 14:25	03/09/21 15:44
92526574003	**H+0.5**	Water	03/08/21 15:25	03/09/21 15:44
92526574004	**H+0.2**	Water	03/08/21 16:00	03/09/21 15:44
92526574005	**Up Stream**	Water	03/08/21 15:00	03/09/21 15:44
92526574006	**Down Stream**	Water	03/08/21 14:35	03/09/21 15:44
92526574007	**H+0.35**	Water	03/08/21 14:20	03/09/21 15:44

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE ANALYTE COUNT

Project: Plant Hammond-CCR Ash Pond
Pace Project No.: 92526574

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92526574001	**H+0.75**	EPA 6010D	KH	4	PASI-GA
		EPA 6020B	CW1	4	PASI-GA
		SM 2450C-2011	AW1	1	PASI-GA
		EPA 9040C	AW1	1	PASI-GA
		SM 2320B-2011	ECH	3	PASI-A
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
92526574002	**H+0.25**	EPA 6010D	KH	4	PASI-GA
		EPA 6020B	CW1	4	PASI-GA
		SM 2450C-2011	AW1	1	PASI-GA
		EPA 9040C	AW1	1	PASI-GA
		SM 2320B-2011	ECH	3	PASI-A
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
92526574003	**H+0.5**	EPA 6010D	KH	4	PASI-GA
		EPA 6020B	CW1	4	PASI-GA
		SM 2450C-2011	AW1	1	PASI-GA
		EPA 9040C	AW1	1	PASI-GA
		SM 2320B-2011	ECH	3	PASI-A
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
92526574004	**H+0.2**	EPA 6010D	KH	4	PASI-GA
		EPA 6020B	CW1	4	PASI-GA
		SM 2450C-2011	AW1	1	PASI-GA
		EPA 9040C	AW1	1	PASI-GA
		SM 2320B-2011	ECH	3	PASI-A
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
92526574005	**Up Stream**	EPA 6010D	KH	4	PASI-GA
		EPA 6020B	CW1	4	PASI-GA
		SM 2450C-2011	AW1	1	PASI-GA
		EPA 9040C	AW1	1	PASI-GA
		SM 2320B-2011	ECH	3	PASI-A
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
92526574006	**Down Stream**	EPA 6010D	KH	4	PASI-GA
		EPA 6020B	CW1	4	PASI-GA
		SM 2450C-2011	AW1	1	PASI-GA
		EPA 9040C	AW1	1	PASI-GA
		SM 2320B-2011	ECH	3	PASI-A
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
92526574007	**H+0.35**	EPA 6010D	KH	4	PASI-GA

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE ANALYTE COUNT

Project: Plant Hammond-CCR Ash Pond
Pace Project No.: 92526574

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 6020B	CW1	4	PASI-GA
		SM 2450C-2011	AW1	1	PASI-GA
		EPA 9040C	AW1	1	PASI-GA
		SM 2320B-2011	ECH	3	PASI-A
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A

PASI-A = Pace Analytical Services - Asheville
PASI-GA = Pace Analytical Services - Peachtree Corners, GA

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant Hammond-CCR Ash Pond
Pace Project No.: 92526574

Sample: H+0.75 **Lab ID: 92526574001** Collected: 03/08/21 14:00 Received: 03/09/21 15:44 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA							
Potassium	**1.4**	mg/L	0.20	1	03/11/21 10:50	03/12/21 05:10	7440-09-7	
Sodium	**3.8**	mg/L	1.0	1	03/11/21 10:50	03/12/21 05:10	7440-23-5	
Calcium	**15.7**	mg/L	1.0	1	03/11/21 10:50	03/12/21 05:10	7440-70-2	
Magnesium	**4.3**	mg/L	0.050	1	03/11/21 10:50	03/12/21 05:10	7439-95-4	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA							
Boron	ND	mg/L	0.040	1	03/11/21 12:04	03/11/21 18:15	7440-42-8	
Cobalt	ND	mg/L	0.0050	1	03/11/21 12:04	03/11/21 18:15	7440-48-4	
Lithium	ND	mg/L	0.030	1	03/11/21 12:04	03/11/21 18:15	7439-93-2	
Molybdenum	ND	mg/L	0.010	1	03/11/21 12:04	03/11/21 18:15	7439-98-7	
2540C Total Dissolved Solids	Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA							
Total Dissolved Solids	**78.0**	mg/L	10.0	1		03/13/21 15:42		D6
9040 pH	Analytical Method: EPA 9040C Pace Analytical Services - Peachtree Corners, GA							
pH at 25 Degrees C	**7.5**	Std. Units	0.10	1		03/11/21 21:57		H3,H6
2320B Alkalinity	Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville							
Alkalinity,Bicarbonate (CaCO3)	**51.1**	mg/L	5.0	1		03/16/21 04:09		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	1		03/16/21 04:09		
Alkalinity, Total as CaCO3	**51.1**	mg/L	5.0	1		03/16/21 04:09		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville							
Chloride	**4.0**	mg/L	1.0	1		03/12/21 02:04	16887-00-6	
Fluoride	ND	mg/L	0.10	1		03/12/21 02:04	16984-48-8	
Sulfate	**5.6**	mg/L	1.0	1		03/12/21 02:04	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant Hammond-CCR Ash Pond
Pace Project No.: 92526574

Sample: H+0.25 **Lab ID: 92526574002** Collected: 03/08/21 14:25 Received: 03/09/21 15:44 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA							
Potassium	**1.6**	mg/L	0.20	1	03/11/21 10:50	03/12/21 05:14	7440-09-7	
Sodium	**8.8**	mg/L	1.0	1	03/11/21 10:50	03/12/21 05:14	7440-23-5	
Calcium	**16.3**	mg/L	1.0	1	03/11/21 10:50	03/12/21 05:14	7440-70-2	
Magnesium	**4.3**	mg/L	0.050	1	03/11/21 10:50	03/12/21 05:14	7439-95-4	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA							
Boron	**0.043**	mg/L	0.040	1	03/11/21 12:04	03/11/21 18:21	7440-42-8	
Cobalt	ND	mg/L	0.0050	1	03/11/21 12:04	03/11/21 18:21	7440-48-4	
Lithium	ND	mg/L	0.030	1	03/11/21 12:04	03/11/21 18:21	7439-93-2	
Molybdenum	ND	mg/L	0.010	1	03/11/21 12:04	03/11/21 18:21	7439-98-7	
2540C Total Dissolved Solids	Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA							
Total Dissolved Solids	**76.0**	mg/L	10.0	1		03/13/21 15:43		
9040 pH	Analytical Method: EPA 9040C Pace Analytical Services - Peachtree Corners, GA							
pH at 25 Degrees C	**7.6**	Std. Units	0.10	1		03/11/21 22:06		H3,H6
2320B Alkalinity	Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville							
Alkalinity,Bicarbonate (CaCO3)	**54.2**	mg/L	5.0	1		03/16/21 04:19		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	1		03/16/21 04:19		
Alkalinity, Total as CaCO3	**54.2**	mg/L	5.0	1		03/16/21 04:19		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville							
Chloride	**4.2**	mg/L	1.0	1		03/12/21 02:19	16887-00-6	
Fluoride	ND	mg/L	0.10	1		03/12/21 02:19	16984-48-8	
Sulfate	**14.3**	mg/L	1.0	1		03/12/21 02:19	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
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(770)734-4200

ANALYTICAL RESULTS

Project: Plant Hammond-CCR Ash Pond
Pace Project No.: 92526574

Sample: H+0.5 **Lab ID: 92526574003** Collected: 03/08/21 15:25 Received: 03/09/21 15:44 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA							
Potassium	**1.3**	mg/L	0.20	1	03/11/21 10:50	03/12/21 05:19	7440-09-7	
Sodium	**3.1**	mg/L	1.0	1	03/11/21 10:50	03/12/21 05:19	7440-23-5	
Calcium	**15.3**	mg/L	1.0	1	03/11/21 10:50	03/12/21 05:19	7440-70-2	
Magnesium	**4.2**	mg/L	0.050	1	03/11/21 10:50	03/12/21 05:19	7439-95-4	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA							
Boron	**0.044**	mg/L	0.040	1	03/11/21 12:04	03/11/21 18:27	7440-42-8	
Cobalt	ND	mg/L	0.0050	1	03/11/21 12:04	03/11/21 18:27	7440-48-4	
Lithium	ND	mg/L	0.030	1	03/11/21 12:04	03/11/21 18:27	7439-93-2	
Molybdenum	ND	mg/L	0.010	1	03/11/21 12:04	03/11/21 18:27	7439-98-7	
2540C Total Dissolved Solids	Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA							
Total Dissolved Solids	**77.0**	mg/L	10.0	1		03/13/21 15:43		
9040 pH	Analytical Method: EPA 9040C Pace Analytical Services - Peachtree Corners, GA							
pH at 25 Degrees C	**7.1**	Std. Units	0.10	1		03/11/21 22:16		H3,H6
2320B Alkalinity	Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville							
Alkalinity,Bicarbonate (CaCO3)	**51.1**	mg/L	5.0	1		03/16/21 04:27		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	1		03/16/21 04:27		
Alkalinity, Total as CaCO3	**51.1**	mg/L	5.0	1		03/16/21 04:27		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville							
Chloride	**4.4**	mg/L	1.0	1		03/12/21 02:34	16887-00-6	
Fluoride	ND	mg/L	0.10	1		03/12/21 02:34	16984-48-8	
Sulfate	**4.3**	mg/L	1.0	1		03/12/21 02:34	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: Plant Hammond-CCR Ash Pond
Pace Project No.: 92526574

Sample: H+0.2 **Lab ID: 92526574004** Collected: 03/08/21 16:00 Received: 03/09/21 15:44 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA							
Potassium	**1.4**	mg/L	0.20	1	03/11/21 10:50	03/12/21 05:24	7440-09-7	
Sodium	**3.2**	mg/L	1.0	1	03/11/21 10:50	03/12/21 05:24	7440-23-5	
Calcium	**16.0**	mg/L	1.0	1	03/11/21 10:50	03/12/21 05:24	7440-70-2	
Magnesium	**4.4**	mg/L	0.050	1	03/11/21 10:50	03/12/21 05:24	7439-95-4	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA							
Boron	**0.050**	mg/L	0.040	1	03/11/21 12:04	03/11/21 18:32	7440-42-8	
Cobalt	ND	mg/L	0.0050	1	03/11/21 12:04	03/11/21 18:32	7440-48-4	
Lithium	ND	mg/L	0.030	1	03/11/21 12:04	03/11/21 18:32	7439-93-2	
Molybdenum	ND	mg/L	0.010	1	03/11/21 12:04	03/11/21 18:32	7439-98-7	
2540C Total Dissolved Solids	Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA							
Total Dissolved Solids	**66.0**	mg/L	10.0	1		03/13/21 15:43		
9040 pH	Analytical Method: EPA 9040C Pace Analytical Services - Peachtree Corners, GA							
pH at 25 Degrees C	**7.2**	Std. Units	0.10	1		03/15/21 06:55		H3,H6
2320B Alkalinity	Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville							
Alkalinity,Bicarbonate (CaCO3)	**51.5**	mg/L	5.0	1		03/16/21 04:47		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	1		03/16/21 04:47		
Alkalinity, Total as CaCO3	**51.5**	mg/L	5.0	1		03/16/21 04:47		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville							
Chloride	**4.7**	mg/L	1.0	1		03/12/21 02:49	16887-00-6	
Fluoride	ND	mg/L	0.10	1		03/12/21 02:49	16984-48-8	
Sulfate	**4.3**	mg/L	1.0	1		03/12/21 02:49	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: Plant Hammond-CCR Ash Pond
Pace Project No.: 92526574

Sample: Up Stream **Lab ID: 92526574005** Collected: 03/08/21 15:00 Received: 03/09/21 15:44 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA							
Potassium	**1.4**	mg/L	0.20	1	03/11/21 10:50	03/12/21 05:29	7440-09-7	
Sodium	**3.1**	mg/L	1.0	1	03/11/21 10:50	03/12/21 05:29	7440-23-5	
Calcium	**15.6**	mg/L	1.0	1	03/11/21 10:50	03/12/21 05:29	7440-70-2	
Magnesium	**4.3**	mg/L	0.050	1	03/11/21 10:50	03/12/21 05:29	7439-95-4	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA							
Boron	**0.044**	mg/L	0.040	1	03/11/21 12:04	03/11/21 18:38	7440-42-8	
Cobalt	ND	mg/L	0.0050	1	03/11/21 12:04	03/11/21 18:38	7440-48-4	
Lithium	ND	mg/L	0.030	1	03/11/21 12:04	03/11/21 18:38	7439-93-2	
Molybdenum	ND	mg/L	0.010	1	03/11/21 12:04	03/11/21 18:38	7439-98-7	
2540C Total Dissolved Solids	Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA							
Total Dissolved Solids	**42.0**	mg/L	10.0	1		03/13/21 15:43		
9040 pH	Analytical Method: EPA 9040C Pace Analytical Services - Peachtree Corners, GA							
pH at 25 Degrees C	**7.6**	Std. Units	0.10	1		03/11/21 22:11		H3,H6
2320B Alkalinity	Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville							
Alkalinity,Bicarbonate (CaCO3)	**50.8**	mg/L	5.0	1		03/16/21 04:56		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	1		03/16/21 04:56		
Alkalinity, Total as CaCO3	**50.8**	mg/L	5.0	1		03/16/21 04:56		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville							
Chloride	**4.3**	mg/L	1.0	1		03/12/21 03:33	16887-00-6	
Fluoride	ND	mg/L	0.10	1		03/12/21 03:33	16984-48-8	
Sulfate	**4.3**	mg/L	1.0	1		03/12/21 03:33	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant Hammond-CCR Ash Pond
Pace Project No.: 92526574

Sample: Down Stream **Lab ID: 92526574006** Collected: 03/08/21 14:35 Received: 03/09/21 15:44 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA							
Potassium	**1.4**	mg/L	0.20	1	03/11/21 10:50	03/12/21 05:43	7440-09-7	
Sodium	**3.3**	mg/L	1.0	1	03/11/21 10:50	03/12/21 05:43	7440-23-5	
Calcium	**15.3**	mg/L	1.0	1	03/11/21 10:50	03/12/21 05:43	7440-70-2	
Magnesium	**4.2**	mg/L	0.050	1	03/11/21 10:50	03/12/21 05:43	7439-95-4	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA							
Boron	ND	mg/L	0.040	1	03/11/21 12:04	03/11/21 18:44	7440-42-8	
Cobalt	ND	mg/L	0.0050	1	03/11/21 12:04	03/11/21 18:44	7440-48-4	
Lithium	ND	mg/L	0.030	1	03/11/21 12:04	03/11/21 18:44	7439-93-2	
Molybdenum	ND	mg/L	0.010	1	03/11/21 12:04	03/11/21 18:44	7439-98-7	
2540C Total Dissolved Solids	Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA							
Total Dissolved Solids	**54.0**	mg/L	10.0	1		03/13/21 15:44		
9040 pH	Analytical Method: EPA 9040C Pace Analytical Services - Peachtree Corners, GA							
pH at 25 Degrees C	**7.6**	Std. Units	0.10	1		03/11/21 22:08		H3,H6
2320B Alkalinity	Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville							
Alkalinity,Bicarbonate (CaCO3)	**50.9**	mg/L	5.0	1		03/16/21 05:04		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	1		03/16/21 05:04		
Alkalinity, Total as CaCO3	**50.9**	mg/L	5.0	1		03/16/21 05:04		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville							
Chloride	**4.2**	mg/L	1.0	1		03/12/21 04:18	16887-00-6	
Fluoride	ND	mg/L	0.10	1		03/12/21 04:18	16984-48-8	
Sulfate	**4.8**	mg/L	1.0	1		03/12/21 04:18	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant Hammond-CCR Ash Pond
Pace Project No.: 92526574

Sample: H+0.35 **Lab ID: 92526574007** Collected: 03/08/21 14:20 Received: 03/09/21 15:44 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA							
Potassium	**1.5**	mg/L	0.20	1	03/11/21 10:50	03/12/21 05:48	7440-09-7	
Sodium	**5.8**	mg/L	1.0	1	03/11/21 10:50	03/12/21 05:48	7440-23-5	
Calcium	**16.1**	mg/L	1.0	1	03/11/21 10:50	03/12/21 05:48	7440-70-2	
Magnesium	**4.3**	mg/L	0.050	1	03/11/21 10:50	03/12/21 05:48	7439-95-4	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA							
Boron	**0.041**	mg/L	0.040	1	03/11/21 12:04	03/11/21 18:50	7440-42-8	
Cobalt	ND	mg/L	0.0050	1	03/11/21 12:04	03/11/21 18:50	7440-48-4	
Lithium	ND	mg/L	0.030	1	03/11/21 12:04	03/11/21 18:50	7439-93-2	
Molybdenum	ND	mg/L	0.010	1	03/11/21 12:04	03/11/21 18:50	7439-98-7	
2540C Total Dissolved Solids	Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA							
Total Dissolved Solids	**67.0**	mg/L	10.0	1		03/13/21 15:44		
9040 pH	Analytical Method: EPA 9040C Pace Analytical Services - Peachtree Corners, GA							
pH at 25 Degrees C	**7.6**	Std. Units	0.10	1		03/11/21 22:03		H3,H6
2320B Alkalinity	Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville							
Alkalinity,Bicarbonate (CaCO3)	**52.1**	mg/L	5.0	1		03/16/21 05:13		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	1		03/16/21 05:13		
Alkalinity, Total as CaCO3	**52.1**	mg/L	5.0	1		03/16/21 05:13		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville							
Chloride	**4.1**	mg/L	1.0	1		03/12/21 04:33	16887-00-6	
Fluoride	ND	mg/L	0.10	1		03/12/21 04:33	16984-48-8	
Sulfate	**9.1**	mg/L	1.0	1		03/12/21 04:33	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Hammond-CCR Ash Pond
Pace Project No.: 92526574

QC Batch: 605887
QC Batch Method: EPA 3010A
Analysis Method: EPA 6010D
Analysis Description: 6010D ATL
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92526574001, 92526574002, 92526574003, 92526574004, 92526574005, 92526574006, 92526574007

METHOD BLANK: 3191972 Matrix: Water
Associated Lab Samples: 92526574001, 92526574002, 92526574003, 92526574004, 92526574005, 92526574006, 92526574007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	03/12/21 04:06	
Magnesium	mg/L	ND	0.050	03/12/21 04:06	
Potassium	mg/L	ND	0.20	03/12/21 04:06	
Sodium	mg/L	ND	1.0	03/12/21 04:06	

LABORATORY CONTROL SAMPLE: 3191973

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	mg/L	1	1.0	103	80-120	
Magnesium	mg/L	1	1.1	106	80-120	
Potassium	mg/L	1	1.1	115	80-120	
Sodium	mg/L	1	1.1	106	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3191974 3191975

Parameter	Units	92526541002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Calcium	mg/L	16.3	1	1	17.0	17.1	67	74	75-125	0	20	M1
Magnesium	mg/L	3.3	1	1	4.3	4.2	100	94	75-125	1	20	
Potassium	mg/L	0.74	1	1	1.9	1.8	113	107	75-125	4	20	
Sodium	mg/L	1.8	1	1	2.8	2.8	99	98	75-125	0	20	

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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Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Hammond-CCR Ash Pond
Pace Project No.: 92526574

QC Batch: 605915
QC Batch Method: EPA 3005A
Analysis Method: EPA 6020B
Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92526574001, 92526574002, 92526574003, 92526574004, 92526574005, 92526574006, 92526574007

METHOD BLANK: 3192197 Matrix: Water
Associated Lab Samples: 92526574001, 92526574002, 92526574003, 92526574004, 92526574005, 92526574006, 92526574007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Boron	mg/L	ND	0.040	03/11/21 17:01	
Cobalt	mg/L	ND	0.0050	03/11/21 17:01	
Lithium	mg/L	ND	0.030	03/11/21 17:01	
Molybdenum	mg/L	ND	0.010	03/11/21 17:01	

LABORATORY CONTROL SAMPLE: 3192198

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron	mg/L	1	0.96	96	80-120	
Cobalt	mg/L	0.1	0.097	97	80-120	
Lithium	mg/L	0.1	0.10	102	80-120	
Molybdenum	mg/L	0.1	0.099	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3192199 3192200

Parameter	Units	92526544002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron	mg/L	0.049	1	1	1.0	1.0	95	97	75-125	3	20	
Cobalt	mg/L	ND	0.1	0.1	0.097	0.094	96	94	75-125	3	20	
Lithium	mg/L	ND	0.1	0.1	0.099	0.10	98	99	75-125	1	20	
Molybdenum	mg/L	ND	0.1	0.1	0.098	0.099	98	99	75-125	1	20	

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-CCR Ash Pond
Pace Project No.: 92526574

QC Batch: 606468 | Analysis Method: SM 2450C-2011
QC Batch Method: SM 2450C-2011 | Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92526574001, 92526574002, 92526574003, 92526574004, 92526574005, 92526574006, 92526574007

METHOD BLANK: 3195225 Matrix: Water
Associated Lab Samples: 92526574001, 92526574002, 92526574003, 92526574004, 92526574005, 92526574006, 92526574007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	03/13/21 15:41	

LABORATORY CONTROL SAMPLE: 3195226

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	368	92	90-111	

SAMPLE DUPLICATE: 3195227

Parameter	Units	92526574001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	78.0	60.0	26	10	D6

SAMPLE DUPLICATE: 3195228

Parameter	Units	92526337005 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	227	203	11	10	D6

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-CCR Ash Pond
Pace Project No.: 92526574

QC Batch: 606012
QC Batch Method: EPA 9040C
Analysis Method: EPA 9040C
Analysis Description: 9040 pH
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92526574001, 92526574002, 92526574003, 92526574005, 92526574006, 92526574007

SAMPLE DUPLICATE: 3192744

Parameter	Units	92525947001 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	6.9	6.9	0	9	H3,H6

SAMPLE DUPLICATE: 3193332

Parameter	Units	92526541002 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	7.2	7.2	1	9	H3,H6

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-CCR Ash Pond
Pace Project No.: 92526574

QC Batch: 606506
QC Batch Method: EPA 9040C
Analysis Method: EPA 9040C
Analysis Description: 9040 pH
Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92526574004

SAMPLE DUPLICATE: 3195363

Parameter	Units	92526574004 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	7.2	7.2	1	10	H3,H6

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-CCR Ash Pond
Pace Project No.: 92526574

QC Batch: 606758
QC Batch Method: SM 2320B-2011
Analysis Method: SM 2320B-2011
Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92526574001, 92526574002, 92526574003, 92526574004, 92526574005, 92526574006, 92526574007

METHOD BLANK: 3196779 Matrix: Water
Associated Lab Samples: 92526574001, 92526574002, 92526574003, 92526574004, 92526574005, 92526574006, 92526574007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	ND	5.0	03/16/21 01:47	
Alkalinity,Bicarbonate (CaCO3)	mg/L	ND	5.0	03/16/21 01:47	
Alkalinity,Carbonate (CaCO3)	mg/L	ND	5.0	03/16/21 01:47	

LABORATORY CONTROL SAMPLE: 3196780

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	50	49.7	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3196781 3196782

Parameter	Units	92526544001 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	68.3	50	50	116	118	96	99	80-120	1	25	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3196783 3196784

Parameter	Units	92526568008 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	17.2	50	50	68.6	68.8	103	103	80-120	0	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: Plant Hammond-CCR Ash Pond
Pace Project No.: 92526574

QC Batch: 605465
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: 92526574001, 92526574002, 92526574003, 92526574004, 92526574005, 92526574006, 92526574007

METHOD BLANK: 3189694 Matrix: Water
Associated Lab Samples: 92526574001, 92526574002, 92526574003, 92526574004, 92526574005, 92526574006, 92526574007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	03/11/21 23:04	
Fluoride	mg/L	ND	0.10	03/11/21 23:04	
Sulfate	mg/L	ND	1.0	03/11/21 23:04	

LABORATORY CONTROL SAMPLE: 3189695

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	50.7	101	90-110	
Fluoride	mg/L	2.5	2.6	105	90-110	
Sulfate	mg/L	50	51.0	102	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3189696 3189697

Parameter	Units	92526541001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	1.3	50	50	48.9	56.2	95	110	90-110	14	10	R1
Fluoride	mg/L	ND	2.5	2.5	2.5	2.9	97	113	90-110	15	10	M1,R1
Sulfate	mg/L	9.8	50	50	58.6	65.8	98	112	90-110	12	10	M1,R1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3189698 3189699

Parameter	Units	92526574005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	4.3	50	50	54.7	52.6	101	97	90-110	4	10	
Fluoride	mg/L	ND	2.5	2.5	2.6	2.5	101	98	90-110	3	10	
Sulfate	mg/L	4.3	50	50	55.1	53.2	102	98	90-110	3	10	

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-CCR Ash Pond
Pace Project No.: 92526574

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

D6	The precision between the sample and sample duplicate exceeded laboratory control limits.
H3	Sample was received or analysis requested beyond the recognized method holding time.
H6	Analysis initiated outside of the 15 minute EPA required holding time.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
R1	RPD value was outside control limits.

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Hammond-CCR Ash Pond
Pace Project No.: 92526574

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92526574001	**H+0.75**	EPA 3010A	605887	EPA 6010D	605937
92526574002	**H+0.25**	EPA 3010A	605887	EPA 6010D	605937
92526574003	**H+0.5**	EPA 3010A	605887	EPA 6010D	605937
92526574004	**H+0.2**	EPA 3010A	605887	EPA 6010D	605937
92526574005	**Up Stream**	EPA 3010A	605887	EPA 6010D	605937
92526574006	**Down Stream**	EPA 3010A	605887	EPA 6010D	605937
92526574007	**H+0.35**	EPA 3010A	605887	EPA 6010D	605937
92526574001	**H+0.75**	EPA 3005A	605915	EPA 6020B	606002
92526574002	**H+0.25**	EPA 3005A	605915	EPA 6020B	606002
92526574003	**H+0.5**	EPA 3005A	605915	EPA 6020B	606002
92526574004	**H+0.2**	EPA 3005A	605915	EPA 6020B	606002
92526574005	**Up Stream**	EPA 3005A	605915	EPA 6020B	606002
92526574006	**Down Stream**	EPA 3005A	605915	EPA 6020B	606002
92526574007	**H+0.35**	EPA 3005A	605915	EPA 6020B	606002
92526574001	**H+0.75**	SM 2450C-2011	606468		
92526574002	**H+0.25**	SM 2450C-2011	606468		
92526574003	**H+0.5**	SM 2450C-2011	606468		
92526574004	**H+0.2**	SM 2450C-2011	606468		
92526574005	**Up Stream**	SM 2450C-2011	606468		
92526574006	**Down Stream**	SM 2450C-2011	606468		
92526574007	**H+0.35**	SM 2450C-2011	606468		
92526574001	**H+0.75**	EPA 9040C	606012		
92526574002	**H+0.25**	EPA 9040C	606012		
92526574003	**H+0.5**	EPA 9040C	606012		
92526574004	**H+0.2**	EPA 9040C	606506		
92526574005	**Up Stream**	EPA 9040C	606012		
92526574006	**Down Stream**	EPA 9040C	606012		
92526574007	**H+0.35**	EPA 9040C	606012		
92526574001	**H+0.75**	SM 2320B-2011	606758		
92526574002	**H+0.25**	SM 2320B-2011	606758		
92526574003	**H+0.5**	SM 2320B-2011	606758		
92526574004	**H+0.2**	SM 2320B-2011	606758		
92526574005	**Up Stream**	SM 2320B-2011	606758		
92526574006	**Down Stream**	SM 2320B-2011	606758		
92526574007	**H+0.35**	SM 2320B-2011	606758		
92526574001	**H+0.75**	EPA 300.0 Rev 2.1 1993	605465		
92526574002	**H+0.25**	EPA 300.0 Rev 2.1 1993	605465		
92526574003	**H+0.5**	EPA 300.0 Rev 2.1 1993	605465		
92526574004	**H+0.2**	EPA 300.0 Rev 2.1 1993	605465		
92526574005	**Up Stream**	EPA 300.0 Rev 2.1 1993	605465		
92526574006	**Down Stream**	EPA 300.0 Rev 2.1 1993	605465		
92526574007	**H+0.35**	EPA 300.0 Rev 2.1 1993	605465		

REPORT OF LABORATORY ANALYSIS

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:
Company: ARCADIS - Atlanta
Address: 2839 Paces Ferry Rd
Atlanta, GA 30339
Email: kelley.sharps@arcadis.com
Phone: (770)384-6584 Fax:
Requested Due Date:

Section B — Required Project Information:
Report To: Kelley Sharps, Warren Johnson
Copy To: Ben Hodges, Jojo Abraham
Purchase Order #: GPC11084009
Project Name: Plant Hammond/CCR-Ash Pond Closure
Project #:

Section C — Invoice Information:
Attention:
Company Name:
Address:
Pace Quote:
Pace Project Manager: maiya.parks@arcadis.com,
Pace Profile #: 12880

Mediport Agency:
State / Location: GA

ITEM #	SAMPLE ID (One Character per box. (A-Z, 0-9 / ,-) Sample IDs must be unique)	MATRIX: 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 START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test Y/N	Analyses Test: Cesium	Molybdenum	Major Cations	Agg. 23 Metals	Lithium	Residual Chlorine (Y/N)
1	H+0.75		WT		3.8.21	1400													X	X	X	X	X		
2	H+0.25		WT		3.8.21	1425													X	X	X	X	X		
3	H-0.5		WT		3.8.21	1525													X	X	X	X	X		
4	H-0.2		WT		3.8.22	1600													X	X	X	X	X		
5	Up Stream		WT		3.8.23	1500													X	X	X	X	X		
6	Down Stream		WT		3.8.24	1435													X	X	X	X	X		
7	H+0.35		(G)		3.8.21	1420													X	X	X	X	X		
8																									
9																									
10																									
11																									
12																									

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
Appendix III: Boron, Calcium, Chloride, Fluoride, pH, Sulfate, Total Dissolved Solids (TDS)		3.8.21	1200	Pace	3-9-21	1213	
Major Ions: Ca, Mg, K, total alkalinity, bicarbonate alkalinity	Pace	3-9-21	1544		3/9/21	1644	

WO# : 92526574

92526574

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER: Chad Tomlinson
SIGNATURE of SAMPLER:
DATE Signed: 3-9-21

TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

Pace Analytical	Document Name: Sample Condition Upon Receipt(SCUR)	Document Revised: October 28, 2020 Page 1 of 2
	Document No.: F-CAR-CS-033-Rev.07	Issuing Authority: Pace Carolinas Quality Office

Laboratory receiving samples:
Asheville ☐ Eden ☐ Greenwood ☐ Huntersville ☐ Raleigh ☐ Mechanicsville ☐ Atlanta ☐ Kernersville ☐

Sample Condition Upon Receipt

Client Name: Arcadis

Project #: WO#: 92526574

PM: MP Due Date: 03/16/21
CLIENT: GA-ArcadAtl

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace ☐ Other:____

Custody Seal Present? ☐ Yes ☐ No **Seals Intact?** ☐ Yes ☐ No

Date/Initials Person Examining Contents:_____

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☐ None ☐ Other

Biological Tissue Frozen? ☐ Yes ☐ No ☐ N/A

Thermometer: ☐ IR Gun ID: 214 ☐ Wet ☐ Blue ☐ None

Type of Ice:

Cooler Temp: 4.0 **Correction Factor:** Add/Subtract (°C) +0.1

Cooler Temp Corrected (°C): 4.1

Temp should be above freezing to 6°C
☐ Samples out of temp criteria. Samples on ice, cooling process has begun

USDA Regulated Soil (☐ N/A, water sample)
Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)? ☐ Yes ☐ No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? ☐ Yes ☐ No

				Comments/Discrepancy:
Chain of Custody Present?	☑ Yes	☐ No	☐ N/A	1.
Samples Arrived within Hold Time?	☑ Yes	☐ No	☐ N/A	2.
Short Hold Time Analysis (<72 hr.)?	☐ Yes	☑ No	☐ N/A	3.
Rush Turn Around Time Requested?	☐ Yes	☑ No	☐ N/A	4.
Sufficient Volume?	☑ Yes	☐ No	☐ N/A	5.
Correct Containers Used?	☑ Yes	☐ No	☐ N/A	6.
-Pace Containers Used?	☑ Yes	☐ No	☐ N/A	
Containers Intact?	☑ Yes	☐ No	☐ N/A	7.
Dissolved analysis: Samples Field Filtered?	☐ Yes	☐ No	☑ N/A	8.
Sample Labels Match COC?	☐ Yes	☑ No	☐ N/A	9. H+0.2 NOT present Sample H+0.75 taken 3/8/21 @ 1410 present H+2 present ~~without time or date~~
-Includes Date/Time/ID/Analysis Matrix: W				
Headspace in VOA Vials (>5-6mm)?	☐ Yes	☐ No	☑ N/A	10.
Trip Blank Present?	☐ Yes	☐ No	☑ N/A	11.
Trip Blank Custody Seals Present?	☐ Yes	☐ No	☐ N/A	

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? ☐ Yes ☐ No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: _____ Date/Time: _____

Project Manager SCURF Review: _____ **Date:** _____

Project Manager SRF Review: _____ **Date:** _____

VALIDATION REPORTS

Geosyntec consultants

180A Market Place Boulevard
Knoxville, TN 37922
PH 865.330.0037
www.geosyntec.com

Memorandum

Date:	February 8, 2021
To:	Whitney Law
From:	Kristoffer Henderson
CC:	J. Caprio
Subject:	**Stage 2A Data Validation - Level II Data Deliverables – Pace Analytical Services, LLC Project Numbers 92512541 and 92512574**

SITE: Plant Hammond AP-2

INTRODUCTION

This report summarizes the findings of the Stage 2A data validation of three aqueous samples and one equipment blank, collected 15 December 2020, as part of the Plant Hammond AP on-site sampling event.

The samples were analyzed at Pace Analytical Services Atlanta, Peachtree Corners, Georgia, for the following analytical tests:

- Calcium by United States (US) Environmental Protection Agency (EPA) Methods 3010A/6010D
- Metals by USEPA Methods 3005A/6020B
- Mercury by USEPA Method 7470A
- Total Dissolved Solids (TDS) by Standard Method 2540C

The samples were analyzed at Pace Analytical Services Asheville, North Carolina, for the following analytical test:

- Anions (Chloride, Fluoride and Sulfate) by USEPA Method 300.0

The samples were analyzed at Pace Analytical Services, LLC, Greensburg, Pennsylvania, for the following analytical tests:

- Radium-226 by USEPA Method 9315
- Radium-228 by USEPA Method 9320
- Total Radium by Calculation

EXECUTIVE SUMMARY

Based on the Stage 2A data validation covering the quality control (QC) parameters listed below and the information provided, the data are usable for meeting project objectives.

The data were reviewed based on the pertinent methods referenced in the laboratory reports, professional and technical judgment, and the following documents:

- US EPA Region IV Data Validation Standard Operating Procedures (US EPA Region IV, September 2011);
- USEPA National Functional Guidelines for Inorganic Superfund Methods Data Review, January 2017 (EPA 540-R-2017-001); and
- American National Standard, Verification and Validation of Radiological Data for use in Waste Management and Environmental Remediation, February 15, 2012 (ANSI/ANS-41.5-2012).

The following samples were analyzed and reported in the laboratory reports:

Laboratory ID	Client ID
92512541001	HGWA-43D
92512541002	HGWA-44D
92512541003	EB-01
92512541004	HGWA-42D

Laboratory ID	Client ID
92512574001	HGWA-43D
92512574002	HGWA-44D
92512574003	EB-01
92512574004	HGWA-42D

The samples were received within 0-6 degrees Celsius (°C). No sample preservation issues were noted by the laboratory.

The following issues were noted with the chain of custody (COC) forms:

- The year was not documented for the *relinquished by* date for the first sample transfer on page one of the COC and for the second transfer on page two of the COC.
- The year was not documented for the *received by* date for the first sample transfer on page two of the COC.

The field pH data included in the laboratory report were not validated.

1.0 METALS

The samples were analyzed for metals by USEPA methods 3010A/6010D and USEPA methods 3005A/6020B. (Mercury was evaluated separately in Section 2.0, below).

The areas of data review are listed below. A leading check mark (✓) indicates an area of review in which the data were acceptable. A preceding crossed circle (⊗) signifies areas where issues were

raised during the course of the validation review and should be considered to determine any impact on data quality and usability.

- ✓ Overall Assessment
- ✓ Holding Time
- ✓ Method Blank
- ✓ Matrix Spike/Matrix Spike Duplicate
- ✓ Laboratory Control Sample
- ✓ Equipment Blank
- ✓ Field Blank
- ✓ Field Duplicate
- ✓ Sensitivity
- ✓ Electronic Data Deliverables Review

1.1 Overall Assessment

The metals data reported in this data set are considered usable for meeting project objectives. The results are considered valid; the analytical completeness defined as the ratio of the number of valid analytical results (valid analytical results include values qualified as estimated) to the total number of analytical results requested on samples submitted for this analysis, for this data set is 100%.

1.2 Holding Time

The holding time for the metals analysis of a water sample is 180 days from sample collection to analysis. The holding times were met for the sample analyses.

1.3 Method Blank

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Two method blanks were reported (batches 589396 and 589337). Metals were not detected in the method blanks above the method detection limits (MDLs).

1.4 Matrix Spike/Matrix Spike Duplicate (MS/MSD)

MS/MSDs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Two batch MS/MSD pairs were reported. Since these were batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data.

1.5 Equipment Blank

One equipment blank was collected with the sample set, EB-01. Metals were not detected in the equipment blank above the MDLs, with the following exception.

Calcium was detected in EB-01 at an estimated concentration greater than the MDL and less than the reporting limit (RL). Since calcium was detected in the associated samples at concentrations greater than the RL, no qualifications were applied to the data.

1.6 Field Blank

A field blank was not collected with the sample set.

1.7 Field Duplicate

A field duplicate was not collected with the sample set.

1.8 Sensitivity

The samples were reported to the MDLs. Elevated nondetect results were not reported.

1.9 Electronic Data Deliverable (EDD) Review

The results and sample IDs in the EDD were reviewed against the information provided by the associated level II report at a minimum of 20% as part of the data validation process. No discrepancies were identified between the level II report and the EDD.

2.0 MERCURY

The samples were analyzed for mercury by USEPA method 7470A.

The areas of data review are listed below. A leading check mark (✓) indicates an area of review in which the data were acceptable. A preceding crossed circle (⊗) signifies areas where issues were raised during the course of the validation review and should be considered to determine any impact on data quality and usability.

- ✓ Overall Assessment
- ✓ Holding Time
- ✓ Method Blank
- ✓ Matrix Spike/Matrix Spike Duplicate
- ✓ Laboratory Control Sample
- ✓ Equipment Blank
- ✓ Field Blank
- ✓ Field Duplicate
- ✓ Sensitivity
- ✓ Electronic Data Deliverables Review

2.1 Overall Assessment

The mercury data reported in this data set are considered usable for meeting project objectives. The results are considered valid; the analytical completeness defined as the ratio of the number of valid analytical results (valid analytical results include values qualified as estimated) to the total number of analytical results requested on samples submitted for this analysis, for this data set is 100%.

2.2 Holding Time

The holding time for mercury analysis of a water sample is 28 days from sample collection to analysis. The holding times were met for the sample analyses.

2.3 Method Blank

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). One method blank was reported (batch 588542). Mercury was not detected in the method blank above the MDL.

2.4 Matrix Spike/Matrix Spike Duplicate

MS/MSDs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). One sample set specific MS/MSD pair was reported using sample HGWA-42D. The recovery and relative percent difference (RPD) results were within the laboratory specified acceptance criteria.

2.5 Laboratory Control Sample

LCSs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). One LCS was reported. The recovery result was within the laboratory specified acceptance criteria.

2.6 Equipment Blank

One equipment blank was collected with the sample set, EB-01. Mercury was not detected in the equipment blank above the MDL.

2.7 Field Blank

A field blank was not collected with the sample set.

2.8 Field Duplicate

A field duplicate was not collected with the sample set.

2.9 Sensitivity

The samples were reported to the MDL. No elevated nondetect results were reported.

2.10 Electronic Data Deliverable Review

The results and sample IDs in the EDD were reviewed against the information provided by the associated level II report at a minimum of 20% as part of the data validation process. No discrepancies were identified between the level II report and the EDD.

3.0 WET CHEMISTRY

The samples were analyzed for TDS by Standard method 2540C and anions by USEPA method 300.0.

The areas of data review are listed below. A leading check mark (✓) indicates an area of review in which the data were acceptable. A preceding crossed circle (⊗) signifies areas where issues were raised during the course of the validation review and should be considered to determine any impact on data quality and usability.

- ✓ Overall Assessment
- ✓ Holding Times
- ✓ Method Blank
- ✓ Matrix Spike/Matrix Spike Duplicate
- ✓ Laboratory Control Sample
- ✓ Laboratory Duplicate
- ✓ Equipment Blank
- ✓ Field Blank
- ✓ Field Duplicate
- ✓ Sensitivity
- ✓ Electronic Data Deliverables Review

3.1 Overall Assessment

The wet chemistry data reported in this data set are considered usable for meeting project objectives. The results are considered valid; the analytical completeness defined as the ratio of the number of valid analytical results (valid analytical results include values qualified as estimated) to the total number of analytical results requested on samples submitted for these analyses, for this data set is 100%.

3.2 Holding Times

The holding time for the TDS analysis of a water sample is 7 days from sample collection to analysis. The holding time for the anions (chloride, fluoride and sulfate) analysis of a water sample is 28 days from sample collection to analysis. The holding times were met for the sample analyses.

3.3 Method Blank

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). One method blank was reported for TDS (batch 588373) and one method blank was reported for the anions (batch 589104). The wet chemistry parameters were not detected in the method blanks above the MDLs.

3.4 Matrix Spike/Matrix Spike Duplicate

MS/MSDs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Two batch MS/MSD pairs were reported for the anions. Since these were batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data.

3.5 Laboratory Control Sample

LCSs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). One LCS was reported for TDS and one LCS was reported for the anions. The recovery results were within the laboratory specified acceptance criteria.

3.6 Laboratory Duplicate

One sample set specific laboratory duplicate was reported for TDS using HGWA-42D. The RPD result was within the laboratory specified acceptance criteria.

One batch laboratory duplicate was also reported for TDS. Since these were batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data.

3.7 Equipment Blank

One equipment blank was collected with the sample set, EB-01. The wet chemistry parameters were not detected in the equipment blank above the MDLs.

3.8 Field Blank

A field blank was not collected with the sample set.

3.9 Field Duplicate

A field duplicate was not collected with the sample set.

3.10 Sensitivity

The samples were reported to the MDLs. No elevated nondetect results were reported.

3.11 Electronic Data Deliverable Review

The results and sample IDs in the EDD were reviewed against the information provided by the associated level II report at a minimum of 20% as part of the data validation process. No discrepancies were identified between the level II report and the EDD.

4.0 RADIOCHEMISTRY

The samples were analyzed for radium-226 by USEPA method 9315, radium-228 by USEPA method 9320 and total radium by calculation.

The areas of data review are listed below. A leading check mark (✓) indicates an area of review in which the data were acceptable. A preceding crossed circle (⊗) signifies areas where issues were raised during the course of the validation review and should be considered to determine any impact on data quality and usability.

- ✓ Overall Assessment
- ✓ Holding Times
- ✓ Method Blank
- ✓ Matrix Spike/Matrix Spike Duplicate
- ✓ Laboratory Control Sample
- ✓ Laboratory Duplicate
- ✓ Tracers and Carriers
- ✓ Equipment Blank
- ✓ Field Blank
- ✓ Field Duplicate
- ✓ Sensitivity
- ✓ Electronic Data Deliverables Review

4.1 Overall Assessment

The radium-226 and radium-228 data reported in this data set are considered usable for meeting project objectives. The results are considered valid; the analytical completeness defined as the ratio of the number of valid analytical results (valid analytical results include values qualified as

estimated) to the total number of analytical results requested on samples submitted for this analysis, for this data set is 100%.

4.2 Holding Times

The holding times for the radium-226 and radium-228 analyses of a water sample are 180 days from sample collection to analysis. The holding times were met for the sample analyses.

4.3 Method Blank

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). One method blank was reported for the radium-228 data (batch 428750). One method blank was reported for the radium-226 data (batch 429175). Radium-226 was not detected in the method blank above the minimum detectable concentration (MDC).

Radium-228 (0.694 pCi/L) was detected in the method blank in batch 428750 at a concentration greater than the MDC. Since radium-228 was not detected at concentrations greater than the MDCs in the associated samples, no qualifications were applied to the data.

4.4 Matrix Spike/Matrix Spike Duplicate

MS/MSD pairs were not reported with the data.

4.5 Laboratory Control Sample

LCSs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). One LCS/LCS duplicate (LCSD) pair was reported for radium-226. One LCS/LCSD pair was reported for radium-228. The recovery and replicate error ratio (RER) [1 sigma (1σ)] results were within the laboratory specified acceptance criteria.

4.6 Laboratory Duplicate

One batch laboratory duplicate was reported radium-26. Since these were batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data.

4.7 Tracers and Carriers

Carriers were reported for the radium-226 and radium-228 analyses and a tracer was reported for the radium-228 analyses. The recovery results were within the laboratory specified acceptance criteria.

4.8 Equipment Blank

One equipment blank was collected with the sample set, EB-01. Radium-226 and Radium-228 were not detected in the equipment blank above the MDCs.

4.9 Field Blank

A field blank was not collected with the sample set.

4.10 Field Duplicate

A field duplicate was not collected with the sample set.

4.11 Sensitivity

The samples were reported to the MDCs. No elevated nondetect results were reported.

4.12 Electronic Data Deliverable Review

The results and sample IDs in the EDD were reviewed against the information provided by the associated level II report at a minimum of 20% as part of the data validation process. No discrepancies were identified between the level II report and the EDD.

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ATTACHMENT 1
DATA VALIDATION QUALIFIER DEFINITIONS AND INTERPRETATION KEY
Assigned by Geosyntec's Data Validation Team

DATA QUALIFIER DEFINITIONS

U The analyte was analyzed for, but was not detected above the reported sample quantitation limit. Upon application of the U qualifier to a reported result, the definition changes to "not detected at or above the reported result".

J The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

J+ The analyte was positively identified; however, the associated numerical value is likely to be higher than the concentration of the analyte in the sample due to positive bias of associated QC or calibration data or attributable to matrix interference.

J- The analyte was positively identified; however, the associated numerical value is likely to be lower than the concentration of the analyte in the sample due to negative bias of associated QC or calibration data or attributable to matrix interference.

UJ The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

R The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

ATTACHMENT 2
DATA VALIDATION REASON CODES
Assigned by Geosyntec's Data Validation Team

Valid Value	Description
1	Preservation requirement not met
2	Analysis holding time exceeded
3	Blank contamination (i.e., method, trip, equipment, etc.)
4	Matrix spike/matrix spike duplicate recovery or RPD outside limits
5	LCS or RPD recovery outside limits (LCS/LCSD)
6	Surrogate recovery outside limits
7	Field Duplicate RPD exceeded
8	Serial dilution percent difference exceeded
9	Calibration criteria not met
10	Linear range exceeded
11	Internal standard criteria not met
12	Lab duplicates RPD exceeded
13	Other
14	Lab flag removed or modified: no validation qualification required

LCS - Laboratory Control Sample
LCSD - Laboratory Control Sample duplicate
RPD - Relative percent difference

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Memorandum

Date:	April 8, 2021
To:	Whitney Law
From:	Kristoffer Henderson
CC:	J. Caprio
Subject:	**Stage 2A Data Validation - Level II Data Deliverables – Pace Analytical Services, LLC Project Numbers 92517863 and 92517891**

SITE: Plant Hammond AP-2

INTRODUCTION

This report summarizes the findings of the Stage 2A data validation of three aqueous samples and one equipment blank, collected 19-20 January 2021, as part of the Plant Hammond AP on-site sampling event.

The samples were analyzed at Pace Analytical Services Atlanta, Peachtree Corners, Georgia, for the following analytical tests:

- Calcium by United States Environmental Protection Agency (US EPA) Methods 3010A/6010D
- Metals by USEPA Methods 3005A/6020B
- Mercury by USEPA Method 7470A
- Total Dissolved Solids (TDS) by Standard Method 2540C

The samples were analyzed at Pace Analytical Services Asheville, North Carolina, for the following analytical test:

- Anions (Chloride, Fluoride and Sulfate) by USEPA Method 300.0

The samples were analyzed at Pace Analytical Services, LLC, Greensburg, Pennsylvania, for the following analytical tests:

- Radium-226 by USEPA Method 9315
- Radium-228 by USEPA Method 9320
- Total Radium by Calculation

EXECUTIVE SUMMARY

Based on the Stage 2A data validation covering the quality control (QC) parameters listed below and the information provided, the data as qualified are usable for meeting project objectives. Qualified data should be used within the limitation of the qualification.

The data were reviewed based on the pertinent methods referenced in the laboratory reports, professional and technical judgment, and the following documents:

- US EPA Region IV Data Validation Standard Operating Procedures (US EPA Region IV, September 2011);
- USEPA National Functional Guidelines for Inorganic Superfund Methods Data Review, November 2020 (EPA 542-R-20-006); and
- American National Standard, Verification and Validation of Radiological Data for use in Waste Management and Environmental Remediation, February 15, 2012 (ANSI/ANS-41.5-2012).

The following samples were analyzed and reported in the laboratory reports:

Laboratory ID	Client ID
92517863001	HGWA-42D
92517863002	HGWA-43D
92517863003	HGWA-44D
92517863004	EB-01

Laboratory ID	Client ID
92517891001	HGWA-42D
92517891002	HGWA-43D
92517891003	HGWA-44D
92517891004	EB-01

The samples were received within 0-6 degrees Celsius (°C). No sample preservation issues were noted by the laboratory.

The year was not noted on the chain of custody (COC) for the collection dates associated with samples HGWA-44D and EB-01. The samples were logged in with the collection year of 2021.

The field pH data included in the laboratory report were not validated.

1.0 METALS

The samples were analyzed for metals by USEPA methods 3010A/6010D and USEPA methods 3005A/6020B. (Mercury was evaluated separately in Section 2.0, below).

The areas of data review are listed below. A leading check mark (✓) indicates an area of review in which the data were acceptable. A preceding crossed circle (⊗) signifies areas where issues were raised during the course of the validation review and should be considered to determine any impact on data quality and usability.

- ✓ Overall Assessment
- ✓ Holding Time
- ⊗ Method Blank
- ✓ Matrix Spike/Matrix Spike Duplicate
- ✓ Laboratory Control Sample
- ✓ Equipment Blank
- ✓ Field Blank
- ✓ Field Duplicate
- ✓ Sensitivity
- ✓ Electronic Data Deliverables Review

1.1 Overall Assessment

The metals data reported in this data set are considered usable for meeting project objectives. The results are considered valid; the analytical completeness defined as the ratio of the number of valid analytical results (valid analytical results include values qualified as estimated) to the total number of analytical results requested on samples submitted for this analysis, for this data set is 100%.

1.2 Holding Time

The holding time for the metals analysis of a water sample is 180 days from sample collection to analysis. The holding times were met for the sample analyses.

1.3 Method Blank

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Two method blanks were reported (batches 596653 and 596887). Metals were not detected in the method blanks above the method detection limits (MDLs), with the following exception.

Antimony was detected in the method blank in batch 596887 at an estimated concentration greater than the MDL and less than the reporting limit (RL). Therefore, the estimated antimony concentrations in the associated samples were U qualified as not detected at the RL.

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	Validation Result (mg/L)	Validation Qualifier*	Reason Code**
HGWA-43D	Antimony	0.00029	J B	0.0030	U	3
HGWA-44D	Antimony	0.00067	J B	0.0030	U	3

mg/L-milligrams per liter
J-estimated concentration greater than the MDL and less than the RL
B-laboratory indicating the analyte was detected in both the method blank and sample
* Validation qualifiers are defined in Attachment 1 at the end of this report
**Reason codes are defined in Attachment 2 at the end of this report

1.4 Matrix Spike/Matrix Spike Duplicate (MS/MSD)

MS/MSDs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Three batch MS/MSD pairs were reported. Since these were batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data.

1.5 Laboratory Control Sample (LCS)

LCSs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Two LCSs were reported. The recovery results were within the laboratory specified acceptance criteria.

1.6 Equipment Blank

One equipment blank was collected with the sample set, EB-01. Metals were not detected in the equipment blank above the MDLs.

1.7 Field Blank

A field blank was not collected with the sample set.

1.8 Field Duplicate

A field duplicate was not collected with the sample set.

1.9 Sensitivity

The samples were reported to the MDLs. No elevated non-detect results were reported.

1.10 Electronic Data Deliverable (EDD) Review

The results and sample IDs in the EDD were reviewed against the information provided by the associated level II report at a minimum of 20% as part of the data validation process. No discrepancies were identified between the level II report and the EDD.

2.0 MERCURY

The samples were analyzed for mercury by USEPA method 7470A.

The areas of data review are listed below. A leading check mark (✓) indicates an area of review in which the data were acceptable. A preceding crossed circle (⊗) signifies areas where issues

were raised during the course of the validation review and should be considered to determine any impact on data quality and usability.

- ✓ Overall Assessment
- ✓ Holding Time
- ✓ Method Blank
- ✓ Matrix Spike/Matrix Spike Duplicate
- ✓ Laboratory Control Sample
- ✓ Equipment Blank
- ✓ Field Blank
- ✓ Field Duplicate
- ✓ Sensitivity
- ✓ Electronic Data Deliverables Review

2.1 Overall Assessment

The mercury data reported in this data set are considered usable for meeting project objectives. The results are considered valid; the analytical completeness defined as the ratio of the number of valid analytical results (valid analytical results include values qualified as estimated) to the total number of analytical results requested on samples submitted for this analysis, for this data set is 100%.

2.2 Holding Time

The holding time for mercury analysis of a water sample is 28 days from sample collection to analysis. The holding times were met for the sample analyses.

2.3 Method Blank

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). One method blank was reported (batch 594784). Mercury was not detected in the method blank above the MDL.

2.4 Matrix Spike/Matrix Spike Duplicate

MS/MSDs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). One sample set specific MS/MSD pair was reported using sample HGWA-42D. The recovery and relative percent difference (RPD) results were within the laboratory specified acceptance criteria.

2.5 Laboratory Control Sample

LCSs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). One LCS was reported. The recovery result was within the laboratory specified acceptance criteria.

2.6 Equipment Blank

One equipment blank was collected with the sample set, EB-01. Mercury was not detected in the equipment blank above the MDL.

2.7 Field Blank

A field blank was not collected with the sample set.

2.8 Field Duplicate

A field duplicate was not collected with the sample set.

2.9 Sensitivity

The samples were reported to the MDL. No elevated non-detect results were reported.

2.10 Electronic Data Deliverable Review

The results and sample IDs in the EDD were reviewed against the information provided by the associated level II report at a minimum of 20% as part of the data validation process. No discrepancies were identified between the level II report and the EDD.

3.0 WET CHEMISTRY

The samples were analyzed for TDS by Standard method 2540C and anions by USEPA method 300.0.

The areas of data review are listed below. A leading check mark (✓) indicates an area of review in which the data were acceptable. A preceding crossed circle (⊗) signifies areas where issues were raised during the course of the validation review and should be considered to determine any impact on data quality and usability.

- ✓ Overall Assessment
- ✓ Holding Times
- ✓ Method Blank
- ✓ Matrix Spike/Matrix Spike Duplicate

- ✓ Laboratory Control Sample
- ✓ Laboratory Duplicate
- ✓ Equipment Blank
- ✓ Field Blank
- ✓ Field Duplicate
- ✓ Sensitivity
- ✓ Electronic Data Deliverables Review

3.1 Overall Assessment

The wet chemistry data reported in this data set are considered usable for meeting project objectives. The results are considered valid; the analytical completeness defined as the ratio of the number of valid analytical results (valid analytical results include values qualified as estimated) to the total number of analytical results requested on samples submitted for these analyses, for this data set is 100%.

3.2 Holding Times

The holding time for the TDS analysis of a water sample is 7 days from sample collection to analysis. The holding time for the anions (chloride, fluoride, and sulfate) analysis of a water sample is 28 days from sample collection to analysis. The holding times were met for the sample analyses.

3.3 Method Blank

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Two method blanks were reported for TDS (batches 594633 and 594779) and two method blanks were reported for the anions (batches 594878 and 595172). The wet chemistry parameters were not detected in the method blanks above the MDLs.

3.4 Matrix Spike/Matrix Spike Duplicate

MS/MSDs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Four batch MS/MSD pairs were reported for the anions. Since these were batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data.

3.5 Laboratory Control Sample

LCSs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Two LCSs were reported for TDS and two LCSs were reported for the anions. The recovery results were within the laboratory specified acceptance criteria.

3.6 Laboratory Duplicate

Four batch laboratory duplicates were reported for TDS. Since these were batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data.

3.7 Equipment Blank

One equipment blank was collected with the sample set, EB-01. The wet chemistry parameters were not detected in the equipment blank above the MDL.

3.8 Field Blank

A field blank was not collected with the sample set.

3.9 Field Duplicate

A field duplicate was not collected with the sample set.

3.10 Sensitivity

The samples were reported to the MDLs. No elevated non-detect results were reported.

3.11 Electronic Data Deliverable Review

The results and sample IDs in the EDD were reviewed against the information provided by the associated level II report at a minimum of 20% as part of the data validation process. No discrepancies were identified between the level II report and the EDD.

4.0 RADIOCHEMISTRY

The samples were analyzed for radium-226 by USEPA method 9315, radium-228 by USEPA method 9320 and total radium by calculation.

The areas of data review are listed below. A leading check mark (✓) indicates an area of review in which the data were acceptable. A preceding crossed circle (⊗) signifies areas where issues were raised during the course of the validation review and should be considered to determine any impact on data quality and usability.

✓ Overall Assessment
✓ Holding Times
✓ Method Blank
✓ Matrix Spike/Matrix Spike Duplicate
⊗ Laboratory Control Sample

- ✓ Laboratory Duplicate
- ✓ Tracers and Carriers
- ✓ Equipment Blank
- ✓ Field Blank
- ✓ Field Duplicate
- ✓ Sensitivity
- ✓ Electronic Data Deliverables Review

4.1 Overall Assessment

The radium-226 and radium-228 data reported in this data set are considered usable for meeting project objectives. The results are considered valid; the analytical completeness defined as the ratio of the number of valid analytical results (valid analytical results include values qualified as estimated) to the total number of analytical results requested on samples submitted for this analysis, for this data set is 100%.

4.2 Holding Times

The holding times for the radium-226 and radium-228 analyses of a water sample are 180 days from sample collection to analysis. The holding times were met for the sample analyses.

4.3 Method Blank

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Two method blanks were reported for the radium-228 data (batches 433216 and 432561). One method blank was reported for the radium-226 data (batch 433326). Radium-226 and radium-228 were not detected in the method blanks above the minimum detectable concentrations (MDCs).

4.4 Matrix Spike/Matrix Spike Duplicate

MS/MSD pairs were not reported with the data.

4.5 Laboratory Control Sample

LCSs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). One LCS/LCS duplicate (LCSD) pair was reported for radium-226. Two LCS/LCSD pairs were reported for radium-228. The recovery and replicate error ratio (RER) [1 sigma (1σ)] results were within the laboratory specified acceptance criteria, with the following exception.

The recovery of radium-228 in the LCS in batch 432561 was low and outside of the laboratory specified acceptance criteria. Therefore, the radium-228 and total radium concentrations less than the MDCs in the associated samples were UJ qualified as estimated less than the MDCs.

Sample	Analyte	Laboratory Result (pCi/L)	Laboratory Flag	Validation Result (pCi/L)	Validation Qualifier	Reason Code
HGWA-42D	Radium-228	0.702	U	0.702	UJ	5
HGWA-42D	Combined Radium 226 + 228	0.845	U	0.845	UJ	5
HGWA-43D	Radium-228	0.482	U	0.482	UJ	5
HGWA-43D	Combined Radium 226 + 228	0.685	U	0.685	UJ	5
HGWA-44D	Radium-228	0.531	U	0.531	UJ	5
HGWA-44D	Combined Radium 226 + 228	0.790	U	0.790	UJ	5
EB-01	Radium-228	0.365	U	0.365	UJ	5
EB-01	Combined Radium 226 + 228	0.404	U	0.404	UJ	5

pCi/L-picocuries per liter
U-not detected at or above the MDC

4.6 Laboratory Duplicate

One batch laboratory duplicate was reported for radium-226. Since these were batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data.

4.7 Tracers and Carriers

Carriers were reported for the radium-226 and radium-228 analyses and a tracer was reported for the radium-228 analyses. The recovery results were within the laboratory specified acceptance criteria.

4.8 Equipment Blank

One equipment blank was collected with the sample set, EB-01. Radium-226 and Radium-228 were not detected in the equipment blank above the MDCs.

4.9 Field Blank

A field blank was not collected with the sample set.

4.10 Field Duplicate

A field duplicate was not collected with the sample set.

4.11 Sensitivity

The samples were reported to the MDCs. No elevated non-detect results were reported.

4.12 Electronic Data Deliverable Review

The results and sample IDs in the EDD were reviewed against the information provided by the associated level II report at a minimum of 20% as part of the data validation process. No discrepancies were identified between the level II report and the EDD.

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ATTACHMENT 1
DATA VALIDATION QUALIFIER DEFINITIONS AND INTERPRETATION KEY
Assigned by Geosyntec's Data Validation Team

DATA QUALIFIER DEFINITIONS

U The analyte was analyzed for but was not detected above the reported sample quantitation limit. Upon application of the U qualifier to a reported result, the definition changes to "not detected at or above the reported result".

J The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

J+ The analyte was positively identified; however, the associated numerical value is likely to be higher than the concentration of the analyte in the sample due to positive bias of associated QC or calibration data or attributable to matrix interference.

J- The analyte was positively identified; however, the associated numerical value is likely to be lower than the concentration of the analyte in the sample due to negative bias of associated QC or calibration data or attributable to matrix interference.

UJ The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

R The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

ATTACHMENT 2
DATA VALIDATION REASON CODES
Assigned by Geosyntec's Data Validation Team

Valid Value	Description
1	Preservation requirement not met
2	Analysis holding time exceeded
3	Blank contamination (i.e., method, trip, equipment, etc.)
4	Matrix spike/matrix spike duplicate recovery or RPD outside limits
5	LCS or RPD recovery outside limits (LCS/LCSD)
6	Surrogate recovery outside limits
7	Field Duplicate RPD exceeded
8	Serial dilution percent difference exceeded
9	Calibration criteria not met
10	Linear range exceeded
11	Internal standard criteria not met
12	Lab duplicates RPD exceeded
13	Other
14	Lab flag removed or modified: no validation qualification required

LCS - Laboratory Control Sample
LCSD - Laboratory Control Sample duplicate
RPD - Relative percent difference

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Memorandum

Date:	April 27, 2021
To:	Whitney Law
From:	Kristoffer Henderson
CC:	J. Caprio
Subject:	**Stage 2A Data Validation - Level II Data Deliverables – Pace Analytical Services, LLC Project Numbers 92521125 and 92521143**

SITE: Plant Hammond AP-2

INTRODUCTION

This report summarizes the findings of the Stage 2A data validation of twenty aqueous samples, one field duplicate, one field blank and one equipment blank, collected 8-15 February 2021, as part of the Plant Hammond AP on-site sampling event.

The samples were analyzed at Pace Analytical Services Atlanta, Peachtree Corners, Georgia, for the following analytical tests:

- Metals by USEPA Methods 3005A/6020B
- Mercury by USEPA Method 7470A

The samples were analyzed at Pace Analytical Services Asheville, North Carolina, for the following analytical test:

- Fluoride by USEPA Method 300.0

The samples were analyzed at Pace Analytical Services, LLC, Greensburg, Pennsylvania, for the following analytical tests:

- Radium-226 by USEPA Method 9315
- Radium-228 by USEPA Method 9320
- Total Radium by Calculation

EXECUTIVE SUMMARY

Based on the Stage 2A data validation covering the quality control (QC) parameters listed below and the information provided, the data as qualified are usable for meeting project objectives. Qualified data should be used within the limitation of the qualification.

The data were reviewed based on the pertinent methods referenced in the laboratory reports, professional and technical judgment, and the following documents:

- US EPA Region IV Data Validation Standard Operating Procedures (US EPA Region IV, September 2011);
- USEPA National Functional Guidelines for Inorganic Superfund Methods Data Review, November 2020 (EPA 542-R-20-006); and
- American National Standard, Verification and Validation of Radiological Data for use in Waste Management and Environmental Remediation, February 15, 2012 (ANSI/ANS-41.5-2012).

The following samples were analyzed and reported in the laboratory reports:

Client ID	Laboratory ID
92521125001	HGWA-1
92521125002	HGWA-4
92521125003	HGWA-42D
92521125004	HGWA-2
92521125005	HGWA-3
92521125006	HGWA-5
92521125007	HGWA-6
92521125008	HGWA-43D
92521125009	HGWA-44D
92521125010	HGWC-16
92521125011	HGWC-18
92521125012	MW-21D
92521125013	DUP-2
92521125014	HGWC-14
92521125015	HGWC-17
92521125016	MW-37D
92521125017	FB-2
92521125018	HGWC-15
92521125019	MW-23D
92521125020	MW-33
92521125021	EB-1
92521125022	MW-22
92521125023	MW-35

Client ID	Laboratory ID
92521143001	HGWA-1
92521143002	HGWA-4
92521143003	HGWA-42D
92521143004	HGWA-2
92521143005	HGWA-3
92521143006	HGWA-5
92521143007	HGWA-6
92521143008	HGWA-43D
92521143009	HGWA-44D
92521143010	HGWC-16
92521143011	HGWC-18
92521143012	MW-21D
92521143013	DUP-2
92521143014	HGWC-14
92521143015	HGWC-17
92521143016	MW-37D
92521143017	FB-2
92521143018	HGWC-15
92521143019	MW-23D
92521143020	MW-33
92521143021	EB-1
92521143022	MW-22
92521143023	MW-35

The samples were received within 0-6 degrees Celsius (ºC). No sample preservation issues were noted by the laboratory.

The following issues were noted on the chain of custody (COC). No qualifications were applied based on these issues.

- A collection time was not listed on the COC for the field duplicate, DUP-2. The field duplicate was logged in with the collection time of 00:00.
- There were time discrepancies for sample transfers on pages 1-3 of the COC. The relinquished by time was documented as 2/9/21 1231 and the received by time was documented as 2/9/21 1233.
- There were time discrepancies for sample transfers on pages 4-6 of the COC. The relinquished by time was documented as 2/9/21 0933 and the received by time was documented as 2/9/21 0936.
- The relinquished by signature, date and time were missing for the final sample transfer on page 7 of the COC.
- The relinquished by date and time and the received by signature, date and time were missing for the final sample transfer on page 11 of the COC.

The field pH data included in the laboratory report were not validated.

1.0 METALS

The samples were analyzed for metals by USEPA methods 3005A/6020B. (Mercury was evaluated separately in Section 2.0, below).

The areas of data review are listed below. A leading check mark (✓) indicates an area of review in which the data were acceptable. A preceding crossed circle (⊗) signifies areas where issues were raised during the course of the validation review and should be considered to determine any impact on data quality and usability.

✓ Overall Assessment
✓ Holding Time
⊗ Method Blank
✓ Matrix Spike/Matrix Spike Duplicate
✓ Laboratory Control Sample
✓ Equipment Blank
⊗ Field Blank
⊗ Field Duplicate
✓ Sensitivity
✓ Electronic Data Deliverables Review

1.1 Overall Assessment

The metals data reported in this data set are considered usable for meeting project objectives. The results are considered valid; the analytical completeness defined as the ratio of the number of valid analytical results (valid analytical results include values qualified as estimated) to the total number of analytical results requested on samples submitted for this analysis, for this data set is 100%.

1.2 Holding Time

The holding time for the metals analysis of a water sample is 180 days from sample collection to analysis. The holding times were met for the sample analyses.

1.3 Method Blank

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Two method blanks were reported (batches 601892 and 601924). Metals were not detected in the method blanks above the method detection limits (MDLs), with the following exceptions.

Antimony and arsenic were detected in the method blank in batch 601892 at estimated concentrations greater than the MDLs and less than the reporting limits (RLs). Therefore, the estimated antimony and arsenic concentrations in the associated samples were U qualified as not detected at the RLs and based on professional and technical judgment the arsenic concentrations in samples HGWC-18 and HGWC-14 were J+ qualified as estimated with high biases.

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	Validation Result (mg/L)	Validation Qualifier*	Reason Code**
HGWA-42D	Antimony	0.0019	J B	0.0030	U	3
HGWA-2	Antimony	0.00062	J B	0.0030	U	3
HGWA-3	Antimony	0.00031	J B	0.0030	U	3
HGWA-43D	Antimony	0.00037	J B	0.0030	U	3
HGWA-43D	Arsenic	0.0017	J B	0.0050	U	3
HGWA-44D	Antimony	0.00042	J B	0.0030	U	3
HGWA-44D	Arsenic	0.00083	J B	0.0050	U	3
HGWC-16	Arsenic	0.0012	J B	0.0050	U	3
HGWC-18	Arsenic	0.0069	B	0.0069	J+	3
MW-21D	Arsenic	0.001	J B	0.0050	U	3
DUP-2	Arsenic	0.00095	J B	0.0050	U	3
HGWC-14	Antimony	0.00043	J B	0.0030	U	3
HGWC-14	Arsenic	0.0062	B	0.0062	J+	3
HGWC-17	Arsenic	0.0012	J B	0.0050	U	3

mg/L-milligrams per liter

J-estimated concentration greater than the MDL and less than the RL
B-laboratory indicating the analyte was detected in both the method blank and sample
* Validation qualifiers are defined in Attachment 1 at the end of this report
**Reason codes are defined in Attachment 2 at the end of this report

1.4 Matrix Spike/Matrix Spike Duplicate (MS/MSD)

MS/MSDs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). One sample set specific MS/MSD pair was reported using sample HGWA-4. The recovery and relative percent difference (RPD) results were within the laboratory specified acceptance criteria.

One batch MS/MSD pair was also reported. Since these were batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data.

1.5 Laboratory Control Sample (LCS)

LCSs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Two LCSs were reported. The recovery results were within the laboratory specified acceptance criteria.

1.6 Equipment Blank

One equipment blank was collected with the sample set, EB-1. Metals were not detected in the equipment blank above the MDLs.

1.7 Field Blank

One field blank was collected with the sample set, FB-2. Metals were not detected in the field blank above the MDLs, with the following exception.

Arsenic was detected in FB-2 at an estimated concentration greater than the MDL and less than the RL. Therefore, the estimated arsenic concentrations in the associated samples were U qualified as not detected at the RL and based on professional and technical judgment the arsenic concentrations in samples HGWC-18, HGWC-14, MW-33 and MW-35 were J+ qualified as estimated with high biases.

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	Validation Result (mg/L)	Validation Qualifier	Reason Code
HGWA-43D	Arsenic	0.0017	J B	0.0050	U	3
HGWA-44D	Arsenic	0.00083	J B	0.0050	U	3
HGWC-16	Arsenic	0.0012	J B	0.0050	U	3

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	Validation Result (mg/L)	Validation Qualifier	Reason Code
HGWC-18	Arsenic	0.0069	B	0.0069	J+	3
MW-21D	Arsenic	0.0010	J B	0.0050	U	3
DUP-2	Arsenic	0.00095	J B	0.0050	U	3
HGWC-14	Arsenic	0.0062	B	0.0062	J+	3
HGWC-17	Arsenic	0.0012	J B	0.0050	U	3
MW-37D	Arsenic	0.0023	J	0.0050	U	3
MW-23D	Arsenic	0.0010	J	0.0050	U	3
MW-33	Arsenic	0.0059	NA	0.0059	J+	3
MW-35	Arsenic	0.0050	NA	0.0050	J+	3

mg/L-milligrams per liter
J-estimated concentration greater than the MDL and less than the RL
B-laboratory indicating the analyte was detected in both the method blank and sample
NA-not applicable

1.8 Field Duplicate

One field duplicate sample was collected with the sample set, DUP-02. Acceptable precision (RPD $\leq$ 20% or the difference between the concentrations < RL) was demonstrated between the field duplicate and the original sample, MW-21D, with the following exception.

Lead was detected in MW-21D at an estimated concentration greater than the MDL and less than the RL and was not detected in DUP-2, resulting in a noncalculable RPD. Therefore, based on professional and technical judgment the lead concentration in MW-21D was J qualified as estimated and the non-detect lead result in DUP-2 was UJ qualified as estimated less than the MDL.

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	RPD	Validation Result (mg/L)	Validation Qualifier	Reason Code
MW-21D	Lead	0.00066	J	NC	0.00066	J	7
DUP-2	Lead	0.000036	U		0.000036	UJ	7

mg/L-milligrams per liter
J-estimated concentration greater than the MDL and less than the RL
U-not detected at or above the MDL
NC-not calculable

1.9 Sensitivity

The samples were reported to the MDLs. No elevated non-detect results were reported.

1.10 Electronic Data Deliverable (EDD) Review

The results and sample IDs in the EDD were reviewed against the information provided by the associated level II report at a minimum of 20% as part of the data validation process. No discrepancies were identified between the level II report and the EDD.

2.0 MERCURY

The samples were analyzed for mercury by USEPA method 7470A.

The areas of data review are listed below. A leading check mark (✓) indicates an area of review in which the data were acceptable. A preceding crossed circle (⊗) signifies areas where issues were raised during the course of the validation review and should be considered to determine any impact on data quality and usability.

- ✓ Overall Assessment
- ✓ Holding Time
- ✓ Method Blank
- ✓ Matrix Spike/Matrix Spike Duplicate
- ✓ Laboratory Control Sample
- ✓ Equipment Blank
- ✓ Field Blank
- ✓ Field Duplicate
- ✓ Sensitivity
- ✓ Electronic Data Deliverables Review

2.1 Overall Assessment

The mercury data reported in this data set are considered usable for meeting project objectives. The results are considered valid; the analytical completeness defined as the ratio of the number of valid analytical results (valid analytical results include values qualified as estimated) to the total number of analytical results requested on samples submitted for this analysis, for this data set is 100%.

2.2 Holding Time

The holding time for mercury analysis of a water sample is 28 days from sample collection to analysis. The holding times were met for the sample analyses.

2.3 Method Blank

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Three method blanks were reported (batches 600377, 601295 and 601590). Mercury was not detected in the method blanks above the MDL.

2.4 Matrix Spike/Matrix Spike Duplicate

MS/MSDs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Two sample set specific MS/MSD pairs were reported using samples HGWA-1 and EB-1. The recovery and RPD results were within the laboratory specified acceptance criteria.

One batch MS/MSD pair was also reported. Since these were batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data.

2.5 Laboratory Control Sample

LCSs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Three LCSs were reported. The recovery results were within the laboratory specified acceptance criteria.

2.6 Equipment Blank

One equipment blank was collected with the sample set, EB-1. Mercury was not detected in the equipment blank above the MDL.

2.7 Field Blank

One field blank was collected with the sample set, FB-2. Mercury was not detected in the field blank above the MDL.

2.8 Field Duplicate

One field duplicate sample was collected with the sample set, DUP-02. Acceptable precision (RPD $\leq$ 20% or the difference between the concentrations < RL) was demonstrated between the field duplicate and the original sample, MW-21D.

2.9 Sensitivity

The samples were reported to the MDL. No elevated non-detect results were reported.

2.10 Electronic Data Deliverable Review

The results and sample IDs in the EDD were reviewed against the information provided by the associated level II report at a minimum of 20% as part of the data validation process. No discrepancies were identified between the level II report and the EDD.

3.0 FLUORIDE

The samples were analyzed for fluoride by USEPA method 300.0.

The areas of data review are listed below. A leading check mark (✓) indicates an area of review in which the data were acceptable. A preceding crossed circle (⊗) signifies areas where issues were raised during the course of the validation review and should be considered to determine any impact on data quality and usability.

✓ Overall Assessment
✓ Holding Times
✓ Method Blank
⊗ Matrix Spike/Matrix Spike Duplicate
✓ Laboratory Control Sample
✓ Equipment Blank
✓ Field Blank
✓ Field Duplicate
✓ Sensitivity
✓ Electronic Data Deliverables Review

3.1 Overall Assessment

The fluoride data reported in this data set are considered usable for meeting project objectives. The results are considered valid; the analytical completeness defined as the ratio of the number of valid analytical results (valid analytical results include values qualified as estimated) to the total number of analytical results requested on samples submitted for these analyses, for this data set is 100%.

3.2 Holding Times

The holding time for the fluoride analysis of a water sample is 28 days from sample collection to analysis. The holding time was met for the sample analyses.

3.3 Method Blank

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Seven method blanks were reported (batches 598903, 599257, 599664, 599863, 599864, 600235 and 601397). Fluoride was not detected in the method blanks above the MDL.

3.4 Matrix Spike/Matrix Spike Duplicate

MS/MSDs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Three sample set specific MS/MSD pairs were reported using samples HGWA-2, HGWC-16 and MW-22. The recovery and RPD results were within the laboratory specified acceptance criteria, with the following exception.

The recovery of fluoride in the MS using sample HGWC-16 was low and outside the laboratory specified acceptance criteria. Therefore, the fluoride concentration in sample HGWC-16 was J-qualified as estimated with low bias.

Twelve batch MS/MSD pairs were also reported. Since these were batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data.

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	Validation Result (mg/L)	Validation Qualifier	Reason Code
HGWC-16	Fluoride	0.21	M1	0.21	J-	4

mg/L-milligrams per liter
M1-laboratory flag indicating the MS recovery exceeded the QC limits

3.5 Laboratory Control Sample

LCSs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Seven LCSs were reported. The recovery results were within the laboratory specified acceptance criteria.

3.6 Equipment Blank

One equipment blank was collected with the sample set, EB-1. Fluoride was not detected in the equipment blank above the MDL.

3.7 Field Blank

One field blank was collected with the sample set, FB-2. Fluoride was not detected in the field blank above the MDL.

3.8 Field Duplicate

One field duplicate sample was collected with the sample set, DUP-02. Acceptable precision (RPD ≤ 20% or the difference between the concentrations < RL) was demonstrated between the field duplicate and the original sample, MW-21D.

3.9 Sensitivity

The samples were reported to the MDLs. No elevated non-detect results were reported.

3.10 Electronic Data Deliverable Review

The results and sample IDs in the EDD were reviewed against the information provided by the associated level II report at a minimum of 20% as part of the data validation process. No discrepancies were identified between the level II report and the EDD.

4.0 RADIOCHEMISTRY

The samples were analyzed for radium-226 by USEPA method 9315, radium-228 by USEPA method 9320 and total radium by calculation.

The areas of data review are listed below. A leading check mark (✓) indicates an area of review in which the data were acceptable. A preceding crossed circle (⊗) signifies areas where issues were raised during the course of the validation review and should be considered to determine any impact on data quality and usability.

✓ Overall Assessment
✓ Holding Times
✓ Method Blank
✓ Matrix Spike/Matrix Spike Duplicate
✓ Laboratory Control Sample
✓ Laboratory Duplicate
✓ Tracers and Carriers
⊗ Equipment Blank
✓ Field Blank
✓ Field Duplicate
✓ Sensitivity
✓ Electronic Data Deliverables Review

4.1 Overall Assessment

The radium-226 and radium-228 data reported in this data set are considered usable for meeting project objectives. The results are considered valid; the analytical completeness defined as the ratio

of the number of valid analytical results (valid analytical results include values qualified as estimated) to the total number of analytical results requested on samples submitted for this analysis, for this data set is 100%.

4.2 Holding Times

The holding times for the radium-226 and radium-228 analyses of a water sample are 180 days from sample collection to analysis. The holding times were met for the sample analyses.

4.3 Method Blank

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Four method blanks were reported for the radium-228 data (batches 435116, 435836, 435838 and 435787). Four method blanks were reported for the radium-226 data (batches 435459, 435786, 435837 and 435835). Radium-226 and radium-228 were not detected in the method blanks above the minimum detectable concentrations (MDCs), with the following exception.

Radium-226 (0.276 pCi/L) was detected in the method blank in batch 435459 at a concentration greater than the MDC. Since radium-226 was not detected in the associated samples at concentrations greater than the MDCs, no qualifications were applied to the data.

4.4 Matrix Spike/Matrix Spike Duplicate

MS/MSD pairs were not reported with the data.

4.5 Laboratory Control Sample

LCSs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Four LCS/LCS duplicate (LCSD) pairs were reported for radium-226. Four LCS/LCSD pairs were reported for radium-228. The recovery and replicate error ratio (RER) [1 sigma (1σ)] results were within the laboratory specified acceptance criteria.

4.6 Laboratory Duplicate

Three batch laboratory duplicates were reported for radium-226. Since these were batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data.

4.7 Tracers and Carriers

Carriers were reported for the radium-226 and radium-228 analyses and a tracer was reported for the radium-228 analyses. The recovery results were within the laboratory specified acceptance criteria.

4.8 Equipment Blank

One equipment blank was collected with the sample set, EB-1.

Radium-226 was not detected in the equipment blank above the MDC. However, Radium-228 (2.12 pCi/L) was detected in EB-1 at a concentration greater than the MDC. Therefore, based on professional and technical judgment the radium-228 concentrations in the associated samples greater than the MDCs and less than the equipment blank concentration were U qualified as not detected at the reported concentrations. In addition, based on professional and technical judgment, the total radium concentration in sample HGWC-15 was U qualified as not detected at the reported concentration and the total radium concentrations in samples MW-33 and MW-35 were J+ qualified as estimated with high biases.

Sample	Analyte	Laboratory Result (pCi/L)	Laboratory Flag	Validation Result (pCi/L)	Validation Qualifier	Reason Code
HGWC-15	Radium-228	1.59	NA	1.59	U	3
HGWC-15	Combined Radium 226 + 228	1.65	NA	1.65	U	3
MW-33	Radium-228	1.88	NA	1.88	U	3
MW-33	Combined Radium 226 + 228	2.26	NA	2.26	J+	3
MW-35	Radium-228	1.06	NA	1.06	U	3
MW-35	Combined Radium 226 + 228	1.52	NA	1.52	J+	3

pCi/-picocuries per liter
NA-not applicable

4.9 Field Blank

One field blank was collected with the sample set, FB-2. Radium-226 and Radium-228 were not detected in the field blank above the MDCs.

4.10 Field Duplicate

One field duplicate sample was collected with the sample set, DUP-02. Acceptable precision (RER (1σ) < 3) was demonstrated between the field duplicate and the original sample, MW-25D.

4.11 Sensitivity

The samples were reported to the MDCs. No elevated non-detect results were reported.

4.12 Electronic Data Deliverable Review

The results and sample IDs in the EDD were reviewed against the information provided by the associated level II report at a minimum of 20% as part of the data validation process. No discrepancies were identified between the level II report and the EDD.

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* * * * *

ATTACHMENT 1
DATA VALIDATION QUALIFIER DEFINITIONS AND INTERPRETATION KEY
Assigned by Geosyntec's Data Validation Team

DATA QUALIFIER DEFINITIONS

U The analyte was analyzed for but was not detected above the reported sample quantitation limit. Upon application of the U qualifier to a reported result, the definition changes to "not detected at or above the reported result".

J The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

J+ The analyte was positively identified; however, the associated numerical value is likely to be higher than the concentration of the analyte in the sample due to positive bias of associated QC or calibration data or attributable to matrix interference.

J- The analyte was positively identified; however, the associated numerical value is likely to be lower than the concentration of the analyte in the sample due to negative bias of associated QC or calibration data or attributable to matrix interference.

UJ The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

R The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

ATTACHMENT 2
DATA VALIDATION REASON CODES
Assigned by Geosyntec's Data Validation Team

Valid Value	Description
1	Preservation requirement not met
2	Analysis holding time exceeded
3	Blank contamination (i.e., method, trip, equipment, etc.)
4	Matrix spike/matrix spike duplicate recovery or RPD outside limits
5	LCS or RPD recovery outside limits (LCS/LCSD)
6	Surrogate recovery outside limits
7	Field Duplicate RPD exceeded
8	Serial dilution percent difference exceeded
9	Calibration criteria not met
10	Linear range exceeded
11	Internal standard criteria not met
12	Lab duplicates RPD exceeded
13	Other
14	Lab flag removed or modified: no validation qualification required

LCS - Laboratory Control Sample
LCSD - Laboratory Control Sample duplicate
RPD - Relative percent difference

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Memorandum

Date:	April 27, 2021
To:	Whitney Law
From:	Kristoffer Henderson
CC:	J. Caprio
Subject:	**Stage 2A Data Validation - Level II Data Deliverables – Pace Analytical Services, LLC Project Numbers 92527256 and 92527258**

SITE: Plant Hammond AP-2

INTRODUCTION

This report summarizes the findings of the Stage 2A data validation of twenty aqueous samples, one field duplicate, one field blank and one equipment blank, collected 10-19 March 2021, as part of the Plant Hammond AP on-site sampling event.

The samples were analyzed at Pace Analytical Services Atlanta, Peachtree Corners, Georgia, for the following analytical tests:

- Calcium by USEPA Methods 3010A/6010D
- Metals by USEPA Methods 3005A/6020B
- Total Dissolved Solids (TDS) by Standard Method 2450C

The samples were analyzed at Pace Analytical Services Asheville, North Carolina, for the following analytical test:

- Anions (Chloride, Fluoride and Sulfate) by USEPA Method 300.0

The samples were analyzed at Pace Analytical Services, LLC, Greensburg, Pennsylvania, for the following analytical tests:

- Radium-226 by USEPA Method 9315
- Radium-228 by USEPA Method 9320
- Total Radium by Calculation

EXECUTIVE SUMMARY

Based on the Stage 2A data validation covering the quality control (QC) parameters listed below and the information provided, the data as qualified are usable for meeting project objectives. Qualified data should be used within the limitation of the qualification.

The data were reviewed based on the pertinent methods referenced in the laboratory reports, professional and technical judgment, and the following documents:

- US EPA Region IV Data Validation Standard Operating Procedures (US EPA Region IV, September 2011);
- USEPA National Functional Guidelines for Inorganic Superfund Methods Data Review, November 2020 (EPA 542-R-20-006); and
- American National Standard, Verification and Validation of Radiological Data for use in Waste Management and Environmental Remediation, February 15, 2012 (ANSI/ANS-41.5-2012).

The following samples were analyzed and reported in the laboratory reports:

Laboratory ID	Client ID
92527256001	HGWA-1
92527256002	HGWA-4
92527256003	HGWA-42D
92527256004	HGWA-44D
92527256006	HGWA-2
92527256007	HGWA-3
92527256008	HGWA-5
92527256009	HGWA-6
92527256010	HGWA-43D
92527256011	MW-37D
92527256012	HGWC-15
92527256013	HGWC-14
92527256014	HGWC-16
92527256015	MW-22
92527256016	MW-23D
92527256017	HGWC-17
92527256018	HGWC-18
92527256019	MW-21D
92527256020	MW-33
92527256021	DUP-2
92527256022	EB-2
92527256023	FB-2
92527256024	MW-35

Laboratory ID	Client ID
92527258001	HGWA-1
92527258002	HGWA-4
92527258003	HGWA-42D
92527258004	HGWA-44D
92527258005	HGWA-2
92527258006	HGWA-3
92527258007	HGWA-5
92527258008	HGWA-6
92527258009	HGWA-43D
92527258010	MW-37D
92527258011	HGWC-15
92527258012	HGWC-14
92527258013	HGWC-16
92527258014	MW-22
92527258015	MW-23D
92527258016	HGWC-17
92527258017	HGWC-18
92527258018	MW-21D
92527258019	MW-33
92527258020	DUP-2
92527258021	EB-2
92527258022	FB-2
92527258023	MW-35

The samples were received within 0-6 degrees Celsius (ºC). No sample preservation issues were noted by the laboratory.

The following issues were noted on the chain of custody (COC). No qualifications were applied based on these issues.

- A collection time was not listed on the COC for the field duplicate, DUP-2. The field duplicate was logged in with the collection time of 00:00.
- There was a time discrepancy for the sample transfer on pages 3 of the COC. The relinquished by time was documented as 3/15/21 1145 and the received by time was documented as 3/15/21 1200.

Incorrect error corrections were observed on the COCs, instead of the proper procedure of a single strike through, correction, and initials and date of person making the corrections.

The field pH data included in the laboratory report were not validated.

1.0 METALS

The samples were analyzed for metals by USEPA methods 3005A/6020B.

The areas of data review are listed below. A leading check mark (✓) indicates an area of review in which the data were acceptable. A preceding crossed circle (⊗) signifies areas where issues were raised during the course of the validation review and should be considered to determine any impact on data quality and usability.

✓ Overall Assessment
✓ Holding Time
⊗ Method Blank
✓ Matrix Spike/Matrix Spike Duplicate
✓ Laboratory Control Sample
✓ Equipment Blank
⊗ Field Blank
✓ Field Duplicate
✓ Sensitivity
✓ Electronic Data Deliverables Review

1.1 Overall Assessment

The metals data reported in this data set are considered usable for meeting project objectives. The results are considered valid; the analytical completeness defined as the ratio of the number of valid analytical results (valid analytical results include values qualified as estimated) to the total number of analytical results requested on samples submitted for this analysis, for this data set is 100%.

1.2 Holding Time

The holding time for the metals analysis of a water sample is 180 days from sample collection to analysis. The holding times were met for the sample analyses.

1.3 Method Blank

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Six method blanks were reported (batches 606634, 608195, 610580, 606644, 607964 and 610582). Metals were not detected in the method blanks above the method detection limits (MDLs), with the following exception.

Antimony was detected in the method blank in batch 606644 at an estimated concentration greater than the MDL and less than the reporting limit (RL). Therefore, the estimated antimony concentration in the associated sample was U qualified as not detected at the RL.

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	Validation Result (mg/L)	Validation Qualifier*	Reason Code**
HGWA-44D	Antimony	0.00037	J B	0.0030	U	3

mg/L-milligrams per liter
J-estimated concentration greater than the MDL and less than the RL
B-laboratory indicating the analyte was detected in both the method blank and sample
* Validation qualifiers are defined in Attachment 1 at the end of this report
**Reason codes are defined in Attachment 2 at the end of this report

1.4 Matrix Spike/Matrix Spike Duplicate (MS/MSD)

MS/MSDs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Three sample set specific MS/MSD pairs were reported using samples HGWA-2, HGWA-5 and HGWA-6. The recovery and relative percent difference (RPD) results were within the laboratory specified acceptance criteria, with the following exceptions.

The MSD recovery and RPD of chromium in the MS/MSD pair using sample HGWA-6 were high and outside of the laboratory specified acceptance criteria. Since chromium was not detected in sample HGWA-6, no qualifications were applied to the data.

The MSD recovery of calcium in the MS/MSD pair using sample HGWA-2 was low and outside of the laboratory specified acceptance criteria. Since the concentration of calcium in sample HGWA-2 was greater than four times the spike concentration, no qualifications were applied to the data.

The MS recovery of calcium in the MS/MSD pair using sample HGWA-5 was low and outside of the laboratory specified acceptance criteria. Since the concentration of calcium in sample HGWA-5 was greater than four times the spike concentration, no qualifications were applied to the data.

Three batch MS/MSD pairs were also reported. Since these were batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data.

1.5 Laboratory Control Sample (LCS)

LCSs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Six LCSs were reported. The recovery results were within the laboratory specified acceptance criteria.

1.6 Equipment Blank

One equipment blank was collected with the sample set, EB-2. Metals were not detected in the equipment blank above the MDLs, with the following exception.

Boron was detected in EB-2 at an estimated concentration greater than the MDL and less than the RL. Since the boron concentration in EB-2 was U qualified due to field blank contamination and based on professional and technical judgment, no additional qualifications were applied to the data.

1.7 Field Blank

One field blank was collected with the sample set, FB-2. Metals were not detected in the field blank above the MDLs, with the following exception.

Boron was detected in FB-2 at an estimated concentration greater than the MDL and less than the RL. Therefore, the estimated boron concentrations in the associated samples were U qualified as not detected at the RL.

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	Validation Result (mg/L)	Validation Qualifier	Reason Code
HGWA-1	Boron	0.015	J	0.040	U	3
HGWA-4	Boron	0.012	J	0.040	U	3
HGWA-3	Boron	0.015	J	0.040	U	3
HGWA-5	Boron	0.0075	J	0.040	U	3
HGWA-6	Boron	0.018	J	0.040	U	3
EB-2	Boron	0.026	J	0.040	U	3

mg/L-milligrams per liter
J-estimated concentration greater than the MDL and less than the RL

1.8 Field Duplicate

One field duplicate sample was collected with the sample set, DUP-02. Acceptable precision (RPD ≤ 20% or the difference between the concentrations < RL) was demonstrated between the field duplicate and the original sample, MW-33.

1.9 Sensitivity

The samples were reported to the MDLs. Elevated non-detect results were reported based upon the dilutions analyzed.

1.10 Electronic Data Deliverable (EDD) Review

The results and sample IDs in the EDD were reviewed against the information provided by the associated level II report at a minimum of 20% as part of the data validation process. No discrepancies were identified between the level II report and the EDD.

2.0 WET CHEMISTRY

The samples were analyzed for TDS by Standard Method 2450C and anions (chloride, fluoride and sulfate) by USEPA method 300.0.

The areas of data review are listed below. A leading check mark (✓) indicates an area of review in which the data were acceptable. A preceding crossed circle (⊗) signifies areas where issues were raised during the course of the validation review and should be considered to determine any impact on data quality and usability.

✓ Overall Assessment
✓ Holding Times
✓ Method Blank
⊗ Matrix Spike/Matrix Spike Duplicate
✓ Laboratory Control Sample
✓ Laboratory Duplicate
✓ Equipment Blank
✓ Field Blank
✓ Field Duplicate
✓ Sensitivity
✓ Electronic Data Deliverables Review

2.1 Overall Assessment

The wet chemistry data reported in this data set are considered usable for meeting project objectives. The results are considered valid; the analytical completeness defined as the ratio of the

number of valid analytical results (valid analytical results include values qualified as estimated) to the total number of analytical results requested on samples submitted for these analyses, for this data set is 100%.

2.2 Holding Times

The holding time for TDS analysis of a water sample is 7 days from sample collection to analysis. The holding time for the anions analysis of a water sample is 28 days from sample collection to analysis. The holding time was met for the sample analyses.

2.3 Method Blank

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Seven method blanks were reported for TDS (batches 606587, 606868, 607316, 608136, 608146, 608913 and 609221). Seven method blanks were reported for the anions (batches 607170, 607751, 607758, 607984, 608285, 608857 and 608960). The wet chemistry parameters were not detected in the method blanks above the MDL.

2.4 Matrix Spike/Matrix Spike Duplicate

MS/MSDs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Four sample set specific MS/MSD pairs were reported for the anions using samples HGWA-1, HGWA-4, HGWA-3 and HGWC-17. The recovery and RPD results were within the laboratory specified acceptance criteria, with the following exceptions.

The recovery of sulfate in the MS using sample HGWA-1 was low and outside of the laboratory specified acceptance criteria. Therefore, the sulfate concentration in sample HGWA-1 was J-qualified as estimated with low bias.

The recovery of fluoride in the MS/MSD using sample HGWA-4 were high and outside of the laboratory specified acceptance criteria. Since fluoride was not detected in sample HGWA-4, no qualifications were applied to the data.

The recoveries of chloride and sulfate in the MS using sample HGWC-17 were low and outside of the laboratory specified acceptance criteria. Since the sulfate concentration in sample HGWC-17 was greater than four times the spiked concentration, no qualifications were applied to the sulfate data. However, the chloride concentration in sample HGWC-17 was J- qualified as estimated with low bias. It was noted the laboratory flagged the chloride concentration M6 indicating the MS/MSD was not evaluated due to dilution. Based on the sample and spiked concentrations and professional and technical judgment, the MS/MSD results were considered for validation.

Batch MS/MSD pairs were also reported for the anions. Since these were batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data.

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	Validation Result (mg/L)	Validation Qualifier	Reason Code
HGWA-1	Sulfate	49.6	M1	49.6	J-	4
HGWC-17	Chloride	138	M6	138	J-	4

mg/L-milligrams per liter
M1-laboratory flag indicating the MS recovery exceeded the QC limits
M6-laboratory flag indicating MS/MSD recovery was not evaluated due to sample dilution

2.5 Laboratory Control Sample

LCSs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). LCSs were reported for each analysis and batch. The recovery results were within the laboratory specified acceptance criteria.

2.6 Laboratory Duplicate

One sample set specific laboratory duplicate was reported using sample HGWA-2. The RPD result was within the laboratory specified acceptance criteria.

Batch laboratory duplicates were also reported. Since these were batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data.

2.7 Equipment Blank

One equipment blank was collected with the sample set, EB-2. The wet chemistry parameters were not detected in the equipment blank above the MDLs.

2.8 Field Blank

One field blank was collected with the sample set, FB-2. The wet chemistry parameters were not detected in the field blank above the MDLs.

2.9 Field Duplicate

One field duplicate sample was collected with the sample set, DUP-02. Acceptable precision (RPD $\leq$ 20% or the difference between the concentrations < RL) was demonstrated between the field duplicate and the original sample, MW-33.

2.10 Sensitivity

The samples were reported to the MDLs. No elevated non-detect results were reported.

2.11 Electronic Data Deliverable Review

The results and sample IDs in the EDD were reviewed against the information provided by the associated level II report at a minimum of 20% as part of the data validation process. No discrepancies were identified between the level II report and the EDD.

3.0 RADIOCHEMISTRY

The samples were analyzed for radium-226 by USEPA method 9315, radium-228 by USEPA method 9320 and total radium by calculation.

The areas of data review are listed below. A leading check mark (✓) indicates an area of review in which the data were acceptable. A preceding crossed circle (⊗) signifies areas where issues were raised during the course of the validation review and should be considered to determine any impact on data quality and usability.

✓ Overall Assessment
✓ Holding Times
⊗ Method Blank
✓ Matrix Spike/Matrix Spike Duplicate
✓ Laboratory Control Sample
✓ Laboratory Duplicate
✓ Tracers and Carriers
✓ Equipment Blank
✓ Field Blank
✓ Field Duplicate
✓ Sensitivity
✓ Electronic Data Deliverables Review

3.1 Overall Assessment

The radium-226 and radium-228 data reported in this data set are considered usable for meeting project objectives. The results are considered valid; the analytical completeness defined as the ratio of the number of valid analytical results (valid analytical results include values qualified as estimated) to the total number of analytical results requested on samples submitted for this analysis, for this data set is 100%.

3.2 Holding Times

The holding times for the radium-226 and radium-228 analyses of a water sample are 180 days from sample collection to analysis. The holding times were met for the sample analyses.

3.3 Method Blank

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Four method blanks were reported for the radium-228 data (batches 440493, 442226, 440490 and 440491). Four method blanks were reported for the radium-226 data (batches 441707, 440499, 440500 and 439773). Radium-226 and radium-228 were not detected in the method blanks above the minimum detectable concentrations (MDCs), with the following exceptions.

Radium-228 was detected in the method blank in batches 440490 (0.738 pCi/L) and 440491 (0.826 pCi/L) at concentrations greater than the MDCs. Therefore, the radium-228 concentration in the associated sample greater than the MDC and method blank concentration was J+ qualified as estimated with high bias.

Sample	Analyte	Laboratory Result (pCi/L)	Laboratory Flag	Validation Result (pCi/L)	Validation Qualifier	Reason Code
HGWA-5	Radium-228	0.920	NA	0.920	J+	3

pCi/L-picocuries per liter
NA-not applicable

3.4 Matrix Spike/Matrix Spike Duplicate

MS/MSD pairs were not reported with the data.

3.5 Laboratory Control Sample

LCSs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Four LCS/LCS duplicate (LCSD) pairs were reported for radium-226. Four LCS/LCSD pairs were reported for radium-228. The recovery and replicate error ratio (RER) [1 sigma (1σ)] results were within the laboratory specified acceptance criteria.

3.6 Laboratory Duplicate

Two sample set specific laboratory duplicates were reported using samples HGWA-1 and MW-37D. The RER (1 σ) results were within the laboratory specified acceptance criteria.

One batch laboratory duplicate was reported for radium-226. Since these were batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data.

3.7 Tracers and Carriers

Carriers were reported for the radium-226 and radium-228 analyses and a tracer was reported for the radium-228 analyses. The recovery results were within the laboratory specified acceptance criteria.

3.8 Equipment Blank

One equipment blank was collected with the sample set, EB-2. Radium-226 and Radium-228 were not detected in the equipment blank above the MDCs.

3.9 Field Blank

One field blank was collected with the sample set, FB-2. Radium-226 and Radium-228 were not detected in the field blank above the MDCs.

3.10 Field Duplicate

One field duplicate sample was collected with the sample set, DUP-02. Acceptable precision (RER (1σ) < 3) was demonstrated between the field duplicate and the original sample, MW-25D.

3.11 Sensitivity

The samples were reported to the MDCs. No elevated non-detect results were reported.

3.12 Electronic Data Deliverable Review

The results and sample IDs in the EDD were reviewed against the information provided by the associated level II report at a minimum of 20% as part of the data validation process. No discrepancies were identified between the level II report and the EDD.

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ATTACHMENT 1
DATA VALIDATION QUALIFIER DEFINITIONS AND INTERPRETATION KEY
Assigned by Geosyntec's Data Validation Team

DATA QUALIFIER DEFINITIONS

U The analyte was analyzed for but was not detected above the reported sample quantitation limit. Upon application of the U qualifier to a reported result, the definition changes to "not detected at or above the reported result".

J The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

J+ The analyte was positively identified; however, the associated numerical value is likely to be higher than the concentration of the analyte in the sample due to positive bias of associated QC or calibration data or attributable to matrix interference.

J- The analyte was positively identified; however, the associated numerical value is likely to be lower than the concentration of the analyte in the sample due to negative bias of associated QC or calibration data or attributable to matrix interference.

UJ The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

R The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

ATTACHMENT 2
DATA VALIDATION REASON CODES
Assigned by Geosyntec's Data Validation Team

Valid Value	Description
1	Preservation requirement not met
2	Analysis holding time exceeded
3	Blank contamination (i.e., method, trip, equipment, etc.)
4	Matrix spike/matrix spike duplicate recovery or RPD outside limits
5	LCS or RPD recovery outside limits (LCS/LCSD)
6	Surrogate recovery outside limits
7	Field Duplicate RPD exceeded
8	Serial dilution percent difference exceeded
9	Calibration criteria not met
10	Linear range exceeded
11	Internal standard criteria not met
12	Lab duplicates RPD exceeded
13	Other
14	Lab flag removed or modified: no validation qualification required

LCS - Laboratory Control Sample
LCSD - Laboratory Control Sample duplicate
RPD - Relative percent difference

FIELD SAMPLING REPORTS

Low-Flow Test Report:

Test Date / Time: 1/20/2021 9:45:34 AM
Project: GP-Plant Hammond (5)
Operator Name: Connor Cain

Location Name: HGWA-42D **Well Diameter: 2 in** **Casing Type: PVC** **Initial Depth to Water: 11.91 ft**	**Pump Type: QED** **Tubing Type: polyethylene** **Tubing Inner Diameter: 0.17 in** **Estimated Total Volume Pumped: 6076.667 ml** **Flow Cell Volume: 90 ml** **Final Flow Rate: 200 ml/min** **Final Draw Down: -11.478 ft**	**Instrument Used: Aqua TROLL 400** **Serial Number: 728638**

Test Notes:

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 5	
1/20/2021 9:45 AM	00:00	7.60 pH	16.23 °C	281.02 µS/cm	0.84 mg/L	0.81 NTU	-77.5 mV	11.93 ft	200.00 ml/min
1/20/2021 9:50 AM	05:00	7.62 pH	17.31 °C	277.18 µS/cm	0.39 mg/L	1.08 NTU	-73.2 mV	12.54 ft	200.00 ml/min
1/20/2021 9:55 AM	10:00	7.64 pH	17.40 °C	276.68 µS/cm	0.26 mg/L	1.71 NTU	-73.3 mV	12.91 ft	200.00 ml/min
1/20/2021 10:00 AM	15:00	7.65 pH	17.36 °C	276.87 µS/cm	0.21 mg/L	0.42 NTU	-142.5 mV	13.07 ft	200.00 ml/min
1/20/2021 10:05 AM	20:00	7.66 pH	17.63 °C	277.01 µS/cm	0.48 mg/L	1.28 NTU	-69.7 mV	13.18 ft	200.00 ml/min
1/20/2021 10:07 AM	21:55	7.65 pH	17.62 °C	275.34 µS/cm	0.36 mg/L	0.53 NTU	-66.9 mV	13.18 ft	200.00 ml/min
1/20/2021 10:10 AM	25:23	7.67 pH	17.49 °C	276.41 µS/cm	0.27 mg/L	0.59 NTU	-69.6 mV	13.18 ft	200.00 ml/min
1/20/2021 10:15 AM	30:23	7.68 pH	17.65 °C	276.16 µS/cm	0.20 mg/L	0.35 NTU	-131.4 mV	13.18 ft	200.00 ml/min

Samples

Sample ID:	Description:
HGWA-42D	Grab sample

Low-Flow Test Report:

Test Date / Time: 1/19/2021 2:58:28 PM
Project: GP-Plant Hammond (4)
Operator Name: Connor Cain

Location Name: HGWA-43D **Well Diameter: 2 in** **Casing Type: PVC** **Initial Depth to Water: 16.76 ft**	**Pump Type: QED** **Tubing Type: polyethylene** **Tubing Inner Diameter: 0.17 in** **Estimated Total Volume Pumped: 13500 ml** **Flow Cell Volume: 90 ml** **Final Flow Rate: 100 ml/min** **Final Draw Down: 20.73 ft**	**Instrument Used: Aqua TROLL 400** **Serial Number: 728638**

Test Notes:

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 5	
1/19/2021 2:58 PM	00:00	7.49 pH	15.85 °C	0.53 µS/cm	7.61 mg/L	38.60 NTU	-69.0 mV	18.84 ft	200.00 ml/min
1/19/2021 3:03 PM	05:00	7.44 pH	15.96 °C	0.53 µS/cm	5.84 mg/L	30.20 NTU	-66.7 mV	19.43 ft	200.00 ml/min
1/19/2021 3:08 PM	10:00	7.42 pH	15.97 °C	0.53 µS/cm	4.66 mg/L	25.00 NTU	-122.3 mV	19.86 ft	200.00 ml/min
1/19/2021 3:13 PM	15:00	7.40 pH	15.98 °C	0.53 µS/cm	3.85 mg/L	14.00 NTU	-62.8 mV	20.32 ft	200.00 ml/min
1/19/2021 3:18 PM	20:00	7.40 pH	15.87 °C	0.52 µS/cm	2.77 mg/L	11.60 NTU	-116.6 mV	20.44 ft	200.00 ml/min
1/19/2021 3:23 PM	25:00	7.39 pH	15.84 °C	0.52 µS/cm	2.30 mg/L	10.68 NTU	-56.1 mV	20.49 ft	200.00 ml/min
1/19/2021 3:28 PM	30:00	7.39 pH	15.74 °C	0.51 µS/cm	2.20 mg/L	8.80 NTU	-106.6 mV	20.66 ft	200.00 ml/min
1/19/2021 3:33 PM	35:00	7.39 pH	15.75 °C	0.51 µS/cm	2.01 mg/L	8.22 NTU	-49.7 mV	20.74 ft	200.00 ml/min
1/19/2021 3:38 PM	40:00	7.39 pH	15.60 °C	0.51 µS/cm	1.54 mg/L	6.60 NTU	-99.3 mV	20.76 ft	200.00 ml/min
1/19/2021 3:43 PM	45:00	7.39 pH	15.83 °C	0.50 µS/cm	1.76 mg/L	6.79 NTU	-96.2 mV	20.78 ft	100.00 ml/min
1/19/2021 3:48 PM	50:00	7.40 pH	15.43 °C	0.50 µS/cm	1.81 mg/L	7.01 NTU	-90.9 mV	20.79 ft	100.00 ml/min
1/19/2021 3:53 PM	55:00	7.38 pH	15.16 °C	0.50 µS/cm	0.90 mg/L	4.52 NTU	-91.3 mV	20.72 ft	100.00 ml/min
1/19/2021 3:58 PM	01:00:00	7.39 pH	15.14 °C	0.49 µS/cm	1.30 mg/L	4.32 NTU	-87.6 mV	20.69 ft	100.00 ml/min
1/19/2021 4:03 PM	01:05:00	7.37 pH	15.65 °C	0.50 µS/cm	1.15 mg/L	4.04 NTU	-87.6 mV	20.68 ft	100.00 ml/min
1/19/2021 4:08 PM	01:10:00	7.39 pH	15.74 °C	0.49 µS/cm	1.59 mg/L	6.02 NTU	-82.9 mV	20.68 ft	100.00 ml/min

1/19/2021 4:13 PM	01:15:00	7.39 pH	15.88 °C	0.49 µS/cm	1.41 mg/L	4.49 NTU	-37.4 mV	20.71 ft	100.00 ml/min
1/19/2021 4:18 PM	01:20:00	7.39 pH	15.46 °C	0.49 µS/cm	1.11 mg/L	4.23 NTU	-80.1 mV	20.70 ft	100.00 ml/min
1/19/2021 4:23 PM	01:25:00	7.38 pH	15.21 °C	0.49 µS/cm	1.02 mg/L	3.20 NTU	-36.1 mV	20.74 ft	100.00 ml/min
1/19/2021 4:28 PM	01:30:00	7.39 pH	14.79 °C	0.49 µS/cm	0.98 mg/L	3.88 NTU	-78.1 mV	20.70 ft	100.00 ml/min

Samples

Sample ID:	Description:
HGWA-43D	Grab sample

Low-Flow Test Report:

Test Date / Time: 1/19/2021 2:36:54 PM
Project: GP-Plant Hammond (3)
Operator Name: Chad Russo

Location Name: HGWA-44D **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 103 ft** **Initial Depth to Water: 16.28 ft**	**Pump Type: Bladder** **Tubing Type: polyethylene** **Tubing Inner Diameter: 0.17 in** **Estimated Total Volume Pumped: 20500 ml** **Flow Cell Volume: 90 ml** **Final Flow Rate: 100 ml/min** **Final Draw Down: 2.32 ft**	**Instrument Used: Aqua TROLL 400** **Serial Number: 728634**

Test Notes:

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
1/19/2021 2:36 PM	00:00	7.83 pH	15.29 °C	506.34 µS/cm	1.46 mg/L	--	-91.3 mV	16.28 ft	200.00 ml/min
1/19/2021 2:41 PM	05:00	7.84 pH	16.03 °C	500.24 µS/cm	0.44 mg/L	82.00 NTU	-97.3 mV	17.19 ft	200.00 ml/min
1/19/2021 2:46 PM	10:00	7.85 pH	16.14 °C	495.76 µS/cm	0.31 mg/L	98.00 NTU	-98.2 mV	17.51 ft	200.00 ml/min
1/19/2021 2:51 PM	15:00	7.86 pH	16.16 °C	491.34 µS/cm	0.26 mg/L	77.00 NTU	-99.1 mV	18.04 ft	200.00 ml/min
1/19/2021 2:56 PM	20:00	7.85 pH	16.14 °C	489.93 µS/cm	0.22 mg/L	22.00 NTU	-100.6 mV	18.40 ft	200.00 ml/min
1/19/2021 3:01 PM	25:00	7.84 pH	15.74 °C	485.07 µS/cm	0.22 mg/L	44.40 NTU	-98.0 mV	18.35 ft	100.00 ml/min
1/19/2021 3:06 PM	30:00	7.84 pH	15.57 °C	484.09 µS/cm	0.24 mg/L	34.10 NTU	-98.8 mV	18.35 ft	100.00 ml/min
1/19/2021 3:11 PM	35:00	7.84 pH	15.58 °C	481.64 µS/cm	0.25 mg/L	33.00 NTU	-99.5 mV	18.45 ft	100.00 ml/min
1/19/2021 3:16 PM	40:00	7.84 pH	15.59 °C	479.88 µS/cm	0.24 mg/L	25.90 NTU	-99.5 mV	18.50 ft	100.00 ml/min
1/19/2021 3:21 PM	45:00	7.83 pH	15.59 °C	483.16 µS/cm	0.22 mg/L	18.50 NTU	-96.8 mV	18.55 ft	100.00 ml/min
1/19/2021 3:26 PM	50:00	7.83 pH	15.56 °C	482.00 µS/cm	0.20 mg/L	19.20 NTU	-96.5 mV	18.60 ft	100.00 ml/min
1/19/2021 3:31 PM	55:00	7.82 pH	15.40 °C	479.95 µS/cm	0.20 mg/L	16.50 NTU	-95.5 mV	18.60 ft	100.00 ml/min
1/19/2021 3:36 PM	01:00:00	7.83 pH	15.25 °C	482.48 µS/cm	0.20 mg/L	14.60 NTU	-95.8 mV	18.55 ft	100.00 ml/min
1/19/2021 3:41 PM	01:05:00	7.83 pH	15.24 °C	482.12 µS/cm	0.20 mg/L	14.60 NTU	-94.8 mV	18.55 ft	100.00 ml/min
1/19/2021 3:46 PM	01:10:00	7.83 pH	15.29 °C	481.12 µS/cm	0.19 mg/L	14.50 NTU	-95.1 mV	18.50 ft	100.00 ml/min

1/19/2021 3:51 PM	01:15:00	7.83 pH	15.29 °C	480.83 µS/cm	0.19 mg/L	12.90 NTU	-94.8 mV	18.55 ft	100.00 ml/min
1/19/2021 3:56 PM	01:20:00	7.83 pH	15.29 °C	479.33 µS/cm	0.18 mg/L	12.80 NTU	-94.6 mV	18.55 ft	100.00 ml/min
1/19/2021 4:01 PM	01:25:00	7.84 pH	15.29 °C	481.00 µS/cm	0.18 mg/L	11.40 NTU	-94.2 mV	18.55 ft	100.00 ml/min
1/19/2021 4:06 PM	01:30:00	7.84 pH	15.16 °C	479.47 µS/cm	0.18 mg/L	10.15 NTU	-93.1 mV	18.40 ft	100.00 ml/min
1/19/2021 4:11 PM	01:35:00	7.84 pH	15.03 °C	481.23 µS/cm	0.18 mg/L	13.40 NTU	-92.7 mV	18.50 ft	100.00 ml/min
1/19/2021 4:16 PM	01:40:00	7.84 pH	15.25 °C	478.27 µS/cm	0.18 mg/L	22.80 NTU	-93.1 mV	18.50 ft	100.00 ml/min
1/19/2021 4:21 PM	01:45:00	7.84 pH	15.14 °C	477.80 µS/cm	0.18 mg/L	20.30 NTU	-91.5 mV	18.50 ft	100.00 ml/min
1/19/2021 4:26 PM	01:50:00	7.84 pH	15.02 °C	475.66 µS/cm	0.18 mg/L	16.10 NTU	-90.8 mV	18.50 ft	100.00 ml/min
1/19/2021 4:31 PM	01:55:00	7.85 pH	14.91 °C	478.31 µS/cm	0.16 mg/L	12.39 NTU	-90.1 mV	18.60 ft	100.00 ml/min
1/19/2021 4:36 PM	02:00:00	7.84 pH	14.59 °C	482.53 µS/cm	0.15 mg/L	11.95 NTU	-88.5 mV	18.60 ft	100.00 ml/min
1/19/2021 4:41 PM	02:05:00	7.85 pH	14.52 °C	486.75 µS/cm	0.15 mg/L	12.84 NTU	-88.6 mV	18.60 ft	100.00 ml/min
1/19/2021 4:46 PM	02:10:00	7.86 pH	14.42 °C	483.95 µS/cm	0.15 mg/L	11.56 NTU	-87.4 mV	18.60 ft	100.00 ml/min
1/19/2021 4:51 PM	02:15:00	7.85 pH	14.41 °C	484.00 µS/cm	0.14 mg/L	11.67 NTU	-87.0 mV	18.60 ft	100.00 ml/min
1/19/2021 4:56 PM	02:20:00	7.86 pH	14.30 °C	483.23 µS/cm	0.15 mg/L	12.43 NTU	-158.9 mV	18.60 ft	100.00 ml/min
1/19/2021 5:01 PM	02:25:00	7.85 pH	14.34 °C	485.05 µS/cm	0.15 mg/L	12.12 NTU	-87.2 mV	18.60 ft	100.00 ml/min
1/19/2021 5:06 PM	02:30:00	7.87 pH	14.39 °C	484.74 µS/cm	0.14 mg/L	10.12 NTU	-159.9 mV	18.60 ft	100.00 ml/min
1/19/2021 5:11 PM	02:35:00	7.87 pH	14.34 °C	484.08 µS/cm	0.15 mg/L	10.94 NTU	-86.3 mV	18.60 ft	100.00 ml/min
1/19/2021 5:16 PM	02:40:00	7.87 pH	14.24 °C	489.94 µS/cm	0.15 mg/L	11.81 NTU	-158.9 mV	18.60 ft	100.00 ml/min
1/19/2021 5:21 PM	02:45:00	7.86 pH	14.25 °C	491.19 µS/cm	0.15 mg/L	11.14 NTU	-87.4 mV	18.60 ft	100.00 ml/min
1/19/2021 5:26 PM	02:50:00	7.85 pH	14.21 °C	497.24 µS/cm	0.16 mg/L	10.54 NTU	-84.7 mV	18.60 ft	100.00 ml/min
1/19/2021 5:31 PM	02:55:00	7.85 pH	14.41 °C	494.66 µS/cm	0.16 mg/L	10.42 NTU	-157.5 mV	18.60 ft	100.00 ml/min
1/19/2021 5:36 PM	03:00:00	7.86 pH	14.48 °C	493.23 µS/cm	0.16 mg/L	9.73 NTU	-158.4 mV	18.60 ft	100.00 ml/min

Samples

Sample ID:	Description:
HGWA-44D	Grab

Low-Flow Test Report:

Test Date / Time: 2/8/2021 3:34:14 PM
Project: Plant Hammond
Operator Name: Chad Russo

Location Name: HGWA-1 **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 22.5 ft** **Total Depth: 32.5 ft** **Initial Depth to Water: 13.59 ft**	**Pump Type: Bladder** **Tubing Type: Polyethylene** **Pump Intake From TOC: 28 ft** **Estimated Total Volume Pumped: 6.68 liter** **Flow Cell Volume: 90 ml** **Final Flow Rate: 200 ml/min** **Final Draw Down: 0.66 ft**	**Instrument Used: Aqua TROLL 400** **Serial Number: 728634**

Test 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 6010D/6020B/7470A).

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 10	+/- 10	+/- 0.3	
2/8/2021 3:34 PM	00:00	7.14 pH	17.08 °C	579.20 µS/cm	2.07 mg/L	--	70.9 mV	13.59 ft	200.00 ml/min
2/8/2021 3:39 PM	05:00	7.15 pH	17.13 °C	583.74 µS/cm	1.41 mg/L	--	47.2 mV	14.15 ft	200.00 ml/min
2/8/2021 3:40 PM	06:44	7.14 pH	17.19 °C	567.43 µS/cm	1.19 mg/L	8.62 NTU	46.0 mV	14.15 ft	200.00 ml/min
2/8/2021 3:45 PM	11:44	7.13 pH	17.27 °C	584.98 µS/cm	0.83 mg/L	4.92 NTU	53.6 mV	14.20 ft	200.00 ml/min
2/8/2021 3:50 PM	16:44	7.13 pH	17.34 °C	584.50 µS/cm	0.68 mg/L	3.22 NTU	35.0 mV	14.20 ft	200.00 ml/min
2/8/2021 3:55 PM	21:44	7.12 pH	17.40 °C	580.08 µS/cm	0.60 mg/L	2.44 NTU	31.9 mV	14.25 ft	200.00 ml/min
2/8/2021 3:57 PM	23:24	7.12 pH	17.43 °C	558.18 µS/cm	0.56 mg/L	2.44 NTU	31.9 mV	14.25 ft	200.00 ml/min
2/8/2021 4:02 PM	28:24	7.12 pH	17.43 °C	582.77 µS/cm	0.46 mg/L	2.08 NTU	34.2 mV	14.25 ft	200.00 ml/min
2/8/2021 4:07 PM	33:24	7.11 pH	17.39 °C	587.09 µS/cm	0.40 mg/L	1.74 NTU	29.3 mV	14.25 ft	200.00 ml/min

Samples

Sample ID:	Description:
HGWA-1	Grab

Low-Flow Test Report:

Test Date / Time: 2/9/2021 9:46:32 AM
Project: GP-Plant Hammond
Operator Name: Thomas Kessler

Location Name: HGWA-2 **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 17.95 ft** **Total Depth: 28.45 ft** **Initial Depth to Water: 8.1 ft**	**Pump Type: Bladder** **Tubing Type: Polyethylene** **Pump Intake From TOC: 22.95 ft** **Estimated Total Volume Pumped: 9.8 liter** **Flow Cell Volume: 90 ml** **Final Flow Rate: 200 ml/min** **Final Draw Down: 0.05 ft**	**Instrument Used: Aqua TROLL 400** **Serial Number: 728541**

Test 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 6010D/6020B/7470A).

Weather Conditions:
Cloudy, 45 degrees

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.03	
2/9/2021 9:46 AM	00:00	5.84 pH	14.99 °C	229.06 µS/cm	6.18 mg/L	26.90 NTU	101.0 mV	8.10 ft	200.00 ml/min
2/9/2021 9:49 AM	03:18	5.68 pH	16.11 °C	249.70 µS/cm	3.22 mg/L	24.00 NTU	103.9 mV	8.14 ft	200.00 ml/min
2/9/2021 9:50 AM	04:09	5.66 pH	16.20 °C	246.42 µS/cm	2.98 mg/L	24.00 NTU	94.6 mV	8.14 ft	200.00 ml/min
2/9/2021 9:56 AM	09:45	5.50 pH	16.47 °C	218.63 µS/cm	1.47 mg/L	17.60 NTU	108.7 mV	8.14 ft	200.00 ml/min
2/9/2021 10:01 AM	14:45	5.49 pH	16.52 °C	220.74 µS/cm	1.55 mg/L	12.50 NTU	97.9 mV	8.14 ft	200.00 ml/min
2/9/2021 10:06 AM	19:45	5.47 pH	16.56 °C	220.10 µS/cm	1.91 mg/L	12.30 NTU	99.6 mV	8.14 ft	200.00 ml/min
2/9/2021 10:11 AM	24:45	5.44 pH	16.62 °C	217.52 µS/cm	1.55 mg/L	8.22 NTU	97.3 mV	8.14 ft	200.00 ml/min
2/9/2021 10:16 AM	29:45	5.43 pH	16.64 °C	216.58 µS/cm	1.07 mg/L	7.46 NTU	103.0 mV	8.15 ft	200.00 ml/min
2/9/2021 10:21 AM	34:45	5.44 pH	16.69 °C	216.07 µS/cm	0.54 mg/L	6.90 NTU	104.8 mV	8.15 ft	200.00 ml/min
2/9/2021 10:26 AM	39:45	5.42 pH	16.56 °C	213.99 µS/cm	0.27 mg/L	4.67 NTU	103.4 mV	8.15 ft	200.00 ml/min
2/9/2021 10:31 AM	44:45	5.42 pH	16.53 °C	212.92 µS/cm	0.27 mg/L	4.71 NTU	105.1 mV	8.15 ft	200.00 ml/min
2/9/2021 10:36 AM	49:45	5.42 pH	16.48 °C	214.52 µS/cm	0.24 mg/L	4.32 NTU	105.5 mV	8.15 ft	200.00 ml/min

Samples

Sample ID:	Description:
HGWA-2	Grab Sample.

Low-Flow Test Report:

Test Date / Time: 2/9/2021 11:22:55 AM
Project: GP-Plant Hammond
Operator Name: Thomas Kessler

Location Name: HGWA-3 **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 34.87 ft** **Total Depth: 34.87 ft** **Initial Depth to Water: 7.7 ft**	**Pump Type: Bladder** **Tubing Type: Polyethylene** **Pump Intake From TOC: 39.87 ft** **Estimated Total Volume Pumped: 6 liter** **Flow Cell Volume: 90 ml** **Final Flow Rate: 200 ml/min** **Final Draw Down: 0 ft**	**Instrument Used: Aqua TROLL 400** **Serial Number: 728541**

Test 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 6010D/6020B/7470A).

Weather Conditions:
Sunny, 46 degrees

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.03	
2/9/2021 11:22 AM	00:00	7.01 pH	17.95 °C	451.18 µS/cm	1.75 mg/L	4.20 NTU	-33.3 mV	7.70 ft	200.00 ml/min
2/9/2021 11:27 AM	05:00	7.11 pH	17.08 °C	461.05 µS/cm	0.44 mg/L	2.49 NTU	-48.0 mV	7.70 ft	200.00 ml/min
2/9/2021 11:32 AM	10:00	7.15 pH	17.23 °C	457.34 µS/cm	0.33 mg/L	1.24 NTU	-53.3 mV	7.70 ft	200.00 ml/min
2/9/2021 11:37 AM	15:00	7.17 pH	17.28 °C	455.26 µS/cm	0.27 mg/L	1.54 NTU	-92.6 mV	7.70 ft	200.00 ml/min
2/9/2021 11:42 AM	20:00	7.20 pH	17.28 °C	455.00 µS/cm	0.27 mg/L	1.52 NTU	-95.6 mV	7.70 ft	200.00 ml/min
2/9/2021 11:47 AM	25:00	7.22 pH	17.40 °C	453.59 µS/cm	0.23 mg/L	1.39 NTU	-97.9 mV	7.70 ft	200.00 ml/min
2/9/2021 11:52 AM	30:00	7.23 pH	17.54 °C	451.62 µS/cm	0.22 mg/L	0.86 NTU	-99.4 mV	7.70 ft	200.00 ml/min

Samples

Sample ID:	Description:
HGWA-3	Grab Sample.

Low-Flow Test Report:

Test Date / Time: 2/8/2021 3:34:36 PM **Project:** GP-Plant Hammond
Operator Name: Aaron Reeder

Location Name: HGWA-4 **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 14.88 ft Initial** **Total Depth: 24.88 ft** **Depth to Water: 7.50 ft**	**Pump Type: QED MP50** **Tubing Type: polyethylene** **Tubing Inner Diameter: 0.17 in** **Estimated Total Volume Pumped: 4 liter** **Flow Cell Volume: 90 ml** **Final Flow Rate: 200 ml/min Final Draw Down: 1.50 ft**	**Instrument Used: Aqua TROLL 400** **Serial Number: 728623**

Test 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 6010D/6020B/7470A).

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 5	
2/8/2021 3:34 PM	00:00	5.01 pH	16.67 °C	67.94 µS/cm	2.47 mg/L	--	142.8 mV	7.50 ft	200.00 ml/min
2/8/2021 3:39 PM	05:00	4.99 pH	16.70 °C	67.76 µS/cm	2.37 mg/L	4.83 NTU	141.2 mV	6.00 ft	200.00 ml/min
2/8/2021 3:44 PM	10:00	4.97 pH	16.72 °C	67.06 µS/cm	2.30 mg/L	4.53 NTU	140.1 mV	6.00 ft	200.00 ml/min
2/8/2021 3:49 PM	15:00	4.95 pH	16.67 °C	67.26 µS/cm	2.28 mg/L	3.47 NTU	140.0 mV	6.00 ft	200.00 ml/min
2/8/2021 3:54 PM	20:00	4.94 pH	16.79 °C	67.39 µS/cm	2.25 mg/L	4.16 NTU	139.7 mV	6.00 ft	200.00 ml/min

Samples

Sample ID:	Description:
HGWA-4	Grab Sample.

Low-Flow Test Report:

Test Date / Time: 2/9/2021 10:01:52 AM
Project: GP-Plant Hammond
Operator Name: Aaron Reeder

Location Name: HGWA-5 **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 17.95 ft** **Total Depth: 27.95 ft** **Initial Depth to Water: 5.5 ft**	**Pump Type: QED MP50** **Tubing Type: polyethylene** **Tubing Inner Diameter: 0.17 in** **Pump Intake From TOC: 22.95 ft** **Estimated Total Volume Pumped: 9 liter** **Flow Cell Volume: 90 ml** **Final Flow Rate: 200 ml/min** **Final Draw Down: 0.9 ft**	**Instrument Used: Aqua TROLL 400** **Serial Number: 728623**

Test 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 6010D/6020B/7470A).

Weather Conditions:
Sunny

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 5	
2/9/2021 10:01 AM	00:00	6.27 pH	16.34 °C	208.31 µS/cm	2.26 mg/L	--	69.5 mV	5.50 ft	200.00 ml/min
2/9/2021 10:06 AM	05:00	6.28 pH	16.69 °C	211.41 µS/cm	1.10 mg/L	7.74 NTU	59.0 mV	6.40 ft	200.00 ml/min
2/9/2021 10:11 AM	10:00	6.31 pH	16.74 °C	214.46 µS/cm	0.84 mg/L	6.71 NTU	55.2 mV	6.45 ft	200.00 ml/min
2/9/2021 10:16 AM	15:00	6.31 pH	16.65 °C	216.53 µS/cm	0.71 mg/L	6.59 NTU	49.4 mV	6.40 ft	200.00 ml/min
2/9/2021 10:21 AM	20:00	6.34 pH	16.53 °C	216.90 µS/cm	0.72 mg/L	6.67 NTU	47.5 mV	6.40 ft	200.00 ml/min
2/9/2021 10:26 AM	25:00	6.33 pH	16.63 °C	215.21 µS/cm	0.57 mg/L	6.55 NTU	46.3 mV	6.40 ft	200.00 ml/min
2/9/2021 10:31 AM	30:00	6.35 pH	16.66 °C	219.36 µS/cm	0.53 mg/L	7.02 NTU	43.0 mV	6.40 ft	200.00 ml/min
2/9/2021 10:36 AM	35:00	6.36 pH	16.58 °C	220.82 µS/cm	0.51 mg/L	6.21 NTU	40.3 mV	6.40 ft	200.00 ml/min
2/9/2021 10:41 AM	40:00	6.35 pH	16.61 °C	218.16 µS/cm	0.49 mg/L	6.09 NTU	37.2 mV	6.40 ft	200.00 ml/min
2/9/2021 10:46 AM	45:00	6.35 pH	16.66 °C	216.84 µS/cm	0.48 mg/L	4.82 NTU	37.2 mV	6.40 ft	200.00 ml/min

Samples

Sample ID:	Description:

HGWA-5	Grab Sample.

Low-Flow Test Report:

Test Date / Time: 2/9/2021 11:20:40 AM
Project: GP-Plant Hammond
Operator Name: Aaron Reeder

Location Name: HGWA-6 **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 40.52 ft** **Total Depth: 50.52 ft** **Initial Depth to Water: 5.41 ft**	**Pump Type: QED MP50** **Tubing Type: polyethylene** **Tubing Inner Diameter: 0.17 in** **Pump Intake From TOC: 45.52 ft** **Estimated Total Volume Pumped: 8 liter** **Flow Cell Volume: 90 ml** **Final Flow Rate: 200 ml/min Final Draw Down: 0.84 ft**	**Instrument Used: Aqua TROLL 400** **Serial Number: 728623**

Test 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 6010D/6020B/7470A).

Weather Conditions:
Sunny

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 5	
2/9/2021 11:20 AM	00:00	7.07 pH	18.48 °C	365.44 µS/cm	2.66 mg/L	--	23.1 mV	5.41 ft	200.00 ml/min
2/9/2021 11:25 AM	05:00	7.29 pH	17.55 °C	373.51 µS/cm	1.09 mg/L	8.98 NTU	3.6 mV	6.55 ft	200.00 ml/min
2/9/2021 11:30 AM	10:00	7.38 pH	17.54 °C	183.83 µS/cm	1.28 mg/L	2.19 NTU	-7.3 mV	6.70 ft	200.00 ml/min
2/9/2021 11:35 AM	15:00	7.41 pH	17.55 °C	371.06 µS/cm	1.08 mg/L	1.85 NTU	-17.9 mV	6.50 ft	200.00 ml/min
2/9/2021 11:40 AM	20:00	7.42 pH	17.72 °C	372.85 µS/cm	0.92 mg/L	1.41 NTU	-27.7 mV	6.40 ft	200.00 ml/min
2/9/2021 11:45 AM	25:00	7.42 pH	17.76 °C	373.09 µS/cm	0.72 mg/L	1.15 NTU	-36.6 mV	6.40 ft	200.00 ml/min
2/9/2021 11:50 AM	30:00	7.43 pH	17.81 °C	372.43 µS/cm	0.57 mg/L	0.96 NTU	-42.2 mV	6.40 ft	200.00 ml/min
2/9/2021 11:55 AM	35:00	7.42 pH	17.87 °C	372.96 µS/cm	0.51 mg/L	1.05 NTU	-47.7 mV	6.25 ft	200.00 ml/min
2/9/2021 12:00 PM	40:00	7.40 pH	17.86 °C	372.49 µS/cm	0.46 mg/L	1.14 NTU	-48.5 mV	6.25 ft	200.00 ml/min

Samples

Sample ID:	Description:

HGWA-6	Grab Sa,[;e.

Low-Flow Test Report:

Test Date / Time: 2/8/2021 3:40:33 PM
Project: GP-Plant Hammond
Operator Name: Thomas Kessler

Location Name: HGWA-42D **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 58.03 ft** **Total Depth: 67.62 ft** **Initial Depth to Water: 10.42 ft**	**Pump Type: Bladder** **Tubing Type: Polyethylene** **Pump Intake From TOC: 63.3 m** **Estimated Total Volume Pumped: 19.6 liter** **Flow Cell Volume: 90 ml** **Final Flow Rate: 200 ml/min** **Final Draw Down: 1.98 ft**	**Instrument Used: Aqua TROLL 400** **Serial Number: 728541**

Test 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 6010D/6020B/7470A).

Weather Conditions:
Sunny, 61 degrees

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.03	
2/8/2021 3:40 PM	00:00	7.51 pH	20.00 °C	278.54 µS/cm	3.29 mg/L	29.40 NTU	-1.2 mV	10.42 ft	200.00 ml/min
2/8/2021 3:42 PM	02:13	7.52 pH	18.27 °C	296.45 µS/cm	3.73 mg/L	18.20 NTU	-27.1 mV	11.30 ft	200.00 ml/min
2/8/2021 3:47 PM	06:36	7.54 pH	18.17 °C	286.51 µS/cm	1.84 mg/L	12.30 NTU	-37.3 mV	11.50 ft	200.00 ml/min
2/8/2021 3:52 PM	11:36	7.56 pH	18.20 °C	292.59 µS/cm	0.94 mg/L	11.30 NTU	-40.8 mV	11.90 ft	200.00 ml/min
2/8/2021 3:57 PM	16:36	7.58 pH	18.24 °C	290.47 µS/cm	2.01 mg/L	7.95 NTU	-42.9 mV	12.10 ft	200.00 ml/min
2/8/2021 4:02 PM	21:36	7.59 pH	18.25 °C	290.76 µS/cm	1.39 mg/L	5.51 NTU	-44.9 mV	12.20 ft	200.00 ml/min
2/8/2021 4:03 PM	22:45	7.59 pH	18.24 °C	290.31 µS/cm	1.09 mg/L	4.93 NTU	-45.0 mV	12.20 ft	200.00 ml/min
2/8/2021 4:06 PM	25:27	7.59 pH	18.21 °C	289.85 µS/cm	1.84 mg/L	5.54 NTU	-47.6 mV	12.27 ft	200.00 ml/min
2/8/2021 4:06 PM	26:03	7.59 pH	18.22 °C	289.52 µS/cm	2.04 mg/L	5.54 NTU	-44.4 mV	12.27 ft	200.00 ml/min
2/8/2021 4:07 PM	27:08	7.59 pH	18.25 °C	289.65 µS/cm	2.17 mg/L	5.54 NTU	-45.6 mV	12.27 ft	200.00 ml/min
2/8/2021 4:10 PM	30:10	7.60 pH	18.21 °C	289.56 µS/cm	2.35 mg/L	5.43 NTU	-50.5 mV	12.30 ft	200.00 ml/min
2/8/2021 4:13 PM	33:23	7.59 pH	18.17 °C	290.45 µS/cm	3.16 mg/L	4.97 NTU	-52.5 mV	12.30 ft	200.00 ml/min
2/8/2021 4:18 PM	38:23	7.60 pH	18.03 °C	289.53 µS/cm	2.88 mg/L	4.72 NTU	-51.3 mV	12.35 ft	200.00 ml/min

2/8/2021 4:23 PM	43:23	7.60 pH	17.95 °C	290.88 µS/cm	3.23 mg/L	4.51 NTU	-104.2 mV	12.35 ft	200.00 ml/min
2/8/2021 4:28 PM	48:23	7.60 pH	17.92 °C	291.88 µS/cm	2.37 mg/L	4.10 NTU	-53.0 mV	12.35 ft	200.00 ml/min
2/8/2021 4:33 PM	53:23	7.61 pH	17.90 °C	293.18 µS/cm	1.59 mg/L	4.07 NTU	-109.6 mV	12.40 ft	200.00 ml/min
2/8/2021 4:38 PM	58:23	7.62 pH	17.90 °C	292.68 µS/cm	1.59 mg/L	4.51 NTU	-55.6 mV	12.40 ft	200.00 ml/min
2/8/2021 4:43 PM	01:03:23	7.61 pH	17.87 °C	293.34 µS/cm	2.92 mg/L	4.44 NTU	-55.5 mV	12.40 ft	200.00 ml/min
2/8/2021 4:48 PM	01:08:23	7.62 pH	17.81 °C	293.23 µS/cm	1.64 mg/L	4.37 NTU	-55.0 mV	12.40 ft	200.00 ml/min
2/8/2021 4:53 PM	01:13:23	7.63 pH	17.79 °C	293.15 µS/cm	2.41 mg/L	3.82 NTU	-57.2 mV	12.40 ft	200.00 ml/min
2/8/2021 4:58 PM	01:18:23	7.63 pH	17.77 °C	293.43 µS/cm	0.82 mg/L	3.96 NTU	-58.8 mV	12.40 ft	200.00 ml/min
2/8/2021 5:03 PM	01:23:23	7.63 pH	17.77 °C	293.42 µS/cm	1.04 mg/L	4.00 NTU	-59.2 mV	12.40 ft	200.00 ml/min
2/8/2021 5:08 PM	01:28:23	7.63 pH	17.77 °C	294.54 µS/cm	1.88 mg/L	4.13 NTU	-114.8 mV	12.40 ft	200.00 ml/min
2/8/2021 5:13 PM	01:33:23	7.63 pH	17.74 °C	293.09 µS/cm	0.93 mg/L	3.88 NTU	-60.8 mV	12.40 ft	200.00 ml/min
2/8/2021 5:18 PM	01:38:23	7.64 pH	17.73 °C	294.07 µS/cm	0.86 mg/L	3.74 NTU	-60.9 mV	12.45 ft	200.00 ml/min
2/8/2021 5:23 PM	01:43:23	7.64 pH	17.73 °C	292.51 µS/cm	0.36 mg/L	3.82 NTU	-61.7 mV	12.45 ft	200.00 ml/min

Samples

Sample ID:	Description:
HGWA-42D	Grab Sample.

Low-Flow Test Report:

Test Date / Time: 2/9/2021 2:33:12 PM
Project: GP-Plant Hammond
Operator Name: Chad Russo

Location Name: HGWA-43D **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 51.25 ft** **Total Depth: 61.25 ft** **Initial Depth to Water: 13.39 ft**	**Pump Type: Bladder** **Tubing Type: Polyethylene** **Pump Intake From TOC: 56 ft** **Estimated Total Volume Pumped: 20000 ml** **Flow Cell Volume: 90 ml** **Final Flow Rate: 100 ml/min** **Final Draw Down: 1.18 ft**	**Instrument Used: Aqua TROLL 400** **Serial Number: 728634**

Test 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 6010D/6020B/7470A).

Weather Conditions:
Sunny, 46 degrees.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 10	+/- 10	+/- 0.3	
2/9/2021 2:33 PM	00:00	7.48 pH	20.47 °C	499.44 µS/cm	2.96 mg/L	--	-41.6 mV	13.39 ft	100.00 ml/min
2/9/2021 2:38 PM	05:00	7.44 pH	18.98 °C	502.27 µS/cm	1.31 mg/L	84.70 NTU	-44.5 mV	14.49 ft	100.00 ml/min
2/9/2021 2:43 PM	10:00	7.43 pH	19.03 °C	500.77 µS/cm	0.88 mg/L	97.20 NTU	-98.8 mV	14.56 ft	100.00 ml/min
2/9/2021 2:48 PM	15:00	7.44 pH	19.04 °C	497.98 µS/cm	0.75 mg/L	101.90 NTU	-50.5 mV	14.56 ft	100.00 ml/min
2/9/2021 2:53 PM	20:00	7.44 pH	18.91 °C	492.45 µS/cm	0.66 mg/L	92.80 NTU	-48.1 mV	14.60 ft	100.00 ml/min
2/9/2021 2:58 PM	25:00	7.45 pH	19.05 °C	485.46 µS/cm	0.60 mg/L	91.20 NTU	-47.6 mV	14.51 ft	100.00 ml/min
2/9/2021 3:03 PM	30:00	7.45 pH	18.73 °C	482.58 µS/cm	0.55 mg/L	96.10 NTU	-97.3 mV	14.56 ft	100.00 ml/min
2/9/2021 3:08 PM	35:00	7.44 pH	18.06 °C	483.81 µS/cm	0.46 mg/L	89.20 NTU	-43.3 mV	14.56 ft	100.00 ml/min
2/9/2021 3:13 PM	40:00	7.45 pH	17.89 °C	491.52 µS/cm	0.57 mg/L	89.20 NTU	-91.6 mV	14.56 ft	100.00 ml/min
2/9/2021 3:18 PM	45:00	7.44 pH	17.67 °C	491.90 µS/cm	0.37 mg/L	97.50 NTU	-91.6 mV	14.66 ft	100.00 ml/min
2/9/2021 3:23 PM	50:00	7.45 pH	17.57 °C	488.23 µS/cm	0.26 mg/L	73.40 NTU	-91.0 mV	14.85 ft	100.00 ml/min
2/9/2021 3:28 PM	55:00	7.44 pH	17.44 °C	484.07 µS/cm	0.22 mg/L	63.20 NTU	-39.5 mV	15.00 ft	100.00 ml/min

2/9/2021 3:48 PM	01:15:00	7.44 pH	17.10 °C	472.09 µS/cm	0.23 mg/L	38.70 NTU	-33.1 mV	14.80 ft	100.00 ml/min
2/9/2021 3:53 PM	01:20:00	7.45 pH	17.09 °C	470.08 µS/cm	0.20 mg/L	30.30 NTU	-76.8 mV	14.77 ft	100.00 ml/min
2/9/2021 3:58 PM	01:25:00	7.44 pH	17.08 °C	469.73 µS/cm	0.20 mg/L	28.50 NTU	-30.1 mV	14.69 ft	100.00 ml/min
2/9/2021 4:03 PM	01:30:00	7.44 pH	17.04 °C	468.72 µS/cm	0.19 mg/L	28.80 NTU	-30.4 mV	14.62 ft	100.00 ml/min
2/9/2021 4:08 PM	01:35:00	7.45 pH	17.06 °C	469.22 µS/cm	0.19 mg/L	29.10 NTU	-30.0 mV	14.62 ft	100.00 ml/min
2/9/2021 4:13 PM	01:40:00	7.45 pH	17.09 °C	469.93 µS/cm	0.18 mg/L	28.70 NTU	-73.5 mV	14.62 ft	100.00 ml/min
2/9/2021 4:18 PM	01:45:00	7.44 pH	17.22 °C	470.76 µS/cm	0.18 mg/L	26.40 NTU	-29.8 mV	14.62 ft	100.00 ml/min
2/9/2021 4:23 PM	01:50:00	7.44 pH	17.22 °C	469.98 µS/cm	0.17 mg/L	24.80 NTU	-28.7 mV	14.62 ft	100.00 ml/min
2/9/2021 4:28 PM	01:55:00	7.45 pH	17.16 °C	469.46 µS/cm	0.17 mg/L	22.50 NTU	-29.0 mV	14.62 ft	100.00 ml/min
2/9/2021 4:33 PM	02:00:00	7.44 pH	16.95 °C	470.80 µS/cm	0.16 mg/L	23.80 NTU	-27.6 mV	14.57 ft	100.00 ml/min
2/9/2021 4:38 PM	02:05:00	7.44 pH	16.86 °C	472.08 µS/cm	0.16 mg/L	22.80 NTU	-27.7 mV	14.57 ft	100.00 ml/min
2/9/2021 4:43 PM	02:10:00	7.45 pH	16.86 °C	471.18 µS/cm	0.15 mg/L	21.60 NTU	-27.6 mV	14.57 ft	100.00 ml/min
2/9/2021 4:48 PM	02:15:00	7.44 pH	16.81 °C	472.85 µS/cm	0.14 mg/L	20.80 NTU	-27.1 mV	14.57 ft	100.00 ml/min
2/9/2021 4:53 PM	02:20:00	7.45 pH	16.73 °C	481.44 µS/cm	0.31 mg/L	28.40 NTU	-66.8 mV	14.57 ft	100.00 ml/min
2/9/2021 4:58 PM	02:25:00	7.45 pH	16.64 °C	479.86 µS/cm	0.28 mg/L	20.10 NTU	-25.7 mV	14.57 ft	100.00 ml/min
2/9/2021 5:03 PM	02:30:00	7.44 pH	16.64 °C	477.43 µS/cm	0.25 mg/L	16.70 NTU	-24.9 mV	14.57 ft	100.00 ml/min
2/9/2021 5:08 PM	02:35:00	7.44 pH	16.60 °C	476.94 µS/cm	0.23 mg/L	15.80 NTU	-25.0 mV	14.57 ft	100.00 ml/min
2/9/2021 5:13 PM	02:40:00	7.45 pH	16.59 °C	478.67 µS/cm	0.20 mg/L	14.20 NTU	-24.5 mV	14.57 ft	100.00 ml/min
2/9/2021 5:18 PM	02:45:00	7.44 pH	16.55 °C	475.63 µS/cm	0.17 mg/L	13.90 NTU	-24.0 mV	14.57 ft	100.00 ml/min
2/9/2021 5:23 PM	02:50:00	7.44 pH	16.57 °C	475.73 µS/cm	0.16 mg/L	13.60 NTU	-24.4 mV	14.57 ft	100.00 ml/min
2/9/2021 5:28 PM	02:55:00	7.44 pH	16.55 °C	472.82 µS/cm	0.15 mg/L	12.60 NTU	-24.2 mV	14.57 ft	100.00 ml/min
2/9/2021 5:33 PM	03:00:00	7.44 pH	16.55 °C	473.54 µS/cm	0.14 mg/L	11.30 NTU	-23.9 mV	14.57 ft	100.00 ml/min
2/9/2021 5:38 PM	03:05:00	7.44 pH	16.50 °C	471.84 µS/cm	0.13 mg/L	11.00 NTU	-23.7 mV	14.57 ft	100.00 ml/min
2/9/2021 5:43 PM	03:10:00	7.45 pH	16.46 °C	470.56 µS/cm	0.12 mg/L	11.97 NTU	-23.7 mV	14.57 ft	100.00 ml/min
2/9/2021 5:48 PM	03:15:00	7.45 pH	16.41 °C	470.42 µS/cm	0.12 mg/L	11.00 NTU	-23.4 mV	14.57 ft	100.00 ml/min
2/9/2021 5:53 PM	03:20:00	7.44 pH	16.37 °C	471.57 µS/cm	0.11 mg/L	9.22 NTU	-23.2 mV	14.57 ft	100.00 ml/min

Samples

Sample ID:	Description:

HGWA-43D	Grab Sample.

Low-Flow Test Report:

Test Date / Time: 2/9/2021 10:04:37 AM
Project: Plant Hammond
Operator Name: Chad Russo

Location Name: HGWA-44D **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 103.28 ft** **Total Depth: 113.28 ft** **Initial Depth to Water: 12.11 ft**	**Pump Type: Bladder** **Tubing Type: Polyethylene** **Pump Intake From TOC: 108 ft** **Estimated Total Volume Pumped: 18 liter** **Flow Cell Volume: 90 ml** **Final Flow Rate: 100 ml/min** **Final Draw Down: 3.35 ft**	**Instrument Used: Aqua TROLL 400** **Serial Number: 728634**

Test 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 6010D/6020B/7470A).

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 10	+/- 10	+/- 0.3	
2/9/2021 10:04 AM	00:00	7.71 pH	15.52 °C	501.55 µS/cm	1.51 mg/L	--	-68.7 mV	12.11 ft	100.00 ml/min
2/9/2021 10:09 AM	05:00	7.79 pH	15.93 °C	498.49 µS/cm	0.84 mg/L	25.00 NTU	-76.9 mV	13.61 ft	100.00 ml/min
2/9/2021 10:14 AM	10:00	7.82 pH	15.58 °C	495.77 µS/cm	0.64 mg/L	19.90 NTU	-147.0 mV	13.85 ft	100.00 ml/min
2/9/2021 10:19 AM	15:00	7.83 pH	15.48 °C	494.19 µS/cm	0.56 mg/L	16.90 NTU	-80.8 mV	14.08 ft	100.00 ml/min
2/9/2021 10:24 AM	20:00	7.83 pH	15.42 °C	492.43 µS/cm	0.52 mg/L	13.30 NTU	-83.2 mV	14.26 ft	100.00 ml/min
2/9/2021 10:29 AM	25:00	7.84 pH	15.41 °C	490.58 µS/cm	0.50 mg/L	11.80 NTU	-84.5 mV	14.41 ft	100.00 ml/min
2/9/2021 10:34 AM	30:00	7.84 pH	15.41 °C	489.95 µS/cm	0.47 mg/L	12.48 NTU	-84.8 mV	14.56 ft	100.00 ml/min
2/9/2021 10:39 AM	35:00	7.83 pH	15.47 °C	486.80 µS/cm	0.45 mg/L	11.22 NTU	-153.6 mV	14.64 ft	100.00 ml/min
2/9/2021 10:44 AM	40:00	7.83 pH	15.49 °C	486.36 µS/cm	0.44 mg/L	9.71 NTU	-82.8 mV	14.76 ft	100.00 ml/min
2/9/2021 10:49 AM	45:00	7.82 pH	15.70 °C	484.60 µS/cm	0.40 mg/L	9.43 NTU	-82.1 mV	14.83 ft	100.00 ml/min
2/9/2021 10:54 AM	50:00	7.82 pH	15.94 °C	483.12 µS/cm	0.35 mg/L	9.21 NTU	-80.8 mV	14.91 ft	100.00 ml/min
2/9/2021 10:59 AM	55:00	7.81 pH	16.28 °C	485.63 µS/cm	0.32 mg/L	9.30 NTU	-79.5 mV	14.98 ft	100.00 ml/min
2/9/2021 11:04 AM	01:00:00	7.82 pH	16.19 °C	484.56 µS/cm	0.30 mg/L	7.57 NTU	-78.1 mV	15.05 ft	100.00 ml/min
2/9/2021 11:09 AM	01:05:00	7.82 pH	16.59 °C	486.83 µS/cm	0.29 mg/L	7.49 NTU	-77.0 mV	15.11 ft	100.00 ml/min
2/9/2021 11:14 AM	01:10:00	7.81 pH	16.83 °C	483.83 µS/cm	0.26 mg/L	6.32 NTU	-142.7 mV	15.17 ft	100.00 ml/min

2/9/2021 11:19 AM	01:15:00	7.81 pH	16.73 °C	483.69 µS/cm	0.25 mg/L	6.87 NTU	-75.3 mV	15.22 ft	100.00 ml/min
2/9/2021 11:24 AM	01:20:00	7.82 pH	16.59 °C	485.43 µS/cm	0.24 mg/L	7.87 NTU	-73.7 mV	15.28 ft	100.00 ml/min
2/9/2021 11:29 AM	01:25:00	7.81 pH	16.48 °C	488.10 µS/cm	0.24 mg/L	7.50 NTU	-72.8 mV	15.30 ft	100.00 ml/min
2/9/2021 11:34 AM	01:30:00	7.82 pH	16.47 °C	487.19 µS/cm	0.23 mg/L	7.69 NTU	-73.4 mV	15.35 ft	100.00 ml/min
2/9/2021 11:39 AM	01:35:00	7.81 pH	16.55 °C	488.27 µS/cm	0.21 mg/L	8.18 NTU	-72.7 mV	15.40 ft	100.00 ml/min
2/9/2021 11:44 AM	01:40:00	7.81 pH	16.46 °C	488.63 µS/cm	0.21 mg/L	8.76 NTU	-71.5 mV	15.42 ft	100.00 ml/min
2/9/2021 11:49 AM	01:45:00	7.81 pH	16.36 °C	489.31 µS/cm	0.21 mg/L	8.26 NTU	-136.4 mV	15.45 ft	100.00 ml/min
2/9/2021 11:54 AM	01:50:00	7.83 pH	16.33 °C	493.57 µS/cm	0.19 mg/L	7.30 NTU	-70.1 mV	15.50 ft	100.00 ml/min
2/9/2021 11:59 AM	01:55:00	7.81 pH	16.41 °C	502.52 µS/cm	0.20 mg/L	8.80 NTU	-69.3 mV	15.51 ft	100.00 ml/min
2/9/2021 12:04 PM	02:00:00	7.82 pH	16.41 °C	502.73 µS/cm	0.20 mg/L	9.03 NTU	-67.4 mV	15.53 ft	100.00 ml/min
2/9/2021 12:09 PM	02:05:00	7.82 pH	16.33 °C	503.19 µS/cm	0.20 mg/L	9.59 NTU	-68.4 mV	15.56 ft	100.00 ml/min
2/9/2021 12:14 PM	02:10:00	7.83 pH	16.37 °C	502.88 µS/cm	0.18 mg/L	9.27 NTU	-68.8 mV	15.56 ft	100.00 ml/min
2/9/2021 12:19 PM	02:15:00	7.82 pH	16.41 °C	504.39 µS/cm	0.17 mg/L	9.58 NTU	-67.8 mV	15.60 ft	100.00 ml/min
2/9/2021 12:24 PM	02:20:00	7.83 pH	16.45 °C	504.74 µS/cm	0.17 mg/L	8.78 NTU	-67.3 mV	15.60 ft	100.00 ml/min
2/9/2021 12:29 PM	02:25:00	7.83 pH	16.52 °C	505.67 µS/cm	0.19 mg/L	8.60 NTU	-66.6 mV	15.60 ft	100.00 ml/min
2/9/2021 12:34 PM	02:30:00	7.83 pH	16.91 °C	505.02 µS/cm	0.18 mg/L	9.45 NTU	-69.1 mV	15.52 ft	100.00 ml/min
2/9/2021 12:39 PM	02:35:00	7.83 pH	17.15 °C	506.24 µS/cm	0.18 mg/L	8.90 NTU	-69.1 mV	15.50 ft	100.00 ml/min
2/9/2021 12:44 PM	02:40:00	7.83 pH	17.31 °C	505.12 µS/cm	0.18 mg/L	8.78 NTU	-68.6 mV	15.48 ft	100.00 ml/min
2/9/2021 12:49 PM	02:45:00	7.83 pH	17.22 °C	507.67 µS/cm	0.19 mg/L	8.84 NTU	-68.7 mV	15.46 ft	100.00 ml/min
2/9/2021 12:54 PM	02:50:00	7.84 pH	17.05 °C	509.41 µS/cm	0.18 mg/L	8.37 NTU	-68.6 mV	15.46 ft	100.00 ml/min
2/9/2021 12:59 PM	02:55:00	7.84 pH	16.89 °C	508.68 µS/cm	0.17 mg/L	8.21 NTU	-69.0 mV	15.46 ft	100.00 ml/min
2/9/2021 1:04 PM	03:00:00	7.84 pH	16.84 °C	507.84 µS/cm	0.17 mg/L	7.69 NTU	-133.0 mV	15.46 ft	100.00 ml/min

Samples

Sample ID:	Description:
HGWA-44D	Grab Sample.

Low-Flow Test Report:

Test Date / Time: 2/11/2021 2:47:03 PM
Project: GP-Plant Hammond
Operator Name: Aaron Reeder

Location Name: HGWC-14 **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 33 ft** **Total Depth: 43 ft** **Initial Depth to Water: 28.5 ft**	**Pump Type: QED MP50** **Tubing Type: polyethylene** **Tubing Inner Diameter: 0.17 in** **Pump Intake From TOC: 38 ft** **Estimated Total Volume Pumped: 3.75 liter** **Flow Cell Volume: 90 ml** **Final Flow Rate: 150 ml/min** **Final Draw Down: 0.1 ft**	**Instrument Used: Aqua TROLL 400** **Serial Number: 728623**

Test 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 6010D/6020B/7470A).

Weather Conditions:
Cloudy and rain

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 5	
2/11/2021 2:47 PM	00:00	5.65 pH	16.43 °C	2,935.2 µS/cm	8.53 mg/L	--	107.8 mV	28.50 ft	150.00 ml/min
2/11/2021 2:52 PM	05:00	4.79 pH	18.71 °C	2,878.7 µS/cm	1.59 mg/L	12.10 NTU	113.6 mV	28.60 ft	150.00 ml/min
2/11/2021 2:57 PM	10:00	4.77 pH	19.15 °C	2,910.7 µS/cm	1.14 mg/L	5.56 NTU	122.0 mV	28.60 ft	150.00 ml/min
2/11/2021 3:02 PM	15:00	4.80 pH	19.24 °C	2,855.9 µS/cm	0.90 mg/L	3.34 NTU	124.8 mV	28.60 ft	150.00 ml/min
2/11/2021 3:07 PM	20:00	4.82 pH	19.26 °C	2,912.3 µS/cm	0.88 mg/L	3.11 NTU	122.9 mV	28.60 ft	150.00 ml/min
2/11/2021 3:12 PM	25:00	4.84 pH	19.28 °C	2,901.2 µS/cm	0.83 mg/L	1.44 NTU	128.7 mV	28.60 ft	150.00 ml/min

Samples

Sample ID:	Description:
HGWC-14	Grab Sample.

Low-Flow Test Report:

Test Date / Time: 2/12/2021 2:20:50 PM
Project: Plant Hammond
Operator Name: Chad Russo

Location Name: HGWC-15 **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 28 ft** **Total Depth: 38 ft** **Initial Depth to Water: 17.34 ft**	**Pump Type: Bladder** **Tubing Type: Polyethylene** **Pump Intake From TOC: 33 ft** **Estimated Total Volume Pumped: 7 liter** **Flow Cell Volume: 90 ml** **Final Flow Rate: 200 ml/min** **Final Draw Down: 0.56 ft**	**Instrument Used: Aqua TROLL 400** **Serial Number: 728634**

Test 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 6010D/6020B/7470A).

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 10	+/- 10	+/- 0.3	
2/12/2021 2:20 PM	00:00	6.51 pH	16.94 °C	1,329.3 µS/cm	2.51 mg/L	--	118.5 mV	17.34 ft	200.00 ml/min
2/12/2021 2:25 PM	05:00	6.20 pH	17.45 °C	1,278.3 µS/cm	2.21 mg/L	8.97 NTU	160.5 mV	17.90 ft	200.00 ml/min
2/12/2021 2:30 PM	10:00	6.05 pH	17.53 °C	1,261.2 µS/cm	0.91 mg/L	4.40 NTU	130.7 mV	17.90 ft	200.00 ml/min
2/12/2021 2:35 PM	15:00	6.01 pH	17.61 °C	1,239.1 µS/cm	0.73 mg/L	3.26 NTU	208.7 mV	17.90 ft	200.00 ml/min
2/12/2021 2:40 PM	20:00	6.00 pH	17.62 °C	1,245.6 µS/cm	0.78 mg/L	2.30 NTU	121.8 mV	17.90 ft	200.00 ml/min
2/12/2021 2:45 PM	25:00	6.00 pH	17.66 °C	1,242.9 µS/cm	0.94 mg/L	1.46 NTU	127.6 mV	17.90 ft	200.00 ml/min
2/12/2021 2:50 PM	30:00	6.00 pH	17.67 °C	1,246.2 µS/cm	1.03 mg/L	1.49 NTU	129.2 mV	17.90 ft	200.00 ml/min
2/12/2021 2:55 PM	35:00	5.99 pH	17.66 °C	1,243.2 µS/cm	0.99 mg/L	1.12 NTU	128.1 mV	17.90 ft	200.00 ml/min

Samples

Sample ID:	Description:
HGWC-15	Grab Sample.

Low-Flow Test Report:

Test Date / Time: 2/10/2021 1:06:55 PM
Project: GP-Plant Hammond
Operator Name: Aaron Reeder

Location Name: HGWC-16 **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 23.1 ft** **Total Depth: 33.1 ft** **Initial Depth to Water: 12.71 ft**	**Pump Type: QED MP50** **Tubing Type: polyethylene** **Tubing Inner Diameter: 0.17 in** **Pump Intake From TOC: 28.1 ft** **Estimated Total Volume Pumped: 23 liter** **Flow Cell Volume: 90 ml** **Final Flow Rate: 200 ml/min** **Final Draw Down: 0.59 ft**	**Instrument Used: Aqua TROLL 400** **Serial Number: 728623**

Test 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 6010D/6020B/7470A).

Weather Conditions:
Sunny warm

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 5	
2/10/2021 1:06 PM	00:00	7.06 pH	19.47 °C	1,121.5 µS/cm	1.32 mg/L	--	9.8 mV	12.71 ft	200.00 ml/min
2/10/2021 1:11 PM	05:00	7.00 pH	19.38 °C	1,090.7 µS/cm	0.84 mg/L	40.60 NTU	-5.2 mV	13.30 ft	200.00 ml/min
2/10/2021 1:16 PM	10:00	6.98 pH	19.45 °C	1,076.2 µS/cm	0.66 mg/L	50.50 NTU	-18.1 mV	13.30 ft	200.00 ml/min
2/10/2021 1:21 PM	15:00	6.99 pH	19.59 °C	1,075.8 µS/cm	0.56 mg/L	33.20 NTU	-27.1 mV	13.30 ft	200.00 ml/min
2/10/2021 1:26 PM	20:00	7.01 pH	20.17 °C	1,074.3 µS/cm	0.79 mg/L	25.20 NTU	-32.6 mV	13.25 ft	200.00 ml/min
2/10/2021 1:31 PM	25:00	7.01 pH	19.50 °C	1,085.0 µS/cm	0.49 mg/L	20.80 NTU	-36.1 mV	13.30 ft	200.00 ml/min
2/10/2021 1:36 PM	30:00	7.02 pH	19.58 °C	1,077.1 µS/cm	0.49 mg/L	15.70 NTU	-39.2 mV	13.40 ft	200.00 ml/min
2/10/2021 1:41 PM	35:00	7.03 pH	19.64 °C	1,076.1 µS/cm	0.44 mg/L	13.30 NTU	-41.9 mV	13.30 ft	200.00 ml/min
2/10/2021 1:46 PM	40:00	7.04 pH	19.64 °C	1,081.4 µS/cm	0.44 mg/L	12.12 NTU	-42.8 mV	13.30 ft	200.00 ml/min
2/10/2021 1:51 PM	45:00	7.04 pH	19.64 °C	1,085.4 µS/cm	0.42 mg/L	10.44 NTU	-42.1 mV	13.30 ft	200.00 ml/min
2/10/2021 1:56 PM	50:00	7.05 pH	19.46 °C	1,081.1 µS/cm	0.40 mg/L	9.50 NTU	-43.6 mV	13.30 ft	200.00 ml/min
2/10/2021 2:01 PM	55:00	7.05 pH	19.61 °C	1,084.7 µS/cm	0.36 mg/L	8.82 NTU	-44.4 mV	13.30 ft	200.00 ml/min
2/10/2021 2:06 PM	01:00:00	7.05 pH	19.75 °C	1,079.4 µS/cm	0.36 mg/L	8.40 NTU	-45.3 mV	13.30 ft	200.00 ml/min

2/10/2021 2:11 PM	01:05:00	7.06 pH	19.75 °C	1,082.8 µS/cm	0.35 mg/L	7.96 NTU	-46.6 mV	13.30 ft	200.00 ml/min
2/10/2021 2:16 PM	01:10:00	7.07 pH	19.78 °C	1,083.8 µS/cm	0.35 mg/L	7.59 NTU	-48.1 mV	13.30 ft	200.00 ml/min
2/10/2021 2:21 PM	01:15:00	7.07 pH	19.74 °C	1,085.9 µS/cm	0.34 mg/L	6.60 NTU	-49.4 mV	13.30 ft	200.00 ml/min
2/10/2021 2:26 PM	01:20:00	7.07 pH	19.69 °C	1,086.9 µS/cm	0.35 mg/L	6.60 NTU	-50.8 mV	13.30 ft	200.00 ml/min
2/10/2021 2:31 PM	01:25:00	7.07 pH	19.64 °C	1,084.4 µS/cm	0.36 mg/L	5.94 NTU	-51.9 mV	13.30 ft	200.00 ml/min
2/10/2021 2:36 PM	01:30:00	7.07 pH	19.71 °C	1,085.3 µS/cm	0.36 mg/L	5.92 NTU	-53.3 mV	13.30 ft	200.00 ml/min
2/10/2021 2:41 PM	01:35:00	7.08 pH	19.62 °C	1,085.4 µS/cm	0.36 mg/L	5.84 NTU	-55.0 mV	13.30 ft	200.00 ml/min
2/10/2021 2:46 PM	01:40:00	7.08 pH	19.68 °C	1,107.3 µS/cm	0.40 mg/L	5.78 NTU	-56.6 mV	13.30 ft	200.00 ml/min
2/10/2021 2:51 PM	01:45:00	7.09 pH	19.53 °C	1,087.2 µS/cm	0.39 mg/L	5.21 NTU	-58.0 mV	13.30 ft	200.00 ml/min
2/10/2021 2:56 PM	01:50:00	7.09 pH	19.32 °C	1,090.9 µS/cm	0.35 mg/L	5.12 NTU	-59.2 mV	13.30 ft	200.00 ml/min
2/10/2021 3:01 PM	01:55:00	7.08 pH	19.50 °C	1,086.5 µS/cm	0.36 mg/L	4.83 NTU	-60.8 mV	13.30 ft	200.00 ml/min

Samples

Sample ID:	Description:
HGWC-16	Grab Sample.

Low-Flow Test Report:

Test Date / Time: 2/11/2021 10:05:05 AM
Project: GP-Plant Hammond
Operator Name: Aaron Reeder

Location Name: HGWC-17 **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 17.8 ft** **Total Depth: 27.8 ft** **Initial Depth to Water: 17.83 ft**	**Pump Type: QED MP50** **Tubing Type: polyethylene** **Tubing Inner Diameter: 0.17 in** **Pump Intake From TOC: 22.8 ft** **Estimated Total Volume Pumped: 17 liter** **Flow Cell Volume: 90 ml** **Final Flow Rate: 200 ml/min** **Final Draw Down: 0.17 ft**	**Instrument Used: Aqua TROLL 400** **Serial Number: 728623**

Test 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 6010D/6020B/7470A).

Weather Conditions:
Cloudy with rain and lightning

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 5	
2/11/2021 10:05 AM	00:00	6.89 pH	14.49 °C	1,721.2 µS/cm	8.23 mg/L	--	94.4 mV	17.83 ft	200.00 ml/min
2/11/2021 10:10 AM	05:00	6.33 pH	17.50 °C	1,636.2 µS/cm	2.44 mg/L	17.00 NTU	100.3 mV	18.05 ft	200.00 ml/min
2/11/2021 10:15 AM	10:00	6.30 pH	17.72 °C	1,636.5 µS/cm	1.82 mg/L	24.20 NTU	109.4 mV	18.00 ft	200.00 ml/min
2/11/2021 10:20 AM	15:00	6.29 pH	17.81 °C	1,652.0 µS/cm	1.34 mg/L	28.10 NTU	109.0 mV	18.00 ft	200.00 ml/min
2/11/2021 10:25 AM	20:00	6.28 pH	17.75 °C	1,644.3 µS/cm	1.12 mg/L	22.90 NTU	108.5 mV	18.00 ft	200.00 ml/min
2/11/2021 10:30 AM	25:00	6.28 pH	17.72 °C	1,655.0 µS/cm	1.01 mg/L	20.30 NTU	108.4 mV	18.00 ft	200.00 ml/min
2/11/2021 10:35 AM	30:00	6.29 pH	17.69 °C	1,644.9 µS/cm	1.25 mg/L	17.00 NTU	104.5 mV	18.00 ft	200.00 ml/min
2/11/2021 10:40 AM	35:00	6.29 pH	17.73 °C	1,650.3 µS/cm	0.97 mg/L	14.30 NTU	107.1 mV	18.00 ft	200.00 ml/min
2/11/2021 10:45 AM	40:00	6.29 pH	17.77 °C	1,647.6 µS/cm	1.02 mg/L	12.00 NTU	107.0 mV	18.00 ft	200.00 ml/min
2/11/2021 10:50 AM	45:00	6.30 pH	17.64 °C	1,640.6 µS/cm	1.65 mg/L	12.17 NTU	103.3 mV	18.00 ft	200.00 ml/min
2/11/2021 10:55 AM	50:00	6.30 pH	17.59 °C	1,641.3 µS/cm	0.78 mg/L	9.14 NTU	106.2 mV	18.00 ft	200.00 ml/min
2/11/2021 11:00 AM	55:00	6.29 pH	17.76 °C	1,672.2 µS/cm	0.84 mg/L	7.02 NTU	106.0 mV	18.00 ft	200.00 ml/min
2/11/2021 11:05 AM	01:00:00	6.30 pH	17.79 °C	1,659.1 µS/cm	0.71 mg/L	7.44 NTU	105.2 mV	18.00 ft	200.00 ml/min

2/11/2021 11:10 AM	01:05:00	6.30 pH	17.77 °C	1,650.8 µS/cm	0.70 mg/L	6.65 NTU	105.1 mV	18.00 ft	200.00 ml/min
2/11/2021 11:15 AM	01:10:00	6.30 pH	17.77 °C	1,641.9 µS/cm	0.73 mg/L	6.07 NTU	104.7 mV	18.00 ft	200.00 ml/min
2/11/2021 11:20 AM	01:15:00	6.31 pH	17.66 °C	1,658.6 µS/cm	0.66 mg/L	5.67 NTU	104.5 mV	18.00 ft	200.00 ml/min
2/11/2021 11:25 AM	01:20:00	6.30 pH	17.63 °C	1,657.5 µS/cm	0.70 mg/L	4.80 NTU	104.2 mV	18.00 ft	200.00 ml/min
2/11/2021 11:30 AM	01:25:00	6.31 pH	17.69 °C	1,654.5 µS/cm	0.51 mg/L	4.52 NTU	104.0 mV	18.00 ft	200.00 ml/min

Samples

Sample ID:	Description:
HGWC-17	Grab Sample.

Low-Flow Test Report:

Test Date / Time: 2/11/2021 12:21:07 PM
Project: Plant Hammond
Operator Name: Chad Russo

Location Name: HGWC-18 **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 17.8 ft** **Total Depth: 27.8 ft** **Initial Depth to Water: 17.7 ft**	**Pump Type: Bladder** **Tubing Type: Polyethylene** **Pump Intake From TOC: 22.8 ft** **Estimated Total Volume Pumped: 6.273 liter** **Flow Cell Volume: 90 ml** **Final Flow Rate: 200 ml/min** **Final Draw Down: 0.15 ft**	**Instrument Used: Aqua TROLL 400** **Serial Number: 728634**

Test 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 6010D/6020B/7470A).

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 10	+/- 10	+/- 0.3	
2/11/2021 12:21 PM	00:00	4.48 pH	15.29 °C	2,183.8 µS/cm	2.08 mg/L	--	104.0 mV	17.70 ft	200.00 ml/min
2/11/2021 12:24 PM	03:11	4.49 pH	15.25 °C	2,223.6 µS/cm	2.27 mg/L	--	107.1 mV	17.70 ft	200.00 ml/min
2/11/2021 12:26 PM	05:07	4.51 pH	15.07 °C	2,178.0 µS/cm	3.16 mg/L	4.41 NTU	124.9 mV	17.85 ft	200.00 ml/min
2/11/2021 12:31 PM	10:07	4.47 pH	15.92 °C	2,055.2 µS/cm	0.59 mg/L	1.25 NTU	155.2 mV	17.85 ft	200.00 ml/min
2/11/2021 12:32 PM	11:05	4.48 pH	15.96 °C	2,110.1 µS/cm	0.54 mg/L	--	150.4 mV	17.85 ft	200.00 ml/min
2/11/2021 12:37 PM	16:05	4.51 pH	16.01 °C	2,000.2 µS/cm	0.44 mg/L	1.43 NTU	156.6 mV	17.85 ft	200.00 ml/min
2/11/2021 12:39 PM	18:18	4.51 pH	16.04 °C	2,118.6 µS/cm	0.42 mg/L	--	171.9 mV	17.85 ft	200.00 ml/min
2/11/2021 12:42 PM	21:22	4.52 pH	16.06 °C	2,008.8 µS/cm	0.37 mg/L	1.24 NTU	177.5 mV	17.85 ft	200.00 ml/min
2/11/2021 12:47 PM	26:22	4.53 pH	16.10 °C	2,042.2 µS/cm	0.39 mg/L	0.92 NTU	160.8 mV	17.85 ft	200.00 ml/min
2/11/2021 12:52 PM	31:22	4.53 pH	16.12 °C	2,029.6 µS/cm	0.28 mg/L	0.91 NTU	252.5 mV	17.85 ft	200.00 ml/min

Samples

Sample ID:	Description:
HGWC-18	Grab Sample.

Low-Flow Test Report:

Test Date / Time: 2/11/2021 1:40:28 PM
Project: Plant Hammond
Operator Name: Chad Russo

Location Name: MW-21D **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 41.8 ft** **Total Depth: 51.8 ft** **Initial Depth to Water: 16.54 ft**	**Pump Type: Bladder** **Tubing Type: Polyethylene** **Pump Intake From TOC: 47 ft** **Estimated Total Volume Pumped: 13.6 liter** **Flow Cell Volume: 90 ml** **Final Flow Rate: 200 ml/min** **Final Draw Down: 0.25 ft**	**Instrument Used: Aqua TROLL 400** **Serial Number: 728634**

Test 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 6010D/6020B/7470A).

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 10	+/- 10	+/- 0.3	
2/11/2021 1:40 PM	00:00	6.30 pH	16.41 °C	2,104.9 µS/cm	4.87 mg/L	--	-18.1 mV	16.54 ft	200.00 ml/min
2/11/2021 1:42 PM	01:56	6.40 pH	16.58 °C	2,113.4 µS/cm	3.61 mg/L	--	-22.3 mV	16.54 ft	200.00 ml/min
2/11/2021 1:43 PM	03:03	6.46 pH	16.64 °C	2,109.1 µS/cm	3.22 mg/L	--	-24.4 mV	16.54 ft	200.00 ml/min
2/11/2021 1:48 PM	08:03	6.61 pH	16.66 °C	2,108.1 µS/cm	2.63 mg/L	1.83 NTU	-29.9 mV	16.79 ft	200.00 ml/min
2/11/2021 1:53 PM	13:03	6.69 pH	16.64 °C	2,108.2 µS/cm	2.06 mg/L	1.17 NTU	-33.9 mV	16.79 ft	200.00 ml/min
2/11/2021 1:58 PM	18:03	6.72 pH	16.73 °C	2,104.3 µS/cm	2.10 mg/L	1.18 NTU	-64.9 mV	16.79 ft	200.00 ml/min
2/11/2021 2:03 PM	23:03	6.77 pH	16.63 °C	2,102.2 µS/cm	1.99 mg/L	1.01 NTU	-36.7 mV	16.79 ft	200.00 ml/min
2/11/2021 2:08 PM	28:03	6.78 pH	16.63 °C	2,101.9 µS/cm	1.77 mg/L	0.62 NTU	-68.0 mV	16.79 ft	200.00 ml/min
2/11/2021 2:13 PM	33:03	6.80 pH	16.73 °C	2,094.7 µS/cm	1.58 mg/L	0.87 NTU	-39.9 mV	16.79 ft	200.00 ml/min
2/11/2021 2:18 PM	38:03	6.82 pH	16.68 °C	2,099.3 µS/cm	1.42 mg/L	0.92 NTU	-41.1 mV	16.79 ft	200.00 ml/min
2/11/2021 2:23 PM	43:03	6.83 pH	16.75 °C	2,102.1 µS/cm	1.18 mg/L	0.47 NTU	-72.7 mV	16.79 ft	200.00 ml/min
2/11/2021 2:28 PM	48:03	6.84 pH	16.86 °C	2,100.7 µS/cm	1.01 mg/L	0.63 NTU	-43.9 mV	16.79 ft	200.00 ml/min
2/11/2021 2:33 PM	53:03	6.85 pH	16.82 °C	2,102.5 µS/cm	0.91 mg/L	0.56 NTU	-44.8 mV	16.79 ft	200.00 ml/min
2/11/2021 2:38 PM	58:03	6.86 pH	16.73 °C	2,104.9 µS/cm	0.79 mg/L	0.47 NTU	-45.5 mV	16.79 ft	200.00 ml/min
2/11/2021 2:43 PM	01:03:03	6.87 pH	16.73 °C	2,106.4 µS/cm	0.68 mg/L	0.50 NTU	-46.3 mV	16.79 ft	200.00 ml/min

2/11/2021 2:48 PM	01:08:03	6.87 pH	16.70 °C	2,103.9 µS/cm	0.59 mg/L	0.54 NTU	-46.3 mV	16.79 ft	200.00 ml/min

Samples

Sample ID:	Description:
MW-21D	Grab Sample.
Dup-2	Grab Sample.

Low-Flow Test Report:

Test Date / Time: 2/15/2021 2:54:34 PM
Project: Plant Hammond
Operator Name: Chad Russo

Location Name: MW-22 **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 27.58 ft** **Total Depth: 37.58 ft** **Initial Depth to Water: 14.05 ft**	**Pump Type: Bladder** **Tubing Type: Polyethylene** **Pump Intake From TOC: 32 ft** **Estimated Total Volume Pumped: 4.38 liter** **Flow Cell Volume: 90 ml** **Final Flow Rate: 100 ml/min** **Final Draw Down: 4.63 ft**	**Instrument Used: Aqua TROLL 400** **Serial Number: 728634**

Test 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 6010D/6020B/7470A).

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 10	+/- 10	+/- 0.3	
2/15/2021 2:54 PM	00:00	5.56 pH	15.07 °C	1,393.8 µS/cm	1.44 mg/L	--	141.9 mV	14.05 ft	100.00 ml/min
2/15/2021 2:58 PM	03:49	5.52 pH	14.69 °C	1,393.9 µS/cm	1.39 mg/L	8.82 NTU	192.3 mV	15.75 ft	100.00 ml/min
2/15/2021 3:03 PM	08:49	5.50 pH	14.63 °C	1,373.9 µS/cm	1.26 mg/L	7.56 NTU	319.6 mV	16.22 ft	100.00 ml/min
2/15/2021 3:08 PM	13:49	5.47 pH	14.84 °C	1,370.8 µS/cm	2.04 mg/L	4.46 NTU	343.7 mV	16.75 ft	100.00 ml/min
2/15/2021 3:13 PM	18:49	5.47 pH	14.71 °C	1,366.4 µS/cm	2.52 mg/L	3.75 NTU	205.1 mV	17.13 ft	100.00 ml/min
2/15/2021 3:18 PM	23:49	5.47 pH	14.86 °C	1,373.4 µS/cm	2.74 mg/L	2.86 NTU	221.1 mV	17.50 ft	100.00 ml/min
2/15/2021 3:23 PM	28:49	5.47 pH	15.07 °C	1,373.3 µS/cm	2.80 mg/L	2.46 NTU	218.8 mV	17.86 ft	100.00 ml/min
2/15/2021 3:28 PM	33:49	5.48 pH	15.14 °C	1,372.2 µS/cm	2.75 mg/L	1.98 NTU	213.2 mV	18.18 ft	100.00 ml/min
2/15/2021 3:33 PM	38:49	5.48 pH	15.02 °C	1,370.7 µS/cm	2.64 mg/L	1.99 NTU	203.8 mV	18.45 ft	100.00 ml/min
2/15/2021 3:38 PM	43:49	5.48 pH	15.03 °C	1,377.8 µS/cm	2.51 mg/L	1.57 NTU	200.4 mV	18.68 ft	100.00 ml/min

Samples

Sample ID:	Description:
MW-22	Grab Sample.

Low-Flow Test Report:

Test Date / Time: 2/12/2021 1:19:43 PM
Project: Plant Hammond
Operator Name: Chad Russo

Location Name: MW-23D **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 52.79 ft** **Total Depth: 62.79 ft** **Initial Depth to Water: 18.55 ft**	**Pump Type: Alexis** **Tubing Type: Polyethylene** **Pump Intake From TOC: 58 ft** **Estimated Total Volume Pumped: 6 liter** **Flow Cell Volume: 90 ml** **Final Flow Rate: 200 ml/min** **Final Draw Down: 0.07 ft**	**Instrument Used: Aqua TROLL 400** **Serial Number: 728634**

Test 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 6010D/6020B/7470A).

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 10	+/- 10	+/- 0.3	
2/12/2021 1:19 PM	00:00	6.93 pH	15.24 °C	1,591.9 µS/cm	1.38 mg/L	--	-6.6 mV	18.55 ft	200.00 ml/min
2/12/2021 1:24 PM	05:00	6.86 pH	16.41 °C	1,666.0 µS/cm	0.82 mg/L	4.58 NTU	8.5 mV	18.62 ft	200.00 ml/min
2/12/2021 1:29 PM	10:00	6.84 pH	16.49 °C	1,697.5 µS/cm	0.56 mg/L	4.09 NTU	7.8 mV	18.62 ft	200.00 ml/min
2/12/2021 1:34 PM	15:00	6.83 pH	16.37 °C	1,711.2 µS/cm	0.46 mg/L	3.38 NTU	17.2 mV	18.62 ft	200.00 ml/min
2/12/2021 1:39 PM	20:00	6.80 pH	16.43 °C	1,723.7 µS/cm	0.40 mg/L	4.06 NTU	26.3 mV	18.62 ft	200.00 ml/min
2/12/2021 1:44 PM	25:00	6.81 pH	16.33 °C	1,725.1 µS/cm	0.36 mg/L	2.84 NTU	28.4 mV	18.62 ft	200.00 ml/min
2/12/2021 1:49 PM	30:00	6.80 pH	16.09 °C	1,730.2 µS/cm	0.33 mg/L	2.92 NTU	30.1 mV	18.62 ft	200.00 ml/min

Samples

Sample ID:	Description:
MW-23D	Grab Sample.

Low-Flow Test Report:

Test Date / Time: 2/12/2021 9:52:33 AM
Project: GP-Plant Hammond
Operator Name: Aaron Reeder

Location Name: MW-33 **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 27.93 ft** **Total Depth: 37.93 ft** **Initial Depth to Water: 24.6 ft**	**Pump Type: Alexis** **Tubing Type: polyethylene** **Tubing Inner Diameter: 0.17 in** **Pump Intake From TOC: 33 ft** **Estimated Total Volume Pumped: 6 liter** **Flow Cell Volume: 90 ml** **Final Flow Rate: 150 ml/min** **Final Draw Down: 0.05 ft**	**Instrument Used: Aqua TROLL 400** **Serial Number: 728623**

Test 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 6010D/6020B/7470A).

Weather Conditions:
Rain

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 5	
2/12/2021 9:52 AM	00:00	5.01 pH	10.36 °C	2,888.5 µS/cm	5.12 mg/L	--	182.4 mV	24.60 ft	150.00 ml/min
2/12/2021 9:57 AM	05:00	4.28 pH	17.23 °C	2,834.9 µS/cm	1.57 mg/L	2.55 NTU	259.6 mV	24.65 ft	150.00 ml/min
2/12/2021 10:02 AM	10:00	4.34 pH	17.77 °C	2,826.2 µS/cm	1.00 mg/L	1.37 NTU	256.1 mV	24.65 ft	150.00 ml/min
2/12/2021 10:07 AM	15:00	4.37 pH	17.81 °C	2,813.5 µS/cm	1.85 mg/L	1.30 NTU	249.9 mV	24.65 ft	150.00 ml/min
2/12/2021 10:12 AM	20:00	4.38 pH	17.90 °C	2,800.3 µS/cm	1.03 mg/L	1.25 NTU	249.1 mV	24.65 ft	150.00 ml/min
2/12/2021 10:17 AM	25:00	4.39 pH	17.90 °C	2,777.7 µS/cm	0.66 mg/L	1.42 NTU	287.8 mV	24.65 ft	150.00 ml/min
2/12/2021 10:22 AM	30:00	4.39 pH	17.92 °C	2,760.3 µS/cm	0.64 mg/L	1.24 NTU	243.9 mV	24.65 ft	150.00 ml/min
2/12/2021 10:27 AM	35:00	4.40 pH	18.00 °C	2,808.6 µS/cm	0.67 mg/L	0.85 NTU	239.4 mV	24.65 ft	150.00 ml/min
2/12/2021 10:32 AM	40:00	4.40 pH	18.01 °C	2,740.4 µS/cm	0.47 mg/L	0.72 NTU	235.9 mV	24.65 ft	150.00 ml/min

Samples

Sample ID:	Description:

MW-33	Grab Sample.

Low-Flow Test Report:

Test Date / Time: 2/15/2021 11:00:06 AM
Project: Plant Hammond
Operator Name: Chad Russo

Location Name: MW-35 **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 13.52 ft** **Total Depth: 23.52 ft** **Initial Depth to Water: 8.49 ft**	**Pump Type: Alexis** **Tubing Type: Polyethylene** **Pump Intake From TOC: 20 ft** **Estimated Total Volume Pumped: 4 liter** **Flow Cell Volume: 90 ml** **Final Flow Rate: 100 ml/min** **Final Draw Down: 2.12 ft**	**Instrument Used: Aqua TROLL 400** **Serial Number: 728634**

Test 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 6010D/6020B/7470A).

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 10	+/- 10	+/- 0.3	
2/15/2021 11:00 AM	00:00	4.80 pH	15.39 °C	2,791.7 µS/cm	0.65 mg/L	--	187.7 mV	8.49 ft	200.00 ml/min
2/15/2021 11:05 AM	05:00	4.78 pH	15.65 °C	2,745.6 µS/cm	0.51 mg/L	1.28 NTU	282.1 mV	10.88 ft	200.00 ml/min
2/15/2021 11:10 AM	10:00	4.79 pH	14.83 °C	2,762.2 µS/cm	0.55 mg/L	2.60 NTU	167.6 mV	10.76 ft	100.00 ml/min
2/15/2021 11:15 AM	15:00	4.80 pH	14.84 °C	2,783.3 µS/cm	0.52 mg/L	1.73 NTU	160.4 mV	10.67 ft	100.00 ml/min
2/15/2021 11:20 AM	20:00	4.81 pH	14.93 °C	2,775.5 µS/cm	0.44 mg/L	2.74 NTU	154.9 mV	10.67 ft	100.00 ml/min
2/15/2021 11:25 AM	25:00	4.82 pH	15.02 °C	2,779.0 µS/cm	0.49 mg/L	2.40 NTU	154.6 mV	10.61 ft	100.00 ml/min
2/15/2021 11:30 AM	30:00	4.82 pH	14.85 °C	2,800.6 µS/cm	0.42 mg/L	1.48 NTU	149.5 mV	10.61 ft	100.00 ml/min

Samples

Sample ID:	Description:
MW-35	Grab Sample.

Low-Flow Test Report:

Test Date / Time: 2/10/2021 1:49:57 PM
Project: Plant Hammond
Operator Name: Chad Russo

Location Name: MW-37D **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 66.63 ft** **Total Depth: 76.63 ft** **Initial Depth to Water: 16.27 ft**	**Pump Type: Bladder** **Tubing Type: Polyethylene** **Pump Intake From TOC: 71 ft** **Estimated Total Volume Pumped: 2 liter** **Flow Cell Volume: 90 ml** **Final Flow Rate: 100 ml/min** **Final Draw Down: 1.52 ft**	**Instrument Used: Aqua TROLL 400** **Serial Number: 728634**

Test Notes:
Purge Dry

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 10	+/- 10	+/- 0.3	
2/10/2021 1:49 PM	00:00	7.71 pH	22.97 °C	1,263.9 µS/cm	1.71 mg/L	--	-67.0 mV	16.27 ft	100.00 ml/min
2/10/2021 1:54 PM	05:00	7.51 pH	20.24 °C	1,487.8 µS/cm	0.91 mg/L	32.60 NTU	-70.7 mV	15.69 ft	100.00 ml/min
2/10/2021 1:59 PM	10:00	7.47 pH	19.54 °C	1,509.5 µS/cm	0.67 mg/L	35.30 NTU	-75.2 mV	16.41 ft	100.00 ml/min
2/10/2021 2:04 PM	15:00	7.48 pH	19.54 °C	1,507.4 µS/cm	0.53 mg/L	27.50 NTU	-145.1 mV	17.10 ft	100.00 ml/min
2/10/2021 2:09 PM	20:00	7.50 pH	19.49 °C	1,507.8 µS/cm	0.45 mg/L	27.50 NTU	-80.9 mV	17.79 ft	100.00 ml/min

Samples

Sample ID:	Description:

Low-Flow Test Report:

Test Date / Time: 2/11/2021 12:34:42 PM
Project: GP-Plant Hammond
Operator Name: Aaron Reeder

Location Name: MW-37D **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 66.63 ft** **Total Depth: 76.63 ft** **Initial Depth to Water: 15.01 ft**	**Pump Type: QED MP50** **Tubing Type: polyethylene** **Tubing Inner Diameter: 0.17 in** **Pump Intake From TOC: 71 ft** **Estimated Total Volume Pumped: 4 liter** **Flow Cell Volume: 90 ml** **Final Flow Rate: 100 ml/min** **Final Draw Down: 1.86 ft**	**Instrument Used: Aqua TROLL 400** **Serial Number: 728623**

Test Notes:

Weather Conditions:
Cloudy with rain

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 5	
2/11/2021 12:34 PM	00:00	7.31 pH	16.56 °C	1,413.4 µS/cm	4.15 mg/L	--	100.7 mV	15.01 ft	150.00 ml/min
2/11/2021 12:39 PM	05:00	7.37 pH	16.92 °C	902.43 µS/cm	2.67 mg/L	27.30 NTU	93.9 mV	18.85 ft	150.00 ml/min
2/11/2021 12:44 PM	10:00	7.39 pH	16.96 °C	1,352.2 µS/cm	2.69 mg/L	26.30 NTU	90.4 mV	18.85 ft	150.00 ml/min
2/11/2021 12:49 PM	15:00	7.40 pH	16.87 °C	1,351.1 µS/cm	2.63 mg/L	25.90 NTU	86.3 mV	18.80 ft	100.00 ml/min
2/11/2021 12:54 PM	20:00	7.41 pH	16.87 °C	1,350.5 µS/cm	2.65 mg/L	30.90 NTU	82.7 mV	18.80 ft	100.00 ml/min
2/11/2021 12:59 PM	25:00	7.41 pH	16.89 °C	1,122.2 µS/cm	2.69 mg/L	14.20 NTU	79.6 mV	18.82 ft	100.00 ml/min
2/11/2021 1:04 PM	30:00	7.41 pH	16.92 °C	1,350.6 µS/cm	2.67 mg/L	11.70 NTU	76.7 mV	18.80 ft	100.00 ml/min
2/11/2021 1:09 PM	35:00	7.42 pH	16.96 °C	1,426.9 µS/cm	2.73 mg/L	9.35 NTU	74.0 mV	18.80 ft	100.00 ml/min

Samples

Sample ID:	Description:
MW-37D	Grab Sample.

Low-Flow Test Report:

Test Date / Time: 2/10/2021 11:48:21 AM
Project: Plant Hammond (4)
Operator Name: Chad Russo

Location Name: HGWC-18 **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 17.8 ft** **Total Depth: 27.8 ft** **Initial Depth to Water: 17.66 ft**	**Pump Type: Bladder** **Tubing Type: Polyethylene** **Pump Intake From TOC: 22.8 ft** **Estimated Total Volume Pumped: 4970 ml** **Flow Cell Volume: 90 ml** **Final Flow Rate: 200 ml/min** **Final Draw Down: 0.18 ft**	**Instrument Used: Aqua TROLL 400** **Serial Number: 728634**

Test Notes:
Seven bottles: Alkalinity, dissolved CO2, ions, metals, sulfide.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 10	+/- 10	+/- 0.3	
2/10/2021 11:48 AM	00:00	4.43 pH	16.89 °C	2,123.4 µS/cm	1.74 mg/L		122.4 mV	17.66 ft	100.00 ml/min
2/10/2021 11:53 AM	05:00	4.45 pH	17.09 °C	2,021.9 µS/cm	1.12 mg/L	5.47 NTU	132.0 mV	17.76 ft	100.00 ml/min
2/10/2021 11:58 AM	10:00	4.50 pH	17.10 °C	1,994.8 µS/cm	0.92 mg/L	2.28 NTU	221.9 mV	17.76 ft	100.00 ml/min
2/10/2021 12:03 PM	15:00	4.52 pH	17.11 °C	2,028.2 µS/cm	0.93 mg/L	1.71 NTU	242.9 mV	17.84 ft	200.00 ml/min
2/10/2021 12:08 PM	20:00	4.52 pH	17.16 °C	2,025.5 µS/cm	0.64 mg/L	1.71 NTU	152.3 mV	17.84 ft	200.00 ml/min
2/10/2021 12:13 PM	25:00	4.54 pH	17.22 °C	2,040.4 µS/cm	0.50 mg/L	1.19 NTU	151.6 mV	17.84 ft	200.00 ml/min
2/10/2021 12:18 PM	30:00	4.55 pH	17.27 °C	2,025.6 µS/cm	0.40 mg/L	1.05 NTU	248.2 mV	17.84 ft	200.00 ml/min
2/10/2021 12:20 PM	32:21	4.55 pH	17.29 °C	2,148.7 µS/cm	0.37 mg/L		175.4 mV	17.84 ft	200.00 ml/min

Samples

Sample ID:	Description:
HGWC-18	Grab

Low-Flow Test Report:

Test Date / Time: 3/10/2021 3:42:04 PM
Project: GP-Plant Hammond
Operator Name: Vashish Taukoor

Location Name: HGWA-1 **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 22.5 ft** **Total Depth: 32.5 ft** **Initial Depth to Water: 10.84 ft**	**Pump Type: Bladder** **Tubing Type: Polyethylene** **Pump Intake From TOC: 28 ft** **Estimated Total Volume Pumped: 8 Liter** **Flow Cell Volume: 90 ml** **Final Flow Rate: 200 ml/min** **Final Draw Down: 1.02 ft**	**Instrument Used: Aqua TROLL 400** **Serial Number: 728563**

Test Notes:
Five bottles: Metals, TDS, Inorganics, Radium.

Weather Conditions:
Sunny
Low wind
50 degrees F

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
3/10/2021 3:42 PM	00:00	6.98 pH	17.27 °C	604.28 µS/cm	0.27 mg/L	2.98 NTU	14.4 mV	11.82 ft	200.00 ml/min
3/10/2021 3:47 PM	05:00	6.97 pH	17.21 °C	600.58 µS/cm	0.24 mg/L	2.44 NTU	0.8 mV	11.84 ft	200.00 ml/min
3/10/2021 3:52 PM	10:00	6.96 pH	17.19 °C	600.84 µS/cm	0.24 mg/L	1.52 NTU	-3.3 mV	11.86 ft	200.00 ml/min
3/10/2021 3:57 PM	15:00	6.96 pH	17.23 °C	599.63 µS/cm	0.22 mg/L	1.49 NTU	-7.0 mV	11.86 ft	200.00 ml/min
3/10/2021 4:02 PM	20:00	6.95 pH	17.31 °C	598.41 µS/cm	0.21 mg/L	1.40 NTU	3.4 mV	11.86 ft	200.00 ml/min
3/10/2021 4:07 PM	25:00	6.95 pH	17.29 °C	598.87 µS/cm	0.20 mg/L	1.35 NTU	-9.3 mV	11.86 ft	200.00 ml/min

Samples

Sample ID:	Description:
HGWA-1	Grab Sample.

Low-Flow Test Report:

Test Date / Time: 3/11/2021 9:07:23 AM
Project: GP-Plant Hammond
Operator Name: Vashish Taukoor

Location Name: HGWA-2 **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 17.95 ft** **Total Depth: 27.95 ft** **Initial Depth to Water: 7.11 ft**	**Pump Type: Bladder** **Tubing Type: Polyethylene** **Pump Intake From TOC: 23 ft** **Estimated Total Volume Pumped: 14.5 Liter** **Flow Cell Volume: 90 ml** **Final Flow Rate: 200 ml/min Final Draw Down: 0.1 ft**	**Instrument Used: Aqua TROLL 400** **Serial Number: 728563**

Test Notes:
Five bottles: Metals, TDS, Inorganics, Radium.

Weather Conditions:
Sunny
55 deg F
No wind

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 5	
3/11/2021 9:07 AM	00:00	5.93 pH	16.04 °C	330.25 µS/cm	1.23 mg/L	11.40 NTU	83.5 mV	7.21 ft	200.00 ml/min
3/11/2021 9:12 AM	05:00	5.89 pH	16.20 °C	317.44 µS/cm	1.09 mg/L	11.00 NTU	108.3 mV	7.25 ft	200.00 ml/min
3/11/2021 9:17 AM	10:00	5.87 pH	16.23 °C	310.57 µS/cm	1.08 mg/L	7.97 NTU	87.1 mV	7.25 ft	200.00 ml/min
3/11/2021 9:22 AM	15:00	5.85 pH	16.32 °C	306.71 µS/cm	1.09 mg/L	6.85 NTU	89.0 mV	7.23 ft	200.00 ml/min
3/11/2021 9:27 AM	20:00	5.85 pH	16.32 °C	305.68 µS/cm	1.08 mg/L	6.18 NTU	115.2 mV	7.25 ft	200.00 ml/min
3/11/2021 9:32 AM	25:00	5.84 pH	16.33 °C	301.10 µS/cm	1.05 mg/L	5.43 NTU	89.7 mV	7.21 ft	200.00 ml/min
3/11/2021 9:37 AM	30:00	5.80 pH	16.35 °C	288.98 µS/cm	1.03 mg/L	5.09 NTU	91.2 mV	7.25 ft	200.00 ml/min
3/11/2021 9:42 AM	35:00	5.81 pH	16.43 °C	291.38 µS/cm	0.97 mg/L	4.69 NTU	90.1 mV	7.25 ft	200.00 ml/min
3/11/2021 9:47 AM	40:00	5.81 pH	16.47 °C	294.20 µS/cm	0.93 mg/L	4.21 NTU	117.5 mV	7.21 ft	200.00 ml/min
3/11/2021 9:52 AM	45:00	5.79 pH	16.48 °C	288.27 µS/cm	0.98 mg/L	4.15 NTU	120.2 mV	7.21 ft	200.00 ml/min
3/11/2021 9:57 AM	50:00	5.80 pH	16.47 °C	288.45 µS/cm	0.98 mg/L	4.00 NTU	88.6 mV	7.21 ft	200.00 ml/min

Samples

Sample ID:	Description:
HGWA-2	Five bottles: Metals, TDS, Inorganics, Radium

Low-Flow Test Report:

Test Date / Time: 3/11/2021 10:57:05 AM
Project: GP-Plant Hammond
Operator Name: Vashish Taukoor

Location Name: HGWA-3 **Well Diameter: 2 in** **Screen Length: 10 ft** **Top of Screen: 34.87 ft** **Total Depth: 44.87 ft** **Initial Depth to Water: 6.71 ft**	**Pump Type: Bladder** **Tubing Type: Polyethylene** **Pump Intake From TOC: 40 ft** **Estimated Total Volume Pumped: 8 Liter** **Flow Cell Volume: 90 ml** **Final Flow Rate: 200 ml/min Final Draw Down: 0.01 ft**	**Instrument Used: Aqua TROLL 400** **Serial Number: 728563**

Test Notes:
Five bottles: Metals, TDS, Inorganics, Radium.
Prepurged 15 min at 200 ml/min

Weather Conditions:
Sunny
Low wind
50 deg F

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 5	
3/11/2021 10:57 AM	00:00	7.26 pH	17.10 °C	470.32 µS/cm	0.67 mg/L	4.21 NTU	-50.0 mV	6.72 ft	200.00 ml/min
3/11/2021 11:02 AM	05:00	7.28 pH	17.37 °C	467.49 µS/cm	0.62 mg/L	1.29 NTU	-54.2 mV	6.72 ft	200.00 ml/min
3/11/2021 11:07 AM	10:06	7.30 pH	17.25 °C	467.75 µS/cm	0.59 mg/L	0.67 NTU	-57.4 mV	6.72 ft	200.00 ml/min
3/11/2021 11:12 AM	15:06	7.31 pH	17.23 °C	466.88 µS/cm	0.57 mg/L	0.55 NTU	-59.9 mV	6.72 ft	200.00 ml/min
3/11/2021 11:17 AM	20:06	7.32 pH	17.23 °C	466.87 µS/cm	0.58 mg/L	0.50 NTU	-75.3 mV	6.72 ft	200.00 ml/min
3/11/2021 11:22 AM	24:57	7.33 pH	17.42 °C	467.54 µS/cm	0.56 mg/L	0.45 NTU	-64.5 mV	6.72 ft	200.00 ml/min

Samples

Sample ID:	Description:
HGWA-3	Grab Sample.

Low-Flow Test Report:

Test Date / Time: 3/10/2021 3:46:02 PM
Project: GP-Plant Hammond
Operator Name: Thomas Kessler

Location Name: HGWA-4 **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 15.8 ft** **Total Depth: 24.88 ft** **Initial Depth to Water: 5.75 ft**	**Pump Type: Bladder** **Tubing Type: polyethylene** **Pump Intake From TOC: 20.8 ft** **Estimated Total Volume Pumped: 6 liter** **Flow Cell Volume: 90 ml** **Final Flow Rate: 200 ml/min** **Final Draw Down: 0.2 ft**	**Instrument Used: Aqua TROLL 400** **Serial Number: 728566**

Test Notes:
Five bottles; Metals,TDS, Inorganics, Radium.

Weather Conditions:
Cloudy, 70 degrees.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
3/10/2021 3:46 PM	00:00	5.80 pH	20.04 °C	67.67 µS/cm	6.15 mg/L	3.75 NTU	106.9 mV	5.75 ft	200.00 ml/min
3/10/2021 3:51 PM	05:00	5.37 pH	16.64 °C	68.82 µS/cm	2.55 mg/L	3.10 NTU	116.8 mV	5.90 ft	200.00 ml/min
3/10/2021 3:56 PM	10:00	5.33 pH	16.32 °C	69.95 µS/cm	2.46 mg/L	3.01 NTU	119.4 mV	5.95 ft	200.00 ml/min
3/10/2021 4:01 PM	15:00	5.31 pH	16.29 °C	70.17 µS/cm	2.37 mg/L	2.50 NTU	118.4 mV	5.95 ft	200.00 ml/min
3/10/2021 4:06 PM	20:00	5.25 pH	16.38 °C	70.83 µS/cm	2.25 mg/L	2.77 NTU	119.7 mV	5.95 ft	200.00 ml/min
3/10/2021 4:11 PM	25:00	5.26 pH	16.38 °C	71.62 µS/cm	2.20 mg/L	2.40 NTU	114.6 mV	5.95 ft	200.00 ml/min
3/10/2021 4:16 PM	30:00	5.28 pH	16.33 °C	72.76 µS/cm	2.16 mg/L	2.16 NTU	109.8 mV	5.95 ft	200.00 ml/min

Samples

Sample ID:	Description:
HGWA-4	Grab Sample.

Low-Flow Test Report:

Test Date / Time: 3/11/2021 10:25:17 AM
Project: GP-Plant Hammond
Operator Name: Chad Russo

Location Name: HGWA-5 **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 17.95 ft** **Total Depth: 27.95 ft** **Initial Depth to Water: 4.83 ft**	**Pump Type: Bladder** **Tubing Type: Polyethylene** **Pump Intake From TOC: 23 ft** **Estimated Total Volume Pumped: 12 Liter** **Flow Cell Volume: 90 ml** **Final Flow Rate: 200 ml/min Final Draw Down: 1.03 ft**	**Instrument Used: Aqua TROLL 400** **Serial Number: 728550**

Test Notes:
Five Bottles: Metals, TDS, Inorganics, Radium

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
3/11/2021 10:25 AM	00:00	6.41 pH	17.17 °C	253.71 µS/cm	1.24 mg/L	--	11.3 mV	4.83 ft	200.00 ml/min
3/11/2021 10:30 AM	05:00	6.47 pH	17.19 °C	246.39 µS/cm	1.13 mg/L	32.60 NTU	7.6 mV	5.45 ft	200.00 ml/min
3/11/2021 10:35 AM	10:00	6.49 pH	17.23 °C	246.96 µS/cm	0.50 mg/L	27.90 NTU	-4.3 mV	5.54 ft	200.00 ml/min
3/11/2021 10:40 AM	15:00	6.51 pH	17.26 °C	243.45 µS/cm	0.38 mg/L	16.30 NTU	2.5 mV	5.65 ft	200.00 ml/min
3/11/2021 10:45 AM	20:00	6.50 pH	17.37 °C	238.90 µS/cm	0.27 mg/L	14.10 NTU	-4.2 mV	5.67 ft	200.00 ml/min
3/11/2021 10:50 AM	25:00	6.51 pH	17.54 °C	234.14 µS/cm	0.22 mg/L	11.50 NTU	4.3 mV	5.74 ft	200.00 ml/min
3/11/2021 10:55 AM	30:00	6.48 pH	17.46 °C	231.69 µS/cm	0.21 mg/L	11.17 NTU	-0.5 mV	5.74 ft	200.00 ml/min
3/11/2021 11:00 AM	35:00	6.49 pH	17.77 °C	229.74 µS/cm	0.20 mg/L	9.01 NTU	7.2 mV	5.81 ft	200.00 ml/min
3/11/2021 11:05 AM	40:00	6.49 pH	17.56 °C	226.98 µS/cm	0.18 mg/L	8.96 NTU	2.1 mV	5.81 ft	200.00 ml/min
3/11/2021 11:10 AM	45:00	6.49 pH	17.54 °C	224.11 µS/cm	0.19 mg/L	7.46 NTU	4.1 mV	5.81 ft	200.00 ml/min
3/11/2021 11:15 AM	50:00	6.46 pH	17.51 °C	223.24 µS/cm	0.18 mg/L	6.85 NTU	12.6 mV	5.86 ft	200.00 ml/min
3/11/2021 11:20 AM	55:00	6.47 pH	17.55 °C	221.87 µS/cm	0.16 mg/L	5.87 NTU	7.9 mV	5.86 ft	200.00 ml/min
3/11/2021 11:25 AM	01:00:00	6.48 pH	18.06 °C	220.96 µS/cm	0.16 mg/L	4.99 NTU	13.7 mV	5.86 ft	200.00 ml/min

Samples

Sample ID:	Description:
HGWA-5	Grab Sample.

Low-Flow Test Report:

Test Date / Time: 3/11/2021 11:54:50 AM
Project: GP-Plant Hammond
Operator Name: Chad Russo

Location Name: HGWA-6 **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 40.52 ft** **Total Depth: 50.52 ft** **Initial Depth to Water: 4.55 ft**	**Pump Type: Bladder** **Tubing Type: Polyethylene** **Pump Intake From TOC: 45 ft** **Estimated Total Volume Pumped: 8 Liter** **Flow Cell Volume: 90 ml** **Final Flow Rate: 200 ml/min** **Final Draw Down: 1.49 ft**	**Instrument Used: Aqua TROLL 400** **Serial Number: 728550**

Test Notes:
Five Bottles: Metals, TDS, Inorganics, Radium.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
3/11/2021 11:54 AM	00:00	7.34 pH	18.52 °C	366.61 µS/cm	2.00 mg/L	--	-25.7 mV	4.55 ft	200.00 ml/min
3/11/2021 11:59 AM	05:00	7.52 pH	17.84 °C	367.82 µS/cm	2.42 mg/L	1.85 NTU	-37.2 mV	5.80 ft	200.00 ml/min
3/11/2021 12:04 PM	10:00	7.59 pH	17.94 °C	368.30 µS/cm	2.56 mg/L	1.59 NTU	-50.9 mV	5.95 ft	200.00 ml/min
3/11/2021 12:09 PM	15:00	7.59 pH	18.29 °C	367.82 µS/cm	1.81 mg/L	1.02 NTU	-51.8 mV	5.95 ft	200.00 ml/min
3/11/2021 12:14 PM	20:00	7.60 pH	18.25 °C	367.95 µS/cm	1.26 mg/L	0.86 NTU	-53.4 mV	5.95 ft	200.00 ml/min
3/11/2021 12:19 PM	25:00	7.59 pH	18.28 °C	367.63 µS/cm	0.90 mg/L	0.81 NTU	-55.6 mV	5.97 ft	200.00 ml/min
3/11/2021 12:24 PM	30:00	7.59 pH	18.35 °C	368.45 µS/cm	0.68 mg/L	0.83 NTU	-57.5 mV	5.97 ft	200.00 ml/min
3/11/2021 12:29 PM	35:00	7.57 pH	18.44 °C	368.09 µS/cm	0.52 mg/L	1.02 NTU	-42.4 mV	6.00 ft	200.00 ml/min
3/11/2021 12:34 PM	40:00	7.56 pH	18.35 °C	368.13 µS/cm	0.42 mg/L	1.00 NTU	-62.4 mV	6.04 ft	200.00 ml/min

Samples

Sample ID:	Description:
HGWA-6	Grab Sample.

Low-Flow Test Report:

Test Date / Time: 3/10/2021 1:48:06 PM
Project: GP-Plant Hammond
Operator Name: Thomas Kessler

Location Name: HGWA-42D **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 58.03 ft** **Total Depth: 68.03** **Initial Depth to Water: 10.68 ft**	**Pump Type: Bladder** **Tubing Type: polyethylene** **Pump Intake From TOC: 63.03 ft** **Estimated Total Volume Pumped: 5 liter** **Flow Cell Volume: 90 ml** **Final Flow Rate: 200 ml/min** **Final Draw Down: 1.57 ft**	**Instrument Used: Aqua TROLL 400** **Serial Number: 728566**

Test Notes:
Five bottles; Metals, TDS, Inorganics, Radium.

Weather Conditions:
Sunny, 70 degrees.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
3/10/2021 1:48 PM	00:00	7.54 pH	23.31 °C	290.35 µS/cm	1.70 mg/L	5.68 NTU	-32.1 mV	10.68 ft	200.00 ml/min
3/10/2021 1:53 PM	05:00	7.63 pH	18.93 °C	289.31 µS/cm	1.29 mg/L	4.91 NTU	-86.0 mV	12.10 ft	200.00 ml/min
3/10/2021 1:58 PM	10:00	7.65 pH	18.75 °C	292.15 µS/cm	0.79 mg/L	4.41 NTU	-97.0 mV	12.34 ft	200.00 ml/min
3/10/2021 2:03 PM	15:00	7.67 pH	18.82 °C	289.96 µS/cm	0.60 mg/L	3.89 NTU	-120.3 mV	12.65 ft	200.00 ml/min
3/10/2021 2:08 PM	20:00	7.69 pH	18.80 °C	291.40 µS/cm	0.62 mg/L	3.21 NTU	-123.6 mV	12.95 ft	200.00 ml/min
3/10/2021 2:13 PM	25:00	7.70 pH	19.38 °C	290.86 µS/cm	0.63 mg/L	2.61 NTU	-121.6 mV	12.25 ft	200.00 ml/min
3/10/2021 2:18 PM	30:00	7.70 pH	19.04 °C	298.35 µS/cm	0.41 mg/L	2.40 NTU	-129.5 mV	12.25 ft	200.00 ml/min

Samples

Sample ID:	Description:
HGWA-42D	Grab Sample.

Low-Flow Test Report:

Test Date / Time: 3/11/2021 9:02:31 AM
Project: GP-Plant Hammond
Operator Name: Thomas Kessler

Location Name: HGWA-43D **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 51.25 ft** **Total Depth: 61.85** **Initial Depth to Water: 11.19 ft**	**Pump Type: Bladder** **Tubing Type: polyethylene** **Pump Intake From TOC: 56.25 ft** **Estimated Total Volume Pumped: 8 Liter** **Flow Cell Volume: 90 ml** **Final Flow Rate: 100 ml/min** **Final Draw Down: 1.73 ft**	**Instrument Used: Aqua TROLL 400** **Serial Number: 728566**

Test Notes:
Five Bottles: Metals, TDS, Inorganics, Radium.

Weather Conditions:
Cloudy, 55 degrees

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
3/11/2021 9:02 AM	00:00	7.44 pH	15.53 °C	518.31 µS/cm	1.99 mg/L	15.70 NTU	-59.3 mV	11.19 ft	200.00 ml/min
3/11/2021 9:07 AM	05:00	7.43 pH	15.84 °C	519.02 µS/cm	0.82 mg/L	16.40 NTU	-73.8 mV	12.15 ft	200.00 ml/min
3/11/2021 9:12 AM	10:00	7.44 pH	16.13 °C	514.46 µS/cm	0.56 mg/L	18.90 NTU	-78.6 mV	12.75 ft	200.00 ml/min
3/11/2021 9:17 AM	15:00	7.46 pH	16.20 °C	515.21 µS/cm	0.41 mg/L	12.80 NTU	-83.0 mV	13.20 ft	200.00 ml/min
3/11/2021 9:22 AM	20:00	7.47 pH	16.29 °C	511.87 µS/cm	0.40 mg/L	13.40 NTU	-103.2 mV	13.45 ft	200.00 ml/min
3/11/2021 9:27 AM	25:00	7.46 pH	16.42 °C	502.64 µS/cm	0.34 mg/L	8.45 NTU	-104.5 mV	13.65 ft	200.00 ml/min
3/11/2021 9:32 AM	30:00	7.45 pH	16.47 °C	496.83 µS/cm	0.13 mg/L	6.57 NTU	-87.9 mV	13.80 ft	200.00 ml/min
3/11/2021 9:37 AM	35:00	7.45 pH	16.45 °C	494.24 µS/cm	0.11 mg/L	7.73 NTU	-88.1 mV	13.80 ft	200.00 ml/min
3/11/2021 9:42 AM	40:00	7.46 pH	16.22 °C	485.88 µS/cm	0.10 mg/L	4.38 NTU	-85.0 mV	13.13 ft	200.00 ml/min
3/11/2021 9:47 AM	45:00	7.46 pH	16.21 °C	479.85 µS/cm	0.10 mg/L	2.45 NTU	-81.0 mV	13.07 ft	200.00 ml/min
3/11/2021 9:52 AM	50:00	7.46 pH	16.22 °C	475.91 µS/cm	0.10 mg/L	4.58 NTU	-77.8 mV	12.92 ft	200.00 ml/min

Samples

Sample ID:	Description:
HGWA-43D	Grab Sample.

Low-Flow Test Report:

Test Date / Time: 3/10/2021 1:57:00 PM
Project: GP-Plant Hammond
Operator Name: Vashish Taukoor

Location Name: HGWA-44D **Well Diameter: 2 cm** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 103.28 ft** **Total Depth: 113.28 ft** **Initial Depth to Water: 11.1 ft**	**Pump Type: Bladder** **Tubing Type: Polyethylene** **Pump Intake From TOC: 108 ft** **Estimated Total Volume Pumped: 9.5 Liter** **Flow Cell Volume: 90 ml** **Final Flow Rate: 100 ml/min Final Draw Down: 3.25 ft**	**Instrument Used: Aqua TROLL 400** **Serial Number: 728563**

Test Notes:
Five bottles: Metals, TDS, Inorganics, Radium
Pre-purged 6.5 L @ 200 ml/min, then dropped to 100 ml/min

Weather Conditions:
Sunny
Low wind
55 degree F

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 5	
3/10/2021 1:57 PM	00:00	7.85 pH	18.25 °C	495.62 µS/cm	0.23 mg/L	2.89 NTU	-107.3 mV	14.48 ft	100.00 ml/min
3/10/2021 2:02 PM	05:00	7.89 pH	18.22 °C	498.99 µS/cm	0.23 mg/L	2.45 NTU	-112.3 mV	14.45 ft	100.00 ml/min
3/10/2021 2:07 PM	10:00	7.91 pH	18.44 °C	496.45 µS/cm	0.23 mg/L	2.67 NTU	-116.4 mV	14.45 ft	100.00 ml/min
3/10/2021 2:12 PM	15:00	7.92 pH	18.58 °C	501.57 µS/cm	0.23 mg/L	2.84 NTU	-120.9 mV	14.45 ft	100.00 ml/min
3/10/2021 2:17 PM	20:00	7.92 pH	18.61 °C	504.22 µS/cm	0.23 mg/L	2.56 NTU	-124.6 mV	14.45 ft	100.00 ml/min
3/10/2021 2:22 PM	25:00	7.92 pH	18.79 °C	502.44 µS/cm	0.22 mg/L	3.54 NTU	-147.9 mV	14.35 ft	100.00 ml/min
3/10/2021 2:27 PM	30:00	7.92 pH	18.88 °C	499.04 µS/cm	0.21 mg/L	2.98 NTU	-129.8 mV	14.35 ft	100.00 ml/min

Samples

Sample ID:	Description:
HGWA-44D	Grab Sample.

Low-Flow Test Report:

Test Date / Time: 3/17/2021 1:52:51 PM
Project: GP-Plant
Operator Name: Thomas Kessler

Location Name: HGWC-14 **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 33 ft** **Total Depth: 43 ft** **Initial Depth to Water: 26.33 ft**	**Pump Type: Bladder** **Tubing Type: polyethylene** **Pump Intake From TOC: 38 ft** **Estimated Total Volume Pumped: 6 liter** **Flow Cell Volume: 90 ml** **Final Flow Rate: 200 ml/min** **Final Draw Down: 0.05 ft**	**Instrument Used: Aqua TROLL 400** **Serial Number: 728566**

Test Notes:
Five bottles: Metals, TDS, Inorganics, Radium.

Weather Conditions:
Cloudy, 50 degrees.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
3/17/2021 1:52 PM	00:00	4.83 pH	17.34 °C	2,767.6 µS/cm	7.04 mg/L	1.40 NTU	219.8 mV	26.33 ft	200.00 ml/min
3/17/2021 1:57 PM	05:00	4.74 pH	18.14 °C	2,762.5 µS/cm	1.33 mg/L	3.37 NTU	254.3 mV	26.38 ft	200.00 ml/min
3/17/2021 2:02 PM	10:00	4.70 pH	18.66 °C	2,743.5 µS/cm	1.04 mg/L	2.25 NTU	202.7 mV	26.38 ft	200.00 ml/min
3/17/2021 2:07 PM	15:00	4.70 pH	18.60 °C	2,747.6 µS/cm	0.86 mg/L	1.92 NTU	201.3 mV	26.38 ft	200.00 ml/min
3/17/2021 2:12 PM	20:00	4.70 pH	18.56 °C	2,749.3 µS/cm	0.71 mg/L	1.42 NTU	197.1 mV	26.38 ft	200.00 ml/min
3/17/2021 2:17 PM	25:00	4.70 pH	18.33 °C	2,744.7 µS/cm	0.61 mg/L	1.36 NTU	195.8 mV	26.38 ft	200.00 ml/min
3/17/2021 2:22 PM	30:00	4.72 pH	18.38 °C	2,749.4 µS/cm	0.52 mg/L	1.45 NTU	197.3 mV	26.38 ft	200.00 ml/min

Samples

Sample ID:	Description:
HGWC-14	Grab Sample.

Low-Flow Test Report:

Test Date / Time: 3/16/2021 2:49:16 PM
Project: GP-Plant Hammond
Operator Name: Thomas Kessler

Location Name: HGWC-15 **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 28 ft** **Total Depth: 38.1 ft** **Initial Depth to Water: 16.02 ft**	**Pump Type: Bladder** **Tubing Type: polyethylene** **Pump Intake From TOC: 33 ft** **Estimated Total Volume Pumped: 6 liter** **Flow Cell Volume: 90 ml** **Final Flow Rate: 200 ml/min** **Final Draw Down: 0.48 ft**	**Instrument Used: Aqua TROLL 400** **Serial Number: 728566**

Test Notes:
Five bottles: Metals, TDS, Inorganics, Radium.

Weather Conditions:
Cloudy, 50 degrees.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
3/16/2021 2:49 PM	00:00	6.96 pH	12.81 °C	1,163.3 µS/cm	8.62 mg/L	1.44 NTU	87.9 mV	16.02 ft	200.00 ml/min
3/16/2021 2:54 PM	05:00	6.32 pH	16.60 °C	1,235.1 µS/cm	2.48 mg/L	2.54 NTU	182.4 mV	16.50 ft	200.00 ml/min
3/16/2021 2:59 PM	10:00	6.15 pH	16.92 °C	1,207.2 µS/cm	2.11 mg/L	1.67 NTU	266.7 mV	16.50 ft	200.00 ml/min
3/16/2021 3:04 PM	15:00	6.11 pH	16.95 °C	1,211.3 µS/cm	1.29 mg/L	1.63 NTU	256.2 mV	16.50 ft	200.00 ml/min
3/16/2021 3:09 PM	20:00	6.10 pH	16.94 °C	1,213.9 µS/cm	1.20 mg/L	1.46 NTU	188.6 mV	16.50 ft	200.00 ml/min
3/16/2021 3:14 PM	25:00	6.08 pH	16.89 °C	1,211.7 µS/cm	1.17 mg/L	1.37 NTU	187.2 mV	16.50 ft	200.00 ml/min
3/16/2021 3:19 PM	30:00	6.08 pH	17.10 °C	1,211.6 µS/cm	1.21 mg/L	1.93 NTU	197.1 mV	16.50 ft	200.00 ml/min

Samples

Sample ID:	Description:
HGWC-15	Grab Sample.

Low-Flow Test Report:

Test Date / Time: 3/17/2021 8:19:03 AM
Project: GP-Plant Hammond
Operator Name: Chad Russo

Location Name: HGWC-16 **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 23.1 ft** **Total Depth: 33.1 ft** **Initial Depth to Water: 11.69 ft**	**Pump Type: Bladder** **Tubing Type: Polyethylene** **Pump Intake From TOC: 28 ft** **Estimated Total Volume Pumped: 13 Liter** **Flow Cell Volume: 90 ml** **Final Flow Rate: 200 ml/min** **Final Draw Down: 0.41 ft**	**Instrument Used: Aqua TROLL 400** **Serial Number: 728550**

Test Notes:
Five Bottles: Metals, TDS, Inorganics, Radium.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
3/17/2021 8:19 AM	00:00	7.02 pH	16.68 °C	1,120.8 µS/cm	1.28 mg/L	--	6.1 mV	11.69 ft	200.00 ml/min
3/17/2021 8:24 AM	05:00	7.07 pH	16.87 °C	1,104.4 µS/cm	0.54 mg/L	45.60 NTU	-27.9 mV	12.07 ft	200.00 ml/min
3/17/2021 8:29 AM	10:00	7.13 pH	16.87 °C	1,096.9 µS/cm	0.83 mg/L	668.00 NTU	-24.5 mV	12.07 ft	200.00 ml/min
3/17/2021 8:34 AM	15:00	7.13 pH	16.74 °C	1,095.6 µS/cm	0.47 mg/L	154.00 NTU	-30.1 mV	12.07 ft	200.00 ml/min
3/17/2021 8:39 AM	20:00	7.13 pH	16.76 °C	1,099.0 µS/cm	0.32 mg/L	88.90 NTU	-18.7 mV	12.07 ft	200.00 ml/min
3/17/2021 8:44 AM	25:00	7.14 pH	16.73 °C	1,097.3 µS/cm	0.30 mg/L	101.40 NTU	-18.9 mV	12.10 ft	200.00 ml/min
3/17/2021 8:49 AM	30:00	7.15 pH	16.72 °C	1,096.2 µS/cm	0.24 mg/L	36.50 NTU	-40.1 mV	12.10 ft	200.00 ml/min
3/17/2021 8:54 AM	35:00	7.16 pH	16.70 °C	1,096.3 µS/cm	0.25 mg/L	23.40 NTU	-24.0 mV	12.10 ft	200.00 ml/min
3/17/2021 8:59 AM	40:00	7.16 pH	16.74 °C	1,095.5 µS/cm	0.26 mg/L	11.70 NTU	-42.8 mV	12.10 ft	200.00 ml/min
3/17/2021 9:04 AM	45:00	7.17 pH	16.88 °C	1,098.7 µS/cm	0.30 mg/L	8.78 NTU	-25.3 mV	12.10 ft	200.00 ml/min
3/17/2021 9:09 AM	50:00	7.18 pH	16.96 °C	1,099.0 µS/cm	0.30 mg/L	9.65 NTU	-43.5 mV	12.10 ft	200.00 ml/min
3/17/2021 9:14 AM	55:00	7.18 pH	17.01 °C	1,099.6 µS/cm	0.26 mg/L	6.89 NTU	-26.3 mV	12.10 ft	200.00 ml/min
3/17/2021 9:19 AM	01:00:00	7.18 pH	16.88 °C	1,100.7 µS/cm	0.27 mg/L	6.03 NTU	-43.5 mV	12.10 ft	200.00 ml/min
3/17/2021 9:24 AM	01:05:00	7.19 pH	16.79 °C	1,100.8 µS/cm	0.22 mg/L	4.43 NTU	-26.2 mV	12.10 ft	200.00 ml/min

Samples

Sample ID:	Description:
HGWC-16	Grab Sample.

Low-Flow Test Report:

Test Date / Time: 3/18/2021 1:48:33 PM
Project: GP-Plant Hammond
Operator Name: Chad Russo

Location Name: HGWC-17 **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 17.8 ft** **Total Depth: 27.8 ft** **Initial Depth to Water: 16.18 ft**	**Pump Type: Bladder** **Tubing Type: Polyethylene** **Pump Intake From TOC: 16.18 ft** **Estimated Total Volume Pumped: 11 Liter** **Flow Cell Volume: 90 ml** **Final Flow Rate: 200 ml/min** **Final Draw Down: 0.17 ft**	**Instrument Used: Aqua TROLL 400** **Serial Number: 728550**

Test Notes:
Five Bottles: Metals, TDS, Inorganics, Radium.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
3/18/2021 1:48 PM	00:00	6.81 pH	19.54 °C	1,441.5 µS/cm	3.31 mg/L	--	89.5 mV	16.18 ft	200.00 ml/min
3/18/2021 1:53 PM	05:00	6.60 pH	18.91 °C	1,461.3 µS/cm	1.11 mg/L	16.20 NTU	93.9 mV	16.45 ft	200.00 ml/min
3/18/2021 1:58 PM	10:00	6.49 pH	18.68 °C	1,473.5 µS/cm	0.69 mg/L	17.80 NTU	82.7 mV	16.45 ft	200.00 ml/min
3/18/2021 2:03 PM	15:00	6.46 pH	18.45 °C	1,486.1 µS/cm	0.40 mg/L	17.20 NTU	62.4 mV	16.45 ft	200.00 ml/min
3/18/2021 2:08 PM	20:00	6.46 pH	18.53 °C	1,490.2 µS/cm	0.28 mg/L	14.20 NTU	78.1 mV	16.45 ft	200.00 ml/min
3/18/2021 2:13 PM	25:00	6.45 pH	18.72 °C	1,506.9 µS/cm	0.23 mg/L	12.90 NTU	61.8 mV	16.45 ft	200.00 ml/min
3/18/2021 2:18 PM	30:00	6.44 pH	18.89 °C	1,505.1 µS/cm	0.21 mg/L	12.19 NTU	77.2 mV	16.45 ft	200.00 ml/min
3/18/2021 2:23 PM	35:00	6.44 pH	18.88 °C	1,502.5 µS/cm	0.19 mg/L	8.57 NTU	61.7 mV	16.45 ft	200.00 ml/min
3/18/2021 2:28 PM	40:00	6.44 pH	18.76 °C	1,508.8 µS/cm	0.18 mg/L	7.99 NTU	76.9 mV	16.45 ft	200.00 ml/min
3/18/2021 2:33 PM	45:00	6.44 pH	18.79 °C	1,512.7 µS/cm	0.18 mg/L	6.67 NTU	61.4 mV	16.35 ft	200.00 ml/min
3/18/2021 2:38 PM	50:00	6.44 pH	18.53 °C	1,517.7 µS/cm	0.18 mg/L	6.19 NTU	76.7 mV	16.35 ft	200.00 ml/min
3/18/2021 2:43 PM	55:00	6.43 pH	18.39 °C	1,518.6 µS/cm	0.18 mg/L	4.97 NTU	61.6 mV	16.35 ft	200.00 ml/min

Samples

Sample ID:	Description:

HGWC-17	Grab Sample.

Low-Flow Test Report:

Test Date / Time: 3/18/2021 9:25:52 AM
Project: GP-Plant Hammond
Operator Name: Chad Russo

Location Name: HGWC-18 **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 17.8 ft** **Total Depth: 27.8 ft** **Initial Depth to Water: 16.58 ft**	**Pump Type: Bladder** **Tubing Type: Polyethylene** **Pump Intake From TOC: 23 ft** **Estimated Total Volume Pumped: 6 Liter** **Flow Cell Volume: 90 ml** **Final Flow Rate: 200 ml/min** **Final Draw Down: 0.17 ft**	**Instrument Used: Aqua TROLL 400** **Serial Number: 728550**

Test Notes:
Five Bottles: Metals, TDS, Inorganics, Radium.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
3/18/2021 9:25 AM	00:00	4.41 pH	15.99 °C	1,976.4 µS/cm	1.71 mg/L	--	162.0 mV	16.58 ft	200.00 ml/min
3/18/2021 9:30 AM	05:00	4.43 pH	15.74 °C	1,886.4 µS/cm	1.20 mg/L	1.07 NTU	178.8 mV	16.75 ft	200.00 ml/min
3/18/2021 9:35 AM	10:00	4.46 pH	15.69 °C	1,904.4 µS/cm	0.84 mg/L	1.09 NTU	237.0 mV	16.75 ft	200.00 ml/min
3/18/2021 9:40 AM	15:00	4.49 pH	15.67 °C	1,916.1 µS/cm	0.71 mg/L	0.83 NTU	310.8 mV	16.75 ft	200.00 ml/min
3/18/2021 9:45 AM	20:00	4.52 pH	15.63 °C	1,955.8 µS/cm	0.54 mg/L	0.79 NTU	192.7 mV	16.75 ft	200.00 ml/min
3/18/2021 9:50 AM	25:00	4.52 pH	15.69 °C	1,949.7 µS/cm	0.50 mg/L	0.86 NTU	343.6 mV	16.75 ft	200.00 ml/min
3/18/2021 9:55 AM	30:00	4.54 pH	15.76 °C	1,948.3 µS/cm	0.48 mg/L	0.63 NTU	204.7 mV	16.75 ft	200.00 ml/min

Samples

Sample ID:	Description:
HGWC-18	Grab Sample.

Low-Flow Test Report:

Test Date / Time: 3/18/2021 10:38:51 AM
Project: GP-Plant Hammond
Operator Name: Chad Russo

Location Name: MW-21D **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 41.8 ft** **Total Depth: 51.8 ft** **Initial Depth to Water: 15.5 ft**	**Pump Type: Bladder** **Tubing Type: Polyethylene** **Pump Intake From TOC: 47 ft** **Estimated Total Volume Pumped: 17 Liter** **Flow Cell Volume: 90 ml** **Final Flow Rate: 200 ml/min** **Final Draw Down: 0.3 ft**	**Instrument Used: Aqua TROLL 400** **Serial Number: 728550**

Test Notes:
Five Bottles: Metals, TDS, Inorganics, Radium.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
3/18/2021 10:38 AM	00:00	6.39 pH	17.48 °C	2,068.3 µS/cm	3.96 mg/L	--	17.5 mV	15.50 ft	200.00 ml/min
3/18/2021 10:43 AM	05:00	6.62 pH	17.63 °C	2,114.6 µS/cm	1.74 mg/L	22.50 NTU	-23.0 mV	15.70 ft	200.00 ml/min
3/18/2021 10:48 AM	10:00	6.71 pH	17.59 °C	2,111.2 µS/cm	0.92 mg/L	19.10 NTU	-58.4 mV	15.70 ft	200.00 ml/min
3/18/2021 10:53 AM	15:00	6.77 pH	17.50 °C	2,110.7 µS/cm	0.60 mg/L	19.90 NTU	-67.2 mV	15.70 ft	200.00 ml/min
3/18/2021 10:58 AM	20:00	6.81 pH	17.22 °C	2,116.3 µS/cm	0.46 mg/L	23.10 NTU	-51.4 mV	15.70 ft	200.00 ml/min
3/18/2021 11:03 AM	25:00	6.83 pH	17.50 °C	2,116.2 µS/cm	0.40 mg/L	26.00 NTU	-74.1 mV	15.70 ft	200.00 ml/min
3/18/2021 11:08 AM	30:00	6.85 pH	17.59 °C	2,116.5 µS/cm	0.38 mg/L	25.90 NTU	-56.8 mV	15.70 ft	200.00 ml/min
3/18/2021 11:13 AM	35:00	6.87 pH	17.99 °C	2,114.0 µS/cm	0.38 mg/L	25.40 NTU	-77.1 mV	15.70 ft	200.00 ml/min
3/18/2021 11:18 AM	40:00	6.88 pH	18.04 °C	2,105.0 µS/cm	0.39 mg/L	24.30 NTU	-77.9 mV	15.70 ft	200.00 ml/min
3/18/2021 11:23 AM	45:00	6.88 pH	18.15 °C	2,112.1 µS/cm	0.41 mg/L	21.50 NTU	-60.3 mV	15.70 ft	200.00 ml/min
3/18/2021 11:28 AM	50:00	6.89 pH	18.44 °C	2,103.8 µS/cm	0.42 mg/L	18.80 NTU	-79.0 mV	15.60 ft	200.00 ml/min
3/18/2021 11:33 AM	55:00	6.90 pH	18.70 °C	2,103.7 µS/cm	0.44 mg/L	16.80 NTU	-61.9 mV	15.60 ft	200.00 ml/min
3/18/2021 11:38 AM	01:00:00	6.92 pH	17.86 °C	2,105.6 µS/cm	0.36 mg/L	14.70 NTU	-81.0 mV	15.70 ft	200.00 ml/min
3/18/2021 11:43 AM	01:05:00	6.93 pH	17.75 °C	2,101.2 µS/cm	0.24 mg/L	11.96 NTU	-83.7 mV	15.70 ft	200.00 ml/min
3/18/2021 11:48 AM	01:10:00	6.93 pH	17.94 °C	2,098.2 µS/cm	0.20 mg/L	10.61 NTU	-85.4 mV	15.80 ft	200.00 ml/min

3/18/2021 11:53 AM	01:15:00	6.94 pH	18.04 °C	2,092.1 µS/cm	0.19 mg/L	8.33 NTU	-68.1 mV	15.80 ft	200.00 ml/min
3/18/2021 11:58 AM	01:20:00	6.94 pH	18.13 °C	2,087.9 µS/cm	0.19 mg/L	6.26 NTU	-86.5 mV	15.80 ft	200.00 ml/min
3/18/2021 12:03 PM	01:25:00	6.95 pH	18.10 °C	2,083.9 µS/cm	0.18 mg/L	4.59 NTU	-69.3 mV	15.80 ft	200.00 ml/min

Samples

Sample ID:	Description:
MW-21D	Grab Sample.

Low-Flow Test Report:

Test Date / Time: 3/17/2021 8:44:28 AM
Project: GP-Plant Hammond
Operator Name: Thomas Kessler

Location Name: MW-22 **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 27.58 ft** **Total Depth: 39.00 ft** **Initial Depth to Water: 13.36 ft**	**Pump Type: Bladder** **Tubing Type: polyethylene** **Pump Intake From TOC: 33.58 ft** **Estimated Total Volume Pumped: 14 Liter** **Flow Cell Volume: 90 ml** **Final Flow Rate: 200 ml/min** **Final Draw Down: 4.52 ft**	**Instrument Used: Aqua TROLL 400** **Serial Number: 728566**

Test Notes:
Five Bottles: Metals, TDS, Inorganics, Radium.

Weather Conditions:
Foggy, 50 degrees.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
3/17/2021 8:44 AM	00:00	5.64 pH	14.80 °C	1,344.0 µS/cm	5.94 mg/L	1.35 NTU	122.2 mV	13.36 ft	200.00 ml/min
3/17/2021 8:49 AM	05:00	5.52 pH	16.56 °C	1,346.4 µS/cm	2.40 mg/L	2.06 NTU	258.0 mV	15.45 ft	200.00 ml/min
3/17/2021 8:54 AM	10:00	5.54 pH	15.89 °C	1,331.9 µS/cm	3.25 mg/L	1.71 NTU	262.0 mV	15.85 ft	200.00 ml/min
3/17/2021 8:59 AM	15:00	5.55 pH	15.31 °C	1,340.5 µS/cm	3.21 mg/L	1.37 NTU	173.6 mV	16.10 ft	200.00 ml/min
3/17/2021 9:04 AM	20:00	5.55 pH	15.30 °C	1,339.9 µS/cm	2.92 mg/L	0.94 NTU	176.1 mV	16.35 ft	200.00 ml/min
3/17/2021 9:09 AM	25:00	5.55 pH	15.44 °C	1,340.9 µS/cm	2.65 mg/L	0.86 NTU	269.7 mV	16.60 ft	200.00 ml/min
3/17/2021 9:14 AM	30:00	5.55 pH	15.47 °C	1,344.0 µS/cm	2.42 mg/L	--	182.1 mV	16.60 ft	200.00 ml/min
3/17/2021 9:19 AM	35:00	5.56 pH	15.57 °C	1,342.6 µS/cm	2.26 mg/L	0.84 NTU	178.4 mV	16.85 ft	200.00 ml/min
3/17/2021 9:24 AM	40:00	5.55 pH	15.42 °C	1,342.5 µS/cm	2.07 mg/L	0.91 NTU	263.8 mV	17.10 ft	200.00 ml/min
3/17/2021 9:29 AM	45:00	5.56 pH	15.44 °C	1,343.6 µS/cm	1.92 mg/L	1.05 NTU	261.2 mV	17.27 ft	200.00 ml/min
3/17/2021 9:34 AM	50:00	5.56 pH	15.44 °C	1,345.2 µS/cm	1.79 mg/L	1.04 NTU	169.5 mV	17.42 ft	200.00 ml/min
3/17/2021 9:39 AM	55:00	5.56 pH	15.57 °C	1,346.3 µS/cm	1.68 mg/L	1.52 NTU	259.0 mV	17.52 ft	200.00 ml/min
3/17/2021 9:44 AM	01:00:00	5.57 pH	15.62 °C	1,350.8 µS/cm	1.56 mg/L	1.46 NTU	174.1 mV	17.67 ft	200.00 ml/min

3/17/2021 9:49 AM	01:05:00	5.57 pH	15.61 °C	1,346.5 µS/cm	1.47 mg/L	1.16 NTU	172.0 mV	17.77 ft	200.00 ml/min
3/17/2021 9:54 AM	01:10:00	5.57 pH	15.44 °C	1,348.6 µS/cm	1.38 mg/L	1.15 NTU	168.9 mV	17.88 ft	200.00 ml/min

Samples

Sample ID:	Description:
MW-22	Grab Sample.

Low-Flow Test Report:

Test Date / Time: 3/17/2021 11:15:53 AM
Project: GP-Plant Hammond
Operator Name: Thomas Kessler

Location Name: MW-23D **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 52.79 ft** **Total Depth: 62.74 ft** **Initial Depth to Water: 16.34 ft**	**Pump Type: Peri** **Tubing Type: polyethylene** **Pump Intake From TOC: 57.79 ft** **Estimated Total Volume Pumped: 3 liter** **Flow Cell Volume: 90 ml** **Final Flow Rate: 100 ml/min** **Final Draw Down: 0.1 ft**	**Instrument Used: Aqua TROLL 400** **Serial Number: 728566**

Test Notes:
Five Bottles, Metals, TDS, Inorganics, Radium.

Weather Conditions:
Foggy, 50 degrees.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 5	
3/17/2021 11:15 AM	00:00	6.83 pH	13.50 °C	1,365.4 µS/cm	3.01 mg/L	5.46 NTU	-44.5 mV	16.34 ft	100.00 ml/min
3/17/2021 11:20 AM	05:00	6.87 pH	16.52 °C	1,696.0 µS/cm	0.26 mg/L	2.48 NTU	4.2 mV	16.44 ft	100.00 ml/min
3/17/2021 11:25 AM	10:00	6.86 pH	17.01 °C	1,710.1 µS/cm	0.20 mg/L	1.37 NTU	15.0 mV	16.44 ft	100.00 ml/min
3/17/2021 11:30 AM	15:00	6.86 pH	17.18 °C	1,729.1 µS/cm	0.19 mg/L	1.76 NTU	18.8 mV	16.44 ft	100.00 ml/min
3/17/2021 11:35 AM	20:00	6.86 pH	17.37 °C	1,733.7 µS/cm	0.18 mg/L	2.22 NTU	20.6 mV	16.44 ft	100.00 ml/min
3/17/2021 11:40 AM	25:00	6.86 pH	17.45 °C	1,726.4 µS/cm	0.20 mg/L	4.93 NTU	21.8 mV	16.44 ft	100.00 ml/min
3/17/2021 11:45 AM	30:00	6.86 pH	17.50 °C	1,731.0 µS/cm	0.24 mg/L	1.48 NTU	21.8 mV	16.44 ft	100.00 ml/min

Samples

Sample ID:	Description:
MW-23D	Grab Sample.

Low-Flow Test Report:

Test Date / Time: 3/18/2021 10:05:18 AM
Project: GP-Plant Hammond
Operator Name: Thomas Kessler

Location Name: MW-33 **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 27.93 m** **Total Depth: 37.93 ft** **Initial Depth to Water: 21.75 ft**	**Pump Type: Bladder** **Tubing Type: polyethylene** **Pump Intake From TOC: 32.93 ft** **Estimated Total Volume Pumped: 6 liter** **Flow Cell Volume: 90 ml** **Final Flow Rate: 200 ml/min** **Final Draw Down: 0.1 ft**	**Instrument Used: Aqua TROLL 400** **Serial Number: 728566**

Test Notes:
Five bottles: Metals, TDS, Inorganics, Radium.

Weather Conditions:
Sunny, 65 degrees.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
3/18/2021 10:05 AM	00:00	4.62 pH	19.19 °C	2,706.7 µS/cm	5.62 mg/L	11.44 NTU	236.7 mV	21.75 ft	200.00 ml/min
3/18/2021 10:10 AM	05:00	4.21 pH	18.84 °C	2,679.3 µS/cm	1.55 mg/L	10.99 NTU	346.5 mV	21.85 ft	200.00 ml/min
3/18/2021 10:15 AM	10:00	4.21 pH	19.05 °C	2,688.1 µS/cm	0.78 mg/L	7.77 NTU	345.5 mV	21.85 ft	200.00 ml/min
3/18/2021 10:20 AM	15:00	4.23 pH	19.01 °C	2,694.5 µS/cm	0.49 mg/L	4.90 NTU	380.9 mV	21.85 ft	200.00 ml/min
3/18/2021 10:25 AM	20:00	4.25 pH	19.06 °C	2,694.5 µS/cm	0.37 mg/L	4.09 NTU	369.2 mV	21.85 ft	200.00 ml/min
3/18/2021 10:30 AM	25:00	4.26 pH	19.06 °C	2,693.2 µS/cm	0.32 mg/L	3.59 NTU	370.6 mV	21.85 ft	200.00 ml/min
3/18/2021 10:35 AM	30:00	4.27 pH	19.15 °C	2,691.3 µS/cm	0.31 mg/L	3.34 NTU	363.6 mV	21.85 ft	200.00 ml/min

Samples

Sample ID:	Description:
MW-33	Grab Sample.

Low-Flow Test Report:

Test Date / Time: 3/19/2021 9:43:04 AM
Project: GP-Plant Hammond
Operator Name: Chad Russo

Location Name: MW-35 **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 13.52 ft** **Total Depth: 23.52 ft** **Initial Depth to Water: 4.12 ft**	**Pump Type: Bladder** **Tubing Type: Polyethylene** **Pump Intake From TOC: 18.52 ft** **Estimated Total Volume Pumped: 18 Liter** **Flow Cell Volume: 90 ml** **Final Flow Rate: 100 ml/min** **Final Draw Down: 1.13 ft**	**Instrument Used: Aqua TROLL 400** **Serial Number: 728550**

Test Notes:
Five Bottles: Metals, TDS, Inorganics, Radium.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
3/19/2021 9:43 AM	00:00	4.95 pH	14.00 °C	2,654.2 µS/cm	3.08 mg/L	--	115.7 mV	4.12 ft	100.00 ml/min
3/19/2021 9:48 AM	05:00	4.87 pH	13.22 °C	2,695.4 µS/cm	1.40 mg/L	26.40 NTU	127.4 mV	4.47 ft	100.00 ml/min
3/19/2021 9:53 AM	10:00	4.86 pH	13.41 °C	2,707.4 µS/cm	1.50 mg/L	16.20 NTU	204.9 mV	4.50 ft	100.00 ml/min
3/19/2021 9:58 AM	15:00	4.86 pH	13.53 °C	2,705.3 µS/cm	1.31 mg/L	15.30 NTU	136.8 mV	4.50 ft	100.00 ml/min
3/19/2021 10:03 AM	20:00	4.85 pH	14.24 °C	2,722.0 µS/cm	1.02 mg/L	12.70 NTU	216.7 mV	4.70 ft	100.00 ml/min
3/19/2021 10:08 AM	25:00	4.85 pH	14.67 °C	2,705.6 µS/cm	0.69 mg/L	11.60 NTU	138.6 mV	4.82 ft	100.00 ml/min
3/19/2021 10:13 AM	30:00	4.85 pH	14.86 °C	2,704.4 µS/cm	0.61 mg/L	13.20 NTU	214.2 mV	4.87 ft	100.00 ml/min
3/19/2021 10:18 AM	35:00	4.85 pH	14.87 °C	2,704.2 µS/cm	0.49 mg/L	12.90 NTU	137.5 mV	4.90 ft	100.00 ml/min
3/19/2021 10:23 AM	40:00	4.86 pH	14.93 °C	2,699.5 µS/cm	0.44 mg/L	13.40 NTU	210.4 mV	4.90 ft	100.00 ml/min
3/19/2021 10:28 AM	45:00	4.86 pH	15.03 °C	2,701.5 µS/cm	0.38 mg/L	11.27 NTU	134.8 mV	4.90 ft	100.00 ml/min
3/19/2021 10:33 AM	50:00	4.86 pH	15.12 °C	2,702.8 µS/cm	0.36 mg/L	11.51 NTU	208.6 mV	4.90 ft	100.00 ml/min
3/19/2021 10:38 AM	55:00	4.86 pH	15.10 °C	2,703.7 µS/cm	0.34 mg/L	10.26 NTU	134.1 mV	4.90 ft	100.00 ml/min
3/19/2021 10:43 AM	01:00:00	4.86 pH	14.83 °C	2,714.5 µS/cm	0.33 mg/L	9.19 NTU	206.8 mV	4.90 ft	100.00 ml/min
3/19/2021 10:48 AM	01:05:00	4.86 pH	14.89 °C	2,713.1 µS/cm	0.32 mg/L	9.01 NTU	133.6 mV	4.90 ft	100.00 ml/min
3/19/2021 10:53 AM	01:10:00	4.85 pH	14.99 °C	2,716.7 µS/cm	0.29 mg/L	7.62 NTU	207.6 mV	4.90 ft	100.00 ml/min

3/19/2021 10:58 AM	01:15:00	4.85 pH	15.13 °C	2,717.6 µS/cm	0.27 mg/L	7.41 NTU	133.9 mV	4.90 ft	100.00 ml/min
3/19/2021 11:03 AM	01:20:00	4.86 pH	15.26 °C	2,719.0 µS/cm	0.27 mg/L	6.53 NTU	209.0 mV	4.95 ft	100.00 ml/min
3/19/2021 11:08 AM	01:25:00	4.85 pH	15.40 °C	2,721.9 µS/cm	0.22 mg/L	7.13 NTU	134.9 mV	5.10 ft	100.00 ml/min
3/19/2021 11:13 AM	01:30:00	4.85 pH	15.76 °C	2,727.5 µS/cm	0.16 mg/L	7.60 NTU	211.8 mV	5.26 ft	100.00 ml/min
3/19/2021 11:18 AM	01:35:00	4.85 pH	15.71 °C	2,720.9 µS/cm	0.16 mg/L	9.85 NTU	135.2 mV	5.30 ft	100.00 ml/min
3/19/2021 11:23 AM	01:40:00	4.85 pH	15.71 °C	2,726.6 µS/cm	0.21 mg/L	10.27 NTU	210.1 mV	5.35 ft	100.00 ml/min
3/19/2021 11:28 AM	01:45:00	4.86 pH	15.62 °C	2,726.4 µS/cm	0.19 mg/L	11.28 NTU	134.3 mV	5.35 ft	100.00 ml/min
3/19/2021 11:33 AM	01:50:00	4.86 pH	15.67 °C	2,730.9 µS/cm	0.18 mg/L	10.75 NTU	208.3 mV	5.35 ft	100.00 ml/min
3/19/2021 11:38 AM	01:55:00	4.86 pH	15.76 °C	2,729.2 µS/cm	0.18 mg/L	11.51 NTU	133.8 mV	5.35 ft	100.00 ml/min
3/19/2021 11:43 AM	02:00:00	4.86 pH	15.89 °C	2,735.2 µS/cm	0.18 mg/L	11.00 NTU	207.6 mV	5.35 ft	100.00 ml/min
3/19/2021 11:48 AM	02:05:00	4.86 pH	15.94 °C	2,728.9 µS/cm	0.20 mg/L	10.72 NTU	133.2 mV	5.35 ft	100.00 ml/min
3/19/2021 11:53 AM	02:10:00	4.86 pH	15.91 °C	2,732.2 µS/cm	0.18 mg/L	11.18 NTU	206.9 mV	5.35 ft	100.00 ml/min
3/19/2021 11:58 AM	02:15:00	4.87 pH	15.85 °C	2,731.9 µS/cm	0.19 mg/L	10.03 NTU	133.1 mV	5.30 ft	100.00 ml/min
3/19/2021 12:03 PM	02:20:00	4.87 pH	15.84 °C	2,732.4 µS/cm	0.18 mg/L	8.93 NTU	131.0 mV	5.30 ft	100.00 ml/min
3/19/2021 12:08 PM	02:25:00	4.87 pH	15.84 °C	2,736.0 µS/cm	0.18 mg/L	9.81 NTU	205.1 mV	5.25 ft	100.00 ml/min
3/19/2021 12:13 PM	02:30:00	4.87 pH	15.85 °C	2,733.7 µS/cm	0.20 mg/L	9.10 NTU	133.1 mV	5.25 ft	100.00 ml/min
3/19/2021 12:18 PM	02:35:00	4.88 pH	15.84 °C	2,735.1 µS/cm	0.19 mg/L	8.93 NTU	206.6 mV	5.25 ft	100.00 ml/min
3/19/2021 12:23 PM	02:40:00	4.88 pH	15.80 °C	2,734.5 µS/cm	0.20 mg/L	8.75 NTU	132.6 mV	5.25 ft	100.00 ml/min
3/19/2021 12:28 PM	02:45:00	4.88 pH	15.80 °C	2,735.9 µS/cm	0.19 mg/L	9.12 NTU	131.3 mV	5.25 ft	100.00 ml/min
3/19/2021 12:33 PM	02:50:00	4.88 pH	15.79 °C	2,737.7 µS/cm	0.19 mg/L	8.77 NTU	206.1 mV	5.25 ft	100.00 ml/min
3/19/2021 12:38 PM	02:55:00	4.88 pH	15.71 °C	2,735.7 µS/cm	0.21 mg/L	8.24 NTU	133.1 mV	5.25 ft	100.00 ml/min
3/19/2021 12:43 PM	03:00:00	4.89 pH	15.77 °C	2,737.3 µS/cm	0.20 mg/L	8.19 NTU	207.4 mV	5.25 ft	100.00 ml/min

Samples

Sample ID:	Description:
MW-35	Grab Sample.

Low-Flow Test Report:

Test Date / Time: 3/11/2021 1:04:15 PM
Project: GP-Plant Hammond
Operator Name: Vashish Taukoor

Location Name: MW-37D **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 66.63 ft Total Depth: 76.63 ft** **Initial Depth to Water: 16.3 ft**	**Pump Type: Bladder** **Tubing Type: Polyethylene** **Pump Intake From TOC: 71 ft** **Estimated Total Volume Pumped: 32 Liter** **Flow Cell Volume: 90 ml** **Final Flow Rate: 300 ml/min Final Draw Down: -14.161 ft**	**Instrument Used: Aqua TROLL 400** **Serial Number: 728563**

Test Notes:
Prepurged for 20 min @ 100ml/min
Fast dropping water level

Well purged dry @ 300 ml/min Final Water level recorded = 65.20 ft

Sample to be collected on 3/12/2021

Weather Conditions:
Sunny
73 deg F
Low wind

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 5	
3/11/2021 1:04 PM	00:00	7.40 pH	18.86 °C	1,291.3 µS/cm	2.26 mg/L	7.28 NTU	-78.3 mV	20.85 cm	100.00 ml/min
3/11/2021 1:09 PM	05:00	7.39 pH	18.74 °C	1,298.5 µS/cm	2.24 mg/L	5.39 NTU	-76.8 mV	21.50 cm	100.00 ml/min
3/11/2021 1:14 PM	10:00	7.39 pH	18.84 °C	1,290.3 µS/cm	2.18 mg/L	7.67 NTU	-90.9 mV	22.80 cm	100.00 ml/min
3/11/2021 1:19 PM	15:00	7.39 pH	18.74 °C	1,280.0 µS/cm	2.39 mg/L	5.78 NTU	-74.3 mV	23.93 cm	100.00 ml/min
3/11/2021 1:21 PM	17:16	7.38 pH	18.84 °C	1,288.6 µS/cm	2.46 mg/L	--	-72.2 mV	--	100.00 ml/min
3/11/2021 1:26 PM	22:16	7.38 pH	19.00 °C	1,299.3 µS/cm	2.64 mg/L	--	-70.0 mV	--	100.00 ml/min
3/11/2021 1:27 PM	23:40	7.37 pH	19.01 °C	1,296.7 µS/cm	2.72 mg/L	4.23 NTU	-69.1 mV	25.50 cm	100.00 ml/min
3/11/2021 1:32 PM	28:40	7.39 pH	19.06 °C	1,292.6 µS/cm	2.97 mg/L	4.99 NTU	-83.4 mV	26.62 cm	100.00 ml/min

3/11/2021 1:33 PM	29:40	7.39 pH	19.07 °C	1,287.3 µS/cm	2.89 mg/L	--	-83.1 mV	--	300.00 ml/min
3/11/2021 1:48 PM	44:40	7.57 pH	18.45 °C	1,324.5 µS/cm	9.28 mg/L	4.57 NTU	-53.2 mV	32.50 cm	300.00 ml/min
3/11/2021 2:03 PM	59:40	7.81 pH	18.44 °C	1,332.7 µS/cm	10.56 mg/L	5.50 NTU	-63.9 mV	39.00 cm	300.00 ml/min
3/11/2021 2:09 PM	01:04:53	7.84 pH	18.61 °C	1,333.0 µS/cm	9.58 mg/L	6.04 NTU	-70.8 mV	43.50 cm	300.00 ml/min
3/11/2021 2:24 PM	01:19:53	7.96 pH	18.44 °C	1,340.1 µS/cm	8.96 mg/L	8.07 NTU	-82.2 mV	49.30 cm	300.00 ml/min
3/11/2021 2:39 PM	01:34:53	8.02 pH	18.57 °C	1,374.4 µS/cm	8.25 mg/L	10.65 NTU	-88.4 mV	56.40 cm	300.00 ml/min
3/11/2021 2:43 PM	01:39:18	8.02 pH	18.48 °C	1,395.8 µS/cm	7.87 mg/L	--	-88.4 mV	--	300.00 ml/min
3/11/2021 2:58 PM	01:54:18	8.03 pH	18.26 °C	1,438.0 µS/cm	7.40 mg/L	12.10 NTU	-89.4 mV	62.00 cm	300.00 ml/min
3/11/2021 3:13 PM	02:09:18	7.56 pH	18.90 °C	1,500.6 µS/cm	4.25 mg/L	8.16 NTU	-88.1 mV	65.20 cm	300.00 ml/min

Samples

Sample ID:	Description:
MW-37D	No sample taken.

Low-Flow Test Report:

Test Date / Time: 3/12/2021 9:48:03 AM
Project: GP-Plant Hammond
Operator Name: Vashish Taukoor

Location Name: MW-37D **Well Diameter: 2 in** **Screen Length: 10 ft** **Top of Screen: 66.63 ft** **Total Depth: 76.63 ft** **Initial Depth to Water: 16.76 ft**	**Pump Type: Bladder** **Tubing Type: Polyethylene** **Pump Intake From TOC: 68 ft** **Estimated Total Volume Pumped: 4.5 Liters** **Flow Cell Volume: 90 ml** **Final Flow Rate: 100 ml/min Final Draw Down: 13.21 ft**	**Instrument Used: Aqua TROLL 400** **Serial Number: 728563**

Test Notes:
Five Bottles: Metals, TDS, Inorganics, Radium.
Purged well dry on 3-11-2021
Water table back to original (well fully recharged)
Pre purged 15 min @ 100 ml/min

Weather Conditions:
Sunny
55 deg F
No wind

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 5	
3/12/2021 9:48 AM	00:00	7.46 pH	17.77 °C	1,306.7 µS/cm	0.90 mg/L	2.85 NTU	-91.3 mV	21.60 cm	100.00 ml/min
3/12/2021 9:53 AM	05:00	7.47 pH	17.85 °C	1,310.5 µS/cm	0.76 mg/L	1.03 NTU	-91.0 mV	22.40 cm	100.00 ml/min
3/12/2021 9:58 AM	10:00	7.48 pH	17.81 °C	1,044.1 µS/cm	0.73 mg/L	2.31 NTU	-115.9 mV	23.92 cm	100.00 ml/min
3/12/2021 10:03 AM	15:00	7.49 pH	17.81 °C	1,000.9 µS/cm	0.70 mg/L	1.26 NTU	-116.1 mV	25.72 cm	100.00 ml/min
3/12/2021 10:08 AM	20:00	7.50 pH	17.86 °C	1,324.4 µS/cm	0.82 mg/L	1.56 NTU	-115.5 mV	26.96 cm	100.00 ml/min
3/12/2021 10:13 AM	25:00	7.50 pH	17.84 °C	1,327.1 µS/cm	0.73 mg/L	1.07 NTU	-115.2 mV	28.37 cm	100.00 ml/min
3/12/2021 10:18 AM	30:00	7.50 pH	17.85 °C	1,327.6 µS/cm	0.82 mg/L	0.98 NTU	-91.6 mV	29.97 cm	100.00 ml/min

Samples

Sample ID:	Description:

MW-37D	Grab Sample.

CALIBRATION REPORTS

Geosyntec consultants

EQUIPMENT CALIBRATION LOG

Field Technician: Chad Russo | Date: 1/20/21 | Time (start): 0945 | Time (finish): 0910

smarTroll SN: 728634 | Turbidity Meter Type: LaMotte 2020we | SN: 2289-2612

Weather Conditions: 40°F sunny | Facility and Unit: Hammond | Project No.: 60605891

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	2005 d 025 8/21	12.87	4496	4514.5	4496	+/- 5 %	(Yes) No	
pH (4)			4	4.05	4	+/- 0.1 SU	Yes No	
Mid-Day pH (4) check		18.28	4	4.09	4.09	+/- 0.1 SU	(Yes) No	
pH (7)	19348057 8/21	12.52	7	7.02	7	+/- 0.1 SU	(Yes) No	
Mid-Day pH (7) check		15.69	7	7.06	7.06	+/- 0.1 SU	(Yes) No	
pH (10)	19320102 8/21	12.25	10	10.08	10	+/- 0.1 SU	(Yes) No	
Mid-Day pH (10) check		13.85	~~13.85~~ 10	10.07	10.07	+/- 0.1 SU	(Yes) No	
ORP (mV)	19460167 8/21	12.2	228	243.7	226	+/- 20mV	(Yes) No	
DO (%) (1pt, 100% water saturated air cal)	[redacted]		100	99.18	100	+/- 6 % saturation	(Yes) No	
Turbidity 0 NTU			0	0.46	0.46	+/- 0.5 NTU	(Yes) No	
Turbidity 1 NTU			1	0.77	0.77	+/- 0.5 NTU	(Yes) No	
Turbidity 10 NTU			10	9.83	9.83	+/- 0.5 NTU	(Yes) No	

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EQUIPMENT CALIBRATION LOG

Field Technician: Chad Russo

Date: 1/19/2021

Time (start): 1030

Time (finish): 1105

smarTroll SN: 728134

Turbidity Meter Type: Lamotte 2020we

SN: 22589-2612

Weather Conditions: ~~40F~~ 40 F cloudy

Facility and Unit: Hammond

Project No: GW6581

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20610025 8/2021	9.22	4490	4683	4490	+/- 5 %	(Yes) No	
pH (4)			4	3.99	4	+/- 0.1 SU	(Yes) No	
Mid-Day pH (4) check	19340052 8/2021	9.28	7	7.04	7	+/- 0.1 SU	(Yes) No	
pH (7)		10.72	4	4.05	4.05	+/- 0.1 SU	(Yes) No	
Mid-Day pH (7) check		10.45	7	7.65	7.05	+/- 0.1 SU	(Yes) No	
pH (10)	19320102 8/2021	9.22	10	10.12	10	+/- 0.1 SU	(Yes) No	
Mid-Day pH (10) check		10.39	16	16.06	10.06	+/- 0.1 SU	Yes No	
ORP (mV)	19460167 8/2021	8.94	228	247	228	+/- 20mV	(Yes) No	
DO (%) (1pt, 100% water saturated air cal)	[redacted]		100	102.04	100	+/- 6 % saturation	(Yes) No	
Turbidity 0 NTU			0	0.45	0.45	+/- 0.5 NTU	(Yes) No	
Turbidity 1 NTU			1	0.76	0.76	+/- 0.5 NTU	(Yes) No	
Turbidity 10 NTU			16	10.13	16.13	+/- 0.5 NTU	(Yes) No	

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EQUIPMENT CALIBRATION LOG

Field Technician: Thomas Kessler | Date: 2/8/21 | Time (start): 1425 | Time (finish): 1500

smarTroll SN: 7285411 | Turbidity Meter Type: LaMote 2020we | SN: 2284-2612

Weather Conditions: Sunny, 55° | Facility and Unit: Plant Hammond AP-1/2 | Project No: GW6581

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20010025 08/21	25° 21.32	4490	4689.8	4490	+/- 5 %	Yes / No	
pH (4)			4.00	4.04	4.00	+/- 0.1 SU	Yes / No	
Mid-Day pH (4) check		22.0	4.00	4.03	—	+/- 0.1 SU	Yes / No	
pH (7)	19340057 08/21	21.10	7.00	7.44	7.00	+/- 0.1 SU	Yes / No	
Mid-Day pH (7) check	—	21.83	7.00	7.02	—	+/- 0.1 SU	Yes / No	
pH (10)	19320162 08/21	21.83	10.00	10.41	10.00	+/- 0.1 SU	Yes / No	
Mid-Day pH (10) check	—	22.0	10.00	9.96	—	+/- 0.1 SU	Yes / No	
ORP (mV)	19460167 08/21	21.52	228	221.9	228	+/- 20mV	Yes / No	
DO (%) (1pt, 100% water saturated air cal)	[redacted]		100	103.15	100%	+/- 6 % saturation	Yes / No	
Turbidity 0 NTU	[redacted]		0	-.27	0	+/- 0.5 NTU	Yes / No	
Turbidity 1 NTU	[redacted]		1.00	0.81	0.93	+/- 0.5 NTU	Yes / No	
Turbidity 10 NTU	[redacted]		10.00	12.3	9.64	+/- 0.5 NTU	Yes / No	

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EQUIPMENT CALIBRATION LOG

Field Technician: Thomas Kessler | Date: 2/9/21 | Time (start): 0812 | Time (finish): 0900

smarTroll SN: 728541 | Turbidity Meter Type: LaMote 2020we | SN: 2289-2612

Weather Conditions: cloudy, 45° | Facility and Unit: Plant Hammond AP-1/2 | Project No.: GW6581

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	2001005 08/21	9.05	4490	45539	4490	+/- 5 %	Yes / No	
pH (4)			4.00	4.01	4.00	+/- 0.1 SU	Yes / No	
Mid-Day pH (4) check	~	~~9.71~~	4.00	~~4.06~~ 7.02	~	+/- 0.1 SU	Yes / No	geood temp = 12.2
pH (7)	1934005 08/21	9.71	7.00	7.02	7.00	+/- 0.1 SU	Yes / No	
Mid-Day pH (7) check	~	11.3	7.00	7.01	—	+/- 0.1 SU	Yes / No	geood
pH (10)	1932005 08/21	10.16	10.00	10.19	10.00	+/- 0.1 SU	Yes / No	
Mid-Day pH (10) check	~	12.8	10.00	9.96	—	+/- 0.1 SU	Yes / No	geood
ORP (mV)	1496 0167 08/21	10.24	228	251.2	228	+/- 20mV	Yes / No	
DO (%) (1pt, 100% water saturated air cal)			100	96.7	100	+/- 6 % saturation	Yes / No	
Turbidity 0 NTU			0	~~0.06~~	~~0.08~~	+/- 0.5 NTU	Yes / No	
Turbidity 1 NTU			1.00	0.63	0.74	+/- 0.5 NTU	Yes / No	
Turbidity 10 NTU			10.00	10.94	9.95	+/- 0.5 NTU	Yes / No	

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EQUIPMENT CALIBRATION LOG

Field Technician: Thomas Kressler | Date: 9/10/21 | Time (start): 0806 | Time (finish): 0900

smarTroll SN: 728541 | Turbidity Meter Type: LaMote 2020we | SN: 2289-2612

Weather Conditions: foggy, 56° | Facility and Unit: Plant Hammond AP-1/2 | Project No.: GW6581

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	19340057 08/21	8.47	4490	4500.9	4490	+/- 5 %	Yes No	
pH (4)			4.00	4.11	4.00	+/- 0.1 SU	Yes No	
Mid-Day pH (4) check	—	9.98	4.00	3.96	—	+/- 0.1 SU	Yes No	geo cond
pH (7)	20010025 08/21	8.62	7.00	7.01	7.00	+/- 0.1 SU	Yes No	
Mid-Day pH (7) check	—	10.3	7.00	7.06	—	+/- 0.1 SU	Yes No	geo cond
pH (10)	19320102 08/21	8.57	10.00	10.06	10.00	+/- 0.1 SU	Yes No	
Mid-Day pH (10) check	—	10.2	10.00	10.01	—	+/- 0.1 SU	Yes No	geo cond
ORP (mV)	14460067 04/21	8.61	228	228.5	228	+/- 20mV	Yes No	
DO (%) (1pt, 100% water saturated air cal)			100	99.17	100	+/- 6 % saturation	Yes No	
Turbidity 0 NTU			0	0.52	0.00	+/- 0.5 NTU	Yes No	
Turbidity 1 NTU			1.00	0.45	~~0.56~~ 1.00	+/- 0.5 NTU	Yes No	
Turbidity 10 NTU			10.00	11.69	10.16	+/- 0.5 NTU	Yes No	

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EQUIPMENT CALIBRATION LOG

Field Technician: Thomas Kessler | Date: 2/11/21 | Time (start): 0815 | Time (finish): 0840

smarTroll SN: 72541 | Turbidity Meter Type: LaMote 2020we | SN: 2289-2617

Weather Conditions: Cloudy 50° | Facility and Unit: Plant Hammond AP-1/2 | Project No.: GW6581

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20010025 08/21	14.90	4490	45160	4490	+/- 5 %	Yes No	
pH (4)	↓		4.00	4.06	4.00	+/- 0.1 SU	Yes No	
Mid-Day pH (4) check	—	16.09	4.00	4.09	—	+/- 0.1 SU	Yes No	good
pH (7)	19340057 08/21	14.90 ~~7.86~~	7.00	7.04	7.00	+/- 0.1 SU	Yes No	
Mid-Day pH (7) check	↓	16.01	7.00	7.07	—	+/- 0.1 SU	Yes No	good
pH (10)	19320102 08/21	15.12	10.00	10.05	10.00	+/- 0.1 SU	Yes No	
Mid-Day pH (10) check	↓	16.21	10.00	9.99	—	+/- 0.1 SU	Yes No	good
ORP (mV)	19460167 08/21	15.22	228	215.9	228	+/- 20mV	Yes No	
DO (%) (1pt, 100% water saturated air cal)	[redacted]		100	99.67	100	+/- 6 % saturation	Yes No	
Turbidity 0 NTU	[redacted]		0	0.66	0.01	+/- 0.5 NTU	Yes No	
Turbidity 1 NTU	[redacted]		1.00	0.34	1.00	+/- 0.5 NTU	Yes No	
Turbidity 10 NTU	[redacted]		10.00	11.48	9.89	+/- 0.5 NTU	Yes No	

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EQUIPMENT CALIBRATION LOG

Field Technician: Thomas Measter | Date: 2/12/20 | Time (start): 0810 | Time (finish): 0830

smarTroll SN: 7285411 | Turbidity Meter Type: LaMote 2020we | SN: 229-2612

Weather Conditions: Cloudy, 50° | Facility and Unit: Plant Hammond AP-1/2 | Project No.: GW6581

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20C100275 08/21	13.39	4490	4452.0	4490	+/- 5 %	Yes / No	
pH (4)	↓	14.06 13.36	4.00	3.92 (3.96)	4.00	+/- 0.1 SU	Yes / No	spent
Mid-Day pH (4) check	19340057 08/12	13.13	7.00	7.01	7.00	+/- 0.1 SU	Yes / No	
pH (7)	↓ —	14.12	7.00	7.06	—	+/- 0.1 SU	Yes / No	spent
Mid-Day pH (7) check	19320102 08/21	13.05	10.00	10.00	10.00	+/- 0.1 SU	Yes / No	
pH (10)	↓ —	14.6	10.00	10.07	—	+/- 0.1 SU	Yes / No	spent
Mid-Day pH (10) check	19460167 08/21	12.90	228	232.1	228	+/- 20mV	Yes / No	
ORP (mV)	[redacted]	[redacted]	100	98.96	100	+/- 6 % saturation	Yes / No	
DO (%) (1pt, 100% water saturated air cal)	[redacted]	[redacted]	0	.86	0	+/- 0.5 NTU	Yes / No	
Turbidity 0 NTU	[redacted]	[redacted]	1.00	.39	1	+/- 0.5 NTU	Yes / No	
Turbidity 1 NTU	[redacted]	[redacted]	10.00	10.43	9.93	+/- 0.5 NTU	Yes / No	
Turbidity 10 NTU	[redacted]	[redacted]						

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EQUIPMENT CALIBRATION LOG

Field Technician: Thomas Wessler

Date: 2/15/21

Time (start): 0835

Time (finish): 0910

smarTroll SN: 728541

Turbidity Meter Type: LaMote 2020we

SN: 2289-2612

Weather Conditions: Foggy, 38°

Facility and Unit: Plant Hammond AP-1/2

Project No.: GW6581

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20010025 08/21	5.18	4490	~~4518.7~~ 4548.7	4440	+/- 5 %	Yes No	
pH (4)	↓		4.00	4.02	4.00	+/- 0.1 SU	Yes No	
Mid-Day pH (4) check	↓	6.99	4.00	3.91	—	+/- 0.1 SU	Yes No	good
pH (7)	19340057 08/21	5.51	7.00	7.10	7.00	+/- 0.1 SU	Yes No	
Mid-Day pH (7) check	↓	7.10	7.00	6.97	—	+/- 0.1 SU	Yes No	good
pH (10)	19320102 08/21	6.03	10.00	10.16	10.00	+/- 0.1 SU	Yes No	
Mid-Day pH (10) check	↓	7.06	10.00	10.02	—	+/- 0.1 SU	Yes No	good
ORP (mV)	19460167 08/21	6.34	228	239.0	228	+/- 20mV	Yes No	
DO (%) (1pt, 100% water saturated air cal)			100	109.43	100	+/- 6 % saturation	Yes No	
Turbidity 0 NTU			0	0.01	0.00	+/- 0.5 NTU	Yes No	
Turbidity 1 NTU			1.00	0.24	1.00	+/- 0.5 NTU	Yes No	
Turbidity 10 NTU			10.00	11.61	10.00	+/- 0.5 NTU	Yes No	

Geosyntec consultants

EQUIPMENT CALIBRATION LOG

Field Technician: Thomas Kessler | Date: 2/16/21 | Time (start): 0904 | Time (finish): 0956

smarTroll SN: 7285411 | Turbidity Meter Type: LaMote 2020we | SN: 2289-2612

Weather Conditions: Snowing, 20° | Facility and Unit: Plant Hammond AP-1/2 | Project No.: GW6581

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20010025 08/21	5.44	4490	4177.9	4490	+/- 5 %	(Yes) No	
pH (4)			4.00	4.05	4.00	+/- 0.1 SU	(Yes) No	
Mid-Day pH (4) check	↓	2.99	4.00	4.00	—	+/- 0.1 SU	(Yes) No	good
pH (7)	19340051 08/21	3.55	7.00	7.08	7.00	+/- 0.1 SU	(Yes) No	
Mid-Day pH (7) check	↓	2.89	7.00	7.09	—	+/- 0.1 SU	(Yes) No	good
pH (10)	19320102 08/21	3.46	10.00	10.12	10.0	+/- 0.1 SU	(Yes) No	
Mid-Day pH (10) check	↓	2.70	10.00	10.01	—	+/- 0.1 SU	(Yes) No	good
ORP (mV)	19460167 08/21	3.50	228	232.1	228	+/- 20mV	(Yes) No	
DO (%) (1pt, 100% water saturated air cal)			100	100.30	100	+/- 6 % saturation	(Yes) No	
Turbidity 0 NTU			0	0.00	0.00	+/- 0.5 NTU	(Yes) No	
Turbidity 1 NTU			1.00	1.45	1.00	+/- 0.5 NTU	(Yes) No	
Turbidity 10 NTU			10.00	8.28	9.63	+/- 0.5 NTU	(Yes) No	

Geosyntec consultants

EQUIPMENT CALIBRATION LOG

Field Technician: Chad Russo | Date: 4/9/24 | Time (start): 1420 | Time (finish): 1450

smarTroll SN: 728639 | Turbidity Meter Type: LaMote 2020we | SN: 2283-2612

Weather Conditions: 50°F sunny | Facility and Unit: Plant Hammond AP-1/2 | Project No.: GW6581

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20010025	19.71	4490	4693.2	4490	+/- 5 %	(Yes) No	
pH (4)	8/24		4.00	3.93	4	+/- 0.1 SU	(Yes) No	
Mid-Day pH (4) check	19340057 8/2024	19.31	4.00	~~7.38~~		+/- 0.1 SU	Yes No	
pH (7)			7.00	7.38	7	+/- 0.1 SU	(Yes) No	
Mid-Day pH (7) check			7.00			+/- 0.1 SU	Yes No	
pH (10)	19320162 8/24	19.49	10.00	10.43	10	+/- 0.1 SU	(Yes) No	
Mid-Day pH (10) check			10.00			+/- 0.1 SU	Yes No	
ORP (mV)	19460167 8/24	17.58	228	224.3	228	+/- 20mV	(Yes) No	
DO (%) (1pt, 100% water saturated air cal)			100	99.63	100	+/- 6 % saturation	(Yes) No	
Turbidity 0 NTU			0	0	0	+/- 0.5 NTU	(Yes) No	
Turbidity 1 NTU			1.00	0.92	0.82	+/- 0.5 NTU	(Yes) No	
Turbidity 10 NTU			10.00	9.14	9.81	+/- 0.5 NTU	(Yes) No	

Geosyntec consultants

EQUIPMENT CALIBRATION LOG

Field Technician: Chad Russo

Date: 2/9/2021

Time (start): 0835

Time (finish): 0900

smarTroll SN: 728634

Turbidity Meter Type: LaMote 2020we

SN: 2283-2612

Weather Conditions: 45°F cloudy

Facility and Unit: Plant Hammond AP-1/2

Project No.: GW6581

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	2001B625 8/2024	14.09	4490	4460.1	4490	+/- 5 %	Yes No	
pH (4)			4.00	4.04	4	+/- 0.1 SU	Yes No	
Mid-Day pH (4) check	2001B625 8/2021	17.48	4.00	4.06	4.06	+/- 0.1 SU	Yes No	
pH (7)	19340057 8/2021	14.40	7.00	7.06	7	+/- 0.1 SU	Yes No	
Mid-Day pH (7) check	19340057 8/2021	18.15	7.00	7.07	7.07	+/- 0.1 SU	Yes No	
pH (10)	19320102 8/2021	14.58	10.00	10.11	10	+/- 0.1 SU	Yes No	
Mid-Day pH (10) check	19320102 5/2021	18.02	10.00	10.03	10.03	+/- 0.1 SU	Yes No	
ORP (mV)	19466167 8/2021	14.76	228	235.1	228	+/- 20mV	Yes No	
DO (%) (1pt, 100% water saturated air cal)	[redacted]		100	100.45	100	+/- 6 % saturation	Yes No	
Turbidity 0 NTU			0	0	0	+/- 0.5 NTU	Yes No	
Turbidity 1 NTU			1.00	1.01	1.01	+/- 0.5 NTU	Yes No	
Turbidity 10 NTU			10.00	10.05	10.05	+/- 0.5 NTU	Yes No	

Geosyntec consultants

EQUIPMENT CALIBRATION LOG

Field Technician: Chad Russo

Date: ~~2/9/21~~ 2/10/2021

Time (start): 0900

Time (finish): 0930

smarTroll SN: 728634

Turbidity Meter Type: LaMote 2020we

SN: 2283-2612

Weather Conditions: 40°F overcast

Facility and Unit: Plant Hammond AP-1/2

Project No.: GW6581

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20010025 8/2021	12.11	4490	4562	4490	+/- 5 %	Yes / No	
pH (4)			4.00	4.10	4	+/- 0.1 SU	Yes / No	
Mid-Day pH (4) check	20010025 8/2021	25.77	4.00	4.06	4.06	+/- 0.1 SU	Yes / No	
pH (7)	19340057 8/2021	12.38	7.00	7.03	7	+/- 0.1 SU	Yes / No	
Mid-Day pH (7) check	19340057 8/2021	23.32	7.00	7.02	7.02	+/- 0.1 SU	Yes / No	
pH (10)	19320102 8/2021	12.52	10.00	10.07	10	+/- 0.1 SU	Yes / No	
Mid-Day pH (10) check	19320102 8/2021	24.82	10.00	9.93	9.93	+/- 0.1 SU	Yes / No	
ORP (mV)	19460167 8/2021	12.68	228	245.3	228	+/- 20mV	Yes / No	
DO (%) (1pt, 100% water saturated air cal)			100	100.22	100	+/- 6 % saturation	Yes / No	
Turbidity 0 NTU			0	0	0	+/- 0.5 NTU	Yes / No	
Turbidity 1 NTU			1.00	1.09	1	+/- 0.5 NTU	Yes / No	
Turbidity 10 NTU			10.00	9.87	~~10~~ 9.87	+/- 0.5 NTU	Yes / No	

Geosyntec consultants

EQUIPMENT CALIBRATION LOG

Field Technician: Chad Russo

Date: 2/11/2021

Time (start): 0845

Time (finish): 0910

smarTroll SN: 728634

Turbidity Meter Type: LaMote 2020we

SN: 2203-2612

Weather Conditions: 50°F raining

Facility and Unit: Plant Hammond AP-1/2

Project No.: GW6581

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20010075 8/2021	15.74	4490	4569	4490	+/- 5 %	Yes No	
pH (4)			4.00	4	4	+/- 0.1 SU	Yes No	
Mid-Day pH (4) check	19340057 8/21		4.00			+/- 0.1 SU	Yes No	
pH (7)	19340057 8/2021	16.45	7.00	7.02	7	+/- 0.1 SU	Yes No	
Mid-Day pH (7) check			7.00			+/- 0.1 SU	Yes No	
pH (10)	19320102 8/2021	16.9	10.00	9.98	10	+/- 0.1 SU	Yes No	
Mid-Day pH (10) check			10.00			+/- 0.1 SU	Yes No	
ORP (mV)	19460161 8/2021	17.17	228	237.4	228	+/- 20mV	Yes No	
DO (%) (1pt, 100% water saturated air cal)			100	99.26	100	+/- 6 % saturation	Yes No	
Turbidity 0 NTU			0	0	0	+/- 0.5 NTU	Yes No	
Turbidity 1 NTU			1.00	1.26	1.21	+/- 0.5 NTU	Yes No	
Turbidity 10 NTU			10.00	9.70	9.70	+/- 0.5 NTU	Yes No	

Geosyntec consultants

EQUIPMENT CALIBRATION LOG

Field Technician: Chad Russo | Date: 2/12/21 | Time (start): 0830 | Time (finish): 0900

smarTroll SN: 728634 | Turbidity Meter Type: LaMote 2020we | SN: 2283-2612

Weather Conditions: 50°F rain | Facility and Unit: Plant Hammond AP-1/2 | Project No.: GW6581

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20916035 8/2021	14.62	4490	4472.3	4490	+/- 5 %	Yes / No	
pH (4)			4.00	4	4	+/- 0.1 SU	Yes / No	
Mid-Day pH (4) check	19340057 8/21	14.96	4.00	7.01	7	+/- 0.1 SU	Yes / No	
pH (7)	20100058 8/21	13.00	7.00	4.10	4.10	+/- 0.1 SU	Yes / No	
Mid-Day pH (7) check	19340057 8/21	12.66	7.00	7.04	7.04	+/- 0.1 SU	Yes / No	
pH (10)	19320102 8/2021	15.36	10.00	10.05	10	+/- 0.1 SU	Yes / No	
Mid-Day pH (10) check	19320102 8/2021	12.75	10.00	10.08	10.08	+/- 0.1 SU	Yes / No	
ORP (mV)	19460167 8/2021	14.89	228	242	228	+/- 20mV	Yes / No	
DO (%) (1pt, 100% water saturated air cal)	[redacted]		100	99.15	100	+/- 6 % saturation	Yes / No	
Turbidity 0 NTU			0	0	0	+/- 0.5 NTU	Yes / No	
Turbidity 1 NTU			1.00	1.18	1.18	+/- 0.5 NTU	Yes / No	
Turbidity 10 NTU			10.00	9.74	9.74	+/- 0.5 NTU	Yes / No	

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EQUIPMENT CALIBRATION LOG

Field Technician: Chad Russo | Date: 2/15/2024 | Time (start): 0845 | Time (finish): 0900

smarTroll SN: 928634 | Turbidity Meter Type: LaMote 2020we | SN: 2283-2612

Weather Conditions: 45°F overcast | Facility and Unit: Plant Hammond AP-1/2 | Project No.: GW6581

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20010025 8/2024	7.02	4490	4444.1	4490	+/- 5 %	Yes / No	
pH (4)			4.00	4.05	4	+/- 0.1 SU	Yes / No	
Mid-Day pH (4) check	19340057 8/2024	6.27	4.00	7.03	7	+/- 0.1 SU	Yes / No	
pH (7)	20010025 8/2024	9.47	7.00	4.06	4.06	+/- 0.1 SU	Yes / No	
Mid-Day pH (7) check	19340057 8/2024	9.89	7.00	7.06	7.06	+/- 0.1 SU	Yes / No	
pH (10)	19320162 8/2024	6.77	10.00	10.16	10	+/- 0.1 SU	Yes / No	
Mid-Day pH (10) check	19320162 8/2024	9.96	10.00	10.04	10.04	+/- 0.1 SU	Yes / No	
ORP (mV)	19460167 8/2024	6.82	228	255.5	228	+/- 20mV	Yes / No	
DO (%) (1pt, 100% water saturated air cal)			100	100.40	100	+/- 6 % saturation	Yes / No	
Turbidity 0 NTU			0	0.83	0	+/- 0.5 NTU	Yes / No	
Turbidity 1 NTU			1.00	1.32	1.32	+/- 0.5 NTU	Yes / No	
Turbidity 10 NTU			10.00	9.46	10	+/- 0.5 NTU	Yes / No	

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EQUIPMENT CALIBRATION LOG

Field Technician: Chad Rosso | Date: 2/16/2021 | Time (start): 0930 | Time (finish): 1000

smarTroll SN: 728634 | Turbidity Meter Type: LaMote 2020we | SN: 2283-2612

Weather Conditions: 20 degrees, Snowing | Facility and Unit: Plant Hammond AP-1/2 | Project No.: GW6581

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20100525 8/2021	10.06	4490	4513.4	4490	+/- 5 %	Yes / No	
pH (4)	↓		4.00	4.03	4	+/- 0.1 SU	Yes / No	
Mid-Day pH (4) check		7.62	4.00	3.99		+/- 0.1 SU	Yes / No	
pH (7)	19340857 9/2021	9.59	7.00	7.04	7	+/- 0.1 SU	Yes / No	
Mid-Day pH (7) check	↓	7.91	7.00	6.97		+/- 0.1 SU	Yes / No	
pH (10)	19320102 8/2021	9.17	10.00	10.09	10	+/- 0.1 SU	Yes / No	
Mid-Day pH (10) check	19460167 9/2021	9.02	10.00	249.2	228	+/- 0.1 SU	Yes / No	
ORP (mV)		7.0	228	10.02		+/- 20mV	Yes / No	
DO (%) (1pt, 100% water saturated air cal)	[redacted]		100	96.06	100	+/- 6 % saturation	Yes / No	
Turbidity 0 NTU	[redacted]		0	0	0	+/- 0.5 NTU	Yes / No	
Turbidity 1 NTU	[redacted]		1.00	1.25	1.25	+/- 0.5 NTU	Yes / No	
Turbidity 10 NTU	[redacted]		10.00	9.56	9.56	+/- 0.5 NTU	Yes / No	

Geosyntec consultants

EQUIPMENT CALIBRATION LOG

Field Technician: Aaron Reeder

Date: 2-8-2021

Time (start): 1415

Time (finish): 1453

smarTroll SN: 728623

Turbidity Meter Type: LaMotte 2020 wi

SN: 6411-1416

Weather Conditions: Sunny 59/43

Facility and Unit: Plant Hammond

Project No.: 6V6581

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	Lot# 20010025 08/2021	22.11	4490	4912.2	4490	+/- 5 %	Yes No	
pH (4)			4.00	3.98	4.0	+/- 0.1 SU	Yes No	
Mid-Day pH (4) check	~~1934005?~~ ~~08/2021~~	~~19.54~~	~~4.00~~ ~~7.00~~	~~3.40~~ ~~7.45~~	~~7.00~~	+/- 0.1 SU	Yes No	
pH (7)	~~193[illegible]~~ 1934005? 08/2021	18.63	7.00	7.45	7.00	+/- 0.1 SU	Yes No	
Mid-Day pH (7) check	1934005? 08/21	18.50	7.00	7.03		+/- 0.1 SU	Yes No	
pH (10)	19320102 08/2021	18.63	10.00	10.40	10.00	+/- 0.1 SU	Yes No	
Mid-Day pH (10) check	19320102 08/21	18.60	10.00	10.02		+/- 0.1 SU	Yes No	
ORP (mV)	19460147 08/2021	18.70	+228	+225	+228	+/- 20mV	Yes No	
DO (%) (1pt, 100% water saturated air cal)	[redacted]		100 %	113.97	100 %	+/- 6 % saturation	Yes No	
Turbidity 0 NTU			0	0.03	0	+/- 0.5 NTU	Yes No	
Turbidity 1 NTU			1	1.02	1.00	+/- 0.5 NTU	Yes No	
Turbidity 10 NTU			10	10.05	10.00	+/- 0.5 NTU	Yes No	

Geosyntec consultants

EQUIPMENT CALIBRATION LOG

Field Technician: Aaron Reeder | Date: 2-9-2021 | Time (start): 0804 | Time (finish): 0835

smarTroll SN: 728623 | Turbidity Meter Type: LaMotte 2020we | SN: 6411-1416

Weather Conditions: Cloudy Drizzle | Facility and Unit: Plant Hammond | Project No.: 6465 1

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20010025 8-2021	6.51	4490	4543.7	4490	+/- 5 %	Yes / No	
pH (4)	↓	6.59	4.00	3.85	4.00	+/- 0.1 SU	Yes / No	
Mid-Day pH (4) check	↓	8.70	4.00	3.96		+/- 0.1 SU	Yes / No	
pH (7)	19340057 08/2021	8.32	7.00	6.93	7.00	+/- 0.1 SU	Yes / No	
Mid-Day pH (7) check	↓	8.75	7.00	7.02		+/- 0.1 SU	Yes / No	
pH (10)	19320102 8-2021	8.78	10.00	10.11	10.00	+/- 0.1 SU	Yes / No	
Mid-Day pH (10) check	↓	8.69	10.00	10.03		+/- 0.1 SU	Yes / No	
ORP (mV)	19460167 8-2021	8.76	+228	253.0	228.0	+/- 20mV	Yes / No	
DO (%) (1pt, 100% water saturated air cal)	[redacted]	[redacted]	100 %	97.63	100	+/- 6 % saturation	Yes / No	
Turbidity 0 NTU	[redacted]	[redacted]	0	0	0	+/- 0.5 NTU	Yes / No	
Turbidity 1 NTU	[redacted]	[redacted]	1	1.34	1.0	+/- 0.5 NTU	Yes / No	
Turbidity 10 NTU	[redacted]	[redacted]	10	9.45	10	+/- 0.5 NTU	Yes / No	

Geosyntec consultants

EQUIPMENT CALIBRATION LOG

Field Technician: Aaron Reeder | Date: 2-10-2021 | Time (start): 0820 | Time (finish): 0843

smarTroll SN: 728623 | Turbidity Meter Type: Lamotte 2020 we | SN: 6411-1416

Weather Conditions: mostly cloudy Hi 70°/Lo 38° | Facility and Unit: Plant Hammond | Project No.: GW6581

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20010025 08/2021	13.40	4490	4454.4	4490	+/- 5 %	Yes / No	
pH (4)	↓		4.00	4.06	4.00	+/- 0.1 SU	Yes / No	
Mid-Day pH (4) check		12.5	4.00	4.00		+/- 0.1 SU	Yes / No	
pH (7)	19340057 08/2021	13.00 ~~12.76~~	7.00	7.05	7.00	+/- 0.1 SU	Yes / No	
Mid-Day pH (7) check	↓	12.6	7.00	7.06		+/- 0.1 SU	Yes / No	
pH (10)	19320102 08/2021	12.97	10.00	10.07	10.00	+/- 0.1 SU	Yes / No	
Mid-Day pH (10) check	↓	12.55	10.00	9.98		+/- 0.1 SU	Yes / No	
ORP (mV)	19460167 08/2021	11.43	+228	221.8	228.0	+/- 20mV	Yes / No	
DO (%) (1pt, 100% water saturated air cal)	[redacted]		100%	104.38	100%	+/- 6 % saturation	Yes / No	
Turbidity 0 NTU	[redacted]		0	-0.02	0	+/- 0.5 NTU	Yes / No	
Turbidity 1 NTU	[redacted]		1	0.84	1	+/- 0.5 NTU	Yes / No	
Turbidity 10 NTU	[redacted]		10	8.87	10	+/- 0.5 NTU	Yes / No	

Geosyntec consultants

EQUIPMENT CALIBRATION LOG

Field Technician: Aaron Reeder | Date: 2-11-2021 | Time (start): 0831 | Time (finish): 0900

smarTroll SN: 728623 | Turbidity Meter Type: LaMote 2020we | SN: 6411-1416

Weather Conditions: Cloudy PM. Rain | Facility and Unit: Plant Hammond AP-1/2 | Project No.: GW6581

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20010025 08/2021	10.69	4490	4454.4	4490	+/- 5 %	Yes / No	
pH (4)	↓	10.43	4.00	4.00	4.00	+/- 0.1 SU	Yes / No	
Mid-Day pH (4) check		12.6	4.00	4.08		+/- 0.1 SU	Yes / No	
pH (7)	19340057 08/2021 ↓	12.03 ~~7.01~~	7.00	7.07	7.00	+/- 0.1 SU	Yes / No	
Mid-Day pH (7) check		11.9	7.00	7.03		+/- 0.1 SU	Yes / No	
pH (10)	19320102 08/2021 ↓	12.54	10.00	10.09	10.00	+/- 0.1 SU	Yes / No	
Mid-Day pH (10) check		12.4	10.00	9.99		+/- 0.1 SU	Yes / No	
ORP (mV)	19460167 08/2021	12.50	228	226.3	228	+/- 20mV	Yes / No	
DO (%) (1pt, 100% water saturated air cal)	[redacted]		100	100.32	100	+/- 6 % saturation	Yes / No	
Turbidity 0 NTU			0	0.10	0.00	+/- 0.5 NTU	Yes / No	
Turbidity 1 NTU			1.00	0.67	1.00	+/- 0.5 NTU	Yes / No	
Turbidity 10 NTU			10.00	9.35	10.00	+/- 0.5 NTU	Yes / No	

Geosyntec consultants

EQUIPMENT CALIBRATION LOG

Field Technician: Aaron Reeder | Date: 2-12-2021 | Time (start): 0812 | Time (finish): 0835

smarTroll SN: 728623 | Turbidity Meter Type: LaMote 2020we | SN: 6411-1416

Weather Conditions: Rain H: 52°/Lo 40° | Facility and Unit: Plant Hammond AP-1/2 | Project No.: GW6581

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	200100 25 08/2021	10.3 ~~25.0~~	4490	4555.3	4440	+/- 5 %	Yes / No	
pH (4)	↓	9.94	4.00	4.05	4.00	+/- 0.1 SU	Yes / No	
Mid-Day pH (4) check		10.68	4.00	~~4.00~~ 4.06		+/- 0.1 SU	Yes / No	
pH (7)	1934005T 08/2021	10.23	7.00	7.10	7.00	+/- 0.1 SU	Yes / No	
Mid-Day pH (7) check	↓	10.73	7.00	~~7.00~~ 6.93		+/- 0.1 SU	Yes / No	
pH (10)	19320102 08/2021	10.36	10.00	10.20	10.00	+/- 0.1 SU	Yes / No	
Mid-Day pH (10) check	↓	10.92	10.00	10.02		+/- 0.1 SU	Yes / No	
ORP (mV)	19460167 08/2021	10.52	228	228.6	228	+/- 20mV	Yes / No	
DO (%) (1pt, 100% water saturated air cal)	[redacted]		100	100.44	100	+/- 6 % saturation	Yes / No	
Turbidity 0 NTU	[redacted]		0	0	0	+/- 0.5 NTU	Yes / No	
Turbidity 1 NTU	[redacted]		1.00	0.43	1.00	+/- 0.5 NTU	Yes / No	
Turbidity 10 NTU	[redacted]		10.00	10	10	+/- 0.5 NTU	Yes / No	

Geosyntec consultants

EQUIPMENT CALIBRATION LOG

Field Technician: Chad Russo

Date: 3/10/2021

Time (start): 1215

Time (finish): 1240

smarTroll SN: 728550

Turbidity Meter Type: LaMote 2020we

SN: 4411-1416

Weather Conditions: 70°F Sunny

Facility and Unit: Plant Hammond AP-1/2

Project No.: GW6581

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20010025 8/2021	19.77	4490	4449.5	4490	+/- 5 %	Yes / No	
pH (4)			4.00	3.9	4	+/- 0.1 SU	Yes / No	
Mid-Day pH (4) check	20010025 8/2021	21.23	4.00	4.02	4.02	+/- 0.1 SU	Yes / No	
pH (7)	19340057 8/2021	19.11	7.00	6.92	7	+/- 0.1 SU	Yes / No	
Mid-Day pH (7) check	19340057 8/2021	22.04	7.00	7.05	7.05	+/- 0.1 SU	Yes / No	
pH (10)	19320102 8/2021	18.50	10.00	9.98	10	+/- 0.1 SU	Yes / No	
Mid-Day pH (10) check	19320102 8/2021	21.87	10.00	10.01	10.01	+/- 0.1 SU	Yes / No	
ORP (mV)	19460167 8/2021	18.15	228	221.3	225	+/- 20mV	Yes / No	
DO (%) (1pt, 100% water saturated air cal)			100	96.47	100	+/- 6 % saturation	Yes / No	
Turbidity 0 NTU			0	6.39	0.39	+/- 0.5 NTU	Yes / No	
Turbidity 1 NTU			1.00	0.52	0.52	+/- 0.5 NTU	Yes / No	
Turbidity 10 NTU			10.00	9.94	9.94	+/- 0.5 NTU	Yes / No	

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EQUIPMENT CALIBRATION LOG

Field Technician: Chad Russo

Date: 3/11/2021

Time (start): 0730

Time (finish): 0755

smarTroll SN: 728550

Turbidity Meter Type: LaMote 2020we

SN: 6411-1416

Weather Conditions: 45°F Clear

Facility and Unit: Plant Hammond AP-1/2

Project No.: GW6581

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20010025 8/2021	14.96	4490	4582.2	4490	+/- 5 %	Yes / No	
pH (4)			4.00	4.03	4	+/- 0.1 SU	Yes / No	
~~Mid-Day pH (7)~~ 7 check	19340057 8/2024	15.69	4.00	7.03	7	+/- 0.1 SU	Yes / No	
pH (7)	20016025 8/2021	25.97	7.00	4.05	4.05	+/- 0.1 SU	Yes / No	
Mid-Day pH (7) check	19340057 8/2021	26.07	7.00	6.95	6.95	+/- 0.1 SU	Yes / No	
pH (10)	19320102 8/2024	15.96	10.00	10.04	10	+/- 0.1 SU	Yes / No	
Mid-Day pH (10) check	19320102 8/2021	25.6	10.00	9.95	9.95	+/- 0.1 SU	Yes / No	
ORP (mV)	19460167 8/2021	16.07	228	231.4	228	+/- 20mV	Yes / No	
DO (%) (1pt, 100% water saturated air cal)			100	92.09	100	+/- 6 % saturation	Yes / No	
Turbidity 0 NTU			0	0	0	+/- 0.5 NTU	Yes / No	
Turbidity 1 NTU			1.00	0.58	0.58	+/- 0.5 NTU	Yes / No	
Turbidity 10 NTU			10.00	10.68	9.75	+/- 0.5 NTU	Yes / No	

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EQUIPMENT CALIBRATION LOG

Field Technician: Chad Russo

Date: 3/12/2021

Time (start): 0855

Time (finish): 0855

smarTroll SN: 82550

Turbidity Meter Type: LaMote 2020we

SN: 6411-1416

Weather Conditions: 50F partly cloudy

Facility and Unit: Plant Hammond AP-1/2

Project No.: GW6581

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20010025 8/2021	19.51	4490	4520	4490	+/- 5 %	Yes / No	
pH (4)			4.00	4.02	4	+/- 0.1 SU	Yes / No	
Mid-Day pH (4) check	20010025 8/2021	25.4	4.00	3.96	3.96	+/- 0.1 SU	Yes / No	
pH (7)	19340057 8/2021	19.55	7.00	6.95	7	+/- 0.1 SU	Yes / No	
Mid-Day pH (7) check	19340057 8/2021	24.87	7.00	7.02	7.02	+/- 0.1 SU	Yes / No	
pH (10)	19320102 8/2021	19.49	10.00	9.98	10	+/- 0.1 SU	Yes / No	
Mid-Day pH (10) check	19320102 8/2021	25.18	10.00	10.04	10.04	+/- 0.1 SU	Yes / No	
ORP (mV)	19460167 8/2021	19.29	228	222.3	228	+/- 20mV	Yes / No	
DO (%) (1pt, 100% water saturated air cal)	[redacted]		100	99.82	100	+/- 6 % saturation	Yes / No	
Turbidity 0 NTU			0	0	0	+/- 0.5 NTU	Yes / No	
Turbidity 1 NTU			1.00	1.03	1.03	+/- 0.5 NTU	Yes / No	
Turbidity 10 NTU			10.00	9.62	9.62	+/- 0.5 NTU	Yes / No	

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EQUIPMENT CALIBRATION LOG

Field Technician: Chad Rosso
Date: 3/15/2021
Time (start): 0740
Time (finish): 0800

smarTroll SN: 728550
Turbidity Meter Type: LaMote 2020we
SN: 6411-1416

Weather Conditions: 60°F Cloudy
Facility and Unit: Plant Hammond AP-1/2
Project No.: GW6581

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20016025 8/2021	19.11	4490	4576	4490	+/- 5 %	Yes / No	
pH (4)			4.00	4.03	4	+/- 0.1 SU	Yes / No	
Mid-Day pH (4) check	20010025 8/2021	20.16	4.00	4.19	4	+/- 0.1 SU	Yes / No	
pH (7)	19340057 8/2021		7.00	7.00	7	+/- 0.1 SU	Yes / No	
Mid-Day pH (7) check	19340057 8/2021	20.37	7.00	7.11	7	+/- 0.1 SU	Yes / No	
pH (10)	19320102 8/2021	19.77	10.00	10.03	10	+/- 0.1 SU	Yes / No	
Mid-Day pH (10) check	19320102 8/2021	20.16	10.00	10.04	10	+/- 0.1 SU	Yes / No	
ORP (mV)	19460167 8/2021	19.77	228	225.2	228	+/- 20mV	Yes / No	
DO (%) (1pt, 100% water saturated air cal)			100	85.39	100	+/- 6 % saturation	Yes / No	
Turbidity 0 NTU			0	0.03	0.03	+/- 0.5 NTU	Yes / No	
Turbidity 1 NTU			1.00	0.69	0.69	+/- 0.5 NTU	Yes / No	
Turbidity 10 NTU			10.00	7.89	10.14	+/- 0.5 NTU	Yes / No	

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EQUIPMENT CALIBRATION LOG

Field Technician: Chad Russo

Date: 3/16/2021

Time (start): 0745

Time (finish): 0815

smarTroll SN: 228550

Turbidity Meter Type: LaMote 2020we

SN: 6911-1416

Weather Conditions: 50°F raining

Facility and Unit: Plant Hammond AP-1/2

Project No.: GW6581

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20010025 8/2021	18.21	4490	4405	4490	+/- 5 %	Yes No	
pH (4)			4.00	3.92	4	+/- 0.1 SU	Yes No	
~~Mid-Day~~ pH (~~7~~) ~~check~~	19340057 8/2021	18	4.00	6.95	7	+/- 0.1 SU	Yes No	
pH (7)	20010025 8/2021	~~19.21~~ 18.5 CB	7.00	~~6.98~~ 4.02 CB	~~6.48~~ 4.02	+/- 0.1 SU	Yes No	
Mid-Day pH (7) check	19340057 8/2021	19.21	7.00	6.98	6.98	+/- 0.1 SU	Yes No	
pH (10)	19320102 8/2021	17.99	10.00	9.99	10	+/- 0.1 SU	Yes No	
Mid-Day pH (10) check	19320102 8/2021	18.34	10.00	10.03	10.03	+/- 0.1 SU	Yes No	
ORP (mV)	19460167 8/2021	17.81	228	230.8	228	+/- 20mV	Yes No	
DO (%) (1pt. 100% water saturated air cal)			100	94.10	100	+/- 6 % saturation	Yes No	
Turbidity 0 NTU			0	0	0	+/- 0.5 NTU	Yes No	
Turbidity 1 NTU			1.00	0.22	6.71	+/- 0.5 NTU	Yes No	
Turbidity 10 NTU			10.00	7.85	10.25	+/- 0.5 NTU	Yes No	

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EQUIPMENT CALIBRATION LOG

Field Technician: Chad Russo | Date: 3/19/2021 | Time (start): 0715 | Time (finish): 0735

smarTroll SN: 728550 | Turbidity Meter Type: LaMote 2020we | SN: 6411-1412

Weather Conditions: 50°F cloudy | Facility and Unit: Plant Hammond AP-1/2 | Project No.: GW6581

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20010025 8/2021	15.75	4490	4506.5	4490	+/- 5 %	(Yes) No	
pH (4)			4.00	4	4	+/- 0.1 SU	(Yes) No	
Mid-Day pH (4) check	20010025 8/2021	16.5	4.00	4.01	4.01	+/- 0.1 SU	(Yes) No	
pH (7)	19340057 8/2021	15.73	7.00	7	7	+/- 0.1 SU	(Yes) No	
Mid-Day pH (7) check	19340057 8/2021	16.21	7.00	6.93	6.93	+/- 0.1 SU	(Yes) No	
pH (10)	19320102 8/2021	15.69	10.00	10.02	10	+/- 0.1 SU	(Yes) No	
Mid-Day pH (10) check	19320102 8/2021	16.04	10.00	10.05	10.05	+/- 0.1 SU	(Yes) No	
ORP (mV)	19461467 8/2021	15.59	228	231.3	228	+/- 20mV	(Yes) No	
DO (%) (1pt, 100% water saturated air cal)	[redacted]		100	88.06	100	+/- 6 % saturation	(Yes) No	
Turbidity 0 NTU			0	0	0	+/- 0.5 NTU	(Yes) No	
Turbidity 1 NTU			1.00	0.94	0.94	+/- 0.5 NTU	(Yes) No	
Turbidity 10 NTU			10.00	9.61	9.64	+/- 0.5 NTU	(Yes) No	

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EQUIPMENT CALIBRATION LOG

Field Technician: Chad Russo | Date: 3/18/2024 | Time (start): 0750 | Time (finish): 0820

smarTroll SN: 78550 | Turbidity Meter Type: LaMote 2020we | SN: 6411-1496

Weather Conditions: 60°F cloudy | Facility and Unit: Plant Hammond AP-1/2 | Project No.: GW6581

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20010025 8/2021	17.38	4490	4511.6	4490	+/- 5 %	Yes / No	
pH (4)			4.00	3.99	4	+/- 0.1 SU	Yes / No	
Mid-Day pH (4) check	20010025 8/2021	19.76	4.00	4.14	4	+/- 0.1 SU	Yes / No	
pH (7)	19340057 8/2021	17.52	7.00	7.0	7.0	+/- 0.1 SU	Yes / No	
Mid-Day pH (7) check	19340057 8/2021	20.22	7.00	7.04	7	+/- 0.1 SU	Yes / No	
pH (10)	19320102 8/2021	17.54	10.00	10.02	10	+/- 0.1 SU	Yes / No	
Mid-Day pH (10) check	19320102 8/2021	20.13	10.00	9.98	10	+/- 0.1 SU	Yes / No	
ORP (mV)	19460167 8/2021	17.54	228	223.4	228	+/- 20mV	Yes / No	
DO (%) (1pt, 100% water saturated air cal)	[redacted]		100	71.47	100	+/- 6 % saturation	Yes / No	
Turbidity 0 NTU			0	0	0	+/- 0.5 NTU	Yes / No	
Turbidity 1 NTU			1.00	1.18	1.18	+/- 0.5 NTU	Yes / No	
Turbidity 10 NTU			10.00	10.42	10.42	+/- 0.5 NTU	Yes / No	

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EQUIPMENT CALIBRATION LOG

Field Technician: Chad Russo
Date: 3/19/2021
Time (start): 0756
Time (finish): 0820

smarTroll SN: 428550
Turbidity Meter Type: LaMote 2020we
SN: 6411-1416

Weather Conditions: 50°F cloudy
Facility and Unit: Plant Hammond AP-1/2
Project No.: GW6581

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20010075 8/2021	14.87	4490	4459.7	4490	+/- 5 %	(Yes) No	
pH (4)			4.00	3.97	4	+/- 0.1 SU	(Yes) No	
Mid-Day pH (4) check			4.00			+/- 0.1 SU	Yes No	
pH (7)	14340057 8/2021	14.97	7.00	6.97	7	+/- 0.1 SU	(Yes) No	
Mid-Day pH (7) check			7.00			+/- 0.1 SU	Yes No	
pH (10)	19320107 8/2021	15.06	10.00	9.98	10	+/- 0.1 SU	(Yes) No	
Mid-Day pH (10) check			10.00			+/- 0.1 SU	Yes No	
ORP (mV)	19460167 8/2021	15.13	228	230.6	228	+/- 20mV	(Yes) No	
DO (%) (1pt, 100% water saturated air cal)			100	104.34	100	+/- 6 % saturation	(Yes) No	
Turbidity 0 NTU			0	0	0	+/- 0.5 NTU	(Yes) No	
Turbidity 1 NTU			1.00	.93	.93	+/- 0.5 NTU	(Yes) No	
Turbidity 10 NTU			10.00	9.76	9.76	+/- 0.5 NTU	(Yes) No	

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EQUIPMENT CALIBRATION LOG

Field Technician: VASHISH TAHKOOR | Date: 3-10-2021 | Time (start): 11 20 | Time (finish): 11 30

smarTroll SN: 728 563 | Turbidity Meter Type: LaMote 2020we | SN: 710-0711

Weather Conditions: SUNNY, 55°F | Facility and Unit: Plant Hammond AP-1/2 | Project No.: GW6581

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20010025 08/21	18.38	4490	4665	4490	+/- 5 %	(Yes) No	
pH (4)			4.00	3.96	4.00	+/- 0.1 SU	(Yes) No	
~~Mid-Day pH (4) check~~	~~"~~		~~4.00~~		~~4.00~~	~~+/- 0.1 SU~~	~~Yes No~~	
pH (7)	19340057 8/21	19.08	7.00	6.99	7.00	+/- 0.1 SU	(Yes) No	
~~Mid-Day pH (7) check~~	~~"~~		~~7.00~~		~~7.00~~	~~+/- 0.1 SU~~	~~Yes No~~	
pH (10)	19320102 8/21	18.96	10.00	10.05	10.00	+/- 0.1 SU	(Yes) No	
~~Mid-Day pH (10) check~~	~~"~~		~~10.00~~		~~10.00~~	~~+/- 0.1 SU~~	~~Yes No~~	
ORP (mV)	19460167 8/21	19.08	228	234.6	228	+/- 20mV	(Yes) No	
DO (%) (1pt, 100% water saturated air cal)	[redacted]		100	105.4	100	+/- 6 % saturation	(Yes) No	
Turbidity 0 NTU			0	-0.06	0	+/- 0.5 NTU	(Yes) No	
Turbidity 1 NTU			1.00	0.92	1.00	+/- 0.5 NTU	(Yes) No	
Turbidity 10 NTU			10.00	10.40	1.00	+/- 0.5 NTU	(Yes) No	

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EQUIPMENT CALIBRATION LOG

Field Technician: VASHISH TAKKOOR
Date: 3-11-2021
Time (start): 08 04
Time (finish): 0819

smarTroll SN: 728563
Turbidity Meter Type: LaMote 2020we
SN: 710-0711

Weather Conditions: SUNNY, 49°F
Facility and Unit: Plant Hammond AP-1/2
Project No.: GW6581

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20610025 08/2021	14.88	4490	4437	4490	+/- 5 %	Yes No	
pH (4)			4.00	4.01	4.00	+/- 0.1 SU	Yes No	
Mid-Day pH (4) check	"	24.19	4.00	4.05	4.00	+/- 0.1 SU	Yes No	
pH (7)	19340057 08/2021	15.50	7.00	6.88	7.00	+/- 0.1 SU	Yes No	
Mid-Day pH (7) check	"	23.10	7.00	7.03	7.00	+/- 0.1 SU	Yes No	
pH (10)	19320102 08/2021	15.31	10.00	10.06	10.00	+/- 0.1 SU	Yes No	
Mid-Day pH (10) check	"	21.96	10.00	9.98	10.00	+/- 0.1 SU	Yes No	
ORP (mV)	19460167 08/2021	14.94	228	240.8	228	+/- 20mV	Yes No	
DO (%) (1pt, 100% water saturated air cal)	[redacted]		100	91.19	100	+/- 6 % saturation	Yes No	
Turbidity 0 NTU			0	0.00	0	+/- 0.5 NTU	Yes No	
Turbidity 1 NTU			1.00	1.17	1.00	+/- 0.5 NTU	Yes No	
Turbidity 10 NTU			10.00	10.45	10.00	+/- 0.5 NTU	Yes No	

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EQUIPMENT CALIBRATION LOG

Field Technician: VASHISH TANKOOR | Date: 3-12-2021 | Time (start): 0823 | Time (finish): 0837

smarTroll SN: 728 563 | Turbidity Meter Type: LaMote 2020we | SN: 710-0711

Weather Conditions: SUNNY, 50°F | Facility and Unit: Plant Hammond AP-1/2 | Project No.: GW6581

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20610025 08/2024	20.57	4490	~~4392.6~~ 4392.6 (VT)	4490	+/- 5 %	Yes / No	
pH (4)			4.00	3.97	4.00	+/- 0.1 SU	Yes / No	
Mid-Day pH (4) check	"	23.92	4.00	4.04	4.00	+/- 0.1 SU	Yes / No	
pH (7)	19340057 08/2024	19.53	7.00	7.01	7.00	+/- 0.1 SU	Yes / No	
Mid-Day pH (7) check	"	22.74	7.00	7.06	7.00	+/- 0.1 SU	Yes / No	
pH (10)	19320102 08/2024	18.78	10.00	10.05	10.00	+/- 0.1 SU	Yes / No	
Mid-Day pH (10) check	"	21.91	10.00	9.98	10.00	+/- 0.1 SU	Yes / No	
ORP (mV)	19460167 08/2024	18.26	228	238.2	228	+/- 20mV	Yes / No	
DO (%) (1pt, 100% water saturated air cal)	[redacted]		100	96.86	100	+/- 6 % saturation	Yes / No	
Turbidity 0 NTU			0	-0.01	0	+/- 0.5 NTU	Yes / No	
Turbidity 1 NTU			1.00	1.11	1.00	+/- 0.5 NTU	Yes / No	
Turbidity 10 NTU			10.00	10.45	10.00	+/- 0.5 NTU	Yes / No	

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EQUIPMENT CALIBRATION LOG

Field Technician: VASHISH THAKKAR | Date: 3-15-2024 | Time (start): 0813 | Time (finish): 0824

smarTroll SN: 728563 | Turbidity Meter Type: LaMote 2020we | SN: 710-0711

Weather Conditions: CLOUDY, 60°F | Facility and Unit: Plant Hammond AP-1/2 | Project No.: GW6581

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	2061002S 08/24	15.74	4490	4662.8	4490	+/- 5 %	Yes / No	
pH (4)			4.00	3.96	4.00	+/- 0.1 SU	Yes / No	
Mid-Day pH (4) check	"	18.52	4.00	4.05	4.00	+/- 0.1 SU	Yes / No	
pH (7)	1934057 08/2024	18.72	7.00	6.99	7.00	+/- 0.1 SU	Yes / No	
Mid-Day pH (7) check	"	18.26	7.00	7.07	7.00	+/- 0.1 SU	Yes / No	
pH (10)	193 20102 08/2024	16.87	10.00	10.08	10.00	+/- 0.1 SU	Yes / No	
Mid-Day pH (10) check	"	17.86	10.00	10.02	10.00	+/- 0.1 SU	Yes / No	
ORP (mV)	194 0167 08/2024	16.87	228	238.8	228	+/- 20mV	Yes / No	
DO (%) (1pt, 100% water saturated air cal)	[redacted]		100	93.38	100	+/- 6 % saturation	Yes / No	
Turbidity 0 NTU			0	-0.02	0.00	+/- 0.5 NTU	Yes / No	
Turbidity 1 NTU			1.00	1.24	1.00	+/- 0.5 NTU	Yes / No	
Turbidity 10 NTU			10.00	9.54	10.00	+/- 0.5 NTU	Yes / No	

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EQUIPMENT CALIBRATION LOG

Field Technician: VASHISH TAHOOR | Date: 3-16-2021 | Time (start): 0750 | Time (finish): 0810

smarTroll SN: 728 563 | Turbidity Meter Type: LaMotte 2020we | SN: 710-0711

Weather Conditions: RAIN, 50°F | Facility and Unit: Plant Hammond AP-1/2 | Project No.: GW6581

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20610025 08/21	16.97	4490	4396.8	4490	+/- 5 %	Yes No	
pH (4)			4.00	3.99	4.00	+/- 0.1 SU	Yes No	
Mid-Day pH (4) check	"	15.21	4.00	4.08	4.00	+/- 0.1 SU	Yes No	
pH (7)	19340057 08/21	17.01	7.00	6.95	7.00	+/- 0.1 SU	Yes No	
Mid-Day pH (7) check	"	15.93	7.00	7.05	7.00	+/- 0.1 SU	Yes No	
pH (10)	19320102 08/21	17.01	10.00	9.98	10.00	+/- 0.1 SU	Yes No	
Mid-Day pH (10) check	"	16.28	10.00	10.04	10.00	+/- 0.1 SU	Yes No	
ORP (mV)	19460107 08/21	16.93	228	238.7	228	+/- 20mV	Yes No	
DO (%) (1pt, 100% water saturated air cal)			100	99.79	100	+/- 6 % saturation	Yes No	
Turbidity 0 NTU			0	0.03	0	+/- 0.5 NTU	Yes No	
Turbidity 1 NTU			1.00	1.07	1.00	+/- 0.5 NTU	Yes No	
Turbidity 10 NTU			10.00	9.62	10.00	+/- 0.5 NTU	Yes No	

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EQUIPMENT CALIBRATION LOG

Field Technician: VASHISH THAKKOR | Date: 3-17-2021 | Time (start): 0730 | Time (finish): 0739

smarTroll SN: 728563 | Turbidity Meter Type: LaMotte 2020we | SN: 710-0711

Weather Conditions: SHOWERS/THUNDERSTORMS, 50°F | Facility and Unit: Plant Hammond AP-1/2 | Project No.: GW6581

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20610025 08/21	16.07	4490	4489.2	4490	+/- 5 %	Yes / No	
pH (4)			4.00	3.95	4.00	+/- 0.1 SU	Yes / No	
Mid-Day pH (4) check	"	18.91	4.00	4.07	4.00	+/- 0.1 SU	Yes / No	
pH (7)	19340057 08/21	16.02	7.00	7.00	7.00	+/- 0.1 SU	Yes / No	
Mid-Day pH (7) check	"	19.50	7.00	6.99	7.00	+/- 0.1 SU	Yes / No	
pH (10)	19320102 08/21	15.76	10.00	10.09	10.00	+/- 0.1 SU	Yes / No	
Mid-Day pH (10) check	"	19.28	10.00	10.01	10.00	+/- 0.1 SU	Yes / No	
ORP (mV)	19460107 08/21	15.06	228	240.2	228	+/- 20mV	Yes / No	
DO (%) (1pt, 100% water saturated air cal)	[redacted]		100	95.73	100	+/- 6 % saturation	Yes / No	
Turbidity 0 NTU			0	<0.01	0	+/- 0.5 NTU	Yes / No	
Turbidity 1 NTU			1.00	1.10	1.00	+/- 0.5 NTU	Yes / No	
Turbidity 10 NTU			10.00	10.87	10.00	+/- 0.5 NTU	Yes / No	

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EQUIPMENT CALIBRATION LOG

Field Technician: VASHISH TAUKOOR

Date: 3-18-2021

Time (start): 0806

Time (finish): 0816

smarTroll SN: 728563

Turbidity Meter Type: LaMotte 2020we

SN: 710-0711

Weather Conditions: SHOWERS, STORMS, 50°F

Facility and Unit: Plant Hammond AP-1/2

Project No.: GW6581

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	2061 0025 08/21	16.52	4490	4532.6	4490	+/- 5 %	Yes / No	
pH (4)			4.00	3.95	4.00	+/- 0.1 SU	Yes / No	
Mid-Day pH (4) check	"	19.31	4.00	4.05	4.00	+/- 0.1 SU	Yes / No	
pH (7)	1934 0057 08/21	17.03	7.00	6.99	7.00	+/- 0.1 SU	Yes / No	
Mid-Day pH (7) check	"	19.54	7.00	7.01	7.00	+/- 0.1 SU	Yes / No	
pH (10)	1932 0102 08/21	17.10	10.00	10.04	10.00	+/- 0.1 SU	Yes / No	
Mid-Day pH (10) check	"	19.55	10.00	9.99	10.00	+/- 0.1 SU	Yes / No	
ORP (mV)	1940 0107 08/21	17.05	228	238.1	228	+/- 20mV	Yes / No	
DO (%) (1pt, 100% water saturated air cal)	[redacted]		100	99.19	100	+/- 6 % saturation	Yes / No	
Turbidity 0 NTU			0	0.00	0	+/- 0.5 NTU	Yes / No	
Turbidity 1 NTU			1.00	1.00	1.00	+/- 0.5 NTU	Yes / No	
Turbidity 10 NTU			10.00	10.45	10.00	+/- 0.5 NTU	Yes / No	

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EQUIPMENT CALIBRATION LOG

Field Technician: VASHISH THAKOOR

Date: 3-10-2021

Time (start): 0740

Time (finish): 0749

smarTroll SN: 728563

Turbidity Meter Type: LaMote 2020we

SN: 710-0711

Weather Conditions: CLOUDY, 40°F

Facility and Unit: Plant Hammond AP-1/2

Project No: GW6581

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20610025 08/21	21.06	4490	4366.2	4490	+/- 5 %	Yes No	
pH (4)			4.00	3.93	4.00	+/- 0.1 SU	Yes No	
Mid-Day pH (4) check	"		4.00			+/- 0.1 SU	Yes No	
pH (7)	19340057 08/21	19.38	7.00	6.92	7.00	+/- 0.1 SU	Yes No	
Mid-Day pH (7) check	"		7.00			+/- 0.1 SU	Yes No	
pH (10)	19320102 08/21	18.70	10.00	9.88	10.00	+/- 0.1 SU	Yes No	
Mid-Day pH (10) check	"		10.00			+/- 0.1 SU	Yes No	
ORP (mV)	19460167 08/21	18.74	228	238.0	229	+/- 20mV	Yes No	
DO (%) (1pt, 100% water saturated air cal)	[redacted]		100	95.71	100	+/- 6 % saturation	Yes No	
Turbidity 0 NTU			0	0.00	0.00	+/- 0.5 NTU	Yes No	
Turbidity 1 NTU			1.00	0.96	1.00	+/- 0.5 NTU	Yes No	
Turbidity 10 NTU			10.00	10.39	10.00	+/- 0.5 NTU	Yes No	

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EQUIPMENT CALIBRATION LOG

Field Technician: Thomas Kessler ✓ | Date: 3/10/21 | Time (start): 1130 | Time (finish): ~~10~~ 1240

smarTroll SN: 728566 | Turbidity Meter Type: LaMote 2020we | SN: 12289-2617

Weather Conditions: Sunny 70 | Facility and Unit: Plant Hammond AP-1/2 | Project No.: GW6581

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	2001CC-28 08/21	15.96	4490	4368.3	4490	+/- 5 %	(Yes) No	
pH (4)			4.00	4.08	4.0	+/- 0.1 SU	(Yes) No	
Mid-Day pH (4) check			4.00			+/- 0.1 SU	Yes No	
pH (7)	1934 0C57 8/21	15.43	7.00	7.04	~~7.00~~	+/- 0.1 SU	(Yes) No	
Mid-Day pH (7) check			7.00			+/- 0.1 SU	Yes No	
pH (10)	193 2902 08/21	14.89	10.00	9.99	10.00	+/- 0.1 SU	(Yes) No	
Mid-Day pH (10) check			10.00			+/- 0.1 SU	Yes No	
ORP (mV)	194160167 08/21	14.39	228	214	228	+/- 20mV	(Yes) No	
DO (%) (1pt, 100% water saturated air cal)			100	101.73	100	+/- 6 % saturation	(Yes) No	
Turbidity 0 NTU			0	1.07	0.00	+/- 0.5 NTU	(Yes) No	
Turbidity 1 NTU			1.00	1.03	1.03	+/- 0.5 NTU	(Yes) No	
Turbidity 10 NTU			10.00	8.23	10.03	+/- 0.5 NTU	(Yes) No	

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EQUIPMENT CALIBRATION LOG

Field Technician: Thomas Kessler | Date: 3/11/21 | Time (start): 0740 | Time (finish): 0810

smarTroll SN: 228566 | Turbidity Meter Type: LaMote 2020we | SN: 2289-2812

Weather Conditions: Sunny, 70° | Facility and Unit: Plant Hammond AP-1/2 | Project No.: GW6581

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20010025 08/21	15	4490	4332.5	4490	+/- 5 %	(Yes) No	
pH (4)			4.00	3.98	4.00	+/- 0.1 SU	(Yes) No	
Mid-Day pH (4) check			4.00	~~4.10~~ 3.98 4.09	—	+/- 0.1 SU	(Yes) No	within range
pH (7)	19340057	15	7.00	7.04	7.04	+/- 0.1 SU	(Yes) No	
Mid-Day pH (7) check			7.00	6.98	—	+/- 0.1 SU	Yes No	within Range
pH (10)	19329027 08/21	15	10.00	10.17	10.00	+/- 0.1 SU	(Yes) No	
Mid-Day pH (10) check			10.00	9.92	—	+/- 0.1 SU	Yes No	within Range
ORP (mV)	19460167 08/21	15	228	237.6	228	+/- 20mV	(Yes) No	
DO (%) (1pt, 100% water saturated air cal)			100	93.07	100	+/- 6 % saturation	(Yes) No	
Turbidity 0 NTU			0	0.19	0.00	+/- 0.5 NTU	(Yes) No	
Turbidity 1 NTU			1.00	0.93	1.00	+/- 0.5 NTU	(Yes) No	
Turbidity 10 NTU			10.00	10.45	10.00	+/- 0.5 NTU	(Yes) No	

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EQUIPMENT CALIBRATION LOG

Field Technician: Thomas Kessler | Date: 3/12/21 | Time (start): 0715 | Time (finish): 0900

smarTroll SN: 728566 | Turbidity Meter Type: LaMote 2020we | SN: 12289-262

Weather Conditions: Sunny, 70° | Facility and Unit: Plant Hammond AP-1/2 | Project No.: GW6581

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20610078 08/21	13.18	4490	4471.9	4490	+/- 5 %	(Yes) No	
pH (4)			4.00	4.05	4.00	+/- 0.1 SU	(Yes) No	
Mid-Day pH (4) check	~	~	4.00	4.07	~	+/- 0.1 SU	Yes No	within Range
pH (7)	08/21 19340057	13.10	7.00	6.99	7.00	+/- 0.1 SU	(Yes) No	
Mid-Day pH (7) check	~	~	7.00	7.02	~	+/- 0.1 SU	Yes No	within Range
pH (10)	19329021 08/21	13.09	10.00	9.98	10.00	+/- 0.1 SU	(Yes) No	
Mid-Day pH (10) check	~	~	10.00	10.01	~	+/- 0.1 SU	Yes No	within Range
ORP (mV)	19460167 08/21	13.33	228	243.5	228	+/- 20mV	(Yes) No	
DO (%) (1pt, 100% water saturated air cal)			100	96.39		+/- 6 % saturation	Yes No	
Turbidity 0 NTU			0	0.89	0.00	+/- 0.5 NTU	(Yes) No	
Turbidity 1 NTU			1.00	1.31	1.05	+/- 0.5 NTU	(Yes) No	
Turbidity 10 NTU			10.00	7.99	10.00	+/- 0.5 NTU	(Yes) No	

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EQUIPMENT CALIBRATION LOG

Field Technician: Thomas Kassdorf | Date: 3/15/21 | Time (start): 7:15 | Time (finish): 7:45

smarTroll SN: 728562 | Turbidity Meter Type: LaMotte 2020we | SN: 12289262

Weather Conditions: | Facility and Unit: Plant Hammond AP-1/2 | Project No.: GW6581

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	200100 CS 08/21	15.35	4490	4530.3	4490	+/- 5 %	(Yes) No	
pH (4)			4.00	3.99	4.00	+/- 0.1 SU	(Yes) No	
Mid-Day pH (4) check			4.00	4.02		+/- 0.1 SU	Yes No	within range
pH (7)	1434005T 08/21	15.71	7.00	7.04	7.00	+/- 0.1 SU	(Yes) No	
Mid-Day pH (7) check			7.00	6.99		+/- 0.1 SU	Yes No	within range
pH (10)	1458908 08/21	15.84	10.00	10.01	10.00	+/- 0.1 SU	(Yes) No	
Mid-Day pH (10) check			10.00	10.00		+/- 0.1 SU	Yes No	within range
ORP (mV)	1446067 08/21	15.80	228	227.22	228	+/- 20mV	(Yes) No	
DO (%) (1pt, 100% water saturated air cal)			100	95.71	100	+/- 6 % saturation	(Yes) No	
Turbidity 0 NTU			0	0.00	0.00	+/- 0.5 NTU	(Yes) No	
Turbidity 1 NTU			1.00	0.17	1.05	+/- 0.5 NTU	(Yes) No	
Turbidity 10 NTU			10.00	10.34	10.00	+/- 0.5 NTU	(Yes) No	

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EQUIPMENT CALIBRATION LOG

Field Technician: Thomas Wheeler | Date: 3/6/21 | Time (start): 0730 | Time (finish): 0810

smarTroll SN: 728562 | Turbidity Meter Type: LaMotte 2020we | SN: 12789-2612

Weather Conditions: cloudy/~~foggy~~ Rainy | Facility and Unit: Plant Hammond AP-1/2 | Project No.: GW6581

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	2301005 08/21	12.94	4490	4523.2	4490	+/- 5 %	Yes No	
pH (4)			4.00	3.99		+/- 0.1 SU	Yes No	
Mid-Day pH (4) check		~~12.94~~	4.00	4.07	4.00	+/- 0.1 SU	Yes No	
pH (7)	19310057 08/21	13.23	7.00	7.04	7.00	+/- 0.1 SU	Yes No	
Mid-Day pH (7) check			7.00	7.01		+/- 0.1 SU	Yes No	
pH (10)	19329002 08/21	13.46	10.00	10.06	10.00	+/- 0.1 SU	Yes No	
Mid-Day pH (10) check			10.00	9.97		+/- 0.1 SU	Yes No	
ORP (mV)	19460167 08/21	13.35	228	230.9	228	+/- 20mV	Yes No	
DO (%) (1pt, 100% water saturated air cal)			100	95.73	100	+/- 6 % saturation	Yes No	
Turbidity 0 NTU			0	0.00	0.00	+/- 0.5 NTU	Yes No	
Turbidity 1 NTU			1.00	0.27	1.00	+/- 0.5 NTU	Yes No	
Turbidity 10 NTU			10.00	11.29	10.00	+/- 0.5 NTU	Yes No	

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EQUIPMENT CALIBRATION LOG

Field Technician: Thomas Thompson | Date: 3/17 | Time (start): 7:20 | Time (finish): 0850

smarTroll SN: 728566 | Turbidity Meter Type: LaMote 2020we | SN: 12289-2612

Weather Conditions: cloudy/rainy 50° | Facility and Unit: Plant Hammond AP-1/2 | Project No.: GW6581

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	2601005 08/21	11.21	4490	4435.6	4490	+/- 5 %	(Yes) No	
pH (4)			4.00	3.99	4.00	+/- 0.1 SU	(Yes) No	
Mid-Day pH (4) check			4.00	4.00		+/- 0.1 SU	(Yes) No	within Range
pH (7)	1937100587 08/21	11.23	7.00	7.05	7.00	+/- 0.1 SU	(Yes) No	
Mid-Day pH (7) check			7.00	7.02		+/- 0.1 SU	(Yes) No	
pH (10)	1937902 08/21	[illegible]	10.00	10.02		+/- 0.1 SU	(Yes) No	
Mid-Day pH (10) check		11.29	10.00	10.06	10.00	+/- 0.1 SU	(Yes) No	
ORP (mV)	RU460161 08/21	11.34	228	247.8	228	+/- 20mV	(Yes) No	
DO (%) (1pt, 100% water saturated air cal)	[redacted]		100	95.72	100	+/- 6 % saturation	(Yes) No	
Turbidity 0 NTU			0	1.10	0.00	+/- 0.5 NTU	(Yes) No	
Turbidity 1 NTU			1.00	0.27	1.01	+/- 0.5 NTU	Yes No	
Turbidity 10 NTU			10.00	9.02	10	+/- 0.5 NTU	Yes No	

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EQUIPMENT CALIBRATION LOG

Field Technician: Thomas Jhesson | Date: 3/18/21 | Time (start): 0730 | Time (finish): 840

smarTroll SN: 728566 | Turbidity Meter Type: LaMote 2020we | SN: 2289-2612

Weather Conditions: Cloudy 60° | Facility and Unit: Plant Hammond AP-1/2 | Project No.: GW6581

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20010028 08/21	15.21	4490	4475.5	4490	+/- 5 %	Yes No	
pH (4)			4.00	4.00	4.00	+/- 0.1 SU	Yes No	
Mid-Day pH (4) check	—	—	4.00	4.01	—	+/- 0.1 SU	Yes No	
pH (7)	19360057 08/21	14.99	7.00	7.02	7.00	+/- 0.1 SU	Yes No	
Mid-Day pH (7) check	—	—	7.00	7.06	—	+/- 0.1 SU	Yes No	
pH (10)	19329OZ 08/21	14.99	10.00	10.06	10.00	+/- 0.1 SU	Yes No	
Mid-Day pH (10) check	—	—	10.00	10.00	—	+/- 0.1 SU	Yes No	
ORP (mV)	19460167 08/21	14.89	228	222.5	228	+/- 20mV	Yes No	
DO (%) (1pt, 100% water saturated air cal)			100	100.98	100.00	+/- 6 % saturation	Yes No	
Turbidity 0 NTU			0	0.06	0.00	+/- 0.5 NTU	Yes No	
Turbidity 1 NTU			1.00	0.11	1.08	+/- 0.5 NTU	Yes No	
Turbidity 10 NTU			10.00	10.94	9.54	+/- 0.5 NTU	Yes No	

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EQUIPMENT CALIBRATION LOG

Field Technician: Thomas Thresher | Date: 3/19/21 | Time (start): 0730 | Time (finish): 0815

smarTroll SN: 728566 | Turbidity Meter Type: LaMote 2020we | SN: 6411-1416

Weather Conditions: | Facility and Unit: Plant Hammond AP-1/2 | Project No.: GW6581

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	Z0010025 8/21	9.99	4490	4547.1	4490	+/- 5 %	(Yes) No	
pH (4)			4.00	4.04	4.0	+/- 0.1 SU	(Yes) No	
Mid-Day pH (4) check			4.00	4.02	—	+/- 0.1 SU	(Yes) No	
pH (7)	19340057 8/21	10.13	7.00	7.10	7.00	+/- 0.1 SU	(Yes) No	
Mid-Day pH (7) check			7.00	7.00	—	+/- 0.1 SU	Yes No	
pH (10)	19376102 8/21		10.00	10.01	—	+/- 0.1 SU	Yes No	
Mid-Day pH (10) check		10.30	10.00	10.05	10.00	+/- 0.1 SU	(Yes) No	
ORP (mV)	19460167 8/21	10.32	228	234.1	228	+/- 20mV	(Yes) No	
DO (%) (1pt, 100% water saturated air cal)	[redacted]		100	98.16	100	+/- 6 % saturation	(Yes) No	
Turbidity 0 NTU			0	0	0	+/- 0.5 NTU	(Yes) No	
Turbidity 1 NTU			1.00	1.05	1.05	+/- 0.5 NTU	(Yes) No	
Turbidity 10 NTU			10.00	9.78	9.78	+/- 0.5 NTU	(Yes) No	

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EQUIPMENT CALIBRATION LOG

Field Technician: Chad Russo | Date: 3/18/2024 | Time (start): 0750 | Time (finish): 0820

smarTroll SN: 78550 | Turbidity Meter Type: LaMote 2020we | SN: 6411-1496

Weather Conditions: 60°F cloudy | Facility and Unit: Plant Hammond AP-1/2 | Project No.: GW6581

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20010025 8/2021	17.38	4490	4511.6	4490	+/- 5 %	Yes / No	
pH (4)			4.00	3.99	4	+/- 0.1 SU	Yes / No	
Mid-Day pH (4) check	20010025 8/2021	19.76	4.00	4.14	4	+/- 0.1 SU	Yes / No	
pH (7)	19340057 8/2021	17.52	7.00	7.0	7.0	+/- 0.1 SU	Yes / No	
Mid-Day pH (7) check	19340057 8/2021	20.22	7.00	7.04	7	+/- 0.1 SU	Yes / No	
pH (10)	19320102 8/2021	17.54	10.00	10.02	10	+/- 0.1 SU	Yes / No	
Mid-Day pH (10) check	19320102 8/2021	20.13	10.00	9.98	10	+/- 0.1 SU	Yes / No	
ORP (mV)	19460167 8/2021	17.54	228	223.4	228	+/- 20mV	Yes / No	
DO (%) (1pt, 100% water saturated air cal)	[redacted]		100	71.47	100	+/- 6 % saturation	Yes / No	
Turbidity 0 NTU			0	0	0	+/- 0.5 NTU	Yes / No	
Turbidity 1 NTU			1.00	1.18	1.18	+/- 0.5 NTU	Yes / No	
Turbidity 10 NTU			10.00	10.42	10.42	+/- 0.5 NTU	Yes / No	

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EQUIPMENT CALIBRATION LOG

Field Technician: Chad Russo
Date: 3/19/2021
Time (start): 0756
Time (finish): 0820

smarTroll SN: 428550
Turbidity Meter Type: LaMote 2020we
SN: 6411-1416

Weather Conditions: 50°F cloudy
Facility and Unit: Plant Hammond AP-1/2
Project No.: GW6581

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20010075 8/2021	14.87	4490	4459.7	4490	+/- 5 %	(Yes) No	
pH (4)			4.00	3.97	4	+/- 0.1 SU	(Yes) No	
Mid-Day pH (4) check			4.00			+/- 0.1 SU	Yes No	
pH (7)	14340057 8/2021	14.97	7.00	6.97	7	+/- 0.1 SU	(Yes) No	
Mid-Day pH (7) check			7.00			+/- 0.1 SU	Yes No	
pH (10)	19320107 8/2021	15.06	10.00	9.98	10	+/- 0.1 SU	(Yes) No	
Mid-Day pH (10) check			10.00			+/- 0.1 SU	Yes No	
ORP (mV)	19460167 8/2021	15.13	228	230.6	228	+/- 20mV	(Yes) No	
DO (%) (1pt, 100% water saturated air cal)			100	104.34	100	+/- 6 % saturation	(Yes) No	
Turbidity 0 NTU			0	0	0	+/- 0.5 NTU	(Yes) No	
Turbidity 1 NTU			1.00	.93	.93	+/- 0.5 NTU	(Yes) No	
Turbidity 10 NTU			10.00	9.76	9.76	+/- 0.5 NTU	(Yes) No	

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EQUIPMENT CALIBRATION LOG

Field Technician: VASHISH TAUKOOR

Date: 3-18-2021

Time (start): 0806

Time (finish): 0816

smarTroll SN: 728563

Turbidity Meter Type: LaMotte 2020we

SN: 710-0711

Weather Conditions: SHOWERS, STORMS, 50°F

Facility and Unit: Plant Hammond AP-1/2

Project No.: GW6581

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	2061 0025 08/21	16.52	4490	4532.6	4490	+/- 5 %	Yes / No	
pH (4)			4.00	3.95	4.00	+/- 0.1 SU	Yes / No	
Mid-Day pH (4) check	"	19.31	4.00	4.05	4.00	+/- 0.1 SU	Yes / No	
pH (7)	1934 0057 08/21	17.03	7.00	6.99	7.00	+/- 0.1 SU	Yes / No	
Mid-Day pH (7) check	"	19.54	7.00	7.01	7.00	+/- 0.1 SU	Yes / No	
pH (10)	1932 0102 08/21	17.10	10.00	10.04	10.00	+/- 0.1 SU	Yes / No	
Mid-Day pH (10) check	"	19.55	10.00	9.99	10.00	+/- 0.1 SU	Yes / No	
ORP (mV)	1940 0107 08/21	17.05	228	238.1	228	+/- 20mV	Yes / No	
DO (%) (1pt, 100% water saturated air cal)	[redacted]		100	99.19	100	+/- 6 % saturation	Yes / No	
Turbidity 0 NTU			0	0.00	0	+/- 0.5 NTU	Yes / No	
Turbidity 1 NTU			1.00	1.00	1.00	+/- 0.5 NTU	Yes / No	
Turbidity 10 NTU			10.00	10.45	10.00	+/- 0.5 NTU	Yes / No	

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EQUIPMENT CALIBRATION LOG

Field Technician: VASHISH THAKOOR

Date: 3-10-2021

Time (start): 0740

Time (finish): 0749

smarTroll SN: 728563

Turbidity Meter Type: LaMote 2020we

SN: 710-0711

Weather Conditions: CLOUDY, 40°F

Facility and Unit: Plant Hammond AP-1/2

Project No: GW6581

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20610025 08/21	21.06	4490	4366.2	4490	+/- 5 %	Yes No	
pH (4)			4.00	3.93	4.00	+/- 0.1 SU	Yes No	
Mid-Day pH (4) check	"		4.00			+/- 0.1 SU	Yes No	
pH (7)	19340057 08/21	19.38	7.00	6.92	7.00	+/- 0.1 SU	Yes No	
Mid-Day pH (7) check	"		7.00			+/- 0.1 SU	Yes No	
pH (10)	19320102 08/21	18.70	10.00	9.88	10.00	+/- 0.1 SU	Yes No	
Mid-Day pH (10) check	"		10.00			+/- 0.1 SU	Yes No	
ORP (mV)	19460167 08/21	18.74	228	238.0	229	+/- 20mV	Yes No	
DO (%) (1pt, 100% water saturated air cal)	[redacted]		100	95.71	100	+/- 6 % saturation	Yes No	
Turbidity 0 NTU			0	0.00	0.00	+/- 0.5 NTU	Yes No	
Turbidity 1 NTU			1.00	0.96	1.00	+/- 0.5 NTU	Yes No	
Turbidity 10 NTU			10.00	10.39	10.00	+/- 0.5 NTU	Yes No	

Geosyntec consultants
engineers | scientists | innovators

EQUIPMENT CALIBRATION LOG

Field Technician: Thomas Jhesson | Date: 3/18/21 | Time (start): 0730 | Time (finish): 840

smarTroll SN: 728566 | Turbidity Meter Type: LaMote 2020we | SN: 2289-2612

Weather Conditions: Cloudy 60° | Facility and Unit: Plant Hammond AP-1/2 | Project No.: GW6581

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20010028 08/21	15.21	4490	4475.5	4490	+/- 5 %	Yes No	
pH (4)			4.00	4.00	4.00	+/- 0.1 SU	Yes No	
Mid-Day pH (4) check	—	—	4.00	4.01	—	+/- 0.1 SU	Yes No	
pH (7)	19360057 08/21	14.99	7.00	7.02	7.00	+/- 0.1 SU	Yes No	
Mid-Day pH (7) check	—	—	7.00	7.06	—	+/- 0.1 SU	Yes No	
pH (10)	19329OZ 08/21	14.99	10.00	10.06	10.00	+/- 0.1 SU	Yes No	
Mid-Day pH (10) check	—	—	10.00	10.00	—	+/- 0.1 SU	Yes No	
ORP (mV)	19460167 08/21	14.89	228	222.5	228	+/- 20mV	Yes No	
DO (%) (1pt, 100% water saturated air cal)			100	100.98	100.00	+/- 6 % saturation	Yes No	
Turbidity 0 NTU			0	0.06	0.00	+/- 0.5 NTU	Yes No	
Turbidity 1 NTU			1.00	0.11	1.08	+/- 0.5 NTU	Yes No	
Turbidity 10 NTU			10.00	10.94	9.54	+/- 0.5 NTU	Yes No	

Geosyntec consultants

EQUIPMENT CALIBRATION LOG

Field Technician: Thomas Thresher | Date: 3/19/21 | Time (start): 0730 | Time (finish): 0815

smarTroll SN: 728566 | Turbidity Meter Type: LaMote 2020we | SN: 6411-1416

Weather Conditions: | Facility and Unit: Plant Hammond AP-1/2 | Project No.: GW6581

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	Z0010025 8/21	9.99	4490	4547.1	4490	+/- 5 %	(Yes) No	
pH (4)			4.00	4.04	4.0	+/- 0.1 SU	(Yes) No	
Mid-Day pH (4) check			4.00	4.02	—	+/- 0.1 SU	(Yes) No	
pH (7)	19340057 8/21	10.13	7.00	7.10	7.00	+/- 0.1 SU	(Yes) No	
Mid-Day pH (7) check			7.00	7.00	—	+/- 0.1 SU	Yes No	
pH (10)	19376102 8/21		10.00	10.01	—	+/- 0.1 SU	Yes No	
Mid-Day pH (10) check		10.30	10.00	10.05	10.00	+/- 0.1 SU	(Yes) No	
ORP (mV)	19460167 8/21	10.32	228	234.1	228	+/- 20mV	(Yes) No	
DO (%) (1pt, 100% water saturated air cal)	[redacted]		100	98.16	100	+/- 6 % saturation	(Yes) No	
Turbidity 0 NTU			0	0	0	+/- 0.5 NTU	(Yes) No	
Turbidity 1 NTU			1.00	1.05	1.05	+/- 0.5 NTU	(Yes) No	
Turbidity 10 NTU			10.00	9.78	9.78	+/- 0.5 NTU	(Yes) No	

APPENDIX D

Statistical Analysis Report

GROUNDWATER STATS CONSULTING

August 24, 2021

Southern Company Services
Attn: Ms. Kristen Jurinko
241 Ralph McGill Blvd NE, Bin 10160
Atlanta, Georgia 30308

Re: Plant Hammond Ash Pond 2 (AP-2)
March 2021 Statistical Analysis

Dear Ms. Jurinko,

Groundwater Stats Consulting, formerly the statistical consulting division of Sanitas Technologies, is pleased to provide the March 2021 Semi-Annual Groundwater Detection and Assessment Monitoring Statistical summary of groundwater data for Georgia Power Company's Plant Hammond AP-2. The analysis complies with the federal rule for the Disposal of Coal Combustion Residuals from Electric Utilities (CCR Rule, 2015), the Georgia Environmental Protection Division (EPD) Rules for Solid Waste Management Chapter 391-3-4-.10 and follows the United States Environmental Protection Agency (USEPA) Unified Guidance (2009).

The monitoring well network, as provided by Southern Company Services, consists of the following:

- **Upgradient wells:** HGWA-1, HGWA-2, HGWA-3, HGWA-4, HGWA-5, HGWA-6, HGWA-42D, HGWA-43D, and HGWA-44D
- **Downgradient wells:** HGWC-14, HGWC-15, HGWC-16, HGWC-17, and HGWC-18
- **Delineation wells:** MW-21D, MW-22, MW-23D, and MW-37D
- **Piezometers:** MW-33 and MW-35

Sampling began for the CCR program in 2016, and at least 8 samples were collected for all wells except for newer upgradient wells HGWA-42D, HGWA-43D, and HGWA-44D and delineation wells. Sampling began in 2019 for delineation wells MW-21D, MW-22, and

MW-23D; and in 2020 for upgradient wells HGWA-42D, HGWA-43D, HGWA-44D, delineation well MW-37D, and piezometers MW-33 and MW-35.

Delineation wells and piezometers are included on time series and box plots for all parameters. When a minimum of 4 samples is available, these wells and piezometers are evaluated using confidence intervals for the Appendix IV constituents.

Data were sent electronically to Groundwater Stats Consulting, and the statistical analysis was reviewed by Kristina Rayner, Groundwater Statistician and Founder of Groundwater Stats Consulting. The statistical analysis was performed according to the groundwater data screening that was performed in April 2018 by GSC and approved by Dr. Cameron, PhD Statistician with MacStat Consulting and primary author of the USEPA Unified Guidance.

The CCR program consists of the constituents listed below. The terms "parameters" and "constituents" are used interchangeably.

- **Appendix III** (Detection Monitoring) **-** boron, calcium, chloride, fluoride, pH, sulfate, and TDS
- **Appendix IV** (Assessment Monitoring) **–** arsenic, barium, beryllium, cadmium, chromium, cobalt, combined radium 226 + 228, fluoride, lead, lithium, molybdenum, selenium, and thallium

Note that when there are no detections present in downgradient wells for a given constituent, statistical analyses are not required. A summary of well/constituent pairs with 100% non-detects follows this letter. Additionally, annual Scan events are conducted to determine which Appendix IV constituents are detected in downgradient wells and, therefore, require statistical analysis. Any constituents that are not detected do not require statistical analysis. During the Scan event conducted in February 2021, mercury was not detected; therefore, this constituent was not required to be sampled in subsequent events. Data for mercury were plotted on time series graphs and box plots, but were not analyzed with confidence intervals.

For all constituents, a substitution of the most recent reporting limit is used for nondetect data. In the case of lithium, a reporting limit of 0.03 mg/L was substituted across all wells which is the most recent reporting limit by the laboratory.

Time series plots for Appendix III and IV parameters at all wells are provided for the purpose of screening data at these wells (Figure A). Additionally, a separate section of box plots is included for all constituents at upgradient and downgradient wells (Figure B). The

time series plots are used to initially screen for suspected outliers and trends, while the box plots provide visual representation of variation within individual wells and between all wells. When values in background are flagged as outliers, they may be seen in a lighter font and as a disconnected symbol on the graphs. No values were flagged as outliers (Figure C).

In earlier analyses, data at all wells were evaluated for the following: 1) outliers; 2) trends; 3) most appropriate statistical method for Appendix III parameters based on site characteristics of groundwater data upgradient of the facility; and 4) eligibility of downgradient wells when intrawell statistical methods are recommended. Power curves were provided to demonstrate that the selected statistical methods for Appendix III parameters comply with the USEPA Unified Guidance. The EPA suggests that the selected statistical method should provide at least 55% power at 3 standard deviations or at least 80% power at 4 standard deviations.

Statistical Methods – Appendix III Parameters

Appendix III parameters are evaluated using Interwell Prediction Limits combined with 1-of-2 resamples for all constituents: boron, calcium, chloride, fluoride, pH, sulfate, and TDS.

Parametric prediction limits are utilized when the screened historical data follow a normal or transformed-normal distribution. When data cannot be normalized or the majority of data are non-detects, a nonparametric test is utilized. While the false positive rate associated with the parametric limits is based on an annual 10% (5% per semi-annual event) as recommended by the EPA Unified Guidance (2009), the false positive rate associated with the nonparametric limits is dependent upon the available background sample size, number of future comparisons, and verification resample plan. The distribution of data is tested using the Shapiro-Wilk/Shapiro-Francia test for normality. After testing for normality and performing any adjustments as discussed below (US EPA, 2009), data are analyzed using either parametric or non-parametric prediction limits. Non-detects are handled as follows:

- No statistical analyses are required on wells and analytes containing 100% non-detects (USEPA Unified Guidance, 2009, Chapter 6).
- When data contain <15% non-detects in background, simple substitution of one-half the reporting limit is utilized in the statistical analysis. The reporting limit utilized for non-detects is the most recent practical quantification limit (PQL) as reported by the laboratory.

- When data contain between 15-50% non-detects, the Kaplan-Meier non-detect adjustment is applied to the background data. This technique adjusts the mean and standard deviation of the historical concentrations to account for concentrations below the reporting limit.
- Nonparametric prediction limits are used on data containing greater than 50% non-detects.

Natural systems continuously evolve due to physical changes made to the environment. Examples include capping a landfill, paving areas near a well, or lining a drainage channel to prevent erosion. Periodic updating of background statistical limits is necessary to accommodate these types of changes. In the interwell case, prediction limits are updated with upgradient well data during each event after careful screening for any new outliers. In some cases, an earlier portion of data may require deselection prior to construction of limits to provide sensitive limits that will rapidly detect changes in groundwater quality. Even though the data are excluded from the calculation, the values will continue to be reported and shown in tables and graphs. When this step is required, a summary of any adjusted records will be provided.

Statistical Evaluation of Appendix III Parameters – March 2021

All Appendix III parameters were analyzed using interwell prediction limits. Background (upgradient) well data were re-assessed for potential outliers during this analysis. When values in background have been flagged as outliers, they may be seen in a lighter font and as a disconnected symbol on the graphs. No new values were flagged, and no values have been flagged as outliers (Figure C).

Interwell prediction limits, combined with a 1-of-2 resample plan, were constructed for all Appendix III parameters using all historical upgradient well data through March 2021 (Figure D). Downgradient measurements were compared to these interwell background limits. Interwell prediction limits use all available upgradient well data to establish a background limit for an individual constituent. The most recent sample from each downgradient well is compared to the background limit to determine whether there are statistically significant increases (SSIs).

In the event of an initial exceedance of compliance well data, the 1-of-2 resample plan allows for collection of one additional sample to determine whether the initial exceedance is confirmed. When the resample confirm the initial exceedance, a statistically significant increase (SSI) is identified and further research would be required to identify the cause of the exceedance (i.e. impact from the site, natural variation, or an off-site source). If the resample falls within the statistical limit, the initial exceedance is considered to be a false

positive result; therefore, no further action is necessary. If no resample is collected, the initial exceedance is automatically confirmed.

When the March 2021 compliance data from downgradient wells were compared to interwell prediction limits, several exceedances were noted. A summary table of these findings is provided along with the prediction limits (Figure D).

When prediction limit exceedances are identified in downgradient wells, data are further evaluated using the Sen's Slope/Mann Kendall trend test to determine whether concentrations are statistically increasing, decreasing, or stable (Figure E). Upgradient well data are included in the trend analyses for all parameters found to exceed their prediction limit in downgradient wells to identify whether similar patterns exist upgradient of the site. Upgradient trends are an indication of natural variability in groundwater unrelated to practices at the site. A summary of the trend test results follows this letter. Statistically significant trends were noted for the following well/constituent pairs:

Increasing trends:

- Boron: HGWA-2 (upgradient) and HGWC-16
- Calcium: HGWC-16
- Chloride: HGWC-16 and HGWC-17
- pH: HGWC-14
- Sulfate: HGWA-2 and HGWA-3 (both upgradient)
- TDS: HGWC-16 and HGWC-17

Decreasing trends:

- Chloride: HGWA-4 (upgradient), HGWC-14, and HGWC-18
- pH: HGWA-4 (upgradient)
- TDS: HGWA-4 (upgradient) and HGWC-14

Statistical Methods – Appendix IV Parameters

Appendix IV parameters are evaluated by statistically comparing the mean or median of each downgradient well/constituent pair against corresponding Groundwater Protection Standards (GWPS). The GWPS may be either regulatory (MCL or CCR rule-specified limits) or site-specific limits that are based on upgradient background groundwater quality. Site-specific background limits are determined using tolerance limits, and the comparison of downgradient means or medians to GWPS is performed using confidence intervals. Confidence intervals are provided for Appendix IV well/constituent pairs with detections and with current reported data. The methods are described below.

Statistical Evaluation of Appendix IV Parameters – March 2021

Site specific background limits were calculated as upper one-sided interwell tolerance limits (UTLs) on pooled upgradient data for each of the Appendix IV constituents (Figure F). When varying detection limits were present in upgradient wells, all non-detects were substituted with the most recent reporting limit. Parametric tolerance limits were used when data follow a normal or transformed-normal distribution. When data contained greater than 50% non-detects or did not follow a normal or transformed-normal distribution, non-parametric tolerance limits were used. The background limits were then used when determining the groundwater protection standard (GWPS) under 40 CFR §257.95(h) and Georgia EPD Rule 391-3-4-.10(6)(a) (Figure G).
As described in 40 CFR §257.95(h) (1-3), the GWPS is:

- The maximum contaminant level (MCL) established under §141.62 and §141.66 of this title
- Where an MCL has not been established for a constituent, CCR-rule specified levels have been specified for cobalt (0.006 mg/L), lead (0.015 mg/L), lithium (0.040 mg/L), and molybdenum (0.100 mg/L)
- The respective background level for a constituent when the background level is higher than the MCL or Federal CCR Rule identified GWPS

On July 30, 2018, USEPA revised the Federal CCR Rule updating GWPS for cobalt, lead, lithium, and molybdenum as described above in 40 CFR §257.95(h)(2). Georgia EPD has not incorporated the updated GWPS into the current Georgia EPD Rules for Solid Waste Management 391-3-4-.10(6)(a); therefore, for sites regulated under Georgia EPD Rules, the GWPS is:

- The MCL or
- The background concentration when an MCL is not established or when the background concentration is higher than the MCL.

Following the above Georgia EPD Rule requirements and the CCR Rule, State and Federal GWPS were established for statistical comparison of Appendix IV constituents for the March 2021 sample event (Figures G and H, respectively). As mentioned above, delineation wells and piezometers were included when a minimum of 4 samples were available. Note that a GWPS is established for mercury; however, since it was not sampled during the March 2021 sampling event, no statistical comparison with confidence intervals is required.

To complete the statistical comparison to GWPS, confidence intervals were constructed for each of the Appendix IV constituents in each downgradient well. The Sanitas software was used to calculate the tolerance limits and the confidence intervals—either parametric or nonparametric as appropriate. For the State requirements, confidence intervals were compared to the GWPS established using the Georgia EPD Rules 391-3-4-.10(6)(a). For the Federal requirements, confidence intervals were compared to the GWPS prepared according to the CCR Rule. Only when the entire confidence interval is above a GWPS is the downgradient well/constituent pair considered to exceed its respective standard. If there is an exceedance of the GWPS, a statistically significant level (SSL) exceedance is identified. Note the reporting limits changes for the following constituents:

- Beryllium from <0.003 mg/L to <0.0005 mg/L
- Cadmium from <0.0025 mg/L to <0.0005 mg/L
- Chromium from <0.01 mg/L to <0.025 mg/L
- Lead from <0.005 mg/L to <0.001 mg/L
- Mercury from <0.001 mg/L to <0.0005 mg/L
- Selenium from <0.01 mg/L to <0.005 mg/L

As a result, background limits changed for these constituents, except for chromium. However, in all cases, except for lead which uses the background limit as the GWPS for State confidence intervals, the established MCL or CCR Rule-Specified Levels for the constituents mentioned above were higher than the background limits. Therefore, these GWPS were not affected. Additionally, some of the confidence intervals constructed on downgradient wells resulted in decreased upper and lower confidence limits since all historical non-detects within a given well are replaced with the most recent reporting limit. Summaries of the confidence interval results, along with graphical comparison against GWPS for both State and Federal requirements, follow this letter (Figures I and J, respectively). The following confidence interval exceedances were identified:

State:

- Cobalt: HGWC-18, MW-33, and MW-35
- Lead: HGWC-14, HGWC-18, and MW-33
- Molybdenum: MW-21D

Federal:

- Cobalt: HGWC-18, MW-33, and MW-35

Note that all concentrations through February 2021 for lead at wells HGWC-14, HGWC-18, and MW-33 have been reported as estimated values below the historical

practical quantitation limit (PQL) of 0.005 mg/L. No confidence interval exceedances were previously noted.

During this analysis, a decrease in the reporting limit for lead resulted in a GWPS (background limit) of 0.001 mg/L; and confidence intervals constructed on the estimated values for this constituent exceeded the state GWPS for wells HGWC-14, HGWC-18, and MW-33. Earlier reported non-detect values were also based on the reporting limit in use at the time of measurement; therefore, the exact values are unknown. As more data are collected, the GWPS and confidence intervals will be recalculated using only the more recent data measured with the lower reporting limit. Similar logic applies to the other constituents for which the reporting limits changed.

Additional confidence intervals were constructed for lead at these wells using the historical GWPS of 0.005 mg/L and no exceedances were noted. The Sen's Slope/Mann Kendall trend test was also used to evaluate the measurements of lead at wells HGWC-14, HGWC-18, and MW-33 to determine whether the reported estimated concentrations are increasing, decreasing, or remaining stable over time. The trend tests show that all reported estimated concentrations are stable over time with no statistically significant increasing or decreasing trends.

Thank you for the opportunity to assist you in the statistical analysis of groundwater quality for Hammond AP-2. If you have any questions or comments, please feel free to contact us.

For Groundwater Stats Consulting,

Andrew T. Collins
Project Manager

Kristina L. Rayner
Groundwater Statistician

100% Non-Detects: Appendix IV

Analysis Run 5/5/2021 10:30 AM View: Appendix IV - Confidence Intervals
Plant Hammond Client: Southern Company Data: Hammond AP-2

Antimony (mg/L)
HGWC-15, HGWC-16, HGWC-17, HGWC-18, MW-21D, MW-22, MW-23D

Beryllium (mg/L)
HGWC-15, HGWC-16, MW-21D, MW-23D

Cadmium (mg/L)
HGWC-16, MW-21D, MW-37D

Lithium (mg/L)
HGWC-14

Mercury (mg/L)
HGWC-14, HGWC-15, HGWC-16, HGWC-17, MW-21D, MW-22, MW-23D, MW-33, MW-35, MW-37D

Molybdenum (mg/L)
HGWC-14, HGWC-16, HGWC-17, HGWC-18, MW-33, MW-35

Selenium (mg/L)
MW-21D, MW-23D, MW-37D

Thallium (mg/L)
HGWC-15, HGWC-16, MW-21D, MW-22, MW-23D, MW-37D

Appendix III Interwell Prediction Limits - Significant Results

Plant Hammond Client: Southern Company Data: Hammond AP-2 Printed 5/5/2021, 9:44 AM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Boron (mg/L)	HGWC-14	0.4	n/a	3/17/2021	11.8	Yes	111	n/a	n/a	5.405	n/a	n/a	0.0001613	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-15	0.4	n/a	3/16/2021	2.4	Yes	111	n/a	n/a	5.405	n/a	n/a	0.0001613	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-16	0.4	n/a	3/17/2021	2.7	Yes	111	n/a	n/a	5.405	n/a	n/a	0.0001613	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-17	0.4	n/a	3/18/2021	6.8	Yes	111	n/a	n/a	5.405	n/a	n/a	0.0001613	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-18	0.4	n/a	3/18/2021	8.9	Yes	111	n/a	n/a	5.405	n/a	n/a	0.0001613	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-14	138.6	n/a	3/17/2021	572	Yes	111	3.83	0.611	0	None	ln(x)	0.001504	Param Inter 1 of 2
Calcium (mg/L)	HGWC-15	138.6	n/a	3/16/2021	196	Yes	111	3.83	0.611	0	None	ln(x)	0.001504	Param Inter 1 of 2
Calcium (mg/L)	HGWC-16	138.6	n/a	3/17/2021	198	Yes	111	3.83	0.611	0	None	ln(x)	0.001504	Param Inter 1 of 2
Calcium (mg/L)	HGWC-17	138.6	n/a	3/18/2021	266	Yes	111	3.83	0.611	0	None	ln(x)	0.001504	Param Inter 1 of 2
Calcium (mg/L)	HGWC-18	138.6	n/a	3/18/2021	407	Yes	111	3.83	0.611	0	None	ln(x)	0.001504	Param Inter 1 of 2
Chloride (mg/L)	HGWC-14	20.4	n/a	3/17/2021	233	Yes	111	n/a	n/a	0	n/a	n/a	0.0001613	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-15	20.4	n/a	3/16/2021	103	Yes	111	n/a	n/a	0	n/a	n/a	0.0001613	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-16	20.4	n/a	3/17/2021	93.8	Yes	111	n/a	n/a	0	n/a	n/a	0.0001613	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-17	20.4	n/a	3/18/2021	138	Yes	111	n/a	n/a	0	n/a	n/a	0.0001613	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-18	20.4	n/a	3/18/2021	90.2	Yes	111	n/a	n/a	0	n/a	n/a	0.0001613	NP Inter (normality) 1 of 2
Field pH (s.u.)	HGWC-14	7.92	4.9	3/17/2021	4.72	Yes	138	n/a	n/a	0	n/a	n/a	0.0002064	NP Inter (normality) 1 of 2
Field pH (s.u.)	HGWC-18	7.92	4.9	3/18/2021	4.54	Yes	138	n/a	n/a	0	n/a	n/a	0.0002064	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-14	85.9	n/a	3/17/2021	1300	Yes	111	n/a	n/a	3.604	n/a	n/a	0.0001613	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-15	85.9	n/a	3/16/2021	379	Yes	111	n/a	n/a	3.604	n/a	n/a	0.0001613	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-16	85.9	n/a	3/17/2021	250	Yes	111	n/a	n/a	3.604	n/a	n/a	0.0001613	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-17	85.9	n/a	3/18/2021	447	Yes	111	n/a	n/a	3.604	n/a	n/a	0.0001613	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-18	85.9	n/a	3/18/2021	1050	Yes	111	n/a	n/a	3.604	n/a	n/a	0.0001613	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-14	496	n/a	3/17/2021	1640	Yes	111	n/a	n/a	0	n/a	n/a	0.0001613	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-16	496	n/a	3/17/2021	768	Yes	111	n/a	n/a	0	n/a	n/a	0.0001613	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-17	496	n/a	3/18/2021	1020	Yes	111	n/a	n/a	0	n/a	n/a	0.0001613	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-18	496	n/a	3/18/2021	1390	Yes	111	n/a	n/a	0	n/a	n/a	0.0001613	NP Inter (normality) 1 of 2

Appendix III Interwell Prediction Limits - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-2 Printed 5/5/2021, 9:44 AM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Boron (mg/L)	**HGWC-14**	**0.4**	**n/a**	**3/17/2021**	**11.8**	**Yes**	**111**	**n/a**	**n/a**	**5.405**	**n/a**	**n/a**	**0.0001613**	**NP Inter (normality) 1 of 2**
Boron (mg/L)	**HGWC-15**	**0.4**	**n/a**	**3/16/2021**	**2.4**	**Yes**	**111**	**n/a**	**n/a**	**5.405**	**n/a**	**n/a**	**0.0001613**	**NP Inter (normality) 1 of 2**
Boron (mg/L)	**HGWC-16**	**0.4**	**n/a**	**3/17/2021**	**2.7**	**Yes**	**111**	**n/a**	**n/a**	**5.405**	**n/a**	**n/a**	**0.0001613**	**NP Inter (normality) 1 of 2**
Boron (mg/L)	**HGWC-17**	**0.4**	**n/a**	**3/18/2021**	**6.8**	**Yes**	**111**	**n/a**	**n/a**	**5.405**	**n/a**	**n/a**	**0.0001613**	**NP Inter (normality) 1 of 2**
Boron (mg/L)	**HGWC-18**	**0.4**	**n/a**	**3/18/2021**	**8.9**	**Yes**	**111**	**n/a**	**n/a**	**5.405**	**n/a**	**n/a**	**0.0001613**	**NP Inter (normality) 1 of 2**
Calcium (mg/L)	**HGWC-14**	**138.6**	**n/a**	**3/17/2021**	**572**	**Yes**	**111**	**3.83**	**0.611**	**0**	**None**	**ln(x)**	**0.001504**	**Param Inter 1 of 2**
Calcium (mg/L)	**HGWC-15**	**138.6**	**n/a**	**3/16/2021**	**196**	**Yes**	**111**	**3.83**	**0.611**	**0**	**None**	**ln(x)**	**0.001504**	**Param Inter 1 of 2**
Calcium (mg/L)	**HGWC-16**	**138.6**	**n/a**	**3/17/2021**	**198**	**Yes**	**111**	**3.83**	**0.611**	**0**	**None**	**ln(x)**	**0.001504**	**Param Inter 1 of 2**
Calcium (mg/L)	**HGWC-17**	**138.6**	**n/a**	**3/18/2021**	**266**	**Yes**	**111**	**3.83**	**0.611**	**0**	**None**	**ln(x)**	**0.001504**	**Param Inter 1 of 2**
Calcium (mg/L)	**HGWC-18**	**138.6**	**n/a**	**3/18/2021**	**407**	**Yes**	**111**	**3.83**	**0.611**	**0**	**None**	**ln(x)**	**0.001504**	**Param Inter 1 of 2**
Chloride (mg/L)	**HGWC-14**	**20.4**	**n/a**	**3/17/2021**	**233**	**Yes**	**111**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.0001613**	**NP Inter (normality) 1 of 2**
Chloride (mg/L)	**HGWC-15**	**20.4**	**n/a**	**3/16/2021**	**103**	**Yes**	**111**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.0001613**	**NP Inter (normality) 1 of 2**
Chloride (mg/L)	**HGWC-16**	**20.4**	**n/a**	**3/17/2021**	**93.8**	**Yes**	**111**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.0001613**	**NP Inter (normality) 1 of 2**
Chloride (mg/L)	**HGWC-17**	**20.4**	**n/a**	**3/18/2021**	**138**	**Yes**	**111**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.0001613**	**NP Inter (normality) 1 of 2**
Chloride (mg/L)	**HGWC-18**	**20.4**	**n/a**	**3/18/2021**	**90.2**	**Yes**	**111**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.0001613**	**NP Inter (normality) 1 of 2**
Field pH (s.u.)	**HGWC-14**	**7.92**	**4.9**	**3/17/2021**	**4.72**	**Yes**	**138**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.0002064**	**NP Inter (normality) 1 of 2**
Field pH (s.u.)	HGWC-15	7.92	4.9	3/16/2021	6.08	No	138	n/a	n/a	0	n/a	n/a	0.0002064	NP Inter (normality) 1 of 2
Field pH (s.u.)	HGWC-16	7.92	4.9	3/17/2021	7.19	No	138	n/a	n/a	0	n/a	n/a	0.0002064	NP Inter (normality) 1 of 2
Field pH (s.u.)	HGWC-17	7.92	4.9	3/18/2021	6.43	No	138	n/a	n/a	0	n/a	n/a	0.0002064	NP Inter (normality) 1 of 2
Field pH (s.u.)	**HGWC-18**	**7.92**	**4.9**	**3/18/2021**	**4.54**	**Yes**	**138**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.0002064**	**NP Inter (normality) 1 of 2**
Fluoride (mg/L)	HGWC-14	0.74	n/a	3/17/2021	0.076J	No	138	n/a	n/a	31.88	n/a	n/a	0.0001032	NP Inter (normality) 1 of 2
Fluoride (mg/L)	HGWC-15	0.74	n/a	3/16/2021	0.1ND	No	138	n/a	n/a	31.88	n/a	n/a	0.0001032	NP Inter (normality) 1 of 2
Fluoride (mg/L)	HGWC-16	0.74	n/a	3/17/2021	0.1ND	No	138	n/a	n/a	31.88	n/a	n/a	0.0001032	NP Inter (normality) 1 of 2
Fluoride (mg/L)	HGWC-17	0.74	n/a	3/18/2021	0.057J	No	138	n/a	n/a	31.88	n/a	n/a	0.0001032	NP Inter (normality) 1 of 2
Fluoride (mg/L)	HGWC-18	0.74	n/a	3/18/2021	0.64	No	138	n/a	n/a	31.88	n/a	n/a	0.0001032	NP Inter (normality) 1 of 2
Sulfate (mg/L)	**HGWC-14**	**85.9**	**n/a**	**3/17/2021**	**1300**	**Yes**	**111**	**n/a**	**n/a**	**3.604**	**n/a**	**n/a**	**0.0001613**	**NP Inter (normality) 1 of 2**
Sulfate (mg/L)	**HGWC-15**	**85.9**	**n/a**	**3/16/2021**	**379**	**Yes**	**111**	**n/a**	**n/a**	**3.604**	**n/a**	**n/a**	**0.0001613**	**NP Inter (normality) 1 of 2**
Sulfate (mg/L)	**HGWC-16**	**85.9**	**n/a**	**3/17/2021**	**250**	**Yes**	**111**	**n/a**	**n/a**	**3.604**	**n/a**	**n/a**	**0.0001613**	**NP Inter (normality) 1 of 2**
Sulfate (mg/L)	**HGWC-17**	**85.9**	**n/a**	**3/18/2021**	**447**	**Yes**	**111**	**n/a**	**n/a**	**3.604**	**n/a**	**n/a**	**0.0001613**	**NP Inter (normality) 1 of 2**
Sulfate (mg/L)	**HGWC-18**	**85.9**	**n/a**	**3/18/2021**	**1050**	**Yes**	**111**	**n/a**	**n/a**	**3.604**	**n/a**	**n/a**	**0.0001613**	**NP Inter (normality) 1 of 2**
Total Dissolved Solids (mg/L)	**HGWC-14**	**496**	**n/a**	**3/17/2021**	**1640**	**Yes**	**111**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.0001613**	**NP Inter (normality) 1 of 2**
Total Dissolved Solids (mg/L)	HGWC-15	496	n/a	3/16/2021	92	No	111	n/a	n/a	0	n/a	n/a	0.0001613	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	**HGWC-16**	**496**	**n/a**	**3/17/2021**	**768**	**Yes**	**111**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.0001613**	**NP Inter (normality) 1 of 2**
Total Dissolved Solids (mg/L)	**HGWC-17**	**496**	**n/a**	**3/18/2021**	**1020**	**Yes**	**111**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.0001613**	**NP Inter (normality) 1 of 2**
Total Dissolved Solids (mg/L)	**HGWC-18**	**496**	**n/a**	**3/18/2021**	**1390**	**Yes**	**111**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.0001613**	**NP Inter (normality) 1 of 2**

Trend Tests - Prediction Limit Exceedances - Significant Results

Plant Hammond Client: Southern Company Data: Hammond AP-2 Printed 5/5/2021, 10:25 AM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Boron (mg/L)	**HGWA-2 (bg)**	**0.00257**	**72**	**58**	**Yes**	**16**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Boron (mg/L)	**HGWC-16**	**0.2888**	**80**	**58**	**Yes**	**16**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Calcium (mg/L)	**HGWC-16**	**13.53**	**89**	**58**	**Yes**	**16**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Chloride (mg/L)	**HGWA-4 (bg)**	**-0.357**	**-85**	**-58**	**Yes**	**16**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Chloride (mg/L)	**HGWC-14**	**-90.69**	**-67**	**-58**	**Yes**	**16**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Chloride (mg/L)	**HGWC-16**	**14.74**	**110**	**58**	**Yes**	**16**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Chloride (mg/L)	**HGWC-17**	**15.05**	**68**	**58**	**Yes**	**16**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Chloride (mg/L)	**HGWC-18**	**-36.81**	**-60**	**-58**	**Yes**	**16**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Field pH (s.u.)	**HGWA-4 (bg)**	**-0.2968**	**-107**	**-81**	**Yes**	**20**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Field pH (s.u.)	**HGWC-14**	**0.04839**	**82**	**81**	**Yes**	**20**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Sulfate (mg/L)	**HGWA-2 (bg)**	**1.382**	**64**	**58**	**Yes**	**16**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Sulfate (mg/L)	**HGWA-3 (bg)**	**1.676**	**67**	**58**	**Yes**	**16**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Total Dissolved Solids (mg/L)	**HGWA-4 (bg)**	**-35.66**	**-61**	**-58**	**Yes**	**16**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Total Dissolved Solids (mg/L)	**HGWC-14**	**-252**	**-73**	**-58**	**Yes**	**16**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Total Dissolved Solids (mg/L)	**HGWC-16**	**53.96**	**84**	**58**	**Yes**	**16**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Total Dissolved Solids (mg/L)	**HGWC-17**	**80.13**	**71**	**58**	**Yes**	**16**	**6.25**	**n/a**	**n/a**	**0.01**	**NP**

Trend Tests - Prediction Limit Exceedances - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-2 Printed 5/5/2021, 10:25 AM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Boron (mg/L)	HGWA-1 (bg)	-0.0001741	-4	-58	No	16	0	n/a	n/a	0.01	NP
Boron (mg/L)	**HGWA-2 (bg)**	**0.00257**	**72**	**58**	**Yes**	**16**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Boron (mg/L)	HGWA-3 (bg)	-0.0004025	-20	-58	No	16	12.5	n/a	n/a	0.01	NP
Boron (mg/L)	HGWA-4 (bg)	-0.001192	-46	-58	No	16	6.25	n/a	n/a	0.01	NP
Boron (mg/L)	HGWA-42D (bg)	-0.08634	-4	-12	No	5	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWA-43D (bg)	-0.02892	-4	-12	No	5	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWA-44D (bg)	0.3386	8	12	No	5	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWA-5 (bg)	-0.0001291	-7	-58	No	16	12.5	n/a	n/a	0.01	NP
Boron (mg/L)	HGWA-6 (bg)	-0.0004206	-18	-58	No	16	6.25	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-14	-0.9086	-30	-58	No	16	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-15	0.09551	48	58	No	16	0	n/a	n/a	0.01	NP
Boron (mg/L)	**HGWC-16**	**0.2888**	**80**	**58**	**Yes**	**16**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Boron (mg/L)	HGWC-17	0.2301	36	58	No	16	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-18	-0.03739	-3	-58	No	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-1 (bg)	4.009	44	58	No	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-2 (bg)	0.3424	16	58	No	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-3 (bg)	2.789	48	58	No	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-4 (bg)	-9.588	-56	-58	No	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-42D (bg)	-1.953	-2	-12	No	5	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-43D (bg)	-5.439	-2	-12	No	5	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-44D (bg)	-14.84	-4	-12	No	5	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-5 (bg)	-0.1834	-11	-58	No	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-6 (bg)	0.3313	14	58	No	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWC-14	-3.085	-4	-58	No	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWC-15	7.289	36	58	No	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	**HGWC-16**	**13.53**	**89**	**58**	**Yes**	**16**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Calcium (mg/L)	HGWC-17	26.03	55	58	No	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWC-18	10.86	36	58	No	16	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWA-1 (bg)	0.7206	33	58	No	16	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWA-2 (bg)	-0.2299	-53	-58	No	16	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWA-3 (bg)	-0.07881	-28	-58	No	16	0	n/a	n/a	0.01	NP
Chloride (mg/L)	**HGWA-4 (bg)**	**-0.357**	**-85**	**-58**	**Yes**	**16**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Chloride (mg/L)	HGWA-42D (bg)	-2.81	-6	-12	No	5	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWA-43D (bg)	0.5656	3	12	No	5	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWA-44D (bg)	9.78	10	12	No	5	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWA-5 (bg)	-0.07921	-34	-58	No	16	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWA-6 (bg)	-0.08552	-42	-58	No	16	0	n/a	n/a	0.01	NP
Chloride (mg/L)	**HGWC-14**	**-90.69**	**-67**	**-58**	**Yes**	**16**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Chloride (mg/L)	HGWC-15	-23.47	-56	-58	No	16	0	n/a	n/a	0.01	NP
Chloride (mg/L)	**HGWC-16**	**14.74**	**110**	**58**	**Yes**	**16**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Chloride (mg/L)	**HGWC-17**	**15.05**	**68**	**58**	**Yes**	**16**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Chloride (mg/L)	**HGWC-18**	**-36.81**	**-60**	**-58**	**Yes**	**16**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Field pH (s.u.)	HGWA-1 (bg)	-0.03025	-50	-81	No	20	0	n/a	n/a	0.01	NP
Field pH (s.u.)	HGWA-2 (bg)	-0.02029	-21	-81	No	20	0	n/a	n/a	0.01	NP
Field pH (s.u.)	HGWA-3 (bg)	-0.008407	-12	-81	No	20	0	n/a	n/a	0.01	NP
Field pH (s.u.)	**HGWA-4 (bg)**	**-0.2968**	**-107**	**-81**	**Yes**	**20**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Field pH (s.u.)	HGWA-42D (bg)	0.08202	7	14	No	6	0	n/a	n/a	0.01	NP
Field pH (s.u.)	HGWA-43D (bg)	0.2971	4	14	No	6	0	n/a	n/a	0.01	NP
Field pH (s.u.)	HGWA-44D (bg)	0.1043	8	14	No	6	0	n/a	n/a	0.01	NP
Field pH (s.u.)	HGWA-5 (bg)	-0.03997	-68	-81	No	20	0	n/a	n/a	0.01	NP
Field pH (s.u.)	HGWA-6 (bg)	-0.02632	-36	-81	No	20	0	n/a	n/a	0.01	NP
Field pH (s.u.)	**HGWC-14**	**0.04839**	**82**	**81**	**Yes**	**20**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Field pH (s.u.)	HGWC-18	-0.02175	-65	-81	No	20	0	n/a	n/a	0.01	NP

Trend Tests - Prediction Limit Exceedances - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-2 Printed 5/5/2021, 10:25 AM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Sulfate (mg/L)	HGWA-1 (bg)	3.385	39	58	No	16	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	**HGWA-2 (bg)**	**1.382**	**64**	**58**	**Yes**	**16**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Sulfate (mg/L)	**HGWA-3 (bg)**	**1.676**	**67**	**58**	**Yes**	**16**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Sulfate (mg/L)	HGWA-4 (bg)	-0.7193	-56	-58	No	16	18.75	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-42D (bg)	-0.1049	-1	-12	No	5	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-43D (bg)	-8.995	-8	-12	No	5	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-44D (bg)	-2.396	-2	-12	No	5	20	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-5 (bg)	-0.06144	-5	-58	No	16	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-6 (bg)	0.1251	10	58	No	16	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-14	51.27	24	58	No	16	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-15	-0.5501	-3	-58	No	16	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-16	5.214	45	58	No	16	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-17	14.46	45	58	No	16	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-18	32.74	53	58	No	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-1 (bg)	3.302	10	58	No	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-2 (bg)	-1.42	-11	-58	No	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-3 (bg)	-0.3672	-5	-58	No	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	**HGWA-4 (bg)**	**-35.66**	**-61**	**-58**	**Yes**	**16**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Total Dissolved Solids (mg/L)	HGWA-42D (bg)	-69.36	-4	-12	No	5	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-43D (bg)	-24.14	-2	-12	No	5	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-44D (bg)	31.49	4	12	No	5	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-5 (bg)	-7.443	-42	-58	No	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-6 (bg)	-1.111	-9	-58	No	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	**HGWC-14**	**-252**	**-73**	**-58**	**Yes**	**16**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Total Dissolved Solids (mg/L)	**HGWC-16**	**53.96**	**84**	**58**	**Yes**	**16**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Total Dissolved Solids (mg/L)	**HGWC-17**	**80.13**	**71**	**58**	**Yes**	**16**	**6.25**	**n/a**	**n/a**	**0.01**	**NP**
Total Dissolved Solids (mg/L)	HGWC-18	-18.27	-21	-58	No	16	0	n/a	n/a	0.01	NP

Upper Tolerance Limits Summary Table

Plant Hammond Client: Southern Company Data: Hammond AP-2 Printed 5/5/2021, 10:00 AM

Constituent	Upper Lim.	Lower Lim.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Antimony (mg/L)	0.003	n/a	n/a	99	n/a	n/a	79.8	n/a	n/a	0.006232	NP Inter(NDs)
Arsenic (mg/L)	0.005	n/a	n/a	132	n/a	n/a	81.06	n/a	n/a	0.001147	NP Inter(NDs)
Barium (mg/L)	0.46	n/a	n/a	132	n/a	n/a	0	n/a	n/a	0.001147	NP Inter(normality)
Beryllium (mg/L)	0.0005	n/a	n/a	120	n/a	n/a	84.17	n/a	n/a	0.002122	NP Inter(NDs)
Cadmium (mg/L)	0.0005	n/a	n/a	132	n/a	n/a	93.18	n/a	n/a	0.001147	NP Inter(NDs)
Chromium (mg/L)	0.019	n/a	n/a	120	n/a	n/a	82.5	n/a	n/a	0.002122	NP Inter(NDs)
Cobalt (mg/L)	0.038	n/a	n/a	132	n/a	n/a	69.7	n/a	n/a	0.001147	NP Inter(NDs)
Combined Radium 226 + 228 (pCi/L)	1.684	n/a	n/a	132	0.7837	0.2727	0	None	sqrt(x)	0.05	Inter
Fluoride (mg/L)	0.74	n/a	n/a	138	n/a	n/a	31.88	n/a	n/a	0.0008431	NP Inter(normality)
Lead (mg/L)	0.001	n/a	n/a	120	n/a	n/a	67.5	n/a	n/a	0.002122	NP Inter(NDs)
Lithium (mg/L)	0.034	n/a	n/a	132	n/a	n/a	20.45	n/a	n/a	0.001147	NP Inter(normality)
Mercury (mg/L)	0.0005	n/a	n/a	87	n/a	n/a	90.8	n/a	n/a	0.01153	NP Inter(NDs)
Molybdenum (mg/L)	0.01	n/a	n/a	120	n/a	n/a	86.67	n/a	n/a	0.002122	NP Inter(NDs)
Selenium (mg/L)	0.005	n/a	n/a	132	n/a	n/a	98.48	n/a	n/a	0.001147	NP Inter(NDs)
Thallium (mg/L)	0.001	n/a	n/a	132	n/a	n/a	98.48	n/a	n/a	0.001147	NP Inter(NDs)

PLANT HAMMOND AP-2 GWPS (State)				
Constituent Name	**MCL**	**CCR-Rule Specified**	**Background Limit**	**State 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		0.46	2
Beryllium, Total (mg/L)	0.004		0.0005	0.004
Cadmium, Total (mg/L)	0.005		0.0005	0.005
Chromium, Total (mg/L)	0.1		0.0019	0.1
Cobalt, Total (mg/L)	n/a	0.006	0.038	0.038
Combined Radium, Total (pCi/L)	5		1.68	5
Fluoride, Total (mg/L)	4		0.74	4
Lead, Total (mg/L)	n/a	0.015	0.001	0.001
Lithium, Total (mg/L)	n/a	0.04	0.034	0.034
Mercury, Total (mg/L)	0.002		0.0005	0.002
Molybdenum, Total (mg/L)	n/a	0.1	0.01	0.01
Selenium, Total (mg/L)	0.05		0.005	0.05
Thallium, Total (mg/L)	0.002		0.001	0.002

**Grey cell indidcates background is higher than MCL or CCR-Rule*

**MCL = Maximum Contaminant Level*

**CCR = Coal Combustion Residuals*

**GWPS = Groundwater Protection Statard*

PLANT HAMMOND AP-2 GWPS (Federal)				
Constituent Name	**MCL**	**CCR-Rule Specified**	**Background Limit**	**Federal 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		0.46	2
Beryllium, Total (mg/L)	0.004		0.0005	0.004
Cadmium, Total (mg/L)	0.005		0.0005	0.005
Chromium, Total (mg/L)	0.1		0.0019	0.1
Cobalt, Total (mg/L)	n/a	0.006	0.038	0.038
Combined Radium, Total (pCi/L)	5		1.68	5
Fluoride, Total (mg/L)	4		0.74	4
Lead, Total (mg/L)	n/a	0.015	0.001	0.015
Lithium, Total (mg/L)	n/a	0.04	0.034	0.04
Mercury, Total (mg/L)	0.002		0.0005	0.002
Molybdenum, Total (mg/L)	n/a	0.1	0.01	0.1
Selenium, Total (mg/L)	0.05		0.005	0.05
Thallium, Total (mg/L)	0.002		0.001	0.002

**Grey cell indidcates background is higher than MCL or CCR-Rule*

**MCL = Maximum Contaminant Level*

**CCR = Coal Combustion Residuals*

**GWPS = Groundwater Protection Statard*

State Confidence Intervals - Significant Results

Plant Hammond Client: Southern Company Data: Hammond AP-2 Printed 5/5/2021, 11:29 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Cobalt (mg/L)	**HGWC-18**	**0.19**	**0.1614**	**0.038**	**Yes**	**19**	**0.1757**	**0.02444**	**0**	**None**	**No**	**0.01**	**Param.**
Cobalt (mg/L)	**MW-33**	**0.05914**	**0.04819**	**0.038**	**Yes**	**6**	**0.05367**	**0.003983**	**0**	**None**	**No**	**0.01**	**Param.**
Cobalt (mg/L)	**MW-35**	**0.1078**	**0.07716**	**0.038**	**Yes**	**4**	**0.0925**	**0.006758**	**0**	**None**	**No**	**0.01**	**Param.**
Lead (mg/L)	**HGWC-14**	**0.001735**	**0.001385**	**0.001**	**Yes**	**17**	**0.00156**	**0.0002796**	**5.882**	**None**	**No**	**0.01**	**Param.**
Lead (mg/L)	**HGWC-18**	**0.001458**	**0.001175**	**0.001**	**Yes**	**17**	**0.001316**	**0.0002265**	**5.882**	**None**	**No**	**0.01**	**Param.**
Lead (mg/L)	**MW-33**	**0.0018**	**0.0017**	**0.001**	**Yes**	**5**	**0.00172**	**0.00004472**	**0**	**None**	**No**	**0.031**	**NP (normality)**
Molybdenum (mg/L)	**MW-21D**	**0.03607**	**0.01571**	**0.01**	**Yes**	**9**	**0.02589**	**0.01054**	**0**	**None**	**No**	**0.01**	**Param.**

State Confidence Intervals - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-2 Printed 5/5/2021, 11:29 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Antimony (mg/L)	HGWC-14	0.003	0.00043	0.006	No	13	0.002595	0.0009899	84.62	None	No	0.01	NP (NDs)
Arsenic (mg/L)	HGWC-14	0.0089	0.0032	0.01	No	19	0.008125	0.007668	15.79	None	No	0.01	NP (normality)
Arsenic (mg/L)	HGWC-15	0.025	0.0008	0.01	No	19	0.02112	0.009199	84.21	None	No	0.01	NP (NDs)
Arsenic (mg/L)	HGWC-16	0.025	0.0012	0.01	No	19	0.01989	0.01017	78.95	None	No	0.01	NP (NDs)
Arsenic (mg/L)	HGWC-17	0.025	0.00097	0.01	No	19	0.01865	0.01092	73.68	None	No	0.01	NP (NDs)
Arsenic (mg/L)	HGWC-18	0.007066	0.004844	0.01	No	19	0.005955	0.001897	0	None	No	0.01	Param.
Arsenic (mg/L)	MW-21D	0.025	0.00019	0.01	No	9	0.01694	0.01209	66.67	None	No	0.002	NP (NDs)
Arsenic (mg/L)	MW-22	0.025	0.00045	0.01	No	8	0.02193	0.00868	87.5	None	No	0.004	NP (NDs)
Arsenic (mg/L)	MW-23D	0.025	0.00082	0.01	No	8	0.01898	0.01115	75	None	No	0.004	NP (NDs)
Arsenic (mg/L)	MW-33	0.008872	0.002648	0.01	No	5	0.00576	0.001857	0	None	No	0.01	Param.
Arsenic (mg/L)	MW-35	0.025	0.005	0.01	No	4	0.01023	0.009859	25	None	No	0.0625	NP (normality)
Arsenic (mg/L)	MW-37D	0.004094	0.0006745	0.01	No	4	0.007588	0.01162	25	Kaplan-Meier	ln(x)	0.01	Param.
Barium (mg/L)	HGWC-14	0.023	0.019	2	No	19	0.025	0.01827	5.263	None	No	0.01	NP (normality)
Barium (mg/L)	HGWC-15	0.02874	0.01955	2	No	19	0.02414	0.007845	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-16	0.113	0.1002	2	No	19	0.1066	0.01093	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-17	0.02636	0.02358	2	No	19	0.02497	0.002378	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-18	0.0339	0.029	2	No	19	0.03406	0.0163	5.263	None	No	0.01	NP (normality)
Barium (mg/L)	MW-21D	0.07538	0.04662	2	No	9	0.061	0.01489	0	None	No	0.01	Param.
Barium (mg/L)	MW-22	0.03673	0.01702	2	No	8	0.02688	0.009296	0	None	No	0.01	Param.
Barium (mg/L)	MW-23D	0.082	0.056	2	No	8	0.06288	0.008357	0	None	No	0.004	NP (normality)
Barium (mg/L)	MW-33	0.02943	0.02217	2	No	5	0.0258	0.002168	0	None	No	0.01	Param.
Barium (mg/L)	MW-35	0.03443	0.02307	2	No	4	0.02875	0.0025	0	None	No	0.01	Param.
Barium (mg/L)	MW-37D	0.2153	0.07971	2	No	4	0.1475	0.02986	0	None	No	0.01	Param.
Beryllium (mg/L)	HGWC-14	0.00058	0.00043	0.004	No	17	0.0004794	0.00007862	11.76	None	No	0.01	NP (normality)
Beryllium (mg/L)	HGWC-17	0.0005	0.000067	0.004	No	17	0.0004479	0.000147	88.24	None	No	0.01	NP (NDs)
Beryllium (mg/L)	HGWC-18	0.003463	0.002759	0.004	No	17	0.00304	0.000771	5.882	None	x^2	0.01	Param.
Beryllium (mg/L)	MW-22	0.0005	0.000047	0.004	No	8	0.0003364	0.000226	62.5	None	No	0.004	NP (NDs)
Beryllium (mg/L)	MW-33	0.001159	0.0008766	0.004	No	5	0.001018	0.00008438	0	None	No	0.01	Param.
Beryllium (mg/L)	MW-35	0.0008122	0.0001528	0.004	No	4	0.0004825	0.0001452	0	None	No	0.01	Param.
Beryllium (mg/L)	MW-37D	0.0005	0.00012	0.004	No	4	0.000405	0.00019	75	None	No	0.0625	NP (NDs)
Cadmium (mg/L)	HGWC-14	0.0005	0.0001	0.005	No	19	0.000302	0.0001954	47.37	None	No	0.01	NP (normality)
Cadmium (mg/L)	HGWC-15	0.002277	0.001559	0.005	No	19	0.001948	0.0006767	0	None	sqrt(x)	0.01	Param.
Cadmium (mg/L)	HGWC-17	0.0005	0.00007	0.005	No	19	0.0004774	0.00009865	94.74	None	No	0.01	NP (NDs)
Cadmium (mg/L)	HGWC-18	0.002362	0.001856	0.005	No	19	0.002063	0.0005188	5.263	None	x^2	0.01	Param.
Cadmium (mg/L)	MW-22	0.002179	0.001156	0.005	No	8	0.001645	0.0006169	0	None	x^3	0.01	Param.
Cadmium (mg/L)	MW-23D	0.0006	0.00045	0.005	No	8	0.000515	0.00004721	62.5	None	No	0.004	NP (NDs)
Cadmium (mg/L)	MW-33	0.0002327	0.0001473	0.005	No	5	0.00019	0.0000255	0	None	No	0.01	Param.
Cadmium (mg/L)	MW-35	0.002623	-0.0001083	0.005	No	4	0.001258	0.0006016	0	None	No	0.01	Param.
Chromium (mg/L)	HGWC-14	0.025	0.00066	0.1	No	17	0.02212	0.008123	88.24	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-15	0.025	0.0012	0.1	No	17	0.02071	0.009549	82.35	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-16	0.025	0.0021	0.1	No	17	0.02078	0.009409	82.35	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-17	0.025	0.0018	0.1	No	17	0.02078	0.009403	82.35	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-18	0.025	0.00063	0.1	No	17	0.02068	0.009623	82.35	None	No	0.01	NP (NDs)
Chromium (mg/L)	MW-21D	0.025	0.00057	0.1	No	9	0.01959	0.01074	77.78	None	No	0.002	NP (NDs)
Chromium (mg/L)	MW-22	0.025	0.0004	0.1	No	8	0.01889	0.01131	75	None	No	0.004	NP (NDs)
Chromium (mg/L)	MW-23D	0.025	0.00083	0.1	No	8	0.01896	0.01118	75	None	No	0.004	NP (NDs)
Chromium (mg/L)	MW-33	0.025	0.00069	0.1	No	5	0.02014	0.01087	80	None	No	0.031	NP (NDs)
Chromium (mg/L)	MW-35	0.025	0.00079	0.1	No	4	0.01291	0.01397	50	None	No	0.0625	NP (normality)
Chromium (mg/L)	MW-37D	0.008014	0.000295	0.1	No	4	0.01405	0.01272	50	Kaplan-Meier	sqrt(x)	0.01	Param.
Cobalt (mg/L)	HGWC-14	0.02913	0.02366	0.038	No	19	0.02587	0.006039	5.263	None	x^2	0.01	Param.
Cobalt (mg/L)	HGWC-15	0.04702	0.02999	0.038	No	19	0.03851	0.01454	0	None	No	0.01	Param.
Cobalt (mg/L)	HGWC-16	0.005	0.00037	0.038	No	19	0.004508	0.001474	89.47	None	No	0.01	NP (NDs)
Cobalt (mg/L)	HGWC-17	0.01619	0.01429	0.038	No	19	0.01524	0.001623	0	None	No	0.01	Param.
Cobalt (mg/L)	**HGWC-18**	**0.19**	**0.1614**	**0.038**	**Yes**	**19**	**0.1757**	**0.02444**	**0**	**None**	**No**	**0.01**	**Param.**
Cobalt (mg/L)	MW-21D	0.005	0.00034	0.038	No	9	0.004482	0.001553	88.89	None	No	0.002	NP (NDs)

State Confidence Intervals - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-2 Printed 5/5/2021, 11:29 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Cobalt (mg/L)	MW-22	0.04027	0.02448	0.038	No	8	0.03238	0.007444	0	None	No	0.01	Param.
Cobalt (mg/L)	MW-23D	0.001215	0.00097	0.038	No	8	0.001093	0.0001156	0	None	No	0.01	Param.
Cobalt (mg/L)	**MW-33**	**0.05914**	**0.04819**	**0.038**	**Yes**	**6**	**0.05367**	**0.003983**	**0**	**None**	**No**	**0.01**	**Param.**
Cobalt (mg/L)	**MW-35**	**0.1078**	**0.07716**	**0.038**	**Yes**	**4**	**0.0925**	**0.006758**	**0**	**None**	**No**	**0.01**	**Param.**
Cobalt (mg/L)	MW-37D	0.002148	-0.0001679	0.038	No	4	0.002995	0.002352	50	Kaplan-Meier	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-14	1.654	1.179	5	No	19	1.417	0.406	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-15	0.9507	0.4764	5	No	19	0.7136	0.405	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-16	1.008	0.5368	5	No	19	0.7724	0.4023	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-17	1.05	0.6723	5	No	19	0.8614	0.323	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-18	2.288	1.727	5	No	19	2.008	0.479	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-21D	1.194	0.401	5	No	9	0.7951	0.4745	0	None	sqrt(x)	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-22	1.301	0.3473	5	No	8	0.8241	0.4499	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-23D	1.206	0.5544	5	No	8	0.8801	0.3073	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-33	3.245	0.5646	5	No	5	1.905	0.7997	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-35	5.143	-1.186	5	No	4	1.979	1.394	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-37D	2.476	-0.7417	5	No	4	0.867	0.7086	0	None	No	0.01	Param.
Fluoride (mg/L)	HGWC-14	0.2344	0.08602	4	No	20	0.186	0.1617	20	Kaplan-Meier	sqrt(x)	0.01	Param.
Fluoride (mg/L)	HGWC-15	0.17	0.09	4	No	20	0.1457	0.1246	40	None	No	0.01	NP (normality)
Fluoride (mg/L)	HGWC-16	0.1744	0.04649	4	No	20	0.1624	0.1221	50	Kaplan-Meier	sqrt(x)	0.01	Param.
Fluoride (mg/L)	HGWC-17	0.16	0.07	4	No	20	0.1747	0.2184	35	None	No	0.01	NP (normality)
Fluoride (mg/L)	HGWC-18	0.6613	0.4237	4	No	20	0.5425	0.2091	5	None	No	0.01	Param.
Fluoride (mg/L)	MW-21D	0.1	0.1	4	No	9	0.1	5.0e-10	88.89	None	No	0.002	NP (NDs)
Fluoride (mg/L)	MW-22	0.28	0.1	4	No	8	0.1263	0.06301	75	None	No	0.004	NP (NDs)
Fluoride (mg/L)	MW-23D	0.16	0.1	4	No	8	0.1125	0.02375	75	None	No	0.004	NP (NDs)
Fluoride (mg/L)	MW-33	0.3611	0.0956	4	No	6	0.2283	0.09663	0	None	No	0.01	Param.
Fluoride (mg/L)	MW-35	0.1143	0.03769	4	No	4	0.082	0.0207	25	Kaplan-Meier	No	0.01	Param.
Fluoride (mg/L)	MW-37D	0.1156	0.03593	4	No	4	0.07575	0.01754	0	None	No	0.01	Param.
Lead (mg/L)	**HGWC-14**	**0.001735**	**0.001385**	**0.001**	**Yes**	**17**	**0.00156**	**0.0002796**	**5.882**	**None**	**No**	**0.01**	**Param.**
Lead (mg/L)	HGWC-15	0.001	0.0002	0.001	No	17	0.0007897	0.0003918	70.59	None	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-16	0.001	0.000094	0.001	No	17	0.0005308	0.0004573	47.06	None	No	0.01	NP (normality)
Lead (mg/L)	HGWC-17	0.001	0.000088	0.001	No	17	0.0005768	0.0004634	52.94	None	No	0.01	NP (NDs)
Lead (mg/L)	**HGWC-18**	**0.001458**	**0.001175**	**0.001**	**Yes**	**17**	**0.001316**	**0.0002265**	**5.882**	**None**	**No**	**0.01**	**Param.**
Lead (mg/L)	MW-21D	0.001	0.000047	0.001	No	9	0.0006476	0.0004571	55.56	None	No	0.002	NP (NDs)
Lead (mg/L)	MW-22	0.001	0.000036	0.001	No	8	0.0006538	0.0004782	62.5	None	No	0.004	NP (NDs)
Lead (mg/L)	MW-23D	0.001	0.000051	0.001	No	8	0.0007764	0.0004151	75	None	No	0.004	NP (NDs)
Lead (mg/L)	**MW-33**	**0.0018**	**0.0017**	**0.001**	**Yes**	**5**	**0.00172**	**0.00004472**	**0**	**None**	**No**	**0.031**	**NP (normality)**
Lead (mg/L)	MW-35	0.001367	-0.000187	0.001	No	4	0.00059	0.0003422	0	None	No	0.01	Param.
Lead (mg/L)	MW-37D	0.002073	-0.0008688	0.001	No	4	0.000793	0.0007149	25	Kaplan-Meier	No	0.01	Param.
Lithium (mg/L)	HGWC-15	0.007937	0.00179	0.034	No	19	0.01033	0.01019	31.58	Kaplan-Meier	x^(1/3)	0.01	Param.
Lithium (mg/L)	HGWC-16	0.0043	0.0028	0.034	No	19	0.004068	0.002738	5.263	None	No	0.01	NP (normality)
Lithium (mg/L)	HGWC-17	0.015	0.0011	0.034	No	19	0.008423	0.007124	52.63	None	No	0.01	NP (NDs)
Lithium (mg/L)	HGWC-18	0.01461	0.01234	0.034	No	19	0.01347	0.001942	0	None	No	0.01	Param.
Lithium (mg/L)	MW-21D	0.02597	0.02114	0.034	No	9	0.02356	0.002506	0	None	No	0.01	Param.
Lithium (mg/L)	MW-22	0.002	0.0011	0.034	No	8	0.00135	0.0002928	0	None	No	0.004	NP (normality)
Lithium (mg/L)	MW-23D	0.002602	0.002123	0.034	No	8	0.002363	0.0002264	0	None	No	0.01	Param.
Lithium (mg/L)	MW-33	0.001268	0.0008245	0.034	No	5	0.001046	0.0001322	0	None	No	0.01	Param.
Lithium (mg/L)	MW-35	0.005274	0.003226	0.034	No	4	0.00425	0.0004509	0	None	No	0.01	Param.
Lithium (mg/L)	MW-37D	0.04105	0.02795	0.034	No	4	0.0345	0.002887	0	None	No	0.01	Param.
Molybdenum (mg/L)	HGWC-15	0.01	0.0007	0.01	No	17	0.009453	0.002256	94.12	None	No	0.01	NP (NDs)
Molybdenum (mg/L)	**MW-21D**	**0.03607**	**0.01571**	**0.01**	**Yes**	**9**	**0.02589**	**0.01054**	**0**	**None**	**No**	**0.01**	**Param.**
Molybdenum (mg/L)	MW-22	0.01	0.00013	0.01	No	8	0.008766	0.00349	87.5	None	No	0.004	NP (NDs)
Molybdenum (mg/L)	MW-23D	0.005782	0.001794	0.01	No	8	0.00375	0.002632	12.5	None	ln(x)	0.01	Param.
Molybdenum (mg/L)	MW-37D	0.02709	0.008412	0.01	No	4	0.01775	0.004113	0	None	No	0.01	Param.
Selenium (mg/L)	HGWC-14	0.01318	0.006823	0.05	No	19	0.01	0.005427	0	None	No	0.01	Param.
Selenium (mg/L)	HGWC-15	0.005	0.0041	0.05	No	19	0.004322	0.001509	78.95	None	No	0.01	NP (NDs)

State Confidence Intervals - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-2 Printed 5/5/2021, 11:29 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Selenium (mg/L)	HGWC-16	0.005	0.000089	0.05	No	19	0.004742	0.001127	94.74	None	No	0.01	NP (NDs)
Selenium (mg/L)	HGWC-17	0.005	0.0023	0.05	No	19	0.00441	0.001448	84.21	None	No	0.01	NP (NDs)
Selenium (mg/L)	HGWC-18	0.03425	0.01795	0.05	No	19	0.0261	0.01392	5.263	None	No	0.01	Param.
Selenium (mg/L)	MW-22	0.005	0.002	0.05	No	8	0.004625	0.001061	87.5	None	No	0.004	NP (NDs)
Selenium (mg/L)	MW-33	0.04314	-0.001136	0.05	No	5	0.021	0.01321	0	None	No	0.01	Param.
Selenium (mg/L)	MW-35	0.04671	-0.008206	0.05	No	4	0.01925	0.01209	0	None	No	0.01	Param.
Thallium (mg/L)	HGWC-14	0.000306	0.00028	0.002	No	19	0.0002972	0.00003063	0	None	No	0.01	NP (normality)
Thallium (mg/L)	HGWC-17	0.001	0.00011	0.002	No	19	0.0006737	0.0004391	63.16	None	No	0.01	NP (NDs)
Thallium (mg/L)	HGWC-18	0.001	0.00015	0.002	No	19	0.0005174	0.0004233	42.11	None	No	0.01	NP (normality)
Thallium (mg/L)	MW-33	0.0003207	0.0002473	0.002	No	5	0.000284	0.00002191	0	None	No	0.01	Param.
Thallium (mg/L)	MW-35	0.001	0.00013	0.002	No	4	0.0007825	0.000435	75	None	No	0.0625	NP (NDs)

Federal Confidence Intervals - Significant Results

Plant Hammond Client: Southern Company Data: Hammond AP-2 Printed 5/5/2021, 11:24 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Cobalt (mg/L)	**HGWC-18**	**0.19**	**0.1614**	**0.038**	**Yes**	**19**	**0.1757**	**0.02444**	**0**	**None**	**No**	**0.01**	**Param.**
Cobalt (mg/L)	**MW-33**	**0.05914**	**0.04819**	**0.038**	**Yes**	**6**	**0.05367**	**0.003983**	**0**	**None**	**No**	**0.01**	**Param.**
Cobalt (mg/L)	**MW-35**	**0.1078**	**0.07716**	**0.038**	**Yes**	**4**	**0.0925**	**0.006758**	**0**	**None**	**No**	**0.01**	**Param.**

Federal Confidence Intervals - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-2 Printed 5/5/2021, 11:24 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Antimony (mg/L)	HGWC-14	0.003	0.00043	0.006	No	13	0.002595	0.0009899	84.62	None	No	0.01	NP (NDs)
Arsenic (mg/L)	HGWC-14	0.0089	0.0032	0.01	No	19	0.008125	0.007668	15.79	None	No	0.01	NP (normality)
Arsenic (mg/L)	HGWC-15	0.025	0.0008	0.01	No	19	0.02112	0.009199	84.21	None	No	0.01	NP (NDs)
Arsenic (mg/L)	HGWC-16	0.025	0.0012	0.01	No	19	0.01989	0.01017	78.95	None	No	0.01	NP (NDs)
Arsenic (mg/L)	HGWC-17	0.025	0.00097	0.01	No	19	0.01865	0.01092	73.68	None	No	0.01	NP (NDs)
Arsenic (mg/L)	HGWC-18	0.007066	0.004844	0.01	No	19	0.005955	0.001897	0	None	No	0.01	Param.
Arsenic (mg/L)	MW-21D	0.025	0.00019	0.01	No	9	0.01694	0.01209	66.67	None	No	0.002	NP (NDs)
Arsenic (mg/L)	MW-22	0.025	0.00045	0.01	No	8	0.02193	0.00868	87.5	None	No	0.004	NP (NDs)
Arsenic (mg/L)	MW-23D	0.025	0.00082	0.01	No	8	0.01898	0.01115	75	None	No	0.004	NP (NDs)
Arsenic (mg/L)	MW-33	0.008872	0.002648	0.01	No	5	0.00576	0.001857	0	None	No	0.01	Param.
Arsenic (mg/L)	MW-35	0.025	0.005	0.01	No	4	0.01023	0.009859	25	None	No	0.0625	NP (normality)
Arsenic (mg/L)	MW-37D	0.004094	0.0006745	0.01	No	4	0.007588	0.01162	25	Kaplan-Meier	ln(x)	0.01	Param.
Barium (mg/L)	HGWC-14	0.023	0.019	2	No	19	0.025	0.01827	5.263	None	No	0.01	NP (normality)
Barium (mg/L)	HGWC-15	0.02874	0.01955	2	No	19	0.02414	0.007845	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-16	0.113	0.1002	2	No	19	0.1066	0.01093	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-17	0.02636	0.02358	2	No	19	0.02497	0.002378	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-18	0.0339	0.029	2	No	19	0.03406	0.0163	5.263	None	No	0.01	NP (normality)
Barium (mg/L)	MW-21D	0.07538	0.04662	2	No	9	0.061	0.01489	0	None	No	0.01	Param.
Barium (mg/L)	MW-22	0.03673	0.01702	2	No	8	0.02688	0.009296	0	None	No	0.01	Param.
Barium (mg/L)	MW-23D	0.082	0.056	2	No	8	0.06288	0.008357	0	None	No	0.004	NP (normality)
Barium (mg/L)	MW-33	0.02943	0.02217	2	No	5	0.0258	0.002168	0	None	No	0.01	Param.
Barium (mg/L)	MW-35	0.03443	0.02307	2	No	4	0.02875	0.0025	0	None	No	0.01	Param.
Barium (mg/L)	MW-37D	0.2153	0.07971	2	No	4	0.1475	0.02986	0	None	No	0.01	Param.
Beryllium (mg/L)	HGWC-14	0.00058	0.00043	0.004	No	17	0.0004794	0.00007862	11.76	None	No	0.01	NP (normality)
Beryllium (mg/L)	HGWC-17	0.0005	0.000067	0.004	No	17	0.0004479	0.000147	88.24	None	No	0.01	NP (NDs)
Beryllium (mg/L)	HGWC-18	0.003463	0.002759	0.004	No	17	0.00304	0.000771	5.882	None	x^2	0.01	Param.
Beryllium (mg/L)	MW-22	0.0005	0.000047	0.004	No	8	0.0003364	0.000226	62.5	None	No	0.004	NP (NDs)
Beryllium (mg/L)	MW-33	0.001159	0.0008766	0.004	No	5	0.001018	0.00008438	0	None	No	0.01	Param.
Beryllium (mg/L)	MW-35	0.0008122	0.0001528	0.004	No	4	0.0004825	0.0001452	0	None	No	0.01	Param.
Beryllium (mg/L)	MW-37D	0.0005	0.00012	0.004	No	4	0.000405	0.00019	75	None	No	0.0625	NP (NDs)
Cadmium (mg/L)	HGWC-14	0.0005	0.0001	0.005	No	19	0.000302	0.0001954	47.37	None	No	0.01	NP (normality)
Cadmium (mg/L)	HGWC-15	0.002277	0.001559	0.005	No	19	0.001948	0.0006767	0	None	sqrt(x)	0.01	Param.
Cadmium (mg/L)	HGWC-17	0.0005	0.00007	0.005	No	19	0.0004774	0.00009865	94.74	None	No	0.01	NP (NDs)
Cadmium (mg/L)	HGWC-18	0.002362	0.001856	0.005	No	19	0.002063	0.0005188	5.263	None	x^2	0.01	Param.
Cadmium (mg/L)	MW-22	0.002179	0.001156	0.005	No	8	0.001645	0.0006169	0	None	x^3	0.01	Param.
Cadmium (mg/L)	MW-23D	0.0006	0.00045	0.005	No	8	0.000515	0.00004721	62.5	None	No	0.004	NP (NDs)
Cadmium (mg/L)	MW-33	0.0002327	0.0001473	0.005	No	5	0.00019	0.0000255	0	None	No	0.01	Param.
Cadmium (mg/L)	MW-35	0.002623	-0.0001083	0.005	No	4	0.001258	0.0006016	0	None	No	0.01	Param.
Chromium (mg/L)	HGWC-14	0.025	0.00066	0.1	No	17	0.02212	0.008123	88.24	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-15	0.025	0.0012	0.1	No	17	0.02071	0.009549	82.35	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-16	0.025	0.0021	0.1	No	17	0.02078	0.009409	82.35	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-17	0.025	0.0018	0.1	No	17	0.02078	0.009403	82.35	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-18	0.025	0.00063	0.1	No	17	0.02068	0.009623	82.35	None	No	0.01	NP (NDs)
Chromium (mg/L)	MW-21D	0.025	0.00057	0.1	No	9	0.01959	0.01074	77.78	None	No	0.002	NP (NDs)
Chromium (mg/L)	MW-22	0.025	0.0004	0.1	No	8	0.01889	0.01131	75	None	No	0.004	NP (NDs)
Chromium (mg/L)	MW-23D	0.025	0.00083	0.1	No	8	0.01896	0.01118	75	None	No	0.004	NP (NDs)
Chromium (mg/L)	MW-33	0.025	0.00069	0.1	No	5	0.02014	0.01087	80	None	No	0.031	NP (NDs)
Chromium (mg/L)	MW-35	0.025	0.00079	0.1	No	4	0.01291	0.01397	50	None	No	0.0625	NP (normality)
Chromium (mg/L)	MW-37D	0.008014	0.000295	0.1	No	4	0.01405	0.01272	50	Kaplan-Meier	sqrt(x)	0.01	Param.
Cobalt (mg/L)	HGWC-14	0.02913	0.02366	0.038	No	19	0.02587	0.006039	5.263	None	x^2	0.01	Param.
Cobalt (mg/L)	HGWC-15	0.04702	0.02999	0.038	No	19	0.03851	0.01454	0	None	No	0.01	Param.
Cobalt (mg/L)	HGWC-16	0.005	0.00037	0.038	No	19	0.004508	0.001474	89.47	None	No	0.01	NP (NDs)
Cobalt (mg/L)	HGWC-17	0.01619	0.01429	0.038	No	19	0.01524	0.001623	0	None	No	0.01	Param.
Cobalt (mg/L)	**HGWC-18**	**0.19**	**0.1614**	**0.038**	**Yes**	**19**	**0.1757**	**0.02444**	**0**	**None**	**No**	**0.01**	**Param.**
Cobalt (mg/L)	MW-21D	0.005	0.00034	0.038	No	9	0.004482	0.001553	88.89	None	No	0.002	NP (NDs)

Federal Confidence Intervals - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-2 Printed 5/5/2021, 11:24 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Cobalt (mg/L)	MW-22	0.04027	0.02448	0.038	No	8	0.03238	0.007444	0	None	No	0.01	Param.
Cobalt (mg/L)	MW-23D	0.001215	0.00097	0.038	No	8	0.001093	0.0001156	0	None	No	0.01	Param.
Cobalt (mg/L)	**MW-33**	**0.05914**	**0.04819**	**0.038**	**Yes**	**6**	**0.05367**	**0.003983**	**0**	**None**	**No**	**0.01**	**Param.**
Cobalt (mg/L)	**MW-35**	**0.1078**	**0.07716**	**0.038**	**Yes**	**4**	**0.0925**	**0.006758**	**0**	**None**	**No**	**0.01**	**Param.**
Cobalt (mg/L)	MW-37D	0.002148	-0.0001679	0.038	No	4	0.002995	0.002352	50	Kaplan-Meier	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-14	1.654	1.179	5	No	19	1.417	0.406	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-15	0.9507	0.4764	5	No	19	0.7136	0.405	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-16	1.008	0.5368	5	No	19	0.7724	0.4023	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-17	1.05	0.6723	5	No	19	0.8614	0.323	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-18	2.288	1.727	5	No	19	2.008	0.479	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-21D	1.194	0.401	5	No	9	0.7951	0.4745	0	None	sqrt(x)	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-22	1.301	0.3473	5	No	8	0.8241	0.4499	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-23D	1.206	0.5544	5	No	8	0.8801	0.3073	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-33	3.245	0.5646	5	No	5	1.905	0.7997	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-35	5.143	-1.186	5	No	4	1.979	1.394	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-37D	2.476	-0.7417	5	No	4	0.867	0.7086	0	None	No	0.01	Param.
Fluoride (mg/L)	HGWC-14	0.2344	0.08602	4	No	20	0.186	0.1617	20	Kaplan-Meier	sqrt(x)	0.01	Param.
Fluoride (mg/L)	HGWC-15	0.17	0.09	4	No	20	0.1457	0.1246	40	None	No	0.01	NP (normality)
Fluoride (mg/L)	HGWC-16	0.1744	0.04649	4	No	20	0.1624	0.1221	50	Kaplan-Meier	sqrt(x)	0.01	Param.
Fluoride (mg/L)	HGWC-17	0.16	0.07	4	No	20	0.1747	0.2184	35	None	No	0.01	NP (normality)
Fluoride (mg/L)	HGWC-18	0.6613	0.4237	4	No	20	0.5425	0.2091	5	None	No	0.01	Param.
Fluoride (mg/L)	MW-21D	0.1	0.1	4	No	9	0.1	5.0e-10	88.89	None	No	0.002	NP (NDs)
Fluoride (mg/L)	MW-22	0.28	0.1	4	No	8	0.1263	0.06301	75	None	No	0.004	NP (NDs)
Fluoride (mg/L)	MW-23D	0.16	0.1	4	No	8	0.1125	0.02375	75	None	No	0.004	NP (NDs)
Fluoride (mg/L)	MW-33	0.3611	0.0956	4	No	6	0.2283	0.09663	0	None	No	0.01	Param.
Fluoride (mg/L)	MW-35	0.1143	0.03769	4	No	4	0.082	0.0207	25	Kaplan-Meier	No	0.01	Param.
Fluoride (mg/L)	MW-37D	0.1156	0.03593	4	No	4	0.07575	0.01754	0	None	No	0.01	Param.
Lead (mg/L)	HGWC-14	0.001735	0.001385	0.015	No	17	0.00156	0.0002796	5.882	None	No	0.01	Param.
Lead (mg/L)	HGWC-15	0.001	0.0002	0.015	No	17	0.0007897	0.0003918	70.59	None	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-16	0.001	0.000094	0.015	No	17	0.0005308	0.0004573	47.06	None	No	0.01	NP (normality)
Lead (mg/L)	HGWC-17	0.001	0.000088	0.015	No	17	0.0005768	0.0004634	52.94	None	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-18	0.001458	0.001175	0.015	No	17	0.001316	0.0002265	5.882	None	No	0.01	Param.
Lead (mg/L)	MW-21D	0.001	0.000047	0.015	No	9	0.0006476	0.0004571	55.56	None	No	0.002	NP (NDs)
Lead (mg/L)	MW-22	0.001	0.000036	0.015	No	8	0.0006538	0.0004782	62.5	None	No	0.004	NP (NDs)
Lead (mg/L)	MW-23D	0.001	0.000051	0.015	No	8	0.0007764	0.0004151	75	None	No	0.004	NP (NDs)
Lead (mg/L)	MW-33	0.0018	0.0017	0.015	No	5	0.00172	0.00004472	0	None	No	0.031	NP (normality)
Lead (mg/L)	MW-35	0.001367	-0.000187	0.015	No	4	0.00059	0.0003422	0	None	No	0.01	Param.
Lead (mg/L)	MW-37D	0.002073	-0.0008688	0.015	No	4	0.000793	0.0007149	25	Kaplan-Meier	No	0.01	Param.
Lithium (mg/L)	HGWC-15	0.007937	0.00179	0.04	No	19	0.01033	0.01019	31.58	Kaplan-Meier	x^(1/3)	0.01	Param.
Lithium (mg/L)	HGWC-16	0.0043	0.0028	0.04	No	19	0.004068	0.002738	5.263	None	No	0.01	NP (normality)
Lithium (mg/L)	HGWC-17	0.015	0.0011	0.04	No	19	0.008423	0.007124	52.63	None	No	0.01	NP (NDs)
Lithium (mg/L)	HGWC-18	0.01461	0.01234	0.04	No	19	0.01347	0.001942	0	None	No	0.01	Param.
Lithium (mg/L)	MW-21D	0.02597	0.02114	0.04	No	9	0.02356	0.002506	0	None	No	0.01	Param.
Lithium (mg/L)	MW-22	0.002	0.0011	0.04	No	8	0.00135	0.0002928	0	None	No	0.004	NP (normality)
Lithium (mg/L)	MW-23D	0.002602	0.002123	0.04	No	8	0.002363	0.0002264	0	None	No	0.01	Param.
Lithium (mg/L)	MW-33	0.001268	0.0008245	0.04	No	5	0.001046	0.0001322	0	None	No	0.01	Param.
Lithium (mg/L)	MW-35	0.005274	0.003226	0.04	No	4	0.00425	0.0004509	0	None	No	0.01	Param.
Lithium (mg/L)	MW-37D	0.04105	0.02795	0.04	No	4	0.0345	0.002887	0	None	No	0.01	Param.
Molybdenum (mg/L)	HGWC-15	0.01	0.0007	0.1	No	17	0.009453	0.002256	94.12	None	No	0.01	NP (NDs)
Molybdenum (mg/L)	MW-21D	0.03607	0.01571	0.1	No	9	0.02589	0.01054	0	None	No	0.01	Param.
Molybdenum (mg/L)	MW-22	0.01	0.00013	0.1	No	8	0.008766	0.00349	87.5	None	No	0.004	NP (NDs)
Molybdenum (mg/L)	MW-23D	0.005782	0.001794	0.1	No	8	0.00375	0.002632	12.5	None	ln(x)	0.01	Param.
Molybdenum (mg/L)	MW-37D	0.02709	0.008412	0.1	No	4	0.01775	0.004113	0	None	No	0.01	Param.
Selenium (mg/L)	HGWC-14	0.01318	0.006823	0.05	No	19	0.01	0.005427	0	None	No	0.01	Param.
Selenium (mg/L)	HGWC-15	0.005	0.0041	0.05	No	19	0.004322	0.001509	78.95	None	No	0.01	NP (NDs)

Federal Confidence Intervals - All Results

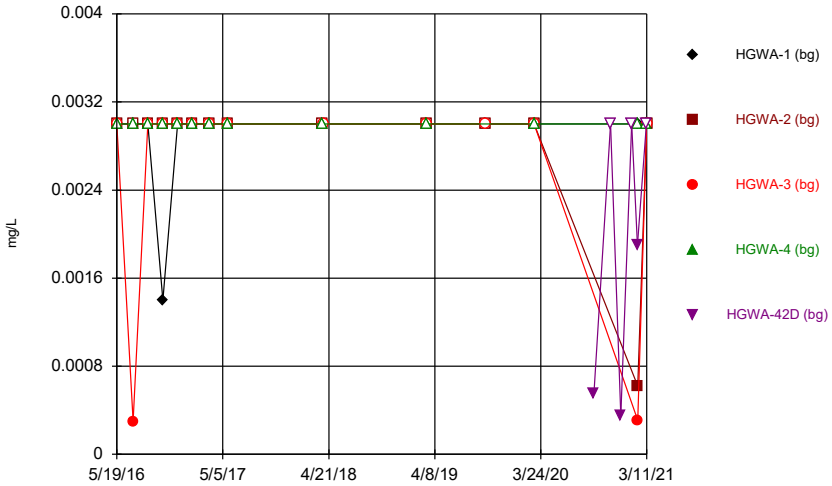
Plant Hammond Client: Southern Company Data: Hammond AP-2 Printed 5/5/2021, 11:24 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Selenium (mg/L)	HGWC-16	0.005	0.000089	0.05	No	19	0.004742	0.001127	94.74	None	No	0.01	NP (NDs)
Selenium (mg/L)	HGWC-17	0.005	0.0023	0.05	No	19	0.00441	0.001448	84.21	None	No	0.01	NP (NDs)
Selenium (mg/L)	HGWC-18	0.03425	0.01795	0.05	No	19	0.0261	0.01392	5.263	None	No	0.01	Param.
Selenium (mg/L)	MW-22	0.005	0.002	0.05	No	8	0.004625	0.001061	87.5	None	No	0.004	NP (NDs)
Selenium (mg/L)	MW-33	0.04314	-0.001136	0.05	No	5	0.021	0.01321	0	None	No	0.01	Param.
Selenium (mg/L)	MW-35	0.04671	-0.008206	0.05	No	4	0.01925	0.01209	0	None	No	0.01	Param.
Thallium (mg/L)	HGWC-14	0.000306	0.00028	0.002	No	19	0.0002972	0.00003063	0	None	No	0.01	NP (normality)
Thallium (mg/L)	HGWC-17	0.001	0.00011	0.002	No	19	0.0006737	0.0004391	63.16	None	No	0.01	NP (NDs)
Thallium (mg/L)	HGWC-18	0.001	0.00015	0.002	No	19	0.0005174	0.0004233	42.11	None	No	0.01	NP (normality)
Thallium (mg/L)	MW-33	0.0003207	0.0002473	0.002	No	5	0.000284	0.00002191	0	None	No	0.01	Param.
Thallium (mg/L)	MW-35	0.001	0.00013	0.002	No	4	0.0007825	0.000435	75	None	No	0.0625	NP (NDs)

FIGURE A.

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

Time Series



Constituent: Antimony Analysis Run 5/4/2021 7:43 PM
Plant Hammond Client: Southern Company Data: Hammond AP-2

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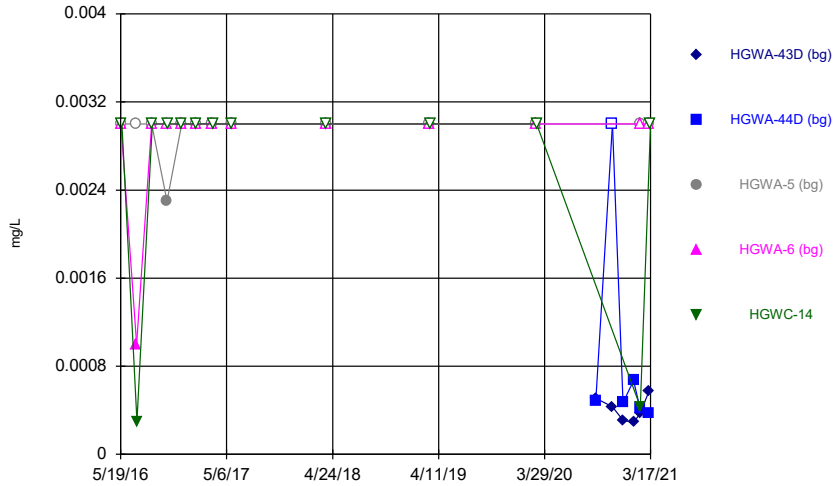

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Plant Hammond Client: Southern Company Data: Hammond AP-2

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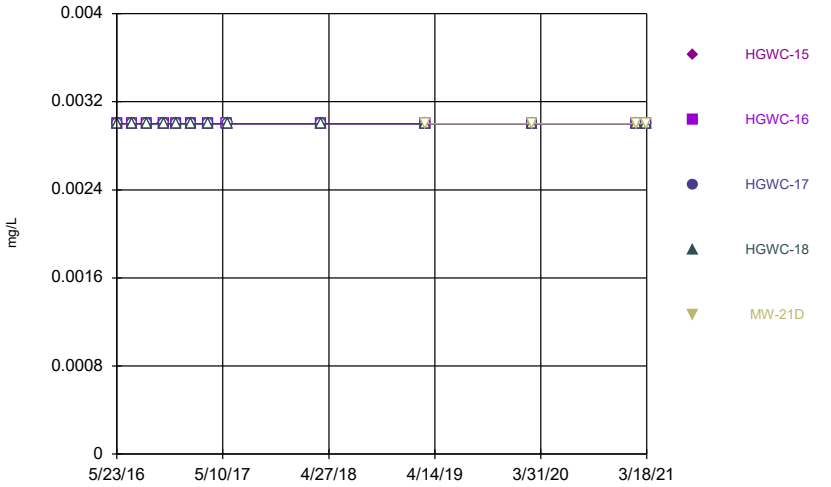

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Plant Hammond Client: Southern Company Data: Hammond AP-2

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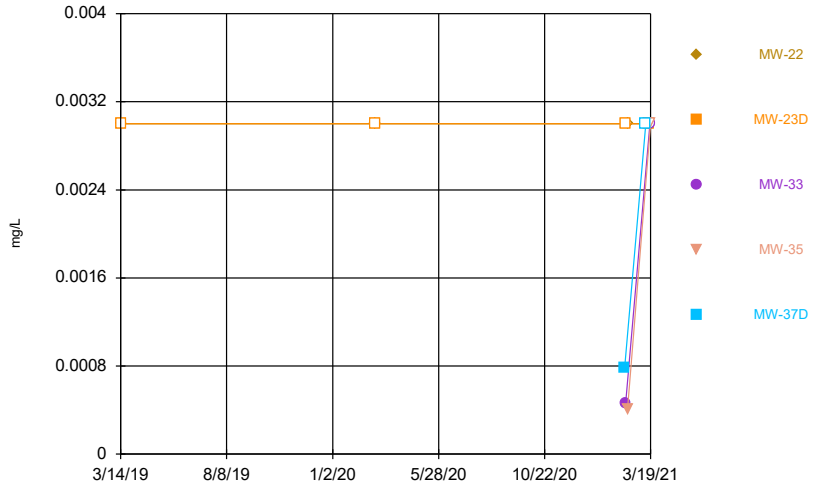

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Plant Hammond Client: Southern Company Data: Hammond AP-2

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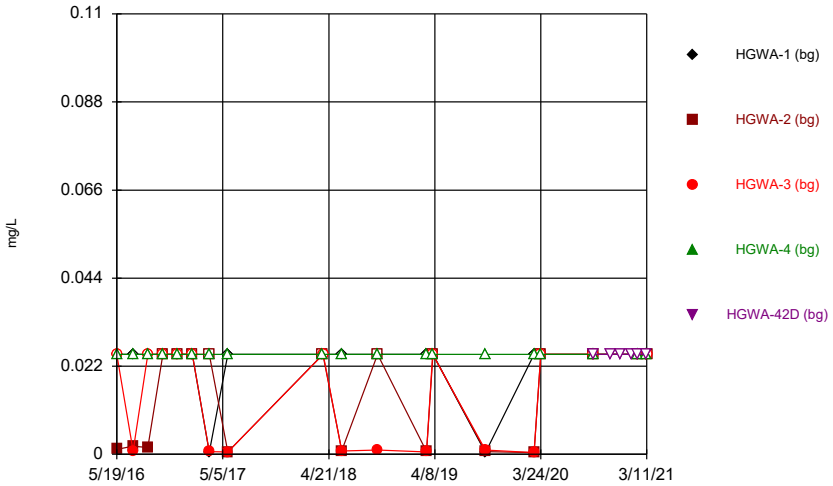

Constituent: Arsenic Analysis Run 5/4/2021 7:43 PM
Plant Hammond Client: Southern Company Data: Hammond AP-2

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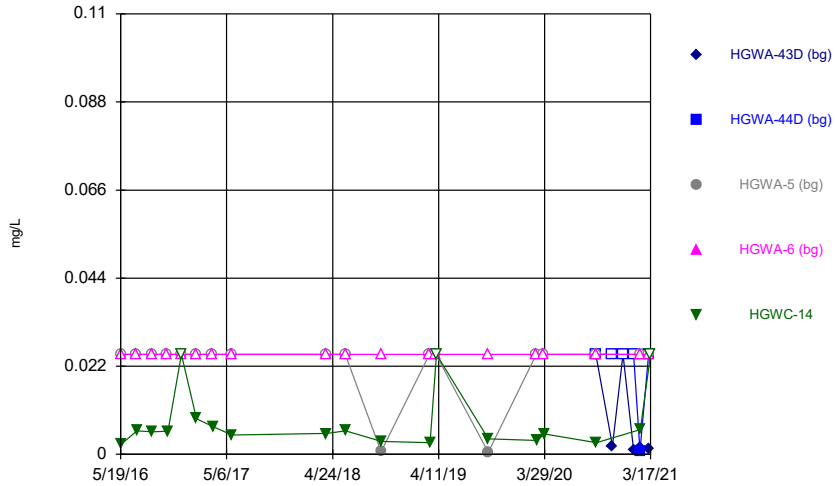

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Plant Hammond Client: Southern Company Data: Hammond AP-2

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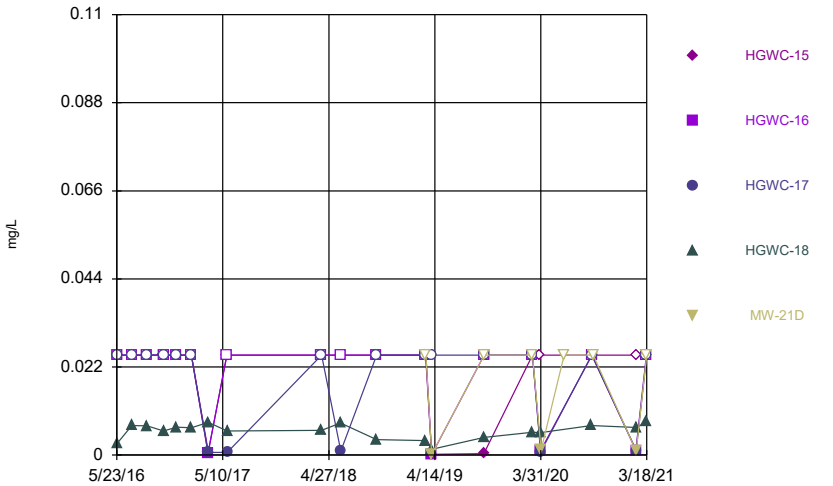

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Plant Hammond Client: Southern Company Data: Hammond AP-2

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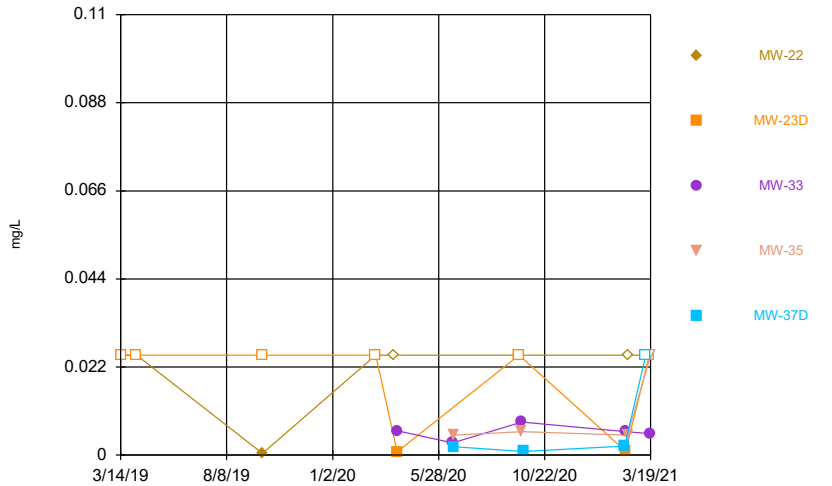

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Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

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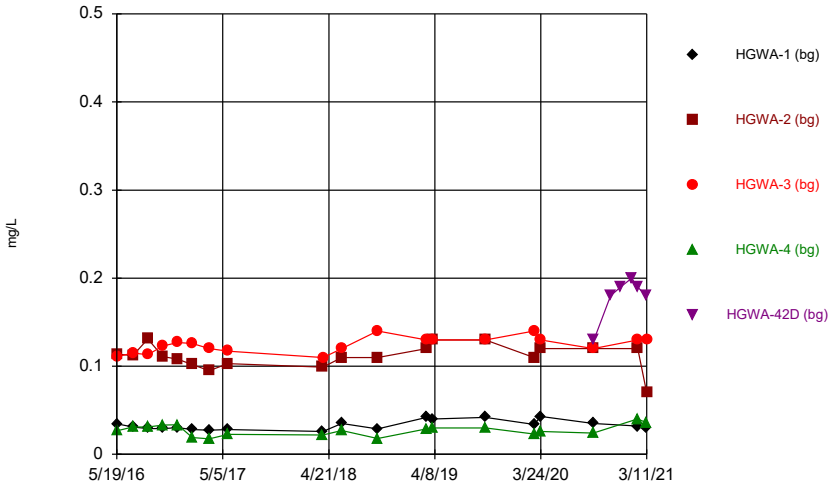

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Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

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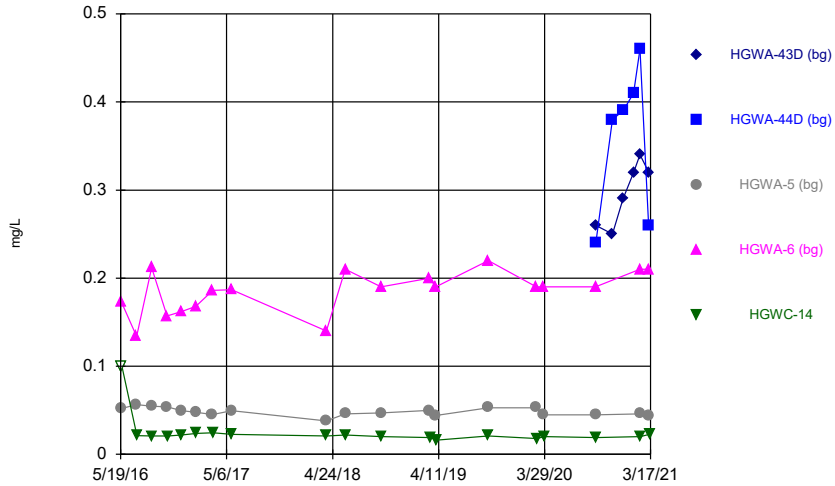

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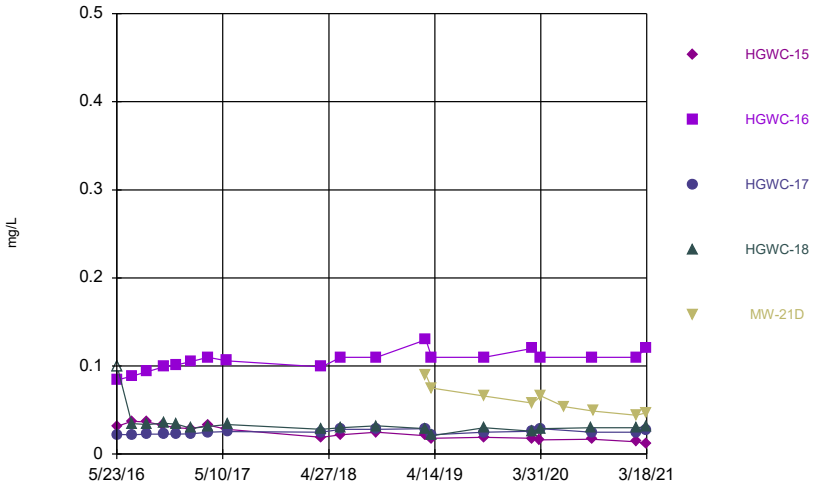

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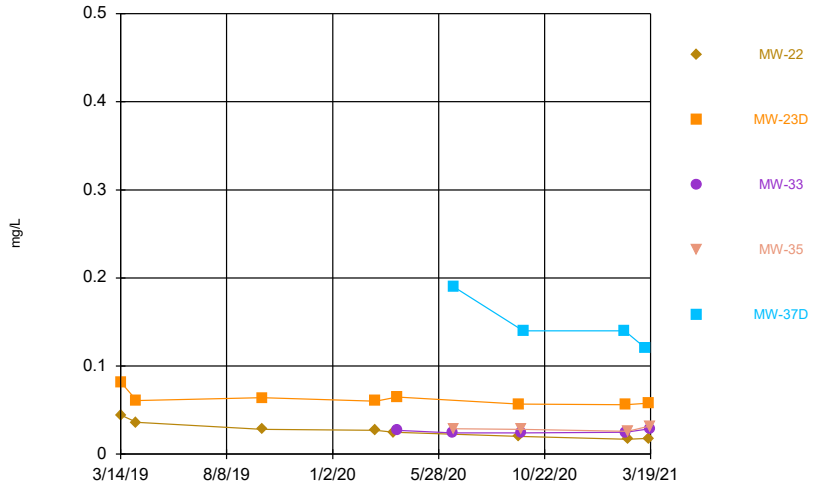

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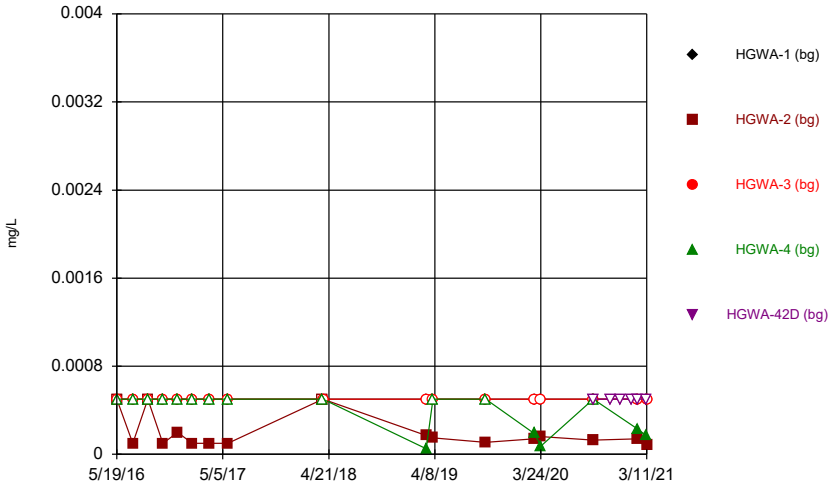

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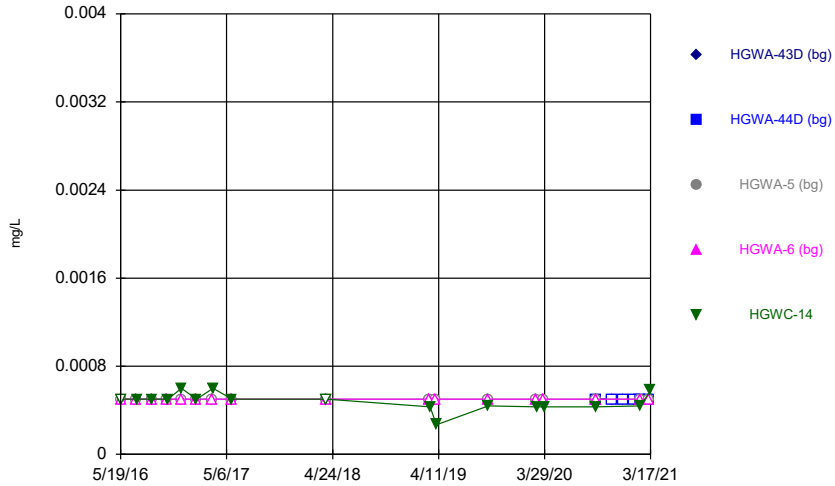

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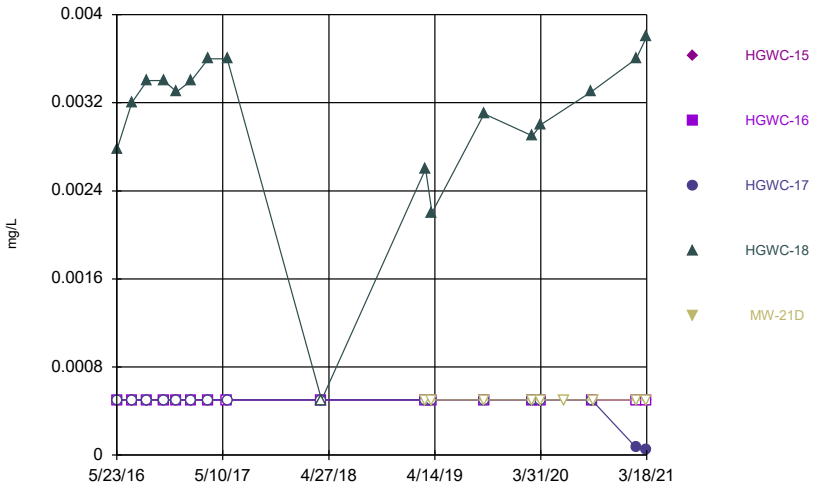

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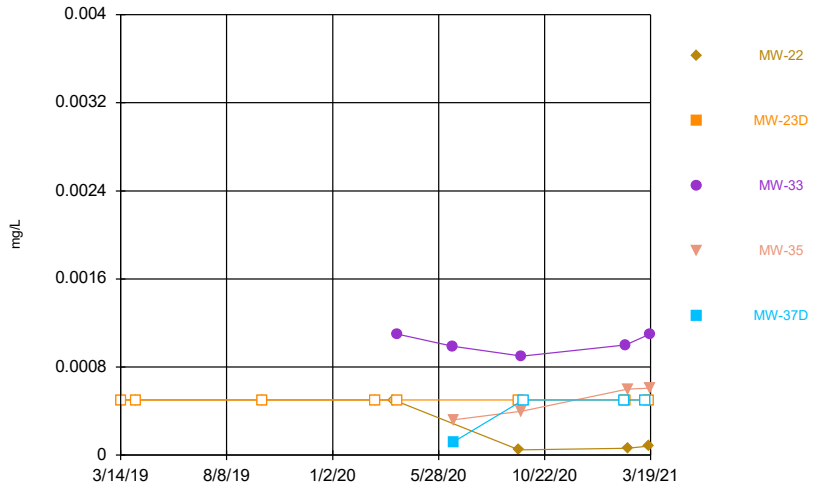

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Plant Hammond Client: Southern Company Data: Hammond AP-2

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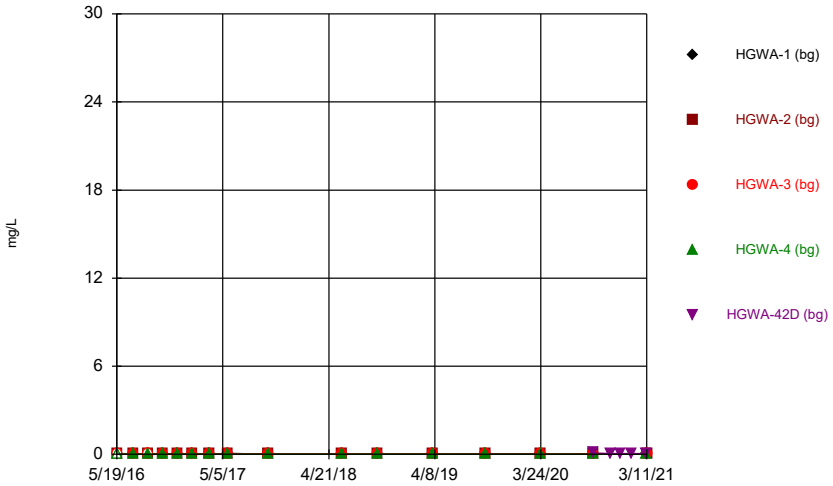

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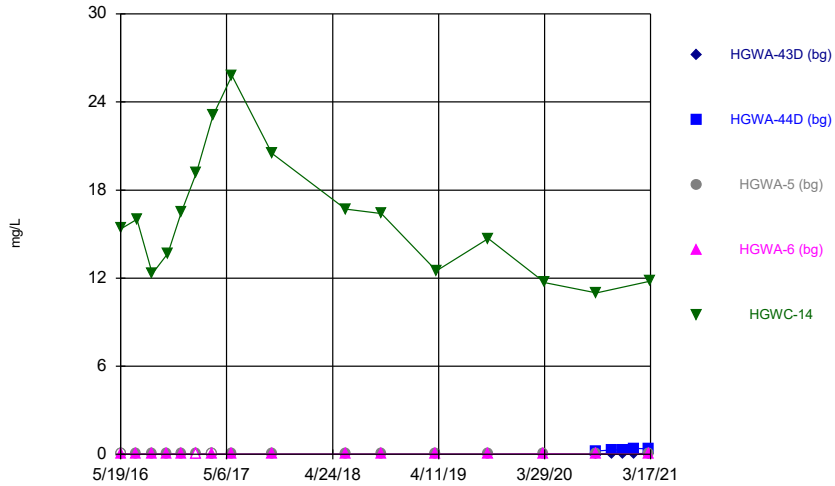

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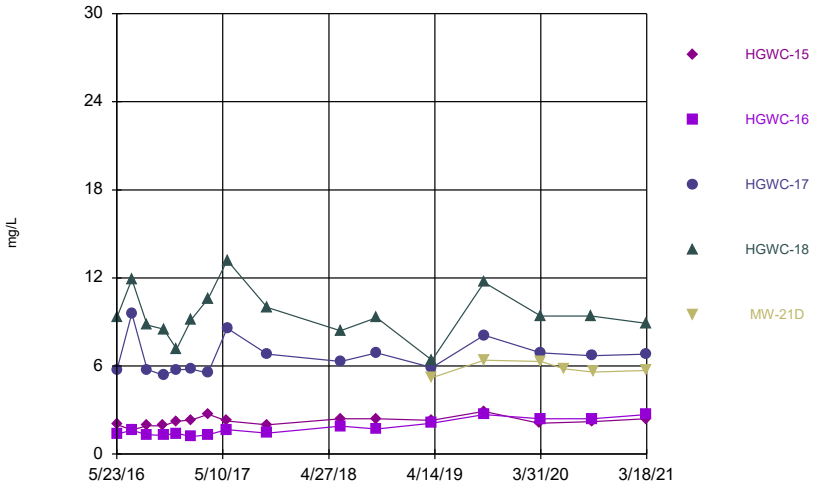

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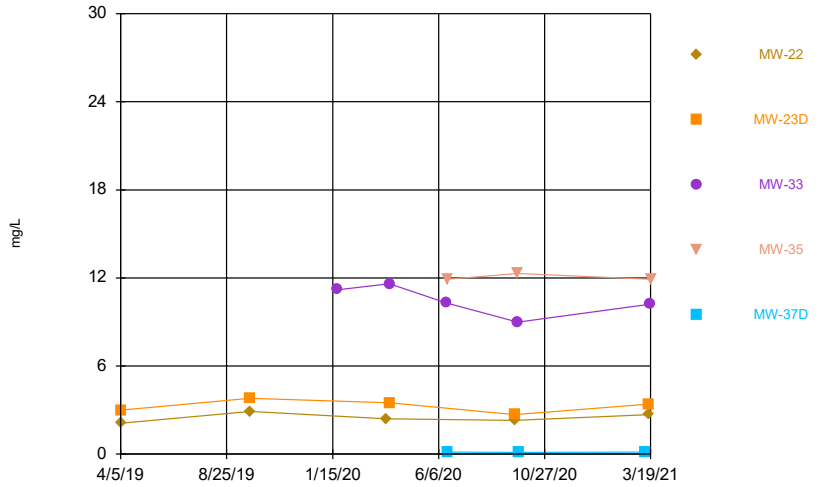

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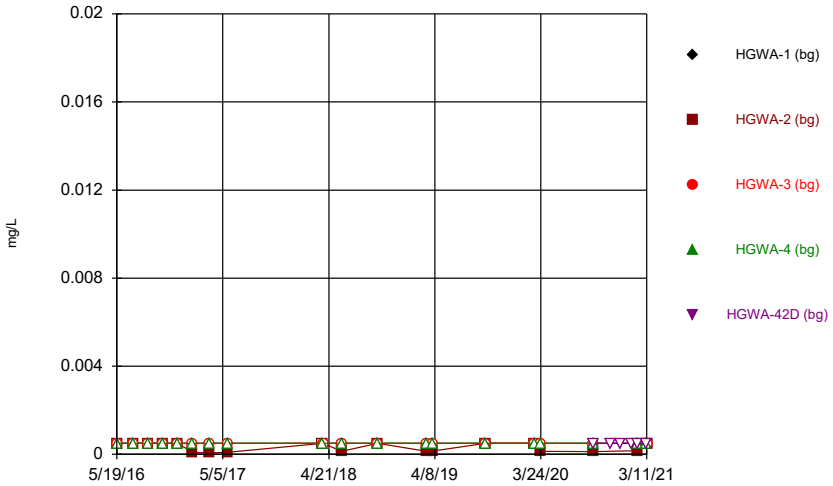

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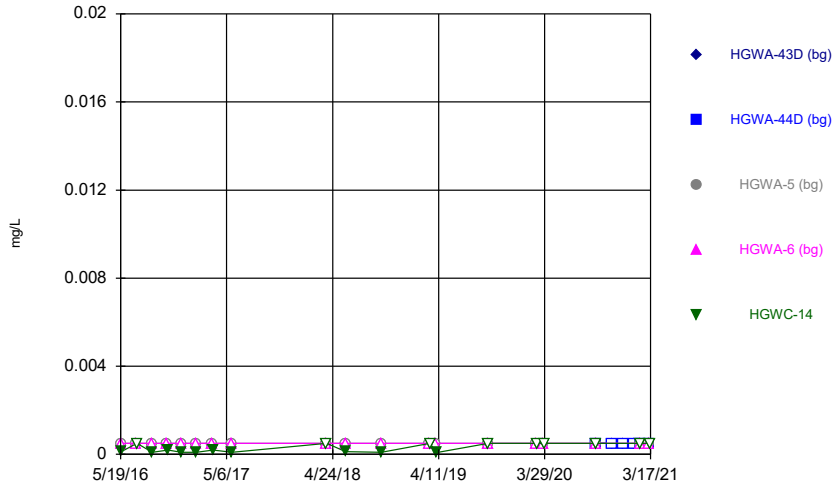

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Plant Hammond Client: Southern Company Data: Hammond AP-2

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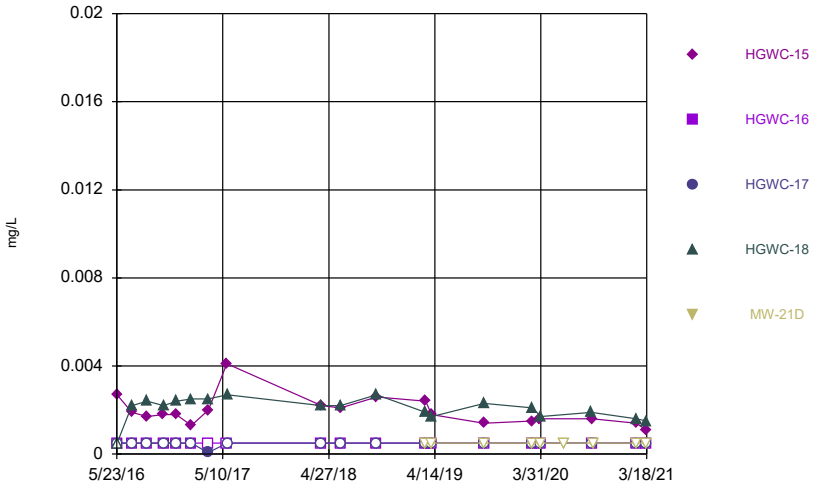

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Plant Hammond Client: Southern Company Data: Hammond AP-2

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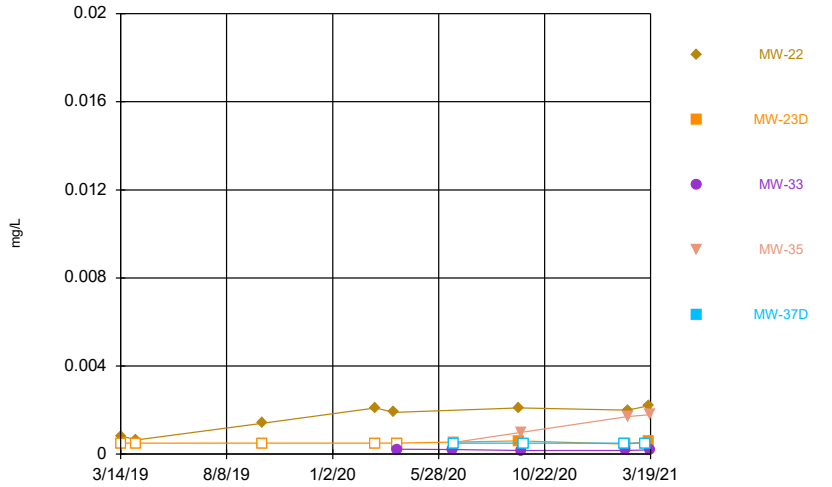

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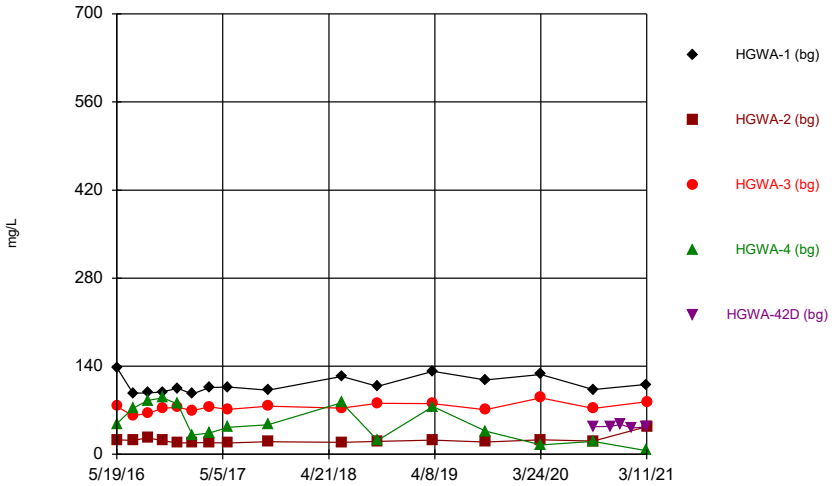
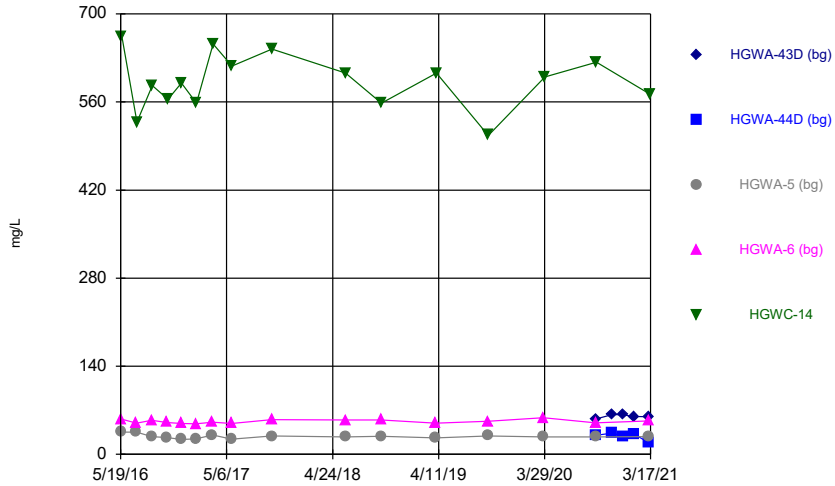


Constituent: Calcium Analysis Run 5/4/2021 7:43 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

Time Series



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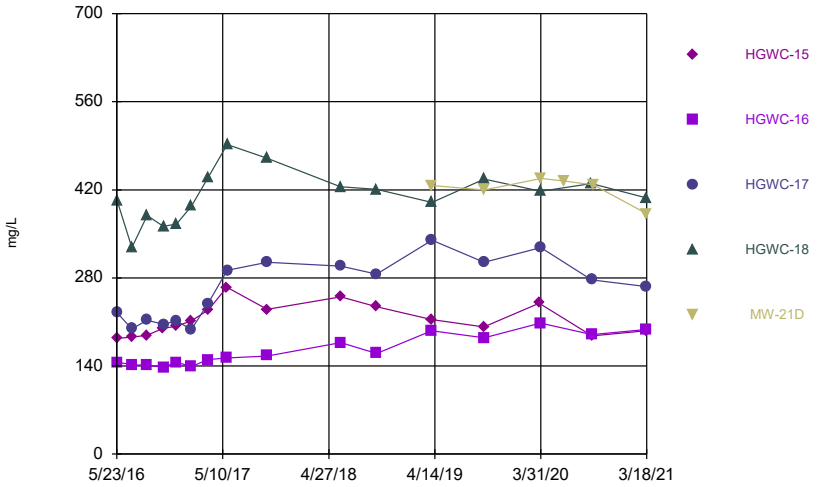

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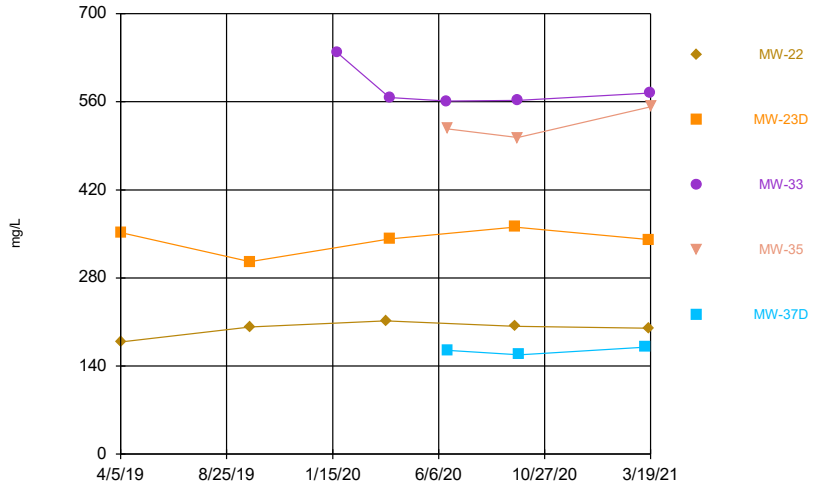

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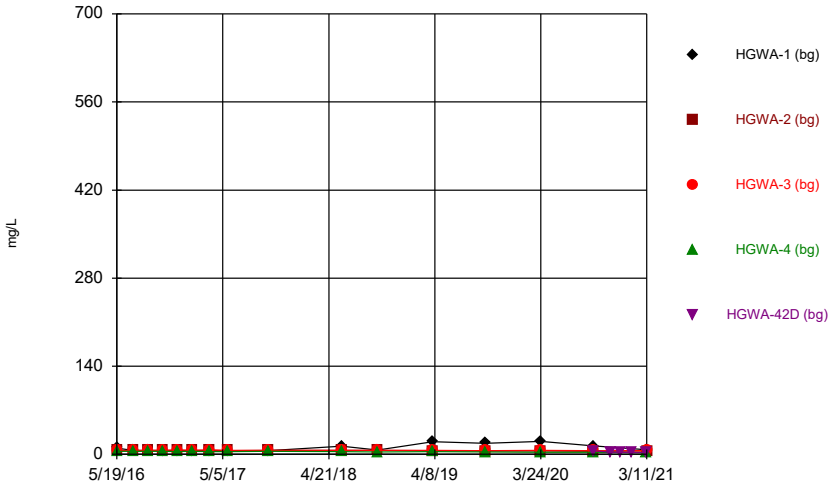

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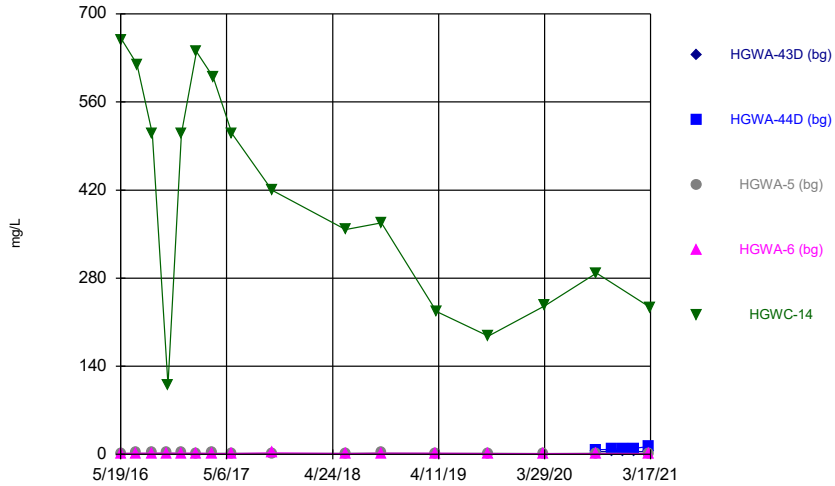
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

Time Series



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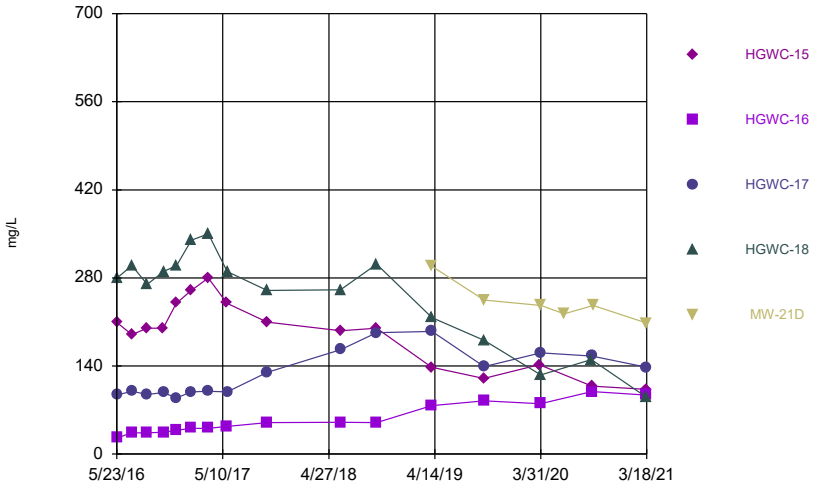

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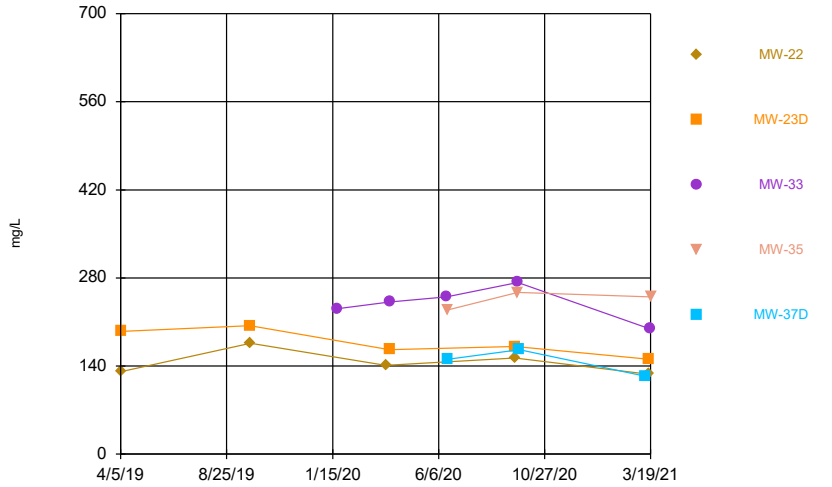
Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

Time Series

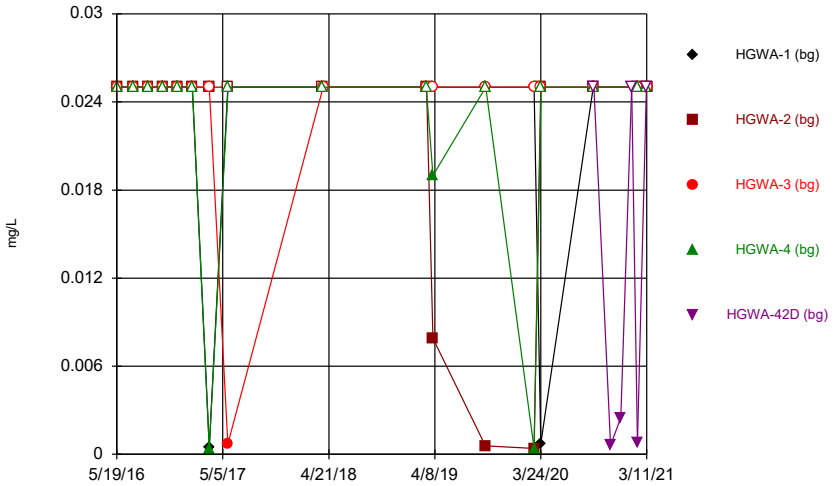


Constituent: Chloride Analysis Run 5/4/2021 7:44 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

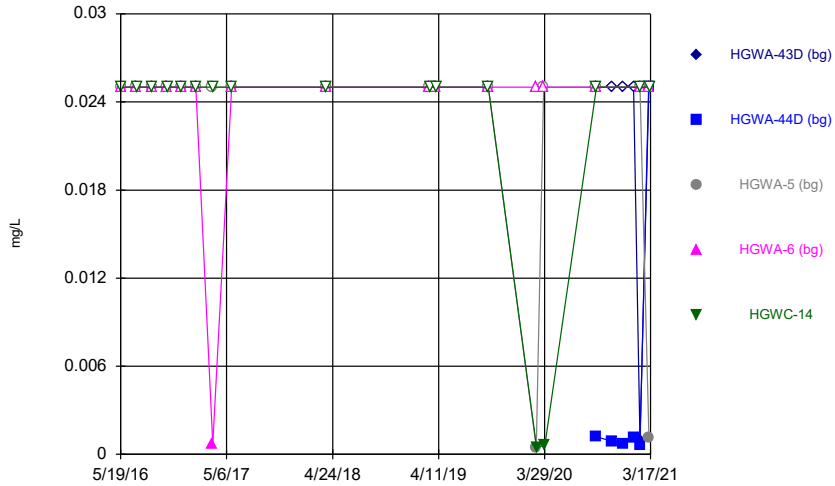
Time Series



Constituent: Chromium Analysis Run 5/4/2021 7:44 PM
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

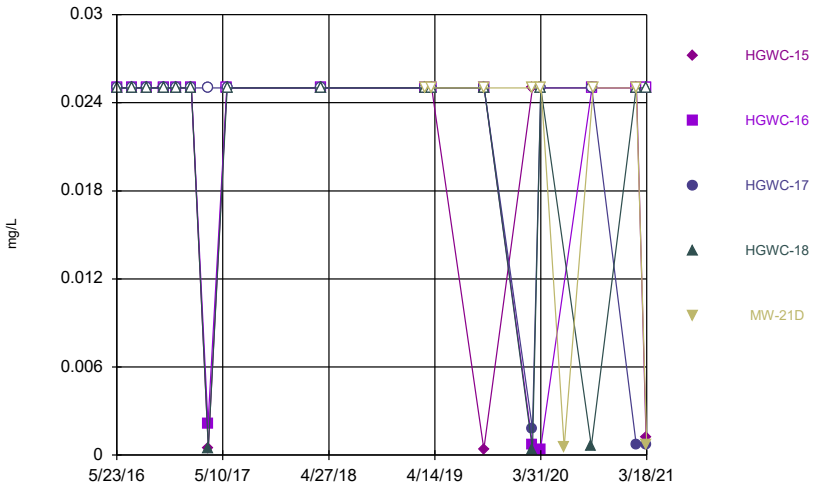
Time Series



Constituent: Chromium Analysis Run 5/4/2021 7:44 PM
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

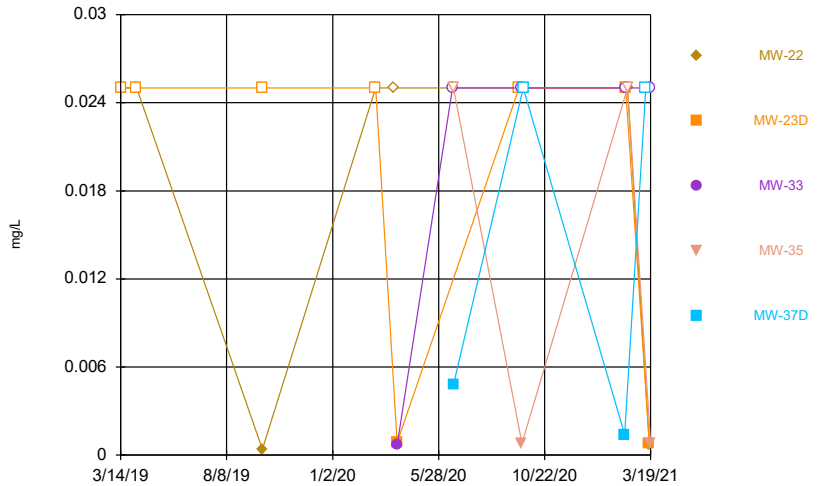
Time Series



Constituent: Chromium Analysis Run 5/4/2021 7:44 PM
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

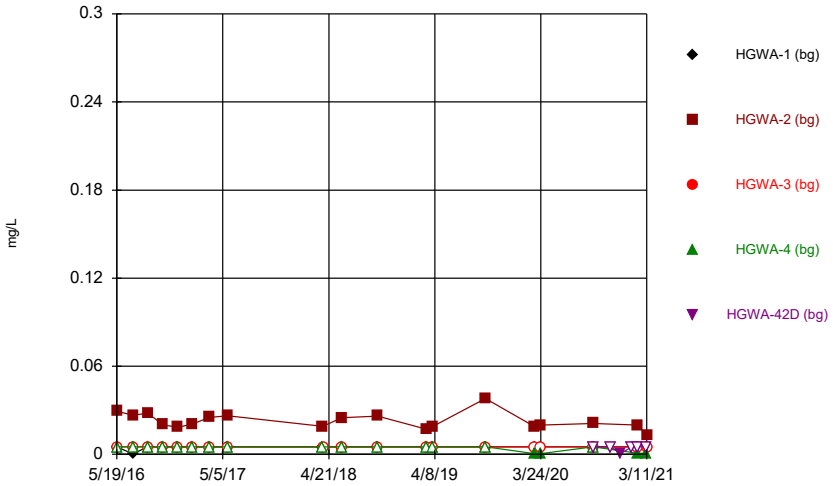
Time Series



Constituent: Chromium Analysis Run 5/4/2021 7:44 PM
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

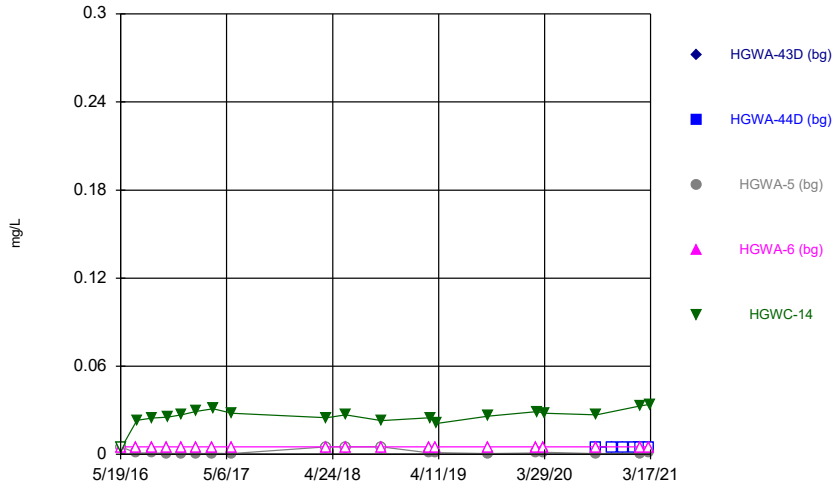
Time Series



Constituent: Cobalt Analysis Run 5/4/2021 7:44 PM
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

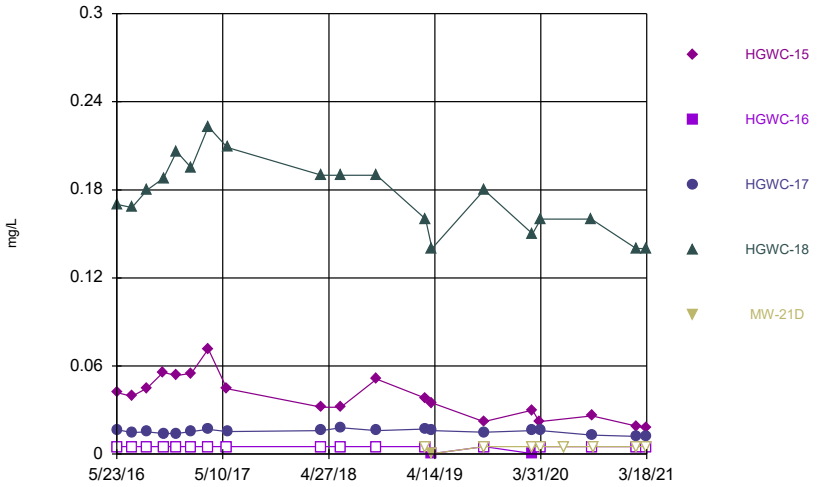
Time Series



Constituent: Cobalt Analysis Run 5/4/2021 7:44 PM
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

Time Series



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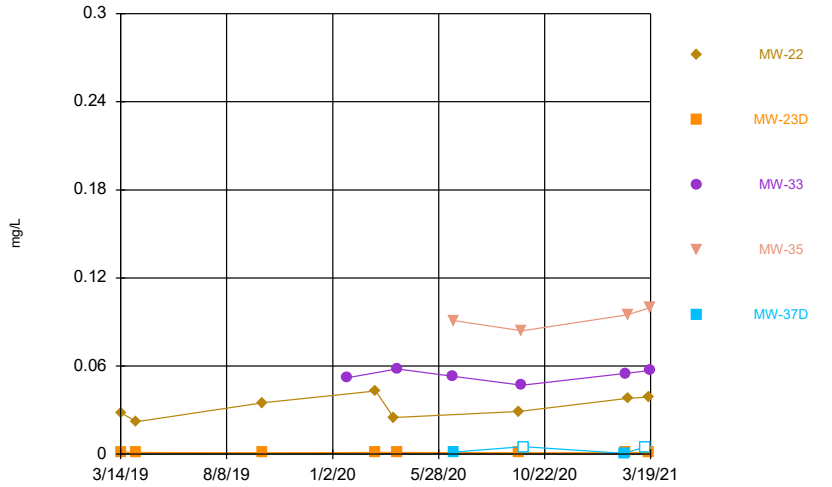
Plant Hammond Client: Southern Company Data: Hammond AP-2

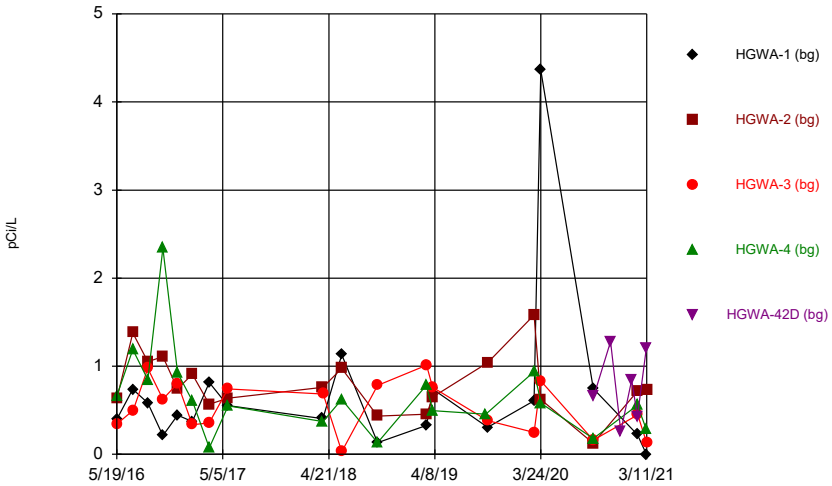
Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

Time Series



Constituent: Cobalt Analysis Run 5/4/2021 7:44 PM
Plant Hammond Client: Southern Company Data: Hammond AP-2

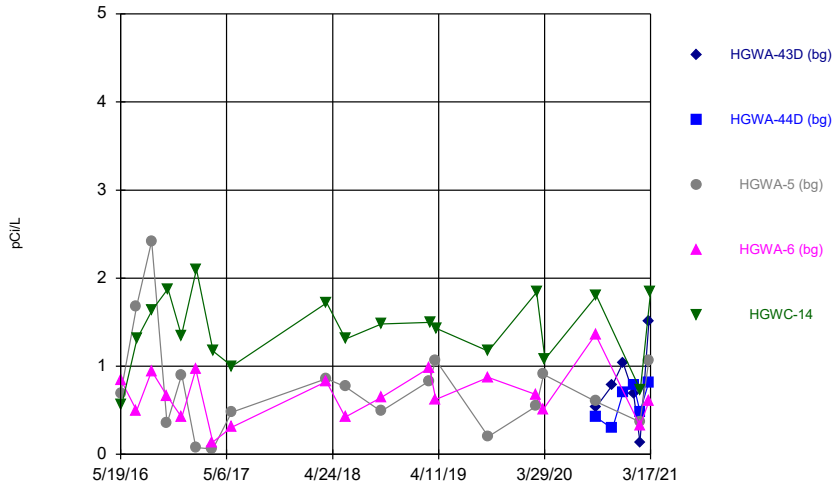
Time Series



Constituent: Combined Radium 226 + 228 Analysis Run 5/4/2021 7:44 PM
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

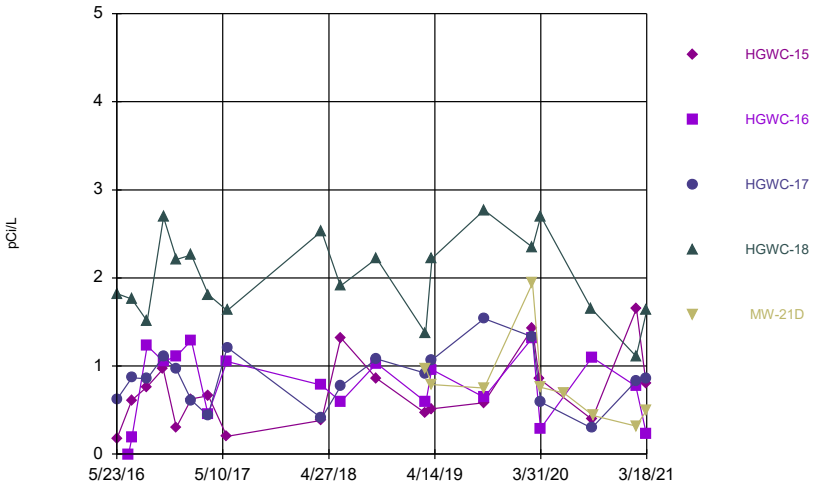
Time Series



Constituent: Combined Radium 226 + 228 Analysis Run 5/4/2021 7:44 PM
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

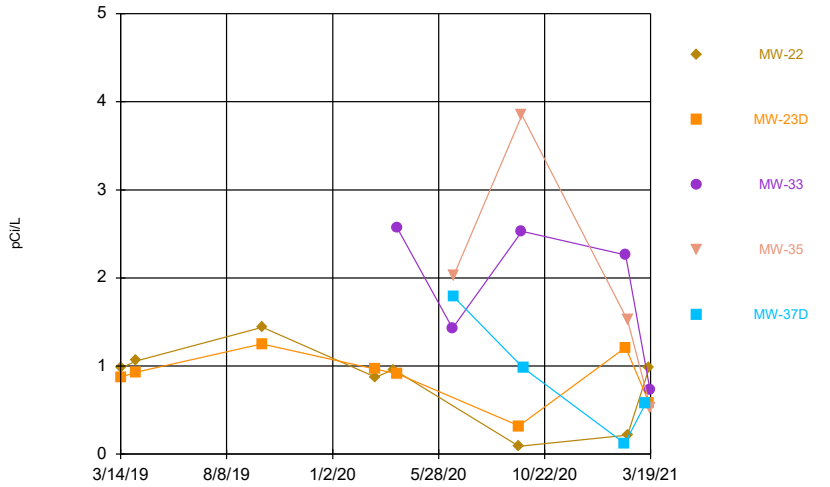
Time Series



Constituent: Combined Radium 226 + 228 Analysis Run 5/4/2021 7:44 PM
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

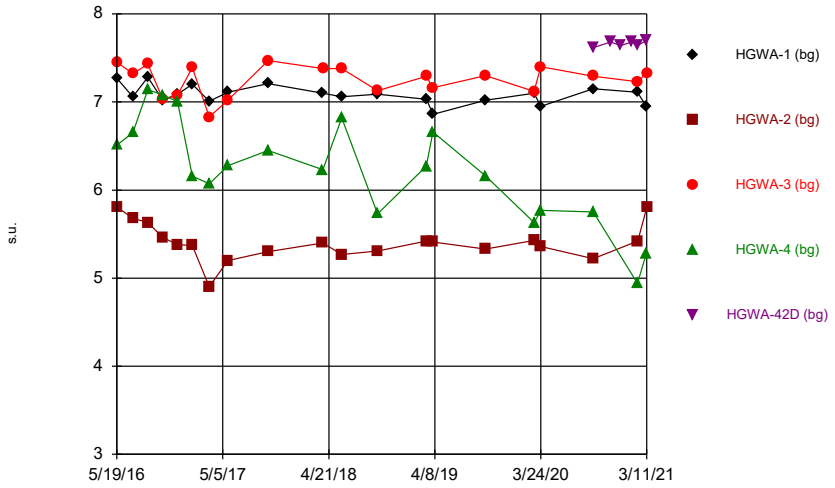
Time Series



Constituent: Combined Radium 226 + 228 Analysis Run 5/4/2021 7:44 PM
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

Time Series

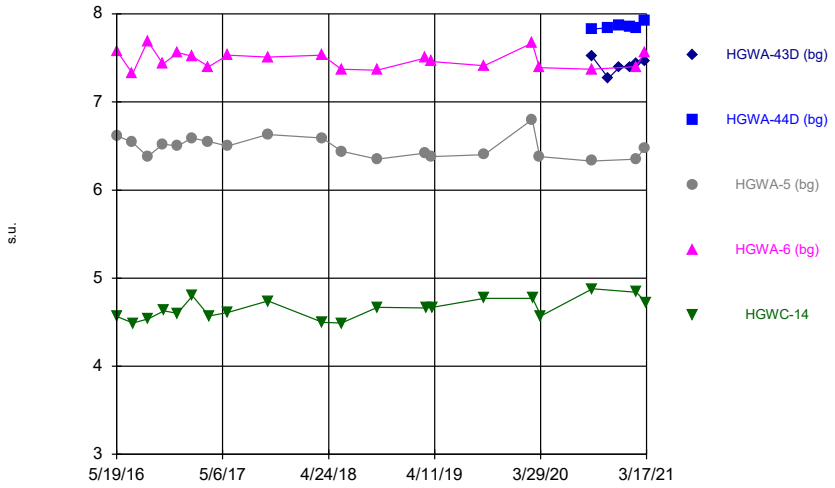


Constituent: Field pH Analysis Run 5/4/2021 7:44 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

Time Series

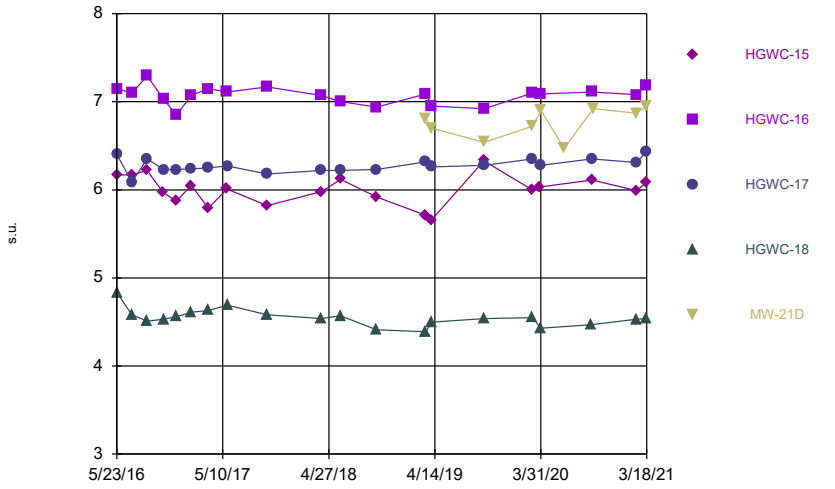


Constituent: Field pH Analysis Run 5/4/2021 7:44 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

Time Series

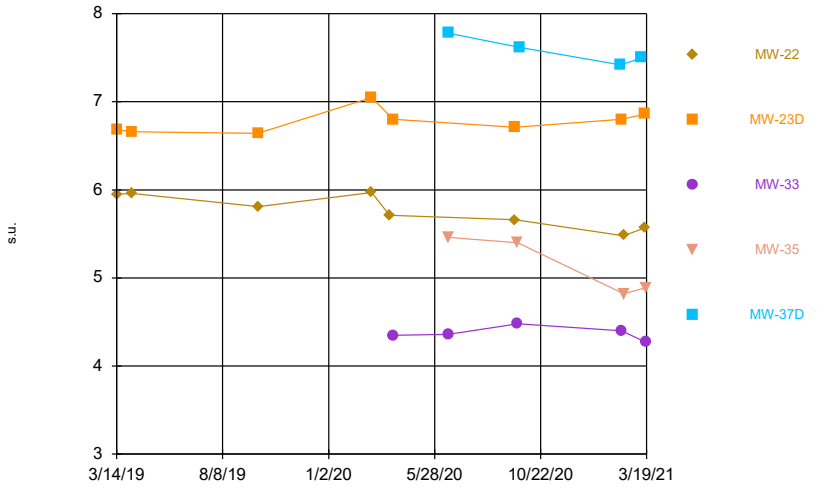


Constituent: Field pH Analysis Run 5/4/2021 7:44 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

Time Series

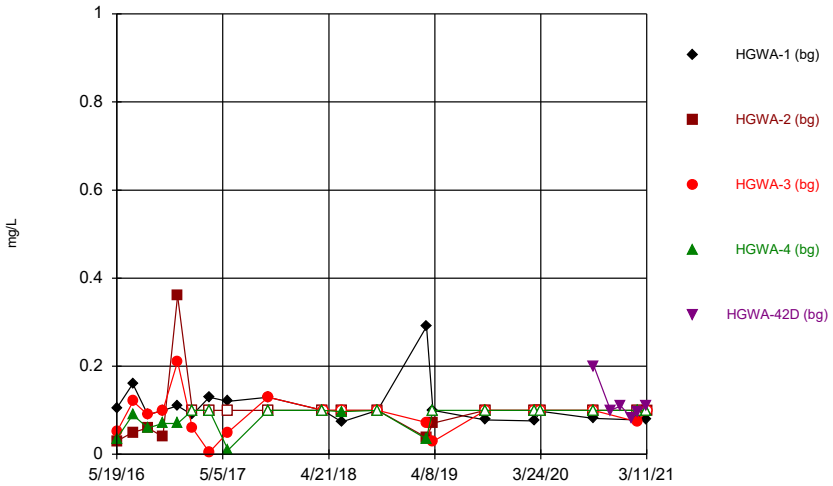


Constituent: Field pH Analysis Run 5/4/2021 7:44 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

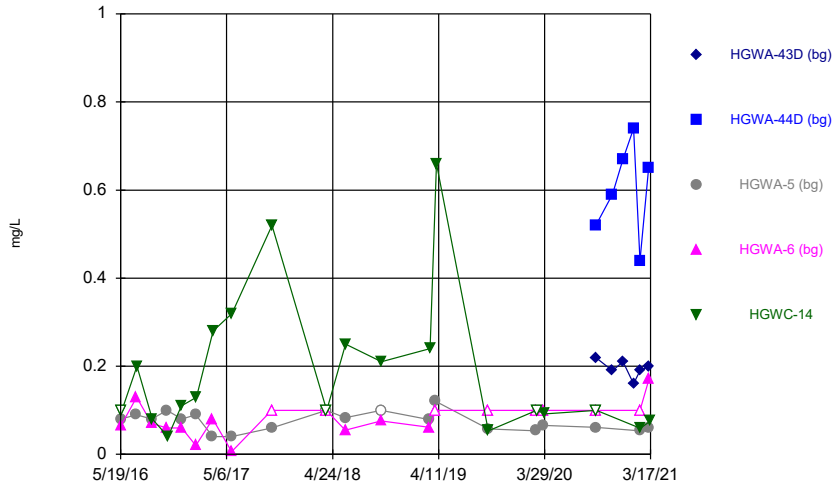
Time Series



Constituent: Fluoride Analysis Run 5/4/2021 7:44 PM
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

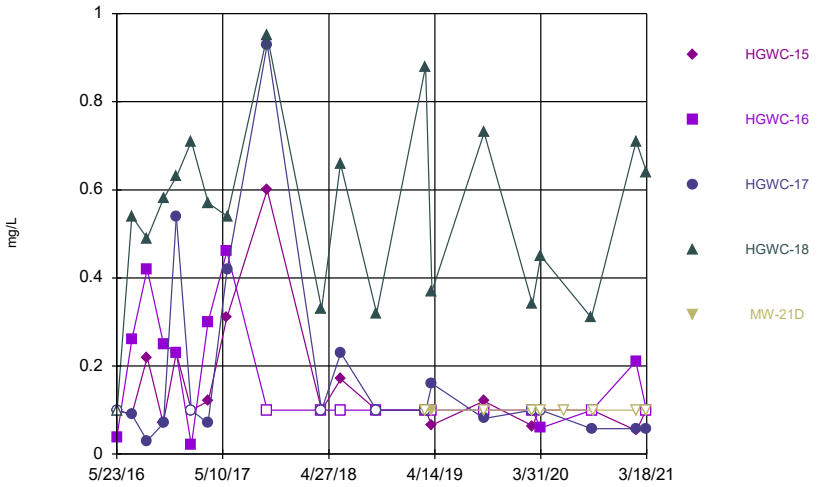
Time Series



Constituent: Fluoride Analysis Run 5/4/2021 7:44 PM
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

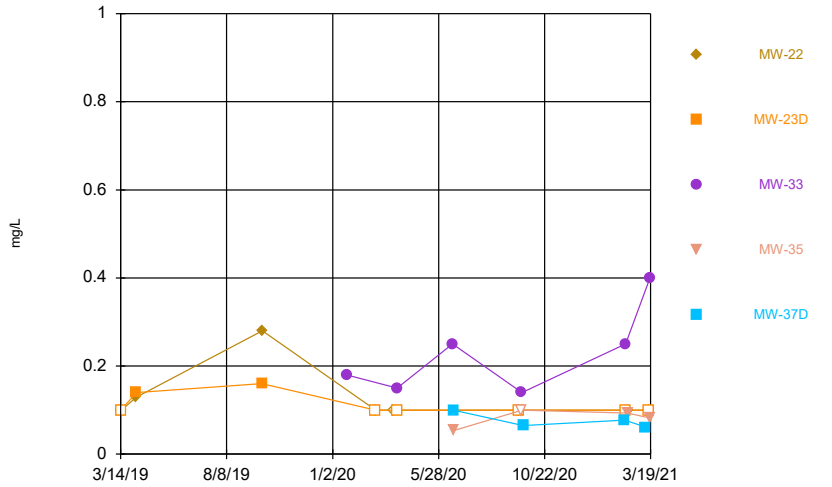
Time Series



Constituent: Fluoride Analysis Run 5/4/2021 7:44 PM
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

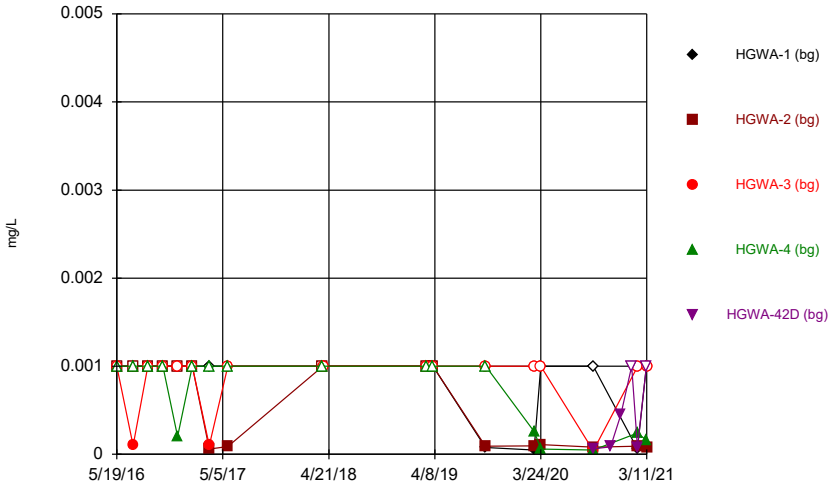
Time Series



Constituent: Fluoride Analysis Run 5/4/2021 7:44 PM
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

Time Series



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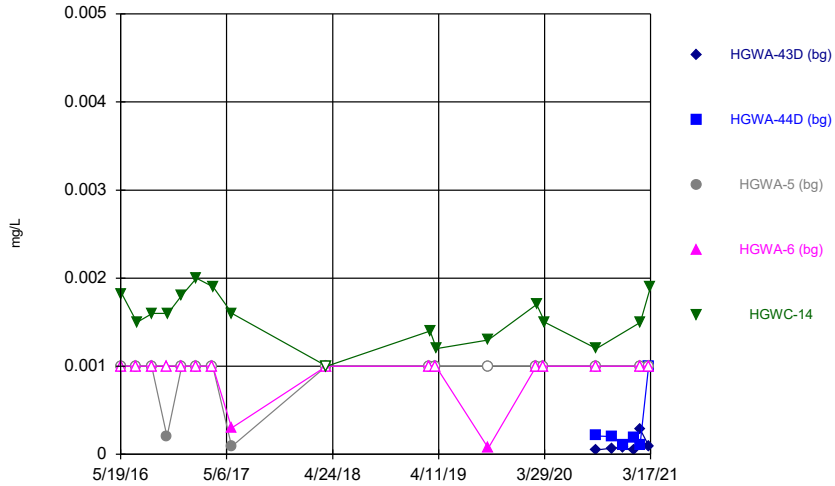
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

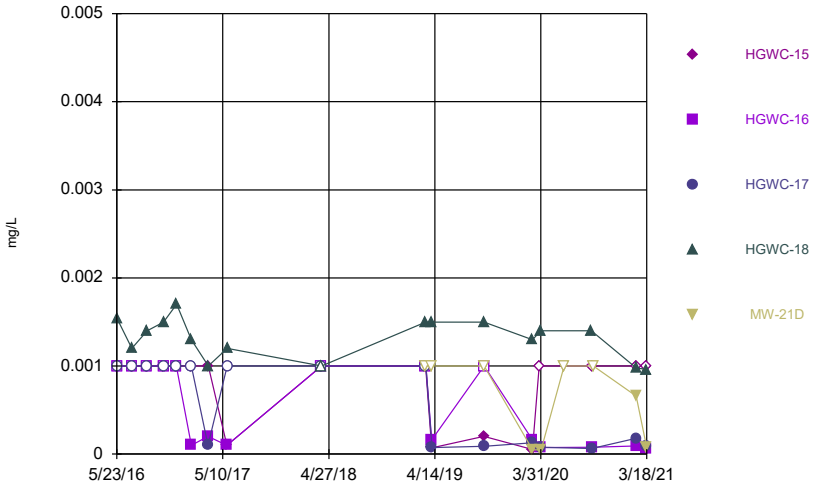
Time Series



Constituent: Lead Analysis Run 5/4/2021 7:44 PM
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

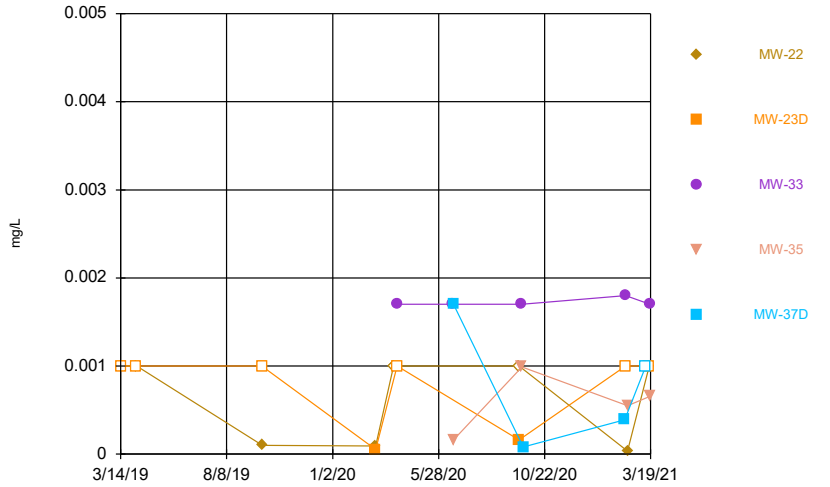
Time Series



Constituent: Lead Analysis Run 5/4/2021 7:44 PM
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

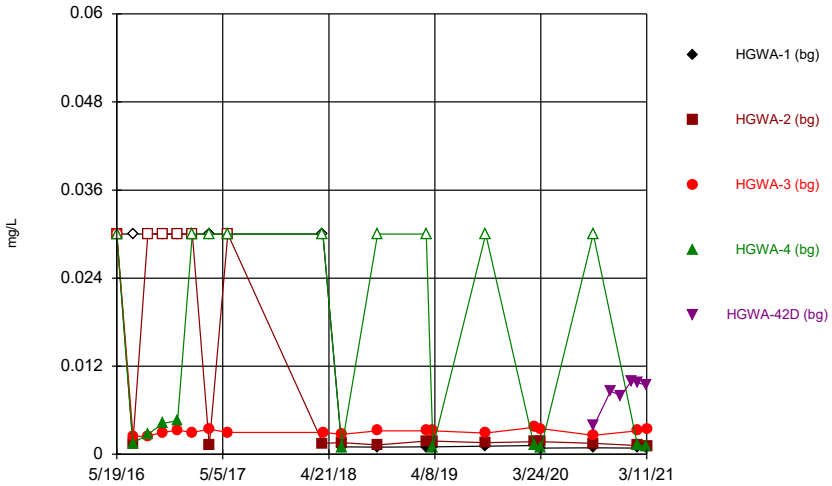
Time Series



Constituent: Lead Analysis Run 5/4/2021 7:44 PM
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

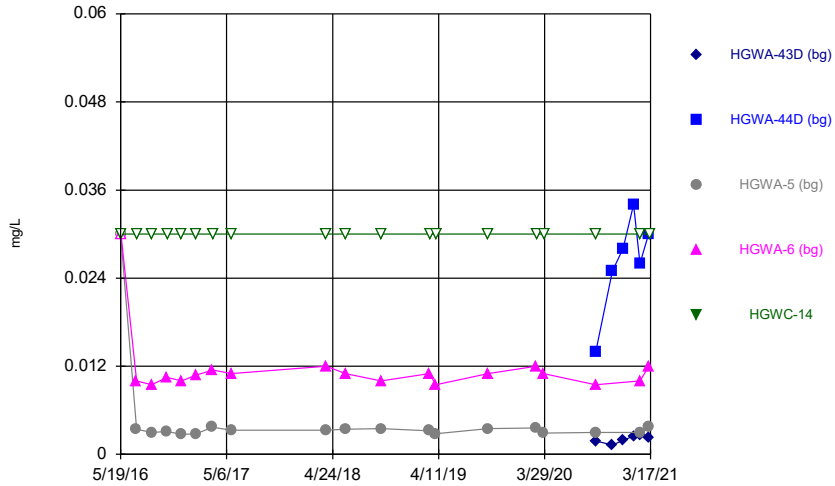
Time Series



Constituent: Lithium Analysis Run 5/4/2021 7:44 PM
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

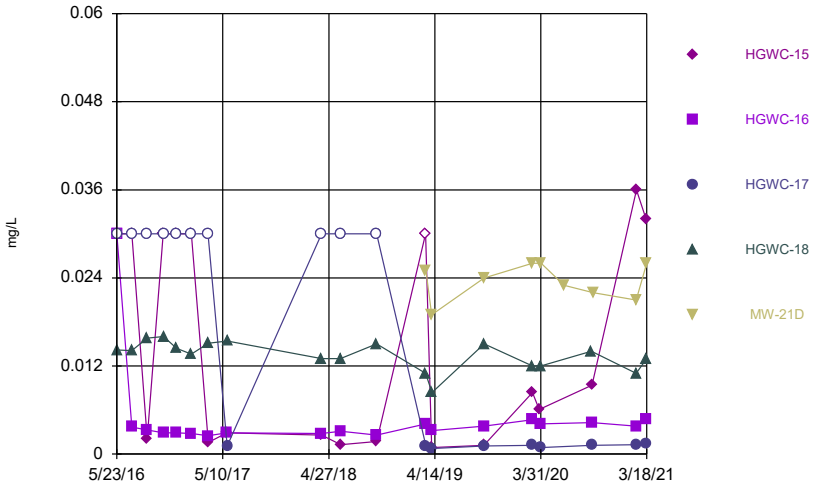
Time Series



Constituent: Lithium Analysis Run 5/4/2021 7:44 PM
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

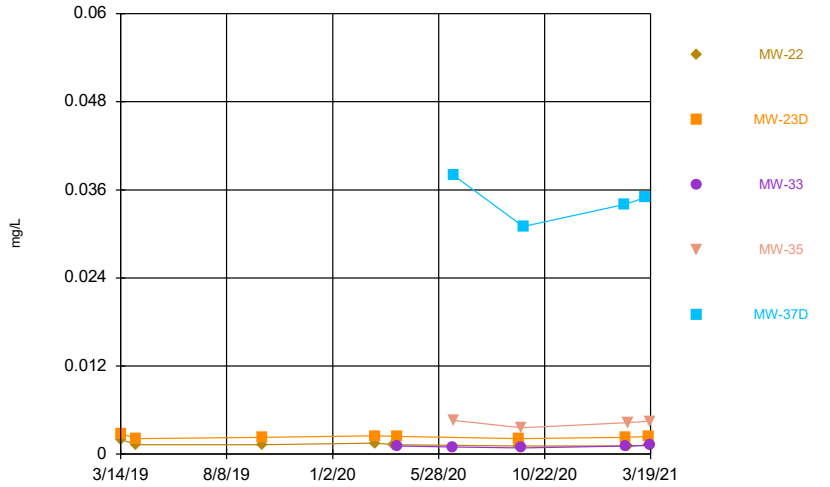
Time Series



Constituent: Lithium Analysis Run 5/4/2021 7:44 PM
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

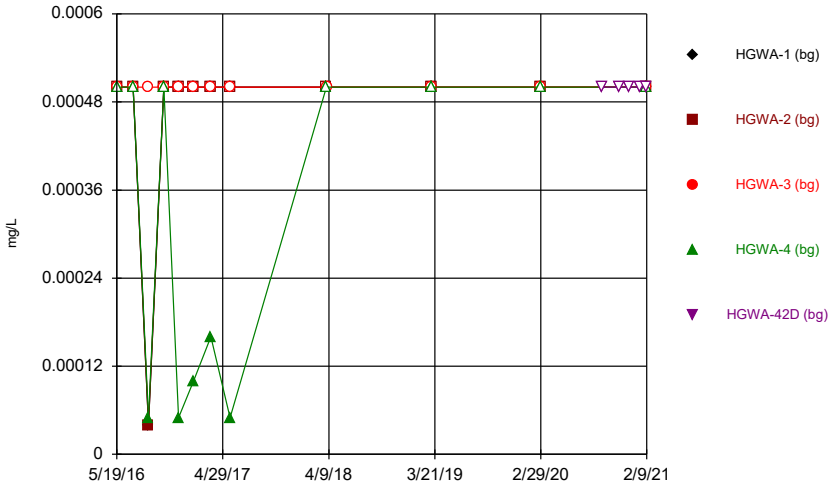
Time Series



Constituent: Lithium Analysis Run 5/4/2021 7:44 PM
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

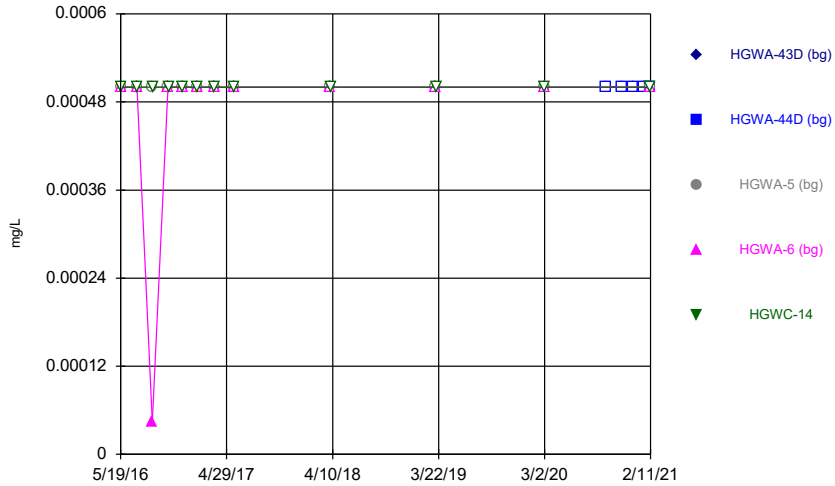
Time Series



Constituent: Mercury Analysis Run 5/4/2021 7:44 PM
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

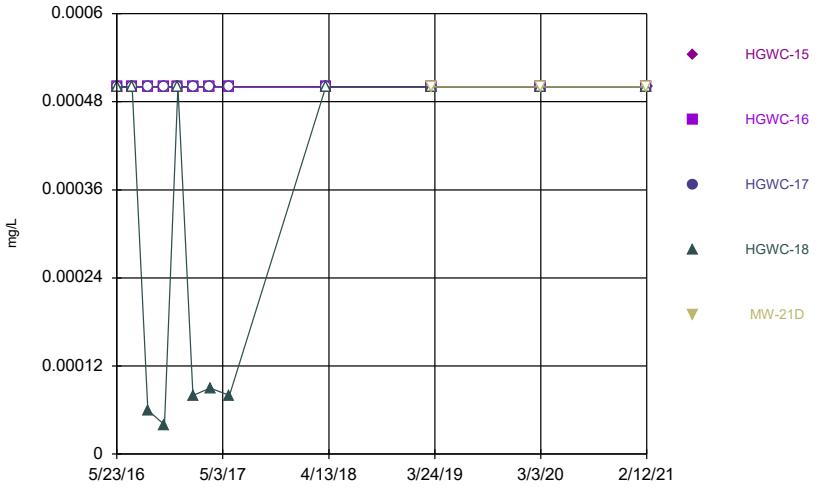
Time Series



Constituent: Mercury Analysis Run 5/4/2021 7:44 PM
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

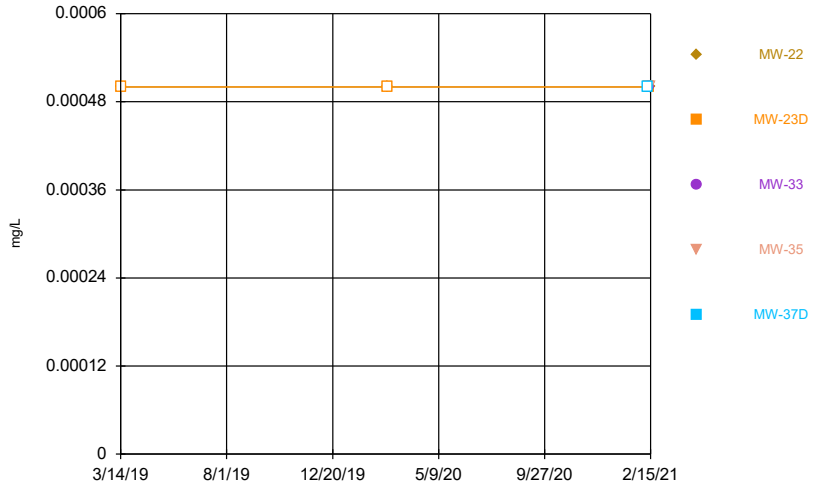
Time Series



Constituent: Mercury Analysis Run 5/4/2021 7:44 PM
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

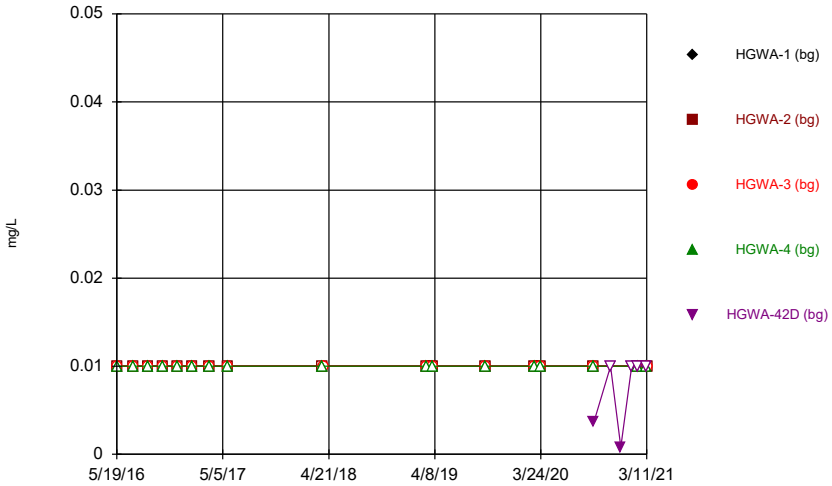
Time Series



Constituent: Mercury Analysis Run 5/4/2021 7:44 PM
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

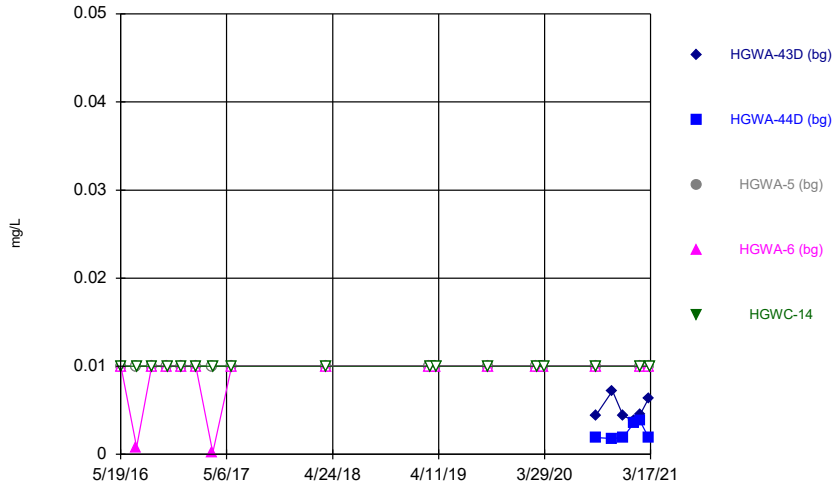
Time Series



Constituent: Molybdenum Analysis Run 5/4/2021 7:44 PM
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

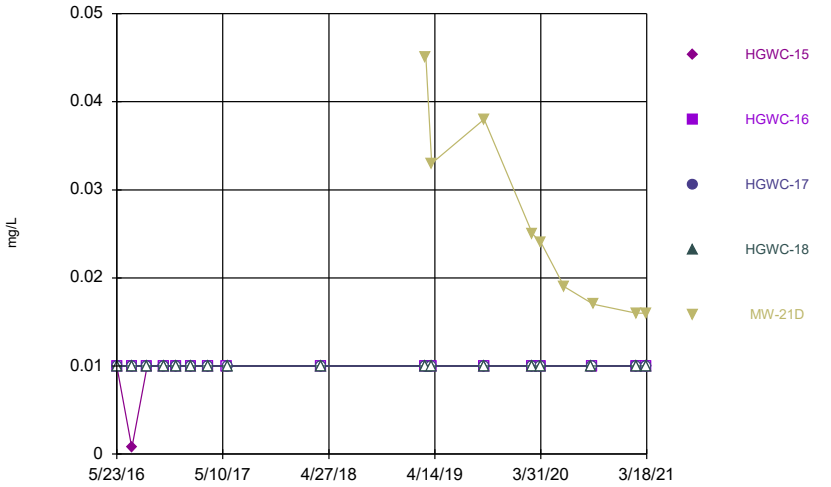
Time Series



Constituent: Molybdenum Analysis Run 5/4/2021 7:44 PM
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

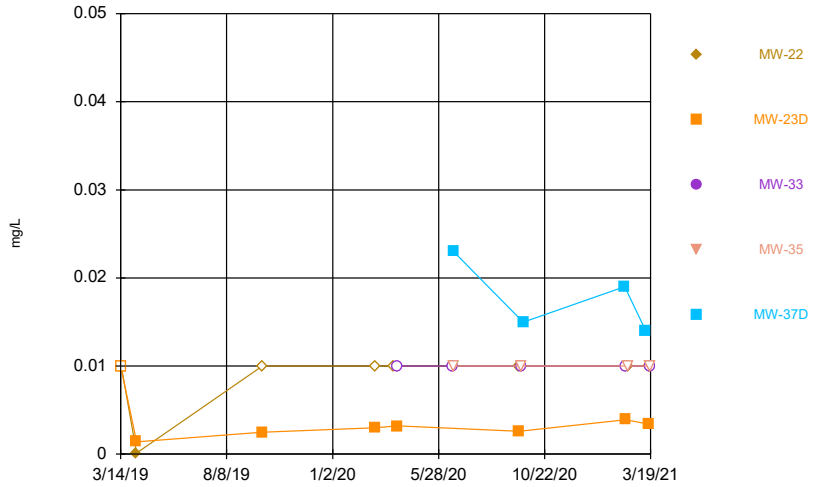
Time Series



Constituent: Molybdenum Analysis Run 5/4/2021 7:44 PM
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

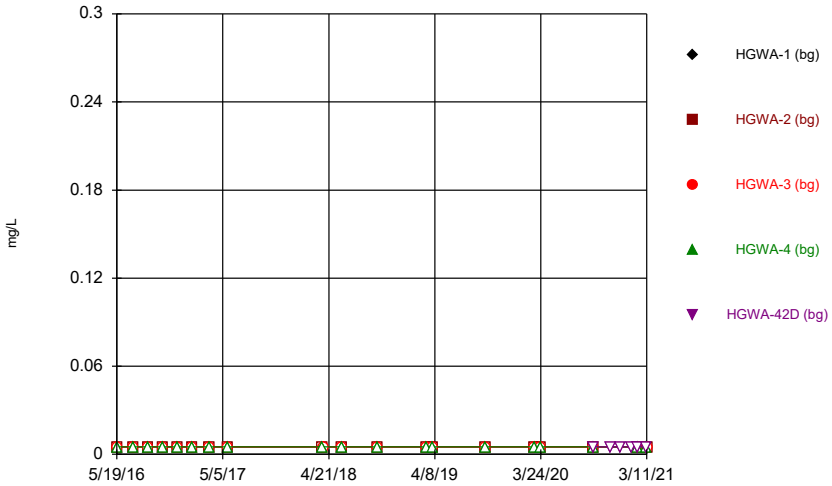
Time Series



Constituent: Molybdenum Analysis Run 5/4/2021 7:44 PM
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

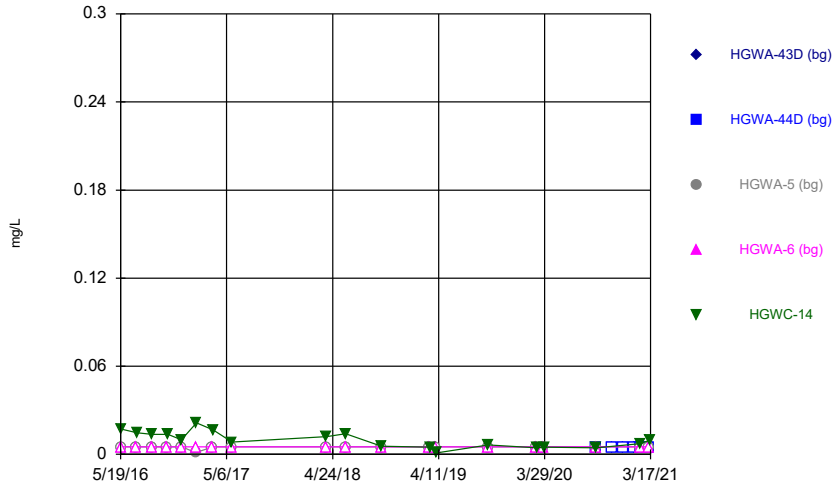
Time Series



Constituent: Selenium Analysis Run 5/4/2021 7:44 PM
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

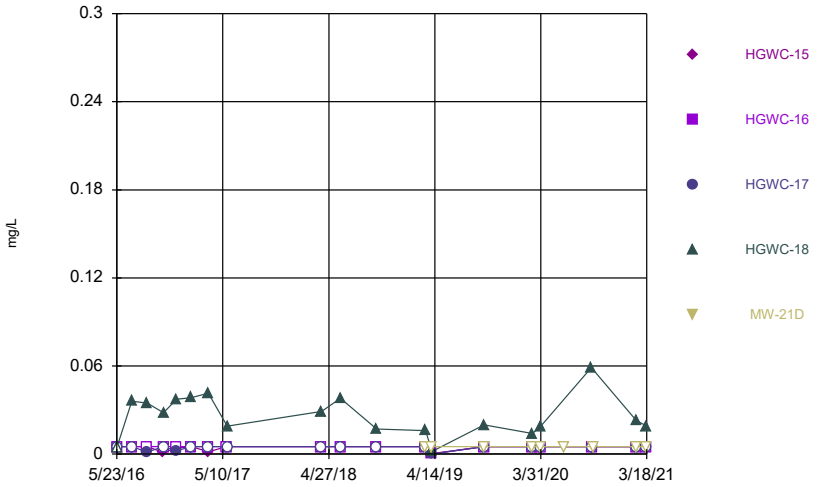
Time Series



Constituent: Selenium Analysis Run 5/4/2021 7:44 PM
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

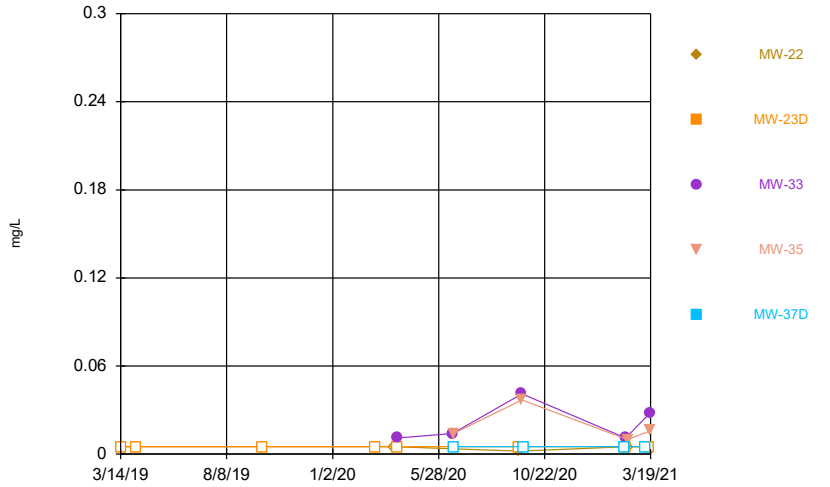
Time Series



Constituent: Selenium Analysis Run 5/4/2021 7:44 PM
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

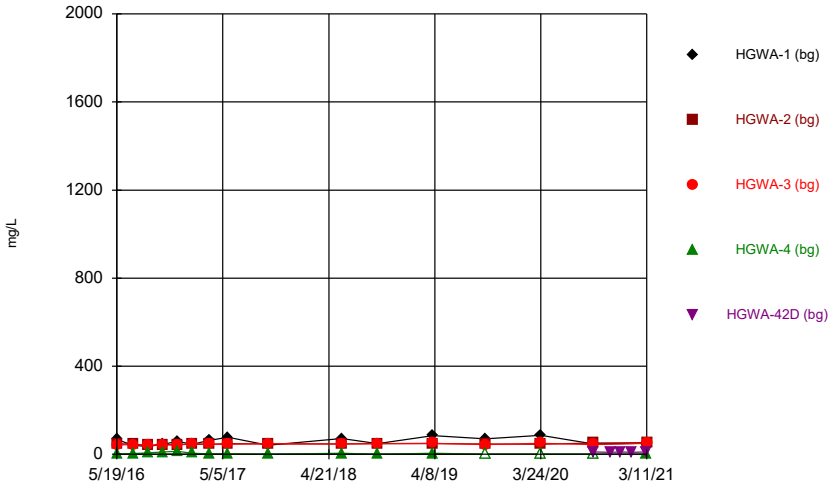
Time Series



Constituent: Selenium Analysis Run 5/4/2021 7:44 PM
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

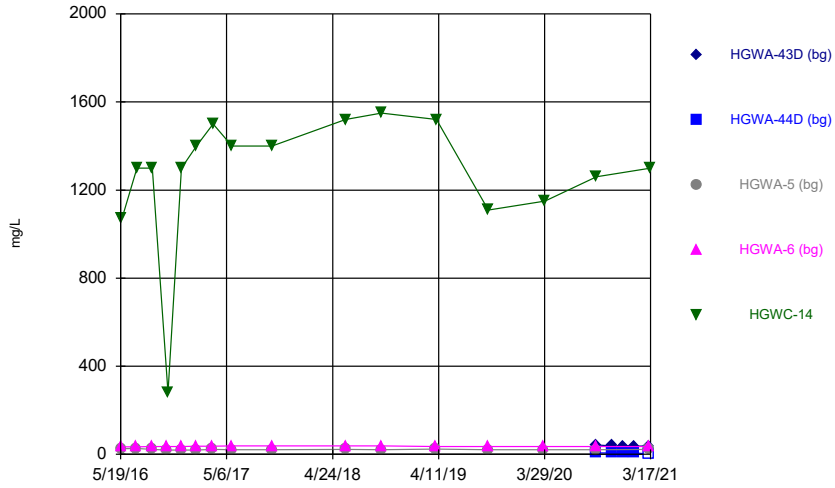
Time Series



Constituent: Sulfate Analysis Run 5/4/2021 7:44 PM
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

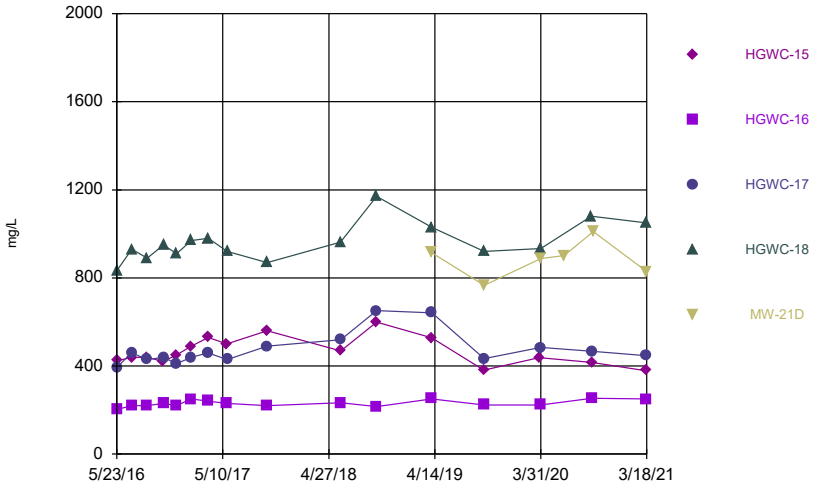
Time Series



Constituent: Sulfate Analysis Run 5/4/2021 7:44 PM
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

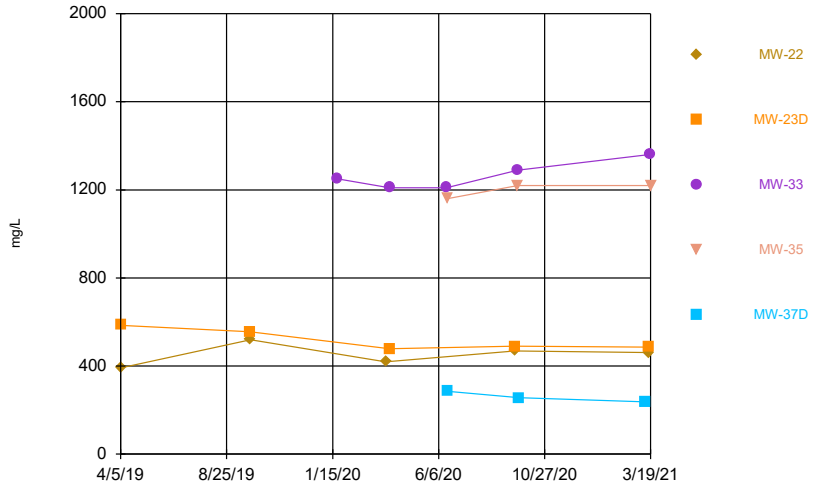
Time Series



Constituent: Sulfate Analysis Run 5/4/2021 7:44 PM
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

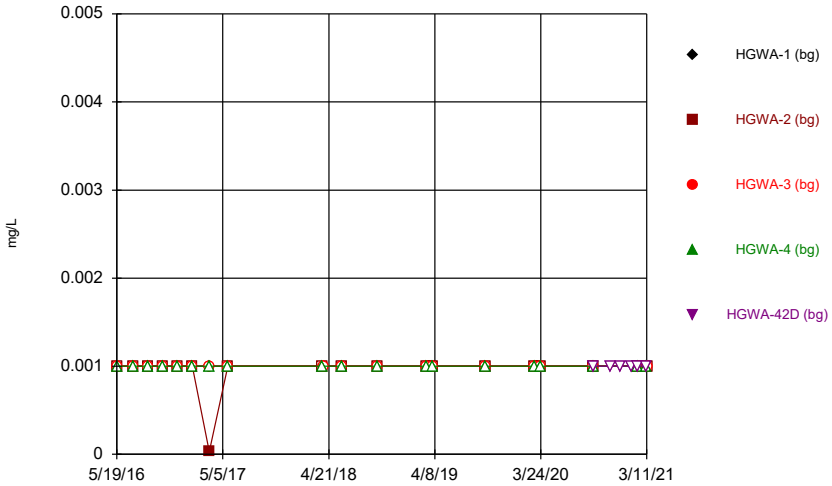
Time Series



Constituent: Sulfate Analysis Run 5/4/2021 7:44 PM
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

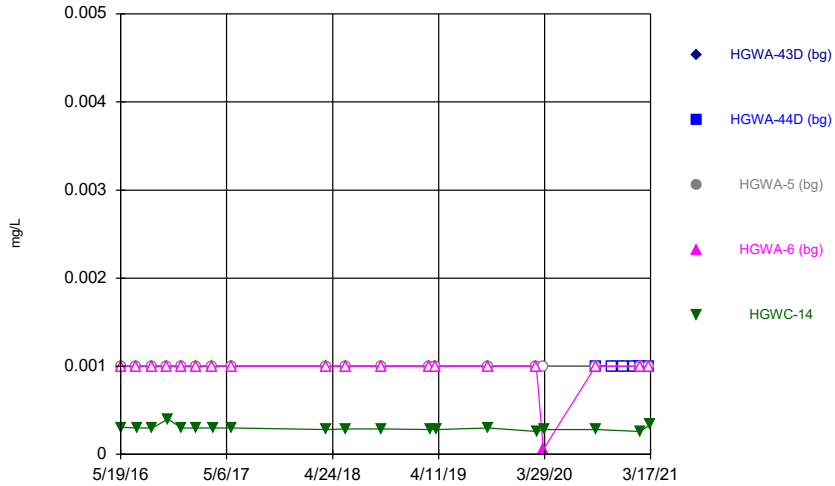
Time Series



Constituent: Thallium Analysis Run 5/4/2021 7:44 PM
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

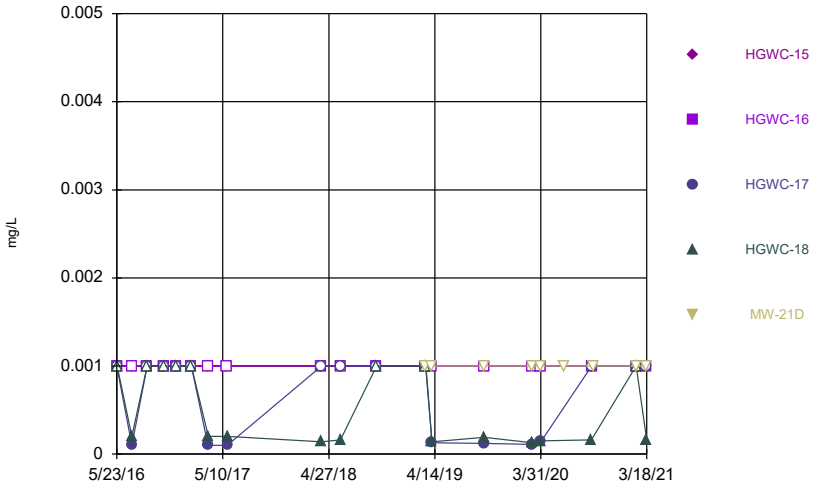
Time Series



Constituent: Thallium Analysis Run 5/4/2021 7:44 PM
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

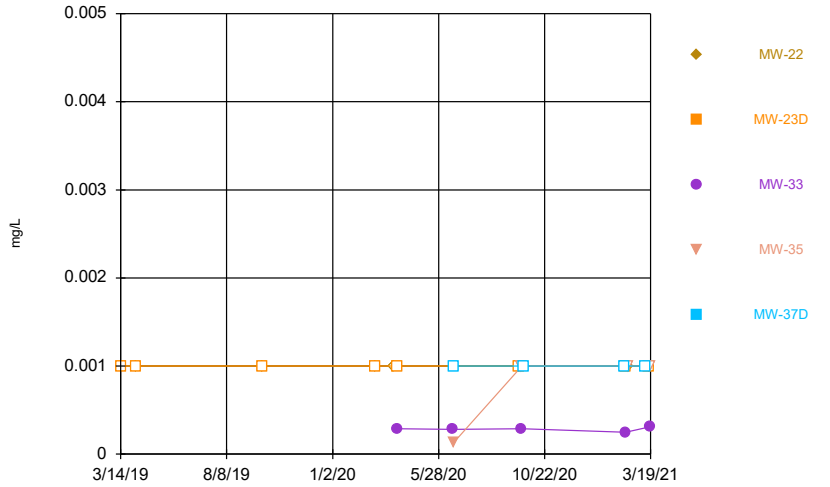
Time Series



Constituent: Thallium Analysis Run 5/4/2021 7:44 PM
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

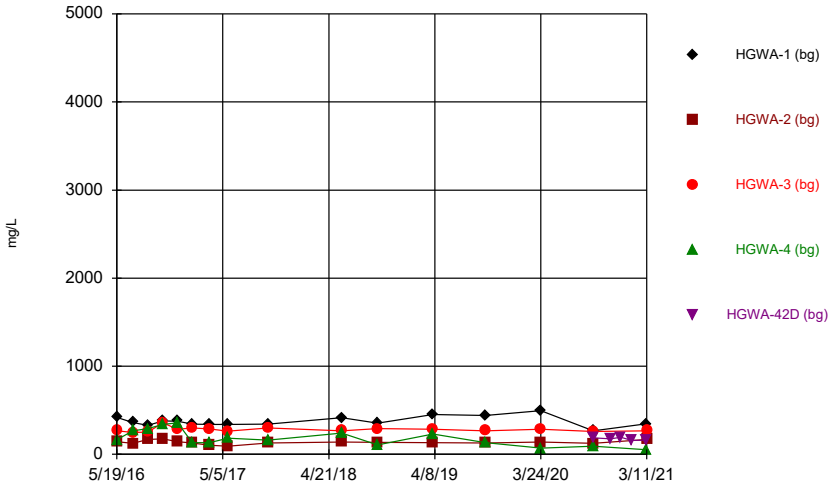
Time Series



Constituent: Thallium Analysis Run 5/4/2021 7:44 PM
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

Time Series

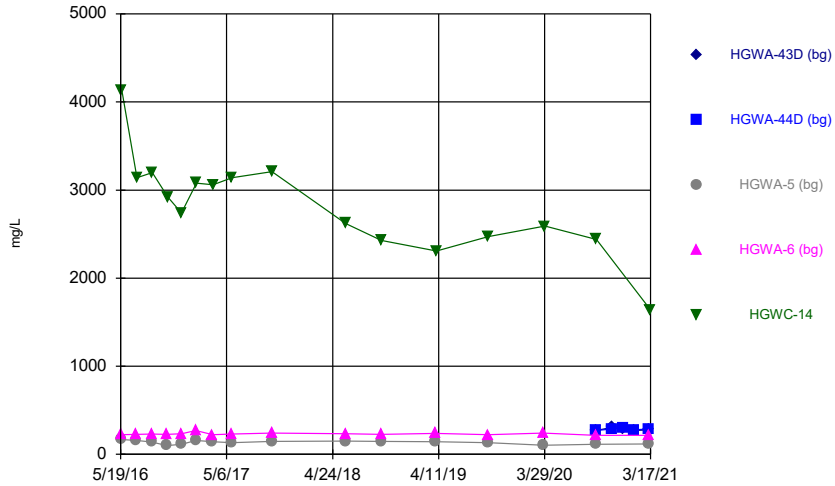


Constituent: Total Dissolved Solids Analysis Run 5/4/2021 7:44 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

Time Series



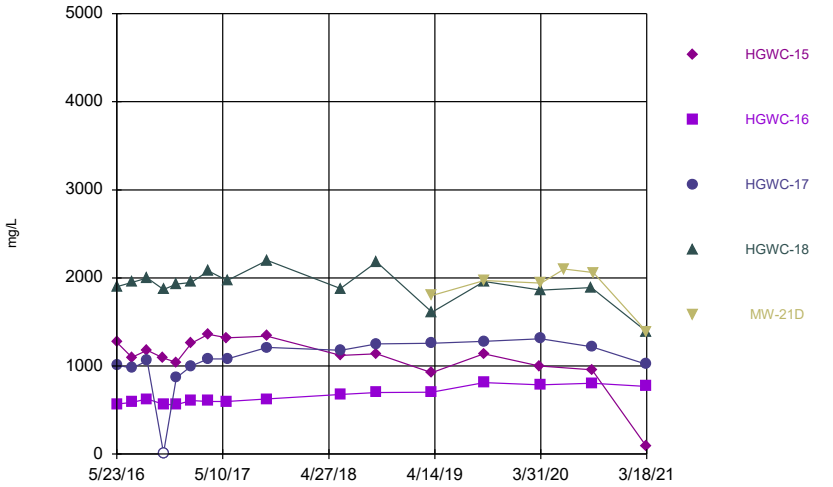
Constituent: Total Dissolved Solids Analysis Run 5/4/2021 7:44 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

Hollow symbols indicate censored values.

Time Series

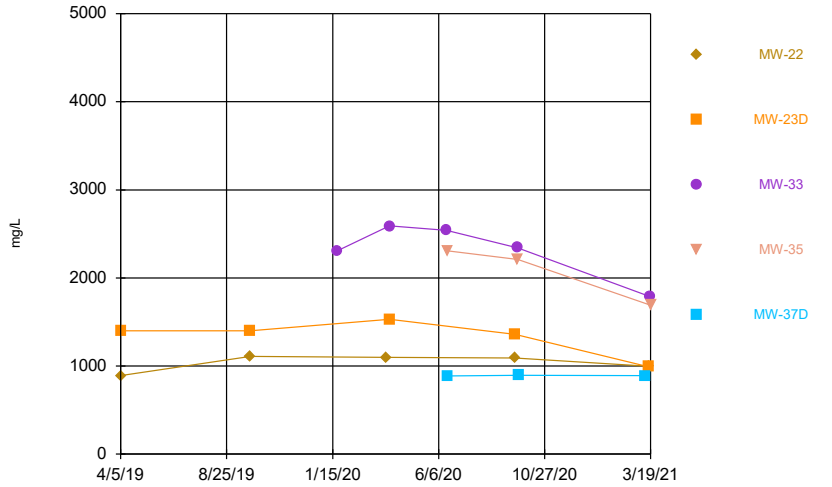


Constituent: Total Dissolved Solids Analysis Run 5/4/2021 7:44 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

Time Series



Constituent: Total Dissolved Solids Analysis Run 5/4/2021 7:44 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

Time Series

Constituent: Antimony (mg/L) Analysis Run 5/4/2021 8:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-4 (bg)	HGWA-42D (bg)
5/19/2016	<0.003	<0.003	<0.003	<0.003	
7/11/2016	<0.003	<0.003		<0.003	
7/12/2016			0.0003 (J)		
8/30/2016	<0.003	<0.003	<0.003	<0.003	
10/19/2016	0.0014 (J)	<0.003	<0.003	<0.003	
12/6/2016	<0.003	<0.003	<0.003	<0.003	
1/24/2017	<0.003	<0.003	<0.003	<0.003	
3/21/2017	<0.003	<0.003	<0.003	<0.003	
5/22/2017	<0.003	<0.003	<0.003		
5/23/2017				<0.003	
4/2/2018	<0.003	<0.003		<0.003	
4/3/2018			<0.003		
3/11/2019				<0.003	
3/12/2019	<0.003	<0.003	<0.003		
9/23/2019	<0.003	<0.003	<0.003		
3/2/2020	<0.003	<0.003	<0.003	<0.003	
9/17/2020					0.00055 (J)
11/11/2020					<0.003
12/15/2020					0.00035 (J)
1/20/2021					<0.003
2/8/2021	<0.003			<0.003	0.0019 (J)
2/9/2021		0.00062 (J)	0.00031 (J)		
3/10/2021	<0.003			<0.003	<0.003
3/11/2021		<0.003	<0.003		

Time Series

Constituent: Antimony (mg/L) Analysis Run 5/4/2021 8:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-5 (bg)	HGWA-6 (bg)	HGWC-14
5/19/2016			<0.003		
5/20/2016				<0.003	
5/23/2016					<0.003
7/11/2016			<0.003	0.001 (J)	
7/12/2016					0.0003 (J)
8/30/2016			<0.003	<0.003	
9/1/2016					<0.003
10/20/2016			0.0023 (J)	<0.003	
10/24/2016					<0.003
12/7/2016					<0.003
12/8/2016			<0.003	<0.003	
1/24/2017			<0.003	<0.003	
1/26/2017					<0.003
3/21/2017			<0.003	<0.003	
3/23/2017					<0.003
5/23/2017			<0.003	<0.003	
5/24/2017					<0.003
4/3/2018			<0.003	<0.003	
4/4/2018					<0.003
3/12/2019			<0.003	<0.003	
3/14/2019					<0.003
3/2/2020			<0.003	<0.003	
3/3/2020					<0.003
9/16/2020	0.00051 (J)	0.00049 (J)			
11/10/2020	0.00043 (J)	<0.003			
12/15/2020	0.00031 (J)	0.00047 (J)			
1/19/2021	0.00029 (J)	0.00067 (J)			
2/9/2021	0.00037 (J)	0.00042 (J)	<0.003	<0.003	
2/11/2021					0.00043 (J)
3/10/2021		0.00037 (J)			
3/11/2021	0.00057 (J)		<0.003	<0.003	
3/17/2021					<0.003

Time Series

Constituent: Antimony (mg/L) Analysis Run 5/4/2021 8:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWC-15	HGWC-16	HGWC-17	HGWC-18	MW-21D
5/23/2016	<0.003	<0.003	<0.003		
5/24/2016				<0.003	
7/12/2016	<0.003	<0.003	<0.003	<0.003	
9/1/2016	<0.003	<0.003	<0.003	<0.003	
10/24/2016	<0.003				
10/25/2016		<0.003	<0.003	<0.003	
12/7/2016	<0.003	<0.003	<0.003		
12/8/2016				<0.003	
1/26/2017	<0.003	<0.003	<0.003	<0.003	
3/22/2017		<0.003	<0.003		
3/23/2017	<0.003			<0.003	
5/24/2017	<0.003	<0.003			
5/25/2017			<0.003	<0.003	
4/3/2018	<0.003	<0.003	<0.003	<0.003	
3/14/2019	<0.003			<0.003	
3/15/2019		<0.003	<0.003		<0.003
3/3/2020	<0.003	<0.003	<0.003	<0.003	<0.003
2/10/2021		<0.003			
2/11/2021			<0.003	<0.003	<0.003
2/12/2021	<0.003				
3/16/2021	<0.003				
3/17/2021		<0.003			
3/18/2021			<0.003	<0.003	<0.003

Time Series

Constituent: Antimony (mg/L) Analysis Run 5/4/2021 8:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

	MW-22	MW-23D	MW-33	MW-35	MW-37D
3/14/2019		<0.003			
3/15/2019	<0.003				
3/2/2020	<0.003	<0.003			
2/11/2021					0.00079 (J)
2/12/2021		<0.003	0.00046 (J)		
2/15/2021	<0.003			0.00041 (J)	
3/12/2021					<0.003
3/17/2021	<0.003	<0.003			
3/18/2021			<0.003		
3/19/2021				<0.003	

Time Series

Constituent: Arsenic (mg/L) Analysis Run 5/4/2021 8:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-4 (bg)	HGWA-42D (bg)
5/19/2016	<0.025	0.00127 (J)	<0.025	<0.025	
7/11/2016	<0.025	0.002 (J)		<0.025	
7/12/2016			0.0008 (J)		
8/30/2016	<0.025	0.0017 (J)	<0.025	<0.025	
10/19/2016	<0.025	<0.025	<0.025	<0.025	
12/6/2016	<0.025	<0.025	<0.025	<0.025	
1/24/2017	<0.025	<0.025	<0.025	<0.025	
3/21/2017	0.0005 (J)	<0.025	0.0007 (J)	<0.025	
5/22/2017	<0.025	0.0006 (J)	0.0006 (J)		
5/23/2017				<0.025	
4/2/2018	<0.025	<0.025		<0.025	
4/3/2018			<0.025		
6/4/2018	<0.025	0.00088 (J)	0.0008 (J)	<0.025	
10/1/2018	<0.025	<0.025	0.0011 (J)	<0.025	
3/11/2019				<0.025	
3/12/2019	<0.025	0.00069 (J)	0.00063 (J)		
4/1/2019			<0.025		
4/2/2019	<0.025	<0.025		<0.025	
9/23/2019	0.00046 (J)	0.00067 (J)	0.0011 (J)		
9/24/2019				<0.025	
3/2/2020	<0.025	0.00043 (J)	0.0004 (J)	<0.025	
3/25/2020	<0.025	<0.025	<0.025		
3/26/2020				<0.025	
9/15/2020	<0.025	<0.025	<0.025	<0.025	
9/17/2020					<0.025
11/11/2020					<0.025
12/15/2020					<0.025
1/20/2021					<0.025
2/8/2021	<0.025			<0.025	<0.025
2/9/2021		<0.025	<0.025		
3/10/2021	<0.025			<0.025	<0.025
3/11/2021		<0.025	<0.025		

Time Series

Constituent: Arsenic (mg/L) Analysis Run 5/4/2021 8:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-5 (bg)	HGWA-6 (bg)	HGWC-14
5/19/2016			<0.025		
5/20/2016				<0.025	
5/23/2016					0.00268 (J)
7/11/2016			<0.025	<0.025	
7/12/2016					0.0059
8/30/2016			<0.025	<0.025	
9/1/2016					0.0056
10/20/2016			<0.025	<0.025	
10/24/2016					0.0058
12/7/2016					<0.025
12/8/2016			<0.025	<0.025	
1/24/2017			<0.025	<0.025	
1/26/2017					0.0089
3/21/2017			<0.025	<0.025	
3/23/2017					0.0069
5/23/2017			<0.025	<0.025	
5/24/2017					0.0048 (J)
4/3/2018			<0.025	<0.025	
4/4/2018					0.0052
6/5/2018			<0.025	<0.025	
6/6/2018					0.0059
10/2/2018			0.00064 (J)	<0.025	
10/3/2018					0.0032 (J)
3/12/2019			<0.025	<0.025	
3/14/2019					0.0029 (J)
4/2/2019			<0.025	<0.025	
4/5/2019					<0.025
9/24/2019			0.00055 (J)	<0.025	0.0039 (J)
3/2/2020			<0.025	<0.025	
3/3/2020					0.0035 (J)
3/25/2020				<0.025	
3/26/2020			<0.025		
3/30/2020					0.0051
9/15/2020			<0.025	<0.025	
9/16/2020	<0.025	<0.025			
9/18/2020					0.0029 (J)
11/10/2020	0.0021 (J)	<0.025			
12/15/2020	<0.025	<0.025			
1/19/2021	0.0011 (J)	<0.025			
2/9/2021	0.0017 (J)	0.00083 (J)	<0.025	<0.025	
2/11/2021					0.0062
3/10/2021		<0.025			
3/11/2021	0.0013 (J)		<0.025	<0.025	
3/17/2021					<0.025

Time Series

Constituent: Arsenic (mg/L) Analysis Run 5/4/2021 8:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWC-15	HGWC-16	HGWC-17	HGWC-18	MW-21D
5/23/2016	<0.025	<0.025	<0.025		
5/24/2016				0.00294 (J)	
7/12/2016	<0.025	<0.025	<0.025	0.0074	
9/1/2016	<0.025	<0.025	<0.025	0.0073	
10/24/2016	<0.025				
10/25/2016		<0.025	<0.025	0.006	
12/7/2016	<0.025	<0.025	<0.025		
12/8/2016				0.007	
1/26/2017	<0.025	<0.025	<0.025	0.0068	
3/22/2017		0.0005 (J)	0.0007 (J)		
3/23/2017	0.0008 (J)			0.0082	
5/24/2017	<0.025	<0.025			
5/25/2017			0.0007 (J)	0.006	
4/3/2018	<0.025	<0.025	<0.025	0.0062	
6/5/2018				0.008	
6/6/2018	<0.025	<0.025	0.00097 (J)		
10/3/2018	<0.025	<0.025	<0.025	0.0039 (J)	
3/14/2019	<0.025			0.0036 (J)	
3/15/2019		<0.025	<0.025		<0.025
4/4/2019	0.00017 (J)	0.0001 (J)			0.00019 (J)
4/5/2019			<0.025	0.0015 (J)	
9/24/2019	0.00037 (J)				
9/25/2019		<0.025	<0.025	0.0044 (J)	<0.025
3/3/2020	<0.025	<0.025	<0.025	0.0057	<0.025
3/26/2020	<0.025				
3/30/2020		0.0011 (J)			
3/31/2020			0.0008 (J)	0.0056	
4/1/2020					0.0013 (J)
6/17/2020					<0.025
9/15/2020				0.0074	
9/16/2020			<0.025		
9/17/2020	<0.025	<0.025			
9/21/2020					<0.025
2/10/2021		0.0012 (J)			
2/11/2021			0.0012 (J)	0.0069 (B)	0.001 (J)
2/12/2021	<0.025				
3/16/2021	<0.025				
3/17/2021		<0.025			
3/18/2021			<0.025	0.0083 (J)	<0.025

Time Series

Constituent: Arsenic (mg/L) Analysis Run 5/4/2021 8:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

	MW-22	MW-23D	MW-33	MW-35	MW-37D
3/14/2019		<0.025			
3/15/2019	<0.025				
4/5/2019	<0.025	<0.025			
9/26/2019		<0.025			
9/27/2019	0.00045 (J)				
3/2/2020	<0.025	<0.025			
3/27/2020	<0.025				
4/1/2020		0.00082 (J)	0.0061		
6/17/2020			0.0031 (J)		
6/18/2020				0.005 (J)	0.0021 (J)
9/17/2020	<0.025	<0.025			
9/21/2020			0.0083	0.0059	
9/23/2020					0.00095 (J)
2/11/2021					0.0023 (J)
2/12/2021		0.001 (J)	0.0059		
2/15/2021	<0.025			0.005	
3/12/2021					<0.025
3/17/2021	<0.025	<0.025			
3/18/2021			0.0054 (J)		
3/19/2021				<0.025	

Time Series

Constituent: Barium (mg/L) Analysis Run 5/4/2021 8:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-4 (bg)	HGWA-42D (bg)
5/19/2016	0.0346	0.114	0.111	0.0266	
7/11/2016	0.0311	0.112		0.0309	
7/12/2016			0.115		
8/30/2016	0.0293	0.131	0.113	0.031	
10/19/2016	0.0293	0.111	0.123	0.0332	
12/6/2016	0.0304	0.108	0.127	0.0334	
1/24/2017	0.028	0.102	0.126	0.0192	
3/21/2017	0.0275	0.095	0.12	0.0175	
5/22/2017	0.0281	0.103	0.117		
5/23/2017				0.0227	
4/2/2018	0.026	0.099		0.022	
4/3/2018			0.11		
6/4/2018	0.035	0.11	0.12	0.027	
10/1/2018	0.029	0.11	0.14	0.018	
3/11/2019				0.029	
3/12/2019	0.042	0.12	0.13		
4/1/2019			0.13		
4/2/2019	0.04	0.13		0.03	
9/23/2019	0.042	0.13	0.13		
9/24/2019				0.03	
3/2/2020	0.034	0.11	0.14	0.023	
3/25/2020	0.043	0.12	0.13		
3/26/2020				0.026	
9/15/2020	0.035	0.12	0.12	0.024	
9/17/2020					0.13
11/11/2020					0.18
12/15/2020					0.19
1/20/2021					0.2
2/8/2021	0.032			0.04	0.19
2/9/2021		0.12	0.13		
3/10/2021	0.03			0.036	0.18
3/11/2021		0.07	0.13		

Time Series

Constituent: Barium (mg/L) Analysis Run 5/4/2021 8:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-5 (bg)	HGWA-6 (bg)	HGWC-14
5/19/2016			0.0519		
5/20/2016				0.174	
5/23/2016					<0.2
7/11/2016			0.0565	0.134	
7/12/2016					0.0214
8/30/2016			0.0548	0.212	
9/1/2016					0.0208
10/20/2016			0.0539	0.157	
10/24/2016					0.0208
12/7/2016					0.022
12/8/2016			0.0496	0.162	
1/24/2017			0.0478	0.168	
1/26/2017					0.0238
3/21/2017			0.0453	0.186	
3/23/2017					0.0244
5/23/2017			0.0496	0.187	
5/24/2017					0.0228
4/3/2018			0.038	0.14	
4/4/2018					0.021
6/5/2018			0.046	0.21	
6/6/2018					0.022
10/2/2018			0.047	0.19	
10/3/2018					0.02
3/12/2019			0.05	0.2	
3/14/2019					0.019
4/2/2019			0.044	0.19	
4/5/2019					0.016
9/24/2019			0.053	0.22	0.021
3/2/2020			0.053	0.19	
3/3/2020					0.018
3/25/2020				0.19	
3/26/2020			0.045		
3/30/2020					0.02
9/15/2020			0.045	0.19	
9/16/2020	0.26	0.24			
9/18/2020					0.019
11/10/2020	0.25	0.38			
12/15/2020	0.29	0.39			
1/19/2021	0.32	0.41			
2/9/2021	0.34	0.46	0.046	0.21	
2/11/2021					0.02
3/10/2021		0.26			
3/11/2021	0.32		0.044	0.21	
3/17/2021					0.023

Time Series

Constituent: Barium (mg/L) Analysis Run 5/4/2021 8:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWC-15	HGWC-16	HGWC-17	HGWC-18	MW-21D
5/23/2016	0.0315 (J)	0.0841	0.0222 (J)		
5/24/2016				<0.2	
7/12/2016	0.0372	0.0886	0.0221	0.0346	
9/1/2016	0.0364	0.0934	0.0227	0.0336	
10/24/2016	0.0326				
10/25/2016		0.0991	0.0225	0.0349	
12/7/2016	0.0301	0.101	0.0227		
12/8/2016				0.0339	
1/26/2017	0.0287	0.105	0.0229	0.0293	
3/22/2017		0.11	0.0248		
3/23/2017	0.0329			0.0313	
5/24/2017	0.0283	0.106			
5/25/2017			0.0255	0.0336	
4/3/2018	0.019	0.099	0.025	0.028	
6/5/2018				0.03	
6/6/2018	0.022	0.11	0.028		
10/3/2018	0.025	0.11	0.028	0.032	
3/14/2019	0.021			0.029	
3/15/2019		0.13	0.029		0.09
4/4/2019	0.018	0.11			0.075
4/5/2019			0.022	0.021	
9/24/2019	0.019				
9/25/2019		0.11	0.025	0.03	0.066
3/3/2020	0.018	0.12	0.026	0.026	0.058
3/26/2020	0.016				
3/30/2020		0.11			
3/31/2020			0.029	0.029	
4/1/2020					0.066
6/17/2020					0.054
9/15/2020				0.03	
9/16/2020			0.025		
9/17/2020	0.017	0.11			
9/21/2020					0.049
2/10/2021		0.11			
2/11/2021			0.025	0.03	0.044
2/12/2021	0.014				
3/16/2021	0.012				
3/17/2021		0.12			
3/18/2021			0.027	0.031	0.047

Time Series

Constituent: Barium (mg/L) Analysis Run 5/4/2021 8:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

	MW-22	MW-23D	MW-33	MW-35	MW-37D
3/14/2019		0.082			
3/15/2019	0.044				
4/5/2019	0.036	0.061			
9/26/2019		0.064			
9/27/2019	0.028				
3/2/2020	0.027	0.06			
3/27/2020	0.025				
4/1/2020		0.065	0.027		
6/17/2020			0.024		
6/18/2020				0.029	0.19
9/17/2020	0.02	0.057			
9/21/2020			0.024	0.028	
9/23/2020					0.14
2/11/2021					0.14
2/12/2021		0.056	0.025		
2/15/2021	0.017			0.026	
3/12/2021					0.12
3/17/2021	0.018	0.058			
3/18/2021			0.029		
3/19/2021				0.032	

Time Series

Constituent: Beryllium (mg/L) Analysis Run 5/4/2021 8:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-4 (bg)	HGWA-42D (bg)
5/19/2016	<0.0005	<0.0005	<0.0005	<0.0005	
7/11/2016	<0.0005	0.0001 (J)		<0.0005	
7/12/2016			<0.0005		
8/30/2016	<0.0005	<0.0005	<0.0005	<0.0005	
10/19/2016	<0.0005	0.0001 (J)	<0.0005	<0.0005	
12/6/2016	<0.0005	0.0002 (J)	<0.0005	<0.0005	
1/24/2017	<0.0005	0.0001 (J)	<0.0005	<0.0005	
3/21/2017	<0.0005	0.0001 (J)	<0.0005	<0.0005	
5/22/2017	<0.0005	0.0001 (J)	<0.0005		
5/23/2017				<0.0005	
4/2/2018	<0.0005	<0.0005		<0.0005	
4/3/2018			<0.0005		
3/11/2019				5E-05 (J)	
3/12/2019	<0.0005	0.00017 (J)	<0.0005		
4/1/2019			<0.0005		
4/2/2019	<0.0005	0.00015 (J)		<0.0005	
9/23/2019	<0.0005	0.00011 (J)	<0.0005		
9/24/2019				<0.0005	
3/2/2020	<0.0005	0.00014 (J)	<0.0005	0.00019 (J)	
3/25/2020	<0.0005	0.00016 (J)	<0.0005		
3/26/2020				7.6E-05 (J)	
9/15/2020	<0.0005	0.00013 (J)	<0.0005	<0.0005	
9/17/2020					<0.0005
11/11/2020					<0.0005
12/15/2020					<0.0005
1/20/2021					<0.0005
2/8/2021	<0.0005			0.00023 (J)	<0.0005
2/9/2021		0.00014 (J)	<0.0005		
3/10/2021	<0.0005			0.00017 (J)	<0.0005
3/11/2021		8.6E-05 (J)	<0.0005		

Time Series

Constituent: Beryllium (mg/L) Analysis Run 5/4/2021 8:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-5 (bg)	HGWA-6 (bg)	HGWC-14
5/19/2016			<0.0005		
5/20/2016				<0.0005	
5/23/2016					<0.0005
7/11/2016			<0.0005	<0.0005	
7/12/2016					0.0005 (J)
8/30/2016			<0.0005	<0.0005	
9/1/2016					0.0005 (J)
10/20/2016			<0.0005	<0.0005	
10/24/2016					0.0005 (J)
12/7/2016					0.0006 (J)
12/8/2016			<0.0005	<0.0005	
1/24/2017			<0.0005	<0.0005	
1/26/2017					0.0005 (J)
3/21/2017			<0.0005	<0.0005	
3/23/2017					0.0006 (J)
5/23/2017			<0.0005	<0.0005	
5/24/2017					0.0005 (J)
4/3/2018			<0.0005	<0.0005	
4/4/2018					<0.0005
3/12/2019			<0.0005	<0.0005	
3/14/2019					0.00043 (J)
4/2/2019			<0.0005	<0.0005	
4/5/2019					0.00027 (J)
9/24/2019			<0.0005	<0.0005	0.00044 (J)
3/2/2020			<0.0005	<0.0005	
3/3/2020					0.00043 (J)
3/25/2020				<0.0005	
3/26/2020			<0.0005		
3/30/2020					0.00043 (J)
9/15/2020			<0.0005	<0.0005	
9/16/2020	<0.0005	<0.0005			
9/18/2020					0.00043 (J)
11/10/2020	<0.0005	<0.0005			
12/15/2020	<0.0005	<0.0005			
1/19/2021	<0.0005	<0.0005			
2/9/2021	<0.0005	<0.0005	<0.0005	<0.0005	
2/11/2021					0.00044 (J)
3/10/2021		<0.0005			
3/11/2021	<0.0005		<0.0005	<0.0005	
3/17/2021					0.00058

Time Series

Constituent: Beryllium (mg/L) Analysis Run 5/4/2021 8:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWC-15	HGWC-16	HGWC-17	HGWC-18	MW-21D
5/23/2016	<0.0005	<0.0005	<0.0005		
5/24/2016				0.00278 (J)	
7/12/2016	<0.0005	<0.0005	<0.0005	0.0032	
9/1/2016	<0.0005	<0.0005	<0.0005	0.0034	
10/24/2016	<0.0005				
10/25/2016		<0.0005	<0.0005	0.0034	
12/7/2016	<0.0005	<0.0005	<0.0005		
12/8/2016				0.0033	
1/26/2017	<0.0005	<0.0005	<0.0005	0.0034	
3/22/2017		<0.0005	<0.0005		
3/23/2017	<0.0005			0.0036	
5/24/2017	<0.0005	<0.0005			
5/25/2017			<0.0005	0.0036	
4/3/2018	<0.0005	<0.0005	<0.0005	<0.0005	
3/14/2019	<0.0005			0.0026 (J)	
3/15/2019		<0.0005	<0.0005		<0.0005
4/4/2019	<0.0005	<0.0005			<0.0005
4/5/2019			<0.0005	0.0022 (J)	
9/24/2019	<0.0005				
9/25/2019		<0.0005	<0.0005	0.0031	<0.0005
3/3/2020	<0.0005	<0.0005	<0.0005	0.0029 (J)	<0.0005
3/26/2020	<0.0005				
3/30/2020		<0.0005			
3/31/2020			<0.0005	0.003	
4/1/2020					<0.0005
6/17/2020					<0.0005
9/15/2020				0.0033	
9/16/2020			<0.0005		
9/17/2020	<0.0005	<0.0005			
9/21/2020					<0.0005
2/10/2021		<0.0005			
2/11/2021			6.7E-05 (J)	0.0036	<0.0005
2/12/2021	<0.0005				
3/16/2021	<0.0005				
3/17/2021		<0.0005			
3/18/2021			4.8E-05 (J)	0.0038	<0.0005

Time Series

Constituent: Beryllium (mg/L) Analysis Run 5/4/2021 8:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

	MW-22	MW-23D	MW-33	MW-35	MW-37D
3/14/2019		<0.0005			
3/15/2019	<0.0005				
4/5/2019	<0.0005	<0.0005			
9/26/2019		<0.0005			
9/27/2019	<0.0005				
3/2/2020	<0.0005	<0.0005			
3/27/2020	<0.0005				
4/1/2020		<0.0005	0.0011 (J)		
6/17/2020			0.00099 (J)		
6/18/2020				0.00032 (J)	0.00012 (J)
9/17/2020	4.7E-05 (J)	<0.0005			
9/21/2020			0.0009 (J)	0.0004 (J)	
9/23/2020					<0.0005
2/11/2021					<0.0005
2/12/2021		<0.0005	0.001 (J)		
2/15/2021	6.2E-05 (J)			0.0006 (J)	
3/12/2021					<0.0005
3/17/2021	8.2E-05 (J)	<0.0005			
3/18/2021			0.0011		
3/19/2021				0.00061	

Time Series

Constituent: Boron (mg/L) Analysis Run 5/4/2021 8:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-4 (bg)	HGWA-42D (bg)
5/19/2016	0.0214 (J)	0.0321 (J)	<0.04	<0.04	
7/11/2016	0.0142 (J)	0.0337 (J)		0.0175 (J)	
7/12/2016			0.0074 (J)		
8/30/2016	0.0074 (J)	0.0173 (J)	<0.04	0.0072 (J)	
10/19/2016	0.0224 (J)	0.0341 (J)	0.0085 (J)	0.018 (J)	
12/6/2016	0.0211 (J)	0.0326 (J)	0.0085 (J)	0.0158 (J)	
1/24/2017	0.0165 (J)	0.0365 (J)	0.01 (J)	0.0145 (J)	
3/21/2017	0.0187 (J)	0.0349 (J)	0.0079 (J)	0.0101 (J)	
5/22/2017	0.0782	0.0475	0.0131 (J)		
5/23/2017				0.0159 (J)	
10/3/2017	0.0198 (J)	0.0386 (J)	0.0097 (J)	0.0162 (J)	
6/4/2018	0.02 (J)	0.036 (J)	0.017 (J)	0.014 (J)	
10/1/2018	0.013 (J)	0.035 (J)	0.0061 (J)	0.0093 (J)	
4/1/2019			0.0066 (J)		
4/2/2019	0.016 (J)	0.034 (J)		0.01 (J)	
9/23/2019	0.021 (J)	0.04 (J)	0.0081 (J)		
9/24/2019				0.013 (J)	
3/25/2020	0.025 (J)	0.039 (J)	0.0096 (J)		
3/26/2020				0.012 (J)	
9/15/2020	0.017 (J)	0.044 (J)	0.0071 (J)	0.013 (J)	
9/17/2020					0.098 (J)
11/11/2020					0.058 (J)
12/15/2020					0.043 (J)
1/20/2021					0.045 (J)
3/10/2021	0.015 (J)			0.012 (J)	0.048
3/11/2021		0.056	0.015 (J)		

Time Series

Constituent: Boron (mg/L) Analysis Run 5/4/2021 8:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-5 (bg)	HGWA-6 (bg)	HGWC-14
5/19/2016			<0.04		
5/20/2016				0.0363 (J)	
5/23/2016					15.4
7/11/2016			0.0052 (J)	0.0179 (J)	
7/12/2016					16
8/30/2016			0.0068 (J)	0.014 (J)	
9/1/2016					12.3
10/20/2016			0.0135 (J)	0.0197 (J)	
10/24/2016					13.7
12/7/2016					16.5
12/8/2016			0.0083 (J)	0.0159 (J)	
1/24/2017			0.0072 (J)	<0.04	
1/26/2017					19.2
3/21/2017			<0.04	0.0166 (J)	
3/23/2017					23.1
5/23/2017			0.0095 (J)	0.0167 (J)	
5/24/2017					25.8
10/3/2017			0.0071 (J)	0.017 (J)	
10/4/2017					20.5
6/5/2018			0.0066 (J)	0.016 (J)	
6/6/2018					16.7
10/2/2018			0.0081 (J)	0.014 (J)	
10/3/2018					16.4
4/2/2019			0.0052 (J)	0.013 (J)	
4/5/2019					12.5
9/24/2019			0.0088 (J)	0.016 (J)	14.7
3/25/2020				0.021 (J)	
3/26/2020			0.0072 (J)		
3/30/2020					11.7
9/15/2020			0.012 (J)	0.016 (J)	
9/16/2020	0.061 (J)	0.23			
9/18/2020					11
11/10/2020	0.057 (J)	0.29			
12/15/2020	0.052 (J)	0.31			
1/19/2021	0.049 (J)	0.4			
3/10/2021		0.39			
3/11/2021	0.06		0.0075 (J)	0.018 (J)	
3/17/2021					11.8

Time Series

Constituent: Boron (mg/L) Analysis Run 5/4/2021 8:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWC-15	HGWC-16	HGWC-17	HGWC-18	MW-21D
5/23/2016	2.02	1.36	5.7		
5/24/2016				9.33	
7/12/2016	1.65	1.62	9.58	11.9	
9/1/2016	1.93	1.31	5.76	8.8	
10/24/2016	1.93				
10/25/2016		1.27	5.38	8.5	
12/7/2016	2.23	1.42	5.74		
12/8/2016				7.15	
1/26/2017	2.31	1.19	5.78	9.17	
3/22/2017		1.32	5.52		
3/23/2017	2.72			10.6	
5/24/2017	2.26	1.67			
5/25/2017			8.58	13.2	
10/4/2017	2	1.43	6.8	10	
6/5/2018				8.4	
6/6/2018	2.4	1.9	6.3		
10/3/2018	2.4	1.7	6.9	9.3	
4/4/2019	2.3	2.1			5.2
4/5/2019			5.9	6.4	
9/24/2019	2.9				
9/25/2019		2.7	8.1	11.7	6.4
3/26/2020	2.1				
3/30/2020		2.4			
3/31/2020			6.9	9.4	
4/1/2020					6.3
6/17/2020					5.8
9/15/2020				9.4	
9/16/2020			6.7		
9/17/2020	2.2	2.4			
9/21/2020					5.6
3/16/2021	2.4				
3/17/2021		2.7			
3/18/2021			6.8	8.9	5.7

Time Series

Constituent: Boron (mg/L) Analysis Run 5/4/2021 8:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

	MW-22	MW-23D	MW-33	MW-35	MW-37D
4/5/2019	2.1	3			
9/26/2019		3.8			
9/27/2019	2.9				
1/22/2020			11.2		
3/27/2020	2.4				
4/1/2020		3.5	11.6		
6/17/2020			10.3		
6/18/2020				11.9	0.14
9/17/2020	2.3	2.7			
9/21/2020			9	12.3	
9/23/2020					0.12
3/12/2021					0.15
3/17/2021	2.7	3.4			
3/18/2021			10.2		
3/19/2021				11.9	

Time Series

Constituent: Cadmium (mg/L) Analysis Run 5/4/2021 8:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-4 (bg)	HGWA-42D (bg)
5/19/2016	<0.0005	<0.0005	<0.0005	<0.0005	
7/11/2016	<0.0005	<0.0005		<0.0005	
7/12/2016			<0.0005		
8/30/2016	<0.0005	<0.0005	<0.0005	<0.0005	
10/19/2016	<0.0005	<0.0005	<0.0005	<0.0005	
12/6/2016	<0.0005	<0.0005	<0.0005	<0.0005	
1/24/2017	<0.0005	0.0001 (J)	<0.0005	<0.0005	
3/21/2017	<0.0005	7E-05 (J)	<0.0005	<0.0005	
5/22/2017	<0.0005	0.0001 (J)	<0.0005		
5/23/2017				<0.0005	
4/2/2018	<0.0005	<0.0005		<0.0005	
4/3/2018			<0.0005		
6/4/2018	<0.0005	0.00014 (J)	<0.0005	<0.0005	
10/1/2018	<0.0005	<0.0005	<0.0005	<0.0005	
3/11/2019				<0.0005	
3/12/2019	<0.0005	0.00013 (J)	<0.0005		
4/1/2019			<0.0005		
4/2/2019	<0.0005	0.00015 (J)		<0.0005	
9/23/2019	<0.0005	<0.0005	<0.0005		
9/24/2019				<0.0005	
3/2/2020	<0.0005	<0.0005	<0.0005	<0.0005	
3/25/2020	<0.0005	0.00014 (J)	<0.0005		
3/26/2020				<0.0005	
9/15/2020	<0.0005	0.00012 (J)	<0.0005	<0.0005	
9/17/2020					<0.0005
11/11/2020					<0.0005
12/15/2020					<0.0005
1/20/2021					<0.0005
2/8/2021	<0.0005			<0.0005	<0.0005
2/9/2021		0.00016 (J)	<0.0005		
3/10/2021	<0.0005			<0.0005	<0.0005
3/11/2021		<0.0005	<0.0005		

Time Series

Constituent: Cadmium (mg/L) Analysis Run 5/4/2021 8:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-5 (bg)	HGWA-6 (bg)	HGWC-14
5/19/2016			<0.0005		
5/20/2016				<0.0005	
5/23/2016					0.000139 (J)
7/11/2016			<0.0005	<0.0005	
7/12/2016					<0.0005
8/30/2016			<0.0005	<0.0005	
9/1/2016					0.0001 (J)
10/20/2016			<0.0005	<0.0005	
10/24/2016					0.0002 (J)
12/7/2016					0.0001 (J)
12/8/2016			<0.0005	<0.0005	
1/24/2017			<0.0005	<0.0005	
1/26/2017					0.0001 (J)
3/21/2017			<0.0005	<0.0005	
3/23/2017					0.0002 (J)
5/23/2017			<0.0005	<0.0005	
5/24/2017					0.0001 (J)
4/3/2018			<0.0005	<0.0005	
4/4/2018					<0.0005
6/5/2018			<0.0005	<0.0005	
6/6/2018					0.00012 (J)
10/2/2018			<0.0005	<0.0005	
10/3/2018					0.0001 (J)
3/12/2019			<0.0005	<0.0005	
3/14/2019					<0.0005
4/2/2019			<0.0005	<0.0005	
4/5/2019					7.9E-05 (J)
9/24/2019			<0.0005	<0.0005	<0.0005
3/2/2020			<0.0005	<0.0005	
3/3/2020					<0.0005
3/25/2020				<0.0005	
3/26/2020			<0.0005		
3/30/2020					<0.0005
9/15/2020			<0.0005	<0.0005	
9/16/2020	<0.0005	<0.0005			
9/18/2020					<0.0005
11/10/2020	<0.0005	<0.0005			
12/15/2020	<0.0005	<0.0005			
1/19/2021	<0.0005	<0.0005			
2/9/2021	<0.0005	<0.0005	<0.0005	<0.0005	
2/11/2021					<0.0005
3/10/2021		<0.0005			
3/11/2021	<0.0005		<0.0005	<0.0005	
3/17/2021					<0.0005

Time Series

Constituent: Cadmium (mg/L) Analysis Run 5/4/2021 8:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWC-15	HGWC-16	HGWC-17	HGWC-18	MW-21D
5/23/2016	0.00271 (J)	<0.0005	<0.0005		
5/24/2016				<0.0005	
7/12/2016	0.0019	<0.0005	<0.0005	0.0022	
9/1/2016	0.0017	<0.0005	<0.0005	0.0024	
10/24/2016	0.0018				
10/25/2016		<0.0005	<0.0005	0.0022	
12/7/2016	0.0018	<0.0005	<0.0005		
12/8/2016				0.0024	
1/26/2017	0.0013	<0.0005	<0.0005	0.0025	
3/22/2017		<0.0005	7E-05 (J)		
3/23/2017	0.002			0.0025	
5/24/2017	0.0041	<0.0005			
5/25/2017			<0.0005	0.0027	
4/3/2018	0.0022	<0.0005	<0.0005	0.0022	
6/5/2018				0.0022	
6/6/2018	0.0021	<0.0005	<0.0005		
10/3/2018	0.0026	<0.0005	<0.0005	0.0027	
3/14/2019	0.0024			0.0019	
3/15/2019		<0.0005	<0.0005		<0.0005
4/4/2019	0.0018	<0.0005			<0.0005
4/5/2019			<0.0005	0.0017	
9/24/2019	0.0014 (J)				
9/25/2019		<0.0005	<0.0005	0.0023 (J)	<0.0005
3/3/2020	0.0015 (J)	<0.0005	<0.0005	0.0021 (J)	<0.0005
3/26/2020	0.0016 (J)				
3/30/2020		<0.0005			
3/31/2020			<0.0005	0.0017 (J)	
4/1/2020					<0.0005
6/17/2020					<0.0005
9/15/2020				0.0019 (J)	
9/16/2020			<0.0005		
9/17/2020	0.0016 (J)	<0.0005			
9/21/2020					<0.0005
2/10/2021		<0.0005			
2/11/2021			<0.0005	0.0016 (J)	<0.0005
2/12/2021	0.0014 (J)				
3/16/2021	0.0011				
3/17/2021		<0.0005			
3/18/2021			<0.0005	0.0015	<0.0005

Time Series

Constituent: Cadmium (mg/L) Analysis Run 5/4/2021 8:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

	MW-22	MW-23D	MW-33	MW-35	MW-37D
3/14/2019		<0.0005			
3/15/2019	0.00082 (J)				
4/5/2019	0.00064 (J)	<0.0005			
9/26/2019		<0.0005			
9/27/2019	0.0014 (J)				
3/2/2020	0.0021 (J)	<0.0005			
3/27/2020	0.0019 (J)				
4/1/2020		<0.0005	0.00022 (J)		
6/17/2020			0.00021 (J)		
6/18/2020				0.00053 (J)	<0.0005
9/17/2020	0.0021 (J)	0.0006 (J)			
9/21/2020			0.00016 (J)	0.001 (J)	
9/23/2020					<0.0005
2/11/2021					<0.0005
2/12/2021		0.00045 (J)	0.00017 (J)		
2/15/2021	0.002 (J)			0.0017 (J)	
3/12/2021					<0.0005
3/17/2021	0.0022	0.00057			
3/18/2021			0.00019 (J)		
3/19/2021				0.0018	

Time Series

Constituent: Calcium (mg/L) Analysis Run 5/4/2021 8:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-4 (bg)	HGWA-42D (bg)
5/19/2016	138	22.9	76.2	48.4	
7/11/2016	97.2	22.3		73	
7/12/2016			61.5		
8/30/2016	97.5	26.4	65.1	85.7	
10/19/2016	99.2	21.7	73.2	89.7	
12/6/2016	105	18.2	74.9	80	
1/24/2017	95.7	18.5	69.6	30.8	
3/21/2017	106	18.6	75.7	34	
5/22/2017	107	17.8	71.5		
5/23/2017				43	
10/3/2017	102	20.2	76.3	46.9	
6/4/2018	124	19.1	73.4	81.9	
10/1/2018	108	20.5 (J)	80.9	22 (J)	
4/1/2019			80.5		
4/2/2019	132	22.5 (J)		76	
9/23/2019	118	19.5	71		
9/24/2019				36.6	
3/25/2020	127	23	89.8		
3/26/2020				14.9	
9/15/2020	103	21.1	73.1	20.4	
9/17/2020					43.8
11/11/2020					44.4
12/15/2020					47.3
1/20/2021					41.8
3/10/2021	111			5.9	43.4
3/11/2021		43.8	83.8		

Time Series

Constituent: Calcium (mg/L) Analysis Run 5/4/2021 8:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-5 (bg)	HGWA-6 (bg)	HGWC-14
5/19/2016			35.5		
5/20/2016				56.1	
5/23/2016					664
7/11/2016			35.4	49.3	
7/12/2016					528
8/30/2016			28	53.9	
9/1/2016					586
10/20/2016			26.7	50.7	
10/24/2016					564
12/7/2016					590
12/8/2016			23.5	49.2	
1/24/2017			24.5	48.3	
1/26/2017					558
3/21/2017			30.8	51.3	
3/23/2017					652
5/23/2017			24.2	49.1	
5/24/2017					617
10/3/2017			29	55.1	
10/4/2017					644
6/5/2018			27.8	54.5	
6/6/2018					606
10/2/2018			28.9	54.7	
10/3/2018					558
4/2/2019			26.3	49.7	
4/5/2019					606
9/24/2019			29.3	52.5	507
3/25/2020				58.1	
3/26/2020			27.8		
3/30/2020					600
9/15/2020			27.9	49.9	
9/16/2020	56	30			
9/18/2020					623
11/10/2020	63.3	33.6			
12/15/2020	62.6	28.7			
1/19/2021	60.1	33			
3/10/2021		18.3			
3/11/2021	59.6		28.3	53.1	
3/17/2021					572

Time Series

Constituent: Calcium (mg/L) Analysis Run 5/4/2021 8:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWC-15	HGWC-16	HGWC-17	HGWC-18	MW-21D
5/23/2016	184	146	225		
5/24/2016				403	
7/12/2016	186	142	199	328	
9/1/2016	189	141	213	379	
10/24/2016	200				
10/25/2016		138	206	362	
12/7/2016	203	146	212		
12/8/2016				366	
1/26/2017	212	139	198	394	
3/22/2017		150	239		
3/23/2017	229			440	
5/24/2017	265	153			
5/25/2017			292	492	
10/4/2017	230	156	305	470	
6/5/2018				425	
6/6/2018	250	177	299		
10/3/2018	234	160	286	421	
4/4/2019	214	196			427
4/5/2019			340	400	
9/24/2019	202				
9/25/2019		185	305	437	420
3/26/2020	240				
3/30/2020		208			
3/31/2020			328	418	
4/1/2020					438
6/17/2020					434
9/15/2020				430	
9/16/2020			277		
9/17/2020	188	190			
9/21/2020					428
3/16/2021	196				
3/17/2021		198			
3/18/2021			266	407	382

Time Series

Constituent: Calcium (mg/L) Analysis Run 5/4/2021 8:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

	MW-22	MW-23D	MW-33	MW-35	MW-37D
4/5/2019	178	352			
9/26/2019		306			
9/27/2019	202				
1/22/2020			638		
3/27/2020	212				
4/1/2020		342	567		
6/17/2020			561		
6/18/2020				517	165
9/17/2020	203	361			
9/21/2020			562	503	
9/23/2020					158
3/12/2021					170
3/17/2021	200	341			
3/18/2021			574		
3/19/2021				552	

Time Series

Constituent: Chloride (mg/L) Analysis Run 5/4/2021 8:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-4 (bg)	HGWA-42D (bg)
5/19/2016	9.94	6.14	5.93	4.56	
7/11/2016	6.3	5.9		5	
7/12/2016			6.2		
8/30/2016	6	6.2	6.4	4.9	
10/19/2016	5.8	6.1	6.5	4.6	
12/6/2016	5.4	6	7.2	4.5	
1/24/2017	5.2	6.1	6.4	4.7	
3/21/2017	4.6	5.9	7.5	4.3	
5/22/2017	4.6	5.9	6.5		
5/23/2017				4.5	
10/3/2017	5.6	6.3	6.5	4.8	
6/4/2018	13.1	6.1	6.3	4.5	
10/1/2018	6.6	6.4	6.4	3.8	
4/1/2019			6.5		
4/2/2019	20.3	5.8		4.4	
9/23/2019	17.7	5.1	5.9		
9/24/2019				3.6	
3/25/2020	20.4	5.2	6.1		
3/26/2020				3.4	
9/15/2020	13.4	5	6	3.3	
9/17/2020					5.8
11/11/2020					3.1
12/15/2020					3.2
1/20/2021					2.8
3/10/2021	7.4			2.9	3
3/11/2021		5.1	5.9		

Time Series

Constituent: Chloride (mg/L) Analysis Run 5/4/2021 8:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-5 (bg)	HGWA-6 (bg)	HGWC-14
5/19/2016			1.57		
5/20/2016				1.35	
5/23/2016					659
7/11/2016			2	1.7	
7/12/2016					620
8/30/2016			2	1.6	
9/1/2016					510
10/20/2016			2.2	1.6	
10/24/2016					110
12/7/2016					510
12/8/2016			2	1.6	
1/24/2017			1.6	1.9	
1/26/2017					640
3/21/2017			2	1.3	
3/23/2017					600
5/23/2017			1.7	1.2	
5/24/2017					510
10/3/2017			1.7	2.1	
10/4/2017					420
6/5/2018			1.6	1.2	
6/6/2018					357
10/2/2018			2.4	1.7	
10/3/2018					368
4/2/2019			1.7	1.6	
4/5/2019					227
9/24/2019			1.7	1.3	188
3/25/2020				1.2	
3/26/2020			1.4		
3/30/2020					236
9/15/2020			1.7	1.2	
9/16/2020	4.1	7.2			
9/18/2020					288
11/10/2020	4.4	7.8			
12/15/2020	4.7	9.4			
1/19/2021	4.1	9.5			
3/10/2021		12.3			
3/11/2021	4.5		1.4	1.2	
3/17/2021					233

Time Series

Constituent: Chloride (mg/L) Analysis Run 5/4/2021 8:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWC-15	HGWC-16	HGWC-17	HGWC-18	MW-21D
5/23/2016	209	25.8	94		
5/24/2016				280	
7/12/2016	190	34	100	300	
9/1/2016	200	34	95	270	
10/24/2016	200				
10/25/2016		35	98	290	
12/7/2016	240	38	89		
12/8/2016				300	
1/26/2017	260	41	99	340	
3/22/2017		41	100		
3/23/2017	280			350	
5/24/2017	240	44			
5/25/2017			99	290	
10/4/2017	210	50	130	260	
6/5/2018				261	
6/6/2018	196	50.6	166		
10/3/2018	200	49.9	193	302	
4/4/2019	138	76.8			299
4/5/2019			195	217	
9/24/2019	120				
9/25/2019		84.4	139	181	245
3/26/2020	142				
3/30/2020		80.2			
3/31/2020			161	126	
4/1/2020					236
6/17/2020					223
9/15/2020				150	
9/16/2020			156		
9/17/2020	108	99.3			
9/21/2020					236
3/16/2021	103				
3/17/2021		93.8			
3/18/2021			138	90.2	208

Time Series

Constituent: Chloride (mg/L) Analysis Run 5/4/2021 8:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

	MW-22	MW-23D	MW-33	MW-35	MW-37D
4/5/2019	131	195			
9/26/2019		204			
9/27/2019	176				
1/22/2020			231		
3/27/2020	141				
4/1/2020		166	242		
6/17/2020			250		
6/18/2020				229	151
9/17/2020	153	171			
9/21/2020			273	257	
9/23/2020					166
3/12/2021					124
3/17/2021	127	151			
3/18/2021			199		
3/19/2021				250	

Time Series

Constituent: Chromium (mg/L) Analysis Run 5/4/2021 8:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-4 (bg)	HGWA-42D (bg)
5/19/2016	<0.025	<0.025	<0.025	<0.025	
7/11/2016	<0.025	<0.025		<0.025	
7/12/2016			<0.025		
8/30/2016	<0.025	<0.025	<0.025	<0.025	
10/19/2016	<0.025	<0.025	<0.025	<0.025	
12/6/2016	<0.025	<0.025	<0.025	<0.025	
1/24/2017	<0.025	<0.025	<0.025	<0.025	
3/21/2017	0.0005 (J)	<0.025	<0.025	0.0004 (J)	
5/22/2017	<0.025	<0.025	0.0007 (J)		
5/23/2017				<0.025	
4/2/2018	<0.025	<0.025		<0.025	
4/3/2018			<0.025		
3/11/2019				<0.025	
3/12/2019	<0.025	<0.025	<0.025		
4/1/2019			<0.025		
4/2/2019	<0.025	0.0079 (J)		0.019	
9/23/2019	<0.025	0.00058 (J)	<0.025		
9/24/2019				<0.025	
3/2/2020	<0.025	0.00041 (J)	<0.025	0.0004 (J)	
3/25/2020	0.00072 (J)	<0.025	<0.025		
3/26/2020				<0.025	
9/15/2020	<0.025	<0.025	<0.025	<0.025	
9/17/2020					<0.025
11/11/2020					0.00063 (J)
12/15/2020					0.0025 (J)
1/20/2021					<0.025
2/8/2021	<0.025			<0.025	0.00078 (J)
2/9/2021		<0.025	<0.025		
3/10/2021	<0.025			<0.025	<0.025
3/11/2021		<0.025	<0.025		

Time Series

Constituent: Chromium (mg/L) Analysis Run 5/4/2021 8:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-5 (bg)	HGWA-6 (bg)	HGWC-14
5/19/2016			<0.025		
5/20/2016				<0.025	
5/23/2016					<0.025
7/11/2016			<0.025	<0.025	
7/12/2016					<0.025
8/30/2016			<0.025	<0.025	
9/1/2016					<0.025
10/20/2016			<0.025	<0.025	
10/24/2016					<0.025
12/7/2016					<0.025
12/8/2016			<0.025	<0.025	
1/24/2017			<0.025	<0.025	
1/26/2017					<0.025
3/21/2017			<0.025	0.0007 (J)	
3/23/2017					<0.025
5/23/2017			<0.025	<0.025	
5/24/2017					<0.025
4/3/2018			<0.025	<0.025	
4/4/2018					<0.025
3/12/2019			<0.025	<0.025	
3/14/2019					<0.025
4/2/2019			<0.025	<0.025	
4/5/2019					<0.025
9/24/2019			<0.025	<0.025	<0.025
3/2/2020			0.0005 (J)	<0.025	
3/3/2020					0.00042 (J)
3/25/2020				<0.025	
3/26/2020			<0.025		
3/30/2020					0.00066 (J)
9/15/2020			<0.025	<0.025	
9/16/2020	<0.025	0.0012 (J)			
9/18/2020					<0.025
11/10/2020	<0.025	0.00089 (J)			
12/15/2020	<0.025	0.00072 (J)			
1/19/2021	<0.025	0.0011 (J)			
2/9/2021	0.00095 (J)	0.00066 (J)	<0.025	<0.025	
2/11/2021					<0.025
3/10/2021		<0.025			
3/11/2021	<0.025		0.0011 (J)	<0.025	
3/17/2021					<0.025

Time Series

Constituent: Chromium (mg/L) Analysis Run 5/4/2021 8:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWC-15	HGWC-16	HGWC-17	HGWC-18	MW-21D
5/23/2016	<0.025	<0.025	<0.025		
5/24/2016				<0.025	
7/12/2016	<0.025	<0.025	<0.025	<0.025	
9/1/2016	<0.025	<0.025	<0.025	<0.025	
10/24/2016	<0.025				
10/25/2016		<0.025	<0.025	<0.025	
12/7/2016	<0.025	<0.025	<0.025		
12/8/2016				<0.025	
1/26/2017	<0.025	<0.025	<0.025	<0.025	
3/22/2017		0.0021 (J)	<0.025		
3/23/2017	0.0005 (J)			0.0005 (J)	
5/24/2017	<0.025	<0.025			
5/25/2017			<0.025	<0.025	
4/3/2018	<0.025	<0.025	<0.025	<0.025	
3/14/2019	<0.025			<0.025	
3/15/2019		<0.025	<0.025		<0.025
4/4/2019	<0.025	<0.025			<0.025
4/5/2019			<0.025	<0.025	
9/24/2019	0.00041 (J)				
9/25/2019		<0.025	<0.025	<0.025	<0.025
3/3/2020	<0.025	0.00071 (J)	0.0018 (J)	0.0004 (J)	<0.025
3/26/2020	<0.025				
3/30/2020		0.0004 (J)			
3/31/2020			<0.025	<0.025	
4/1/2020					<0.025
6/17/2020					0.00057 (J)
9/15/2020				0.00063 (J)	
9/16/2020			<0.025		
9/17/2020	<0.025	<0.025			
9/21/2020					<0.025
2/10/2021		<0.025			
2/11/2021			0.00074 (J)	<0.025	<0.025
2/12/2021	<0.025				
3/16/2021	0.0012 (J)				
3/17/2021		<0.025			
3/18/2021			0.00069 (J)	<0.025	0.00074 (J)

Time Series

Constituent: Chromium (mg/L) Analysis Run 5/4/2021 8:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

	MW-22	MW-23D	MW-33	MW-35	MW-37D
3/14/2019		<0.025			
3/15/2019	<0.025				
4/5/2019	<0.025	<0.025			
9/26/2019		<0.025			
9/27/2019	0.0004 (J)				
3/2/2020	<0.025	<0.025			
3/27/2020	<0.025				
4/1/2020		0.00086 (J)	0.00069 (J)		
6/17/2020			<0.025		
6/18/2020				<0.025	0.0048 (J)
9/17/2020	<0.025	<0.025			
9/21/2020			<0.025	0.00079 (J)	
9/23/2020					<0.025
2/11/2021					0.0014 (J)
2/12/2021		<0.025	<0.025		
2/15/2021	<0.025			<0.025	
3/12/2021					<0.025
3/17/2021	0.00075 (J)	0.00083 (J)			
3/18/2021			<0.025		
3/19/2021				0.00083 (J)	

Time Series

Constituent: Cobalt (mg/L) Analysis Run 5/4/2021 8:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-4 (bg)	HGWA-42D (bg)
5/19/2016	<0.005	0.0293	<0.005	<0.005	
7/11/2016	0.0004 (J)	0.0267		<0.005	
7/12/2016			<0.005		
8/30/2016	<0.005	0.028	<0.005	<0.005	
10/19/2016	<0.005	0.0201	<0.005	<0.005	
12/6/2016	<0.005	0.0184	<0.005	<0.005	
1/24/2017	<0.005	0.0206	<0.005	<0.005	
3/21/2017	<0.005	0.0251	<0.005	<0.005	
5/22/2017	<0.005	0.0263	<0.005		
5/23/2017				<0.005	
4/2/2018	<0.005	0.019		<0.005	
4/3/2018			<0.005		
6/4/2018	<0.005	0.025	<0.005	<0.005	
10/1/2018	<0.005	0.026	<0.005	<0.005	
3/11/2019				<0.005	
3/12/2019	<0.005	0.017	<0.005		
4/1/2019			<0.005		
4/2/2019	<0.005	0.019		<0.005	
9/23/2019	<0.005	0.038	<0.005		
9/24/2019				<0.005	
3/2/2020	<0.005	0.019	<0.005	0.00063 (J)	
3/25/2020	<0.005	0.02	<0.005		
3/26/2020				0.00058 (J)	
9/15/2020	<0.005	0.021	<0.005	<0.005	
9/17/2020					<0.005
11/11/2020					<0.005
12/15/2020					0.00049 (J)
1/20/2021					<0.005
2/8/2021	<0.005			0.00074 (J)	<0.005
2/9/2021		0.02	<0.005		
3/10/2021	<0.005			0.00065 (J)	<0.005
3/11/2021		0.013	<0.005		

Time Series

Constituent: Cobalt (mg/L) Analysis Run 5/4/2021 8:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-5 (bg)	HGWA-6 (bg)	HGWC-14
5/19/2016			<0.005		
5/20/2016				<0.005	
5/23/2016					<0.005
7/11/2016			0.001 (J)	<0.005	
7/12/2016					0.0232
8/30/2016			0.001 (J)	<0.005	
9/1/2016					0.0248
10/20/2016			0.0008 (J)	<0.005	
10/24/2016					0.0253
12/7/2016					0.0269
12/8/2016			0.0006 (J)	<0.005	
1/24/2017			0.0006 (J)	<0.005	
1/26/2017					0.0294
3/21/2017			0.0008 (J)	<0.005	
3/23/2017					0.0311
5/23/2017			0.0006 (J)	<0.005	
5/24/2017					0.0279
4/3/2018			<0.005	<0.005	
4/4/2018					0.025
6/5/2018			<0.005	<0.005	
6/6/2018					0.027
10/2/2018			<0.005	<0.005	
10/3/2018					0.023
3/12/2019			0.00099 (J)	<0.005	
3/14/2019					0.025
4/2/2019			0.0012 (J)	<0.005	
4/5/2019					0.021
9/24/2019			0.00063 (J)	<0.005	0.026
3/2/2020			0.00093 (J)	<0.005	
3/3/2020					0.029
3/25/2020				<0.005	
3/26/2020			0.0013 (J)		
3/30/2020					0.028
9/15/2020			0.00047 (J)	<0.005	
9/16/2020	<0.005	<0.005			
9/18/2020					0.027
11/10/2020	<0.005	<0.005			
12/15/2020	<0.005	<0.005			
1/19/2021	<0.005	<0.005			
2/9/2021	<0.005	<0.005	0.00071 (J)	<0.005	
2/11/2021					0.033
3/10/2021		<0.005			
3/11/2021	<0.005		0.0013 (J)	<0.005	
3/17/2021					0.034

Time Series

Constituent: Cobalt (mg/L) Analysis Run 5/4/2021 8:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWC-15	HGWC-16	HGWC-17	HGWC-18	MW-21D
5/23/2016	0.0419 (J)	<0.005	0.0167		
5/24/2016				0.17 (J)	
7/12/2016	0.0393	<0.005	0.0148	0.168	
9/1/2016	0.045	<0.005	0.0151	0.18	
10/24/2016	0.0557				
10/25/2016		<0.005	0.0141	0.188	
12/7/2016	0.0536	<0.005	0.0141		
12/8/2016				0.206	
1/26/2017	0.055	<0.005	0.0154	0.195	
3/22/2017		<0.005	0.0169		
3/23/2017	0.0715			0.223	
5/24/2017	0.0446	<0.005			
5/25/2017			0.0154	0.209	
4/3/2018	0.032	<0.005	0.016	0.19	
6/5/2018				0.19	
6/6/2018	0.032	<0.005	0.018		
10/3/2018	0.051	<0.005	0.016	0.19	
3/14/2019	0.038			0.16	
3/15/2019		<0.005	0.017		<0.005
4/4/2019	0.035	0.00028 (J)			0.00034 (J)
4/5/2019			0.016	0.14	
9/24/2019	0.022				
9/25/2019		<0.005	0.015	0.18	<0.005
3/3/2020	0.03	0.00037 (J)	0.016	0.15	<0.005
3/26/2020	0.022				
3/30/2020		<0.005			
3/31/2020			0.016	0.16	
4/1/2020					<0.005
6/17/2020					<0.005
9/15/2020				0.16	
9/16/2020			0.013		
9/17/2020	0.026	<0.005			
9/21/2020					<0.005
2/10/2021		<0.005			
2/11/2021			0.012	0.14	<0.005
2/12/2021	0.019				
3/16/2021	0.018				
3/17/2021		<0.005			
3/18/2021			0.012	0.14	<0.005

Time Series

Constituent: Cobalt (mg/L) Analysis Run 5/4/2021 8:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

	MW-22	MW-23D	MW-33	MW-35	MW-37D
3/14/2019		0.0013 (J)			
3/15/2019	0.028				
4/5/2019	0.022	0.0012 (J)			
9/26/2019		0.00098 (J)			
9/27/2019	0.035				
1/22/2020			0.052		
3/2/2020	0.043	0.0011 (J)			
3/27/2020	0.025				
4/1/2020		0.0011 (J)	0.058		
6/17/2020			0.053		
6/18/2020				0.091	0.0015 (J)
9/17/2020	0.029	0.00096 (J)			
9/21/2020			0.047	0.084	
9/23/2020					<0.005
2/11/2021					0.00048 (J)
2/12/2021		0.001 (J)	0.055		
2/15/2021	0.038			0.095	
3/12/2021					<0.005
3/17/2021	0.039	0.0011 (J)			
3/18/2021			0.057		
3/19/2021				0.1	

Time Series

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 5/4/2021 8:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-4 (bg)	HGWA-42D (bg)
5/19/2016	0.397 (U)	0.627 (U)	0.342 (U)	0.662 (U)	
7/11/2016	0.738 (U)	1.38		1.19	
7/12/2016			0.499 (U)		
8/30/2016	0.581 (U)	1.05 (U)	0.976 (U)	0.847 (U)	
10/19/2016	0.213 (U)	1.11 (U)	0.626 (U)	2.34	
12/6/2016	0.444 (U)	0.741 (U)	0.805 (U)	0.925 (U)	
1/24/2017	0.373 (U)	0.908 (U)	0.336 (U)	0.607 (U)	
3/21/2017	0.816 (U)	0.567 (U)	0.358 (U)	0.074 (U)	
5/22/2017	0.554 (U)	0.638 (U)	0.744 (U)		
5/23/2017				0.55 (U)	
4/2/2018	0.405 (U)	0.761 (U)		0.371 (U)	
4/3/2018			0.684 (U)		
6/4/2018	1.13 (U)	0.975 (U)	0.0291 (U)	0.622 (U)	
10/1/2018	0.132 (U)	0.434 (U)	0.781 (U)	0.132 (U)	
3/11/2019				0.781 (U)	
3/12/2019	0.327 (U)	0.454 (U)	1.01 (U)		
4/1/2019			0.76 (U)		
4/2/2019	0.739 (U)	0.651 (U)		0.494 (U)	
9/24/2019				0.455 (U)	
9/30/2019	0.306 (U)	1.04 (U)	0.384 (U)		
3/2/2020	0.61 (U)	1.58	0.249 (U)	0.937 (U)	
3/25/2020	4.36	0.621 (U)	0.833 (U)		
3/26/2020				0.578 (U)	
9/15/2020	0.748 (U)	0.124 (U)	0.161 (U)	0.179 (U)	
9/17/2020					0.665 (U)
11/11/2020					1.28
12/15/2020					0.261 (U)
1/20/2021					0.845 (U)
2/8/2021	0.223 (U)			0.558 (U)	0.429 (U)
2/9/2021		0.721 (U)	0.447 (U)		
3/10/2021	0 (U)			0.281 (U)	1.21
3/11/2021		0.737 (U)	0.128 (U)		

Time Series

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 5/4/2021 8:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-5 (bg)	HGWA-6 (bg)	HGWC-14
5/19/2016			0.685 (U)		
5/20/2016				0.843 (U)	
5/23/2016					0.568 (U)
7/11/2016			1.68	0.494 (U)	
7/12/2016					1.31
8/30/2016			2.42	0.946 (U)	
9/1/2016					1.64
10/20/2016			0.351 (U)	0.664 (U)	
10/24/2016					1.88
12/7/2016					1.35
12/8/2016			0.905 (U)	0.421 (U)	
1/24/2017			0.0774 (U)	0.965 (U)	
1/26/2017					2.1
3/21/2017			0.0599 (U)	0.139 (U)	
3/23/2017					1.17
5/23/2017			0.477 (U)	0.308 (U)	
5/24/2017					1 (U)
4/3/2018			0.858 (U)	0.828 (U)	
4/4/2018					1.72
6/5/2018			0.767 (U)	0.424 (U)	
6/6/2018					1.31 (U)
10/2/2018			0.489 (U)	0.643 (U)	
10/3/2018					1.48
3/12/2019			0.833 (U)	0.982 (U)	
3/14/2019					1.5
4/2/2019			1.07 (U)	0.621 (U)	
4/5/2019					1.43 (U)
9/24/2019			0.201 (U)	0.874 (U)	1.17
3/2/2020			0.547 (U)	0.676 (U)	
3/3/2020					1.84
3/25/2020				0.509 (U)	
3/26/2020			0.907 (U)		
3/30/2020					1.08 (U)
9/15/2020			0.601 (U)	1.36 (U)	
9/16/2020	0.531 (U)	0.422 (U)			
9/18/2020					1.8 (U)
11/10/2020	0.788 (U)	0.293 (U)			
12/15/2020	1.04 (U)	0.7 (U)			
1/19/2021	0.685 (U)	0.79 (U)			
2/9/2021	0.138 (U)	0.486 (U)	0.37 (U)	0.324 (U)	
2/11/2021					0.73 (U)
3/10/2021		0.811 (U)			
3/11/2021	1.51 (U)		1.07 (U)	0.601 (U)	
3/17/2021					1.84

Time Series

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 5/4/2021 8:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWC-15	HGWC-16	HGWC-17	HGWC-18	MW-21D
5/23/2016	0.171 (U)		0.618 (U)		
5/24/2016				1.82	
7/1/2016		0 (U)			
7/12/2016	0.611 (U)	0.182 (U)	0.867	1.76	
9/1/2016	0.766 (U)	1.23	0.857 (U)	1.51	
10/24/2016	0.969				
10/25/2016		1.05 (U)	1.11 (U)	2.69	
12/7/2016	0.302 (U)	1.11 (U)	0.964 (U)		
12/8/2016				2.21	
1/26/2017	0.626 (U)	1.29 (U)	0.612 (U)	2.26	
3/22/2017		0.453 (U)	0.437 (U)		
3/23/2017	0.662 (U)			1.81	
5/24/2017	0.202 (U)	1.05 (U)			
5/25/2017			1.21 (U)	1.63	
4/3/2018	0.384 (U)	0.783 (U)	0.409 (U)	2.53	
6/5/2018				1.91	
6/6/2018	1.32 (U)	0.595 (U)	0.772 (U)		
10/3/2018	0.858 (U)	1.03 (U)	1.08 (U)	2.22	
3/14/2019	0.462 (U)			1.37 (U)	
3/15/2019		0.591 (U)	0.917 (U)		0.972 (U)
4/4/2019	0.512 (U)	0.96 (U)			0.791 (U)
4/5/2019			1.07 (U)	2.22	
9/24/2019	0.582 (U)				
9/25/2019		0.643 (U)	1.54	2.77	0.751 (U)
3/3/2020	1.43	1.32 (U)	1.33	2.35	1.94
3/26/2020	0.855 (U)				
3/30/2020		0.288 (U)			
3/31/2020			0.591 (U)	2.7	
4/1/2020					0.758 (U)
6/17/2020					0.691 (U)
9/15/2020				1.65	
9/16/2020			0.295 (U)		
9/17/2020	0.395 (U)	1.1 (U)			
9/21/2020					0.436 (U)
2/10/2021		0.773 (U)			
2/11/2021			0.831 (U)	1.11	0.317 (U)
2/12/2021	1.65				
3/16/2021	0.801 (U)				
3/17/2021		0.228 (U)			
3/18/2021			0.856 (U)	1.63	0.5 (U)

Time Series

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 5/4/2021 8:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

	MW-22	MW-23D	MW-33	MW-35	MW-37D
3/14/2019		0.872 (U)			
3/15/2019	0.977				
4/5/2019	1.06 (U)	0.932 (U)			
9/26/2019		1.25			
9/27/2019	1.44 (U)				
3/2/2020	0.872 (U)	0.964 (U)			
3/27/2020	0.96 (U)				
4/1/2020		0.914 (U)	2.57		
6/17/2020			1.43 (U)		
6/18/2020				2.02	1.79
9/17/2020	0.0879 (U)	0.32 (U)			
9/21/2020			2.53	3.85	
9/23/2020					0.98 (U)
2/11/2021					0.12 (U)
2/12/2021		1.21 (U)	2.26		
2/15/2021	0.215 (U)			1.52	
3/12/2021					0.578 (U)
3/17/2021	0.981 (U)	0.579 (U)			
3/18/2021			0.733 (U)		
3/19/2021				0.524 (U)	

Time Series

Constituent: Field pH (s.u.) Analysis Run 5/4/2021 8:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-4 (bg)	HGWA-42D (bg)
5/19/2016	7.27	5.81	7.45	6.51	
7/11/2016	7.06	5.68		6.65	
7/12/2016			7.32		
8/30/2016	7.28	5.63	7.43	7.14	
10/19/2016	7.02	5.46	7.03	7.08	
12/6/2016	7.09	5.38	7.08	7	
1/24/2017	7.2	5.37	7.39	6.16	
3/21/2017	7.01	4.9	6.83	6.07	
5/22/2017	7.11	5.2	7.02		
5/23/2017				6.28	
10/3/2017	7.21	5.3	7.47	6.45	
4/2/2018	7.1	5.4		6.23	
4/3/2018			7.38		
6/4/2018	7.06	5.27	7.38	6.82	
10/1/2018	7.09	5.31	7.13	5.73	
3/11/2019				6.27	
3/12/2019	7.03	5.42	7.29		
4/1/2019			7.16		
4/2/2019	6.86	5.41		6.66	
9/23/2019	7.02	5.33	7.3		
9/24/2019				6.16	
3/2/2020	7.1	5.43	7.12	5.63	
3/25/2020	6.95	5.36	7.4		
3/26/2020				5.77	
9/15/2020	7.15	5.22	7.29	5.75	
9/17/2020					7.62
11/11/2020					7.68
12/15/2020					7.64
1/20/2021					7.68
2/8/2021	7.11			4.94	7.64
2/9/2021		5.42	7.23		
3/10/2021	6.95			5.28	7.7
3/11/2021		5.8	7.33		

Time Series

Constituent: Field pH (s.u.) Analysis Run 5/4/2021 8:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-5 (bg)	HGWA-6 (bg)	HGWC-14
5/19/2016			6.62		
5/20/2016				7.58	
5/23/2016					4.56
7/11/2016			6.54	7.32	
7/12/2016					4.49
8/30/2016			6.38	7.69	
9/1/2016					4.54
10/20/2016			6.52	7.43	
10/24/2016					4.63
12/7/2016					4.6
12/8/2016			6.5	7.56	
1/24/2017			6.59	7.52	
1/26/2017					4.8
3/21/2017			6.55	7.4	
3/23/2017					4.57
5/23/2017			6.5	7.53	
5/24/2017					4.61
10/3/2017			6.63	7.51	
10/4/2017					4.74
4/3/2018			6.59	7.53	
4/4/2018					4.5
6/5/2018			6.44	7.37	
6/6/2018					4.49
10/2/2018			6.35	7.36	
10/3/2018					4.67
3/12/2019			6.42	7.5	
3/14/2019					4.66
4/2/2019			6.38	7.46	
4/5/2019					4.67
9/24/2019			6.4	7.41	4.77
3/2/2020			6.8	7.67	
3/3/2020					4.77
3/25/2020				7.39	
3/26/2020			6.38		
3/30/2020					4.57
9/15/2020			6.33	7.37	
9/16/2020	7.52	7.83			
9/18/2020					4.88
11/10/2020	7.27	7.84			
12/15/2020	7.39	7.87			
1/19/2021	7.39	7.86			
2/9/2021	7.44	7.84	6.35	7.4	
2/11/2021					4.84
3/10/2021		7.92			
3/11/2021	7.46		6.48	7.56	
3/17/2021					4.72

Time Series

Constituent: Field pH (s.u.) Analysis Run 5/4/2021 8:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWC-15	HGWC-16	HGWC-17	HGWC-18	MW-21D
5/23/2016	6.17	7.15	6.4		
5/24/2016				4.83	
7/12/2016	6.17	7.1	6.09	4.58	
9/1/2016	6.22	7.29	6.35	4.51	
10/24/2016	5.97				
10/25/2016		7.03	6.23	4.53	
12/7/2016	5.87	6.85	6.23		
12/8/2016				4.56	
1/26/2017	6.05	7.07	6.24	4.61	
3/22/2017		7.15	6.25		
3/23/2017	5.79			4.63	
5/24/2017	6.01	7.11			
5/25/2017			6.27	4.69	
10/4/2017	5.82	7.17	6.18	4.58	
4/3/2018	5.98	7.07	6.22	4.54	
6/5/2018				4.57	
6/6/2018	6.12	7	6.22		
10/3/2018	5.92	6.94	6.23	4.41	
3/14/2019	5.71			4.39	
3/15/2019		7.09	6.32		6.81
4/4/2019	5.66	6.95			6.7
4/5/2019			6.26	4.5	
9/24/2019	6.33				
9/25/2019		6.92	6.28	4.54	6.54
3/3/2020	6	7.1	6.35	4.55	6.72
3/26/2020	6.03				
3/30/2020		7.09			
3/31/2020			6.28	4.43	
4/1/2020					6.9
6/17/2020					6.47
9/15/2020				4.47	
9/16/2020			6.35		
9/17/2020	6.11	7.11			
9/21/2020					6.92
2/10/2021		7.08			
2/11/2021			6.31	4.53	6.87
2/12/2021	5.99				
3/16/2021	6.08				
3/17/2021		7.19			
3/18/2021			6.43	4.54	6.95

Time Series

Constituent: Field pH (s.u.) Analysis Run 5/4/2021 8:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

	MW-22	MW-23D	MW-33	MW-35	MW-37D
3/14/2019		6.68			
3/15/2019	5.95				
4/5/2019	5.96	6.66			
9/26/2019		6.64			
9/27/2019	5.81				
3/2/2020	5.97	7.05			
3/27/2020	5.71				
4/1/2020		6.8	4.35		
6/17/2020			4.36	5.46	7.78
9/17/2020	5.66	6.71			
9/21/2020			4.48	5.4	
9/23/2020					7.62
2/11/2021					7.42
2/12/2021		6.8	4.4		
2/15/2021	5.48			4.82	
3/12/2021					7.5
3/17/2021	5.57	6.86			
3/18/2021			4.27		
3/19/2021				4.89	

Time Series

Constituent: Fluoride (mg/L) Analysis Run 5/4/2021 8:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-4 (bg)	HGWA-42D (bg)
5/19/2016	0.105 (J)	0.0303 (J)	0.0513 (J)	0.036 (J)	
7/11/2016	0.16 (J)	0.05 (J)		0.09 (J)	
7/12/2016			0.12 (J)		
8/30/2016	0.09 (J)	0.06 (J)	0.09 (J)	0.06 (J)	
10/19/2016	0.1 (J)	0.04 (J)	0.1 (J)	0.07 (J)	
12/6/2016	0.11 (J)	0.36	0.21 (J)	0.07 (J)	
1/24/2017	0.09 (J)	<0.1	0.06 (J)	<0.1	
3/21/2017	0.13 (J)	<0.1	0.005 (J)	<0.1	
5/22/2017	0.12 (J)	<0.1	0.05 (J)		
5/23/2017				0.01 (J)	
10/3/2017	0.13 (J)	<0.1	0.13 (J)	<0.1	
4/2/2018	<0.1	<0.1		<0.1	
4/3/2018			<0.1		
6/4/2018	0.074 (J)	<0.1	<0.1	0.097 (J)	
10/1/2018	<0.1	<0.1	<0.1	<0.1	
3/11/2019				0.035 (J)	
3/12/2019	0.29 (J)	0.038 (J)	0.072 (J)		
4/1/2019			0.029 (J)		
4/2/2019	0.1 (J)	0.071 (J)		<0.1	
9/23/2019	0.078 (J)	<0.1	<0.1		
9/24/2019				<0.1	
3/2/2020	0.076 (J)	<0.1	<0.1	<0.1	
3/25/2020	0.098 (J)	<0.1	<0.1		
3/26/2020				<0.1	
9/15/2020	0.082 (J)	<0.1	<0.1	<0.1	
9/17/2020					0.2
11/11/2020					0.1
12/15/2020					0.11
1/20/2021					0.082 (J)
2/8/2021	0.078 (J)			<0.1	0.096 (J)
2/9/2021		<0.1	0.074 (J)		
3/10/2021	0.079 (J)			<0.1	0.11
3/11/2021		0.1	<0.1		

Time Series

Constituent: Fluoride (mg/L) Analysis Run 5/4/2021 8:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-5 (bg)	HGWA-6 (bg)	HGWC-14
5/19/2016			0.08 (J)		
5/20/2016				0.065 (J)	
5/23/2016					<0.1
7/11/2016			0.09 (J)	0.13 (J)	
7/12/2016					0.2 (J)
8/30/2016			0.08 (J)	0.07 (J)	
9/1/2016					0.08 (J)
10/20/2016			0.1 (J)	0.06 (J)	
10/24/2016					0.04 (J)
12/7/2016					0.11 (J)
12/8/2016			0.08 (J)	0.06 (J)	
1/24/2017			0.09 (J)	0.02 (J)	
1/26/2017					0.13 (J)
3/21/2017			0.04 (J)	0.08 (J)	
3/23/2017					0.28 (J)
5/23/2017			0.04 (J)	0.006 (J)	
5/24/2017					0.32
10/3/2017			0.06 (J)	<0.1	
10/4/2017					0.52
4/3/2018			<0.1	<0.1	
4/4/2018					<0.1
6/5/2018			0.083 (J)	0.055 (J)	
6/6/2018					0.25 (J)
10/2/2018			<0.1	0.076 (J)	
10/3/2018					0.21 (J)
3/12/2019			0.079 (J)	0.061 (J)	
3/14/2019					0.24 (J)
4/2/2019			0.12 (J)	<0.1	
4/5/2019					0.66
9/24/2019			0.058 (J)	<0.1	0.053 (J)
3/2/2020			0.053 (J)	<0.1	
3/3/2020					<0.1
3/25/2020				<0.1	
3/26/2020			0.066 (J)		
3/30/2020					0.092 (J)
9/15/2020			0.061 (J)	<0.1	
9/16/2020	0.22	0.52			
9/18/2020					<0.1
11/10/2020	0.19	0.59			
12/15/2020	0.21	0.67			
1/19/2021	0.16	0.74			
2/9/2021	0.19	0.44	0.053 (J)	<0.1	
2/11/2021					0.059 (J)
3/10/2021		0.65			
3/11/2021	0.2		0.06 (J)	0.17	
3/17/2021					0.076 (J)

Time Series

Constituent: Fluoride (mg/L) Analysis Run 5/4/2021 8:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWC-15	HGWC-16	HGWC-17	HGWC-18	MW-21D
5/23/2016	<0.1	0.038 (J)	<0.1		
5/24/2016				<0.1	
7/12/2016	0.09 (J)	0.26 (J)	0.09 (J)	0.54	
9/1/2016	0.22 (J)	0.42	0.03 (J)	0.49	
10/24/2016	0.07 (J)				
10/25/2016		0.25 (J)	0.07 (J)	0.58	
12/7/2016	0.23 (J)	0.23 (J)	0.54		
12/8/2016				0.63	
1/26/2017	<0.1	0.02 (J)	<0.1	0.71	
3/22/2017		0.3	0.07 (J)		
3/23/2017	0.12 (J)			0.57	
5/24/2017	0.31	0.46			
5/25/2017			0.42	0.54	
10/4/2017	0.6	<0.1	0.93	0.95	
4/3/2018	<0.1	<0.1	<0.1	0.33	
6/5/2018				0.66	
6/6/2018	0.17 (J)	<0.1	0.23 (J)		
10/3/2018	<0.1	<0.1	<0.1	0.32	
3/14/2019	<0.1			0.88	
3/15/2019		<0.1	<0.1		<0.1
4/4/2019	0.066 (J)	<0.1			0.1 (J)
4/5/2019			0.16 (J)	0.37	
9/24/2019	0.12 (J)				
9/25/2019		<0.1	0.081 (J)	0.73	<0.1
3/3/2020	0.064 (J)	<0.1	<0.1	0.34	<0.1
3/26/2020	<0.1				
3/30/2020		0.059 (J)			
3/31/2020			<0.1	0.45	
4/1/2020					<0.1
6/17/2020					<0.1
9/15/2020				0.31	
9/16/2020			0.058 (J)		
9/17/2020	<0.1	<0.1			
9/21/2020					<0.1
2/10/2021		0.21			
2/11/2021			0.058 (J)	0.71	<0.1
2/12/2021	0.053 (J)				
3/16/2021	<0.1				
3/17/2021		<0.1			
3/18/2021			0.057 (J)	0.64	<0.1

Time Series

Constituent: Fluoride (mg/L) Analysis Run 5/4/2021 8:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

	MW-22	MW-23D	MW-33	MW-35	MW-37D
3/14/2019		<0.1			
3/15/2019	<0.1				
4/5/2019	0.13 (J)	0.14 (J)			
9/26/2019		0.16 (J)			
9/27/2019	0.28 (J)				
1/22/2020			0.18 (J)		
3/2/2020	<0.1	<0.1			
3/27/2020	<0.1				
4/1/2020		<0.1	0.15 (J)		
6/17/2020			0.25		
6/18/2020				0.053 (J)	0.1
9/17/2020	<0.1	<0.1			
9/21/2020			0.14	<0.1	
9/23/2020					0.065 (J)
2/11/2021					0.077 (J)
2/12/2021		<0.1	0.25		
2/15/2021	<0.1			0.093 (J)	
3/12/2021					0.061 (J)
3/17/2021	<0.1	<0.1			
3/18/2021			0.4		
3/19/2021				0.082 (J)	

Time Series

Constituent: Lead (mg/L) Analysis Run 5/4/2021 8:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-4 (bg)	HGWA-42D (bg)
5/19/2016	<0.001	<0.001	<0.001	<0.001	
7/11/2016	<0.001	<0.001		<0.001	
7/12/2016			0.0001 (J)		
8/30/2016	<0.001	<0.001	<0.001	<0.001	
10/19/2016	<0.001	<0.001	<0.001	<0.001	
12/6/2016	<0.001	<0.001	<0.001	0.0002 (J)	
1/24/2017	<0.001	<0.001	<0.001	<0.001	
3/21/2017	<0.001	6E-05 (J)	0.0001 (J)	<0.001	
5/22/2017	<0.001	9E-05 (J)	<0.001		
5/23/2017				<0.001	
4/2/2018	<0.001	<0.001		<0.001	
4/3/2018			<0.001		
3/11/2019				<0.001	
3/12/2019	<0.001	<0.001	<0.001		
4/1/2019			<0.001		
4/2/2019	<0.001	<0.001		<0.001	
9/23/2019	7.8E-05 (J)	9.2E-05 (J)	<0.001		
9/24/2019				<0.001	
3/2/2020	4.8E-05 (J)	9.5E-05 (J)	<0.001	0.00026 (J)	
3/25/2020	<0.001	0.00011 (J)	<0.001		
3/26/2020				5.9E-05 (J)	
9/15/2020	<0.001	8E-05 (J)	4.2E-05 (J)	4.9E-05 (J)	
9/17/2020					6.2E-05 (J)
11/11/2020					8.4E-05 (J)
12/15/2020					0.00045 (J)
1/20/2021					<0.001
2/8/2021	5.8E-05 (J)			0.00024 (J)	8.1E-05 (J)
2/9/2021		9.4E-05 (J)	<0.001		
3/10/2021	<0.001			0.00016 (J)	<0.001
3/11/2021		7.6E-05 (J)	<0.001		

Time Series

Constituent: Lead (mg/L) Analysis Run 5/4/2021 8:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-5 (bg)	HGWA-6 (bg)	HGWC-14
5/19/2016			<0.001		
5/20/2016				<0.001	
5/23/2016					0.00182 (J)
7/11/2016			<0.001	<0.001	
7/12/2016					0.0015 (J)
8/30/2016			<0.001	<0.001	
9/1/2016					0.0016 (J)
10/20/2016			0.0002 (J)	<0.001	
10/24/2016					0.0016 (J)
12/7/2016					0.0018 (J)
12/8/2016			<0.001	<0.001	
1/24/2017			<0.001	<0.001	
1/26/2017					0.002 (J)
3/21/2017			<0.001	<0.001	
3/23/2017					0.0019 (J)
5/23/2017			9E-05 (J)	0.0003 (J)	
5/24/2017					0.0016 (J)
4/3/2018			<0.001	<0.001	
4/4/2018					<0.001
3/12/2019			<0.001	<0.001	
3/14/2019					0.0014 (J)
4/2/2019			<0.001	<0.001	
4/5/2019					0.0012 (J)
9/24/2019			<0.001	7.1E-05 (J)	0.0013 (J)
3/2/2020			<0.001	<0.001	
3/3/2020					0.0017 (J)
3/25/2020				<0.001	
3/26/2020			<0.001		
3/30/2020					0.0015 (J)
9/15/2020			<0.001	<0.001	
9/16/2020	5E-05 (J)	0.00021 (J)			
9/18/2020					0.0012 (J)
11/10/2020	6.9E-05 (J)	0.0002 (J)			
12/15/2020	8.2E-05 (J)	0.00011 (J)			
1/19/2021	4.4E-05 (J)	0.00019 (J)			
2/9/2021	0.00029 (J)	0.0001 (J)	<0.001	<0.001	
2/11/2021					0.0015 (J)
3/10/2021		<0.001			
3/11/2021	9.4E-05 (J)		<0.001	<0.001	
3/17/2021					0.0019

Time Series

Constituent: Lead (mg/L) Analysis Run 5/4/2021 8:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWC-15	HGWC-16	HGWC-17	HGWC-18	MW-21D
5/23/2016	<0.001	<0.001	<0.001		
5/24/2016				0.00154 (J)	
7/12/2016	<0.001	<0.001	<0.001	0.0012 (J)	
9/1/2016	<0.001	<0.001	<0.001	0.0014 (J)	
10/24/2016	<0.001				
10/25/2016		<0.001	<0.001	0.0015 (J)	
12/7/2016	<0.001	<0.001	<0.001		
12/8/2016				0.0017 (J)	
1/26/2017	<0.001	0.0001 (J)	<0.001	0.0013 (J)	
3/22/2017		0.0002 (J)	0.0001 (J)		
3/23/2017	0.001 (J)			0.001 (J)	
5/24/2017	0.0001 (J)	0.0001 (J)			
5/25/2017			<0.001	0.0012 (J)	
4/3/2018	<0.001	<0.001	<0.001	<0.001	
3/14/2019	<0.001			0.0015 (J)	
3/15/2019		<0.001	<0.001		<0.001
4/4/2019	7.2E-05 (J)	0.00016 (J)			<0.001
4/5/2019			7.6E-05 (J)	0.0015 (J)	
9/24/2019	0.0002 (J)				
9/25/2019		<0.001	8.9E-05 (J)	0.0015 (J)	<0.001
3/3/2020	5.3E-05 (J)	0.00016 (J)	0.00013 (J)	0.0013 (J)	4.7E-05 (J)
3/26/2020	<0.001				
3/30/2020		7.3E-05 (J)			
3/31/2020			7.7E-05 (J)	0.0014 (J)	
4/1/2020					4.8E-05 (J)
6/17/2020					<0.001
9/15/2020				0.0014 (J)	
9/16/2020			6.5E-05 (J)		
9/17/2020	<0.001	7.8E-05 (J)			
9/21/2020					<0.001
2/10/2021		9.4E-05 (J)			
2/11/2021			0.00018 (J)	0.00098 (J)	0.00066 (J)
2/12/2021	<0.001				
3/16/2021	<0.001				
3/17/2021		5.8E-05 (J)			
3/18/2021			8.8E-05 (J)	0.00096 (J)	7.3E-05 (J)

Time Series

Constituent: Lead (mg/L) Analysis Run 5/4/2021 8:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

	MW-22	MW-23D	MW-33	MW-35	MW-37D
3/14/2019		<0.001			
3/15/2019	<0.001				
4/5/2019	<0.001	<0.001			
9/26/2019		<0.001			
9/27/2019	0.0001 (J)				
3/2/2020	9.4E-05 (J)	5.1E-05 (J)			
3/27/2020	<0.001				
4/1/2020		<0.001	0.0017 (J)		
6/17/2020			0.0017 (J)		
6/18/2020				0.00016 (J)	0.0017 (J)
9/17/2020	<0.001	0.00016 (J)			
9/21/2020			0.0017 (J)	0.00099 (J)	
9/23/2020					8.2E-05 (J)
2/11/2021					0.00039 (J)
2/12/2021		<0.001	0.0018 (J)		
2/15/2021	3.6E-05 (J)			0.00055 (J)	
3/12/2021					<0.001
3/17/2021	<0.001	<0.001			
3/18/2021			0.0017		
3/19/2021				0.00066 (J)	

Time Series

Constituent: Lithium (mg/L) Analysis Run 5/4/2021 8:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-4 (bg)	HGWA-42D (bg)
5/19/2016	<0.03	<0.03	<0.03	<0.03	
7/11/2016	<0.03	0.0014 (J)		0.0015 (J)	
7/12/2016			0.0024 (J)		
8/30/2016	<0.03	<0.03	0.0025 (J)	0.0027 (J)	
10/19/2016	<0.03	<0.03	0.003 (J)	0.0042 (J)	
12/6/2016	<0.03	<0.03	0.0033 (J)	0.0046 (J)	
1/24/2017	<0.03	<0.03	0.003 (J)	<0.03	
3/21/2017	<0.03	0.0012 (J)	0.0034 (J)	<0.03	
5/22/2017	<0.03	<0.03	0.003 (J)		
5/23/2017				<0.03	
4/2/2018	<0.03	0.0015 (J)		<0.03	
4/3/2018			0.003 (J)		
6/4/2018	0.001 (J)	0.0016 (J)	0.0027 (J)	0.00097 (J)	
10/1/2018	0.00099 (J)	0.0013 (J)	0.0032 (J)	<0.03	
3/11/2019				<0.03	
3/12/2019	0.001 (J)	0.0018 (J)	0.0032 (J)		
4/1/2019			0.0032 (J)		
4/2/2019	0.001 (J)	0.0018 (J)		0.00098 (J)	
9/23/2019	0.0011 (J)	0.0016 (J)	0.0029 (J)		
9/24/2019				<0.03	
3/2/2020	0.0012 (J)	0.0017 (J)	0.0037 (J)	0.0012 (J)	
3/25/2020	0.00083 (J)	0.0017 (J)	0.0035 (J)		
3/26/2020				0.00095 (J)	
9/15/2020	0.00087 (J)	0.0015 (J)	0.0026 (J)	<0.03	
9/17/2020					0.0039 (J)
11/11/2020					0.0086 (J)
12/15/2020					0.008 (J)
1/20/2021					0.01 (J)
2/8/2021	0.00086 (J)			0.0013 (J)	0.0098 (J)
2/9/2021		0.0012 (J)	0.0032 (J)		
3/10/2021	0.0009 (J)			0.0011 (J)	0.0094 (J)
3/11/2021		0.0011 (J)	0.0035 (J)		

Time Series

Constituent: Lithium (mg/L) Analysis Run 5/4/2021 8:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-5 (bg)	HGWA-6 (bg)	HGWC-14
5/19/2016			<0.03		
5/20/2016				<0.03	
5/23/2016					<0.03
7/11/2016			0.0034 (J)	0.01 (J)	
7/12/2016					<0.03
8/30/2016			0.003 (J)	0.0095 (J)	
9/1/2016					<0.03
10/20/2016			0.0031 (J)	0.0105 (J)	
10/24/2016					<0.03
12/7/2016					<0.03
12/8/2016			0.0027 (J)	0.01 (J)	
1/24/2017			0.0028 (J)	0.0108 (J)	
1/26/2017					<0.03
3/21/2017			0.0037 (J)	0.0115 (J)	
3/23/2017					<0.03
5/23/2017			0.0033 (J)	0.011 (J)	
5/24/2017					<0.03
4/3/2018			0.0033 (J)	0.012 (J)	
4/4/2018					<0.03
6/5/2018			0.0034 (J)	0.011 (J)	
6/6/2018					<0.03
10/2/2018			0.0035 (J)	0.01 (J)	
10/3/2018					<0.03
3/12/2019			0.0032 (J)	0.011 (J)	
3/14/2019					<0.03
4/2/2019			0.0028 (J)	0.0095 (J)	
4/5/2019					<0.03
9/24/2019			0.0035 (J)	0.011 (J)	<0.03
3/2/2020			0.0036 (J)	0.012	
3/3/2020					<0.03
3/25/2020				0.011 (J)	
3/26/2020			0.0029 (J)		
3/30/2020					<0.03
9/15/2020			0.003 (J)	0.0095 (J)	
9/16/2020	0.0018 (J)	0.014 (J)			
9/18/2020					<0.03
11/10/2020	0.0013 (J)	0.025 (J)			
12/15/2020	0.0019 (J)	0.028 (J)			
1/19/2021	0.0025 (J)	0.034			
2/9/2021	0.0026 (J)	0.026 (J)	0.003 (J)	0.01 (J)	
2/11/2021					<0.03
3/10/2021		0.03			
3/11/2021	0.0022 (J)		0.0037 (J)	0.012 (J)	
3/17/2021					<0.03

Time Series

Constituent: Lithium (mg/L) Analysis Run 5/4/2021 8:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWC-15	HGWC-16	HGWC-17	HGWC-18	MW-21D
5/23/2016	<0.03	<0.03	<0.03		
5/24/2016				0.0142 (J)	
7/12/2016	<0.03	0.0037 (J)	<0.03	0.0141 (J)	
9/1/2016	0.0021 (J)	0.0033 (J)	<0.03	0.0158 (J)	
10/24/2016	<0.03				
10/25/2016		0.0029 (J)	<0.03	0.016 (J)	
12/7/2016	<0.03	0.0029 (J)	<0.03		
12/8/2016				0.0144 (J)	
1/26/2017	<0.03	0.0028 (J)	<0.03	0.0136 (J)	
3/22/2017		0.0025 (J)	<0.03		
3/23/2017	0.0016 (J)			0.0151 (J)	
5/24/2017	0.0029 (J)	0.0029 (J)			
5/25/2017			0.0011 (J)	0.0154 (J)	
4/3/2018	0.0026 (J)	0.0028 (J)	<0.03	0.013 (J)	
6/5/2018				0.013 (J)	
6/6/2018	0.0013 (J)	0.0031 (J)	<0.03		
10/3/2018	0.0017 (J)	0.0026 (J)	<0.03	0.015 (J)	
3/14/2019	<0.03			0.011 (J)	
3/15/2019		0.0041 (J)	0.0011 (J)		0.025 (J)
4/4/2019	0.0009 (J)	0.0032 (J)			0.019 (J)
4/5/2019			0.00074 (J)	0.0084 (J)	
9/24/2019	0.0012 (J)				
9/25/2019		0.0038 (J)	0.0011 (J)	0.015 (J)	0.024 (J)
3/3/2020	0.0084 (J)	0.0047 (J)	0.0012 (J)	0.012 (J)	0.026 (J)
3/26/2020	0.0061 (J)				
3/30/2020		0.0041 (J)			
3/31/2020			0.0009 (J)	0.012 (J)	
4/1/2020					0.026 (J)
6/17/2020					0.023 (J)
9/15/2020				0.014 (J)	
9/16/2020			0.0012 (J)		
9/17/2020	0.0094 (J)	0.0043 (J)			
9/21/2020					0.022 (J)
2/10/2021		0.0038 (J)			
2/11/2021			0.0013 (J)	0.011 (J)	0.021 (J)
2/12/2021	0.036				
3/16/2021	0.032				
3/17/2021		0.0048 (J)			
3/18/2021			0.0014 (J)	0.013 (J)	0.026 (J)

Time Series

Constituent: Lithium (mg/L) Analysis Run 5/4/2021 8:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

	MW-22	MW-23D	MW-33	MW-35	MW-37D
3/14/2019		0.0028 (J)			
3/15/2019	0.002 (J)				
4/5/2019	0.0013 (J)	0.0021 (J)			
9/26/2019		0.0023 (J)			
9/27/2019	0.0013 (J)				
3/2/2020	0.0015 (J)	0.0025 (J)			
3/27/2020	0.0013 (J)				
4/1/2020		0.0024 (J)	0.0011 (J)		
6/17/2020			0.00097 (J)		
6/18/2020				0.0046 (J)	0.038 (J)
9/17/2020	0.0011 (J)	0.0021 (J)			
9/21/2020			0.00086 (J)	0.0036 (J)	
9/23/2020					0.031
2/11/2021					0.034
2/12/2021		0.0023 (J)	0.0011 (J)		
2/15/2021	0.0011 (J)			0.0043 (J)	
3/12/2021					0.035
3/17/2021	0.0012 (J)	0.0024 (J)			
3/18/2021			0.0012 (J)		
3/19/2021				0.0045 (J)	

Time Series

Constituent: Mercury (mg/L) Analysis Run 5/4/2021 8:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-4 (bg)	HGWA-42D (bg)
5/19/2016	<0.0005	<0.0005	<0.0005	<0.0005	
7/11/2016	<0.0005	<0.0005		<0.0005	
7/12/2016			<0.0005		
8/30/2016	4E-05 (J)	4E-05 (J)	<0.0005	5E-05 (J)	
10/19/2016	<0.0005	<0.0005	<0.0005	<0.0005	
12/6/2016	<0.0005	<0.0005	<0.0005	5E-05 (J)	
1/24/2017	<0.0005	<0.0005	<0.0005	0.0001 (J)	
3/21/2017	<0.0005	<0.0005	<0.0005	0.00016 (J)	
5/22/2017	<0.0005	<0.0005	<0.0005		
5/23/2017				5E-05 (J)	
4/2/2018	<0.0005	<0.0005		<0.0005	
4/3/2018			<0.0005		
3/11/2019				<0.0005	
3/12/2019	<0.0005	<0.0005	<0.0005		
3/2/2020	<0.0005	<0.0005	<0.0005	<0.0005	
9/17/2020					<0.0005
11/11/2020					<0.0005
12/15/2020					<0.0005
1/20/2021					<0.0005
2/8/2021	<0.0005			<0.0005	<0.0005
2/9/2021		<0.0005	<0.0005		

Time Series

Constituent: Mercury (mg/L) Analysis Run 5/4/2021 8:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-5 (bg)	HGWA-6 (bg)	HGWC-14
5/19/2016			<0.0005		
5/20/2016				<0.0005	
5/23/2016					<0.0005
7/11/2016			<0.0005	<0.0005	
7/12/2016					<0.0005
8/30/2016			<0.0005	4.4E-05 (J)	
9/1/2016					<0.0005
10/20/2016			<0.0005	<0.0005	
10/24/2016					<0.0005
12/7/2016					<0.0005
12/8/2016			<0.0005	<0.0005	
1/24/2017			<0.0005	<0.0005	
1/26/2017					<0.0005
3/21/2017			<0.0005	<0.0005	
3/23/2017					<0.0005
5/23/2017			<0.0005	<0.0005	
5/24/2017					<0.0005
4/3/2018			<0.0005	<0.0005	
4/4/2018					<0.0005
3/12/2019			<0.0005	<0.0005	
3/14/2019					<0.0005
3/2/2020			<0.0005	<0.0005	
3/3/2020					<0.0005
9/16/2020	<0.0005	<0.0005			
11/10/2020	<0.0005	<0.0005			
12/15/2020	<0.0005	<0.0005			
1/19/2021	<0.0005	<0.0005			
2/9/2021	<0.0005	<0.0005	<0.0005	<0.0005	
2/11/2021					<0.0005

Time Series

Constituent: Mercury (mg/L) Analysis Run 5/4/2021 8:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWC-15	HGWC-16	HGWC-17	HGWC-18	MW-21D
5/23/2016	<0.0005	<0.0005	<0.0005		
5/24/2016				<0.0005	
7/12/2016	<0.0005	<0.0005	<0.0005	<0.0005	
9/1/2016	<0.0005	<0.0005	<0.0005	6E-05 (J)	
10/24/2016	<0.0005				
10/25/2016		<0.0005	<0.0005	4E-05 (J)	
12/7/2016	<0.0005	<0.0005	<0.0005		
12/8/2016				<0.0005	
1/26/2017	<0.0005	<0.0005	<0.0005	8E-05 (J)	
3/22/2017		<0.0005	<0.0005		
3/23/2017	<0.0005			9E-05 (J)	
5/24/2017	<0.0005	<0.0005			
5/25/2017			<0.0005	8E-05 (J)	
4/3/2018	<0.0005	<0.0005	<0.0005	<0.0005	
3/14/2019	<0.0005			<0.0005	
3/15/2019		<0.0005	<0.0005		<0.0005
3/3/2020	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
2/10/2021		<0.0005			
2/11/2021			<0.0005	<0.0005	<0.0005
2/12/2021	<0.0005				

Time Series

Constituent: Mercury (mg/L) Analysis Run 5/4/2021 8:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

	MW-22	MW-23D	MW-33	MW-35	MW-37D
3/14/2019		<0.0005			
3/15/2019	<0.0005				
3/2/2020	<0.0005	<0.0005			
2/11/2021					<0.0005
2/12/2021		<0.0005	<0.0005		
2/15/2021	<0.0005			<0.0005	

Time Series

Constituent: Molybdenum (mg/L) Analysis Run 5/4/2021 8:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-4 (bg)	HGWA-42D (bg)
5/19/2016	<0.01	<0.01	<0.01	<0.01	
7/11/2016	<0.01	<0.01		<0.01	
7/12/2016			<0.01		
8/30/2016	<0.01	<0.01	<0.01	<0.01	
10/19/2016	<0.01	<0.01	<0.01	<0.01	
12/6/2016	<0.01	<0.01	<0.01	<0.01	
1/24/2017	<0.01	<0.01	<0.01	<0.01	
3/21/2017	<0.01	<0.01	<0.01	<0.01	
5/22/2017	<0.01	<0.01	<0.01		
5/23/2017				<0.01	
4/2/2018	<0.01	<0.01		<0.01	
4/3/2018			<0.01		
3/11/2019				<0.01	
3/12/2019	<0.01	<0.01	<0.01		
4/1/2019			<0.01		
4/2/2019	<0.01	<0.01		<0.01	
9/23/2019	<0.01	<0.01	<0.01		
9/24/2019				<0.01	
3/2/2020	<0.01	<0.01	<0.01	<0.01	
3/25/2020	<0.01	<0.01	<0.01		
3/26/2020				<0.01	
9/15/2020	<0.01	<0.01	<0.01	<0.01	
9/17/2020					0.0037 (J)
11/11/2020					<0.01
12/15/2020					0.00082 (J)
1/20/2021					<0.01
2/8/2021	<0.01			<0.01	<0.01
2/9/2021		<0.01	<0.01		
3/10/2021	<0.01			<0.01	<0.01
3/11/2021		<0.01	<0.01		

Time Series

Constituent: Molybdenum (mg/L) Analysis Run 5/4/2021 8:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-5 (bg)	HGWA-6 (bg)	HGWC-14
5/19/2016			<0.01		
5/20/2016				<0.01	
5/23/2016					<0.01
7/11/2016			<0.01	0.0008 (J)	
7/12/2016					<0.01
8/30/2016			<0.01	<0.01	
9/1/2016					<0.01
10/20/2016			<0.01	<0.01	
10/24/2016					<0.01
12/7/2016					<0.01
12/8/2016			<0.01	<0.01	
1/24/2017			<0.01	<0.01	
1/26/2017					<0.01
3/21/2017			<0.01	0.0002 (J)	
3/23/2017					<0.01
5/23/2017			<0.01	<0.01	
5/24/2017					<0.01
4/3/2018			<0.01	<0.01	
4/4/2018					<0.01
3/12/2019			<0.01	<0.01	
3/14/2019					<0.01
4/2/2019			<0.01	<0.01	
4/5/2019					<0.01
9/24/2019			<0.01	<0.01	<0.01
3/2/2020			<0.01	<0.01	
3/3/2020					<0.01
3/25/2020				<0.01	
3/26/2020			<0.01		
3/30/2020					<0.01
9/15/2020			<0.01	<0.01	
9/16/2020	0.0044 (J)	0.0019 (J)			
9/18/2020					<0.01
11/10/2020	0.0072 (J)	0.0018 (J)			
12/15/2020	0.0044 (J)	0.0019 (J)			
1/19/2021	0.0038 (J)	0.0035 (J)			
2/9/2021	0.0045 (J)	0.0038 (J)	<0.01	<0.01	
2/11/2021					<0.01
3/10/2021		0.0019 (J)			
3/11/2021	0.0064 (J)		<0.01	<0.01	
3/17/2021					<0.01

Time Series

Constituent: Molybdenum (mg/L) Analysis Run 5/4/2021 8:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWC-15	HGWC-16	HGWC-17	HGWC-18	MW-21D
5/23/2016	<0.01	<0.01	<0.01		
5/24/2016				<0.01	
7/12/2016	0.0007 (J)	<0.01	<0.01	<0.01	
9/1/2016	<0.01	<0.01	<0.01	<0.01	
10/24/2016	<0.01				
10/25/2016		<0.01	<0.01	<0.01	
12/7/2016	<0.01	<0.01	<0.01		
12/8/2016				<0.01	
1/26/2017	<0.01	<0.01	<0.01	<0.01	
3/22/2017		<0.01	<0.01		
3/23/2017	<0.01			<0.01	
5/24/2017	<0.01	<0.01			
5/25/2017			<0.01	<0.01	
4/3/2018	<0.01	<0.01	<0.01	<0.01	
3/14/2019	<0.01			<0.01	
3/15/2019		<0.01	<0.01		0.045
4/4/2019	<0.01	<0.01			0.033
4/5/2019			<0.01	<0.01	
9/24/2019	<0.01				
9/25/2019		<0.01	<0.01	<0.01	0.038
3/3/2020	<0.01	<0.01	<0.01	<0.01	0.025
3/26/2020	<0.01				
3/30/2020		<0.01			
3/31/2020			<0.01	<0.01	
4/1/2020					0.024
6/17/2020					0.019
9/15/2020				<0.01	
9/16/2020			<0.01		
9/17/2020	<0.01	<0.01			
9/21/2020					0.017
2/10/2021		<0.01			
2/11/2021			<0.01	<0.01	0.016
2/12/2021	<0.01				
3/16/2021	<0.01				
3/17/2021		<0.01			
3/18/2021			<0.01	<0.01	0.016

Time Series

Constituent: Molybdenum (mg/L) Analysis Run 5/4/2021 8:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

	MW-22	MW-23D	MW-33	MW-35	MW-37D
3/14/2019		<0.01			
3/15/2019	<0.01				
4/5/2019	0.00013 (J)	0.0014 (J)			
9/26/2019		0.0025 (J)			
9/27/2019	<0.01				
3/2/2020	<0.01	0.003 (J)			
3/27/2020	<0.01				
4/1/2020		0.0032 (J)	<0.01		
6/17/2020			<0.01		
6/18/2020				<0.01	0.023
9/17/2020	<0.01	0.0026 (J)			
9/21/2020			<0.01	<0.01	
9/23/2020					0.015
2/11/2021					0.019
2/12/2021		0.0039 (J)	<0.01		
2/15/2021	<0.01			<0.01	
3/12/2021					0.014
3/17/2021	<0.01	0.0034 (J)			
3/18/2021			<0.01		
3/19/2021				<0.01	

Time Series

Constituent: Selenium (mg/L) Analysis Run 5/4/2021 8:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-4 (bg)	HGWA-42D (bg)
5/19/2016	<0.005	<0.005	<0.005	<0.005	
7/11/2016	<0.005	<0.005		<0.005	
7/12/2016			<0.005		
8/30/2016	<0.005	<0.005	<0.005	<0.005	
10/19/2016	<0.005	<0.005	<0.005	<0.005	
12/6/2016	<0.005	<0.005	<0.005	<0.005	
1/24/2017	<0.005	<0.005	<0.005	<0.005	
3/21/2017	<0.005	<0.005	<0.005	<0.005	
5/22/2017	<0.005	<0.005	<0.005		
5/23/2017				<0.005	
4/2/2018	<0.005	<0.005		<0.005	
4/3/2018			<0.005		
6/4/2018	<0.005	<0.005	<0.005	<0.005	
10/1/2018	<0.005	<0.005	<0.005	<0.005	
3/11/2019				<0.005	
3/12/2019	<0.005	<0.005	<0.005		
4/1/2019			<0.005		
4/2/2019	<0.005	<0.005		<0.005	
9/23/2019	<0.005	<0.005	<0.005		
9/24/2019				<0.005	
3/2/2020	<0.005	<0.005	<0.005	<0.005	
3/25/2020	<0.005	<0.005	<0.005		
3/26/2020				<0.005	
9/15/2020	<0.005	<0.005	<0.005	<0.005	
9/17/2020					<0.005
11/11/2020					<0.005
12/15/2020					<0.005
1/20/2021					<0.005
2/8/2021	<0.005			<0.005	<0.005
2/9/2021		<0.005	<0.005		
3/10/2021	0.0047 (J)			<0.005	<0.005
3/11/2021		<0.005	<0.005		

Time Series

Constituent: Selenium (mg/L) Analysis Run 5/4/2021 8:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-5 (bg)	HGWA-6 (bg)	HGWC-14
5/19/2016			<0.005		
5/20/2016				<0.005	
5/23/2016					0.017
7/11/2016			<0.005	<0.005	
7/12/2016					0.0146
8/30/2016			<0.005	<0.005	
9/1/2016					0.0137
10/20/2016			<0.005	<0.005	
10/24/2016					0.0135
12/7/2016					0.01 (J)
12/8/2016			<0.005	<0.005	
1/24/2017			0.0011 (J)	<0.005	
1/26/2017					0.0214
3/21/2017			<0.005	<0.005	
3/23/2017					0.0167
5/23/2017			<0.005	<0.005	
5/24/2017					0.0083 (J)
4/3/2018			<0.005	<0.005	
4/4/2018					0.012
6/5/2018			<0.005	<0.005	
6/6/2018					0.014
10/2/2018			<0.005	<0.005	
10/3/2018					0.0056 (J)
3/12/2019			<0.005	<0.005	
3/14/2019					0.0048 (J)
4/2/2019			<0.005	<0.005	
4/5/2019					0.00091 (J)
9/24/2019			<0.005	<0.005	0.0064 (J)
3/2/2020			<0.005	<0.005	
3/3/2020					0.0045 (J)
3/25/2020				<0.005	
3/26/2020			<0.005		
3/30/2020					0.0049 (J)
9/15/2020			<0.005	<0.005	
9/16/2020	<0.005	<0.005			
9/18/2020					0.0045 (J)
11/10/2020	<0.005	<0.005			
12/15/2020	<0.005	<0.005			
1/19/2021	<0.005	<0.005			
2/9/2021	<0.005	<0.005	<0.005	<0.005	
2/11/2021					0.0072 (J)
3/10/2021		<0.005			
3/11/2021	<0.005		<0.005	<0.005	
3/17/2021					0.01 (J)

Time Series

Constituent: Selenium (mg/L) Analysis Run 5/4/2021 8:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWC-15	HGWC-16	HGWC-17	HGWC-18	MW-21D
5/23/2016	<0.005	<0.005	<0.005		
5/24/2016				<0.005	
7/12/2016	<0.005	<0.005	<0.005	0.036	
9/1/2016	<0.005	<0.005	0.0014 (J)	0.0347	
10/24/2016	0.0012 (J)				
10/25/2016		<0.005	<0.005	0.0282	
12/7/2016	0.0041 (J)	<0.005	0.0023 (J)		
12/8/2016				0.0373	
1/26/2017	<0.005	<0.005	<0.005	0.0385	
3/22/2017		<0.005	<0.005		
3/23/2017	0.0016 (J)			0.0414	
5/24/2017	<0.005	<0.005			
5/25/2017			<0.005	0.019	
4/3/2018	<0.005	<0.005	<0.005	0.029	
6/5/2018				0.038	
6/6/2018	<0.005	<0.005	<0.005		
10/3/2018	<0.005	<0.005	<0.005	0.017	
3/14/2019	<0.005			0.016	
3/15/2019		<0.005	<0.005		<0.005
4/4/2019	0.00021 (J)	8.9E-05 (J)			<0.005
4/5/2019			9.3E-05 (J)	0.0018 (J)	
9/24/2019	<0.005				
9/25/2019		<0.005	<0.005	0.02	<0.005
3/3/2020	<0.005	<0.005	<0.005	0.014	<0.005
3/26/2020	<0.005				
3/30/2020		<0.005			
3/31/2020			<0.005	0.019	
4/1/2020					<0.005
6/17/2020					<0.005
9/15/2020				0.059	
9/16/2020			<0.005		
9/17/2020	<0.005	<0.005			
9/21/2020					<0.005
2/10/2021		<0.005			
2/11/2021			<0.005	0.023	<0.005
2/12/2021	<0.005				
3/16/2021	<0.005				
3/17/2021		<0.005			
3/18/2021			<0.005	0.019 (J)	<0.005

Time Series

Constituent: Selenium (mg/L) Analysis Run 5/4/2021 8:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

	MW-22	MW-23D	MW-33	MW-35	MW-37D
3/14/2019		<0.005			
3/15/2019	<0.005				
4/5/2019	<0.005	<0.005			
9/26/2019		<0.005			
9/27/2019	<0.005				
3/2/2020	<0.005	<0.005			
3/27/2020	<0.005				
4/1/2020		<0.005	0.011		
6/17/2020			0.014		
6/18/2020				0.014	<0.005
9/17/2020	0.002 (J)	<0.005			
9/21/2020			0.041	0.037	
9/23/2020					<0.005
2/11/2021					<0.005
2/12/2021		<0.005	0.011		
2/15/2021	<0.005			0.01	
3/12/2021					<0.005
3/17/2021	<0.005	<0.005			
3/18/2021			0.028		
3/19/2021				0.016 (J)	

Time Series

Constituent: Sulfate (mg/L) Analysis Run 5/4/2021 8:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-4 (bg)	HGWA-42D (bg)
5/19/2016	66.9	48.6	42.3	1.22	
7/11/2016	41	45		3.7	
7/12/2016			44		
8/30/2016	36	42	40	6.8	
10/19/2016	46	44	43	11	
12/6/2016	59	44	43	13	
1/24/2017	46	46	48	5.7	
3/21/2017	63	46	45	1.7	
5/22/2017	77	48	46		
5/23/2017				1.5	
10/3/2017	42	47	48	1.3	
6/4/2018	71.8	47.8	46.6	4.9	
10/1/2018	49.1	48.1	48.6	0.59 (J)	
4/1/2019			50.4		
4/2/2019	84.3	48.7		4.9	
9/23/2019	70.2	47.2	43.9		
9/24/2019				<1	
3/25/2020	85.9	46.3	50.5		
3/26/2020				<1	
9/15/2020	47.3	51.5	44.7	<1	
9/17/2020					10.9
11/11/2020					9.4
12/15/2020					10.9
1/20/2021					9.8
3/10/2021	49.6			1.2	10.8
3/11/2021		52.9	50.4		

Time Series

Constituent: Sulfate (mg/L) Analysis Run 5/4/2021 8:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-5 (bg)	HGWA-6 (bg)	HGWC-14
5/19/2016			25		
5/20/2016				34.4	
5/23/2016					1070
7/11/2016			27	34	
7/12/2016					1300
8/30/2016			23	36	
9/1/2016					1300
10/20/2016			19	36	
10/24/2016					280
12/7/2016					1300
12/8/2016			20	36	
1/24/2017			20	37	
1/26/2017					1400
3/21/2017			23	37	
3/23/2017					1500
5/23/2017			21	38	
5/24/2017					1400
10/3/2017			21	38	
10/4/2017					1400
6/5/2018			22.9	38	
6/6/2018					1520
10/2/2018			20.3	38.5	
10/3/2018					1550
4/2/2019			23.8	35.5	
4/5/2019					1520
9/24/2019			20.7	35.4	1110
3/25/2020				35.1	
3/26/2020			21.6		
3/30/2020					1150
9/15/2020			21.2	35.3	
9/16/2020	43	6.9			
9/18/2020					1260
11/10/2020	39	6.3			
12/15/2020	38.8	6.7			
1/19/2021	37.3	7.4			
3/10/2021		<1			
3/11/2021	38.6		22.7	35.5	
3/17/2021					1300

Time Series

Constituent: Sulfate (mg/L) Analysis Run 5/4/2021 8:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWC-15	HGWC-16	HGWC-17	HGWC-18	MW-21D
5/23/2016	424	203	395		
5/24/2016				834	
7/12/2016	440	220	460	930	
9/1/2016	440	220	430	890	
10/24/2016	420				
10/25/2016		230	440	950	
12/7/2016	450	220	410		
12/8/2016				910	
1/26/2017	490	250	440	970	
3/22/2017		240	460		
3/23/2017	530			980	
5/24/2017	500	230			
5/25/2017			430	920	
10/4/2017	560	220	490	870	
6/5/2018				962	
6/6/2018	469	233	520		
10/3/2018	600	215	651	1170	
4/4/2019	528	251			915
4/5/2019			642	1030	
9/24/2019	382				
9/25/2019		223	434	920	767
3/26/2020	438				
3/30/2020		223			
3/31/2020			484	934	
4/1/2020					889
6/17/2020					901
9/15/2020				1080	
9/16/2020			467		
9/17/2020	416	254			
9/21/2020					1010
3/16/2021	379				
3/17/2021		250			
3/18/2021			447	1050	829

Time Series

Constituent: Sulfate (mg/L) Analysis Run 5/4/2021 8:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

	MW-22	MW-23D	MW-33	MW-35	MW-37D
4/5/2019	392	585			
9/26/2019		556			
9/27/2019	520				
1/22/2020			1250		
3/27/2020	419				
4/1/2020		478	1210		
6/17/2020			1210		
6/18/2020				1160	286
9/17/2020	468	490			
9/21/2020			1290	1220	
9/23/2020					256
3/12/2021					237
3/17/2021	461	486			
3/18/2021			1360		
3/19/2021				1220	

Time Series

Constituent: Thallium (mg/L) Analysis Run 5/4/2021 8:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-4 (bg)	HGWA-42D (bg)
5/19/2016	<0.001	<0.001	<0.001	<0.001	
7/11/2016	<0.001	<0.001		<0.001	
7/12/2016			<0.001		
8/30/2016	<0.001	<0.001	<0.001	<0.001	
10/19/2016	<0.001	<0.001	<0.001	<0.001	
12/6/2016	<0.001	<0.001	<0.001	<0.001	
1/24/2017	<0.001	<0.001	<0.001	<0.001	
3/21/2017	<0.001	3E-05 (J)	<0.001	<0.001	
5/22/2017	<0.001	<0.001	<0.001		
5/23/2017				<0.001	
4/2/2018	<0.001	<0.001		<0.001	
4/3/2018			<0.001		
6/4/2018	<0.001	<0.001	<0.001	<0.001	
10/1/2018	<0.001	<0.001	<0.001	<0.001	
3/11/2019				<0.001	
3/12/2019	<0.001	<0.001	<0.001		
4/1/2019			<0.001		
4/2/2019	<0.001	<0.001		<0.001	
9/23/2019	<0.001	<0.001	<0.001		
9/24/2019				<0.001	
3/2/2020	<0.001	<0.001	<0.001	<0.001	
3/25/2020	<0.001	<0.001	<0.001		
3/26/2020				<0.001	
9/15/2020	<0.001	<0.001	<0.001	<0.001	
9/17/2020					<0.001
11/11/2020					<0.001
12/15/2020					<0.001
1/20/2021					<0.001
2/8/2021	<0.001			<0.001	<0.001
2/9/2021		<0.001	<0.001		
3/10/2021	<0.001			<0.001	<0.001
3/11/2021		<0.001	<0.001		

Time Series

Constituent: Thallium (mg/L) Analysis Run 5/4/2021 8:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-5 (bg)	HGWA-6 (bg)	HGWC-14
5/19/2016			<0.001		
5/20/2016				<0.001	
5/23/2016					0.000306 (J)
7/11/2016			<0.001	<0.001	
7/12/2016					0.0003 (J)
8/30/2016			<0.001	<0.001	
9/1/2016					0.0003 (J)
10/20/2016			<0.001	<0.001	
10/24/2016					0.0004
12/7/2016					0.0003 (J)
12/8/2016			<0.001	<0.001	
1/24/2017			<0.001	<0.001	
1/26/2017					0.0003 (J)
3/21/2017			<0.001	<0.001	
3/23/2017					0.0003 (J)
5/23/2017			<0.001	<0.001	
5/24/2017					0.0003 (J)
4/3/2018			<0.001	<0.001	
4/4/2018					0.00028 (J)
6/5/2018			<0.001	<0.001	
6/6/2018					0.00029 (J)
10/2/2018			<0.001	<0.001	
10/3/2018					0.00029 (J)
3/12/2019			<0.001	<0.001	
3/14/2019					0.00028 (J)
4/2/2019			<0.001	<0.001	
4/5/2019					0.00028 (J)
9/24/2019			<0.001	<0.001	0.0003 (J)
3/2/2020			<0.001	<0.001	
3/3/2020					0.00026 (J)
3/25/2020				5.7E-05 (J)	
3/26/2020			<0.001		
3/30/2020					0.00028 (J)
9/15/2020			<0.001	<0.001	
9/16/2020	<0.001	<0.001			
9/18/2020					0.00028 (J)
11/10/2020	<0.001	<0.001			
12/15/2020	<0.001	<0.001			
1/19/2021	<0.001	<0.001			
2/9/2021	<0.001	<0.001	<0.001	<0.001	
2/11/2021					0.00026 (J)
3/10/2021		<0.001			
3/11/2021	<0.001		<0.001	<0.001	
3/17/2021					0.00034 (J)

Time Series

Constituent: Thallium (mg/L) Analysis Run 5/4/2021 8:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWC-15	HGWC-16	HGWC-17	HGWC-18	MW-21D
5/23/2016	<0.001	<0.001	<0.001		
5/24/2016				<0.001	
7/12/2016	<0.001	<0.001	0.0001 (J)	0.0002 (J)	
9/1/2016	<0.001	<0.001	<0.001	<0.001	
10/24/2016	<0.001				
10/25/2016		<0.001	<0.001	<0.001	
12/7/2016	<0.001	<0.001	<0.001		
12/8/2016				<0.001	
1/26/2017	<0.001	<0.001	<0.001	<0.001	
3/22/2017		<0.001	0.0001 (J)		
3/23/2017	<0.001			0.0002 (J)	
5/24/2017	<0.001	<0.001			
5/25/2017			0.0001 (J)	0.0002 (J)	
4/3/2018	<0.001	<0.001	<0.001	0.00014 (J)	
6/5/2018				0.00016 (J)	
6/6/2018	<0.001	<0.001	<0.001		
10/3/2018	<0.001	<0.001	<0.001	<0.001	
3/14/2019	<0.001			<0.001	
3/15/2019		<0.001	<0.001		<0.001
4/4/2019	<0.001	<0.001			<0.001
4/5/2019			0.00013 (J)	0.00014 (J)	
9/24/2019	<0.001				
9/25/2019		<0.001	0.00012 (J)	0.00019 (J)	<0.001
3/3/2020	<0.001	<0.001	0.00011 (J)	0.00013 (J)	<0.001
3/26/2020	<0.001				
3/30/2020		<0.001			
3/31/2020			0.00014 (J)	0.00015 (J)	
4/1/2020					<0.001
6/17/2020					<0.001
9/15/2020				0.00016 (J)	
9/16/2020			<0.001		
9/17/2020	<0.001	<0.001			
9/21/2020					<0.001
2/10/2021		<0.001			
2/11/2021			<0.001	<0.001	<0.001
2/12/2021	<0.001				
3/16/2021	<0.001				
3/17/2021		<0.001			
3/18/2021			<0.001	0.00016 (J)	<0.001

Time Series

Constituent: Thallium (mg/L) Analysis Run 5/4/2021 8:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

	MW-22	MW-23D	MW-33	MW-35	MW-37D
3/14/2019		<0.001			
3/15/2019	<0.001				
4/5/2019	<0.001	<0.001			
9/26/2019		<0.001			
9/27/2019	<0.001				
3/2/2020	<0.001	<0.001			
3/27/2020	<0.001				
4/1/2020		<0.001	0.00029 (J)		
6/17/2020			0.00028 (J)		
6/18/2020				0.00013 (J)	<0.001
9/17/2020	<0.001	<0.001			
9/21/2020			0.00029 (J)	<0.001	
9/23/2020					<0.001
2/11/2021					<0.001
2/12/2021		<0.001	0.00025 (J)		
2/15/2021	<0.001			<0.001	
3/12/2021					<0.001
3/17/2021	<0.001	<0.001			
3/18/2021			0.00031 (J)		
3/19/2021				<0.001	

Time Series

Constituent: Total Dissolved Solids (mg/L) Analysis Run 5/4/2021 8:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-4 (bg)	HGWA-42D (bg)
5/19/2016	421	143	267	165	
7/11/2016	363	125		266	
7/12/2016			249		
8/30/2016	330	168	254	292	
10/19/2016	380	176	357	338	
12/6/2016	377	145	285	356	
1/24/2017	342	129	300	131	
3/21/2017	340	103	288	132	
5/22/2017	338	92	263		
5/23/2017				183	
10/3/2017	343	127	300	161	
6/4/2018	415	140	266	240	
10/1/2018	354	135	291	106	
4/1/2019			284		
4/2/2019	452	133		230	
9/23/2019	442	129	268		
9/24/2019				131	
3/25/2020	496	138	284		
3/26/2020				69	
9/15/2020	265	124	258	93	
9/17/2020					188
11/11/2020					175
12/15/2020					193
1/20/2021					158
3/10/2021	348			53	163
3/11/2021		169	267		

Time Series

Constituent: Total Dissolved Solids (mg/L) Analysis Run 5/4/2021 8:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-5 (bg)	HGWA-6 (bg)	HGWC-14
5/19/2016			168		
5/20/2016				223	
5/23/2016					4130
7/11/2016			158	225	
7/12/2016					3140
8/30/2016			141	232	
9/1/2016					3200
10/20/2016			99	225	
10/24/2016					2920
12/7/2016					2740
12/8/2016			116	235	
1/24/2017			156	272	
1/26/2017					3080
3/21/2017			144	222	
3/23/2017					3060
5/23/2017			134	231	
5/24/2017					3140
10/3/2017			147	243	
10/4/2017					3210
6/5/2018			152	235	
6/6/2018					2620
10/2/2018			146	228	
10/3/2018					2430
4/2/2019			144	238	
4/5/2019					2310
9/24/2019			133	222	2470
3/25/2020				240	
3/26/2020			104		
3/30/2020					2590
9/15/2020			116	217	
9/16/2020	272	270			
9/18/2020					2440
11/10/2020	307	287			
12/15/2020	289	295			
1/19/2021	270	278			
3/10/2021		289			
3/11/2021	279		118	215	
3/17/2021					1640

Time Series

Constituent: Total Dissolved Solids (mg/L) Analysis Run 5/4/2021 8:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWC-15	HGWC-16	HGWC-17	HGWC-18	MW-21D
5/23/2016	1270	570	1010		
5/24/2016				1900	
7/12/2016	1100	585	976	1950	
9/1/2016	1180	625	1060	2000	
10/24/2016	1090				
10/25/2016		563	<25	1870	
12/7/2016	1040	561	866		
12/8/2016				1930	
1/26/2017	1260	608	1000	1950	
3/22/2017		599	1080		
3/23/2017	1360			2080	
5/24/2017	1320	598			
5/25/2017			1080	1970	
10/4/2017	1340	626	1210	2200	
6/5/2018				1880	
6/6/2018	1120	678	1180		
10/3/2018	1140	700	1250	2180	
4/4/2019	926	704			1800
4/5/2019			1260	1610	
9/24/2019	1140				
9/25/2019		813	1280	1960	1970
3/26/2020	1000				
3/30/2020		787			
3/31/2020			1310	1860	
4/1/2020					1940
6/17/2020					2100
9/15/2020				1890	
9/16/2020			1220		
9/17/2020	956	804			
9/21/2020					2060
3/16/2021	92				
3/17/2021		768			
3/18/2021			1020	1390	1390

Time Series

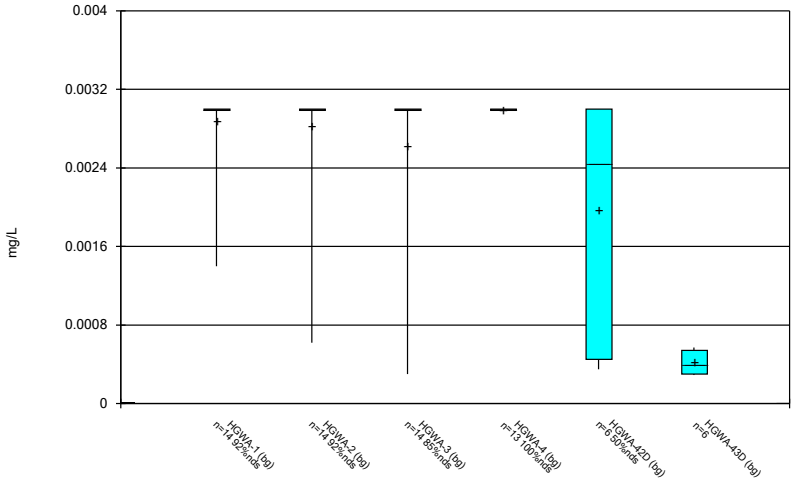
Constituent: Total Dissolved Solids (mg/L) Analysis Run 5/4/2021 8:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

	MW-22	MW-23D	MW-33	MW-35	MW-37D
4/5/2019	890	1400			
9/26/2019		1400			
9/27/2019	1110				
1/22/2020			2310		
3/27/2020	1100				
4/1/2020		1530	2590		
6/17/2020			2540		
6/18/2020				2310	888
9/17/2020	1090	1360			
9/21/2020			2340	2210	
9/23/2020					894
3/12/2021					890
3/17/2021	998	990			
3/18/2021			1790		
3/19/2021				1690	

FIGURE B.

Box & Whiskers Plot

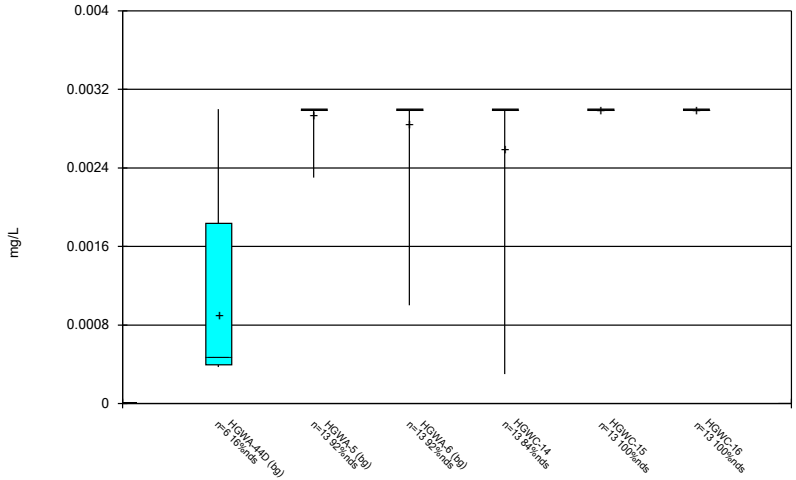


Constituent: Antimony Analysis Run 5/4/2021 8:21 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

Box & Whiskers Plot

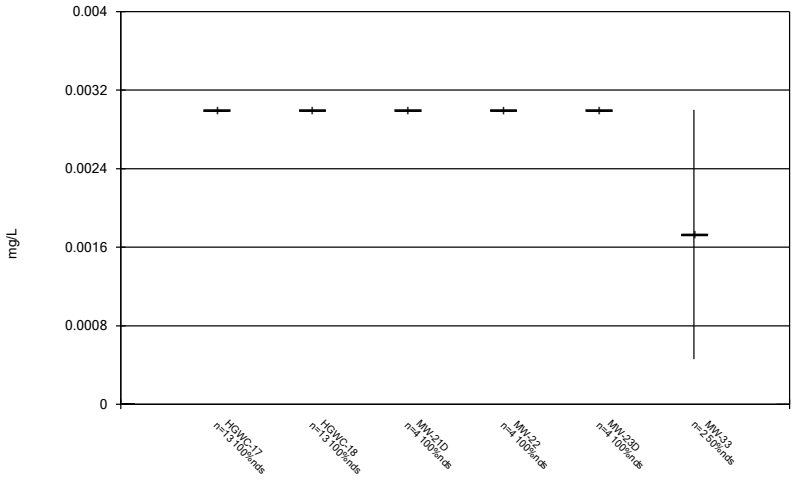


Constituent: Antimony Analysis Run 5/4/2021 8:21 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

Box & Whiskers Plot

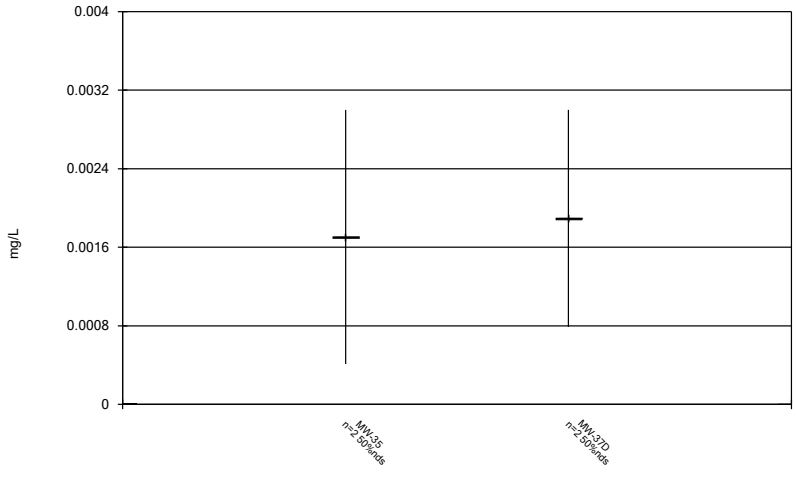


Constituent: Antimony Analysis Run 5/4/2021 8:21 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

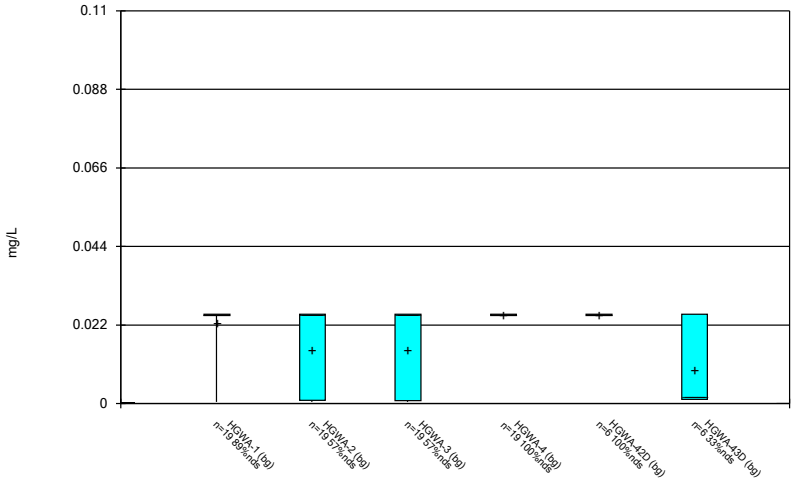
Box & Whiskers Plot



Constituent: Antimony Analysis Run 5/4/2021 8:21 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

Box & Whiskers Plot



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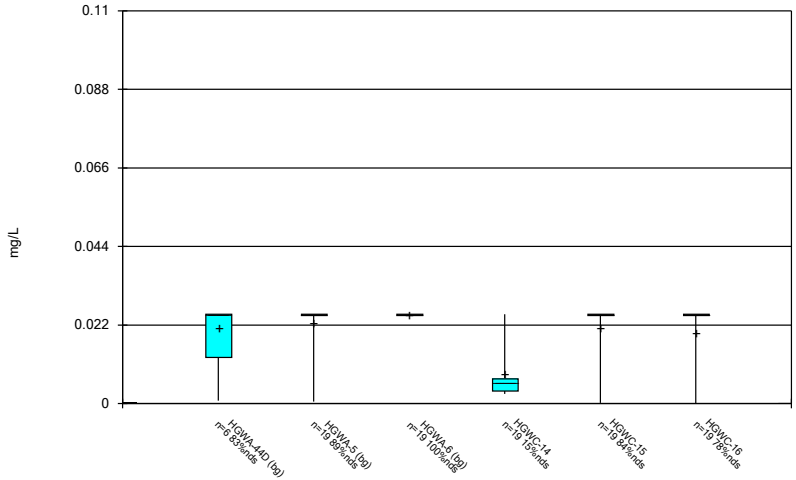
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

Box & Whiskers Plot



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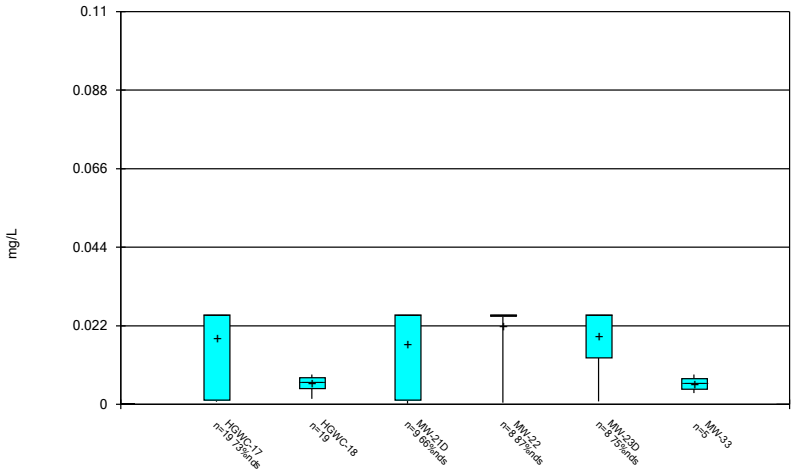
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

Box & Whiskers Plot



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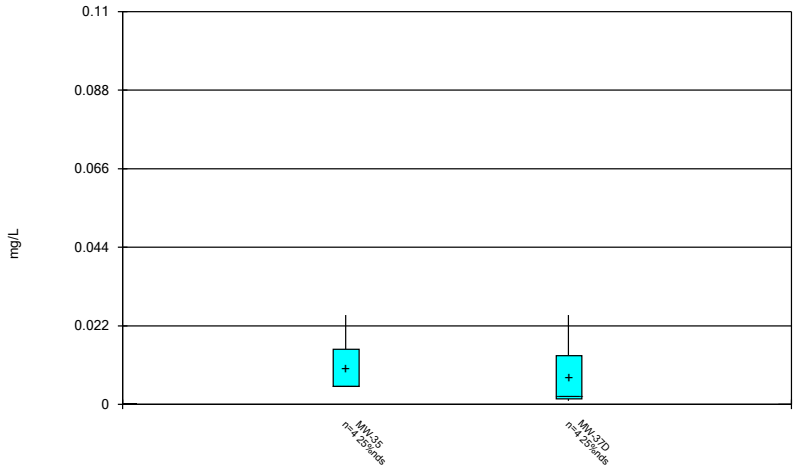
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

Box & Whiskers Plot



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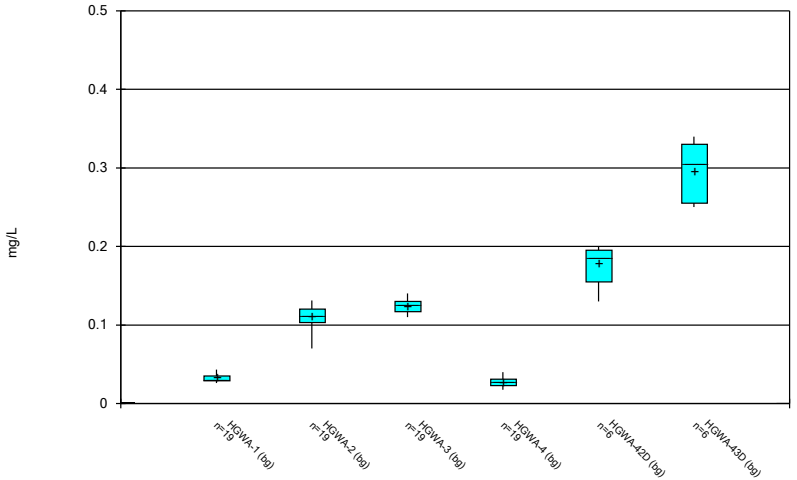
Plant Hammond Client: Southern Company Data: Hammond AP-2

Box & Whiskers Plot



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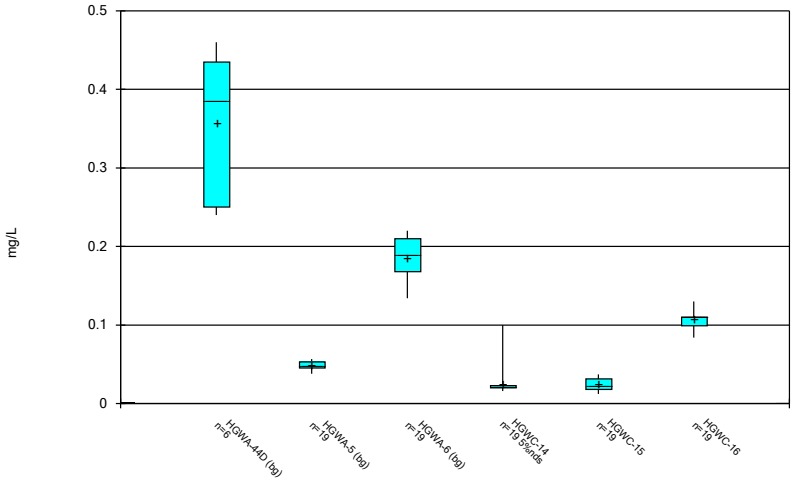
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

Box & Whiskers Plot



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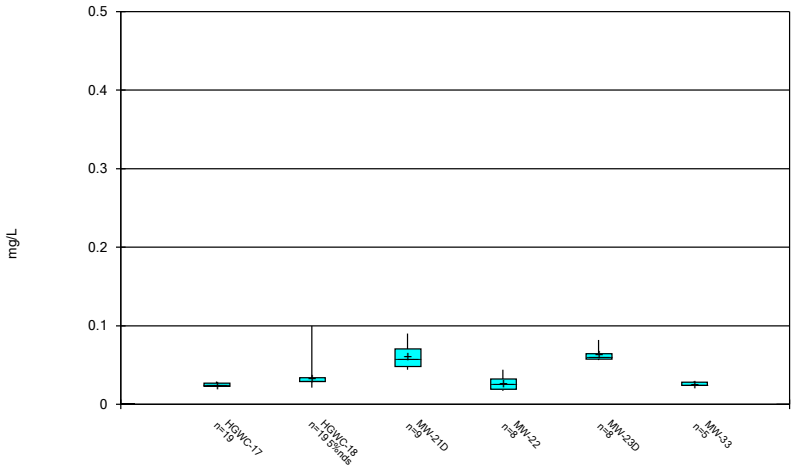
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

Box & Whiskers Plot



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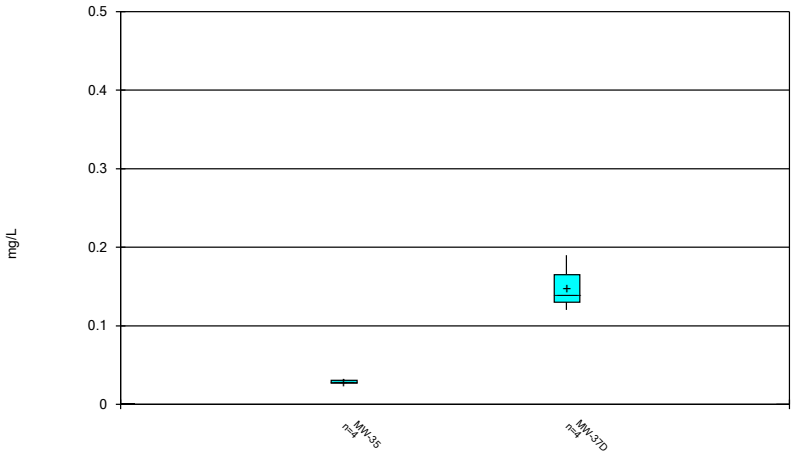
Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

Box & Whiskers Plot



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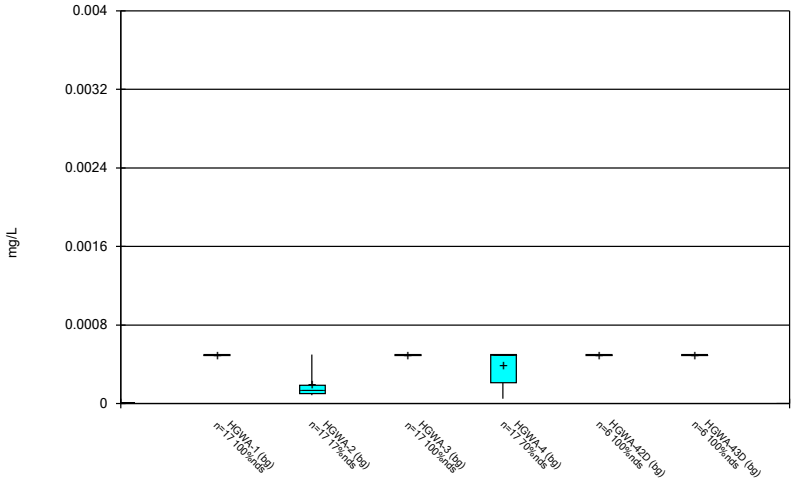
Plant Hammond Client: Southern Company Data: Hammond AP-2

Box & Whiskers Plot



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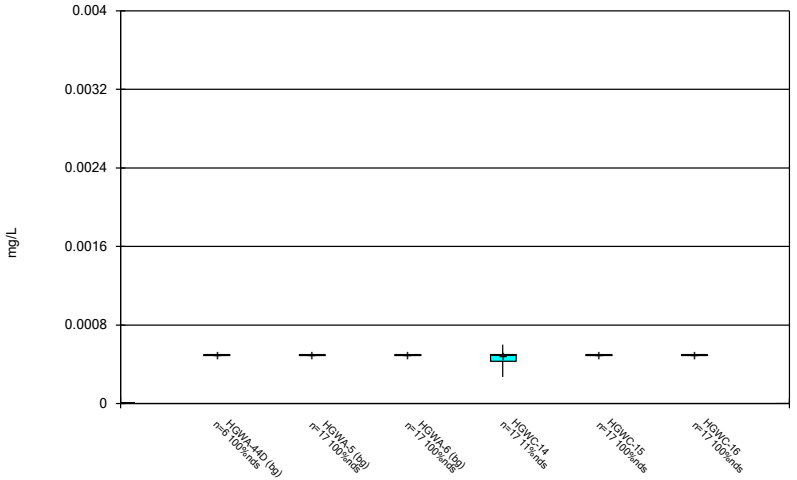
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

Box & Whiskers Plot



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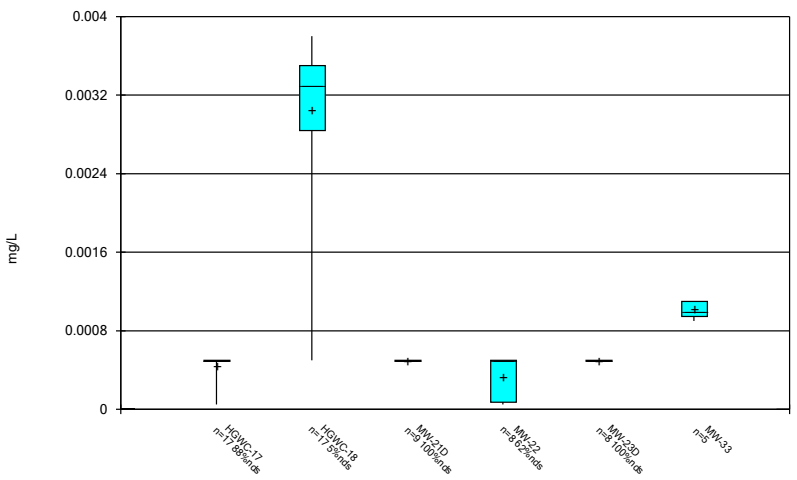
Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

Box & Whiskers Plot



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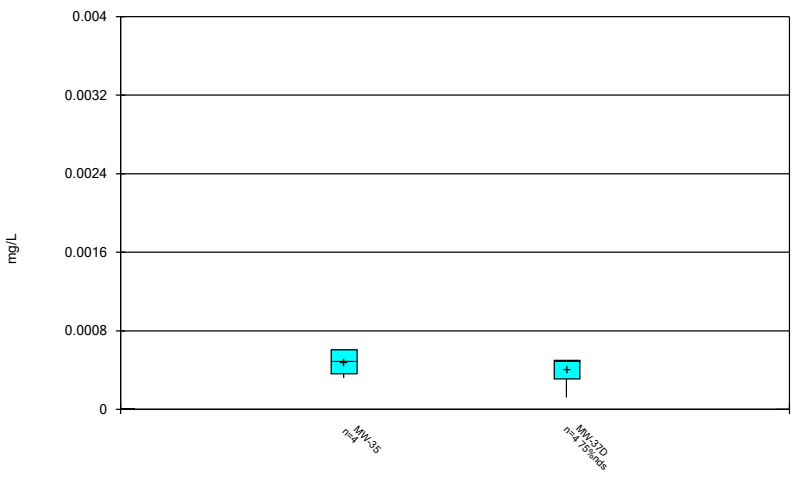
Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

Box & Whiskers Plot



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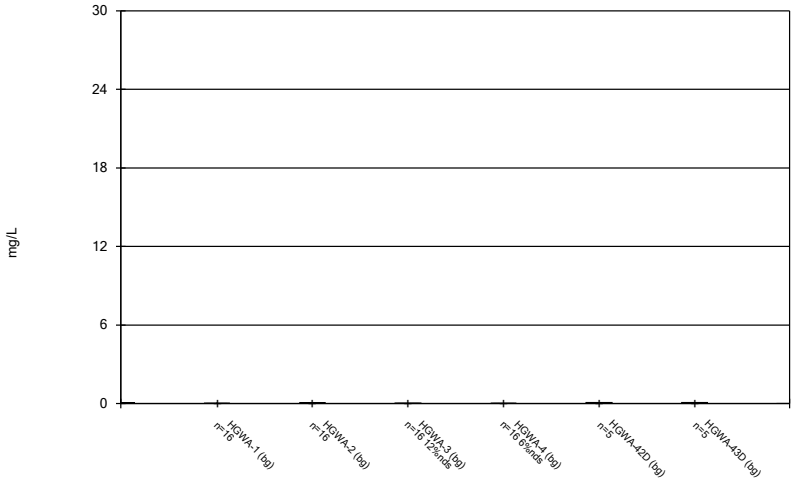
Plant Hammond Client: Southern Company Data: Hammond AP-2

Box & Whiskers Plot



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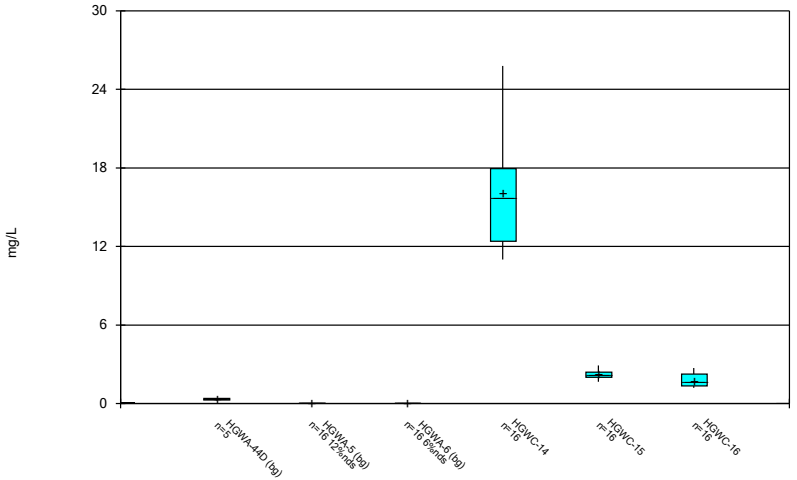
Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

Box & Whiskers Plot



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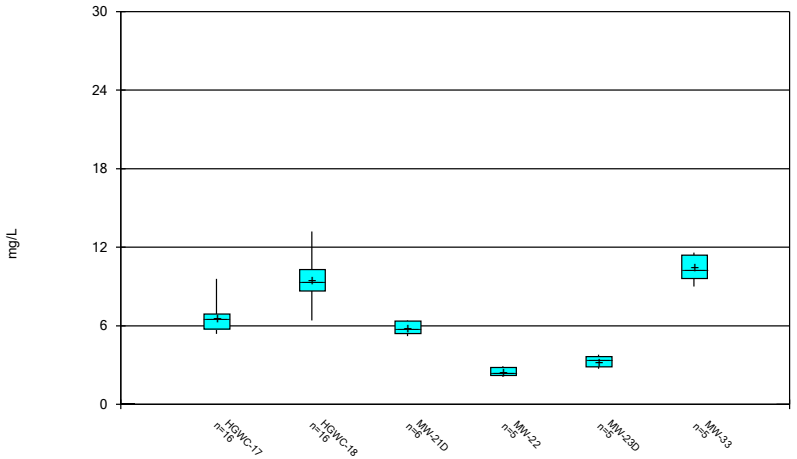
Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

Box & Whiskers Plot



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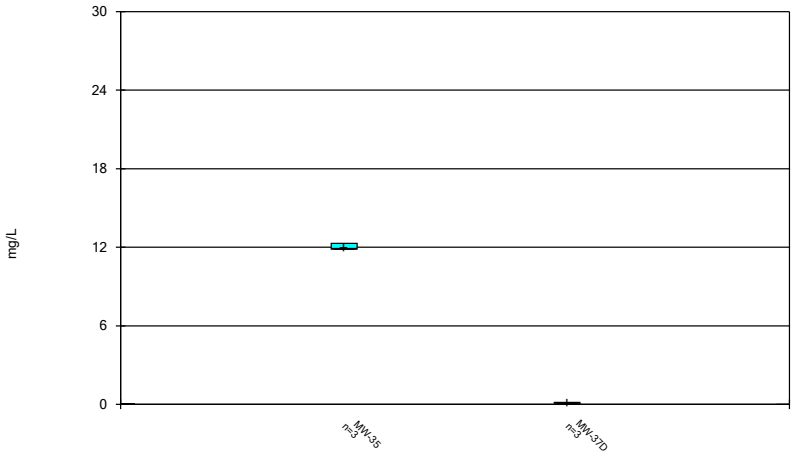
Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

Box & Whiskers Plot



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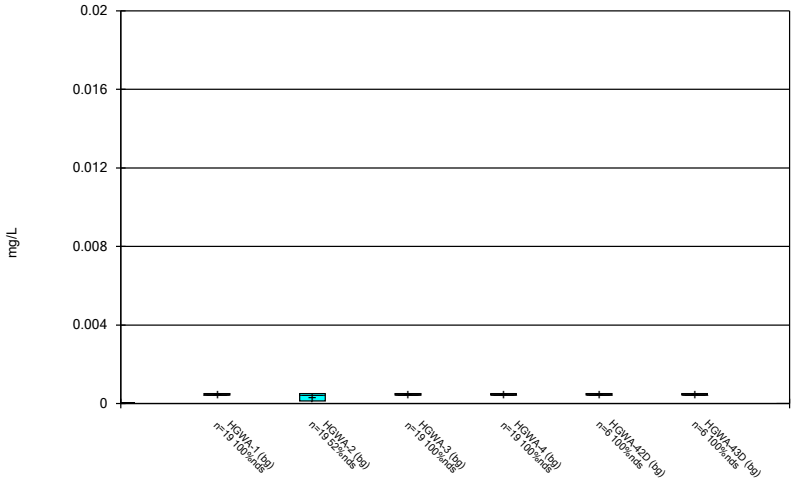
Plant Hammond Client: Southern Company Data: Hammond AP-2

Box & Whiskers Plot

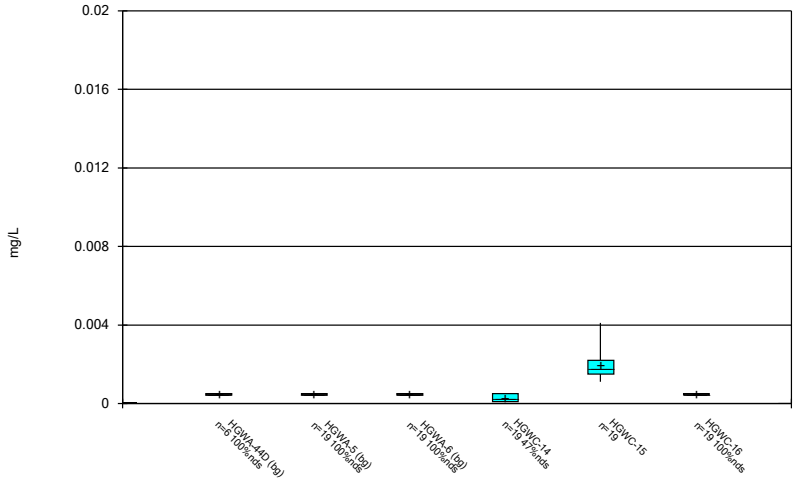


Constituent: Cadmium Analysis Run 5/4/2021 8:21 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

Box & Whiskers Plot



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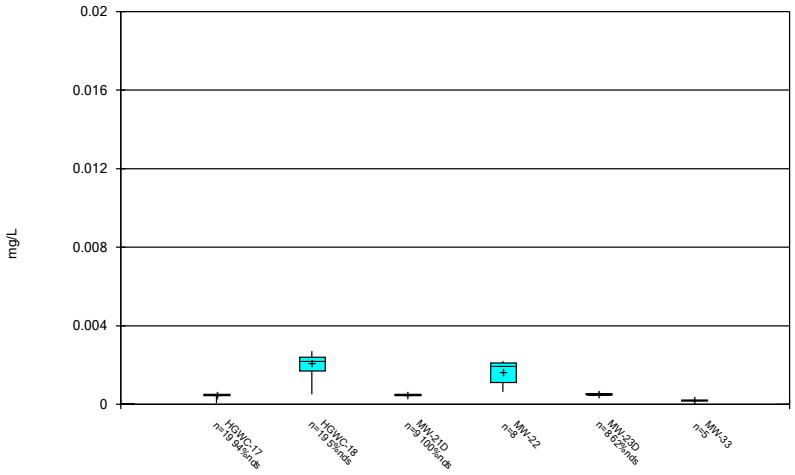
Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

Box & Whiskers Plot



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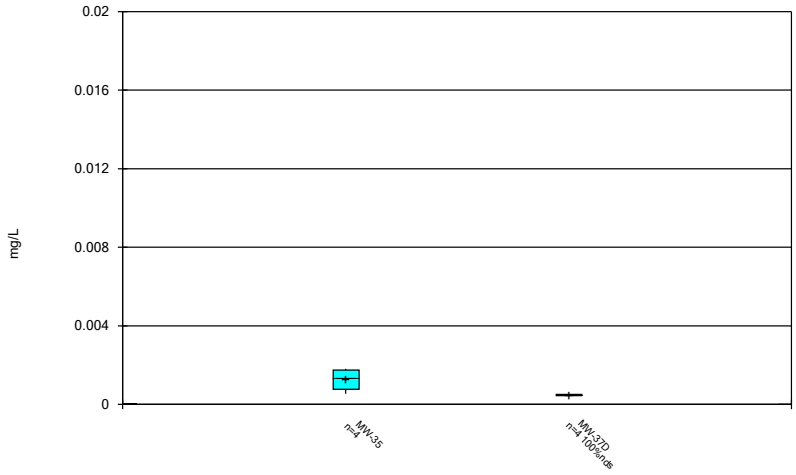
Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

Box & Whiskers Plot



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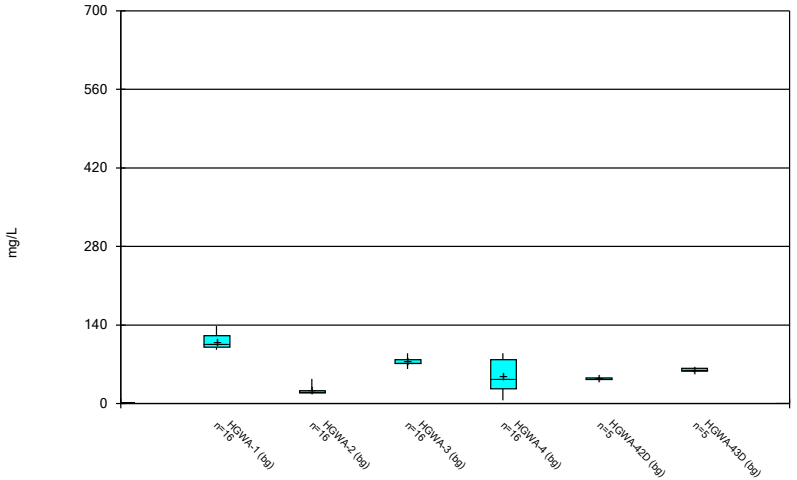
Plant Hammond Client: Southern Company Data: Hammond AP-2

Box & Whiskers Plot



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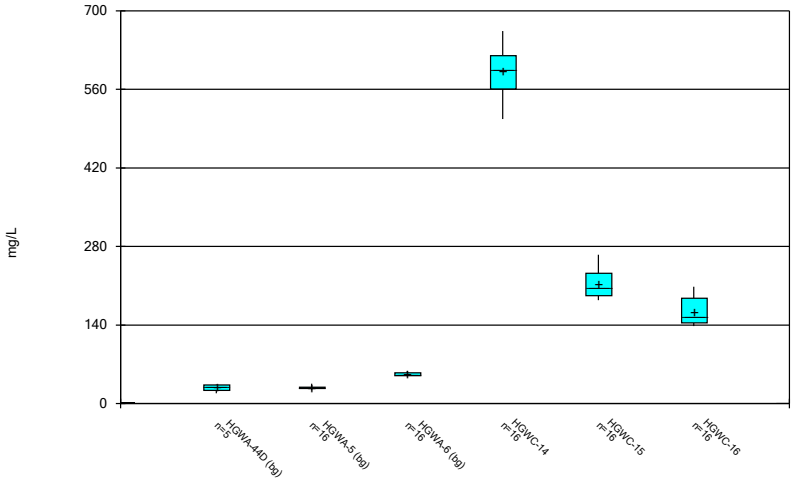
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

Box & Whiskers Plot



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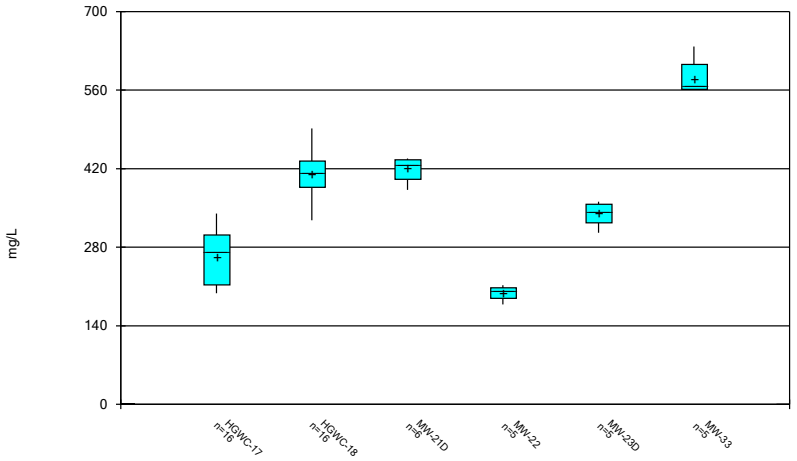
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

Box & Whiskers Plot



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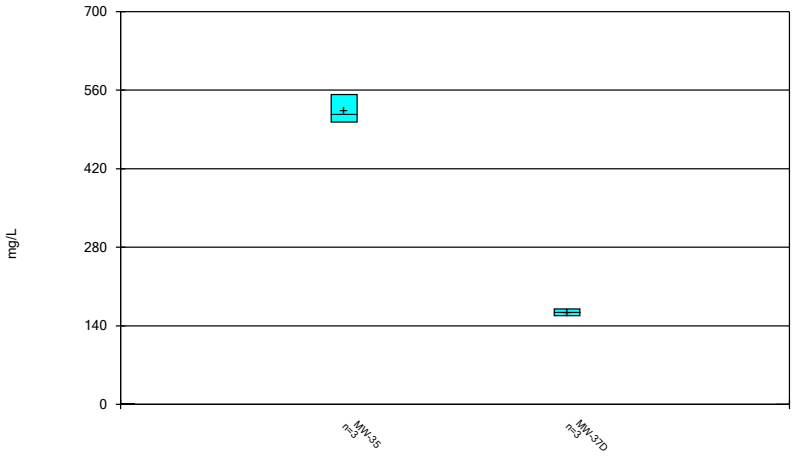
Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

Box & Whiskers Plot



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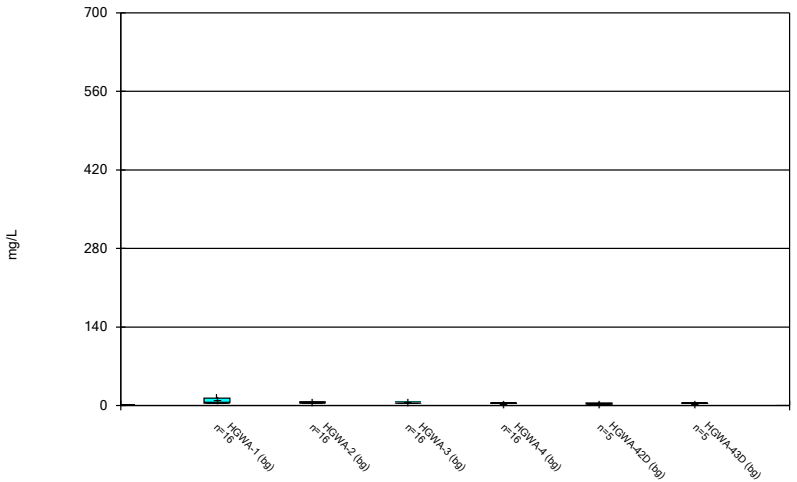
Plant Hammond Client: Southern Company Data: Hammond AP-2

Box & Whiskers Plot

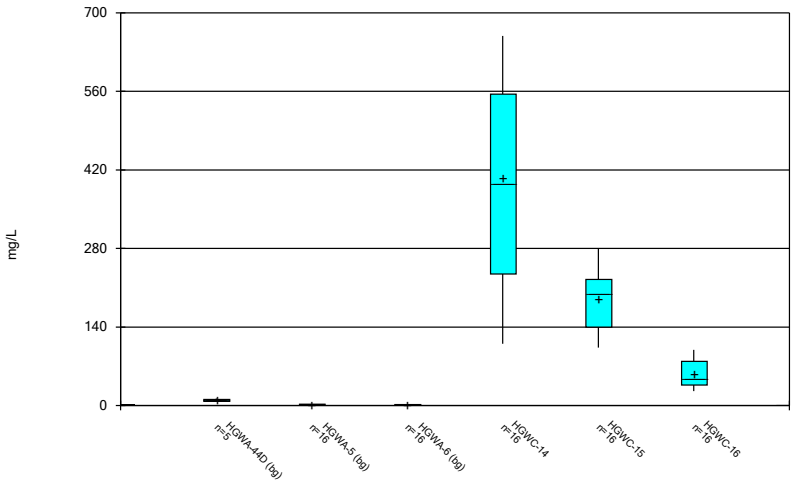


Constituent: Chloride Analysis Run 5/4/2021 8:21 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

Box & Whiskers Plot

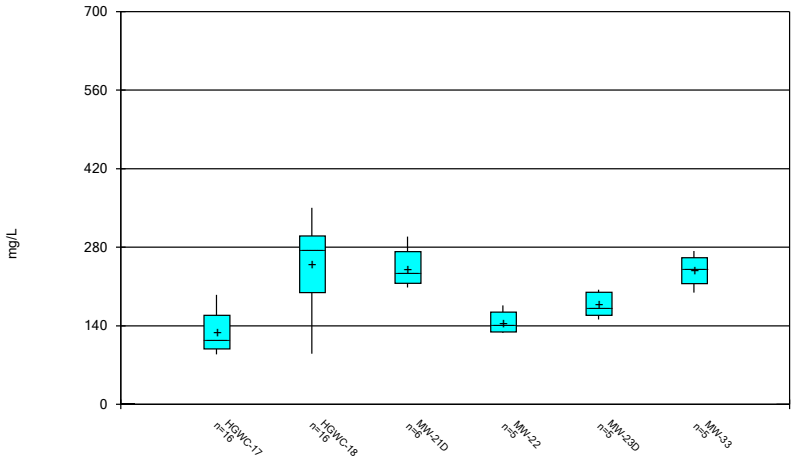


Constituent: Chloride Analysis Run 5/4/2021 8:21 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

Box & Whiskers Plot



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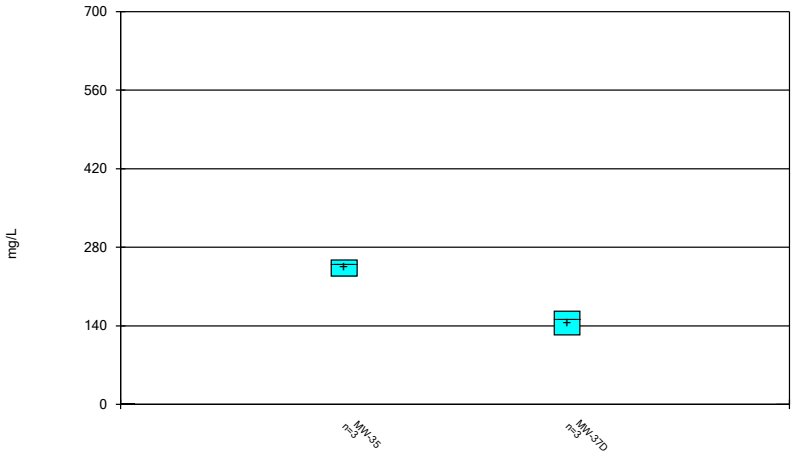
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

Box & Whiskers Plot



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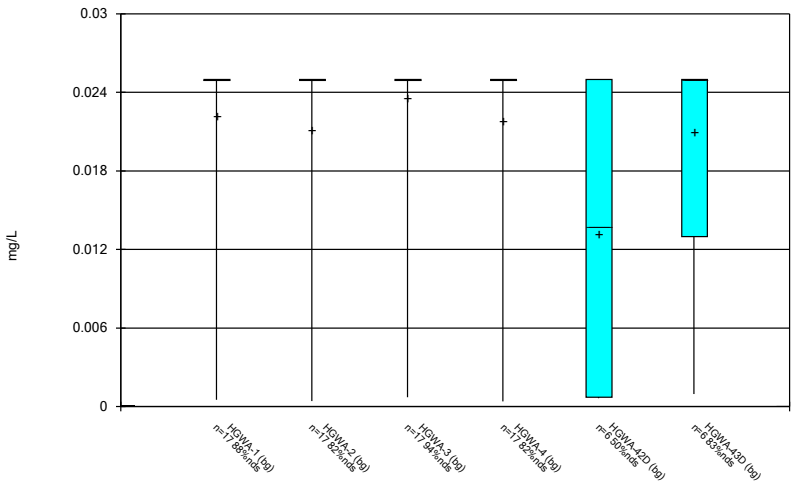
Plant Hammond Client: Southern Company Data: Hammond AP-2

Box & Whiskers Plot

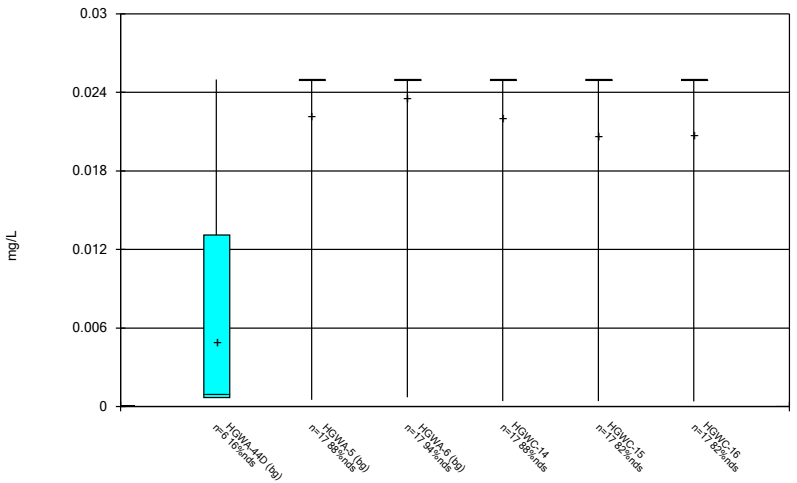


Constituent: Chromium Analysis Run 5/4/2021 8:21 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

Box & Whiskers Plot

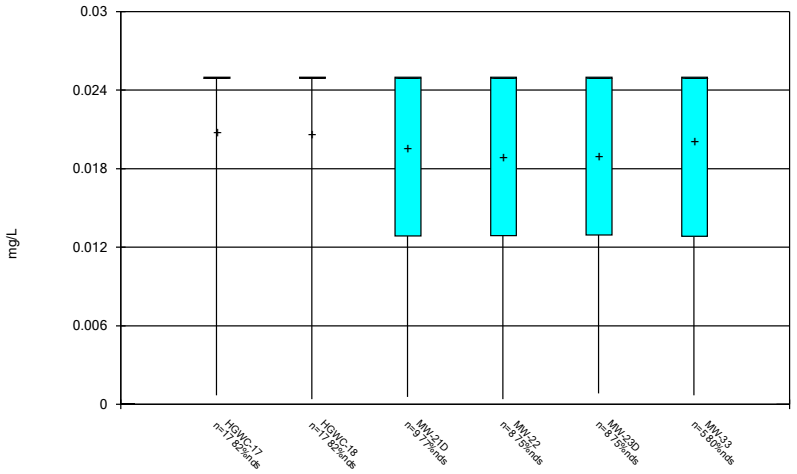


Constituent: Chromium Analysis Run 5/4/2021 8:21 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

Box & Whiskers Plot



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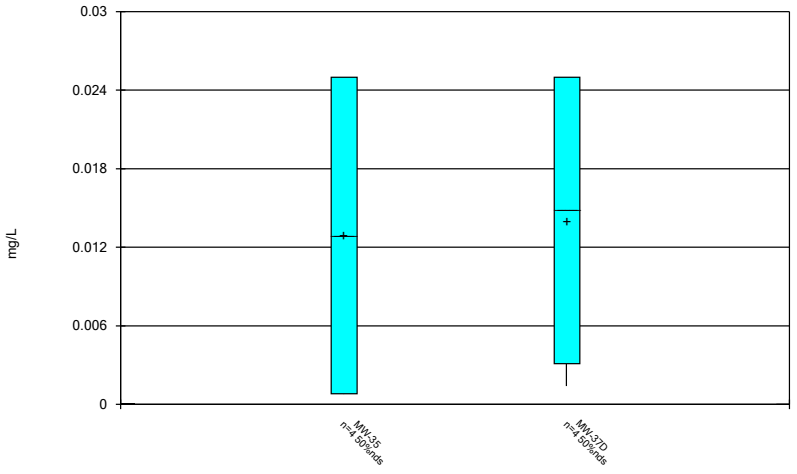
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

Box & Whiskers Plot



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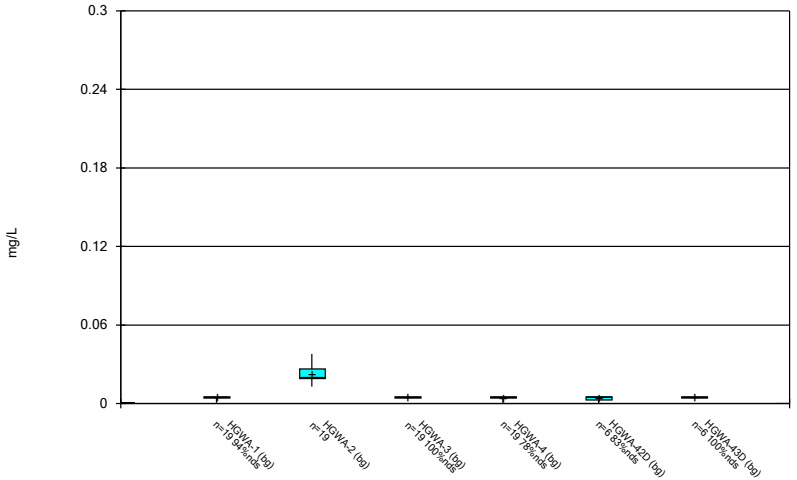
Plant Hammond Client: Southern Company Data: Hammond AP-2

Box & Whiskers Plot

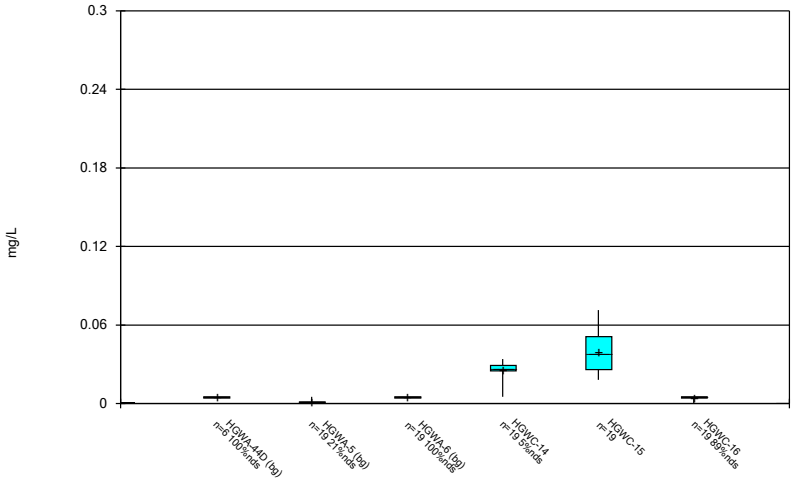


Constituent: Cobalt Analysis Run 5/4/2021 8:21 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

Box & Whiskers Plot



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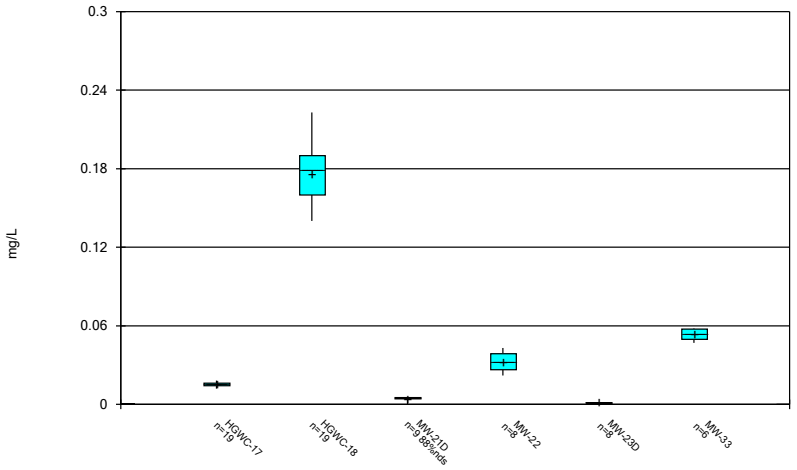
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

Box & Whiskers Plot



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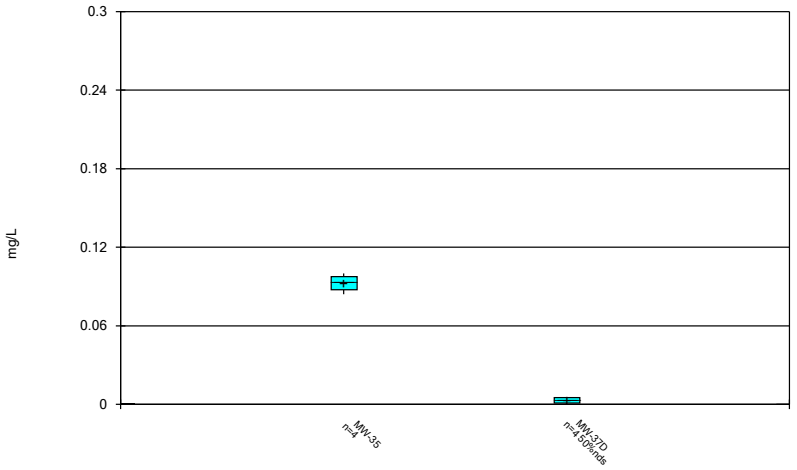
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

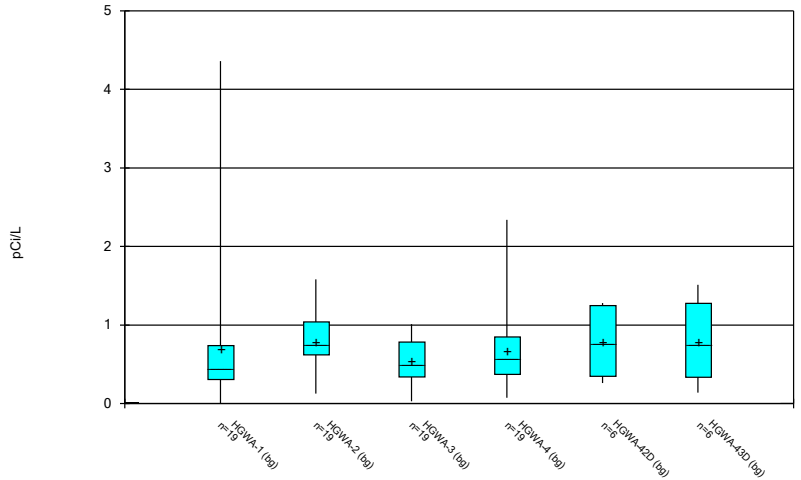
Box & Whiskers Plot



Constituent: Cobalt Analysis Run 5/4/2021 8:21 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

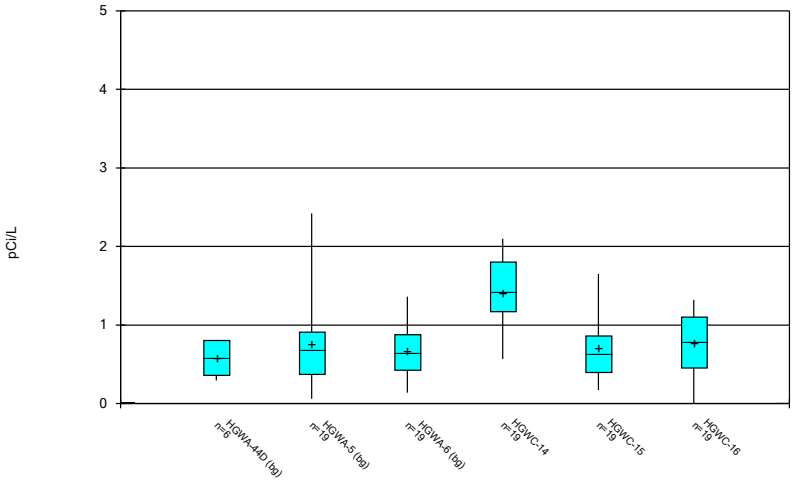
Box & Whiskers Plot



Constituent: Combined Radium 226 + 228 Analysis Run 5/4/2021 8:21 PM
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

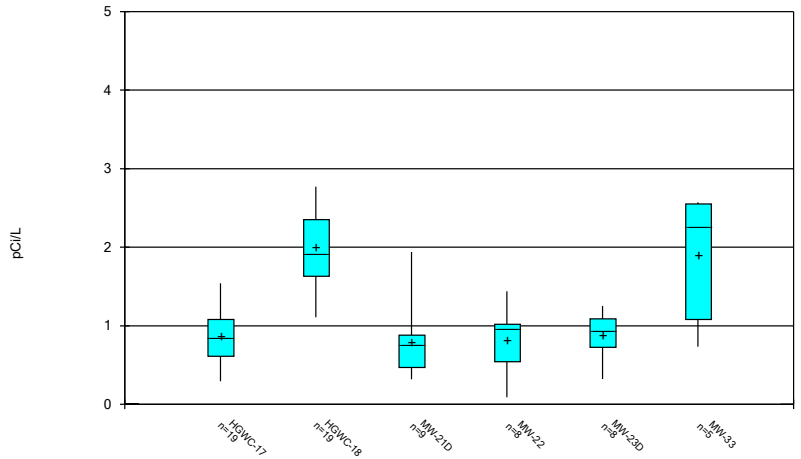
Box & Whiskers Plot



Constituent: Combined Radium 226 + 228 Analysis Run 5/4/2021 8:21 PM
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

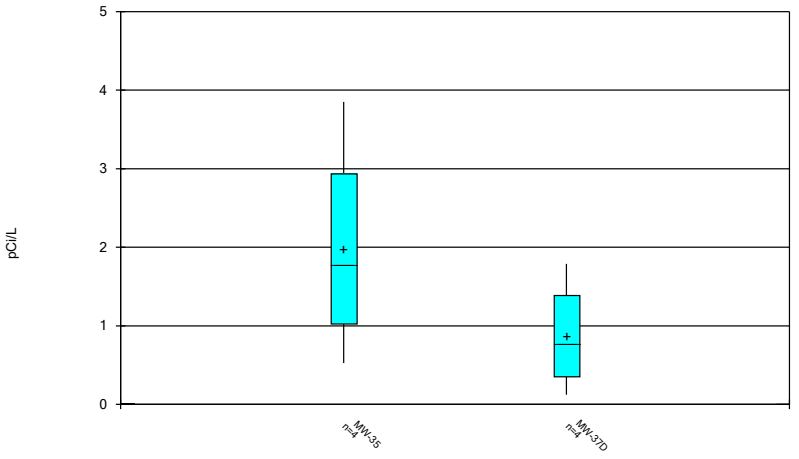
Box & Whiskers Plot



Constituent: Combined Radium 226 + 228 Analysis Run 5/4/2021 8:21 PM
Plant Hammond Client: Southern Company Data: Hammond AP-2

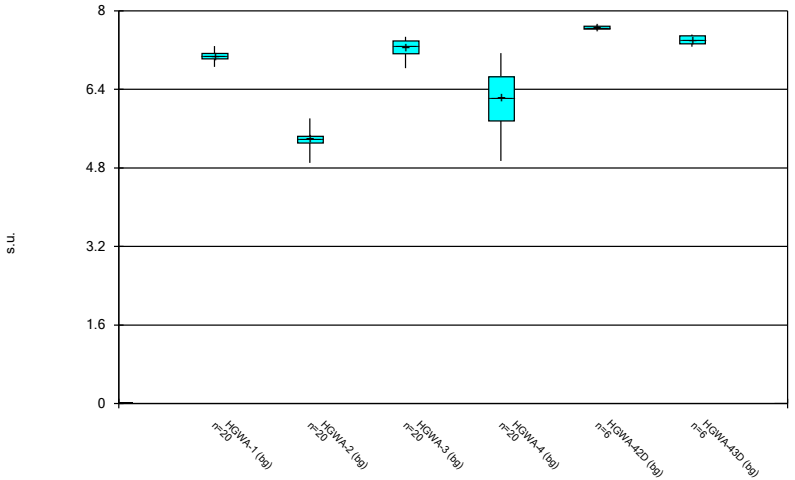
Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

Box & Whiskers Plot



Constituent: Combined Radium 226 + 228 Analysis Run 5/4/2021 8:21 PM
Plant Hammond Client: Southern Company Data: Hammond AP-2

Box & Whiskers Plot

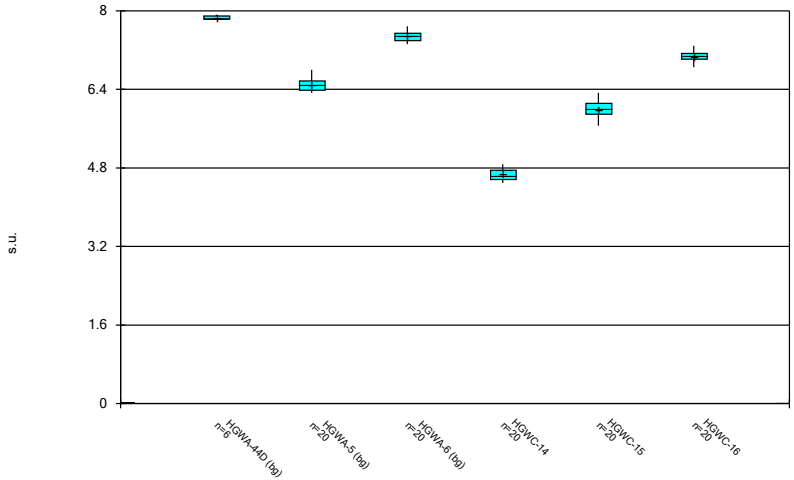


Constituent: Field pH Analysis Run 5/4/2021 8:21 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

Box & Whiskers Plot

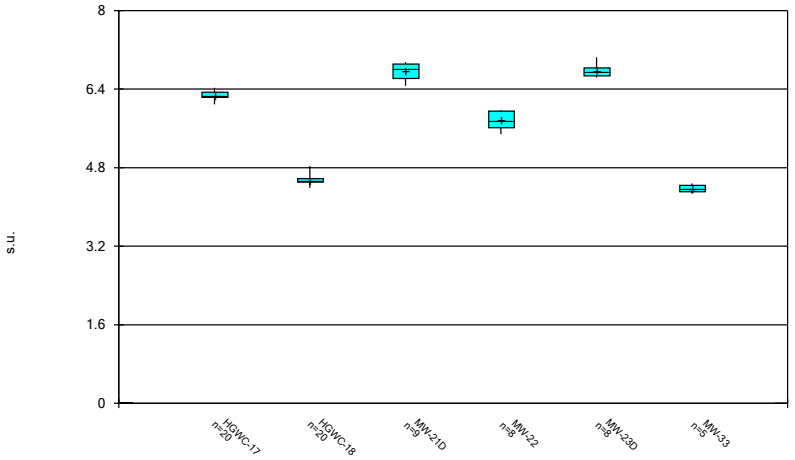


Constituent: Field pH Analysis Run 5/4/2021 8:21 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

Box & Whiskers Plot

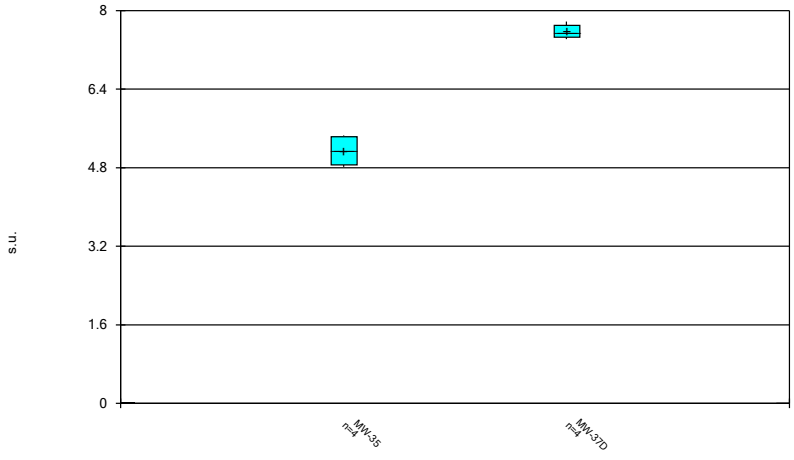


Constituent: Field pH Analysis Run 5/4/2021 8:21 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

Box & Whiskers Plot



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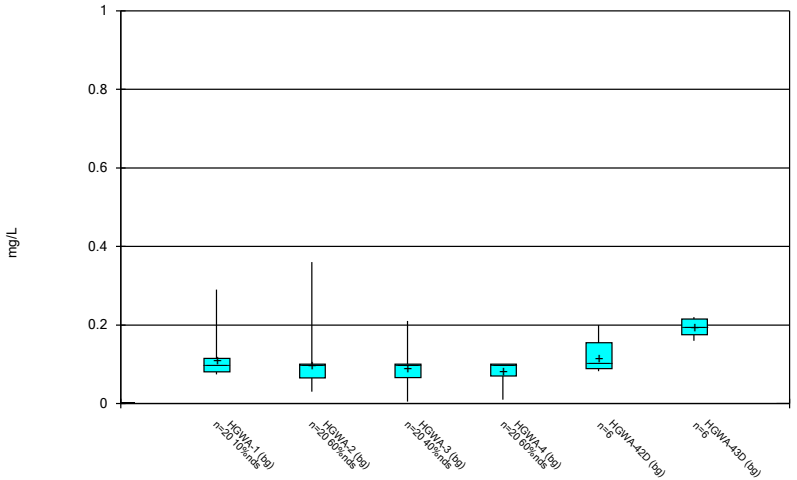
Plant Hammond Client: Southern Company Data: Hammond AP-2

Box & Whiskers Plot

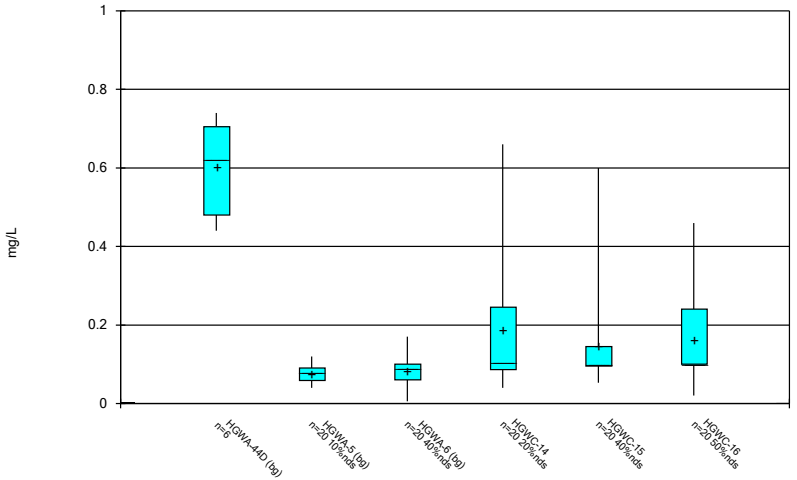


Constituent: Fluoride Analysis Run 5/4/2021 8:21 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

Box & Whiskers Plot



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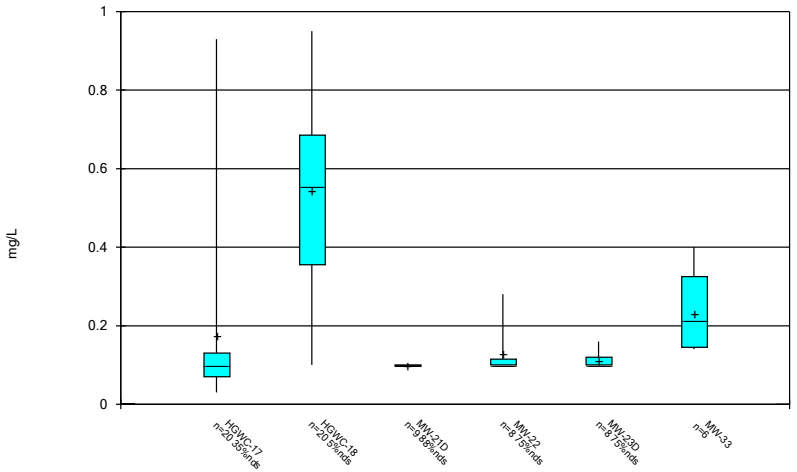
Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

Box & Whiskers Plot



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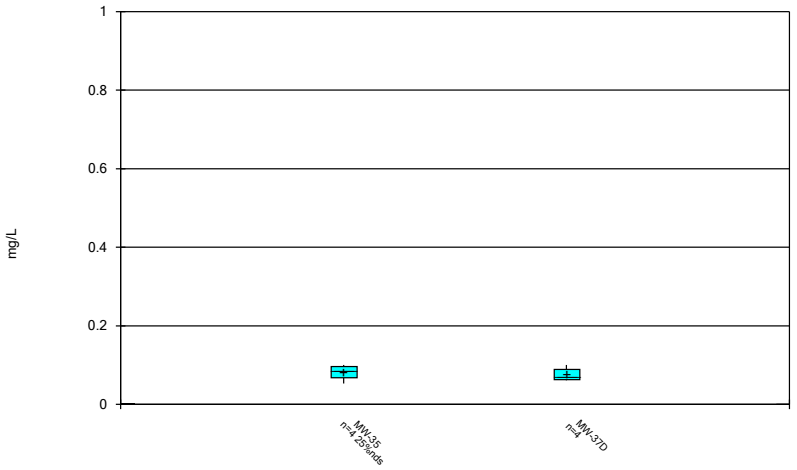
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

Box & Whiskers Plot



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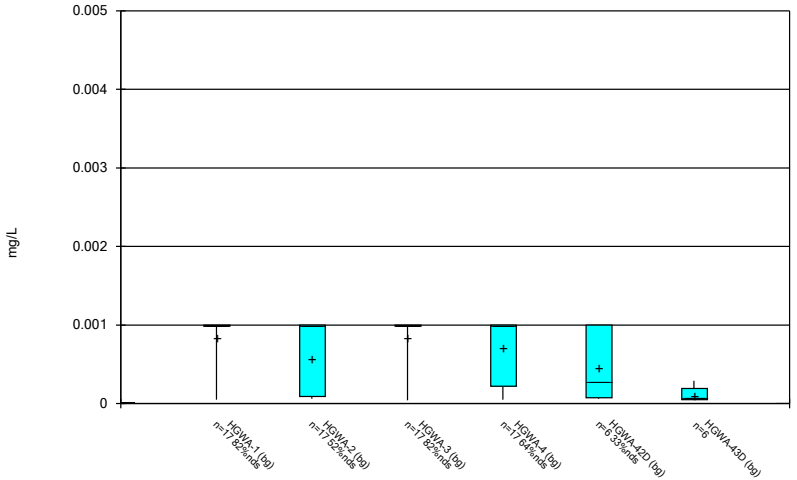
Plant Hammond Client: Southern Company Data: Hammond AP-2

Box & Whiskers Plot



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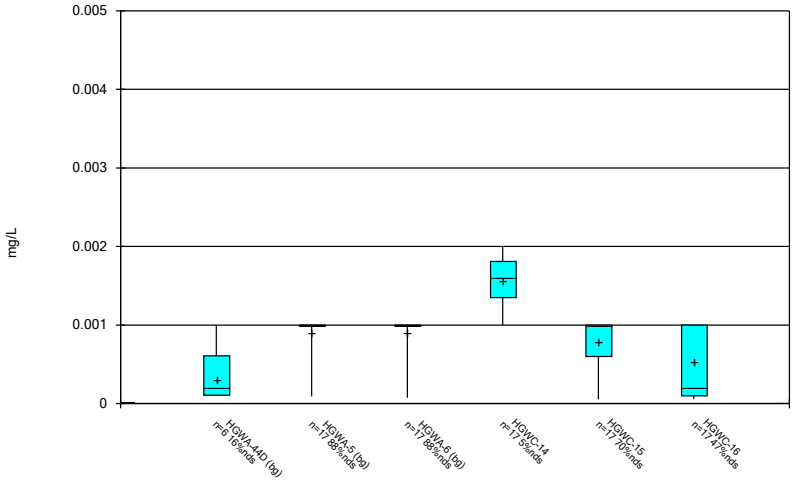
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

Box & Whiskers Plot



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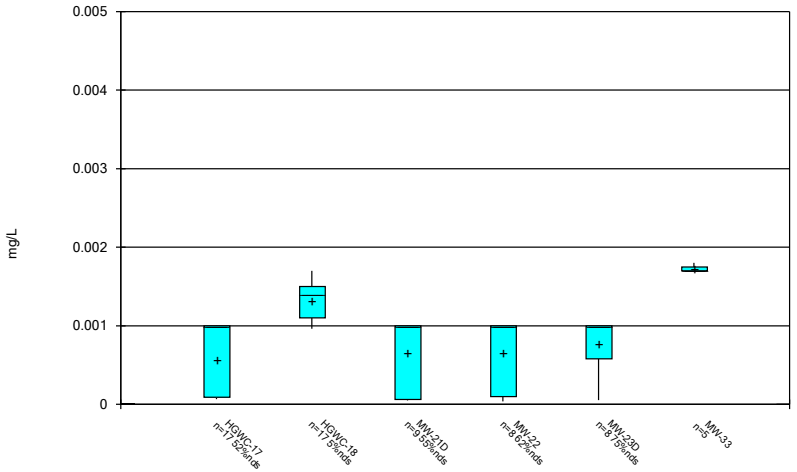
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

Box & Whiskers Plot



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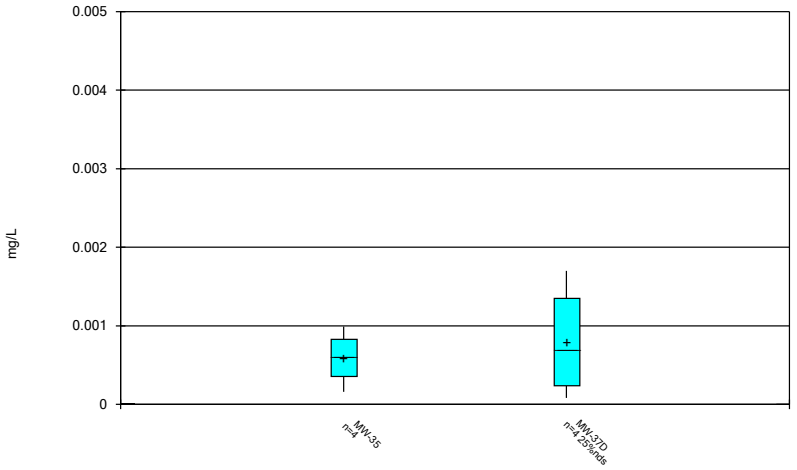
Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

Box & Whiskers Plot



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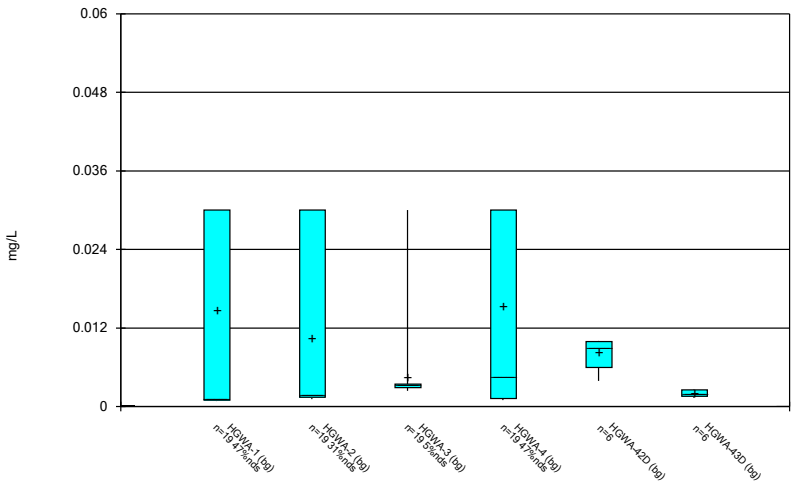
Plant Hammond Client: Southern Company Data: Hammond AP-2

Box & Whiskers Plot

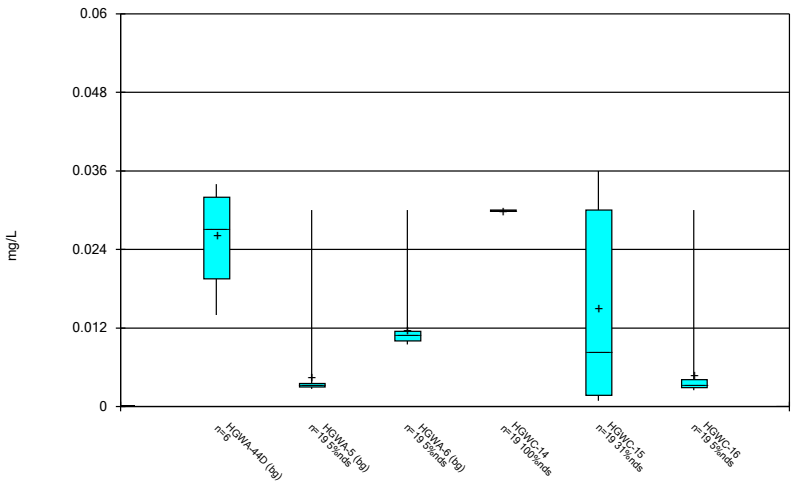


Constituent: Lithium Analysis Run 5/4/2021 8:21 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

Box & Whiskers Plot



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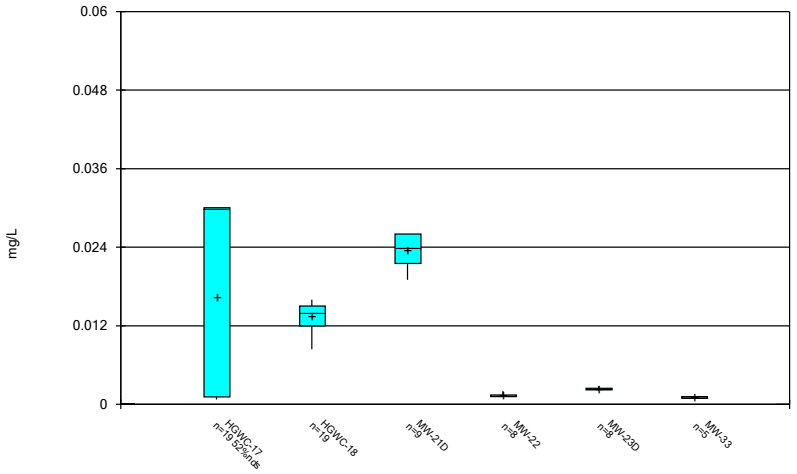
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

Box & Whiskers Plot

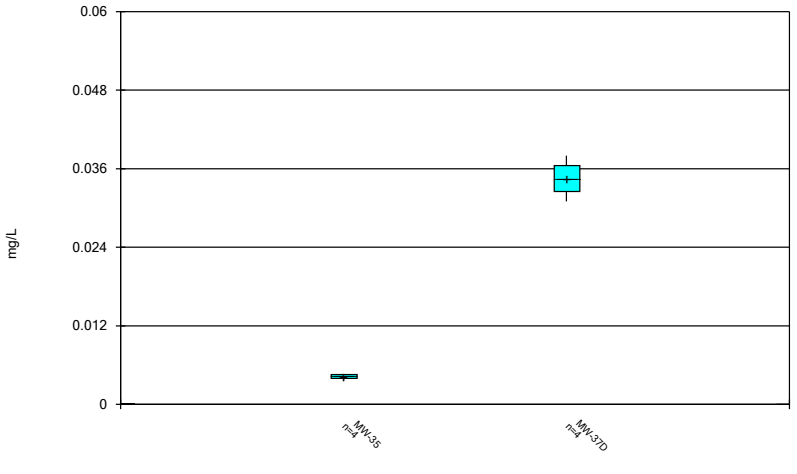


Constituent: Lithium Analysis Run 5/4/2021 8:21 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

Box & Whiskers Plot



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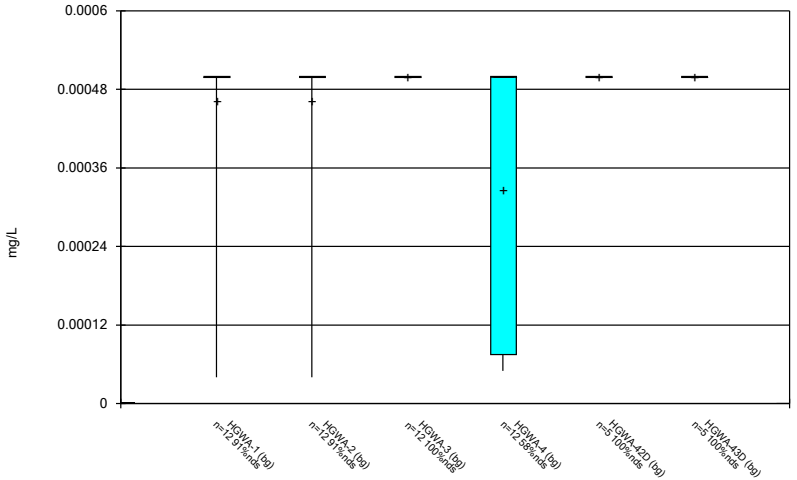
Plant Hammond Client: Southern Company Data: Hammond AP-2

Box & Whiskers Plot

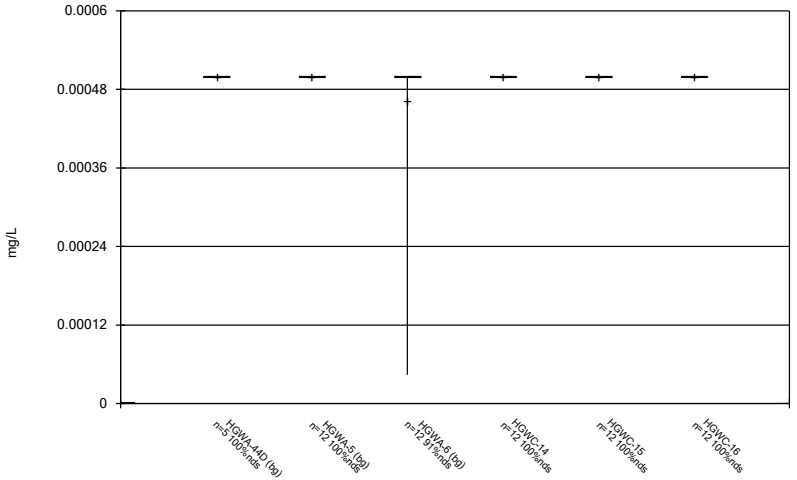


Constituent: Mercury Analysis Run 5/4/2021 8:22 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

Box & Whiskers Plot

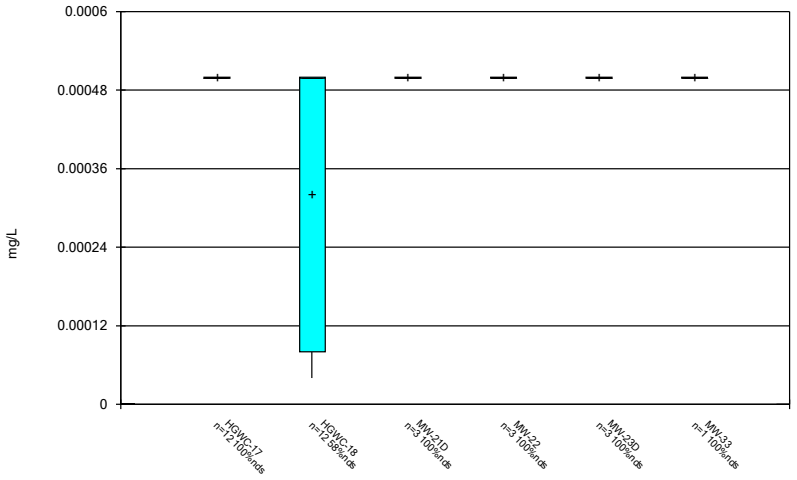


Constituent: Mercury Analysis Run 5/4/2021 8:22 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

Box & Whiskers Plot



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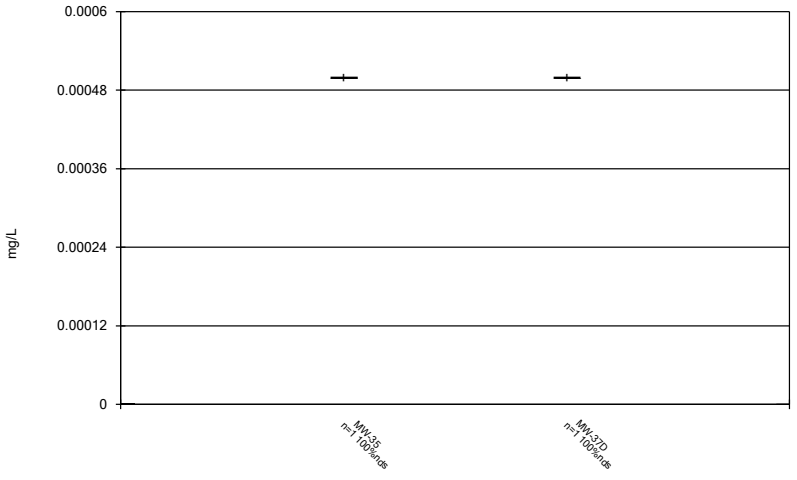
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

Box & Whiskers Plot



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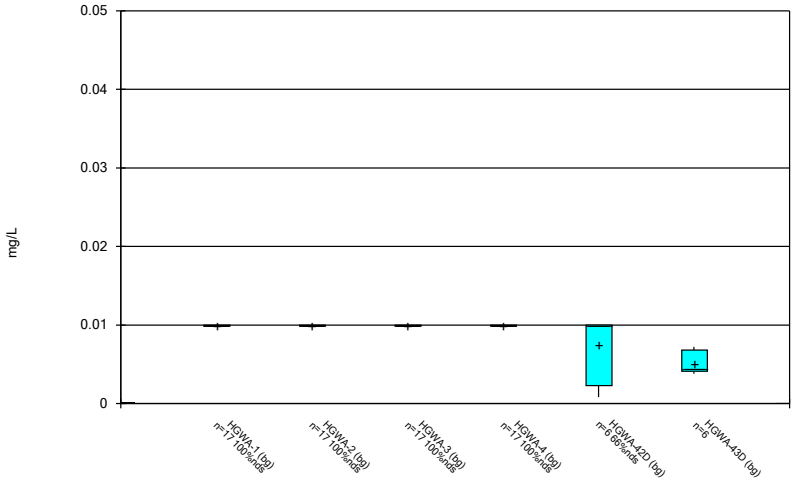
Plant Hammond Client: Southern Company Data: Hammond AP-2

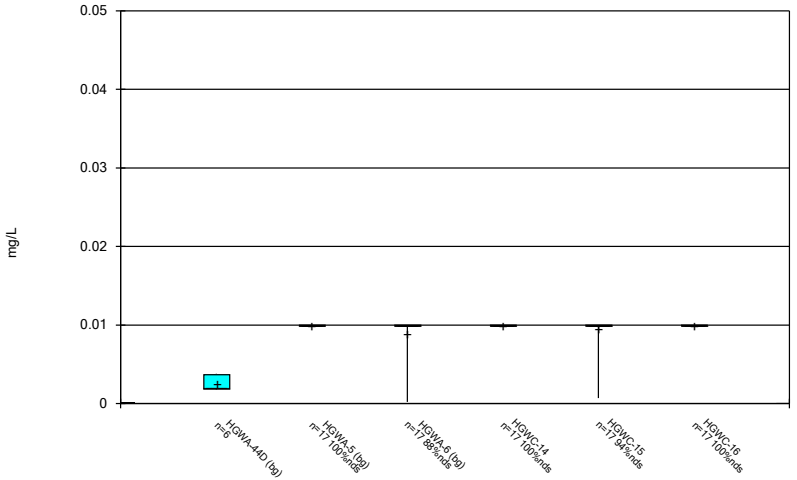
Box & Whiskers Plot



Constituent: Molybdenum Analysis Run 5/4/2021 8:22 PM
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

Box & Whiskers Plot



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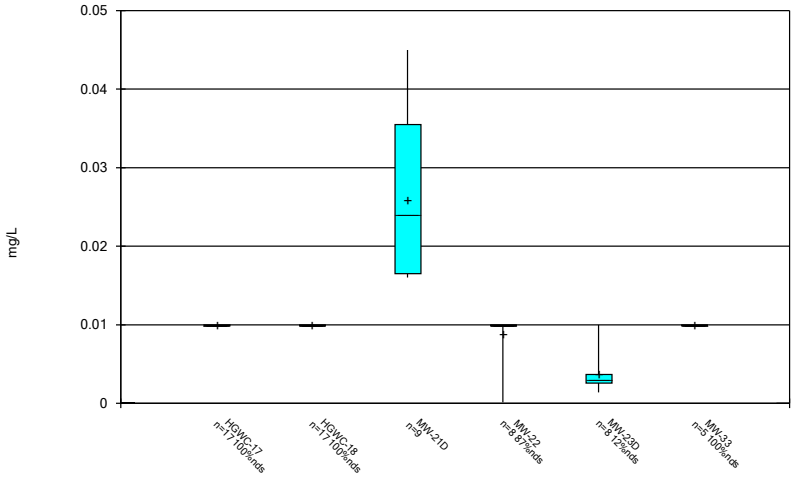
Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

Box & Whiskers Plot



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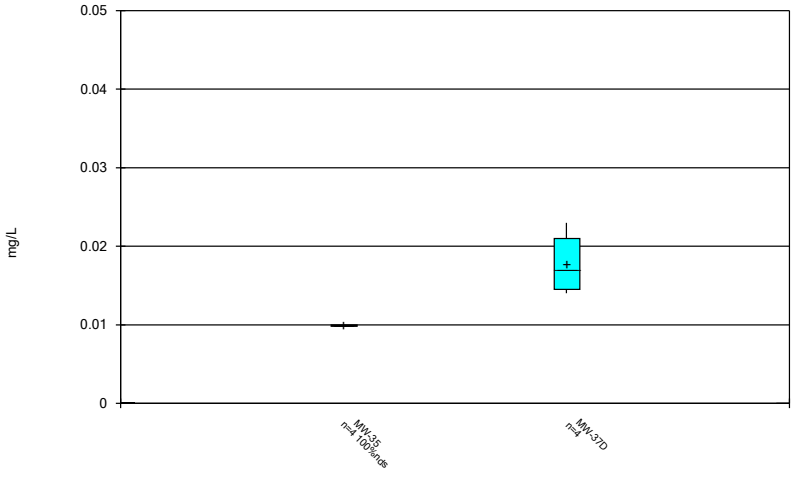
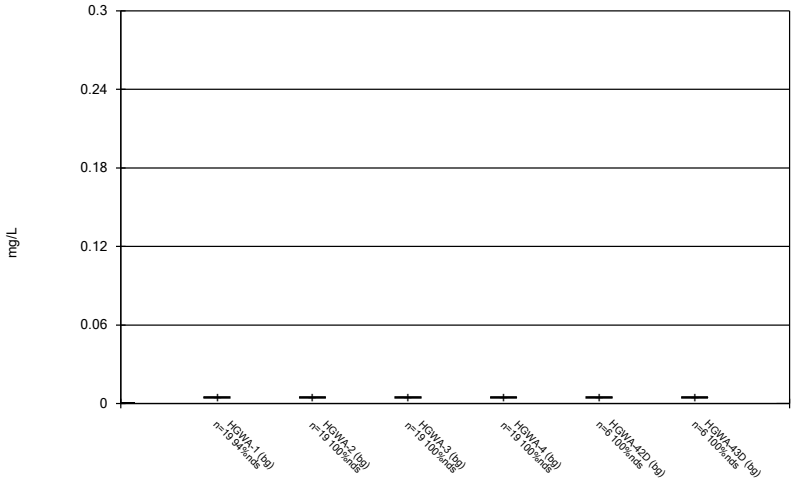
Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

Box & Whiskers Plot



Constituent: Molybdenum Analysis Run 5/4/2021 8:22 PM
Plant Hammond Client: Southern Company Data: Hammond AP-2

Box & Whiskers Plot

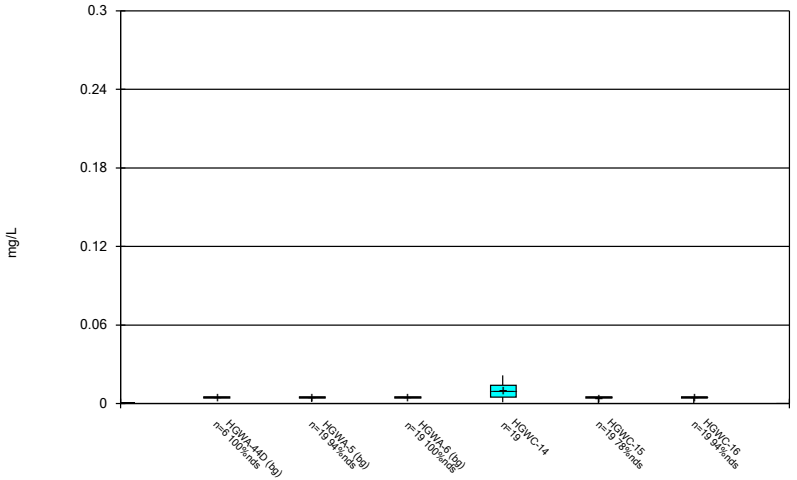


Constituent: Selenium Analysis Run 5/4/2021 8:22 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

Box & Whiskers Plot

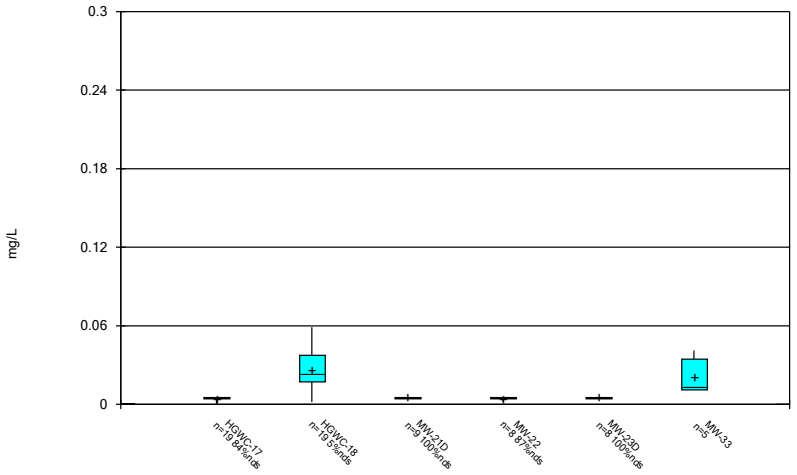


Constituent: Selenium Analysis Run 5/4/2021 8:22 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

Box & Whiskers Plot



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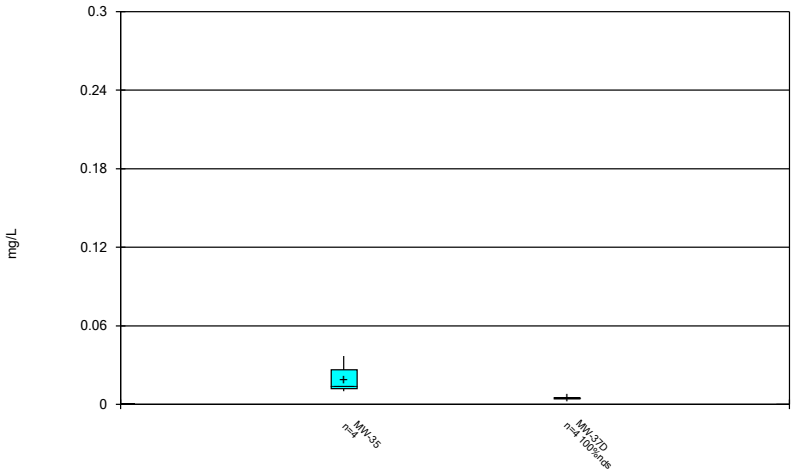
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

Box & Whiskers Plot



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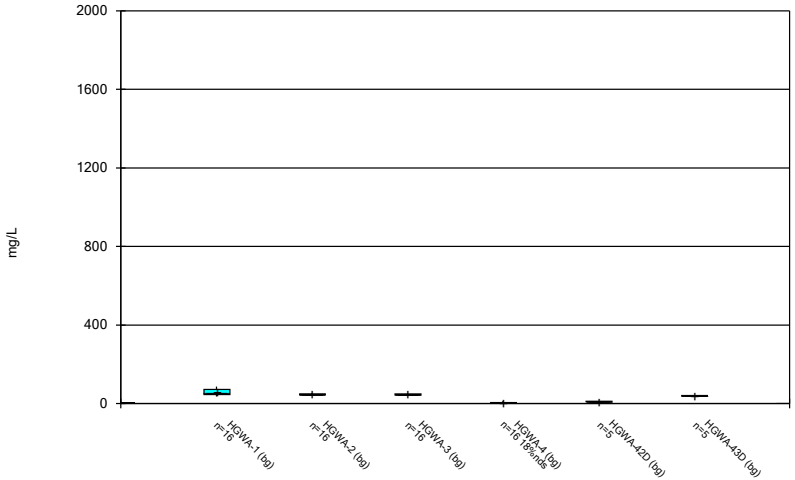
Plant Hammond Client: Southern Company Data: Hammond AP-2

Box & Whiskers Plot

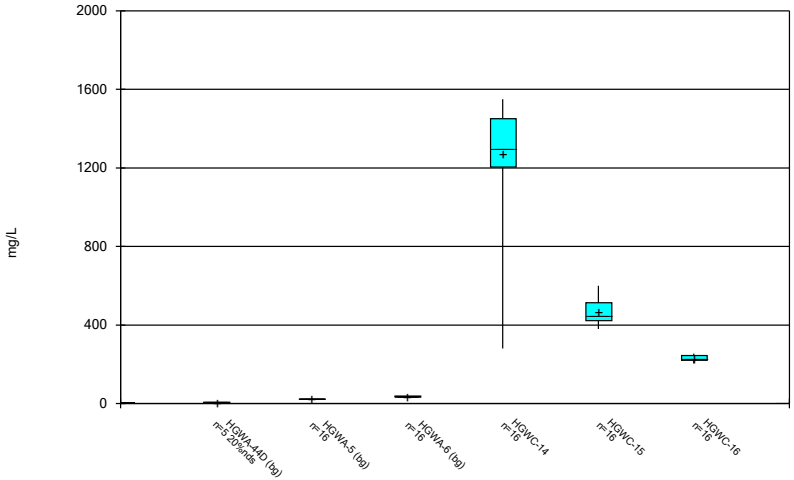


Constituent: Sulfate Analysis Run 5/4/2021 8:22 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

Box & Whiskers Plot



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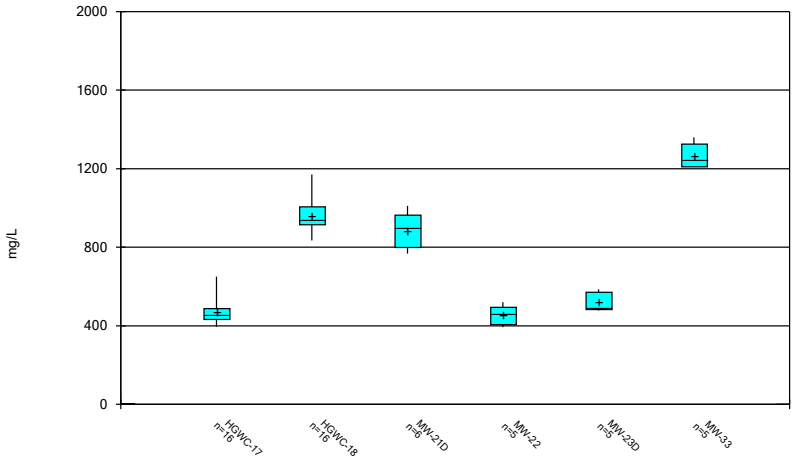
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

Box & Whiskers Plot

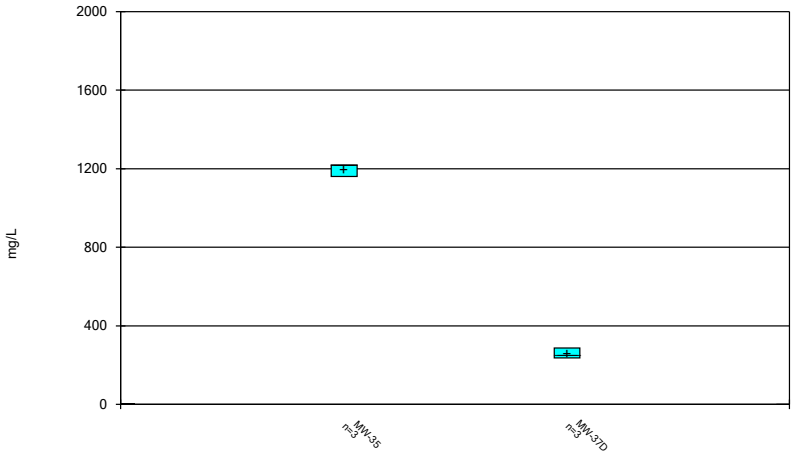


Constituent: Sulfate Analysis Run 5/4/2021 8:22 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

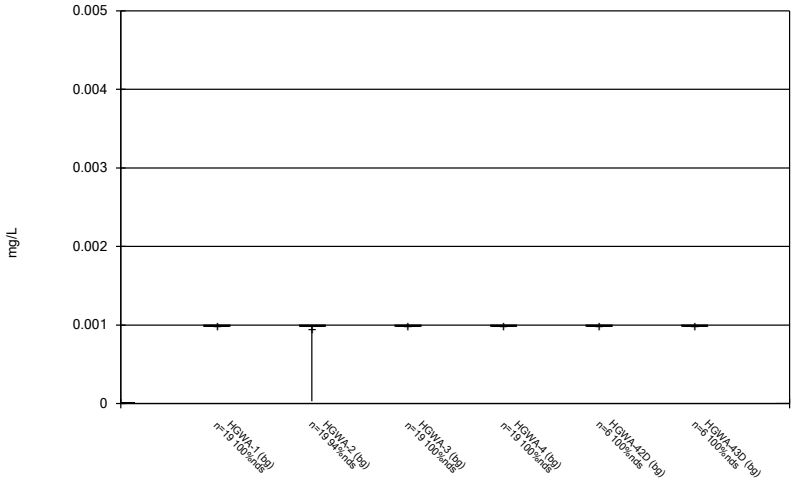
Box & Whiskers Plot



Constituent: Sulfate Analysis Run 5/4/2021 8:22 PM

Plant Hammond Client: Southern Company Data: Hammond AP-2

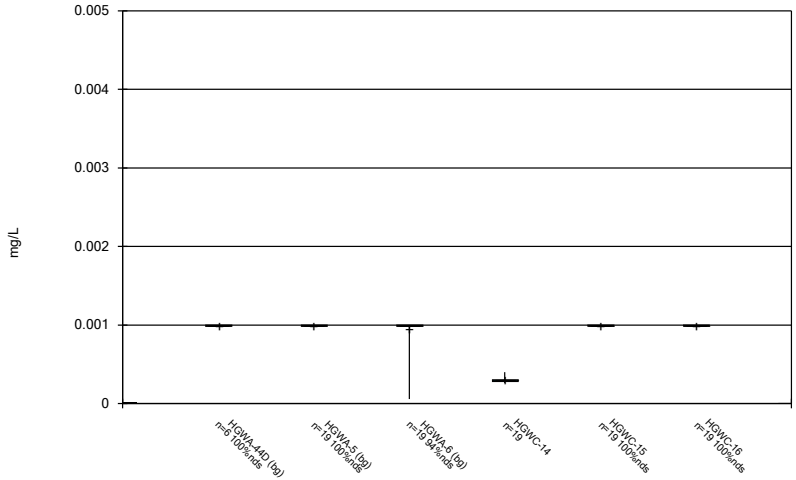
Box & Whiskers Plot



Constituent: Thallium Analysis Run 5/4/2021 8:22 PM
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

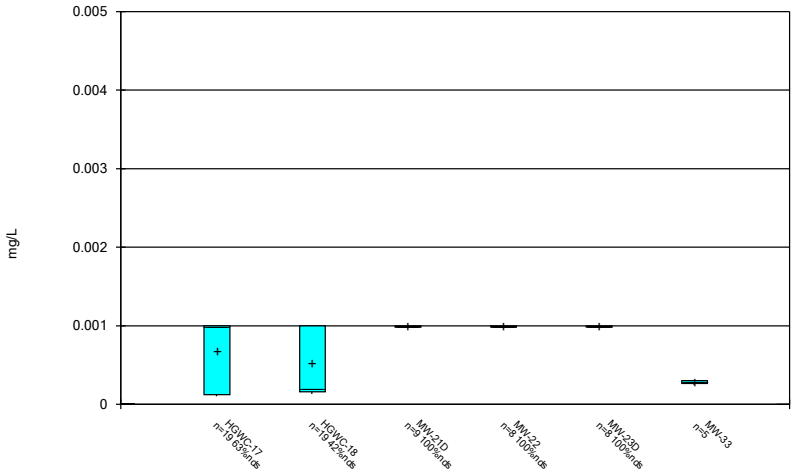
Box & Whiskers Plot



Constituent: Thallium Analysis Run 5/4/2021 8:22 PM
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

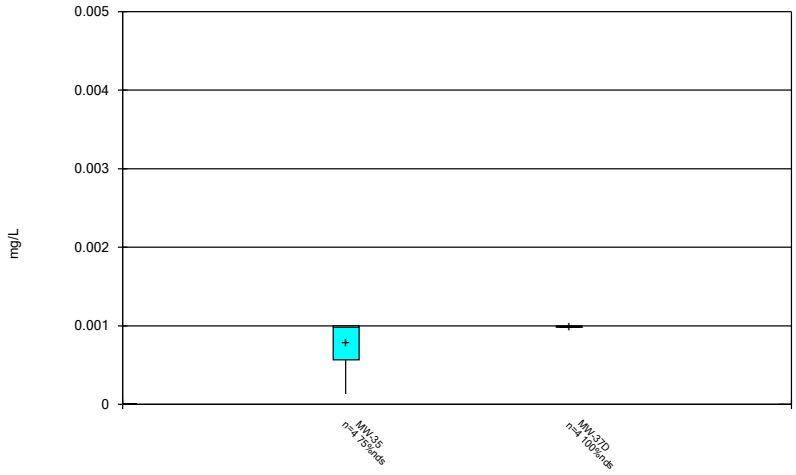
Box & Whiskers Plot



Constituent: Thallium Analysis Run 5/4/2021 8:22 PM
Plant Hammond Client: Southern Company Data: Hammond AP-2

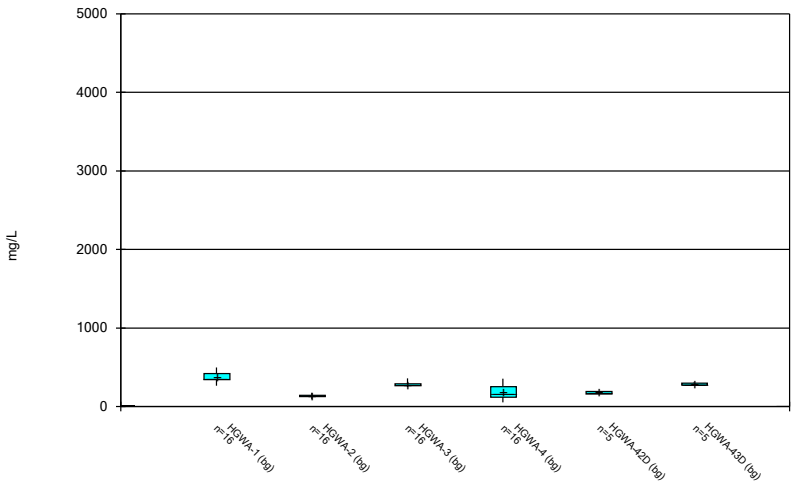
Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

Box & Whiskers Plot



Constituent: Thallium Analysis Run 5/4/2021 8:22 PM
Plant Hammond Client: Southern Company Data: Hammond AP-2

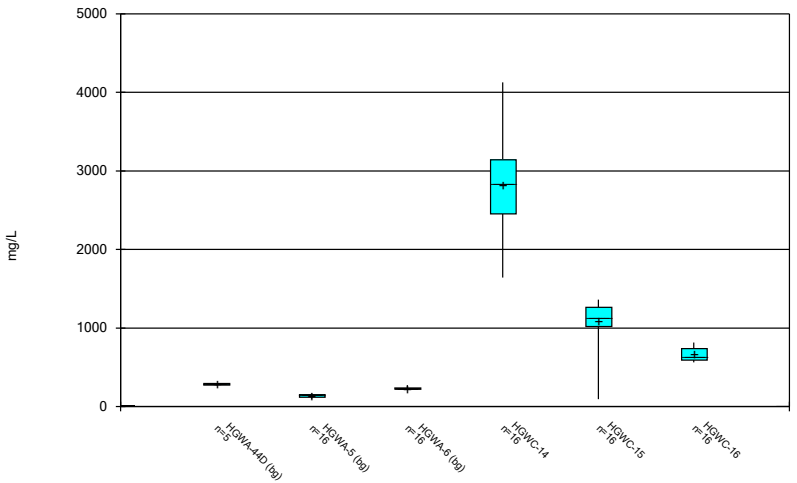
Box & Whiskers Plot



Constituent: Total Dissolved Solids Analysis Run 5/4/2021 8:22 PM
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

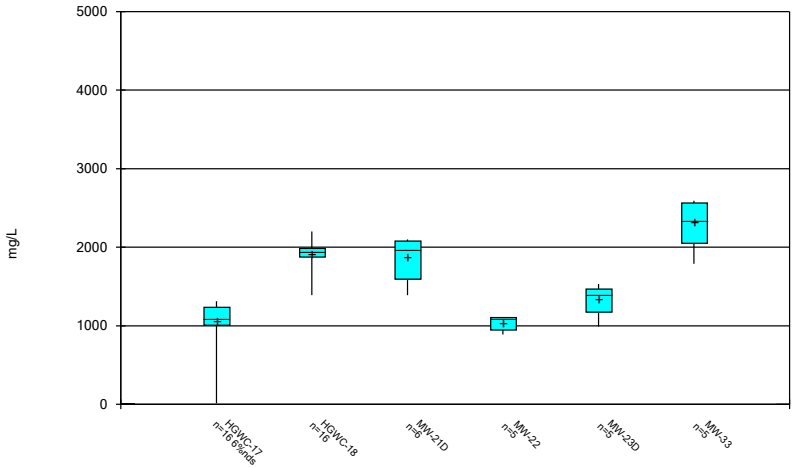
Box & Whiskers Plot



Constituent: Total Dissolved Solids Analysis Run 5/4/2021 8:22 PM
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

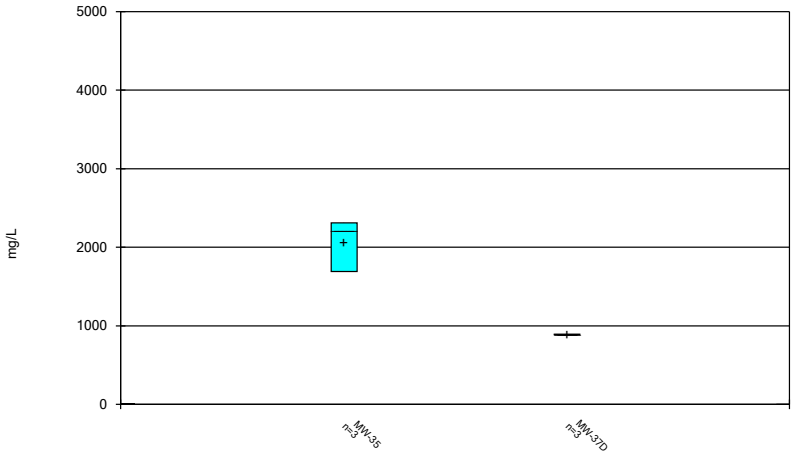
Box & Whiskers Plot



Constituent: Total Dissolved Solids Analysis Run 5/4/2021 8:22 PM
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

Box & Whiskers Plot



Constituent: Total Dissolved Solids Analysis Run 5/4/2021 8:22 PM
Plant Hammond Client: Southern Company Data: Hammond AP-2

FIGURE C.

Outlier Summary

Plant Hammond Client: Southern Company Data: Hammond AP-2 Printed 5/5/2021, 1:53 PM

No outliers were flagged.

FIGURE D.

Appendix III Interwell Prediction Limits - Significant Results

Plant Hammond Client: Southern Company Data: Hammond AP-2 Printed 5/5/2021, 9:44 AM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Boron (mg/L)	HGWC-14	0.4	n/a	3/17/2021	11.8	Yes	111	n/a	n/a	5.405	n/a	n/a	0.0001613	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-15	0.4	n/a	3/16/2021	2.4	Yes	111	n/a	n/a	5.405	n/a	n/a	0.0001613	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-16	0.4	n/a	3/17/2021	2.7	Yes	111	n/a	n/a	5.405	n/a	n/a	0.0001613	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-17	0.4	n/a	3/18/2021	6.8	Yes	111	n/a	n/a	5.405	n/a	n/a	0.0001613	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-18	0.4	n/a	3/18/2021	8.9	Yes	111	n/a	n/a	5.405	n/a	n/a	0.0001613	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-14	138.6	n/a	3/17/2021	572	Yes	111	3.83	0.611	0	None	ln(x)	0.001504	Param Inter 1 of 2
Calcium (mg/L)	HGWC-15	138.6	n/a	3/16/2021	196	Yes	111	3.83	0.611	0	None	ln(x)	0.001504	Param Inter 1 of 2
Calcium (mg/L)	HGWC-16	138.6	n/a	3/17/2021	198	Yes	111	3.83	0.611	0	None	ln(x)	0.001504	Param Inter 1 of 2
Calcium (mg/L)	HGWC-17	138.6	n/a	3/18/2021	266	Yes	111	3.83	0.611	0	None	ln(x)	0.001504	Param Inter 1 of 2
Calcium (mg/L)	HGWC-18	138.6	n/a	3/18/2021	407	Yes	111	3.83	0.611	0	None	ln(x)	0.001504	Param Inter 1 of 2
Chloride (mg/L)	HGWC-14	20.4	n/a	3/17/2021	233	Yes	111	n/a	n/a	0	n/a	n/a	0.0001613	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-15	20.4	n/a	3/16/2021	103	Yes	111	n/a	n/a	0	n/a	n/a	0.0001613	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-16	20.4	n/a	3/17/2021	93.8	Yes	111	n/a	n/a	0	n/a	n/a	0.0001613	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-17	20.4	n/a	3/18/2021	138	Yes	111	n/a	n/a	0	n/a	n/a	0.0001613	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-18	20.4	n/a	3/18/2021	90.2	Yes	111	n/a	n/a	0	n/a	n/a	0.0001613	NP Inter (normality) 1 of 2
Field pH (s.u.)	HGWC-14	7.92	4.9	3/17/2021	4.72	Yes	138	n/a	n/a	0	n/a	n/a	0.0002064	NP Inter (normality) 1 of 2
Field pH (s.u.)	HGWC-18	7.92	4.9	3/18/2021	4.54	Yes	138	n/a	n/a	0	n/a	n/a	0.0002064	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-14	85.9	n/a	3/17/2021	1300	Yes	111	n/a	n/a	3.604	n/a	n/a	0.0001613	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-15	85.9	n/a	3/16/2021	379	Yes	111	n/a	n/a	3.604	n/a	n/a	0.0001613	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-16	85.9	n/a	3/17/2021	250	Yes	111	n/a	n/a	3.604	n/a	n/a	0.0001613	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-17	85.9	n/a	3/18/2021	447	Yes	111	n/a	n/a	3.604	n/a	n/a	0.0001613	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-18	85.9	n/a	3/18/2021	1050	Yes	111	n/a	n/a	3.604	n/a	n/a	0.0001613	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-14	496	n/a	3/17/2021	1640	Yes	111	n/a	n/a	0	n/a	n/a	0.0001613	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-16	496	n/a	3/17/2021	768	Yes	111	n/a	n/a	0	n/a	n/a	0.0001613	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-17	496	n/a	3/18/2021	1020	Yes	111	n/a	n/a	0	n/a	n/a	0.0001613	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-18	496	n/a	3/18/2021	1390	Yes	111	n/a	n/a	0	n/a	n/a	0.0001613	NP Inter (normality) 1 of 2

Appendix III Interwell Prediction Limits - All Results

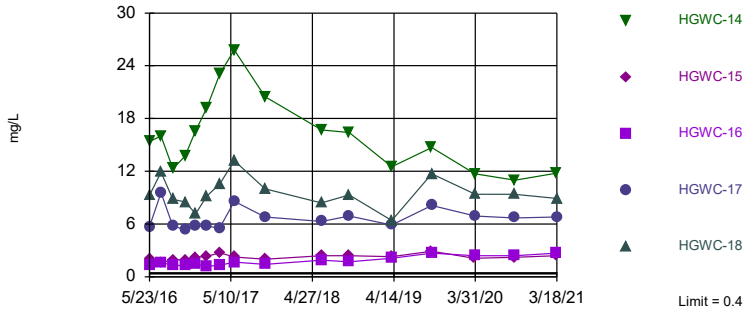
Plant Hammond Client: Southern Company Data: Hammond AP-2 Printed 5/5/2021, 9:44 AM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Boron (mg/L)	**HGWC-14**	**0.4**	**n/a**	**3/17/2021**	**11.8**	**Yes**	**111**	**n/a**	**n/a**	**5.405**	**n/a**	**n/a**	**0.0001613**	**NP Inter (normality) 1 of 2**
Boron (mg/L)	**HGWC-15**	**0.4**	**n/a**	**3/16/2021**	**2.4**	**Yes**	**111**	**n/a**	**n/a**	**5.405**	**n/a**	**n/a**	**0.0001613**	**NP Inter (normality) 1 of 2**
Boron (mg/L)	**HGWC-16**	**0.4**	**n/a**	**3/17/2021**	**2.7**	**Yes**	**111**	**n/a**	**n/a**	**5.405**	**n/a**	**n/a**	**0.0001613**	**NP Inter (normality) 1 of 2**
Boron (mg/L)	**HGWC-17**	**0.4**	**n/a**	**3/18/2021**	**6.8**	**Yes**	**111**	**n/a**	**n/a**	**5.405**	**n/a**	**n/a**	**0.0001613**	**NP Inter (normality) 1 of 2**
Boron (mg/L)	**HGWC-18**	**0.4**	**n/a**	**3/18/2021**	**8.9**	**Yes**	**111**	**n/a**	**n/a**	**5.405**	**n/a**	**n/a**	**0.0001613**	**NP Inter (normality) 1 of 2**
Calcium (mg/L)	**HGWC-14**	**138.6**	**n/a**	**3/17/2021**	**572**	**Yes**	**111**	**3.83**	**0.611**	**0**	**None**	**ln(x)**	**0.001504**	**Param Inter 1 of 2**
Calcium (mg/L)	**HGWC-15**	**138.6**	**n/a**	**3/16/2021**	**196**	**Yes**	**111**	**3.83**	**0.611**	**0**	**None**	**ln(x)**	**0.001504**	**Param Inter 1 of 2**
Calcium (mg/L)	**HGWC-16**	**138.6**	**n/a**	**3/17/2021**	**198**	**Yes**	**111**	**3.83**	**0.611**	**0**	**None**	**ln(x)**	**0.001504**	**Param Inter 1 of 2**
Calcium (mg/L)	**HGWC-17**	**138.6**	**n/a**	**3/18/2021**	**266**	**Yes**	**111**	**3.83**	**0.611**	**0**	**None**	**ln(x)**	**0.001504**	**Param Inter 1 of 2**
Calcium (mg/L)	**HGWC-18**	**138.6**	**n/a**	**3/18/2021**	**407**	**Yes**	**111**	**3.83**	**0.611**	**0**	**None**	**ln(x)**	**0.001504**	**Param Inter 1 of 2**
Chloride (mg/L)	**HGWC-14**	**20.4**	**n/a**	**3/17/2021**	**233**	**Yes**	**111**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.0001613**	**NP Inter (normality) 1 of 2**
Chloride (mg/L)	**HGWC-15**	**20.4**	**n/a**	**3/16/2021**	**103**	**Yes**	**111**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.0001613**	**NP Inter (normality) 1 of 2**
Chloride (mg/L)	**HGWC-16**	**20.4**	**n/a**	**3/17/2021**	**93.8**	**Yes**	**111**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.0001613**	**NP Inter (normality) 1 of 2**
Chloride (mg/L)	**HGWC-17**	**20.4**	**n/a**	**3/18/2021**	**138**	**Yes**	**111**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.0001613**	**NP Inter (normality) 1 of 2**
Chloride (mg/L)	**HGWC-18**	**20.4**	**n/a**	**3/18/2021**	**90.2**	**Yes**	**111**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.0001613**	**NP Inter (normality) 1 of 2**
Field pH (s.u.)	**HGWC-14**	**7.92**	**4.9**	**3/17/2021**	**4.72**	**Yes**	**138**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.0002064**	**NP Inter (normality) 1 of 2**
Field pH (s.u.)	HGWC-15	7.92	4.9	3/16/2021	6.08	No	138	n/a	n/a	0	n/a	n/a	0.0002064	NP Inter (normality) 1 of 2
Field pH (s.u.)	HGWC-16	7.92	4.9	3/17/2021	7.19	No	138	n/a	n/a	0	n/a	n/a	0.0002064	NP Inter (normality) 1 of 2
Field pH (s.u.)	HGWC-17	7.92	4.9	3/18/2021	6.43	No	138	n/a	n/a	0	n/a	n/a	0.0002064	NP Inter (normality) 1 of 2
Field pH (s.u.)	**HGWC-18**	**7.92**	**4.9**	**3/18/2021**	**4.54**	**Yes**	**138**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.0002064**	**NP Inter (normality) 1 of 2**
Fluoride (mg/L)	HGWC-14	0.74	n/a	3/17/2021	0.076J	No	138	n/a	n/a	31.88	n/a	n/a	0.0001032	NP Inter (normality) 1 of 2
Fluoride (mg/L)	HGWC-15	0.74	n/a	3/16/2021	0.1ND	No	138	n/a	n/a	31.88	n/a	n/a	0.0001032	NP Inter (normality) 1 of 2
Fluoride (mg/L)	HGWC-16	0.74	n/a	3/17/2021	0.1ND	No	138	n/a	n/a	31.88	n/a	n/a	0.0001032	NP Inter (normality) 1 of 2
Fluoride (mg/L)	HGWC-17	0.74	n/a	3/18/2021	0.057J	No	138	n/a	n/a	31.88	n/a	n/a	0.0001032	NP Inter (normality) 1 of 2
Fluoride (mg/L)	HGWC-18	0.74	n/a	3/18/2021	0.64	No	138	n/a	n/a	31.88	n/a	n/a	0.0001032	NP Inter (normality) 1 of 2
Sulfate (mg/L)	**HGWC-14**	**85.9**	**n/a**	**3/17/2021**	**1300**	**Yes**	**111**	**n/a**	**n/a**	**3.604**	**n/a**	**n/a**	**0.0001613**	**NP Inter (normality) 1 of 2**
Sulfate (mg/L)	**HGWC-15**	**85.9**	**n/a**	**3/16/2021**	**379**	**Yes**	**111**	**n/a**	**n/a**	**3.604**	**n/a**	**n/a**	**0.0001613**	**NP Inter (normality) 1 of 2**
Sulfate (mg/L)	**HGWC-16**	**85.9**	**n/a**	**3/17/2021**	**250**	**Yes**	**111**	**n/a**	**n/a**	**3.604**	**n/a**	**n/a**	**0.0001613**	**NP Inter (normality) 1 of 2**
Sulfate (mg/L)	**HGWC-17**	**85.9**	**n/a**	**3/18/2021**	**447**	**Yes**	**111**	**n/a**	**n/a**	**3.604**	**n/a**	**n/a**	**0.0001613**	**NP Inter (normality) 1 of 2**
Sulfate (mg/L)	**HGWC-18**	**85.9**	**n/a**	**3/18/2021**	**1050**	**Yes**	**111**	**n/a**	**n/a**	**3.604**	**n/a**	**n/a**	**0.0001613**	**NP Inter (normality) 1 of 2**
Total Dissolved Solids (mg/L)	**HGWC-14**	**496**	**n/a**	**3/17/2021**	**1640**	**Yes**	**111**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.0001613**	**NP Inter (normality) 1 of 2**
Total Dissolved Solids (mg/L)	HGWC-15	496	n/a	3/16/2021	92	No	111	n/a	n/a	0	n/a	n/a	0.0001613	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	**HGWC-16**	**496**	**n/a**	**3/17/2021**	**768**	**Yes**	**111**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.0001613**	**NP Inter (normality) 1 of 2**
Total Dissolved Solids (mg/L)	**HGWC-17**	**496**	**n/a**	**3/18/2021**	**1020**	**Yes**	**111**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.0001613**	**NP Inter (normality) 1 of 2**
Total Dissolved Solids (mg/L)	**HGWC-18**	**496**	**n/a**	**3/18/2021**	**1390**	**Yes**	**111**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.0001613**	**NP Inter (normality) 1 of 2**

Exceeds Limit: HGWC-14, HGWC-15, HGWC-16, HGWC-17, HGWC-18

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Chi Squared normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 111 background values. 5.405% NDs. Annual per-constituent alpha = 0.001612. Individual comparison alpha = 0.0001613 (1 of 2). Comparing 5 points to limit.

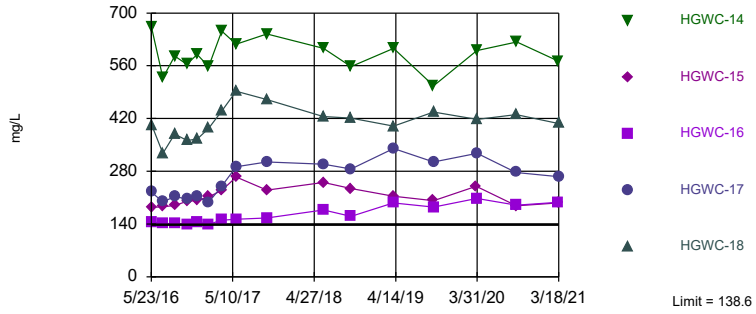
Constituent: Boron Analysis Run 5/5/2021 9:43 AM View: Appendix III

Plant Hammond Client: Southern Company Data: Hammond AP-2

Exceeds Limit: HGWC-14, HGWC-15, HGWC-16, HGWC-17, HGWC-18

Prediction Limit

Interwell Parametric



Background Data Summary (based on natural log transformation): Mean=3.83, Std. Dev.=0.611, n=111. Normality test: Chi Squared @alpha = 0.01, calculated = 7.288, critical = 14.07. Kappa = 1.802 (c=7, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.001504. Comparing 5 points to limit.

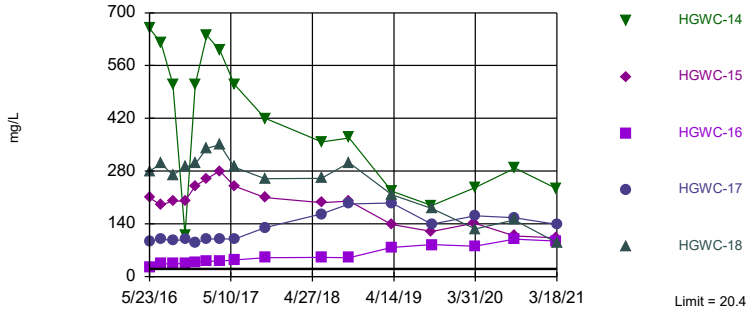
Constituent: Calcium Analysis Run 5/5/2021 9:43 AM View: Appendix III

Plant Hammond Client: Southern Company Data: Hammond AP-2

Exceeds Limit: HGWC-14, HGWC-15, HGWC-16, HGWC-17, HGWC-18

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Chi Squared normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 111 background values. Annual per-constituent alpha = 0.001612. Individual comparison alpha = 0.0001613 (1 of 2). Comparing 5 points to limit.

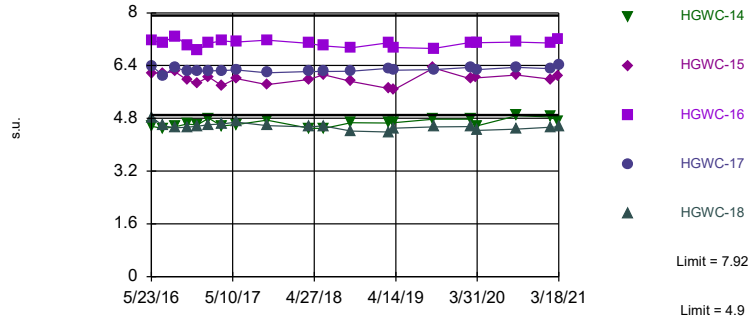
Constituent: Chloride Analysis Run 5/5/2021 9:43 AM View: Appendix III

Plant Hammond Client: Southern Company Data: Hammond AP-2

Exceeds Limits: HGWC-14, HGWC-18

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Chi Squared normality test showed the data to be non-normal at the 0.01 alpha level. Limits are highest and lowest of 138 background values. Annual per-constituent alpha = 0.002063. Individual comparison alpha = 0.0002064 (1 of 2). Comparing 5 points to limit.

Constituent: Field pH Analysis Run 5/5/2021 9:43 AM View: Appendix III

Plant Hammond Client: Southern Company Data: Hammond AP-2

Prediction Limit

Constituent: Boron (mg/L) Analysis Run 5/5/2021 9:44 AM View: Appendix III

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-1 (bg)	HGWA-5 (bg)	HGWA-4 (bg)	HGWA-3 (bg)	HGWA-2 (bg)	HGWA-6 (bg)	HGWC-14	HGWC-17	HGWC-15
5/19/2016	0.0214 (J)	<0.04	<0.04	<0.04	0.0321 (J)				
5/20/2016						0.0363 (J)			
5/23/2016							15.4	5.7	2.02
5/24/2016									
7/11/2016	0.0142 (J)	0.0052 (J)	0.0175 (J)		0.0337 (J)	0.0179 (J)			
7/12/2016				0.0074 (J)			16	9.58	1.65
8/30/2016	0.0074 (J)	0.0068 (J)	0.0072 (J)	<0.04	0.0173 (J)	0.014 (J)			
9/1/2016							12.3	5.76	1.93
10/19/2016	0.0224 (J)		0.018 (J)	0.0085 (J)	0.0341 (J)				
10/20/2016		0.0135 (J)				0.0197 (J)			
10/24/2016							13.7		1.93
10/25/2016								5.38	
12/6/2016	0.0211 (J)		0.0158 (J)	0.0085 (J)	0.0326 (J)				
12/7/2016							16.5	5.74	2.23
12/8/2016		0.0083 (J)				0.0159 (J)			
1/24/2017	0.0165 (J)	0.0072 (J)	0.0145 (J)	0.01 (J)	0.0365 (J)	<0.04			
1/26/2017							19.2	5.78	2.31
3/21/2017	0.0187 (J)	<0.04	0.0101 (J)	0.0079 (J)	0.0349 (J)	0.0166 (J)			
3/22/2017								5.52	
3/23/2017							23.1		2.72
5/22/2017	0.0782			0.0131 (J)	0.0475				
5/23/2017		0.0095 (J)	0.0159 (J)			0.0167 (J)			
5/24/2017							25.8		2.26
5/25/2017								8.58	
10/3/2017	0.0198 (J)	0.0071 (J)	0.0162 (J)	0.0097 (J)	0.0386 (J)	0.017 (J)			
10/4/2017							20.5	6.8	2
6/4/2018	0.02 (J)		0.014 (J)	0.017 (J)	0.036 (J)				
6/5/2018		0.0066 (J)				0.016 (J)			
6/6/2018							16.7	6.3	2.4
10/1/2018	0.013 (J)		0.0093 (J)	0.0061 (J)	0.035 (J)				
10/2/2018		0.0081 (J)				0.014 (J)			
10/3/2018							16.4	6.9	2.4
4/1/2019				0.0066 (J)					
4/2/2019	0.016 (J)	0.0052 (J)	0.01 (J)		0.034 (J)	0.013 (J)			
4/4/2019									2.3
4/5/2019							12.5	5.9	
9/23/2019	0.021 (J)			0.0081 (J)	0.04 (J)				
9/24/2019		0.0088 (J)	0.013 (J)			0.016 (J)	14.7		2.9
9/25/2019								8.1	
3/25/2020	0.025 (J)			0.0096 (J)	0.039 (J)	0.021 (J)			
3/26/2020		0.0072 (J)	0.012 (J)						2.1
3/30/2020							11.7		
3/31/2020								6.9	
9/15/2020	0.017 (J)	0.012 (J)	0.013 (J)	0.0071 (J)	0.044 (J)	0.016 (J)			
9/16/2020								6.7	
9/17/2020									2.2
9/18/2020							11		
11/10/2020									
11/11/2020									
12/15/2020									
1/19/2021									
1/20/2021									

Prediction Limit

Constituent: Boron (mg/L) Analysis Run 5/5/2021 9:44 AM View: Appendix III

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-1 (bg)	HGWA-5 (bg)	HGWA-4 (bg)	HGWA-3 (bg)	HGWA-2 (bg)	HGWA-6 (bg)	HGWC-14	HGWC-17	HGWC-15
3/10/2021	0.015 (J)		0.012 (J)						
3/11/2021		0.0075 (J)		0.015 (J)	0.056	0.018 (J)			
3/16/2021									2.4
3/17/2021							11.8		
3/18/2021								6.8	

Prediction Limit

Constituent: Boron (mg/L) Analysis Run 5/5/2021 9:44 AM View: Appendix III

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWC-16	HGWC-18	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-42D (bg)
5/19/2016					
5/20/2016					
5/23/2016	1.36				
5/24/2016		9.33			
7/11/2016					
7/12/2016	1.62	11.9			
8/30/2016					
9/1/2016	1.31	8.8			
10/19/2016					
10/20/2016					
10/24/2016					
10/25/2016	1.27	8.5			
12/6/2016					
12/7/2016	1.42				
12/8/2016		7.15			
1/24/2017					
1/26/2017	1.19	9.17			
3/21/2017					
3/22/2017	1.32				
3/23/2017		10.6			
5/22/2017					
5/23/2017					
5/24/2017	1.67				
5/25/2017		13.2			
10/3/2017					
10/4/2017	1.43	10			
6/4/2018					
6/5/2018		8.4			
6/6/2018	1.9				
10/1/2018					
10/2/2018					
10/3/2018	1.7	9.3			
4/1/2019					
4/2/2019					
4/4/2019	2.1				
4/5/2019		6.4			
9/23/2019					
9/24/2019					
9/25/2019	2.7	11.7			
3/25/2020					
3/26/2020					
3/30/2020	2.4				
3/31/2020		9.4			
9/15/2020		9.4			
9/16/2020			0.061 (J)	0.23	
9/17/2020	2.4				0.098 (J)
9/18/2020					
11/10/2020			0.057 (J)	0.29	
11/11/2020					0.058 (J)
12/15/2020			0.052 (J)	0.31	0.043 (J)
1/19/2021			0.049 (J)	0.4	
1/20/2021					0.045 (J)

Prediction Limit

Constituent: Boron (mg/L) Analysis Run 5/5/2021 9:44 AM View: Appendix III

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWC-16	HGWC-18	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-42D (bg)
3/10/2021				0.39	0.048
3/11/2021			0.06		
3/16/2021					
3/17/2021	2.7				
3/18/2021		8.9			

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 5/5/2021 9:44 AM View: Appendix III

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-1 (bg)	HGWA-5 (bg)	HGWA-4 (bg)	HGWA-3 (bg)	HGWA-2 (bg)	HGWA-6 (bg)	HGWC-14	HGWC-17	HGWC-15
5/19/2016	138	35.5	48.4	76.2	22.9				
5/20/2016						56.1			
5/23/2016							664	225	184
5/24/2016									
7/11/2016	97.2	35.4	73		22.3	49.3			
7/12/2016				61.5			528	199	186
8/30/2016	97.5	28	85.7	65.1	26.4	53.9			
9/1/2016							586	213	189
10/19/2016	99.2		89.7	73.2	21.7				
10/20/2016		26.7				50.7			
10/24/2016							564		200
10/25/2016								206	
12/6/2016	105		80	74.9	18.2				
12/7/2016							590	212	203
12/8/2016		23.5				49.2			
1/24/2017	95.7	24.5	30.8	69.6	18.5	48.3			
1/26/2017							558	198	212
3/21/2017	106	30.8	34	75.7	18.6	51.3			
3/22/2017								239	
3/23/2017							652		229
5/22/2017	107			71.5	17.8				
5/23/2017		24.2	43			49.1			
5/24/2017							617		265
5/25/2017								292	
10/3/2017	102	29	46.9	76.3	20.2	55.1			
10/4/2017							644	305	230
6/4/2018	124		81.9	73.4	19.1				
6/5/2018		27.8				54.5			
6/6/2018							606	299	250
10/1/2018	108		22 (J)	80.9	20.5 (J)				
10/2/2018		28.9				54.7			
10/3/2018							558	286	234
4/1/2019				80.5					
4/2/2019	132	26.3	76		22.5 (J)	49.7			
4/4/2019									214
4/5/2019							606	340	
9/23/2019	118			71	19.5				
9/24/2019		29.3	36.6			52.5	507		202
9/25/2019								305	
3/25/2020	127			89.8	23	58.1			
3/26/2020		27.8	14.9						240
3/30/2020							600		
3/31/2020								328	
9/15/2020	103	27.9	20.4	73.1	21.1	49.9			
9/16/2020								277	
9/17/2020									188
9/18/2020							623		
11/10/2020									
11/11/2020									
12/15/2020									
1/19/2021									
1/20/2021									

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 5/5/2021 9:44 AM View: Appendix III

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-1 (bg)	HGWA-5 (bg)	HGWA-4 (bg)	HGWA-3 (bg)	HGWA-2 (bg)	HGWA-6 (bg)	HGWC-14	HGWC-17	HGWC-15
3/10/2021	111		5.9						
3/11/2021		28.3		83.8	43.8	53.1			
3/16/2021									196
3/17/2021							572		
3/18/2021								266	

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 5/5/2021 9:44 AM View: Appendix III

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWC-16	HGWC-18	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-42D (bg)
5/19/2016					
5/20/2016					
5/23/2016	146				
5/24/2016		403			
7/11/2016					
7/12/2016	142	328			
8/30/2016					
9/1/2016	141	379			
10/19/2016					
10/20/2016					
10/24/2016					
10/25/2016	138	362			
12/6/2016					
12/7/2016	146				
12/8/2016		366			
1/24/2017					
1/26/2017	139	394			
3/21/2017					
3/22/2017	150				
3/23/2017		440			
5/22/2017					
5/23/2017					
5/24/2017	153				
5/25/2017		492			
10/3/2017					
10/4/2017	156	470			
6/4/2018					
6/5/2018		425			
6/6/2018	177				
10/1/2018					
10/2/2018					
10/3/2018	160	421			
4/1/2019					
4/2/2019					
4/4/2019	196				
4/5/2019		400			
9/23/2019					
9/24/2019					
9/25/2019	185	437			
3/25/2020					
3/26/2020					
3/30/2020	208				
3/31/2020		418			
9/15/2020		430			
9/16/2020			56	30	
9/17/2020	190				43.8
9/18/2020					
11/10/2020			63.3	33.6	
11/11/2020					44.4
12/15/2020			62.6	28.7	47.3
1/19/2021			60.1	33	
1/20/2021					41.8

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 5/5/2021 9:44 AM View: Appendix III

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWC-16	HGWC-18	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-42D (bg)
3/10/2021				18.3	43.4
3/11/2021			59.6		
3/16/2021					
3/17/2021	198				
3/18/2021		407			

Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 5/5/2021 9:44 AM View: Appendix III

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-1 (bg)	HGWA-5 (bg)	HGWA-4 (bg)	HGWA-3 (bg)	HGWA-2 (bg)	HGWA-6 (bg)	HGWC-14	HGWC-17	HGWC-15
5/19/2016	9.94	1.57	4.56	5.93	6.14				
5/20/2016						1.35			
5/23/2016							659	94	209
5/24/2016									
7/11/2016	6.3	2	5		5.9	1.7			
7/12/2016				6.2			620	100	190
8/30/2016	6	2	4.9	6.4	6.2	1.6			
9/1/2016							510	95	200
10/19/2016	5.8		4.6	6.5	6.1				
10/20/2016		2.2				1.6			
10/24/2016							110		200
10/25/2016								98	
12/6/2016	5.4		4.5	7.2	6				
12/7/2016							510	89	240
12/8/2016		2				1.6			
1/24/2017	5.2	1.6	4.7	6.4	6.1	1.9			
1/26/2017							640	99	260
3/21/2017	4.6	2	4.3	7.5	5.9	1.3			
3/22/2017								100	
3/23/2017							600		280
5/22/2017	4.6			6.5	5.9				
5/23/2017		1.7	4.5			1.2			
5/24/2017							510		240
5/25/2017								99	
10/3/2017	5.6	1.7	4.8	6.5	6.3	2.1			
10/4/2017							420	130	210
6/4/2018	13.1		4.5	6.3	6.1				
6/5/2018		1.6				1.2			
6/6/2018							357	166	196
10/1/2018	6.6		3.8	6.4	6.4				
10/2/2018		2.4				1.7			
10/3/2018							368	193	200
4/1/2019				6.5					
4/2/2019	20.3	1.7	4.4		5.8	1.6			
4/4/2019									138
4/5/2019							227	195	
9/23/2019	17.7			5.9	5.1				
9/24/2019		1.7	3.6			1.3	188		120
9/25/2019								139	
3/25/2020	20.4			6.1	5.2	1.2			
3/26/2020		1.4	3.4						142
3/30/2020							236		
3/31/2020								161	
9/15/2020	13.4	1.7	3.3	6	5	1.2			
9/16/2020								156	
9/17/2020									108
9/18/2020							288		
11/10/2020									
11/11/2020									
12/15/2020									
1/19/2021									
1/20/2021									

Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 5/5/2021 9:44 AM View: Appendix III

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-1 (bg)	HGWA-5 (bg)	HGWA-4 (bg)	HGWA-3 (bg)	HGWA-2 (bg)	HGWA-6 (bg)	HGWC-14	HGWC-17	HGWC-15
3/10/2021	7.4		2.9						
3/11/2021		1.4		5.9	5.1	1.2			
3/16/2021									103
3/17/2021							233		
3/18/2021								138	

Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 5/5/2021 9:44 AM View: Appendix III

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWC-16	HGWC-18	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-42D (bg)
5/19/2016					
5/20/2016					
5/23/2016	25.8				
5/24/2016		280			
7/11/2016					
7/12/2016	34	300			
8/30/2016					
9/1/2016	34	270			
10/19/2016					
10/20/2016					
10/24/2016					
10/25/2016	35	290			
12/6/2016					
12/7/2016	38				
12/8/2016		300			
1/24/2017					
1/26/2017	41	340			
3/21/2017					
3/22/2017	41				
3/23/2017		350			
5/22/2017					
5/23/2017					
5/24/2017	44				
5/25/2017		290			
10/3/2017					
10/4/2017	50	260			
6/4/2018					
6/5/2018		261			
6/6/2018	50.6				
10/1/2018					
10/2/2018					
10/3/2018	49.9	302			
4/1/2019					
4/2/2019					
4/4/2019	76.8				
4/5/2019		217			
9/23/2019					
9/24/2019					
9/25/2019	84.4	181			
3/25/2020					
3/26/2020					
3/30/2020	80.2				
3/31/2020		126			
9/15/2020		150			
9/16/2020			4.1	7.2	
9/17/2020	99.3				5.8
9/18/2020					
11/10/2020			4.4	7.8	
11/11/2020					3.1
12/15/2020			4.7	9.4	3.2
1/19/2021			4.1	9.5	
1/20/2021					2.8

Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 5/5/2021 9:44 AM View: Appendix III

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWC-16	HGWC-18	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-42D (bg)
3/10/2021				12.3	3
3/11/2021			4.5		
3/16/2021					
3/17/2021	93.8				
3/18/2021		90.2			

Prediction Limit

Constituent: Field pH (s.u.) Analysis Run 5/5/2021 9:44 AM View: Appendix III

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-1 (bg)	HGWA-5 (bg)	HGWA-4 (bg)	HGWA-3 (bg)	HGWA-2 (bg)	HGWA-6 (bg)	HGWC-15	HGWC-14	HGWC-16
5/19/2016	7.27	6.62	6.51	7.45	5.81				
5/20/2016						7.58			
5/23/2016							6.17	4.56	7.15
5/24/2016									
7/11/2016	7.06	6.54	6.65		5.68	7.32			
7/12/2016				7.32			6.17	4.49	7.1
8/30/2016	7.28	6.38	7.14	7.43	5.63	7.69			
9/1/2016							6.22	4.54	7.29
10/19/2016	7.02		7.08	7.03	5.46				
10/20/2016		6.52				7.43			
10/24/2016							5.97	4.63	
10/25/2016									7.03
12/6/2016	7.09		7	7.08	5.38				
12/7/2016							5.87	4.6	6.85
12/8/2016		6.5				7.56			
1/24/2017	7.2	6.59	6.16	7.39	5.37	7.52			
1/26/2017							6.05	4.8	7.07
3/21/2017	7.01	6.55	6.07	6.83	4.9	7.4			
3/22/2017									7.15
3/23/2017							5.79	4.57	
5/22/2017	7.11			7.02	5.2				
5/23/2017		6.5	6.28			7.53			
5/24/2017							6.01	4.61	7.11
5/25/2017									
10/3/2017	7.21	6.63	6.45	7.47	5.3	7.51			
10/4/2017							5.82	4.74	7.17
4/2/2018	7.1		6.23		5.4				
4/3/2018		6.59		7.38		7.53	5.98		7.07
4/4/2018								4.5	
6/4/2018	7.06		6.82	7.38	5.27				
6/5/2018		6.44				7.37			
6/6/2018							6.12	4.49	7
10/1/2018	7.09		5.73	7.13	5.31				
10/2/2018		6.35				7.36			
10/3/2018							5.92	4.67	6.94
3/11/2019			6.27						
3/12/2019	7.03	6.42		7.29	5.42	7.5			
3/14/2019							5.71	4.66	
3/15/2019									7.09
4/1/2019				7.16					
4/2/2019	6.86	6.38	6.66		5.41	7.46			
4/4/2019							5.66		6.95
4/5/2019								4.67	
9/23/2019	7.02			7.3	5.33				
9/24/2019		6.4	6.16			7.41	6.33	4.77	
9/25/2019									6.92
3/2/2020	7.1	6.8	5.63	7.12	5.43	7.67			
3/3/2020							6	4.77	7.1
3/25/2020	6.95			7.4	5.36	7.39			
3/26/2020		6.38	5.77				6.03		
3/30/2020								4.57	7.09
3/31/2020									

Prediction Limit

Constituent: Field pH (s.u.) Analysis Run 5/5/2021 9:44 AM View: Appendix III

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-1 (bg)	HGWA-5 (bg)	HGWA-4 (bg)	HGWA-3 (bg)	HGWA-2 (bg)	HGWA-6 (bg)	HGWC-15	HGWC-14	HGWC-16
9/15/2020	7.15	6.33	5.75	7.29	5.22	7.37			
9/16/2020									
9/17/2020							6.11		7.11
9/18/2020								4.88	
11/10/2020									
11/11/2020									
12/15/2020									
1/19/2021									
1/20/2021									
2/8/2021	7.11		4.94						
2/9/2021		6.35		7.23	5.42	7.4			
2/10/2021									7.08
2/11/2021								4.84	
2/12/2021							5.99		
3/10/2021	6.95		5.28						
3/11/2021		6.48		7.33	5.8	7.56			
3/16/2021							6.08		
3/17/2021								4.72	7.19
3/18/2021									

Prediction Limit

Constituent: Field pH (s.u.) Analysis Run 5/5/2021 9:44 AM View: Appendix III

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWC-17	HGWC-18	HGWA-44D (bg)	HGWA-43D (bg)	HGWA-42D (bg)
5/19/2016					
5/20/2016					
5/23/2016	6.4				
5/24/2016		4.83			
7/11/2016					
7/12/2016	6.09	4.58			
8/30/2016					
9/1/2016	6.35	4.51			
10/19/2016					
10/20/2016					
10/24/2016					
10/25/2016	6.23	4.53			
12/6/2016					
12/7/2016	6.23				
12/8/2016		4.56			
1/24/2017					
1/26/2017	6.24	4.61			
3/21/2017					
3/22/2017	6.25				
3/23/2017		4.63			
5/22/2017					
5/23/2017					
5/24/2017					
5/25/2017	6.27	4.69			
10/3/2017					
10/4/2017	6.18	4.58			
4/2/2018					
4/3/2018	6.22	4.54			
4/4/2018					
6/4/2018					
6/5/2018		4.57			
6/6/2018	6.22				
10/1/2018					
10/2/2018					
10/3/2018	6.23	4.41			
3/11/2019					
3/12/2019					
3/14/2019		4.39			
3/15/2019	6.32				
4/1/2019					
4/2/2019					
4/4/2019					
4/5/2019	6.26	4.5			
9/23/2019					
9/24/2019					
9/25/2019	6.28	4.54			
3/2/2020					
3/3/2020	6.35	4.55			
3/25/2020					
3/26/2020					
3/30/2020					
3/31/2020	6.28	4.43			

Prediction Limit

Constituent: Field pH (s.u.) Analysis Run 5/5/2021 9:44 AM View: Appendix III

Plant Hammond Client: Southern Company Data: Hammond AP-2

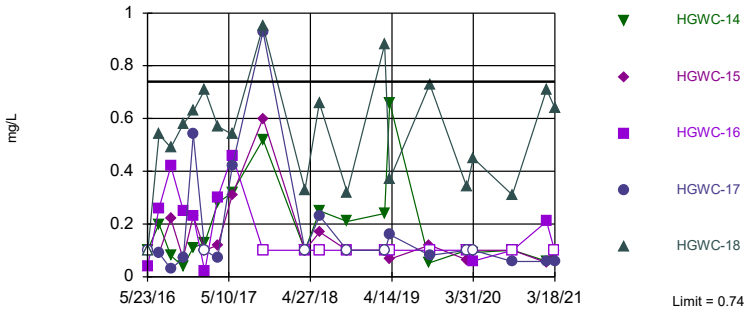
	HGWC-17	HGWC-18	HGWA-44D (bg)	HGWA-43D (bg)	HGWA-42D (bg)
9/15/2020		4.47			
9/16/2020	6.35		7.83	7.52	
9/17/2020					7.62
9/18/2020					
11/10/2020			7.84	7.27	
11/11/2020					7.68
12/15/2020			7.87	7.39	7.64
1/19/2021			7.86	7.39	
1/20/2021					7.68
2/8/2021					7.64
2/9/2021			7.84	7.44	
2/10/2021					
2/11/2021	6.31	4.53			
2/12/2021					
3/10/2021			7.92		7.7
3/11/2021				7.46	
3/16/2021					
3/17/2021					
3/18/2021	6.43	4.54			

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Chi Squared normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 138 background values. 31.88% NDs. Annual per-constituent alpha = 0.001032. Individual comparison alpha = 0.0001032 (1 of 2). Comparing 5 points to limit.

Constituent: Fluoride Analysis Run 5/5/2021 9:43 AM View: Appendix III

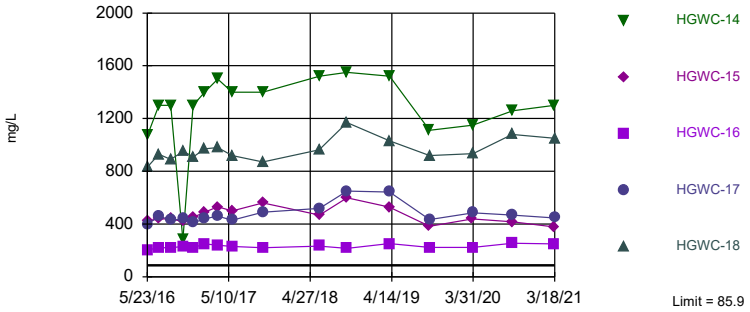
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

Exceeds Limit: HGWC-14, HGWC-15, HGWC-16, HGWC-17, HGWC-18

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Chi Squared normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 111 background values. 3.604% NDs. Annual per-constituent alpha = 0.001612. Individual comparison alpha = 0.0001613 (1 of 2). Comparing 5 points to limit.

Constituent: Sulfate Analysis Run 5/5/2021 9:43 AM View: Appendix III

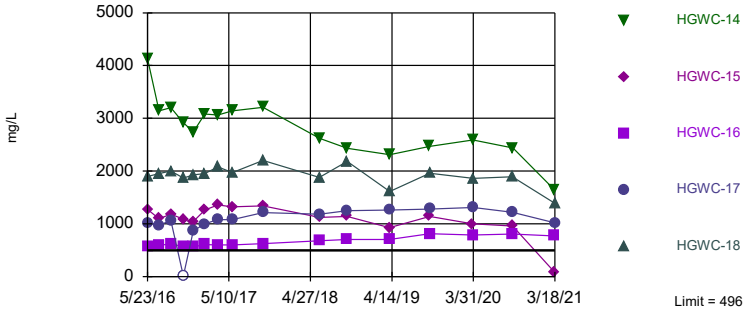
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

Exceeds Limit: HGWC-14, HGWC-16, HGWC-17, HGWC-18

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Chi Squared normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 111 background values. Annual per-constituent alpha = 0.001612. Individual comparison alpha = 0.0001613 (1 of 2). Comparing 5 points to limit.

Constituent: Total Dissolved Solids Analysis Run 5/5/2021 9:43 AM View: Appendix III

Plant Hammond Client: Southern Company Data: Hammond AP-2

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 5/5/2021 9:44 AM View: Appendix III

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-1 (bg)	HGWA-5 (bg)	HGWA-4 (bg)	HGWA-3 (bg)	HGWA-2 (bg)	HGWA-6 (bg)	HGWC-15	HGWC-14	HGWC-16
5/19/2016	0.105 (J)	0.08 (J)	0.036 (J)	0.0513 (J)	0.0303 (J)				
5/20/2016						0.065 (J)			
5/23/2016							<0.1	<0.1	0.038 (J)
5/24/2016									
7/11/2016	0.16 (J)	0.09 (J)	0.09 (J)		0.05 (J)	0.13 (J)			
7/12/2016				0.12 (J)			0.09 (J)	0.2 (J)	0.26 (J)
8/30/2016	0.09 (J)	0.08 (J)	0.06 (J)	0.09 (J)	0.06 (J)	0.07 (J)			
9/1/2016							0.22 (J)	0.08 (J)	0.42
10/19/2016	0.1 (J)		0.07 (J)	0.1 (J)	0.04 (J)				
10/20/2016		0.1 (J)				0.06 (J)			
10/24/2016							0.07 (J)	0.04 (J)	
10/25/2016									0.25 (J)
12/6/2016	0.11 (J)		0.07 (J)	0.21 (J)	0.36				
12/7/2016							0.23 (J)	0.11 (J)	0.23 (J)
12/8/2016		0.08 (J)				0.06 (J)			
1/24/2017	0.09 (J)	0.09 (J)	<0.1	0.06 (J)	<0.1	0.02 (J)			
1/26/2017							<0.1	0.13 (J)	0.02 (J)
3/21/2017	0.13 (J)	0.04 (J)	<0.1	0.005 (J)	<0.1	0.08 (J)			
3/22/2017									0.3
3/23/2017							0.12 (J)	0.28 (J)	
5/22/2017	0.12 (J)			0.05 (J)	<0.1				
5/23/2017		0.04 (J)	0.01 (J)			0.006 (J)			
5/24/2017							0.31	0.32	0.46
5/25/2017									
10/3/2017	0.13 (J)	0.06 (J)	<0.1	0.13 (J)	<0.1	<0.1			
10/4/2017							0.6	0.52	<0.1
4/2/2018	<0.1		<0.1		<0.1				
4/3/2018		<0.1		<0.1		<0.1	<0.1		<0.1
4/4/2018								<0.1	
6/4/2018	0.074 (J)		0.097 (J)	<0.1	<0.1				
6/5/2018		0.083 (J)				0.055 (J)			
6/6/2018							0.17 (J)	0.25 (J)	<0.1
10/1/2018	<0.1		<0.1	<0.1	<0.1				
10/2/2018		<0.1				0.076 (J)			
10/3/2018							<0.1	0.21 (J)	<0.1
3/11/2019			0.035 (J)						
3/12/2019	0.29 (J)	0.079 (J)		0.072 (J)	0.038 (J)	0.061 (J)			
3/14/2019							<0.1	0.24 (J)	
3/15/2019									<0.1
4/1/2019				0.029 (J)					
4/2/2019	0.1 (J)	0.12 (J)	<0.1		0.071 (J)	<0.1			
4/4/2019							0.066 (J)		<0.1
4/5/2019								0.66	
9/23/2019	0.078 (J)			<0.1	<0.1				
9/24/2019		0.058 (J)	<0.1			<0.1	0.12 (J)	0.053 (J)	
9/25/2019									<0.1
3/2/2020	0.076 (J)	0.053 (J)	<0.1	<0.1	<0.1	<0.1			
3/3/2020							0.064 (J)	<0.1	<0.1
3/25/2020	0.098 (J)			<0.1	<0.1	<0.1			
3/26/2020		0.066 (J)	<0.1				<0.1		
3/30/2020								0.092 (J)	0.059 (J)
3/31/2020									

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 5/5/2021 9:44 AM View: Appendix III

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-1 (bg)	HGWA-5 (bg)	HGWA-4 (bg)	HGWA-3 (bg)	HGWA-2 (bg)	HGWA-6 (bg)	HGWC-15	HGWC-14	HGWC-16
9/15/2020	0.082 (J)	0.061 (J)	<0.1	<0.1	<0.1	<0.1			
9/16/2020									
9/17/2020							<0.1		<0.1
9/18/2020								<0.1	
11/10/2020									
11/11/2020									
12/15/2020									
1/19/2021									
1/20/2021									
2/8/2021	0.078 (J)		<0.1						
2/9/2021		0.053 (J)		0.074 (J)	<0.1	<0.1			
2/10/2021									0.21
2/11/2021								0.059 (J)	
2/12/2021							0.053 (J)		
3/10/2021	0.079 (J)		<0.1						
3/11/2021		0.06 (J)		<0.1	0.1	0.17			
3/16/2021							<0.1		
3/17/2021								0.076 (J)	<0.1
3/18/2021									

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 5/5/2021 9:44 AM View: Appendix III

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWC-17	HGWC-18	HGWA-44D (bg)	HGWA-43D (bg)	HGWA-42D (bg)
5/19/2016					
5/20/2016					
5/23/2016	<0.1				
5/24/2016		<0.1			
7/11/2016					
7/12/2016	0.09 (J)	0.54			
8/30/2016					
9/1/2016	0.03 (J)	0.49			
10/19/2016					
10/20/2016					
10/24/2016					
10/25/2016	0.07 (J)	0.58			
12/6/2016					
12/7/2016	0.54				
12/8/2016		0.63			
1/24/2017					
1/26/2017	<0.1	0.71			
3/21/2017					
3/22/2017	0.07 (J)				
3/23/2017		0.57			
5/22/2017					
5/23/2017					
5/24/2017					
5/25/2017	0.42	0.54			
10/3/2017					
10/4/2017	0.93	0.95			
4/2/2018					
4/3/2018	<0.1	0.33			
4/4/2018					
6/4/2018					
6/5/2018		0.66			
6/6/2018	0.23 (J)				
10/1/2018					
10/2/2018					
10/3/2018	<0.1	0.32			
3/11/2019					
3/12/2019					
3/14/2019		0.88			
3/15/2019	<0.1				
4/1/2019					
4/2/2019					
4/4/2019					
4/5/2019	0.16 (J)	0.37			
9/23/2019					
9/24/2019					
9/25/2019	0.081 (J)	0.73			
3/2/2020					
3/3/2020	<0.1	0.34			
3/25/2020					
3/26/2020					
3/30/2020					
3/31/2020	<0.1	0.45			

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 5/5/2021 9:44 AM View: Appendix III

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWC-17	HGWC-18	HGWA-44D (bg)	HGWA-43D (bg)	HGWA-42D (bg)
9/15/2020		0.31			
9/16/2020	0.058 (J)		0.52	0.22	
9/17/2020					0.2
9/18/2020					
11/10/2020			0.59	0.19	
11/11/2020					0.1
12/15/2020			0.67	0.21	0.11
1/19/2021			0.74	0.16	
1/20/2021					0.082 (J)
2/8/2021					0.096 (J)
2/9/2021			0.44	0.19	
2/10/2021					
2/11/2021	0.058 (J)	0.71			
2/12/2021					
3/10/2021			0.65		0.11
3/11/2021				0.2	
3/16/2021					
3/17/2021					
3/18/2021	0.057 (J)	0.64			

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 5/5/2021 9:44 AM View: Appendix III

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-1 (bg)	HGWA-5 (bg)	HGWA-4 (bg)	HGWA-3 (bg)	HGWA-2 (bg)	HGWA-6 (bg)	HGWC-14	HGWC-17	HGWC-15
5/19/2016	66.9	25	1.22	42.3	48.6				
5/20/2016						34.4			
5/23/2016							1070	395	424
5/24/2016									
7/11/2016	41	27	3.7		45	34			
7/12/2016				44			1300	460	440
8/30/2016	36	23	6.8	40	42	36			
9/1/2016							1300	430	440
10/19/2016	46		11	43	44				
10/20/2016		19				36			
10/24/2016							280		420
10/25/2016								440	
12/6/2016	59		13	43	44				
12/7/2016							1300	410	450
12/8/2016		20				36			
1/24/2017	46	20	5.7	48	46	37			
1/26/2017							1400	440	490
3/21/2017	63	23	1.7	45	46	37			
3/22/2017								460	
3/23/2017							1500		530
5/22/2017	77			46	48				
5/23/2017		21	1.5			38			
5/24/2017							1400		500
5/25/2017								430	
10/3/2017	42	21	1.3	48	47	38			
10/4/2017							1400	490	560
6/4/2018	71.8		4.9	46.6	47.8				
6/5/2018		22.9				38			
6/6/2018							1520	520	469
10/1/2018	49.1		0.59 (J)	48.6	48.1				
10/2/2018		20.3				38.5			
10/3/2018							1550	651	600
4/1/2019				50.4					
4/2/2019	84.3	23.8	4.9		48.7	35.5			
4/4/2019									528
4/5/2019							1520	642	
9/23/2019	70.2			43.9	47.2				
9/24/2019		20.7	<1			35.4	1110		382
9/25/2019								434	
3/25/2020	85.9			50.5	46.3	35.1			
3/26/2020		21.6	<1						438
3/30/2020							1150		
3/31/2020								484	
9/15/2020	47.3	21.2	<1	44.7	51.5	35.3			
9/16/2020								467	
9/17/2020									416
9/18/2020							1260		
11/10/2020									
11/11/2020									
12/15/2020									
1/19/2021									
1/20/2021									

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 5/5/2021 9:44 AM View: Appendix III

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-1 (bg)	HGWA-5 (bg)	HGWA-4 (bg)	HGWA-3 (bg)	HGWA-2 (bg)	HGWA-6 (bg)	HGWC-14	HGWC-17	HGWC-15
3/10/2021	49.6		1.2						
3/11/2021		22.7		50.4	52.9	35.5			
3/16/2021									379
3/17/2021							1300		
3/18/2021								447	

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 5/5/2021 9:44 AM View: Appendix III

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWC-16	HGWC-18	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-42D (bg)
5/19/2016					
5/20/2016					
5/23/2016	203				
5/24/2016		834			
7/11/2016					
7/12/2016	220	930			
8/30/2016					
9/1/2016	220	890			
10/19/2016					
10/20/2016					
10/24/2016					
10/25/2016	230	950			
12/6/2016					
12/7/2016	220				
12/8/2016		910			
1/24/2017					
1/26/2017	250	970			
3/21/2017					
3/22/2017	240				
3/23/2017		980			
5/22/2017					
5/23/2017					
5/24/2017	230				
5/25/2017		920			
10/3/2017					
10/4/2017	220	870			
6/4/2018					
6/5/2018		962			
6/6/2018	233				
10/1/2018					
10/2/2018					
10/3/2018	215	1170			
4/1/2019					
4/2/2019					
4/4/2019	251				
4/5/2019		1030			
9/23/2019					
9/24/2019					
9/25/2019	223	920			
3/25/2020					
3/26/2020					
3/30/2020	223				
3/31/2020		934			
9/15/2020		1080			
9/16/2020			43	6.9	
9/17/2020	254				10.9
9/18/2020					
11/10/2020			39	6.3	
11/11/2020					9.4
12/15/2020			38.8	6.7	10.9
1/19/2021			37.3	7.4	
1/20/2021					9.8

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 5/5/2021 9:44 AM View: Appendix III

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWC-16	HGWC-18	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-42D (bg)
3/10/2021				<1	10.8
3/11/2021			38.6		
3/16/2021					
3/17/2021	250				
3/18/2021		1050			

Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 5/5/2021 9:44 AM View: Appendix III

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-1 (bg)	HGWA-5 (bg)	HGWA-4 (bg)	HGWA-3 (bg)	HGWA-2 (bg)	HGWA-6 (bg)	HGWC-14	HGWC-17	HGWC-15
5/19/2016	421	168	165	267	143				
5/20/2016						223			
5/23/2016							4130	1010	1270
5/24/2016									
7/11/2016	363	158	266		125	225			
7/12/2016				249			3140	976	1100
8/30/2016	330	141	292	254	168	232			
9/1/2016							3200	1060	1180
10/19/2016	380		338	357	176				
10/20/2016		99				225			
10/24/2016							2920		1090
10/25/2016								<25	
12/6/2016	377		356	285	145				
12/7/2016							2740	866	1040
12/8/2016		116				235			
1/24/2017	342	156	131	300	129	272			
1/26/2017							3080	1000	1260
3/21/2017	340	144	132	288	103	222			
3/22/2017								1080	
3/23/2017							3060		1360
5/22/2017	338			263	92				
5/23/2017		134	183			231			
5/24/2017							3140		1320
5/25/2017								1080	
10/3/2017	343	147	161	300	127	243			
10/4/2017							3210	1210	1340
6/4/2018	415		240	266	140				
6/5/2018		152				235			
6/6/2018							2620	1180	1120
10/1/2018	354		106	291	135				
10/2/2018		146				228			
10/3/2018							2430	1250	1140
4/1/2019				284					
4/2/2019	452	144	230		133	238			
4/4/2019									926
4/5/2019							2310	1260	
9/23/2019	442			268	129				
9/24/2019		133	131			222	2470		1140
9/25/2019								1280	
3/25/2020	496			284	138	240			
3/26/2020		104	69						1000
3/30/2020							2590		
3/31/2020								1310	
9/15/2020	265	116	93	258	124	217			
9/16/2020								1220	
9/17/2020									956
9/18/2020							2440		
11/10/2020									
11/11/2020									
12/15/2020									
1/19/2021									
1/20/2021									

Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 5/5/2021 9:44 AM View: Appendix III

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWA-1 (bg)	HGWA-5 (bg)	HGWA-4 (bg)	HGWA-3 (bg)	HGWA-2 (bg)	HGWA-6 (bg)	HGWC-14	HGWC-17	HGWC-15
3/10/2021	348		53						
3/11/2021		118		267	169	215			
3/16/2021									92
3/17/2021							1640		
3/18/2021								1020	

Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 5/5/2021 9:44 AM View: Appendix III

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWC-16	HGWC-18	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-42D (bg)
5/19/2016					
5/20/2016					
5/23/2016	570				
5/24/2016		1900			
7/11/2016					
7/12/2016	585	1950			
8/30/2016					
9/1/2016	625	2000			
10/19/2016					
10/20/2016					
10/24/2016					
10/25/2016	563	1870			
12/6/2016					
12/7/2016	561				
12/8/2016		1930			
1/24/2017					
1/26/2017	608	1950			
3/21/2017					
3/22/2017	599				
3/23/2017		2080			
5/22/2017					
5/23/2017					
5/24/2017	598				
5/25/2017		1970			
10/3/2017					
10/4/2017	626	2200			
6/4/2018					
6/5/2018		1880			
6/6/2018	678				
10/1/2018					
10/2/2018					
10/3/2018	700	2180			
4/1/2019					
4/2/2019					
4/4/2019	704				
4/5/2019		1610			
9/23/2019					
9/24/2019					
9/25/2019	813	1960			
3/25/2020					
3/26/2020					
3/30/2020	787				
3/31/2020		1860			
9/15/2020		1890			
9/16/2020			272	270	
9/17/2020	804				188
9/18/2020					
11/10/2020			307	287	
11/11/2020					175
12/15/2020			289	295	193
1/19/2021			270	278	
1/20/2021					158

Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 5/5/2021 9:44 AM View: Appendix III

Plant Hammond Client: Southern Company Data: Hammond AP-2

	HGWC-16	HGWC-18	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-42D (bg)
3/10/2021				289	163
3/11/2021			279		
3/16/2021					
3/17/2021	768				
3/18/2021		1390			

FIGURE E.

Trend Tests - Prediction Limit Exceedances - Significant Results

Plant Hammond Client: Southern Company Data: Hammond AP-2 Printed 5/5/2021, 10:25 AM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Boron (mg/L)	**HGWA-2 (bg)**	**0.00257**	**72**	**58**	**Yes**	**16**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Boron (mg/L)	**HGWC-16**	**0.2888**	**80**	**58**	**Yes**	**16**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Calcium (mg/L)	**HGWC-16**	**13.53**	**89**	**58**	**Yes**	**16**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Chloride (mg/L)	**HGWA-4 (bg)**	**-0.357**	**-85**	**-58**	**Yes**	**16**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Chloride (mg/L)	**HGWC-14**	**-90.69**	**-67**	**-58**	**Yes**	**16**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Chloride (mg/L)	**HGWC-16**	**14.74**	**110**	**58**	**Yes**	**16**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Chloride (mg/L)	**HGWC-17**	**15.05**	**68**	**58**	**Yes**	**16**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Chloride (mg/L)	**HGWC-18**	**-36.81**	**-60**	**-58**	**Yes**	**16**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Field pH (s.u.)	**HGWA-4 (bg)**	**-0.2968**	**-107**	**-81**	**Yes**	**20**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Field pH (s.u.)	**HGWC-14**	**0.04839**	**82**	**81**	**Yes**	**20**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Sulfate (mg/L)	**HGWA-2 (bg)**	**1.382**	**64**	**58**	**Yes**	**16**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Sulfate (mg/L)	**HGWA-3 (bg)**	**1.676**	**67**	**58**	**Yes**	**16**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Total Dissolved Solids (mg/L)	**HGWA-4 (bg)**	**-35.66**	**-61**	**-58**	**Yes**	**16**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Total Dissolved Solids (mg/L)	**HGWC-14**	**-252**	**-73**	**-58**	**Yes**	**16**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Total Dissolved Solids (mg/L)	**HGWC-16**	**53.96**	**84**	**58**	**Yes**	**16**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Total Dissolved Solids (mg/L)	**HGWC-17**	**80.13**	**71**	**58**	**Yes**	**16**	**6.25**	**n/a**	**n/a**	**0.01**	**NP**

Trend Tests - Prediction Limit Exceedances - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-2 Printed 5/5/2021, 10:25 AM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Boron (mg/L)	HGWA-1 (bg)	-0.0001741	-4	-58	No	16	0	n/a	n/a	0.01	NP
Boron (mg/L)	**HGWA-2 (bg)**	**0.00257**	**72**	**58**	**Yes**	**16**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Boron (mg/L)	HGWA-3 (bg)	-0.0004025	-20	-58	No	16	12.5	n/a	n/a	0.01	NP
Boron (mg/L)	HGWA-4 (bg)	-0.001192	-46	-58	No	16	6.25	n/a	n/a	0.01	NP
Boron (mg/L)	HGWA-42D (bg)	-0.08634	-4	-12	No	5	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWA-43D (bg)	-0.02892	-4	-12	No	5	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWA-44D (bg)	0.3386	8	12	No	5	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWA-5 (bg)	-0.0001291	-7	-58	No	16	12.5	n/a	n/a	0.01	NP
Boron (mg/L)	HGWA-6 (bg)	-0.0004206	-18	-58	No	16	6.25	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-14	-0.9086	-30	-58	No	16	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-15	0.09551	48	58	No	16	0	n/a	n/a	0.01	NP
Boron (mg/L)	**HGWC-16**	**0.2888**	**80**	**58**	**Yes**	**16**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Boron (mg/L)	HGWC-17	0.2301	36	58	No	16	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-18	-0.03739	-3	-58	No	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-1 (bg)	4.009	44	58	No	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-2 (bg)	0.3424	16	58	No	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-3 (bg)	2.789	48	58	No	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-4 (bg)	-9.588	-56	-58	No	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-42D (bg)	-1.953	-2	-12	No	5	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-43D (bg)	-5.439	-2	-12	No	5	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-44D (bg)	-14.84	-4	-12	No	5	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-5 (bg)	-0.1834	-11	-58	No	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-6 (bg)	0.3313	14	58	No	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWC-14	-3.085	-4	-58	No	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWC-15	7.289	36	58	No	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	**HGWC-16**	**13.53**	**89**	**58**	**Yes**	**16**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Calcium (mg/L)	HGWC-17	26.03	55	58	No	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWC-18	10.86	36	58	No	16	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWA-1 (bg)	0.7206	33	58	No	16	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWA-2 (bg)	-0.2299	-53	-58	No	16	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWA-3 (bg)	-0.07881	-28	-58	No	16	0	n/a	n/a	0.01	NP
Chloride (mg/L)	**HGWA-4 (bg)**	**-0.357**	**-85**	**-58**	**Yes**	**16**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Chloride (mg/L)	HGWA-42D (bg)	-2.81	-6	-12	No	5	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWA-43D (bg)	0.5656	3	12	No	5	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWA-44D (bg)	9.78	10	12	No	5	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWA-5 (bg)	-0.07921	-34	-58	No	16	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWA-6 (bg)	-0.08552	-42	-58	No	16	0	n/a	n/a	0.01	NP
Chloride (mg/L)	**HGWC-14**	**-90.69**	**-67**	**-58**	**Yes**	**16**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Chloride (mg/L)	HGWC-15	-23.47	-56	-58	No	16	0	n/a	n/a	0.01	NP
Chloride (mg/L)	**HGWC-16**	**14.74**	**110**	**58**	**Yes**	**16**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Chloride (mg/L)	**HGWC-17**	**15.05**	**68**	**58**	**Yes**	**16**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Chloride (mg/L)	**HGWC-18**	**-36.81**	**-60**	**-58**	**Yes**	**16**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Field pH (s.u.)	HGWA-1 (bg)	-0.03025	-50	-81	No	20	0	n/a	n/a	0.01	NP
Field pH (s.u.)	HGWA-2 (bg)	-0.02029	-21	-81	No	20	0	n/a	n/a	0.01	NP
Field pH (s.u.)	HGWA-3 (bg)	-0.008407	-12	-81	No	20	0	n/a	n/a	0.01	NP
Field pH (s.u.)	**HGWA-4 (bg)**	**-0.2968**	**-107**	**-81**	**Yes**	**20**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Field pH (s.u.)	HGWA-42D (bg)	0.08202	7	14	No	6	0	n/a	n/a	0.01	NP
Field pH (s.u.)	HGWA-43D (bg)	0.2971	4	14	No	6	0	n/a	n/a	0.01	NP
Field pH (s.u.)	HGWA-44D (bg)	0.1043	8	14	No	6	0	n/a	n/a	0.01	NP
Field pH (s.u.)	HGWA-5 (bg)	-0.03997	-68	-81	No	20	0	n/a	n/a	0.01	NP
Field pH (s.u.)	HGWA-6 (bg)	-0.02632	-36	-81	No	20	0	n/a	n/a	0.01	NP
Field pH (s.u.)	**HGWC-14**	**0.04839**	**82**	**81**	**Yes**	**20**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Field pH (s.u.)	HGWC-18	-0.02175	-65	-81	No	20	0	n/a	n/a	0.01	NP

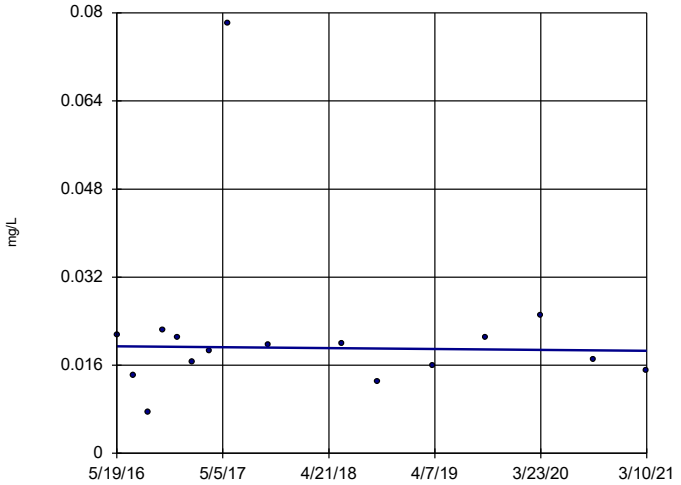
Trend Tests - Prediction Limit Exceedances - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-2 Printed 5/5/2021, 10:25 AM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Sulfate (mg/L)	HGWA-1 (bg)	3.385	39	58	No	16	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	**HGWA-2 (bg)**	**1.382**	**64**	**58**	**Yes**	**16**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Sulfate (mg/L)	**HGWA-3 (bg)**	**1.676**	**67**	**58**	**Yes**	**16**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Sulfate (mg/L)	HGWA-4 (bg)	-0.7193	-56	-58	No	16	18.75	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-42D (bg)	-0.1049	-1	-12	No	5	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-43D (bg)	-8.995	-8	-12	No	5	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-44D (bg)	-2.396	-2	-12	No	5	20	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-5 (bg)	-0.06144	-5	-58	No	16	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-6 (bg)	0.1251	10	58	No	16	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-14	51.27	24	58	No	16	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-15	-0.5501	-3	-58	No	16	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-16	5.214	45	58	No	16	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-17	14.46	45	58	No	16	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-18	32.74	53	58	No	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-1 (bg)	3.302	10	58	No	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-2 (bg)	-1.42	-11	-58	No	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-3 (bg)	-0.3672	-5	-58	No	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	**HGWA-4 (bg)**	**-35.66**	**-61**	**-58**	**Yes**	**16**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Total Dissolved Solids (mg/L)	HGWA-42D (bg)	-69.36	-4	-12	No	5	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-43D (bg)	-24.14	-2	-12	No	5	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-44D (bg)	31.49	4	12	No	5	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-5 (bg)	-7.443	-42	-58	No	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-6 (bg)	-1.111	-9	-58	No	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	**HGWC-14**	**-252**	**-73**	**-58**	**Yes**	**16**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Total Dissolved Solids (mg/L)	**HGWC-16**	**53.96**	**84**	**58**	**Yes**	**16**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Total Dissolved Solids (mg/L)	**HGWC-17**	**80.13**	**71**	**58**	**Yes**	**16**	**6.25**	**n/a**	**n/a**	**0.01**	**NP**
Total Dissolved Solids (mg/L)	HGWC-18	-18.27	-21	-58	No	16	0	n/a	n/a	0.01	NP

Sen's Slope Estimator

HGWA-1 (bg)



n = 16

Slope = -0.0001741 units per year.

Mann-Kendall statistic = -4
critical = -58

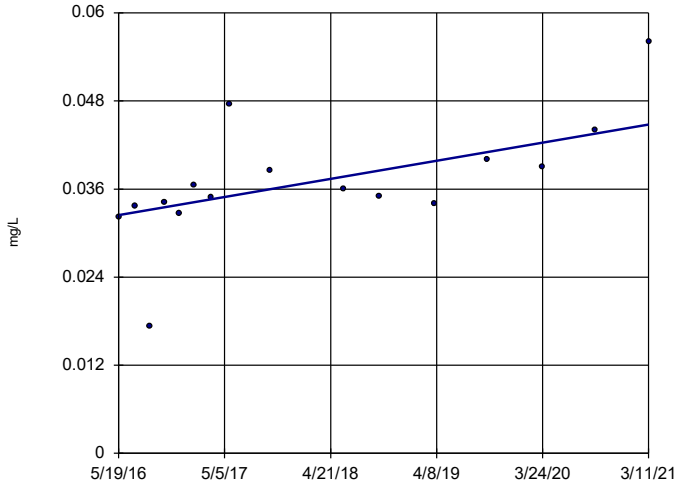
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Boron Analysis Run 5/5/2021 10:23 AM View: Appendix III - Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

Sen's Slope Estimator

HGWA-2 (bg)



n = 16

Slope = 0.00257 units per year.

Mann-Kendall statistic = 72
critical = 58

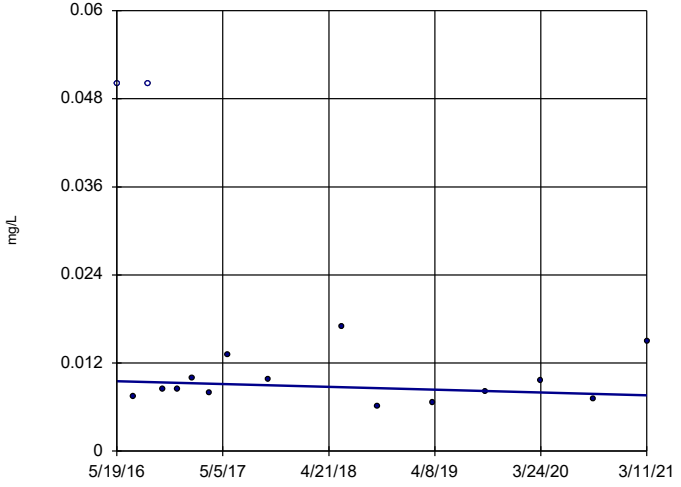
Increasing trend significant at 99% confidence level (α = 0.005 per tail).

Constituent: Boron Analysis Run 5/5/2021 10:23 AM View: Appendix III - Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

HGWA-3 (bg)



n = 16

Slope = -0.0004025 units per year.

Mann-Kendall statistic = -20
critical = -58

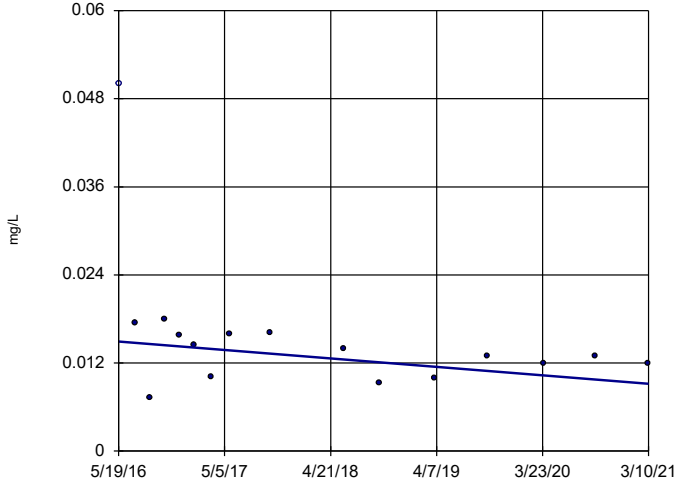
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Boron Analysis Run 5/5/2021 10:23 AM View: Appendix III - Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

HGWA-4 (bg)



n = 16

Slope = -0.001192 units per year.

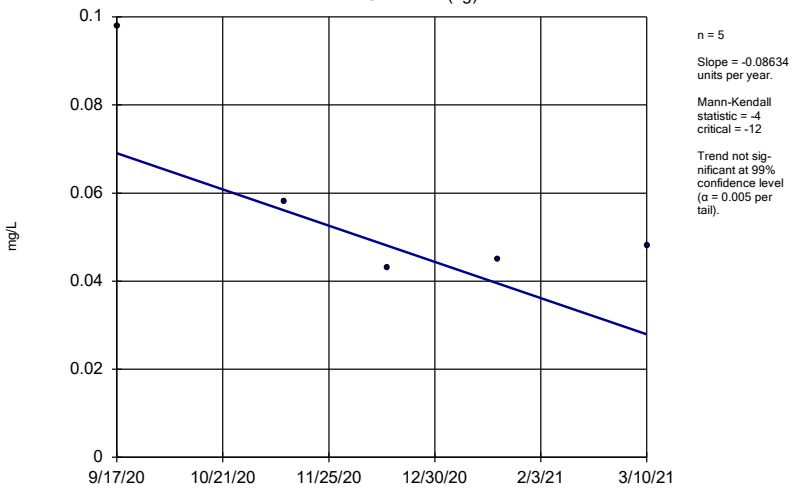
Mann-Kendall statistic = -46
critical = -58

Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Boron Analysis Run 5/5/2021 10:23 AM View: Appendix III - Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sen's Slope Estimator

HGWA-42D (bg)



n = 5

Slope = -0.08634 units per year.

Mann-Kendall statistic = -4
critical = -12

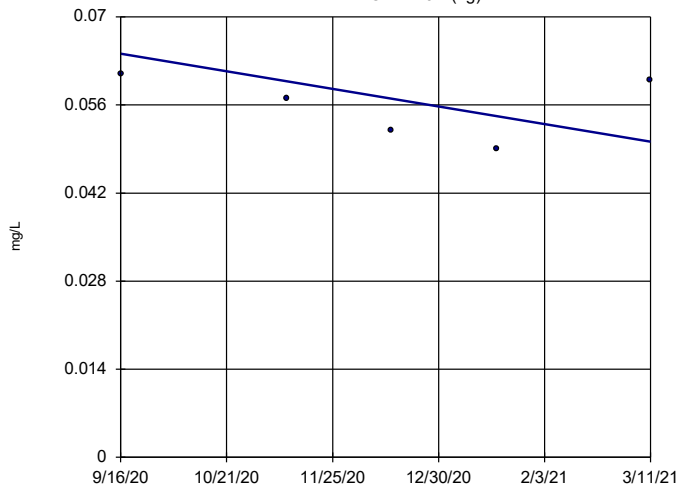
Trend not sig-nificant at 99% confidence level (α = 0.005 per tail).

Constituent: Boron Analysis Run 5/5/2021 10:23 AM View: Appendix III - Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

Sen's Slope Estimator

HGWA-43D (bg)



n = 5

Slope = -0.02892 units per year.

Mann-Kendall statistic = -4
critical = -12

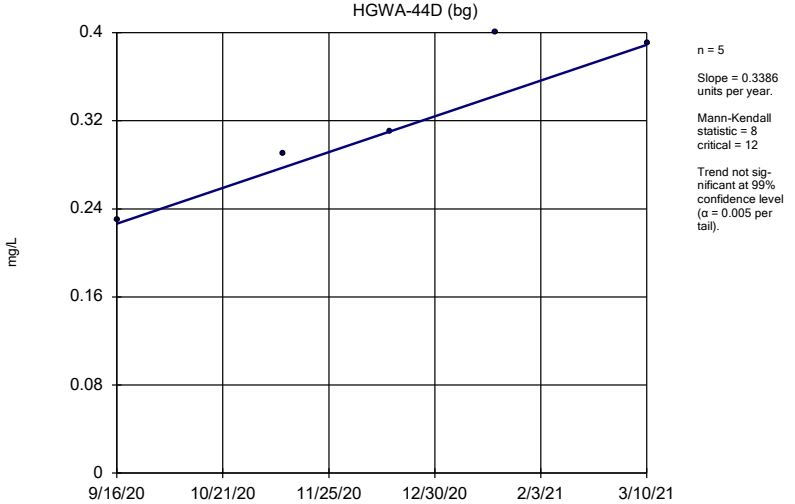
Trend not sig-nificant at 99% confidence level (α = 0.005 per tail).

Constituent: Boron Analysis Run 5/5/2021 10:23 AM View: Appendix III - Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

Sen's Slope Estimator

HGWA-44D (bg)



n = 5

Slope = 0.3386 units per year.

Mann-Kendall statistic = 8
critical = 12

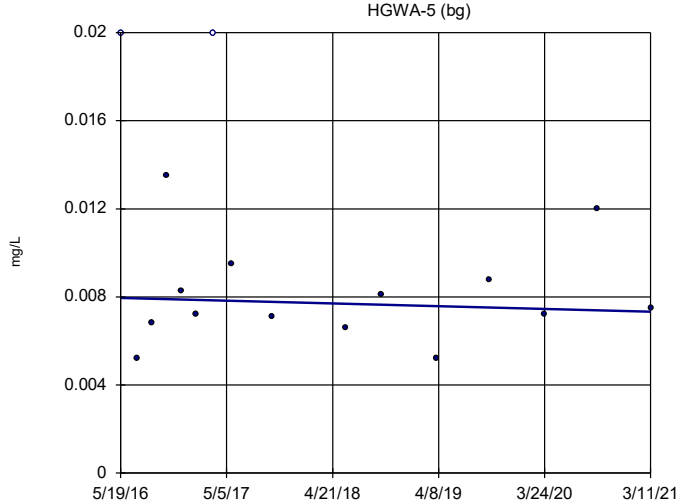
Trend not sig-nificant at 99% confidence level (α = 0.005 per tail).

Constituent: Boron Analysis Run 5/5/2021 10:23 AM View: Appendix III - Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

HGWA-5 (bg)



n = 16

Slope = -0.0001291 units per year.

Mann-Kendall statistic = -7
critical = -58

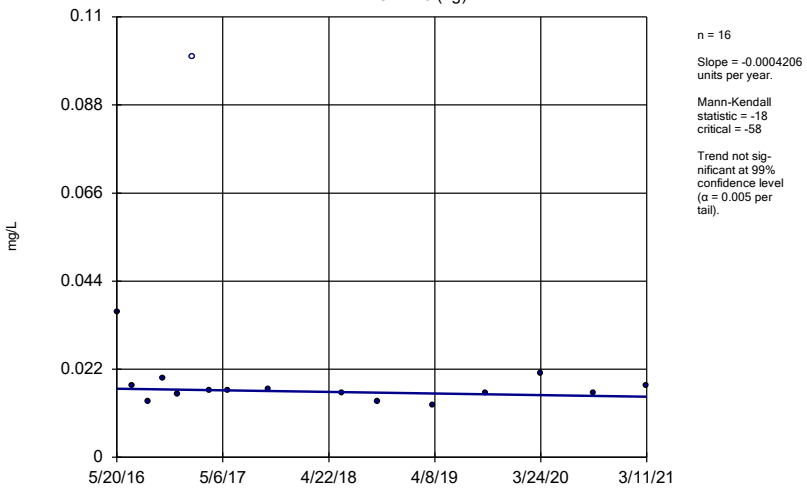
Trend not sig-nificant at 99% confidence level (α = 0.005 per tail).

Constituent: Boron Analysis Run 5/5/2021 10:23 AM View: Appendix III - Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-2

Hollow symbols indicate censored values.

Sen's Slope Estimator

HGWA-6 (bg)



n = 16

Slope = -0.0004206 units per year.

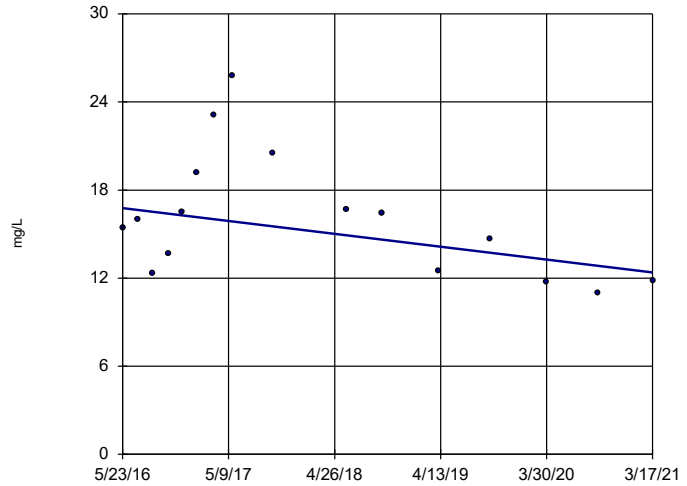
Mann-Kendall statistic = -18
critical = -58

Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Boron Analysis Run 5/5/2021 10:23 AM View: Appendix III - Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sen's Slope Estimator

HGWC-14



n = 16

Slope = -0.9086 units per year.

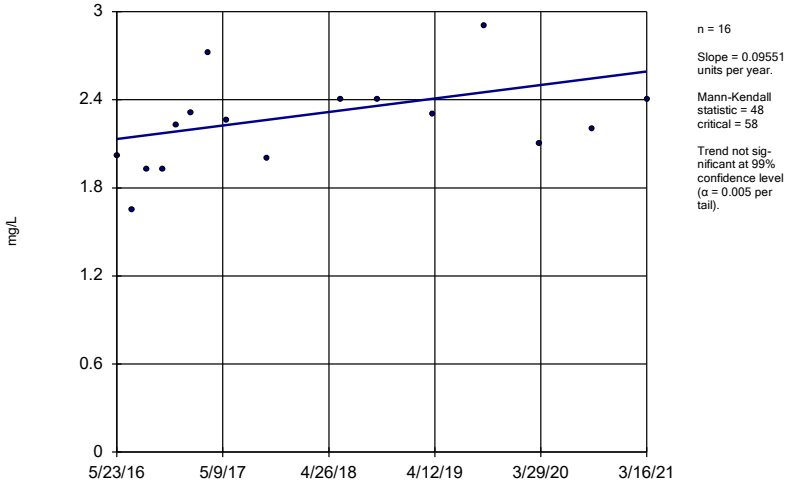
Mann-Kendall statistic = -30
critical = -58

Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Boron Analysis Run 5/5/2021 10:23 AM View: Appendix III - Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sen's Slope Estimator

HGWC-15



n = 16

Slope = 0.09551 units per year.

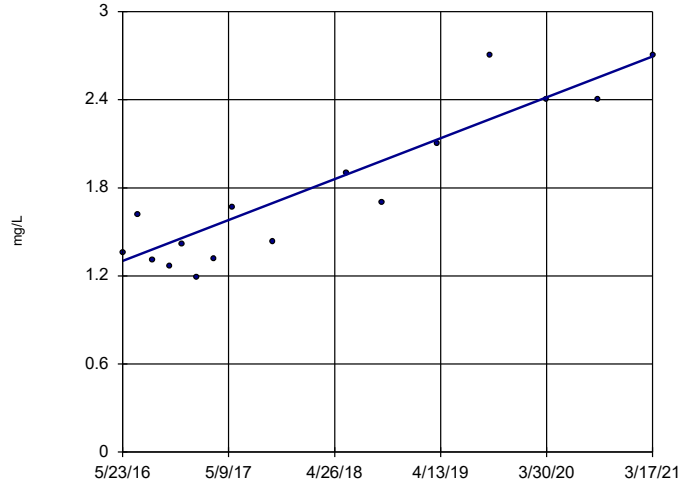
Mann-Kendall statistic = 48
critical = 58

Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Boron Analysis Run 5/5/2021 10:23 AM View: Appendix III - Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sen's Slope Estimator

HGWC-16



n = 16

Slope = 0.2888 units per year.

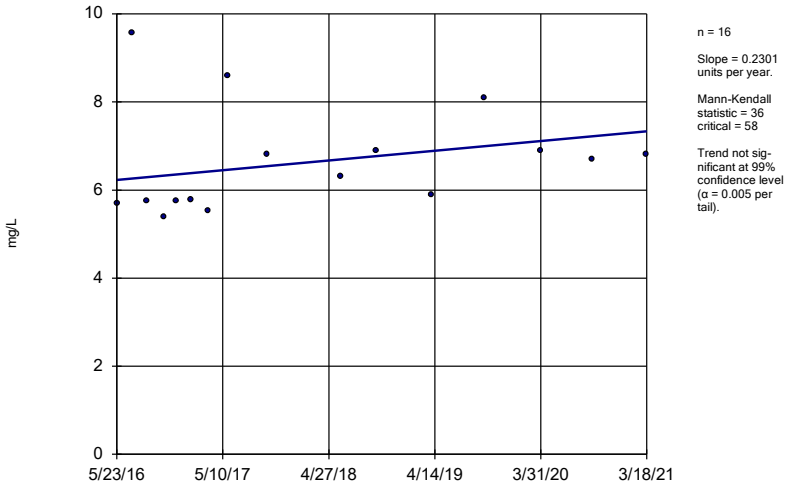
Mann-Kendall statistic = 80
critical = 58

Increasing trend significant at 99% confidence level (α = 0.005 per tail).

Constituent: Boron Analysis Run 5/5/2021 10:23 AM View: Appendix III - Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sen's Slope Estimator

HGWC-17



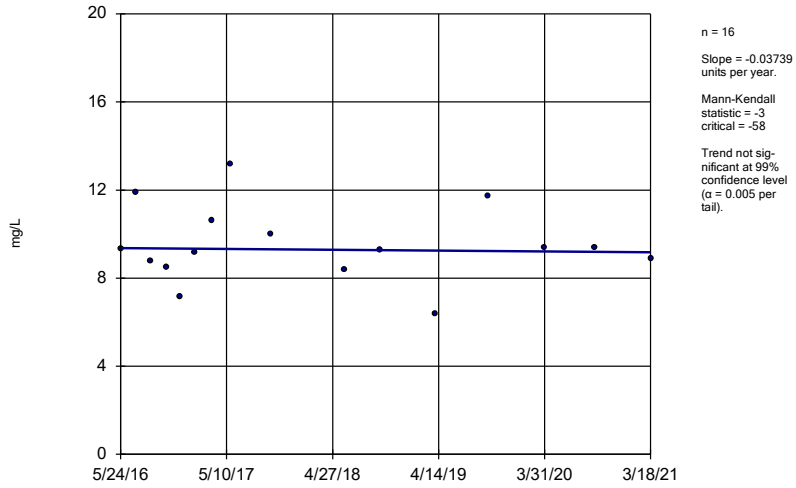
Constituent: Boron Analysis Run 5/5/2021 10:23 AM View: Appendix III - Trend Tests

Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

Sen's Slope Estimator

HGWC-18



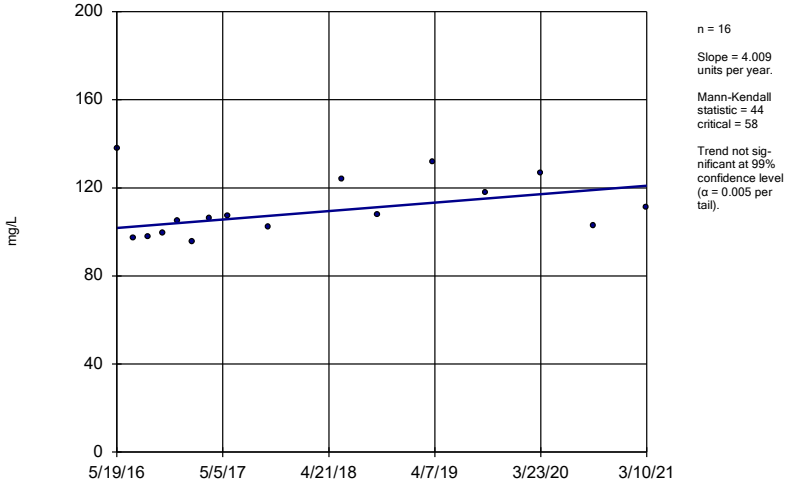
Constituent: Boron Analysis Run 5/5/2021 10:23 AM View: Appendix III - Trend Tests

Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

Sen's Slope Estimator

HGWA-1 (bg)



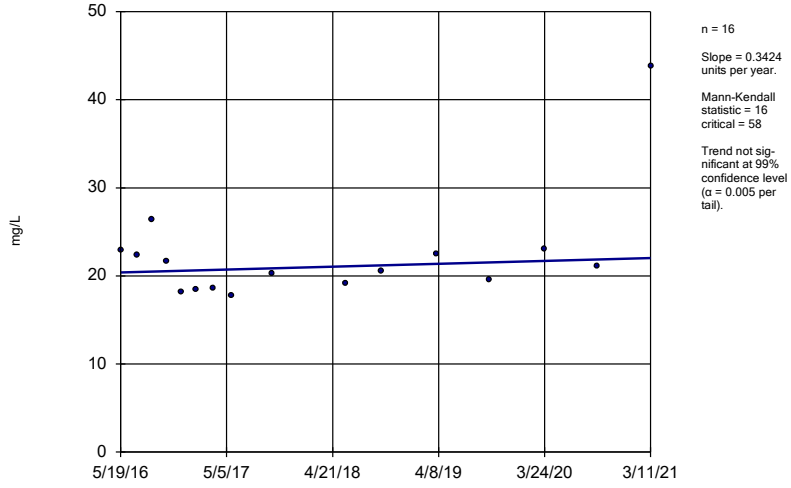
Constituent: Calcium Analysis Run 5/5/2021 10:23 AM View: Appendix III - Trend Tests

Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

Sen's Slope Estimator

HGWA-2 (bg)

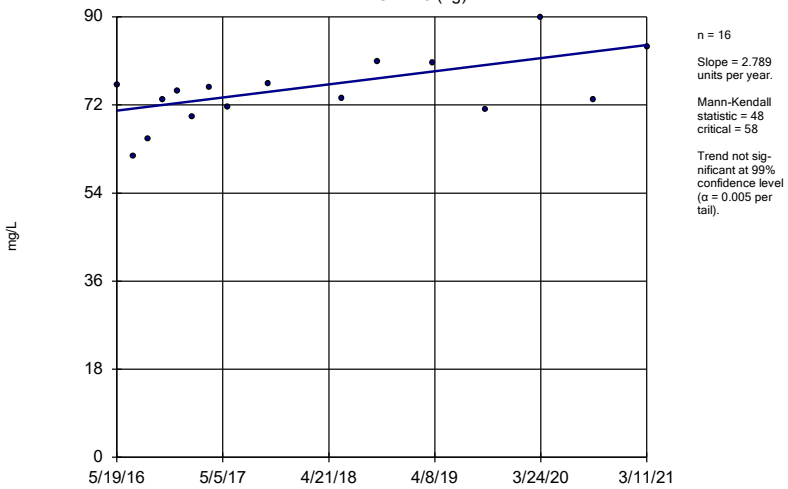


Constituent: Calcium Analysis Run 5/5/2021 10:23 AM View: Appendix III - Trend Tests

Plant Hammond Client: Southern Company Data: Hammond AP-2

Sen's Slope Estimator

HGWA-3 (bg)



n = 16

Slope = 2.789 units per year.

Mann-Kendall statistic = 48
critical = 58

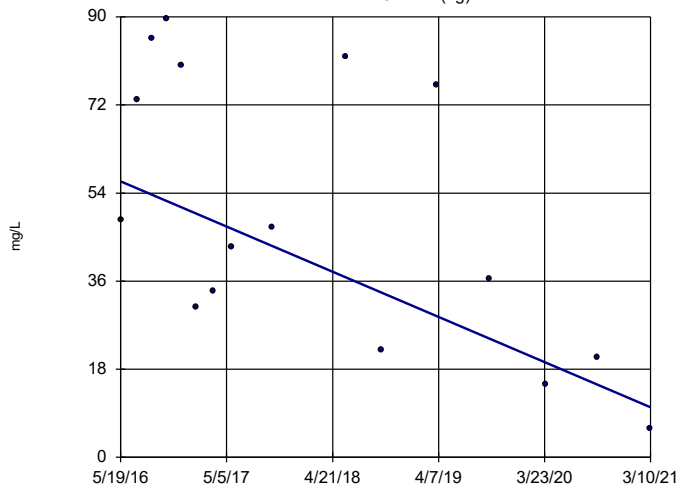
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Calcium Analysis Run 5/5/2021 10:23 AM View: Appendix III - Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

Sen's Slope Estimator

HGWA-4 (bg)



n = 16

Slope = -9.588 units per year.

Mann-Kendall statistic = -56
critical = -58

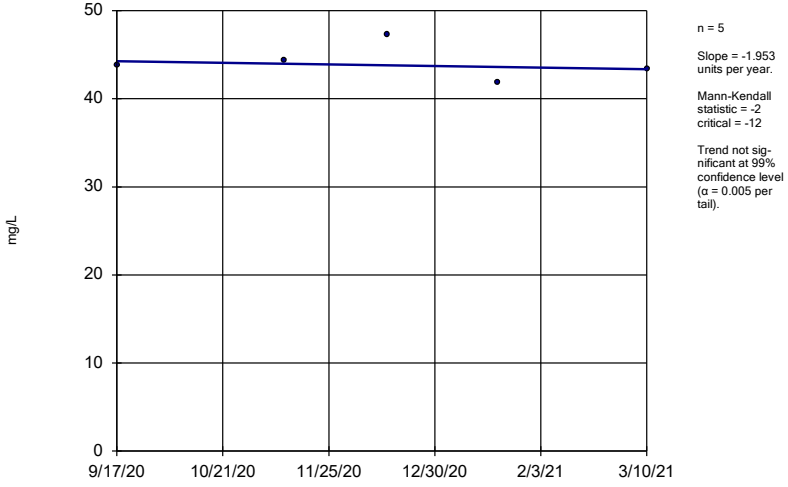
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Calcium Analysis Run 5/5/2021 10:23 AM View: Appendix III - Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

Sen's Slope Estimator

HGWA-42D (bg)



n = 5

Slope = -1.953 units per year.

Mann-Kendall statistic = -2
critical = -12

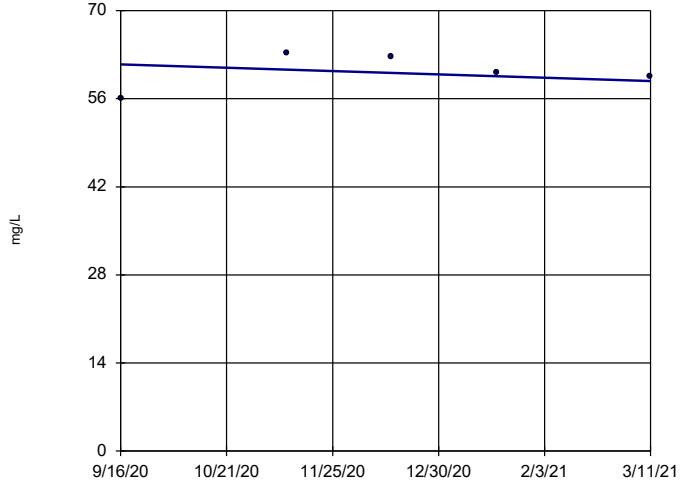
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Calcium Analysis Run 5/5/2021 10:23 AM View: Appendix III - Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

Sen's Slope Estimator

HGWA-43D (bg)



n = 5

Slope = -5.439 units per year.

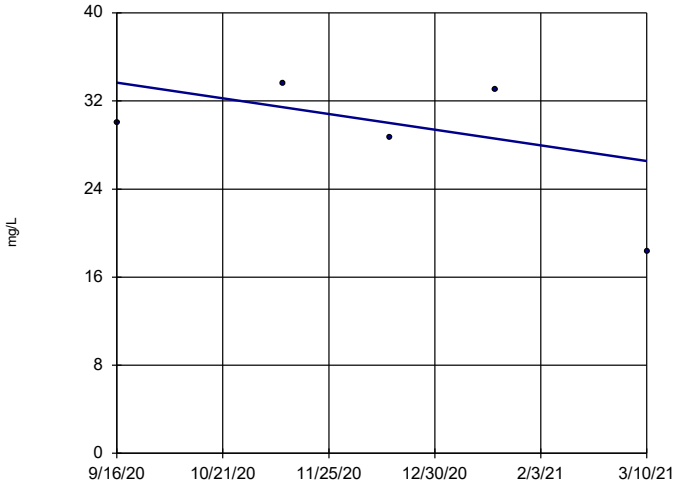
Mann-Kendall statistic = -2
critical = -12

Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Calcium Analysis Run 5/5/2021 10:23 AM View: Appendix III - Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sen's Slope Estimator

HGWA-44D (bg)



n = 5

Slope = -14.84 units per year.

Mann-Kendall statistic = -4
critical = -12

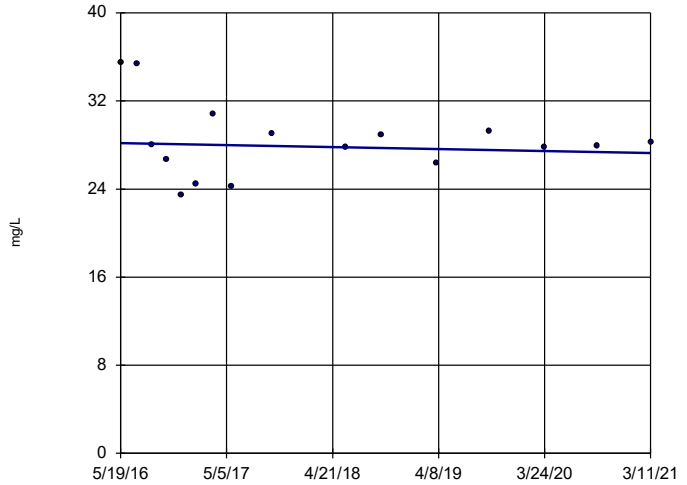
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Calcium Analysis Run 5/5/2021 10:23 AM View: Appendix III - Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

Sen's Slope Estimator

HGWA-5 (bg)



n = 16

Slope = -0.1834 units per year.

Mann-Kendall statistic = -11
critical = -58

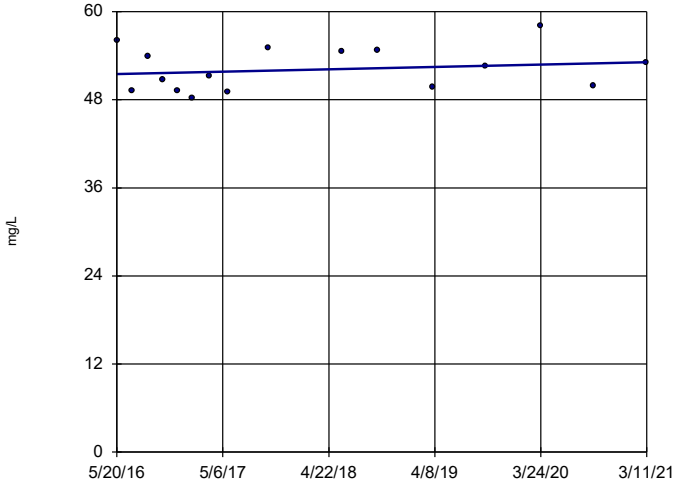
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Calcium Analysis Run 5/5/2021 10:23 AM View: Appendix III - Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

Sen's Slope Estimator

HGWA-6 (bg)



n = 16

Slope = 0.3313 units per year.

Mann-Kendall statistic = 14
critical = 58

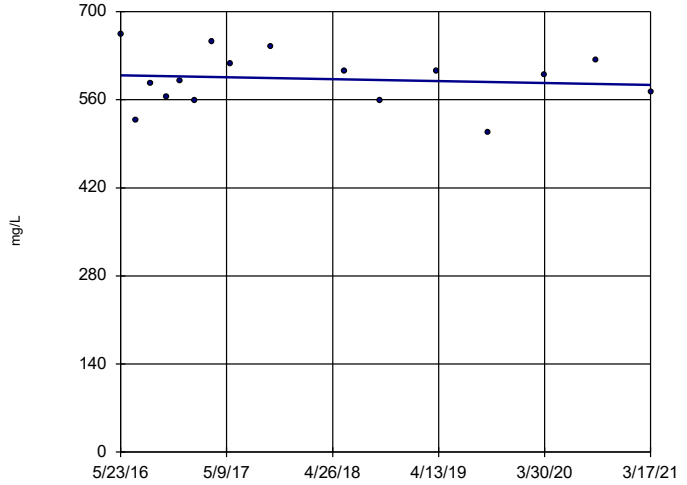
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Calcium Analysis Run 5/5/2021 10:23 AM View: Appendix III - Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

Sen's Slope Estimator

HGWC-14



n = 16

Slope = -3.085 units per year.

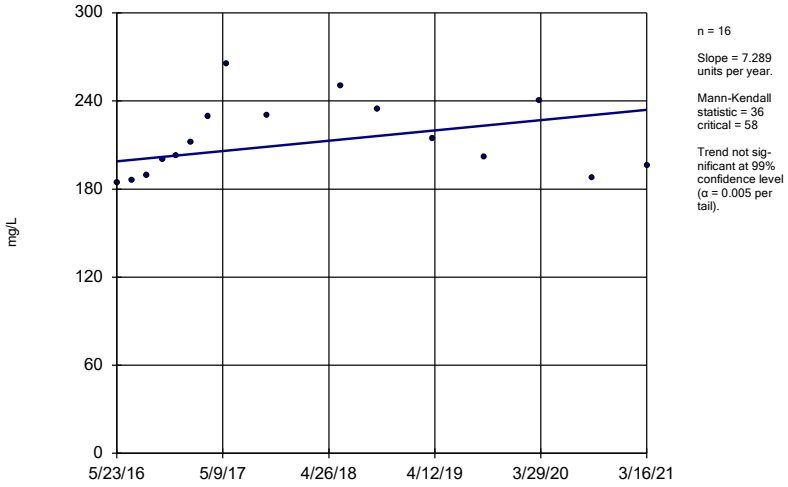
Mann-Kendall statistic = -4
critical = -58

Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Calcium Analysis Run 5/5/2021 10:23 AM View: Appendix III - Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sen's Slope Estimator

HGWC-15



n = 16

Slope = 7.289 units per year.

Mann-Kendall statistic = 36 critical = 58

Trend not significant at 99% confidence level (α = 0.005 per tail).

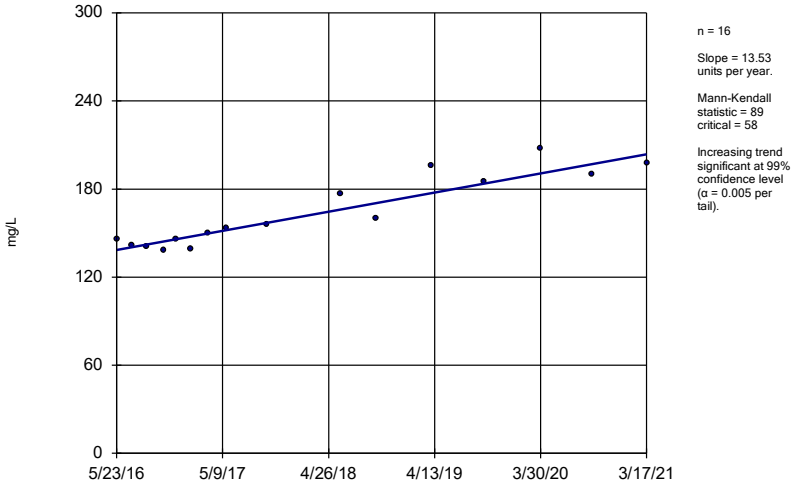
Constituent: Calcium Analysis Run 5/5/2021 10:23 AM View: Appendix III - Trend Tests

Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

Sen's Slope Estimator

HGWC-16



n = 16

Slope = 13.53 units per year.

Mann-Kendall statistic = 89 critical = 58

Increasing trend significant at 99% confidence level (α = 0.005 per tail).

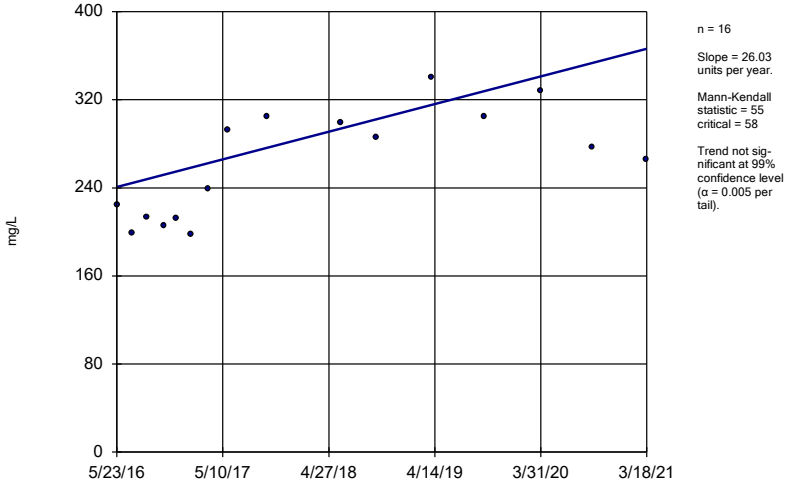
Constituent: Calcium Analysis Run 5/5/2021 10:23 AM View: Appendix III - Trend Tests

Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

Sen's Slope Estimator

HGWC-17



n = 16

Slope = 26.03 units per year.

Mann-Kendall statistic = 55 critical = 58

Trend not significant at 99% confidence level (α = 0.005 per tail).

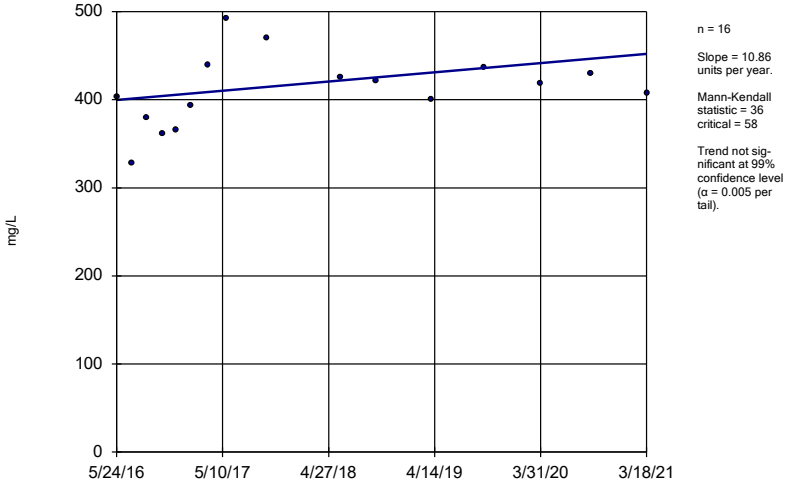
Constituent: Calcium Analysis Run 5/5/2021 10:23 AM View: Appendix III - Trend Tests

Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

Sen's Slope Estimator

HGWC-18



n = 16

Slope = 10.86 units per year.

Mann-Kendall statistic = 36 critical = 58

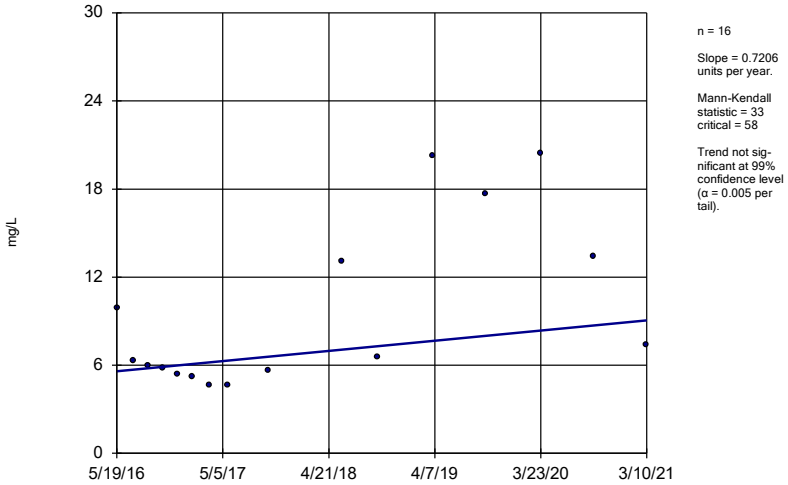
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Calcium Analysis Run 5/5/2021 10:23 AM View: Appendix III - Trend Tests

Plant Hammond Client: Southern Company Data: Hammond AP-2

Sen's Slope Estimator

HGWA-1 (bg)



n = 16

Slope = 0.7206 units per year.

Mann-Kendall statistic = 33 critical = 58

Trend not significant at 99% confidence level (α = 0.005 per tail).

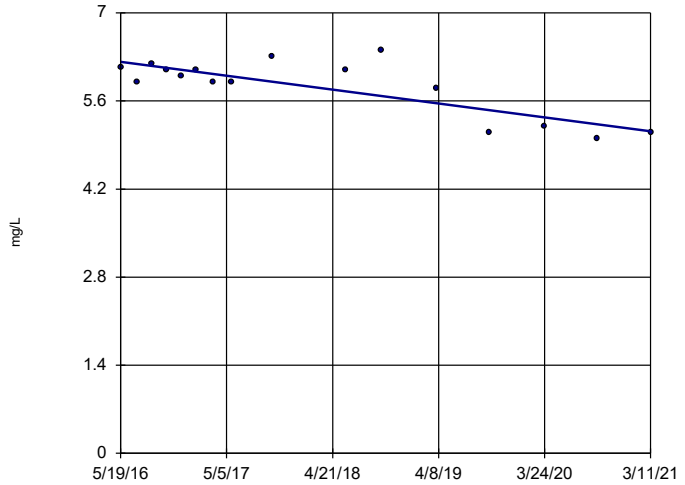
Constituent: Chloride Analysis Run 5/5/2021 10:23 AM View: Appendix III - Trend Tests

Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

Sen's Slope Estimator

HGWA-2 (bg)



n = 16

Slope = -0.2299 units per year.

Mann-Kendall statistic = -53 critical = -58

Trend not significant at 99% confidence level (α = 0.005 per tail).

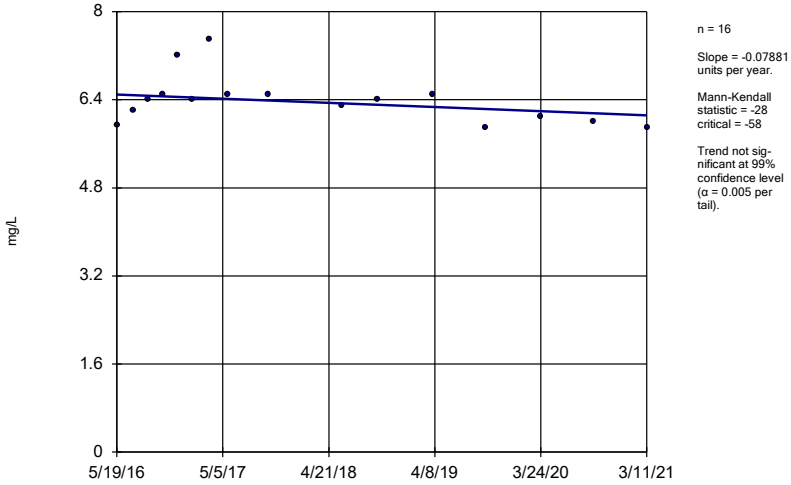
Constituent: Chloride Analysis Run 5/5/2021 10:23 AM View: Appendix III - Trend Tests

Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

Sen's Slope Estimator

HGWA-3 (bg)



n = 16

Slope = -0.07881 units per year.

Mann-Kendall statistic = -28 critical = -58

Trend not significant at 99% confidence level (α = 0.005 per tail).

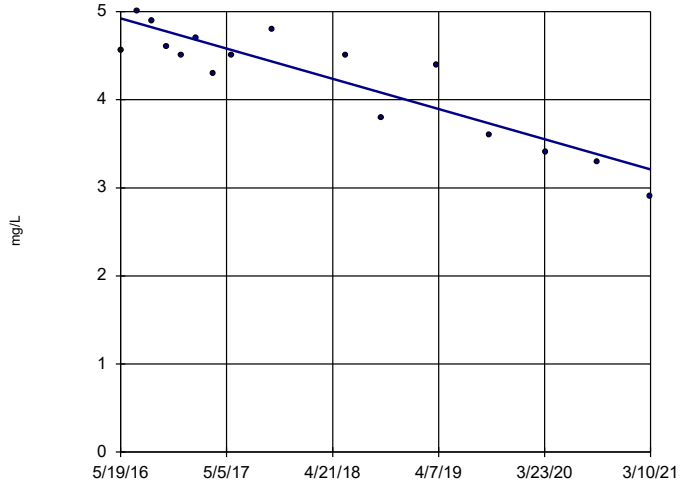
Constituent: Chloride Analysis Run 5/5/2021 10:23 AM View: Appendix III - Trend Tests

Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

Sen's Slope Estimator

HGWA-4 (bg)



n = 16

Slope = -0.357 units per year.

Mann-Kendall statistic = -85 critical = -58

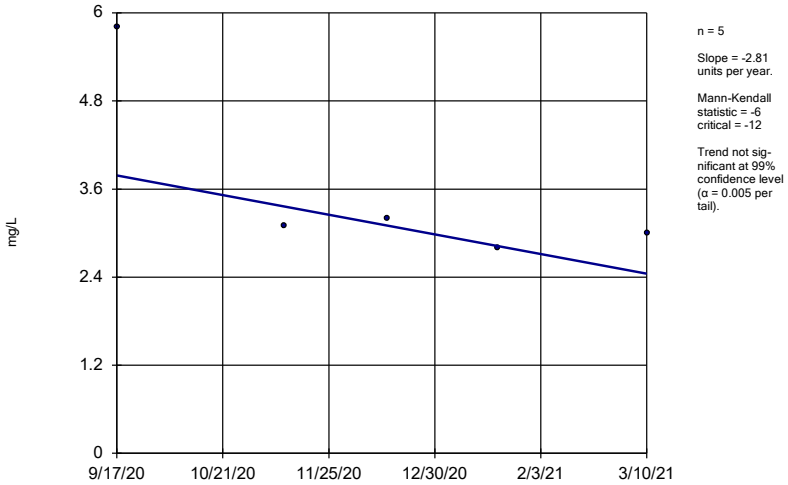
Decreasing trend significant at 99% confidence level (α = 0.005 per tail).

Constituent: Chloride Analysis Run 5/5/2021 10:23 AM View: Appendix III - Trend Tests

Plant Hammond Client: Southern Company Data: Hammond AP-2

Sen's Slope Estimator

HGWA-42D (bg)



n = 5

Slope = -2.81 units per year.

Mann-Kendall statistic = -6
critical = -12

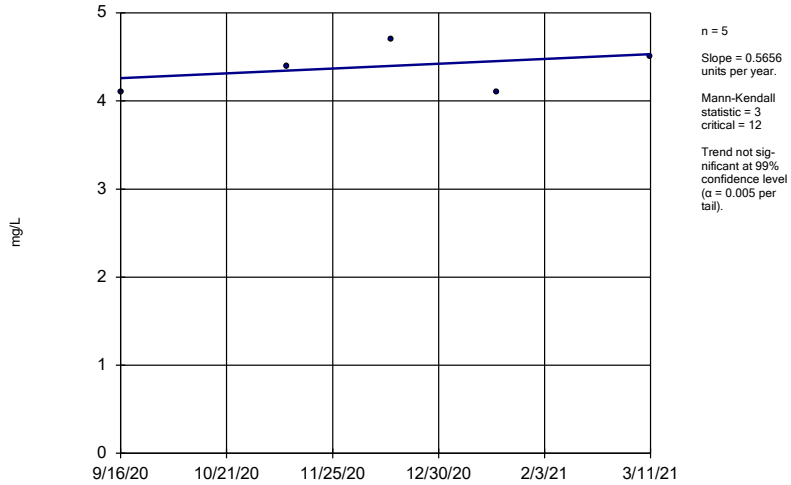
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Chloride Analysis Run 5/5/2021 10:23 AM View: Appendix III - Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

Sen's Slope Estimator

HGWA-43D (bg)



n = 5

Slope = 0.5656 units per year.

Mann-Kendall statistic = 3
critical = 12

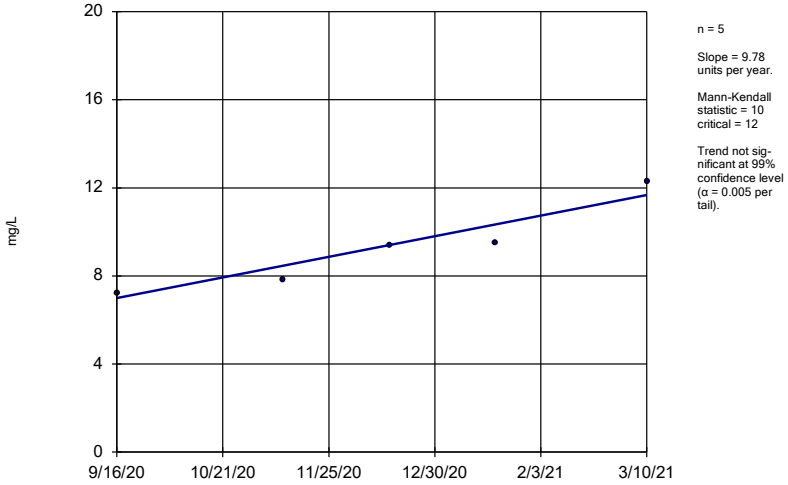
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Chloride Analysis Run 5/5/2021 10:23 AM View: Appendix III - Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

Sen's Slope Estimator

HGWA-44D (bg)



n = 5

Slope = 9.78 units per year.

Mann-Kendall statistic = 10
critical = 12

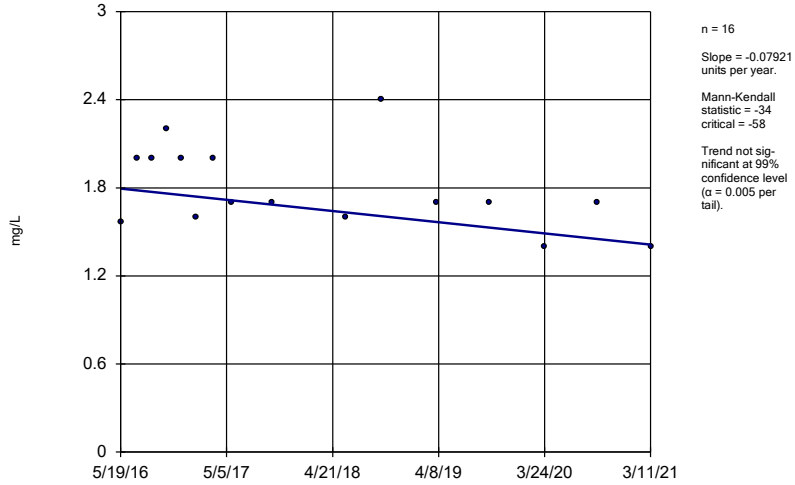
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Chloride Analysis Run 5/5/2021 10:23 AM View: Appendix III - Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

Sen's Slope Estimator

HGWA-5 (bg)



n = 16

Slope = -0.07921 units per year.

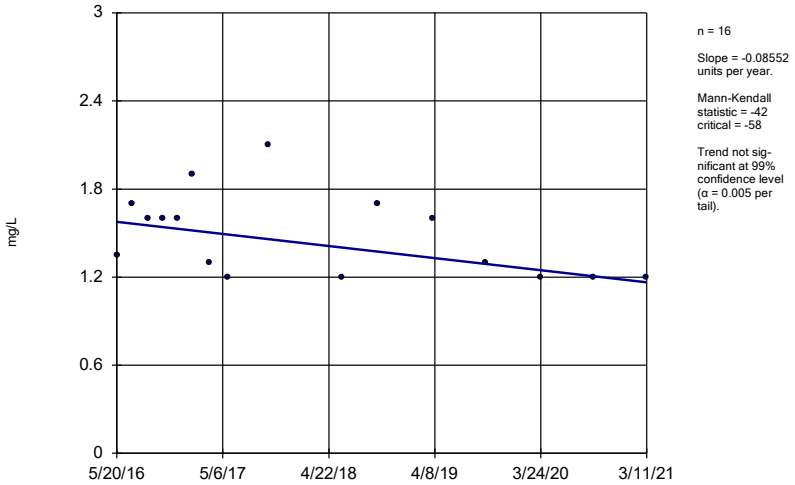
Mann-Kendall statistic = -34
critical = -58

Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Chloride Analysis Run 5/5/2021 10:23 AM View: Appendix III - Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sen's Slope Estimator

HGWA-6 (bg)



n = 16

Slope = -0.08552 units per year.

Mann-Kendall statistic = -42
critical = -58

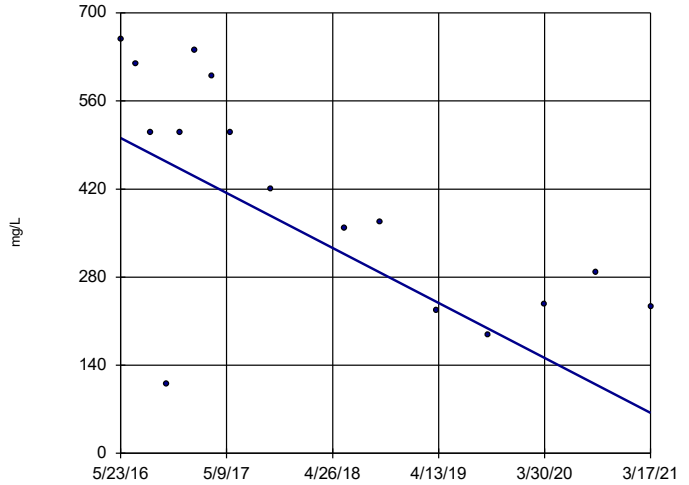
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Chloride Analysis Run 5/5/2021 10:23 AM View: Appendix III - Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

Sen's Slope Estimator

HGWC-14



n = 16

Slope = -90.69 units per year.

Mann-Kendall statistic = -67
critical = -58

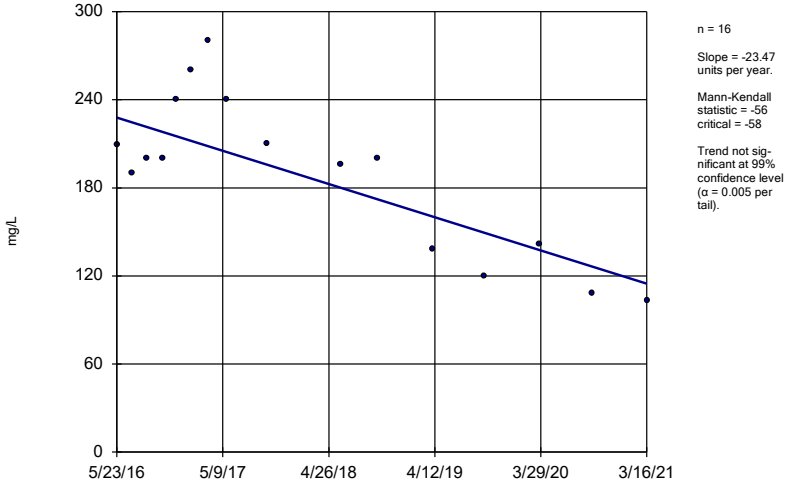
Decreasing trend significant at 99% confidence level (α = 0.005 per tail).

Constituent: Chloride Analysis Run 5/5/2021 10:24 AM View: Appendix III - Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

Sen's Slope Estimator

HGWC-15



n = 16

Slope = -23.47 units per year.

Mann-Kendall statistic = -56
critical = -58

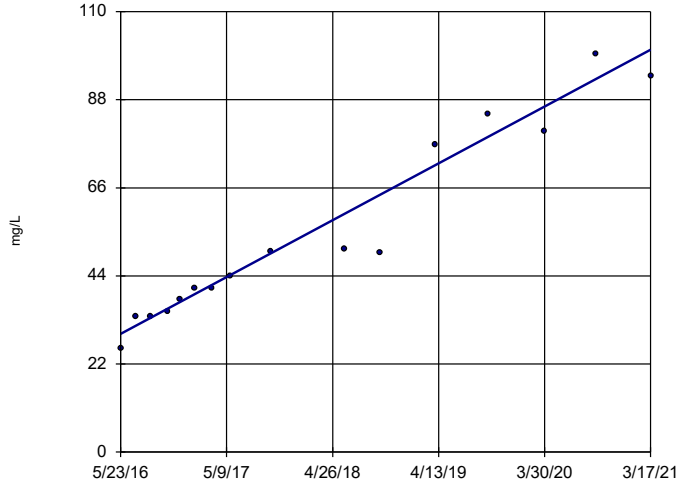
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Chloride Analysis Run 5/5/2021 10:24 AM View: Appendix III - Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

Sen's Slope Estimator

HGWC-16



n = 16

Slope = 14.74 units per year.

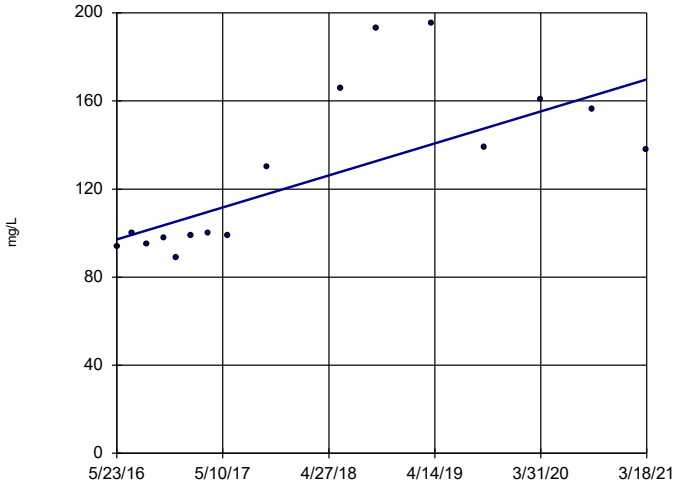
Mann-Kendall statistic = 110
critical = 58

Increasing trend significant at 99% confidence level (α = 0.005 per tail).

Constituent: Chloride Analysis Run 5/5/2021 10:24 AM View: Appendix III - Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sen's Slope Estimator

HGWC-17



n = 16

Slope = 15.05 units per year.

Mann-Kendall statistic = 68
critical = 58

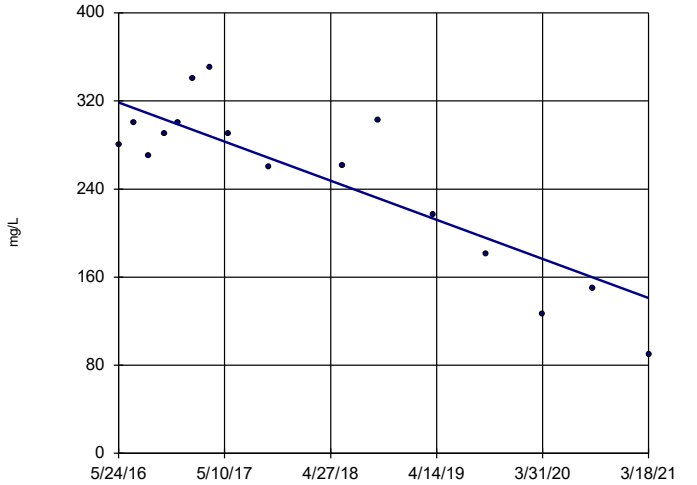
Increasing trend significant at 99% confidence level (α = 0.005 per tail).

Constituent: Chloride Analysis Run 5/5/2021 10:24 AM View: Appendix III - Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

Sen's Slope Estimator

HGWC-18



n = 16

Slope = -36.81 units per year.

Mann-Kendall statistic = -60
critical = -58

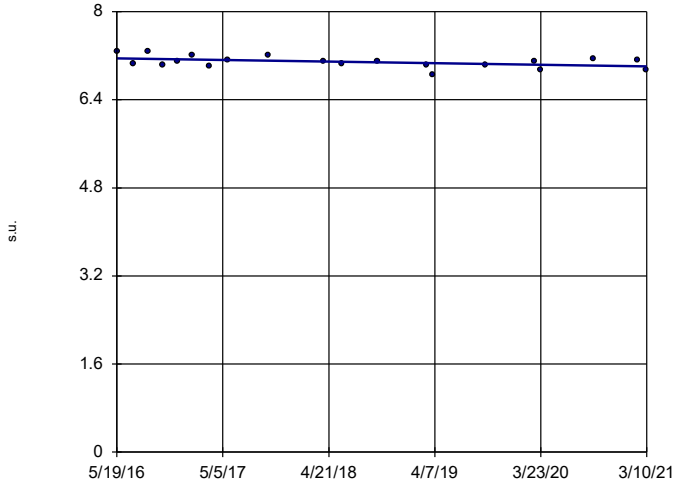
Decreasing trend significant at 99% confidence level (α = 0.005 per tail).

Constituent: Chloride Analysis Run 5/5/2021 10:24 AM View: Appendix III - Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

Sen's Slope Estimator

HGWA-1 (bg)



n = 20

Slope = -0.03025 units per year.

Mann-Kendall statistic = -50
critical = -81

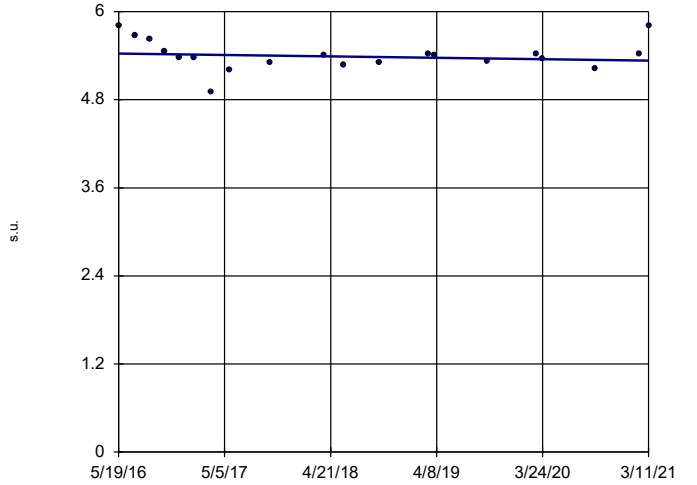
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Field pH Analysis Run 5/5/2021 10:24 AM View: Appendix III - Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

Sen's Slope Estimator

HGWA-2 (bg)



n = 20

Slope = -0.02029 units per year.

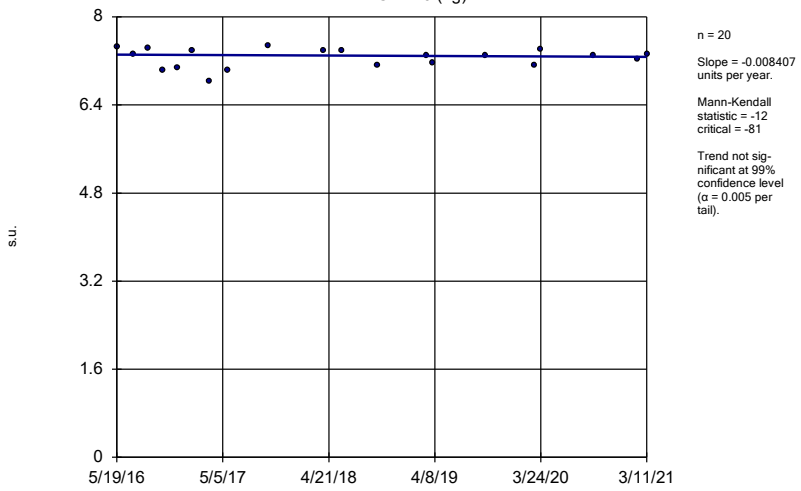
Mann-Kendall statistic = -21
critical = -81

Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Field pH Analysis Run 5/5/2021 10:24 AM View: Appendix III - Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sen's Slope Estimator

HGWA-3 (bg)



n = 20

Slope = -0.008407 units per year.

Mann-Kendall statistic = -12
critical = -81

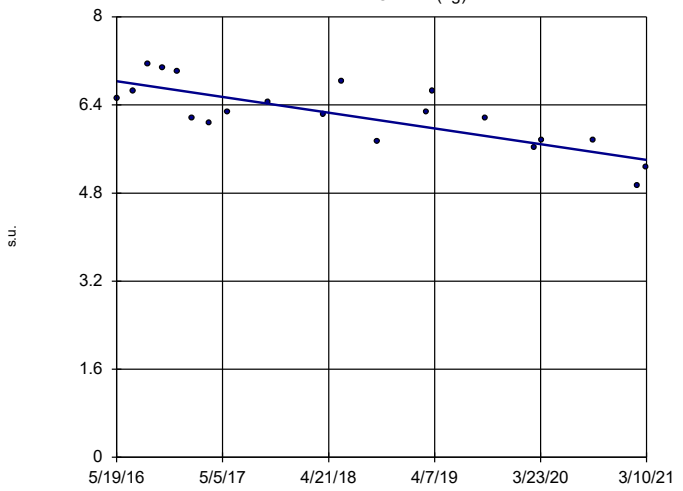
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Field pH Analysis Run 5/5/2021 10:24 AM View: Appendix III - Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

Sen's Slope Estimator

HGWA-4 (bg)



n = 20

Slope = -0.2968 units per year.

Mann-Kendall statistic = -107
critical = -81

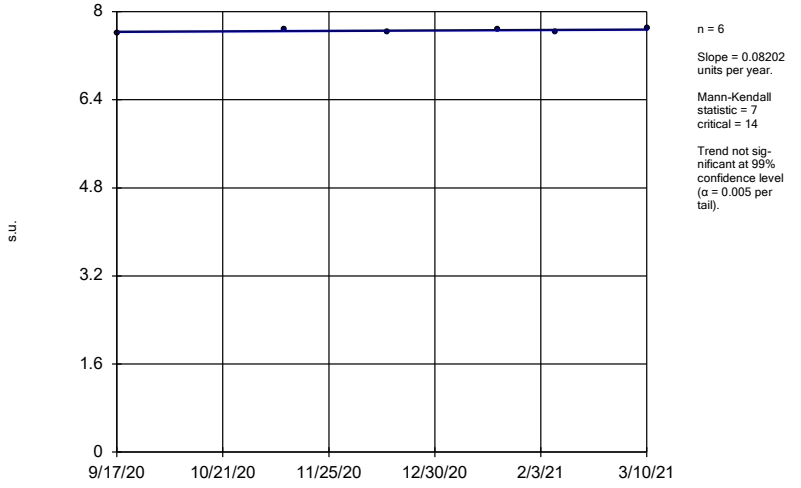
Decreasing trend significant at 99% confidence level (α = 0.005 per tail).

Constituent: Field pH Analysis Run 5/5/2021 10:24 AM View: Appendix III - Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

Sen's Slope Estimator

HGWA-42D (bg)



n = 6

Slope = 0.08202 units per year.

Mann-Kendall statistic = 7
critical = 14

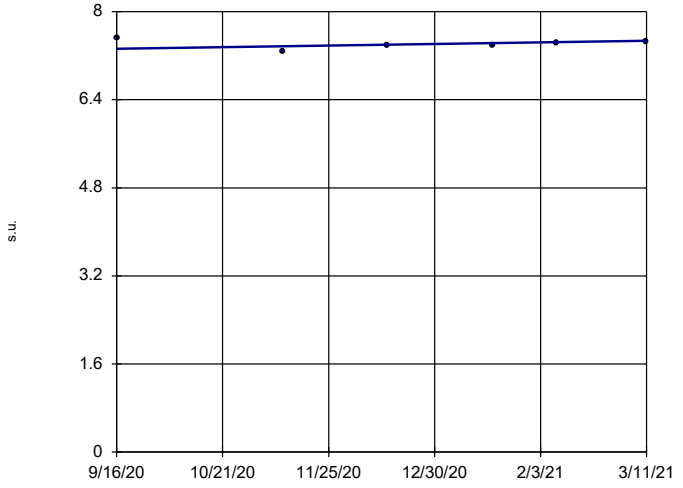
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Field pH Analysis Run 5/5/2021 10:24 AM View: Appendix III - Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

Sen's Slope Estimator

HGWA-43D (bg)



n = 6

Slope = 0.2971 units per year.

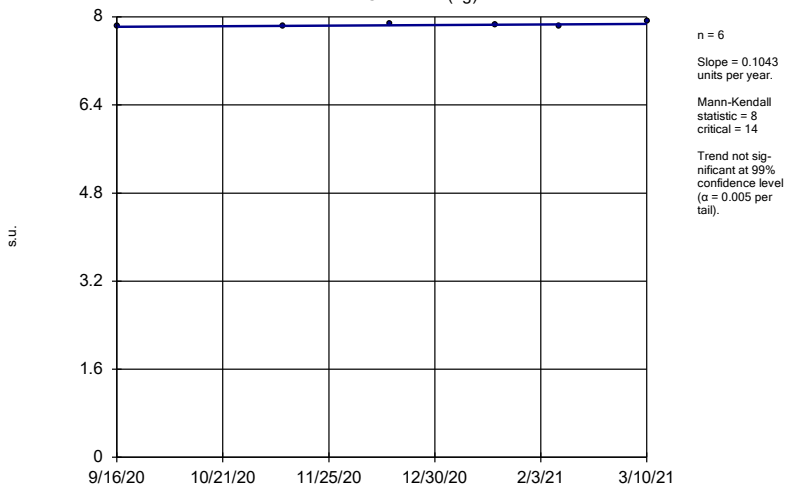
Mann-Kendall statistic = 4
critical = 14

Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Field pH Analysis Run 5/5/2021 10:24 AM View: Appendix III - Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sen's Slope Estimator

HGWA-44D (bg)



n = 6

Slope = 0.1043 units per year.

Mann-Kendall statistic = 8
critical = 14

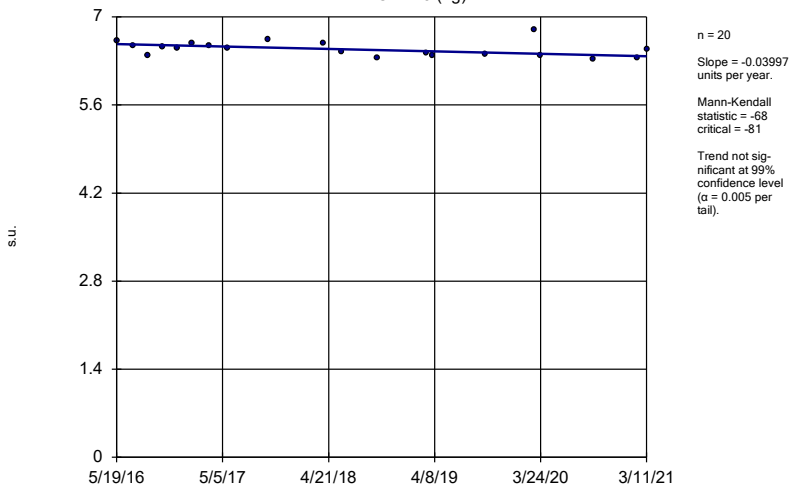
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Field pH Analysis Run 5/5/2021 10:24 AM View: Appendix III - Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

Sen's Slope Estimator

HGWA-5 (bg)



n = 20

Slope = -0.03997 units per year.

Mann-Kendall statistic = -68
critical = -81

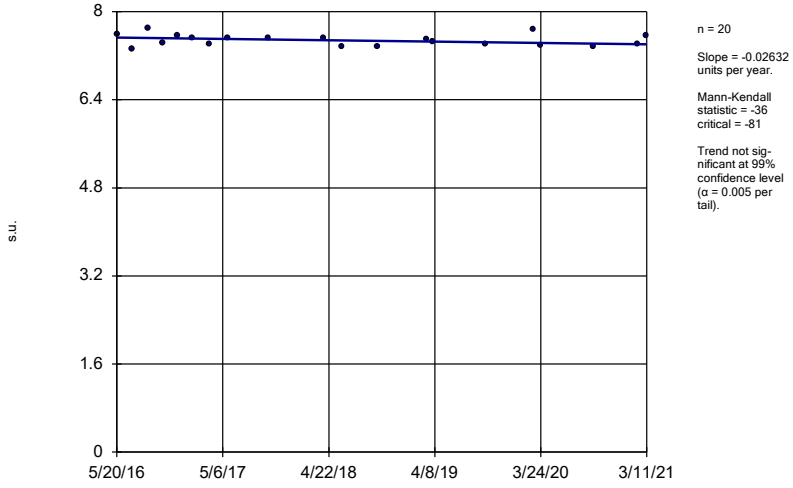
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Field pH Analysis Run 5/5/2021 10:24 AM View: Appendix III - Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

Sen's Slope Estimator

HGWA-6 (bg)



n = 20

Slope = -0.02632 units per year.

Mann-Kendall statistic = -36
critical = -81

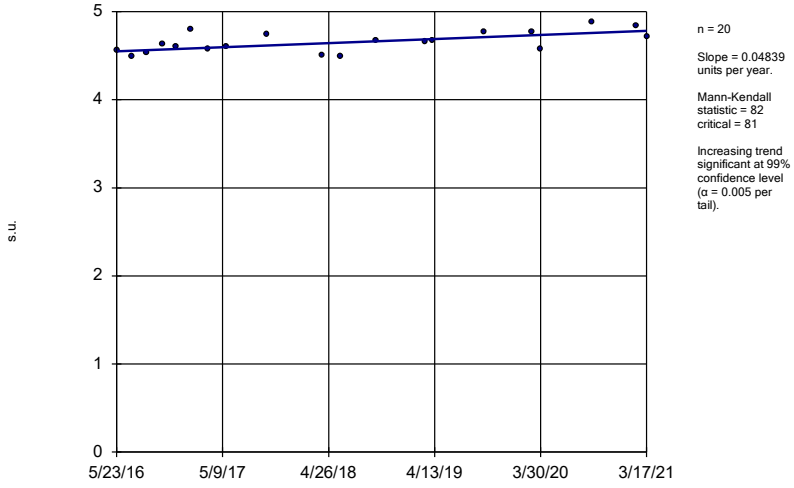
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Field pH Analysis Run 5/5/2021 10:24 AM View: Appendix III - Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

Sen's Slope Estimator

HGWC-14



n = 20

Slope = 0.04839 units per year.

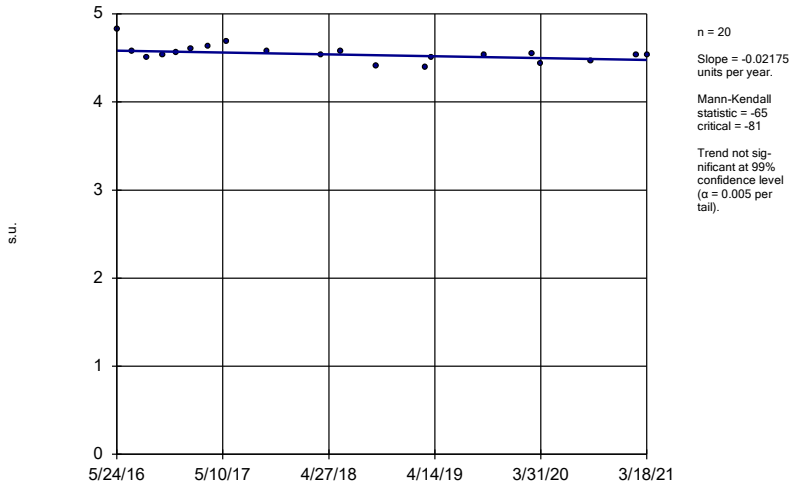
Mann-Kendall statistic = 82
critical = 81

Increasing trend significant at 99% confidence level (α = 0.005 per tail).

Constituent: Field pH Analysis Run 5/5/2021 10:24 AM View: Appendix III - Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sen's Slope Estimator

HGWC-18



n = 20

Slope = -0.02175 units per year.

Mann-Kendall statistic = -65
critical = -81

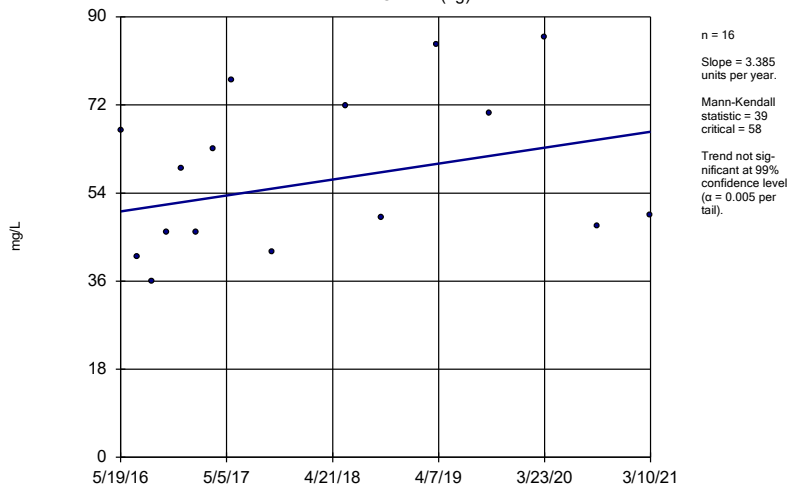
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Field pH Analysis Run 5/5/2021 10:24 AM View: Appendix III - Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

Sen's Slope Estimator

HGWA-1 (bg)



n = 16

Slope = 3.385 units per year.

Mann-Kendall statistic = 39
critical = 58

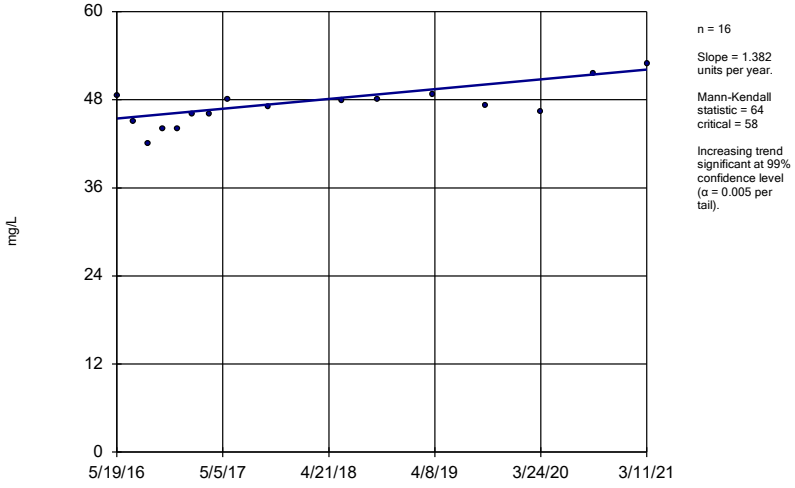
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Sulfate Analysis Run 5/5/2021 10:24 AM View: Appendix III - Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

Sen's Slope Estimator

HGWA-2 (bg)



n = 16

Slope = 1.382 units per year.

Mann-Kendall statistic = 64
critical = 58

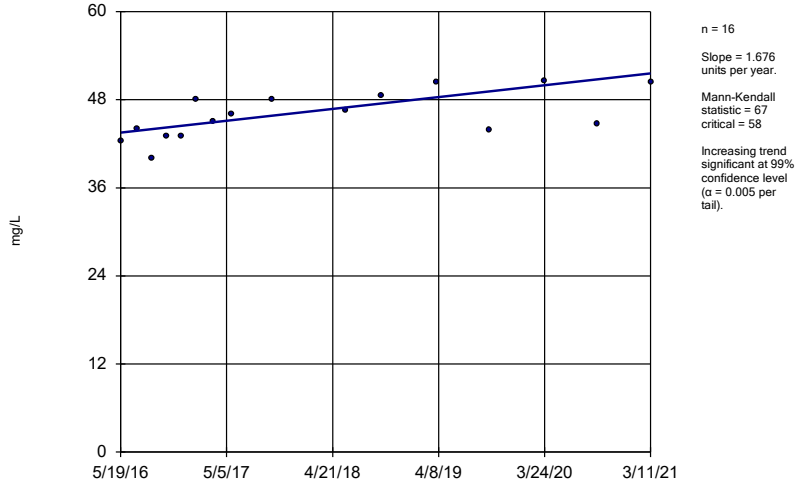
Increasing trend significant at 99% confidence level (α = 0.005 per tail).

Constituent: Sulfate Analysis Run 5/5/2021 10:24 AM View: Appendix III - Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

Sen's Slope Estimator

HGWA-3 (bg)



n = 16

Slope = 1.676 units per year.

Mann-Kendall statistic = 67
critical = 58

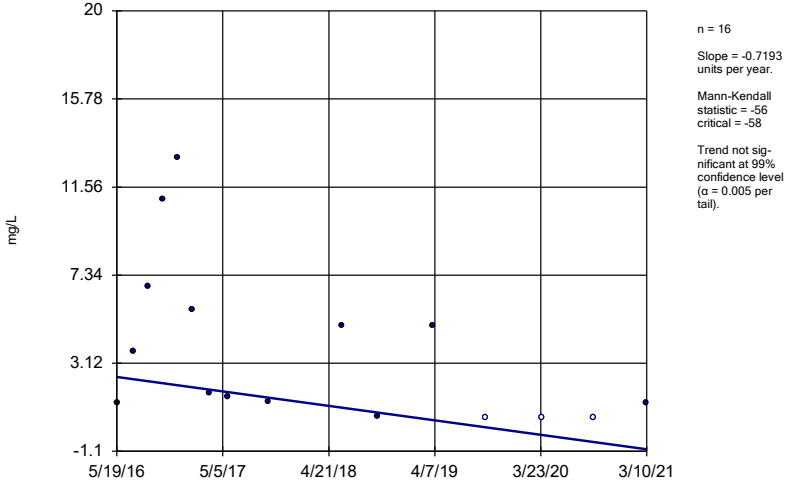
Increasing trend significant at 99% confidence level (α = 0.005 per tail).

Constituent: Sulfate Analysis Run 5/5/2021 10:24 AM View: Appendix III - Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

HGWA-4 (bg)



n = 16

Slope = -0.7193 units per year.

Mann-Kendall statistic = -56
critical = -58

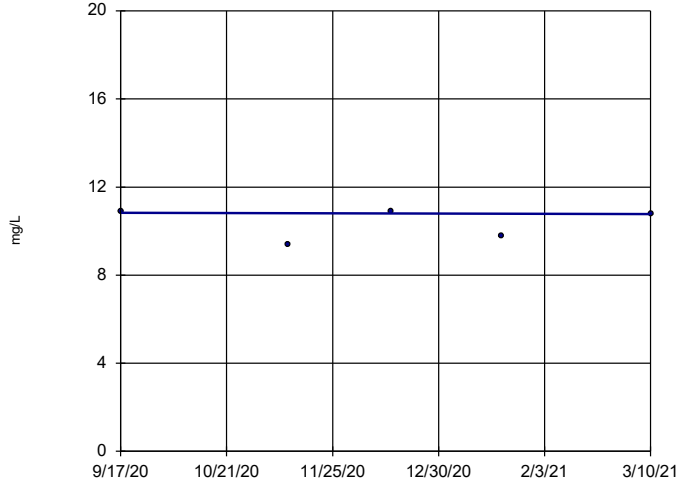
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Sulfate Analysis Run 5/5/2021 10:24 AM View: Appendix III - Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

Sen's Slope Estimator

HGWA-42D (bg)



n = 5

Slope = -0.1049 units per year.

Mann-Kendall statistic = -1
critical = -12

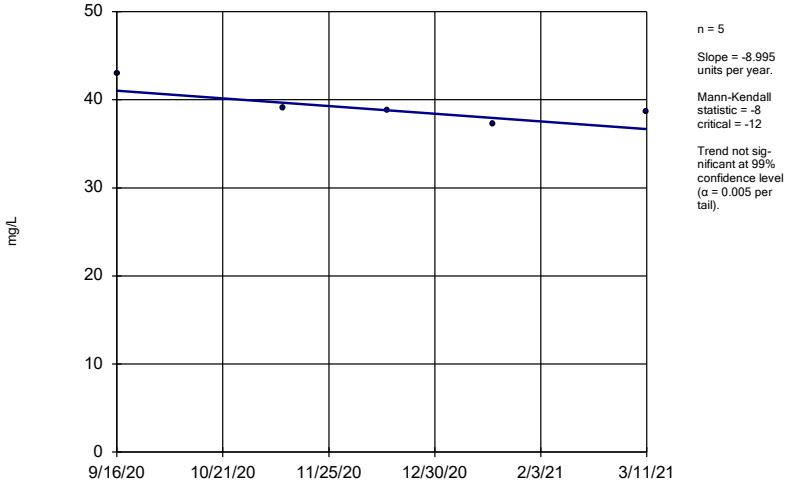
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Sulfate Analysis Run 5/5/2021 10:24 AM View: Appendix III - Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

Sen's Slope Estimator

HGWA-43D (bg)



n = 5

Slope = -8.995 units per year.

Mann-Kendall statistic = -8
critical = -12

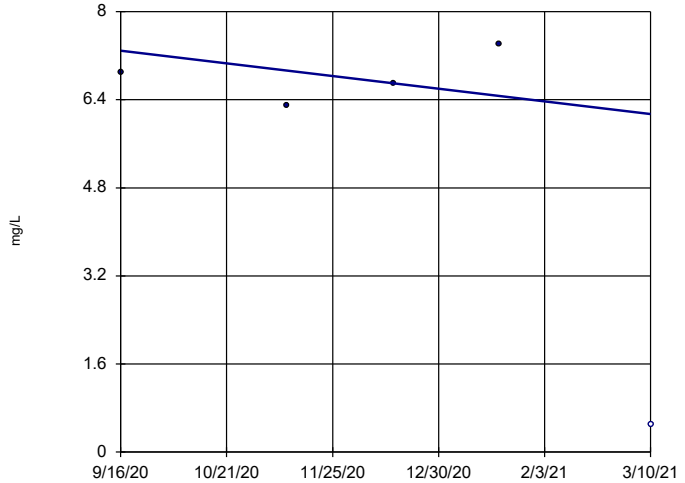
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Sulfate Analysis Run 5/5/2021 10:24 AM View: Appendix III - Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

HGWA-44D (bg)



n = 5

Slope = -2.396 units per year.

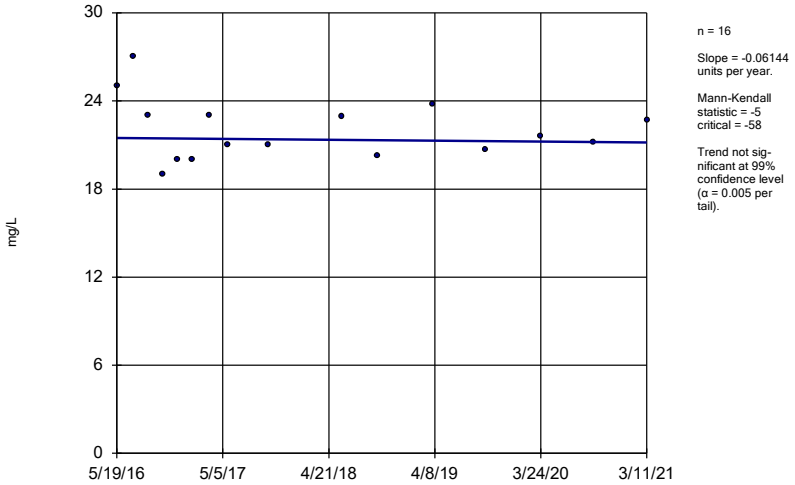
Mann-Kendall statistic = -2
critical = -12

Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Sulfate Analysis Run 5/5/2021 10:24 AM View: Appendix III - Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sen's Slope Estimator

HGWA-5 (bg)



n = 16

Slope = -0.06144 units per year.

Mann-Kendall statistic = -5
critical = -58

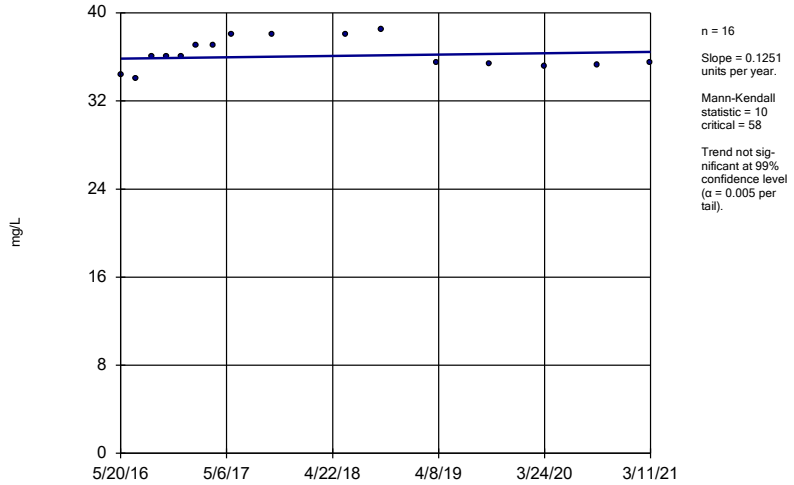
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Sulfate Analysis Run 5/5/2021 10:24 AM View: Appendix III - Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

Sen's Slope Estimator

HGWA-6 (bg)



n = 16

Slope = 0.1251 units per year.

Mann-Kendall statistic = 10
critical = 58

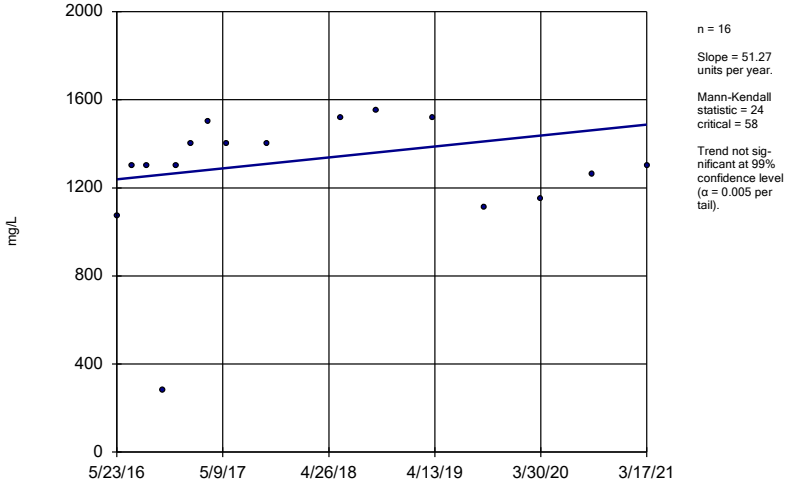
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Sulfate Analysis Run 5/5/2021 10:24 AM View: Appendix III - Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

Sen's Slope Estimator

HGWC-14



n = 16

Slope = 51.27 units per year.

Mann-Kendall statistic = 24
critical = 58

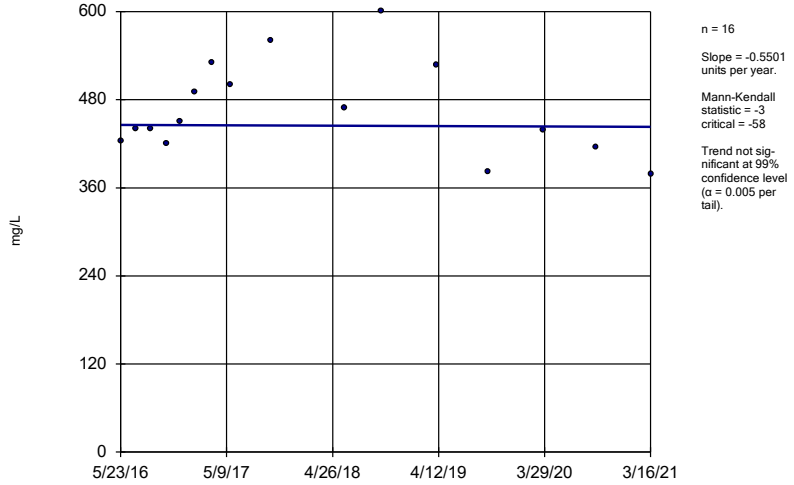
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Sulfate Analysis Run 5/5/2021 10:24 AM View: Appendix III - Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

Sen's Slope Estimator

HGWC-15



n = 16

Slope = -0.5501 units per year.

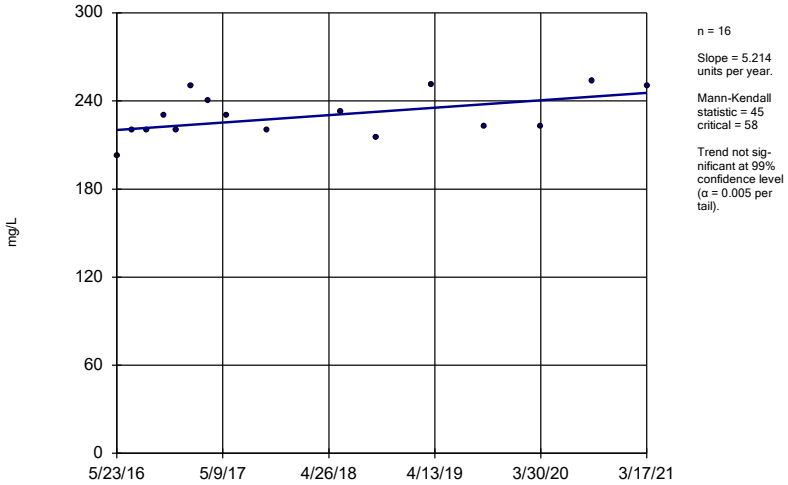
Mann-Kendall statistic = -3
critical = -58

Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Sulfate Analysis Run 5/5/2021 10:24 AM View: Appendix III - Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sen's Slope Estimator

HGWC-16



n = 16

Slope = 5.214 units per year.

Mann-Kendall statistic = 45 critical = 58

Trend not significant at 99% confidence level (α = 0.005 per tail).

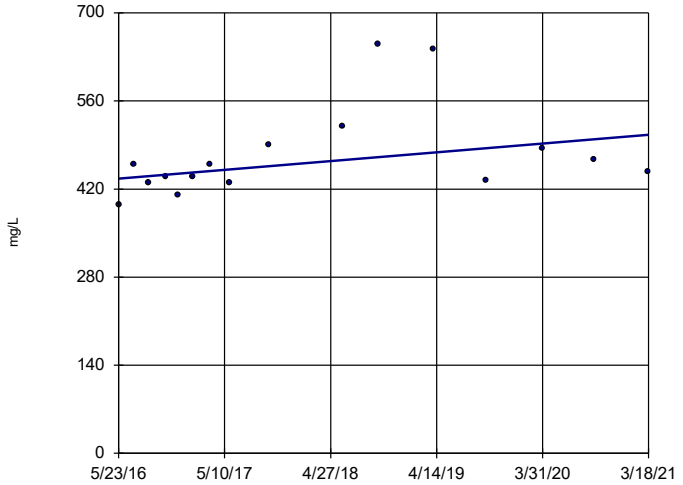
Constituent: Sulfate Analysis Run 5/5/2021 10:24 AM View: Appendix III - Trend Tests

Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

Sen's Slope Estimator

HGWC-17



n = 16

Slope = 14.46 units per year.

Mann-Kendall statistic = 45 critical = 58

Trend not significant at 99% confidence level (α = 0.005 per tail).

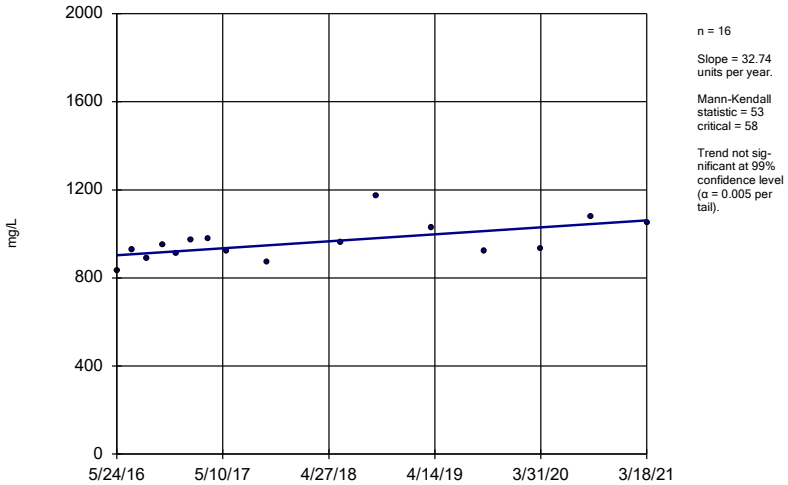
Constituent: Sulfate Analysis Run 5/5/2021 10:24 AM View: Appendix III - Trend Tests

Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

Sen's Slope Estimator

HGWC-18



n = 16

Slope = 32.74 units per year.

Mann-Kendall statistic = 53 critical = 58

Trend not significant at 99% confidence level (α = 0.005 per tail).

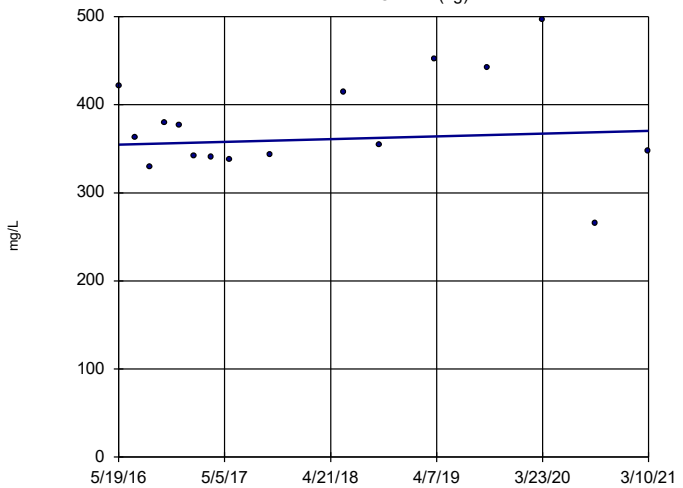
Constituent: Sulfate Analysis Run 5/5/2021 10:24 AM View: Appendix III - Trend Tests

Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

Sen's Slope Estimator

HGWA-1 (bg)



n = 16

Slope = 3.302 units per year.

Mann-Kendall statistic = 10 critical = 58

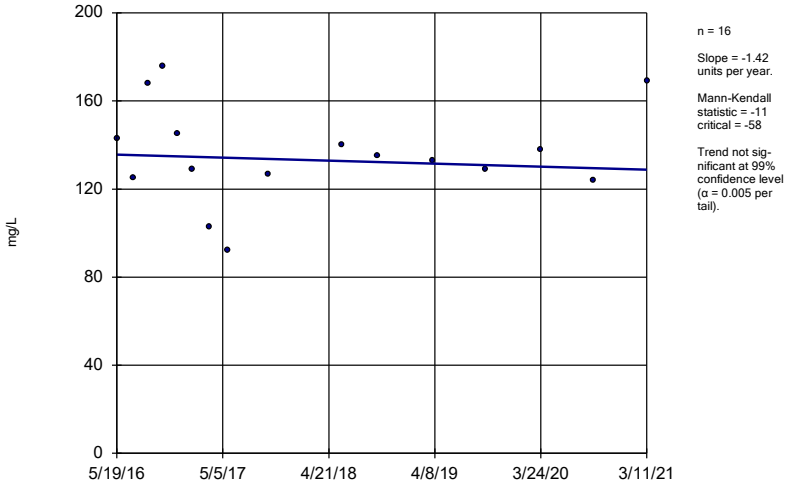
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Total Dissolved Solids Analysis Run 5/5/2021 10:24 AM View: Appendix III - Trend Tests

Plant Hammond Client: Southern Company Data: Hammond AP-2

Sen's Slope Estimator

HGWA-2 (bg)



n = 16

Slope = -1.42 units per year.

Mann-Kendall statistic = -11
critical = -58

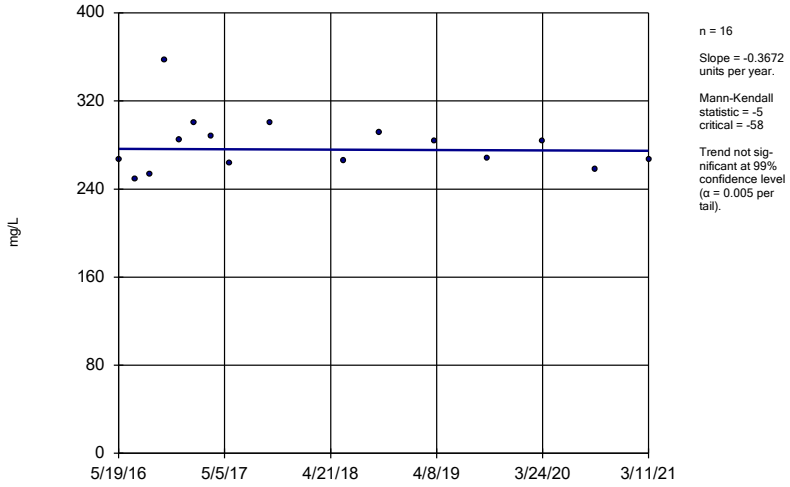
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Total Dissolved Solids Analysis Run 5/5/2021 10:24 AM View: Appendix III - Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

Sen's Slope Estimator

HGWA-3 (bg)



n = 16

Slope = -0.3672 units per year.

Mann-Kendall statistic = -5
critical = -58

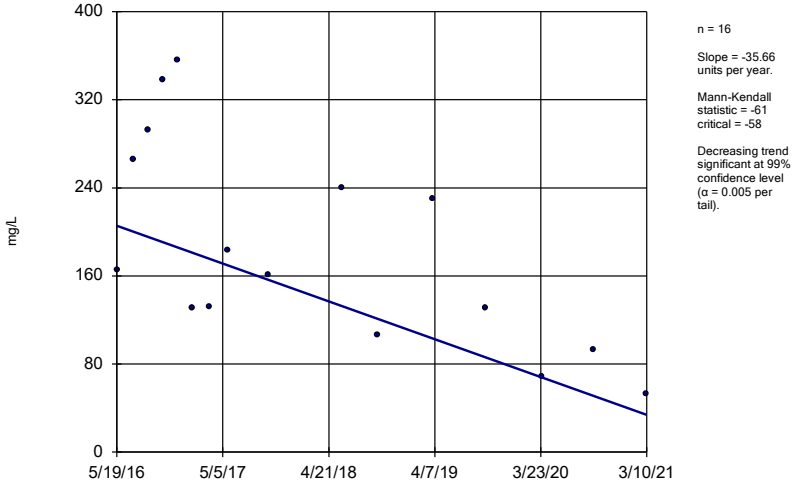
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Total Dissolved Solids Analysis Run 5/5/2021 10:24 AM View: Appendix III - Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

Sen's Slope Estimator

HGWA-4 (bg)



n = 16

Slope = -35.66 units per year.

Mann-Kendall statistic = -61
critical = -58

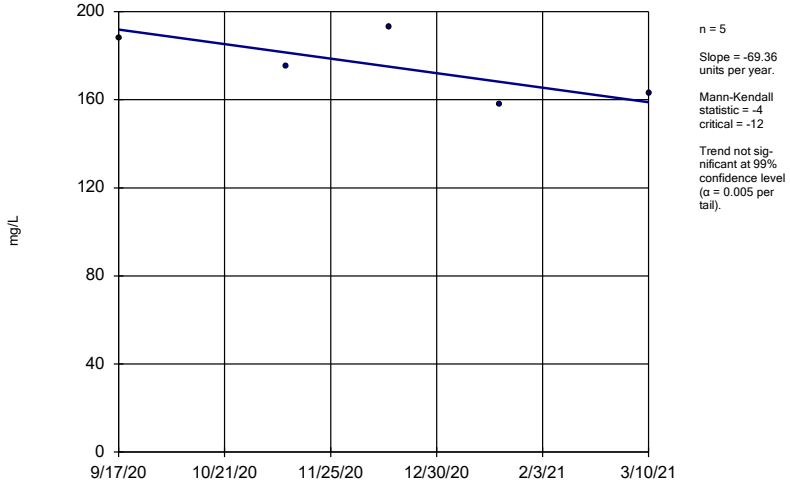
Decreasing trend significant at 99% confidence level (α = 0.005 per tail).

Constituent: Total Dissolved Solids Analysis Run 5/5/2021 10:24 AM View: Appendix III - Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

Sen's Slope Estimator

HGWA-42D (bg)



n = 5

Slope = -69.36 units per year.

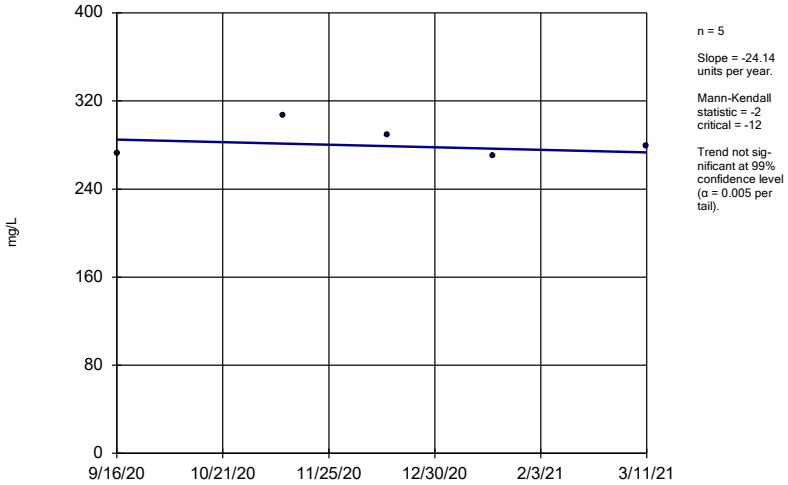
Mann-Kendall statistic = -4
critical = -12

Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Total Dissolved Solids Analysis Run 5/5/2021 10:24 AM View: Appendix III - Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sen's Slope Estimator

HGWA-43D (bg)



n = 5

Slope = -24.14 units per year.

Mann-Kendall statistic = -2
critical = -12

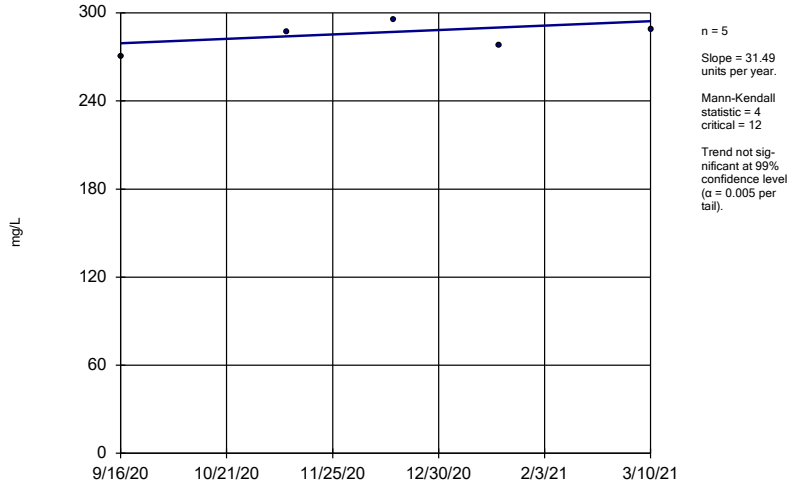
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Total Dissolved Solids Analysis Run 5/5/2021 10:24 AM View: Appendix III - Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

Sen's Slope Estimator

HGWA-44D (bg)



n = 5

Slope = 31.49 units per year.

Mann-Kendall statistic = 4
critical = 12

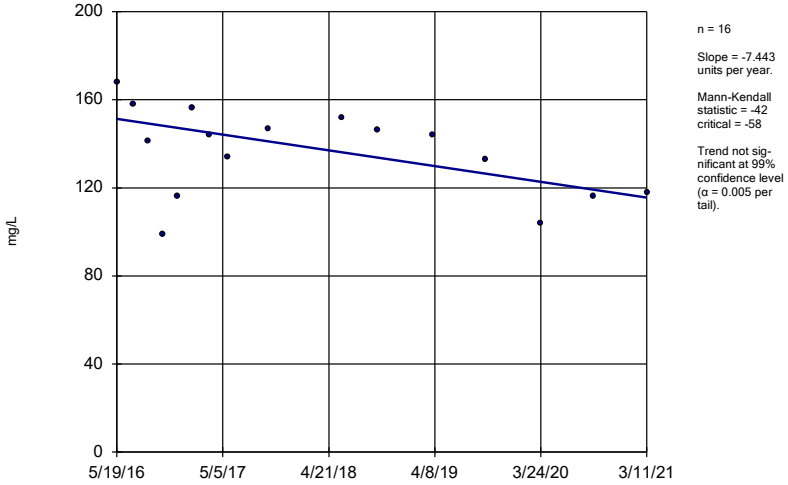
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Total Dissolved Solids Analysis Run 5/5/2021 10:24 AM View: Appendix III - Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

Sen's Slope Estimator

HGWA-5 (bg)



n = 16

Slope = -7.443 units per year.

Mann-Kendall statistic = -42
critical = -58

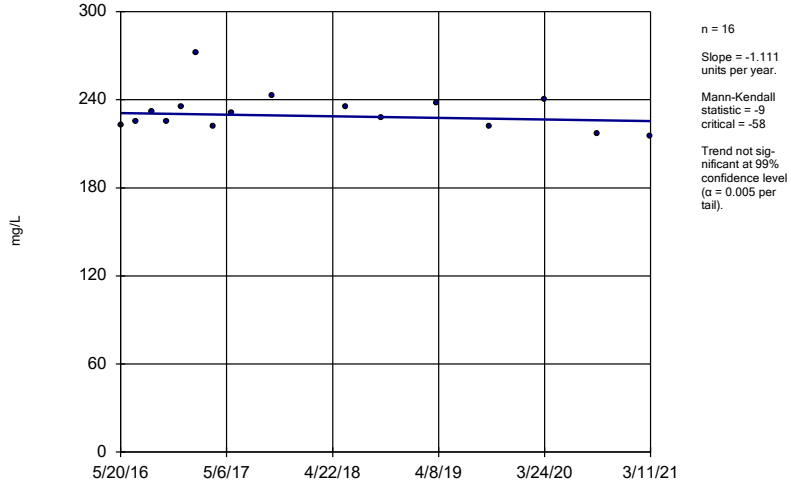
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Total Dissolved Solids Analysis Run 5/5/2021 10:24 AM View: Appendix III - Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

Sen's Slope Estimator

HGWA-6 (bg)



n = 16

Slope = -1.111 units per year.

Mann-Kendall statistic = -9
critical = -58

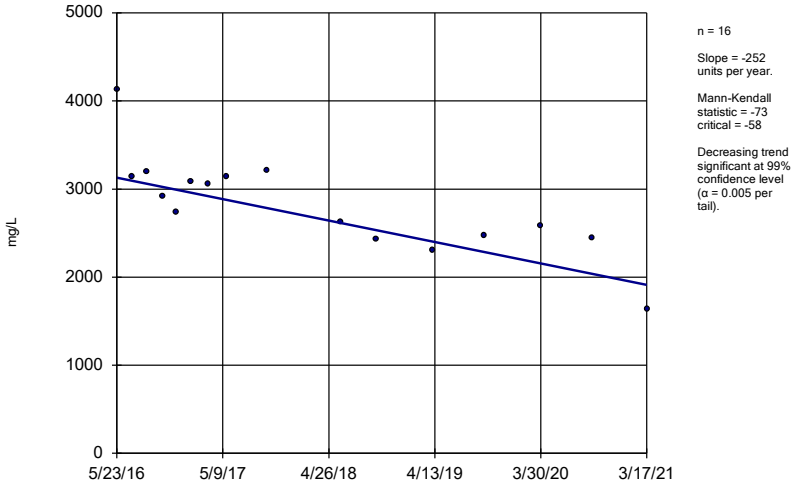
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Total Dissolved Solids Analysis Run 5/5/2021 10:24 AM View: Appendix III - Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

Sen's Slope Estimator

HGWC-14



n = 16

Slope = -252 units per year.

Mann-Kendall statistic = -73
critical = -58

Decreasing trend significant at 99% confidence level (α = 0.005 per tail).

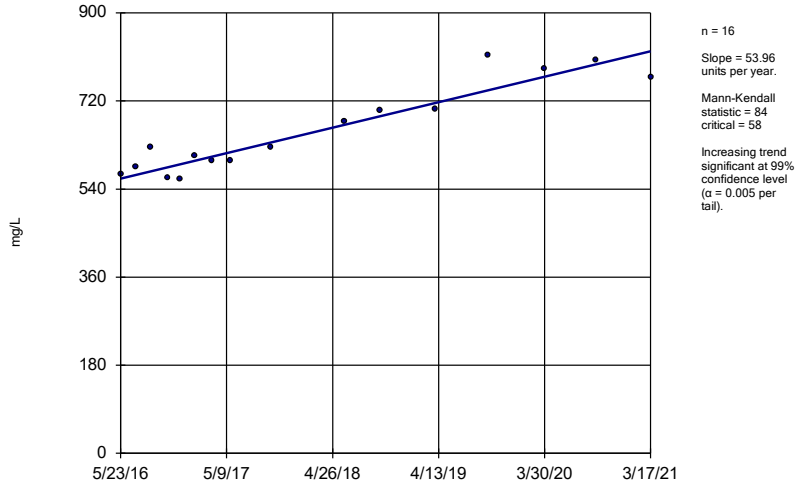
Constituent: Total Dissolved Solids Analysis Run 5/5/2021 10:24 AM View: Appendix III - Trend Tests

Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

Sen's Slope Estimator

HGWC-16



n = 16

Slope = 53.96 units per year.

Mann-Kendall statistic = 84
critical = 58

Increasing trend significant at 99% confidence level (α = 0.005 per tail).

Constituent: Total Dissolved Solids Analysis Run 5/5/2021 10:24 AM View: Appendix III - Trend Tests

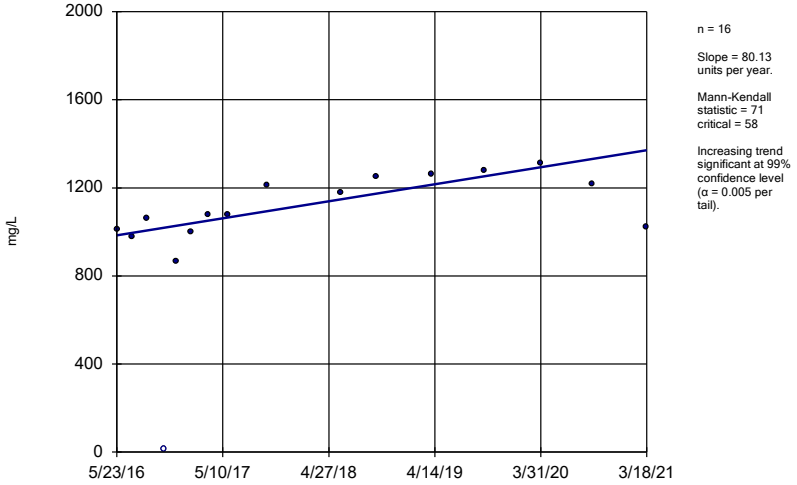
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

Hollow symbols indicate censored values.

Sen's Slope Estimator

HGWC-17



n = 16

Slope = 80.13 units per year.

Mann-Kendall statistic = 71
critical = 58

Increasing trend significant at 99% confidence level (α = 0.005 per tail).

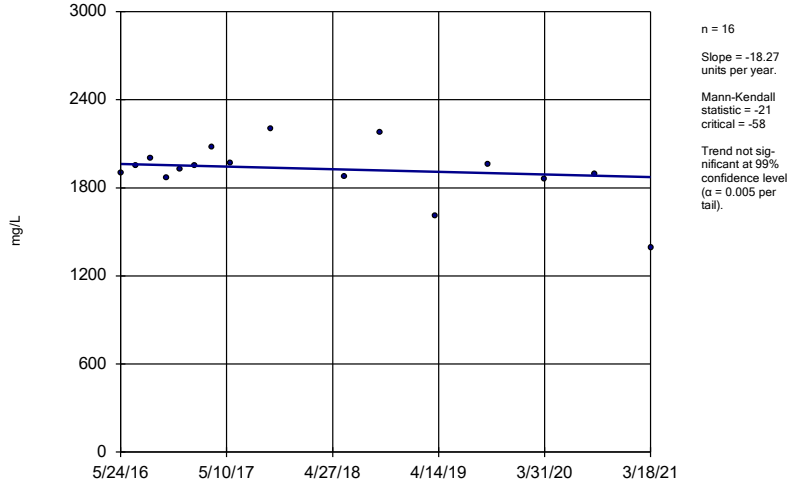
Constituent: Total Dissolved Solids Analysis Run 5/5/2021 10:24 AM View: Appendix III - Trend Tests

Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

Sen's Slope Estimator

HGWC-18



n = 16

Slope = -18.27 units per year.

Mann-Kendall statistic = -21
critical = -58

Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Total Dissolved Solids Analysis Run 5/5/2021 10:24 AM View: Appendix III - Trend Tests

Plant Hammond Client: Southern Company Data: Hammond AP-2

FIGURE F.

Upper Tolerance Limits Summary Table

Plant Hammond Client: Southern Company Data: Hammond AP-2 Printed 5/5/2021, 10:00 AM

Constituent	Upper Lim.	Lower Lim.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Antimony (mg/L)	0.003	n/a	n/a	99	n/a	n/a	79.8	n/a	n/a	0.006232	NP Inter(NDs)
Arsenic (mg/L)	0.005	n/a	n/a	132	n/a	n/a	81.06	n/a	n/a	0.001147	NP Inter(NDs)
Barium (mg/L)	0.46	n/a	n/a	132	n/a	n/a	0	n/a	n/a	0.001147	NP Inter(normality)
Beryllium (mg/L)	0.0005	n/a	n/a	120	n/a	n/a	84.17	n/a	n/a	0.002122	NP Inter(NDs)
Cadmium (mg/L)	0.0005	n/a	n/a	132	n/a	n/a	93.18	n/a	n/a	0.001147	NP Inter(NDs)
Chromium (mg/L)	0.019	n/a	n/a	120	n/a	n/a	82.5	n/a	n/a	0.002122	NP Inter(NDs)
Cobalt (mg/L)	0.038	n/a	n/a	132	n/a	n/a	69.7	n/a	n/a	0.001147	NP Inter(NDs)
Combined Radium 226 + 228 (pCi/L)	1.684	n/a	n/a	132	0.7837	0.2727	0	None	sqrt(x)	0.05	Inter
Fluoride (mg/L)	0.74	n/a	n/a	138	n/a	n/a	31.88	n/a	n/a	0.0008431	NP Inter(normality)
Lead (mg/L)	0.001	n/a	n/a	120	n/a	n/a	67.5	n/a	n/a	0.002122	NP Inter(NDs)
Lithium (mg/L)	0.034	n/a	n/a	132	n/a	n/a	20.45	n/a	n/a	0.001147	NP Inter(normality)
Mercury (mg/L)	0.0005	n/a	n/a	87	n/a	n/a	90.8	n/a	n/a	0.01153	NP Inter(NDs)
Molybdenum (mg/L)	0.01	n/a	n/a	120	n/a	n/a	86.67	n/a	n/a	0.002122	NP Inter(NDs)
Selenium (mg/L)	0.005	n/a	n/a	132	n/a	n/a	98.48	n/a	n/a	0.001147	NP Inter(NDs)
Thallium (mg/L)	0.001	n/a	n/a	132	n/a	n/a	98.48	n/a	n/a	0.001147	NP Inter(NDs)

FIGURE G.

PLANT HAMMOND AP-2 GWPS (State)				
Constituent Name	**MCL**	**CCR-Rule Specified**	**Background Limit**	**State 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		0.46	2
Beryllium, Total (mg/L)	0.004		0.0005	0.004
Cadmium, Total (mg/L)	0.005		0.0005	0.005
Chromium, Total (mg/L)	0.1		0.0019	0.1
Cobalt, Total (mg/L)	n/a	0.006	0.038	0.038
Combined Radium, Total (pCi/L)	5		1.68	5
Fluoride, Total (mg/L)	4		0.74	4
Lead, Total (mg/L)	n/a	0.015	0.001	0.001
Lithium, Total (mg/L)	n/a	0.04	0.034	0.034
Mercury, Total (mg/L)	0.002		0.0005	0.002
Molybdenum, Total (mg/L)	n/a	0.1	0.01	0.01
Selenium, Total (mg/L)	0.05		0.005	0.05
Thallium, Total (mg/L)	0.002		0.001	0.002

**Grey cell 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-2 GWPS (Federal)				
Constituent Name	**MCL**	**CCR-Rule Specified**	**Background Limit**	**Federal 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		0.46	2
Beryllium, Total (mg/L)	0.004		0.0005	0.004
Cadmium, Total (mg/L)	0.005		0.0005	0.005
Chromium, Total (mg/L)	0.1		0.0019	0.1
Cobalt, Total (mg/L)	n/a	0.006	0.038	0.038
Combined Radium, Total (pCi/L)	5		1.68	5
Fluoride, Total (mg/L)	4		0.74	4
Lead, Total (mg/L)	n/a	0.015	0.001	0.015
Lithium, Total (mg/L)	n/a	0.04	0.034	0.04
Mercury, Total (mg/L)	0.002		0.0005	0.002
Molybdenum, Total (mg/L)	n/a	0.1	0.01	0.1
Selenium, Total (mg/L)	0.05		0.005	0.05
Thallium, Total (mg/L)	0.002		0.001	0.002

**Grey cell indidcates background is higher than MCL or CCR-Rule*

**MCL = Maximum Contaminant Level*

**CCR = Coal Combustion Residuals*

**GWPS = Groundwater Protection Statard*

FIGURE I.

State Confidence Intervals - Significant Results

Plant Hammond Client: Southern Company Data: Hammond AP-2 Printed 5/5/2021, 11:29 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Cobalt (mg/L)	**HGWC-18**	**0.19**	**0.1614**	**0.038**	**Yes**	**19**	**0.1757**	**0.02444**	**0**	**None**	**No**	**0.01**	**Param.**
Cobalt (mg/L)	**MW-33**	**0.05914**	**0.04819**	**0.038**	**Yes**	**6**	**0.05367**	**0.003983**	**0**	**None**	**No**	**0.01**	**Param.**
Cobalt (mg/L)	**MW-35**	**0.1078**	**0.07716**	**0.038**	**Yes**	**4**	**0.0925**	**0.006758**	**0**	**None**	**No**	**0.01**	**Param.**
Lead (mg/L)	**HGWC-14**	**0.001735**	**0.001385**	**0.001**	**Yes**	**17**	**0.00156**	**0.0002796**	**5.882**	**None**	**No**	**0.01**	**Param.**
Lead (mg/L)	**HGWC-18**	**0.001458**	**0.001175**	**0.001**	**Yes**	**17**	**0.001316**	**0.0002265**	**5.882**	**None**	**No**	**0.01**	**Param.**
Lead (mg/L)	**MW-33**	**0.0018**	**0.0017**	**0.001**	**Yes**	**5**	**0.00172**	**0.00004472**	**0**	**None**	**No**	**0.031**	**NP (normality)**
Molybdenum (mg/L)	**MW-21D**	**0.03607**	**0.01571**	**0.01**	**Yes**	**9**	**0.02589**	**0.01054**	**0**	**None**	**No**	**0.01**	**Param.**

State Confidence Intervals - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-2 Printed 5/5/2021, 11:29 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Antimony (mg/L)	HGWC-14	0.003	0.00043	0.006	No	13	0.002595	0.0009899	84.62	None	No	0.01	NP (NDs)
Arsenic (mg/L)	HGWC-14	0.0089	0.0032	0.01	No	19	0.008125	0.007668	15.79	None	No	0.01	NP (normality)
Arsenic (mg/L)	HGWC-15	0.025	0.0008	0.01	No	19	0.02112	0.009199	84.21	None	No	0.01	NP (NDs)
Arsenic (mg/L)	HGWC-16	0.025	0.0012	0.01	No	19	0.01989	0.01017	78.95	None	No	0.01	NP (NDs)
Arsenic (mg/L)	HGWC-17	0.025	0.00097	0.01	No	19	0.01865	0.01092	73.68	None	No	0.01	NP (NDs)
Arsenic (mg/L)	HGWC-18	0.007066	0.004844	0.01	No	19	0.005955	0.001897	0	None	No	0.01	Param.
Arsenic (mg/L)	MW-21D	0.025	0.00019	0.01	No	9	0.01694	0.01209	66.67	None	No	0.002	NP (NDs)
Arsenic (mg/L)	MW-22	0.025	0.00045	0.01	No	8	0.02193	0.00868	87.5	None	No	0.004	NP (NDs)
Arsenic (mg/L)	MW-23D	0.025	0.00082	0.01	No	8	0.01898	0.01115	75	None	No	0.004	NP (NDs)
Arsenic (mg/L)	MW-33	0.008872	0.002648	0.01	No	5	0.00576	0.001857	0	None	No	0.01	Param.
Arsenic (mg/L)	MW-35	0.025	0.005	0.01	No	4	0.01023	0.009859	25	None	No	0.0625	NP (normality)
Arsenic (mg/L)	MW-37D	0.004094	0.0006745	0.01	No	4	0.007588	0.01162	25	Kaplan-Meier	ln(x)	0.01	Param.
Barium (mg/L)	HGWC-14	0.023	0.019	2	No	19	0.025	0.01827	5.263	None	No	0.01	NP (normality)
Barium (mg/L)	HGWC-15	0.02874	0.01955	2	No	19	0.02414	0.007845	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-16	0.113	0.1002	2	No	19	0.1066	0.01093	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-17	0.02636	0.02358	2	No	19	0.02497	0.002378	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-18	0.0339	0.029	2	No	19	0.03406	0.0163	5.263	None	No	0.01	NP (normality)
Barium (mg/L)	MW-21D	0.07538	0.04662	2	No	9	0.061	0.01489	0	None	No	0.01	Param.
Barium (mg/L)	MW-22	0.03673	0.01702	2	No	8	0.02688	0.009296	0	None	No	0.01	Param.
Barium (mg/L)	MW-23D	0.082	0.056	2	No	8	0.06288	0.008357	0	None	No	0.004	NP (normality)
Barium (mg/L)	MW-33	0.02943	0.02217	2	No	5	0.0258	0.002168	0	None	No	0.01	Param.
Barium (mg/L)	MW-35	0.03443	0.02307	2	No	4	0.02875	0.0025	0	None	No	0.01	Param.
Barium (mg/L)	MW-37D	0.2153	0.07971	2	No	4	0.1475	0.02986	0	None	No	0.01	Param.
Beryllium (mg/L)	HGWC-14	0.00058	0.00043	0.004	No	17	0.0004794	0.00007862	11.76	None	No	0.01	NP (normality)
Beryllium (mg/L)	HGWC-17	0.0005	0.000067	0.004	No	17	0.0004479	0.000147	88.24	None	No	0.01	NP (NDs)
Beryllium (mg/L)	HGWC-18	0.003463	0.002759	0.004	No	17	0.00304	0.000771	5.882	None	x^2	0.01	Param.
Beryllium (mg/L)	MW-22	0.0005	0.000047	0.004	No	8	0.0003364	0.000226	62.5	None	No	0.004	NP (NDs)
Beryllium (mg/L)	MW-33	0.001159	0.0008766	0.004	No	5	0.001018	0.00008438	0	None	No	0.01	Param.
Beryllium (mg/L)	MW-35	0.0008122	0.0001528	0.004	No	4	0.0004825	0.0001452	0	None	No	0.01	Param.
Beryllium (mg/L)	MW-37D	0.0005	0.00012	0.004	No	4	0.000405	0.00019	75	None	No	0.0625	NP (NDs)
Cadmium (mg/L)	HGWC-14	0.0005	0.0001	0.005	No	19	0.000302	0.0001954	47.37	None	No	0.01	NP (normality)
Cadmium (mg/L)	HGWC-15	0.002277	0.001559	0.005	No	19	0.001948	0.0006767	0	None	sqrt(x)	0.01	Param.
Cadmium (mg/L)	HGWC-17	0.0005	0.00007	0.005	No	19	0.0004774	0.00009865	94.74	None	No	0.01	NP (NDs)
Cadmium (mg/L)	HGWC-18	0.002362	0.001856	0.005	No	19	0.002063	0.0005188	5.263	None	x^2	0.01	Param.
Cadmium (mg/L)	MW-22	0.002179	0.001156	0.005	No	8	0.001645	0.0006169	0	None	x^3	0.01	Param.
Cadmium (mg/L)	MW-23D	0.0006	0.00045	0.005	No	8	0.000515	0.00004721	62.5	None	No	0.004	NP (NDs)
Cadmium (mg/L)	MW-33	0.0002327	0.0001473	0.005	No	5	0.00019	0.0000255	0	None	No	0.01	Param.
Cadmium (mg/L)	MW-35	0.002623	-0.0001083	0.005	No	4	0.001258	0.0006016	0	None	No	0.01	Param.
Chromium (mg/L)	HGWC-14	0.025	0.00066	0.1	No	17	0.02212	0.008123	88.24	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-15	0.025	0.0012	0.1	No	17	0.02071	0.009549	82.35	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-16	0.025	0.0021	0.1	No	17	0.02078	0.009409	82.35	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-17	0.025	0.0018	0.1	No	17	0.02078	0.009403	82.35	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-18	0.025	0.00063	0.1	No	17	0.02068	0.009623	82.35	None	No	0.01	NP (NDs)
Chromium (mg/L)	MW-21D	0.025	0.00057	0.1	No	9	0.01959	0.01074	77.78	None	No	0.002	NP (NDs)
Chromium (mg/L)	MW-22	0.025	0.0004	0.1	No	8	0.01889	0.01131	75	None	No	0.004	NP (NDs)
Chromium (mg/L)	MW-23D	0.025	0.00083	0.1	No	8	0.01896	0.01118	75	None	No	0.004	NP (NDs)
Chromium (mg/L)	MW-33	0.025	0.00069	0.1	No	5	0.02014	0.01087	80	None	No	0.031	NP (NDs)
Chromium (mg/L)	MW-35	0.025	0.00079	0.1	No	4	0.01291	0.01397	50	None	No	0.0625	NP (normality)
Chromium (mg/L)	MW-37D	0.008014	0.000295	0.1	No	4	0.01405	0.01272	50	Kaplan-Meier	sqrt(x)	0.01	Param.
Cobalt (mg/L)	HGWC-14	0.02913	0.02366	0.038	No	19	0.02587	0.006039	5.263	None	x^2	0.01	Param.
Cobalt (mg/L)	HGWC-15	0.04702	0.02999	0.038	No	19	0.03851	0.01454	0	None	No	0.01	Param.
Cobalt (mg/L)	HGWC-16	0.005	0.00037	0.038	No	19	0.004508	0.001474	89.47	None	No	0.01	NP (NDs)
Cobalt (mg/L)	HGWC-17	0.01619	0.01429	0.038	No	19	0.01524	0.001623	0	None	No	0.01	Param.
Cobalt (mg/L)	**HGWC-18**	**0.19**	**0.1614**	**0.038**	**Yes**	**19**	**0.1757**	**0.02444**	**0**	**None**	**No**	**0.01**	**Param.**
Cobalt (mg/L)	MW-21D	0.005	0.00034	0.038	No	9	0.004482	0.001553	88.89	None	No	0.002	NP (NDs)

State Confidence Intervals - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-2 Printed 5/5/2021, 11:29 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Cobalt (mg/L)	MW-22	0.04027	0.02448	0.038	No	8	0.03238	0.007444	0	None	No	0.01	Param.
Cobalt (mg/L)	MW-23D	0.001215	0.00097	0.038	No	8	0.001093	0.0001156	0	None	No	0.01	Param.
Cobalt (mg/L)	**MW-33**	**0.05914**	**0.04819**	**0.038**	**Yes**	**6**	**0.05367**	**0.003983**	**0**	**None**	**No**	**0.01**	**Param.**
Cobalt (mg/L)	**MW-35**	**0.1078**	**0.07716**	**0.038**	**Yes**	**4**	**0.0925**	**0.006758**	**0**	**None**	**No**	**0.01**	**Param.**
Cobalt (mg/L)	MW-37D	0.002148	-0.0001679	0.038	No	4	0.002995	0.002352	50	Kaplan-Meier	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-14	1.654	1.179	5	No	19	1.417	0.406	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-15	0.9507	0.4764	5	No	19	0.7136	0.405	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-16	1.008	0.5368	5	No	19	0.7724	0.4023	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-17	1.05	0.6723	5	No	19	0.8614	0.323	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-18	2.288	1.727	5	No	19	2.008	0.479	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-21D	1.194	0.401	5	No	9	0.7951	0.4745	0	None	sqrt(x)	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-22	1.301	0.3473	5	No	8	0.8241	0.4499	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-23D	1.206	0.5544	5	No	8	0.8801	0.3073	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-33	3.245	0.5646	5	No	5	1.905	0.7997	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-35	5.143	-1.186	5	No	4	1.979	1.394	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-37D	2.476	-0.7417	5	No	4	0.867	0.7086	0	None	No	0.01	Param.
Fluoride (mg/L)	HGWC-14	0.2344	0.08602	4	No	20	0.186	0.1617	20	Kaplan-Meier	sqrt(x)	0.01	Param.
Fluoride (mg/L)	HGWC-15	0.17	0.09	4	No	20	0.1457	0.1246	40	None	No	0.01	NP (normality)
Fluoride (mg/L)	HGWC-16	0.1744	0.04649	4	No	20	0.1624	0.1221	50	Kaplan-Meier	sqrt(x)	0.01	Param.
Fluoride (mg/L)	HGWC-17	0.16	0.07	4	No	20	0.1747	0.2184	35	None	No	0.01	NP (normality)
Fluoride (mg/L)	HGWC-18	0.6613	0.4237	4	No	20	0.5425	0.2091	5	None	No	0.01	Param.
Fluoride (mg/L)	MW-21D	0.1	0.1	4	No	9	0.1	5.0e-10	88.89	None	No	0.002	NP (NDs)
Fluoride (mg/L)	MW-22	0.28	0.1	4	No	8	0.1263	0.06301	75	None	No	0.004	NP (NDs)
Fluoride (mg/L)	MW-23D	0.16	0.1	4	No	8	0.1125	0.02375	75	None	No	0.004	NP (NDs)
Fluoride (mg/L)	MW-33	0.3611	0.0956	4	No	6	0.2283	0.09663	0	None	No	0.01	Param.
Fluoride (mg/L)	MW-35	0.1143	0.03769	4	No	4	0.082	0.0207	25	Kaplan-Meier	No	0.01	Param.
Fluoride (mg/L)	MW-37D	0.1156	0.03593	4	No	4	0.07575	0.01754	0	None	No	0.01	Param.
Lead (mg/L)	**HGWC-14**	**0.001735**	**0.001385**	**0.001**	**Yes**	**17**	**0.00156**	**0.0002796**	**5.882**	**None**	**No**	**0.01**	**Param.**
Lead (mg/L)	HGWC-15	0.001	0.0002	0.001	No	17	0.0007897	0.0003918	70.59	None	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-16	0.001	0.000094	0.001	No	17	0.0005308	0.0004573	47.06	None	No	0.01	NP (normality)
Lead (mg/L)	HGWC-17	0.001	0.000088	0.001	No	17	0.0005768	0.0004634	52.94	None	No	0.01	NP (NDs)
Lead (mg/L)	**HGWC-18**	**0.001458**	**0.001175**	**0.001**	**Yes**	**17**	**0.001316**	**0.0002265**	**5.882**	**None**	**No**	**0.01**	**Param.**
Lead (mg/L)	MW-21D	0.001	0.000047	0.001	No	9	0.0006476	0.0004571	55.56	None	No	0.002	NP (NDs)
Lead (mg/L)	MW-22	0.001	0.000036	0.001	No	8	0.0006538	0.0004782	62.5	None	No	0.004	NP (NDs)
Lead (mg/L)	MW-23D	0.001	0.000051	0.001	No	8	0.0007764	0.0004151	75	None	No	0.004	NP (NDs)
Lead (mg/L)	**MW-33**	**0.0018**	**0.0017**	**0.001**	**Yes**	**5**	**0.00172**	**0.00004472**	**0**	**None**	**No**	**0.031**	**NP (normality)**
Lead (mg/L)	MW-35	0.001367	-0.000187	0.001	No	4	0.00059	0.0003422	0	None	No	0.01	Param.
Lead (mg/L)	MW-37D	0.002073	-0.0008688	0.001	No	4	0.000793	0.0007149	25	Kaplan-Meier	No	0.01	Param.
Lithium (mg/L)	HGWC-15	0.007937	0.00179	0.034	No	19	0.01033	0.01019	31.58	Kaplan-Meier	x^(1/3)	0.01	Param.
Lithium (mg/L)	HGWC-16	0.0043	0.0028	0.034	No	19	0.004068	0.002738	5.263	None	No	0.01	NP (normality)
Lithium (mg/L)	HGWC-17	0.015	0.0011	0.034	No	19	0.008423	0.007124	52.63	None	No	0.01	NP (NDs)
Lithium (mg/L)	HGWC-18	0.01461	0.01234	0.034	No	19	0.01347	0.001942	0	None	No	0.01	Param.
Lithium (mg/L)	MW-21D	0.02597	0.02114	0.034	No	9	0.02356	0.002506	0	None	No	0.01	Param.
Lithium (mg/L)	MW-22	0.002	0.0011	0.034	No	8	0.00135	0.0002928	0	None	No	0.004	NP (normality)
Lithium (mg/L)	MW-23D	0.002602	0.002123	0.034	No	8	0.002363	0.0002264	0	None	No	0.01	Param.
Lithium (mg/L)	MW-33	0.001268	0.0008245	0.034	No	5	0.001046	0.0001322	0	None	No	0.01	Param.
Lithium (mg/L)	MW-35	0.005274	0.003226	0.034	No	4	0.00425	0.0004509	0	None	No	0.01	Param.
Lithium (mg/L)	MW-37D	0.04105	0.02795	0.034	No	4	0.0345	0.002887	0	None	No	0.01	Param.
Molybdenum (mg/L)	HGWC-15	0.01	0.0007	0.01	No	17	0.009453	0.002256	94.12	None	No	0.01	NP (NDs)
Molybdenum (mg/L)	**MW-21D**	**0.03607**	**0.01571**	**0.01**	**Yes**	**9**	**0.02589**	**0.01054**	**0**	**None**	**No**	**0.01**	**Param.**
Molybdenum (mg/L)	MW-22	0.01	0.00013	0.01	No	8	0.008766	0.00349	87.5	None	No	0.004	NP (NDs)
Molybdenum (mg/L)	MW-23D	0.005782	0.001794	0.01	No	8	0.00375	0.002632	12.5	None	ln(x)	0.01	Param.
Molybdenum (mg/L)	MW-37D	0.02709	0.008412	0.01	No	4	0.01775	0.004113	0	None	No	0.01	Param.
Selenium (mg/L)	HGWC-14	0.01318	0.006823	0.05	No	19	0.01	0.005427	0	None	No	0.01	Param.
Selenium (mg/L)	HGWC-15	0.005	0.0041	0.05	No	19	0.004322	0.001509	78.95	None	No	0.01	NP (NDs)

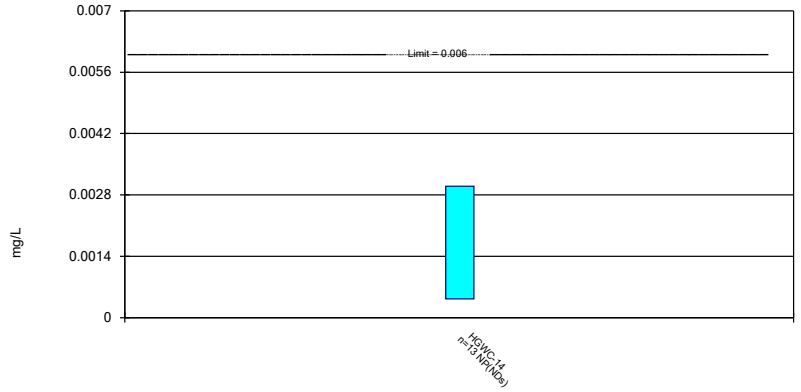
State Confidence Intervals - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-2 Printed 5/5/2021, 11:29 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Selenium (mg/L)	HGWC-16	0.005	0.000089	0.05	No	19	0.004742	0.001127	94.74	None	No	0.01	NP (NDs)
Selenium (mg/L)	HGWC-17	0.005	0.0023	0.05	No	19	0.00441	0.001448	84.21	None	No	0.01	NP (NDs)
Selenium (mg/L)	HGWC-18	0.03425	0.01795	0.05	No	19	0.0261	0.01392	5.263	None	No	0.01	Param.
Selenium (mg/L)	MW-22	0.005	0.002	0.05	No	8	0.004625	0.001061	87.5	None	No	0.004	NP (NDs)
Selenium (mg/L)	MW-33	0.04314	-0.001136	0.05	No	5	0.021	0.01321	0	None	No	0.01	Param.
Selenium (mg/L)	MW-35	0.04671	-0.008206	0.05	No	4	0.01925	0.01209	0	None	No	0.01	Param.
Thallium (mg/L)	HGWC-14	0.000306	0.00028	0.002	No	19	0.0002972	0.00003063	0	None	No	0.01	NP (normality)
Thallium (mg/L)	HGWC-17	0.001	0.00011	0.002	No	19	0.0006737	0.0004391	63.16	None	No	0.01	NP (NDs)
Thallium (mg/L)	HGWC-18	0.001	0.00015	0.002	No	19	0.0005174	0.0004233	42.11	None	No	0.01	NP (normality)
Thallium (mg/L)	MW-33	0.0003207	0.0002473	0.002	No	5	0.000284	0.00002191	0	None	No	0.01	Param.
Thallium (mg/L)	MW-35	0.001	0.00013	0.002	No	4	0.0007825	0.000435	75	None	No	0.0625	NP (NDs)

Non-Parametric Confidence Interval

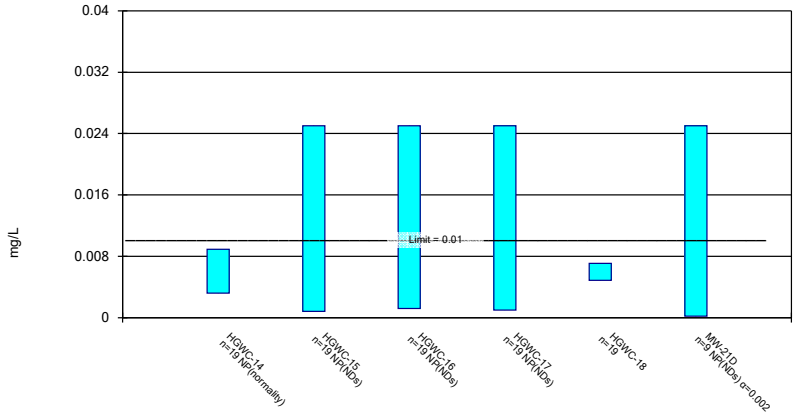
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Antimony Analysis Run 5/5/2021 11:26 AM View: Appendix IV - Confidence Intervals
Plant Hammond Client: Southern Company Data: Hammond AP-2

Parametric and Non-Parametric (NP) Confidence Interval

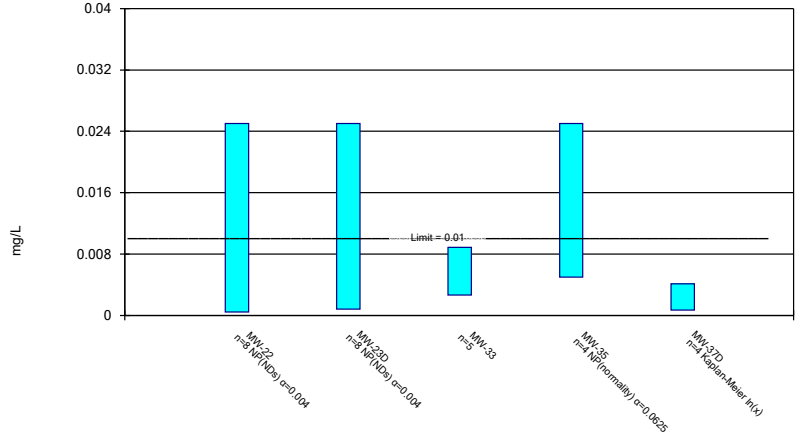
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Arsenic Analysis Run 5/5/2021 11:26 AM View: Appendix IV - Confidence Intervals
Plant Hammond Client: Southern Company Data: Hammond AP-2

Parametric and Non-Parametric (NP) Confidence Interval

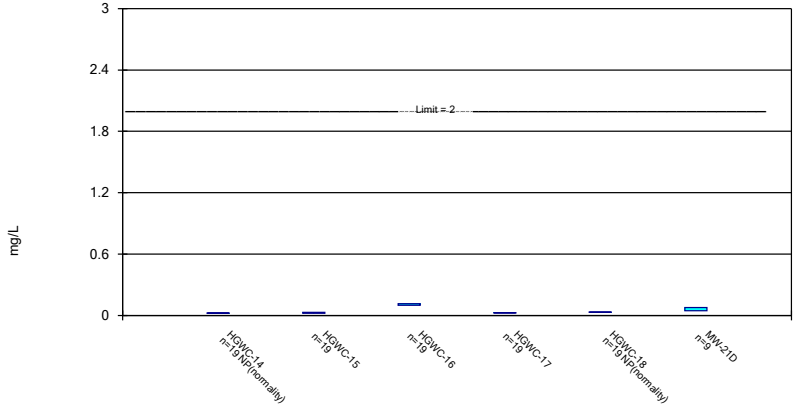
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Arsenic Analysis Run 5/5/2021 11:26 AM View: Appendix IV - Confidence Intervals
Plant Hammond Client: Southern Company Data: Hammond AP-2

Parametric and Non-Parametric (NP) Confidence Interval

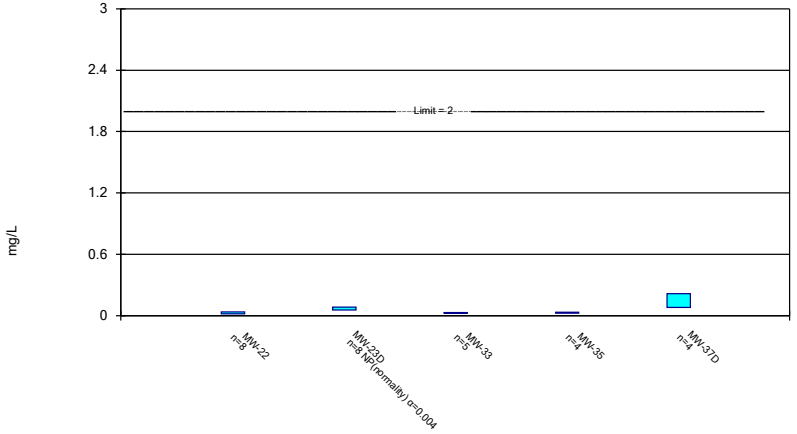
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Barium Analysis Run 5/5/2021 11:26 AM View: Appendix IV - Confidence Intervals
Plant Hammond Client: Southern Company Data: Hammond AP-2

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.

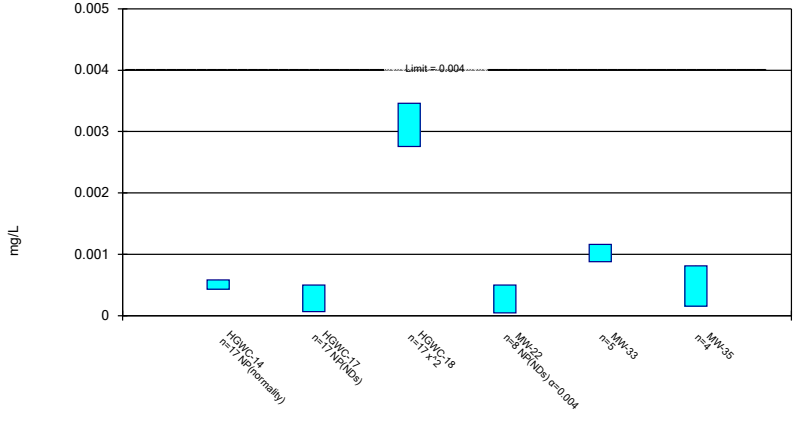


Constituent: Barium Analysis Run 5/5/2021 11:26 AM View: Appendix IV - Confidence Intervals
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 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.

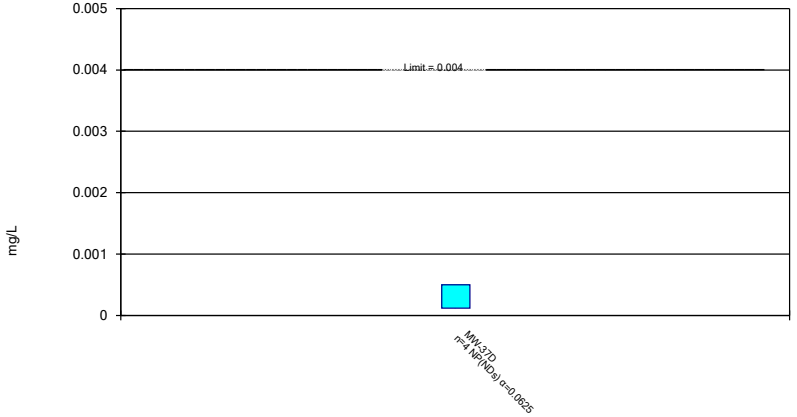


Constituent: Beryllium Analysis Run 5/5/2021 11:26 AM View: Appendix IV - Confidence Intervals
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

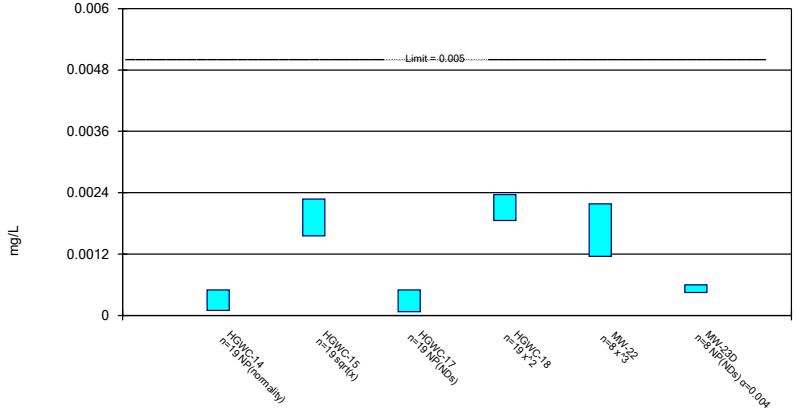


Constituent: Beryllium Analysis Run 5/5/2021 11:26 AM View: Appendix IV - Confidence Intervals
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

Parametric and Non-Parametric (NP) Confidence Interval

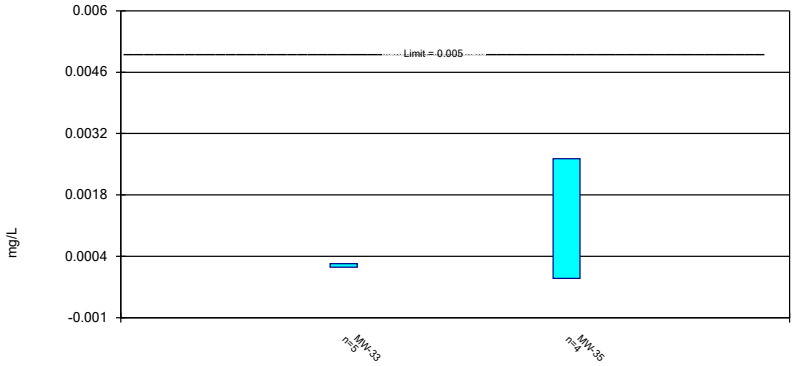
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cadmium Analysis Run 5/5/2021 11:26 AM View: Appendix IV - Confidence Intervals
Plant Hammond Client: Southern Company Data: Hammond AP-2

Parametric Confidence Interval

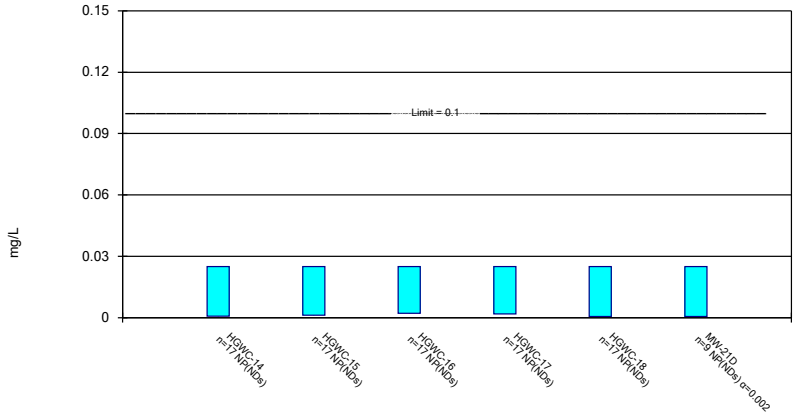
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cadmium Analysis Run 5/5/2021 11:26 AM View: Appendix IV - Confidence Intervals
Plant Hammond Client: Southern Company Data: Hammond AP-2

Non-Parametric Confidence Interval

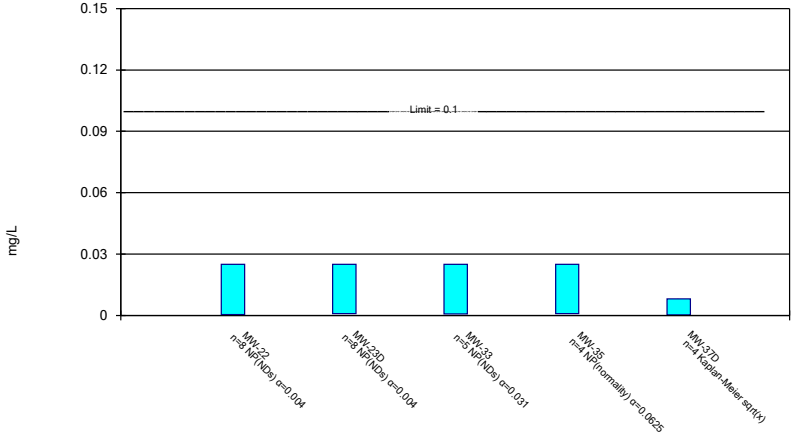
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted.



Constituent: Chromium Analysis Run 5/5/2021 11:26 AM View: Appendix IV - Confidence Intervals
Plant Hammond Client: Southern Company Data: Hammond AP-2

Parametric and Non-Parametric (NP) Confidence Interval

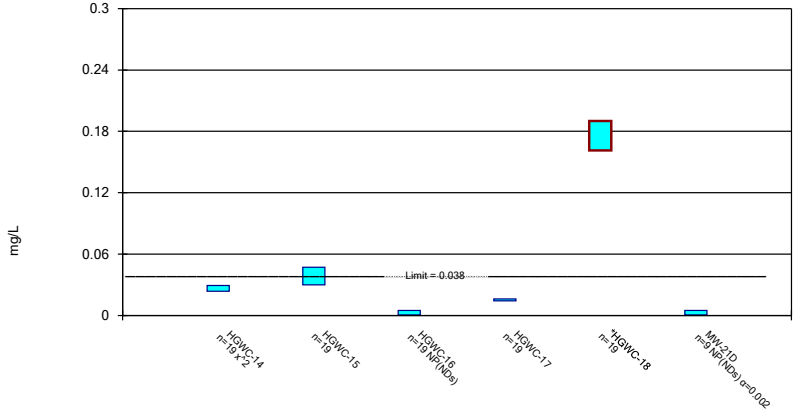
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Chromium Analysis Run 5/5/2021 11:26 AM View: Appendix IV - Confidence Intervals
Plant Hammond Client: Southern Company Data: Hammond AP-2

Parametric and Non-Parametric (NP) Confidence Interval

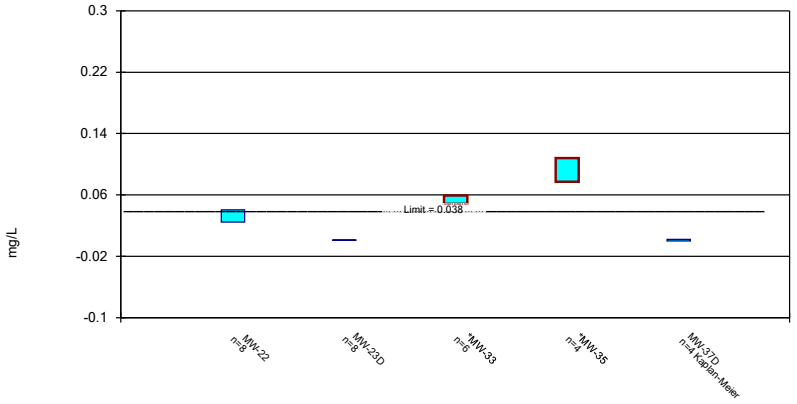
Compliance limit is exceeded.* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cobalt Analysis Run 5/5/2021 11:26 AM View: Appendix IV - Confidence Intervals
Plant Hammond Client: Southern Company Data: Hammond AP-2

Parametric Confidence Interval

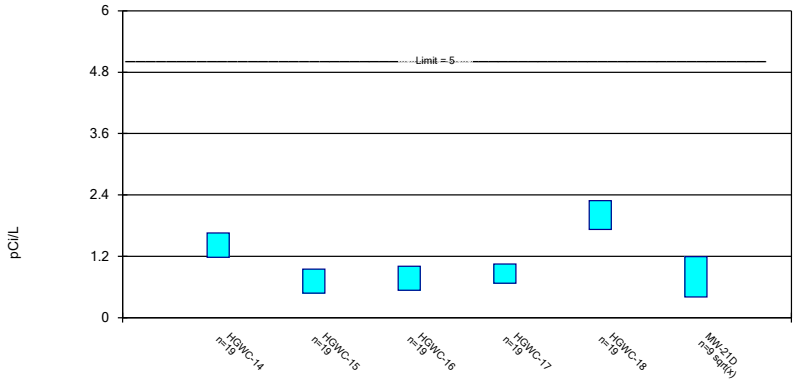
Compliance limit is exceeded.* Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cobalt Analysis Run 5/5/2021 11:26 AM View: Appendix IV - Confidence Intervals
Plant Hammond Client: Southern Company Data: Hammond AP-2

Parametric Confidence Interval

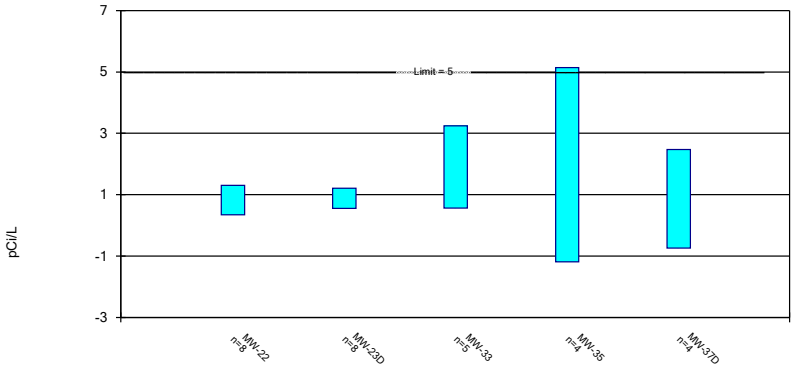
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Combined Radium 226 + 228 Analysis Run 5/5/2021 11:26 AM View: Appendix IV - Confiden
Plant Hammond Client: Southern Company Data: Hammond AP-2

Parametric Confidence Interval

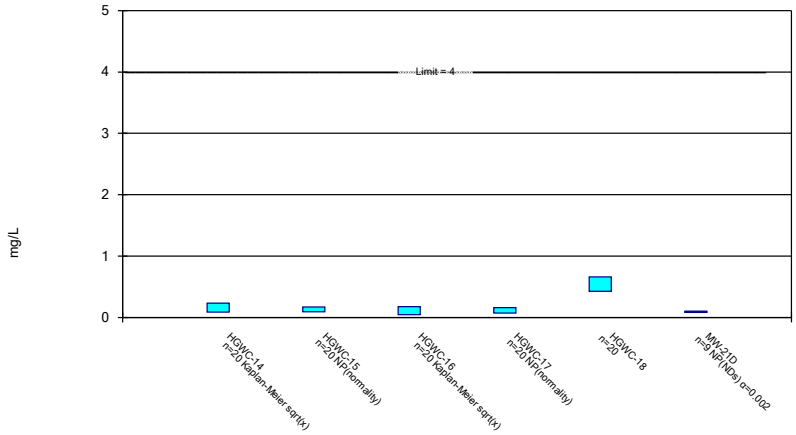
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Combined Radium 226 + 228 Analysis Run 5/5/2021 11:27 AM View: Appendix IV - Confiden
Plant Hammond Client: Southern Company Data: Hammond AP-2

Parametric and Non-Parametric (NP) Confidence Interval

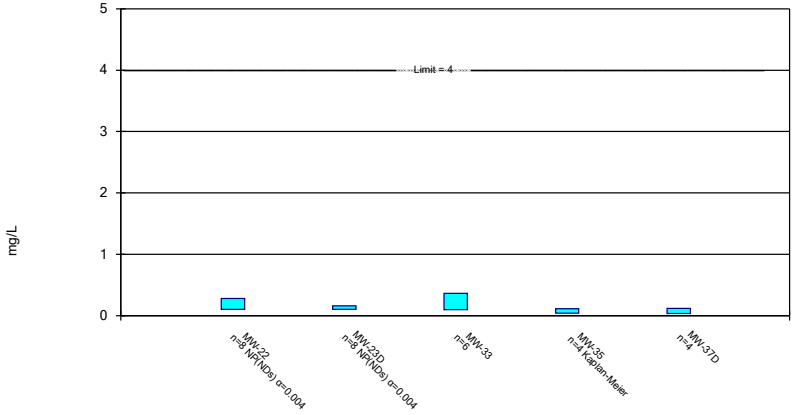
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Fluoride Analysis Run 5/5/2021 11:27 AM View: Appendix IV - Confidence Intervals
Plant Hammond Client: Southern Company Data: Hammond AP-2

Parametric and Non-Parametric (NP) Confidence Interval

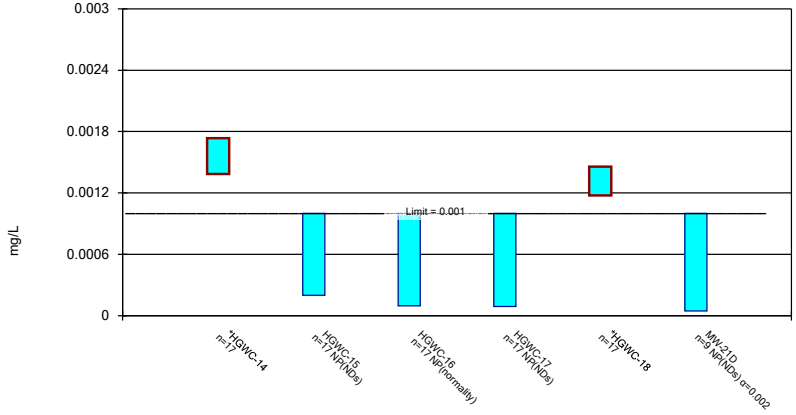
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Fluoride Analysis Run 5/5/2021 11:27 AM View: Appendix IV - Confidence Intervals
Plant Hammond Client: Southern Company Data: Hammond AP-2

Parametric and Non-Parametric (NP) Confidence Interval

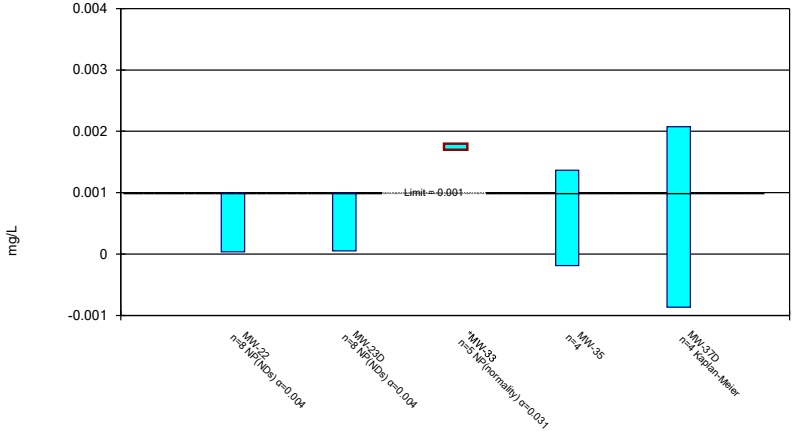
Compliance limit is exceeded.* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Lead Analysis Run 5/5/2021 11:27 AM View: Appendix IV - Confidence Intervals
Plant Hammond Client: Southern Company Data: Hammond AP-2

Parametric and Non-Parametric (NP) Confidence Interval

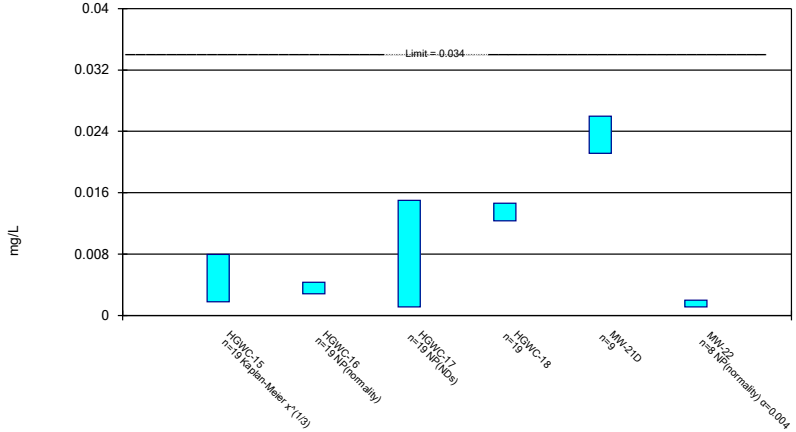
Compliance limit is exceeded.* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Lead Analysis Run 5/5/2021 11:27 AM View: Appendix IV - Confidence Intervals
Plant Hammond Client: Southern Company Data: Hammond AP-2

Parametric and Non-Parametric (NP) Confidence Interval

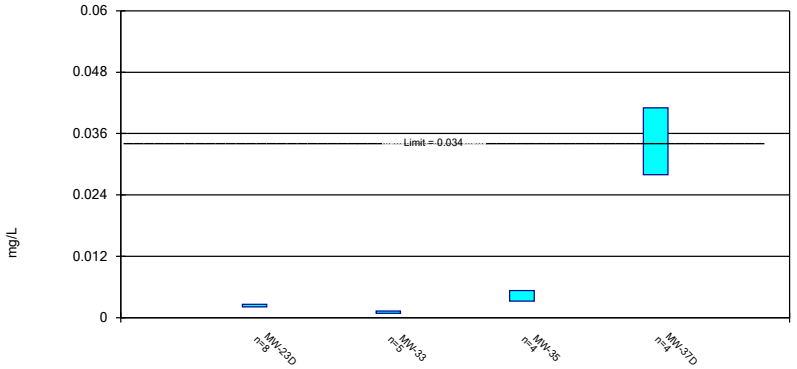
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Lithium Analysis Run 5/5/2021 11:27 AM View: Appendix IV - Confidence Intervals
Plant Hammond Client: Southern Company Data: Hammond AP-2

Parametric Confidence Interval

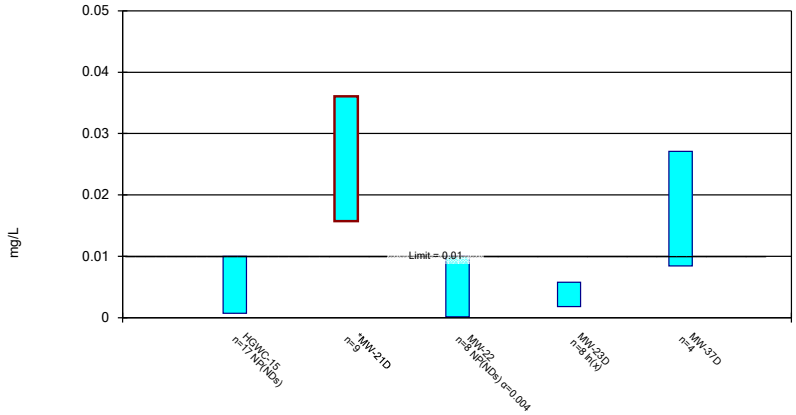
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Lithium Analysis Run 5/5/2021 11:27 AM View: Appendix IV - Confidence Intervals
Plant Hammond Client: Southern Company Data: Hammond AP-2

Parametric and Non-Parametric (NP) Confidence Interval

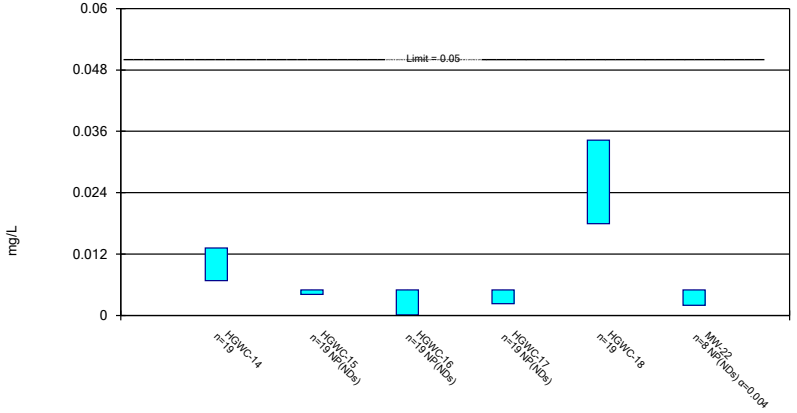
Compliance limit is exceeded.* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Molybdenum Analysis Run 5/5/2021 11:27 AM View: Appendix IV - Confidence Intervals
Plant Hammond Client: Southern Company Data: Hammond AP-2

Parametric and Non-Parametric (NP) Confidence Interval

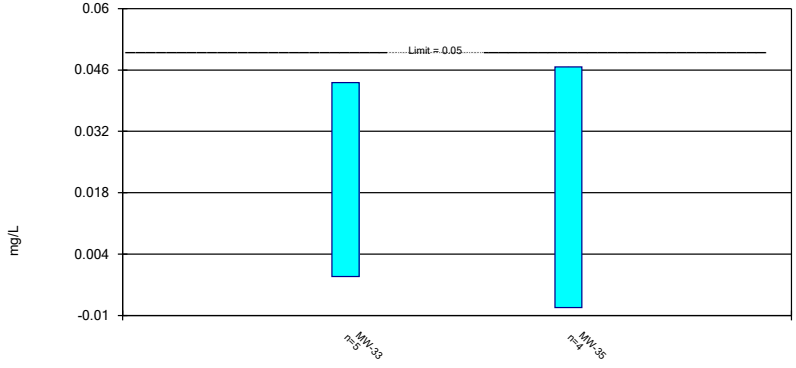
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Selenium Analysis Run 5/5/2021 11:27 AM View: Appendix IV - Confidence Intervals
Plant Hammond Client: Southern Company Data: Hammond AP-2

Parametric Confidence Interval

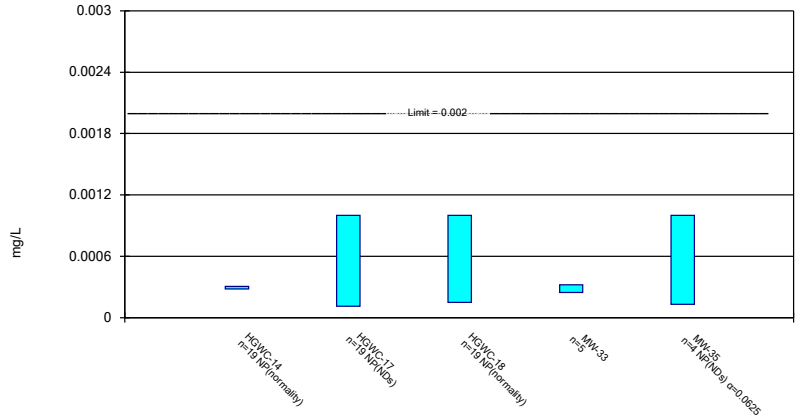
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Selenium Analysis Run 5/5/2021 11:27 AM View: Appendix IV - Confidence Intervals
Plant Hammond Client: Southern Company Data: Hammond AP-2

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Thallium Analysis Run 5/5/2021 11:27 AM View: Appendix IV - Confidence Intervals

Plant Hammond Client: Southern Company Data: Hammond AP-2

FIGURE J.

Federal Confidence Intervals - Significant Results

Plant Hammond Client: Southern Company Data: Hammond AP-2 Printed 5/5/2021, 11:24 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Cobalt (mg/L)	**HGWC-18**	**0.19**	**0.1614**	**0.038**	**Yes**	**19**	**0.1757**	**0.02444**	**0**	**None**	**No**	**0.01**	**Param.**
Cobalt (mg/L)	**MW-33**	**0.05914**	**0.04819**	**0.038**	**Yes**	**6**	**0.05367**	**0.003983**	**0**	**None**	**No**	**0.01**	**Param.**
Cobalt (mg/L)	**MW-35**	**0.1078**	**0.07716**	**0.038**	**Yes**	**4**	**0.0925**	**0.006758**	**0**	**None**	**No**	**0.01**	**Param.**

Federal Confidence Intervals - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-2 Printed 5/5/2021, 11:24 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Antimony (mg/L)	HGWC-14	0.003	0.00043	0.006	No	13	0.002595	0.0009899	84.62	None	No	0.01	NP (NDs)
Arsenic (mg/L)	HGWC-14	0.0089	0.0032	0.01	No	19	0.008125	0.007668	15.79	None	No	0.01	NP (normality)
Arsenic (mg/L)	HGWC-15	0.025	0.0008	0.01	No	19	0.02112	0.009199	84.21	None	No	0.01	NP (NDs)
Arsenic (mg/L)	HGWC-16	0.025	0.0012	0.01	No	19	0.01989	0.01017	78.95	None	No	0.01	NP (NDs)
Arsenic (mg/L)	HGWC-17	0.025	0.00097	0.01	No	19	0.01865	0.01092	73.68	None	No	0.01	NP (NDs)
Arsenic (mg/L)	HGWC-18	0.007066	0.004844	0.01	No	19	0.005955	0.001897	0	None	No	0.01	Param.
Arsenic (mg/L)	MW-21D	0.025	0.00019	0.01	No	9	0.01694	0.01209	66.67	None	No	0.002	NP (NDs)
Arsenic (mg/L)	MW-22	0.025	0.00045	0.01	No	8	0.02193	0.00868	87.5	None	No	0.004	NP (NDs)
Arsenic (mg/L)	MW-23D	0.025	0.00082	0.01	No	8	0.01898	0.01115	75	None	No	0.004	NP (NDs)
Arsenic (mg/L)	MW-33	0.008872	0.002648	0.01	No	5	0.00576	0.001857	0	None	No	0.01	Param.
Arsenic (mg/L)	MW-35	0.025	0.005	0.01	No	4	0.01023	0.009859	25	None	No	0.0625	NP (normality)
Arsenic (mg/L)	MW-37D	0.004094	0.0006745	0.01	No	4	0.007588	0.01162	25	Kaplan-Meier	ln(x)	0.01	Param.
Barium (mg/L)	HGWC-14	0.023	0.019	2	No	19	0.025	0.01827	5.263	None	No	0.01	NP (normality)
Barium (mg/L)	HGWC-15	0.02874	0.01955	2	No	19	0.02414	0.007845	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-16	0.113	0.1002	2	No	19	0.1066	0.01093	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-17	0.02636	0.02358	2	No	19	0.02497	0.002378	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-18	0.0339	0.029	2	No	19	0.03406	0.0163	5.263	None	No	0.01	NP (normality)
Barium (mg/L)	MW-21D	0.07538	0.04662	2	No	9	0.061	0.01489	0	None	No	0.01	Param.
Barium (mg/L)	MW-22	0.03673	0.01702	2	No	8	0.02688	0.009296	0	None	No	0.01	Param.
Barium (mg/L)	MW-23D	0.082	0.056	2	No	8	0.06288	0.008357	0	None	No	0.004	NP (normality)
Barium (mg/L)	MW-33	0.02943	0.02217	2	No	5	0.0258	0.002168	0	None	No	0.01	Param.
Barium (mg/L)	MW-35	0.03443	0.02307	2	No	4	0.02875	0.0025	0	None	No	0.01	Param.
Barium (mg/L)	MW-37D	0.2153	0.07971	2	No	4	0.1475	0.02986	0	None	No	0.01	Param.
Beryllium (mg/L)	HGWC-14	0.00058	0.00043	0.004	No	17	0.0004794	0.00007862	11.76	None	No	0.01	NP (normality)
Beryllium (mg/L)	HGWC-17	0.0005	0.000067	0.004	No	17	0.0004479	0.000147	88.24	None	No	0.01	NP (NDs)
Beryllium (mg/L)	HGWC-18	0.003463	0.002759	0.004	No	17	0.00304	0.000771	5.882	None	x^2	0.01	Param.
Beryllium (mg/L)	MW-22	0.0005	0.000047	0.004	No	8	0.0003364	0.000226	62.5	None	No	0.004	NP (NDs)
Beryllium (mg/L)	MW-33	0.001159	0.0008766	0.004	No	5	0.001018	0.00008438	0	None	No	0.01	Param.
Beryllium (mg/L)	MW-35	0.0008122	0.0001528	0.004	No	4	0.0004825	0.0001452	0	None	No	0.01	Param.
Beryllium (mg/L)	MW-37D	0.0005	0.00012	0.004	No	4	0.000405	0.00019	75	None	No	0.0625	NP (NDs)
Cadmium (mg/L)	HGWC-14	0.0005	0.0001	0.005	No	19	0.000302	0.0001954	47.37	None	No	0.01	NP (normality)
Cadmium (mg/L)	HGWC-15	0.002277	0.001559	0.005	No	19	0.001948	0.0006767	0	None	sqrt(x)	0.01	Param.
Cadmium (mg/L)	HGWC-17	0.0005	0.00007	0.005	No	19	0.0004774	0.00009865	94.74	None	No	0.01	NP (NDs)
Cadmium (mg/L)	HGWC-18	0.002362	0.001856	0.005	No	19	0.002063	0.0005188	5.263	None	x^2	0.01	Param.
Cadmium (mg/L)	MW-22	0.002179	0.001156	0.005	No	8	0.001645	0.0006169	0	None	x^3	0.01	Param.
Cadmium (mg/L)	MW-23D	0.0006	0.00045	0.005	No	8	0.000515	0.00004721	62.5	None	No	0.004	NP (NDs)
Cadmium (mg/L)	MW-33	0.0002327	0.0001473	0.005	No	5	0.00019	0.0000255	0	None	No	0.01	Param.
Cadmium (mg/L)	MW-35	0.002623	-0.0001083	0.005	No	4	0.001258	0.0006016	0	None	No	0.01	Param.
Chromium (mg/L)	HGWC-14	0.025	0.00066	0.1	No	17	0.02212	0.008123	88.24	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-15	0.025	0.0012	0.1	No	17	0.02071	0.009549	82.35	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-16	0.025	0.0021	0.1	No	17	0.02078	0.009409	82.35	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-17	0.025	0.0018	0.1	No	17	0.02078	0.009403	82.35	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-18	0.025	0.00063	0.1	No	17	0.02068	0.009623	82.35	None	No	0.01	NP (NDs)
Chromium (mg/L)	MW-21D	0.025	0.00057	0.1	No	9	0.01959	0.01074	77.78	None	No	0.002	NP (NDs)
Chromium (mg/L)	MW-22	0.025	0.0004	0.1	No	8	0.01889	0.01131	75	None	No	0.004	NP (NDs)
Chromium (mg/L)	MW-23D	0.025	0.00083	0.1	No	8	0.01896	0.01118	75	None	No	0.004	NP (NDs)
Chromium (mg/L)	MW-33	0.025	0.00069	0.1	No	5	0.02014	0.01087	80	None	No	0.031	NP (NDs)
Chromium (mg/L)	MW-35	0.025	0.00079	0.1	No	4	0.01291	0.01397	50	None	No	0.0625	NP (normality)
Chromium (mg/L)	MW-37D	0.008014	0.000295	0.1	No	4	0.01405	0.01272	50	Kaplan-Meier	sqrt(x)	0.01	Param.
Cobalt (mg/L)	HGWC-14	0.02913	0.02366	0.038	No	19	0.02587	0.006039	5.263	None	x^2	0.01	Param.
Cobalt (mg/L)	HGWC-15	0.04702	0.02999	0.038	No	19	0.03851	0.01454	0	None	No	0.01	Param.
Cobalt (mg/L)	HGWC-16	0.005	0.00037	0.038	No	19	0.004508	0.001474	89.47	None	No	0.01	NP (NDs)
Cobalt (mg/L)	HGWC-17	0.01619	0.01429	0.038	No	19	0.01524	0.001623	0	None	No	0.01	Param.
Cobalt (mg/L)	**HGWC-18**	**0.19**	**0.1614**	**0.038**	**Yes**	**19**	**0.1757**	**0.02444**	**0**	**None**	**No**	**0.01**	**Param.**
Cobalt (mg/L)	MW-21D	0.005	0.00034	0.038	No	9	0.004482	0.001553	88.89	None	No	0.002	NP (NDs)

Federal Confidence Intervals - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-2 Printed 5/5/2021, 11:24 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Cobalt (mg/L)	MW-22	0.04027	0.02448	0.038	No	8	0.03238	0.007444	0	None	No	0.01	Param.
Cobalt (mg/L)	MW-23D	0.001215	0.00097	0.038	No	8	0.001093	0.0001156	0	None	No	0.01	Param.
Cobalt (mg/L)	**MW-33**	**0.05914**	**0.04819**	**0.038**	**Yes**	**6**	**0.05367**	**0.003983**	**0**	**None**	**No**	**0.01**	**Param.**
Cobalt (mg/L)	**MW-35**	**0.1078**	**0.07716**	**0.038**	**Yes**	**4**	**0.0925**	**0.006758**	**0**	**None**	**No**	**0.01**	**Param.**
Cobalt (mg/L)	MW-37D	0.002148	-0.0001679	0.038	No	4	0.002995	0.002352	50	Kaplan-Meier	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-14	1.654	1.179	5	No	19	1.417	0.406	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-15	0.9507	0.4764	5	No	19	0.7136	0.405	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-16	1.008	0.5368	5	No	19	0.7724	0.4023	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-17	1.05	0.6723	5	No	19	0.8614	0.323	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-18	2.288	1.727	5	No	19	2.008	0.479	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-21D	1.194	0.401	5	No	9	0.7951	0.4745	0	None	sqrt(x)	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-22	1.301	0.3473	5	No	8	0.8241	0.4499	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-23D	1.206	0.5544	5	No	8	0.8801	0.3073	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-33	3.245	0.5646	5	No	5	1.905	0.7997	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-35	5.143	-1.186	5	No	4	1.979	1.394	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-37D	2.476	-0.7417	5	No	4	0.867	0.7086	0	None	No	0.01	Param.
Fluoride (mg/L)	HGWC-14	0.2344	0.08602	4	No	20	0.186	0.1617	20	Kaplan-Meier	sqrt(x)	0.01	Param.
Fluoride (mg/L)	HGWC-15	0.17	0.09	4	No	20	0.1457	0.1246	40	None	No	0.01	NP (normality)
Fluoride (mg/L)	HGWC-16	0.1744	0.04649	4	No	20	0.1624	0.1221	50	Kaplan-Meier	sqrt(x)	0.01	Param.
Fluoride (mg/L)	HGWC-17	0.16	0.07	4	No	20	0.1747	0.2184	35	None	No	0.01	NP (normality)
Fluoride (mg/L)	HGWC-18	0.6613	0.4237	4	No	20	0.5425	0.2091	5	None	No	0.01	Param.
Fluoride (mg/L)	MW-21D	0.1	0.1	4	No	9	0.1	5.0e-10	88.89	None	No	0.002	NP (NDs)
Fluoride (mg/L)	MW-22	0.28	0.1	4	No	8	0.1263	0.06301	75	None	No	0.004	NP (NDs)
Fluoride (mg/L)	MW-23D	0.16	0.1	4	No	8	0.1125	0.02375	75	None	No	0.004	NP (NDs)
Fluoride (mg/L)	MW-33	0.3611	0.0956	4	No	6	0.2283	0.09663	0	None	No	0.01	Param.
Fluoride (mg/L)	MW-35	0.1143	0.03769	4	No	4	0.082	0.0207	25	Kaplan-Meier	No	0.01	Param.
Fluoride (mg/L)	MW-37D	0.1156	0.03593	4	No	4	0.07575	0.01754	0	None	No	0.01	Param.
Lead (mg/L)	HGWC-14	0.001735	0.001385	0.015	No	17	0.00156	0.0002796	5.882	None	No	0.01	Param.
Lead (mg/L)	HGWC-15	0.001	0.0002	0.015	No	17	0.0007897	0.0003918	70.59	None	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-16	0.001	0.000094	0.015	No	17	0.0005308	0.0004573	47.06	None	No	0.01	NP (normality)
Lead (mg/L)	HGWC-17	0.001	0.000088	0.015	No	17	0.0005768	0.0004634	52.94	None	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-18	0.001458	0.001175	0.015	No	17	0.001316	0.0002265	5.882	None	No	0.01	Param.
Lead (mg/L)	MW-21D	0.001	0.000047	0.015	No	9	0.0006476	0.0004571	55.56	None	No	0.002	NP (NDs)
Lead (mg/L)	MW-22	0.001	0.000036	0.015	No	8	0.0006538	0.0004782	62.5	None	No	0.004	NP (NDs)
Lead (mg/L)	MW-23D	0.001	0.000051	0.015	No	8	0.0007764	0.0004151	75	None	No	0.004	NP (NDs)
Lead (mg/L)	MW-33	0.0018	0.0017	0.015	No	5	0.00172	0.00004472	0	None	No	0.031	NP (normality)
Lead (mg/L)	MW-35	0.001367	-0.000187	0.015	No	4	0.00059	0.0003422	0	None	No	0.01	Param.
Lead (mg/L)	MW-37D	0.002073	-0.0008688	0.015	No	4	0.000793	0.0007149	25	Kaplan-Meier	No	0.01	Param.
Lithium (mg/L)	HGWC-15	0.007937	0.00179	0.04	No	19	0.01033	0.01019	31.58	Kaplan-Meier	x^(1/3)	0.01	Param.
Lithium (mg/L)	HGWC-16	0.0043	0.0028	0.04	No	19	0.004068	0.002738	5.263	None	No	0.01	NP (normality)
Lithium (mg/L)	HGWC-17	0.015	0.0011	0.04	No	19	0.008423	0.007124	52.63	None	No	0.01	NP (NDs)
Lithium (mg/L)	HGWC-18	0.01461	0.01234	0.04	No	19	0.01347	0.001942	0	None	No	0.01	Param.
Lithium (mg/L)	MW-21D	0.02597	0.02114	0.04	No	9	0.02356	0.002506	0	None	No	0.01	Param.
Lithium (mg/L)	MW-22	0.002	0.0011	0.04	No	8	0.00135	0.0002928	0	None	No	0.004	NP (normality)
Lithium (mg/L)	MW-23D	0.002602	0.002123	0.04	No	8	0.002363	0.0002264	0	None	No	0.01	Param.
Lithium (mg/L)	MW-33	0.001268	0.0008245	0.04	No	5	0.001046	0.0001322	0	None	No	0.01	Param.
Lithium (mg/L)	MW-35	0.005274	0.003226	0.04	No	4	0.00425	0.0004509	0	None	No	0.01	Param.
Lithium (mg/L)	MW-37D	0.04105	0.02795	0.04	No	4	0.0345	0.002887	0	None	No	0.01	Param.
Molybdenum (mg/L)	HGWC-15	0.01	0.0007	0.1	No	17	0.009453	0.002256	94.12	None	No	0.01	NP (NDs)
Molybdenum (mg/L)	MW-21D	0.03607	0.01571	0.1	No	9	0.02589	0.01054	0	None	No	0.01	Param.
Molybdenum (mg/L)	MW-22	0.01	0.00013	0.1	No	8	0.008766	0.00349	87.5	None	No	0.004	NP (NDs)
Molybdenum (mg/L)	MW-23D	0.005782	0.001794	0.1	No	8	0.00375	0.002632	12.5	None	ln(x)	0.01	Param.
Molybdenum (mg/L)	MW-37D	0.02709	0.008412	0.1	No	4	0.01775	0.004113	0	None	No	0.01	Param.
Selenium (mg/L)	HGWC-14	0.01318	0.006823	0.05	No	19	0.01	0.005427	0	None	No	0.01	Param.
Selenium (mg/L)	HGWC-15	0.005	0.0041	0.05	No	19	0.004322	0.001509	78.95	None	No	0.01	NP (NDs)

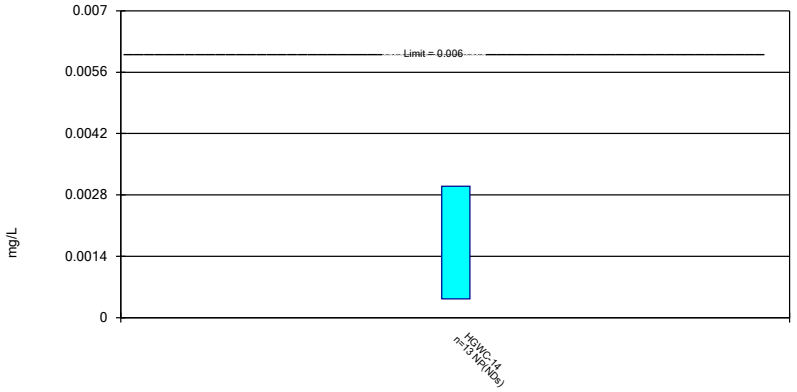
Federal Confidence Intervals - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-2 Printed 5/5/2021, 11:24 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Selenium (mg/L)	HGWC-16	0.005	0.000089	0.05	No	19	0.004742	0.001127	94.74	None	No	0.01	NP (NDs)
Selenium (mg/L)	HGWC-17	0.005	0.0023	0.05	No	19	0.00441	0.001448	84.21	None	No	0.01	NP (NDs)
Selenium (mg/L)	HGWC-18	0.03425	0.01795	0.05	No	19	0.0261	0.01392	5.263	None	No	0.01	Param.
Selenium (mg/L)	MW-22	0.005	0.002	0.05	No	8	0.004625	0.001061	87.5	None	No	0.004	NP (NDs)
Selenium (mg/L)	MW-33	0.04314	-0.001136	0.05	No	5	0.021	0.01321	0	None	No	0.01	Param.
Selenium (mg/L)	MW-35	0.04671	-0.008206	0.05	No	4	0.01925	0.01209	0	None	No	0.01	Param.
Thallium (mg/L)	HGWC-14	0.000306	0.00028	0.002	No	19	0.0002972	0.00003063	0	None	No	0.01	NP (normality)
Thallium (mg/L)	HGWC-17	0.001	0.00011	0.002	No	19	0.0006737	0.0004391	63.16	None	No	0.01	NP (NDs)
Thallium (mg/L)	HGWC-18	0.001	0.00015	0.002	No	19	0.0005174	0.0004233	42.11	None	No	0.01	NP (normality)
Thallium (mg/L)	MW-33	0.0003207	0.0002473	0.002	No	5	0.000284	0.00002191	0	None	No	0.01	Param.
Thallium (mg/L)	MW-35	0.001	0.00013	0.002	No	4	0.0007825	0.000435	75	None	No	0.0625	NP (NDs)

Non-Parametric Confidence Interval

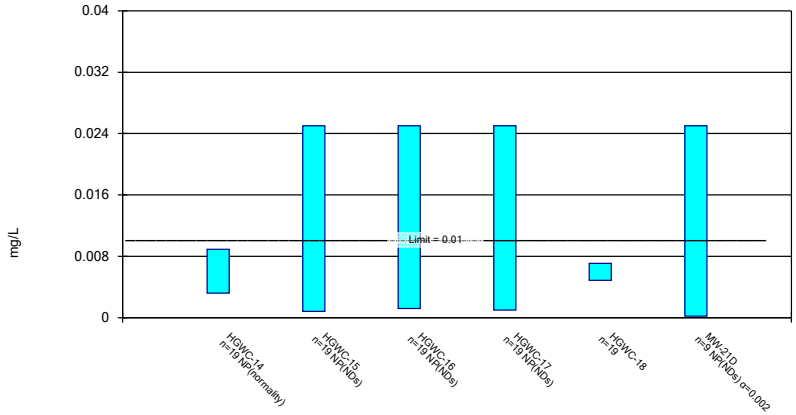
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Antimony Analysis Run 5/5/2021 11:22 AM View: Appendix IV - Confidence Intervals
Plant Hammond Client: Southern Company Data: Hammond AP-2

Parametric and Non-Parametric (NP) Confidence Interval

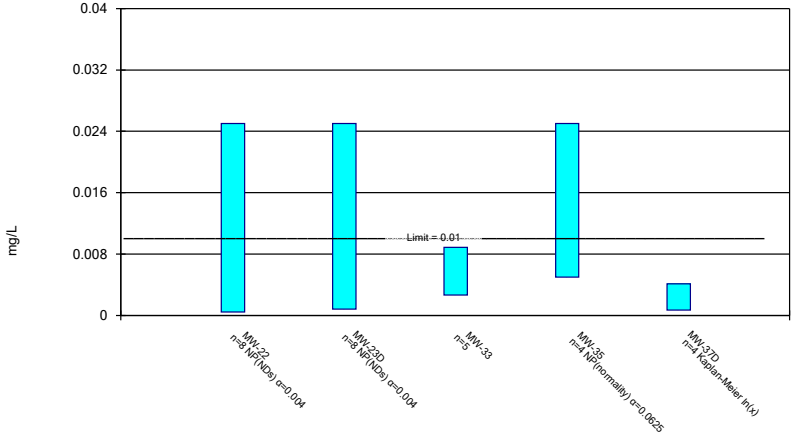
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Arsenic Analysis Run 5/5/2021 11:22 AM View: Appendix IV - Confidence Intervals
Plant Hammond Client: Southern Company Data: Hammond AP-2

Parametric and Non-Parametric (NP) Confidence Interval

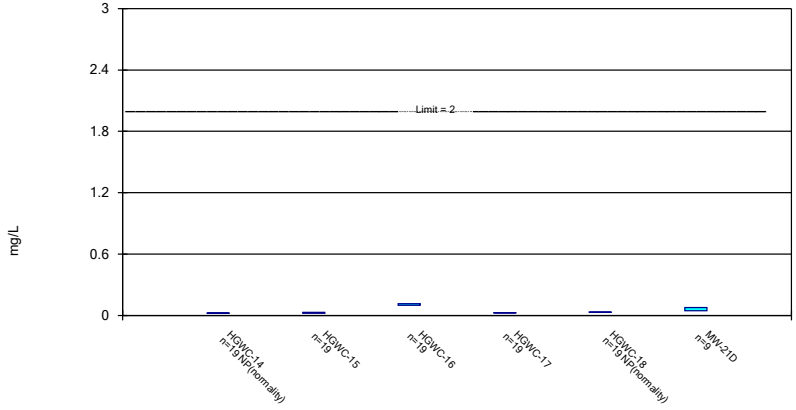
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Arsenic Analysis Run 5/5/2021 11:23 AM View: Appendix IV - Confidence Intervals
Plant Hammond Client: Southern Company Data: Hammond AP-2

Parametric and Non-Parametric (NP) Confidence Interval

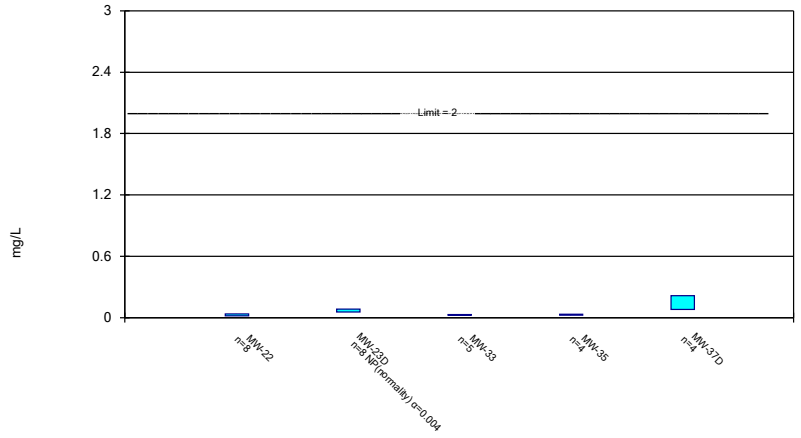
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Barium Analysis Run 5/5/2021 11:23 AM View: Appendix IV - Confidence Intervals
Plant Hammond Client: Southern Company Data: Hammond AP-2

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.

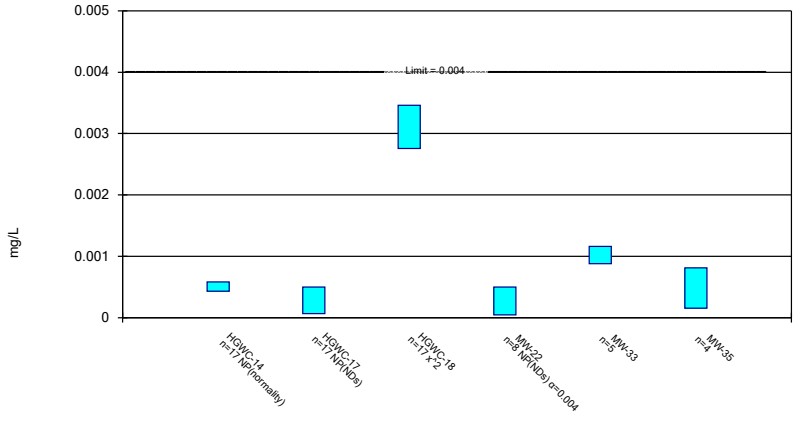


Constituent: Barium Analysis Run 5/5/2021 11:23 AM View: Appendix IV - Confidence Intervals
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 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.

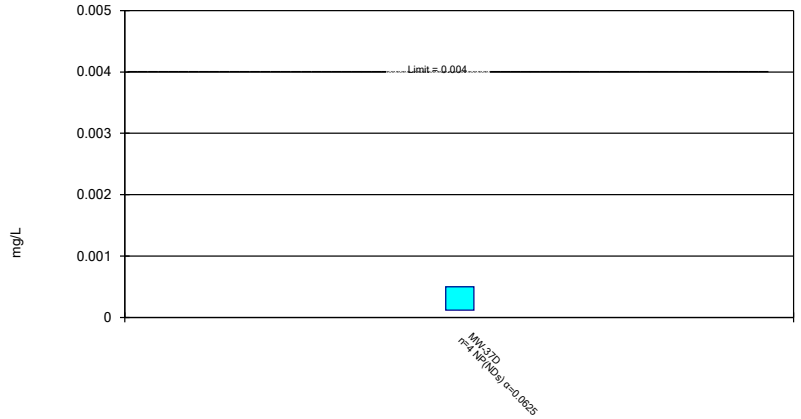


Constituent: Beryllium Analysis Run 5/5/2021 11:23 AM View: Appendix IV - Confidence Intervals
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

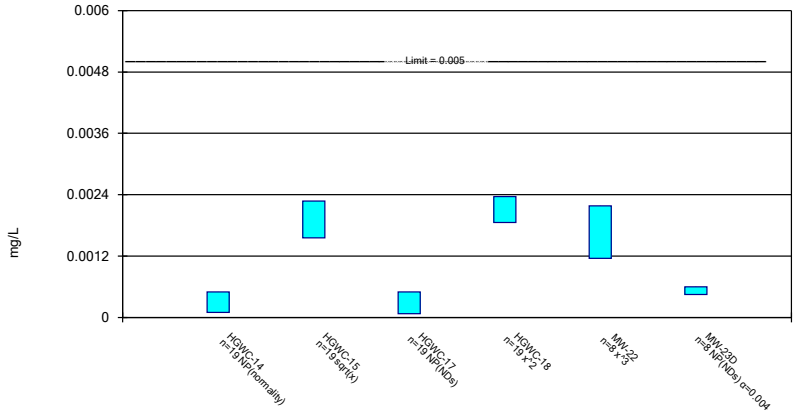


Constituent: Beryllium Analysis Run 5/5/2021 11:23 AM View: Appendix IV - Confidence Intervals
Plant Hammond Client: Southern Company Data: Hammond AP-2

Sanitas™ v.9.6.28 Groundwater Stats Consulting. UG

Parametric and Non-Parametric (NP) Confidence Interval

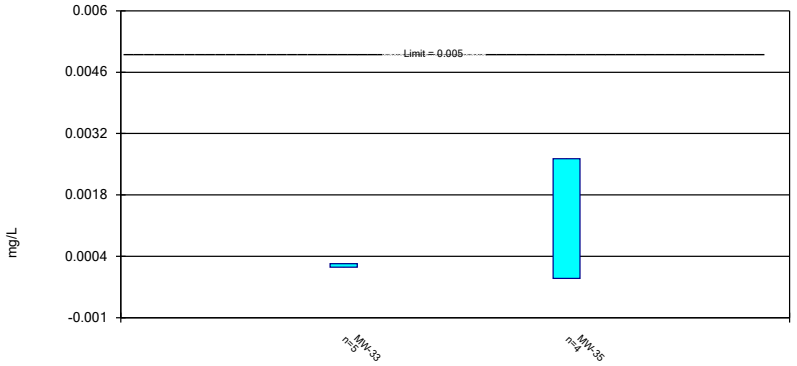
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cadmium Analysis Run 5/5/2021 11:23 AM View: Appendix IV - Confidence Intervals
Plant Hammond Client: Southern Company Data: Hammond AP-2

Parametric Confidence Interval

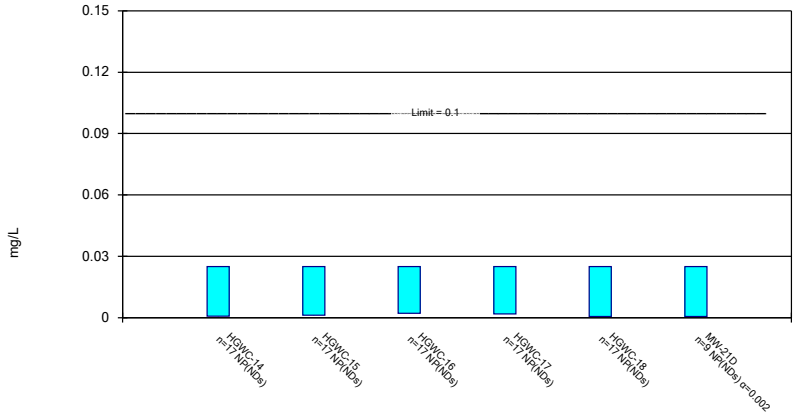
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cadmium Analysis Run 5/5/2021 11:23 AM View: Appendix IV - Confidence Intervals
Plant Hammond Client: Southern Company Data: Hammond AP-2

Non-Parametric Confidence Interval

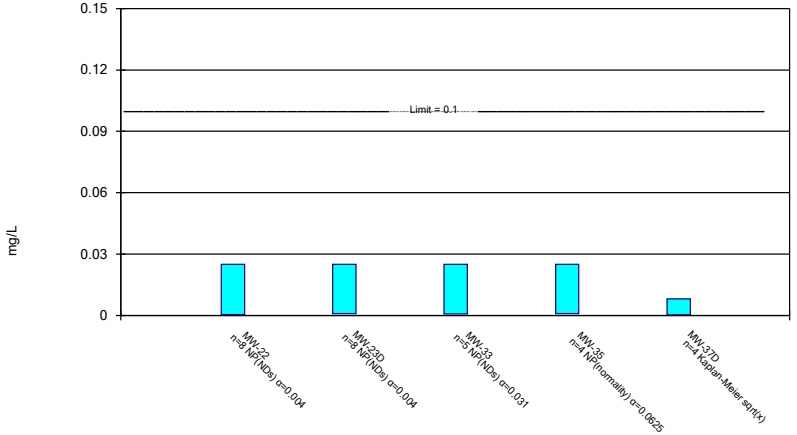
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted.



Constituent: Chromium Analysis Run 5/5/2021 11:23 AM View: Appendix IV - Confidence Intervals
Plant Hammond Client: Southern Company Data: Hammond AP-2

Parametric and Non-Parametric (NP) Confidence Interval

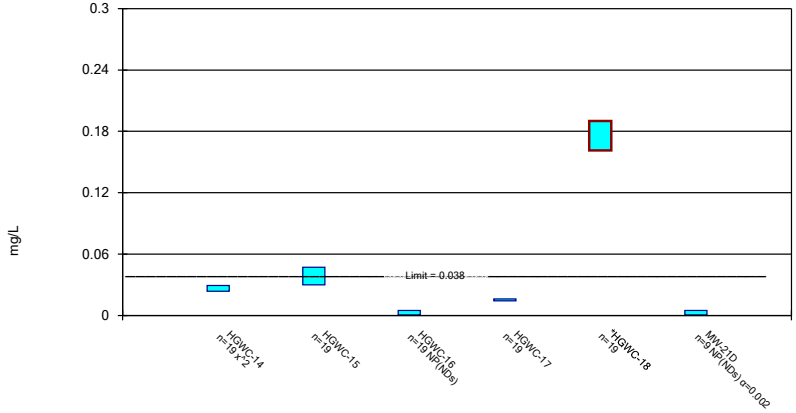
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Chromium Analysis Run 5/5/2021 11:23 AM View: Appendix IV - Confidence Intervals
Plant Hammond Client: Southern Company Data: Hammond AP-2

Parametric and Non-Parametric (NP) Confidence Interval

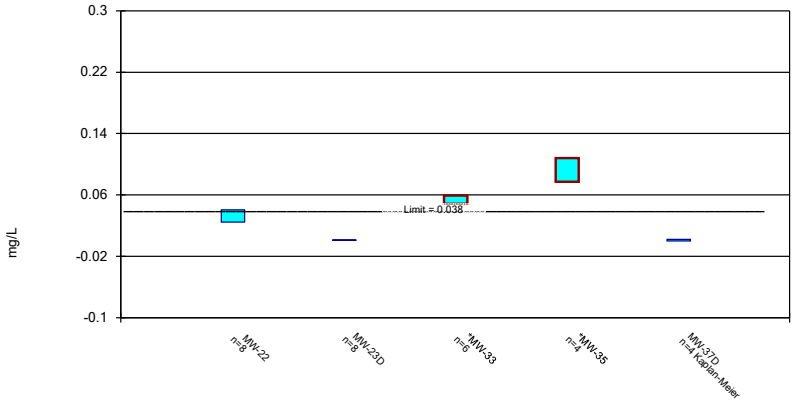
Compliance limit is exceeded.* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cobalt Analysis Run 5/5/2021 11:23 AM View: Appendix IV - Confidence Intervals
Plant Hammond Client: Southern Company Data: Hammond AP-2

Parametric Confidence Interval

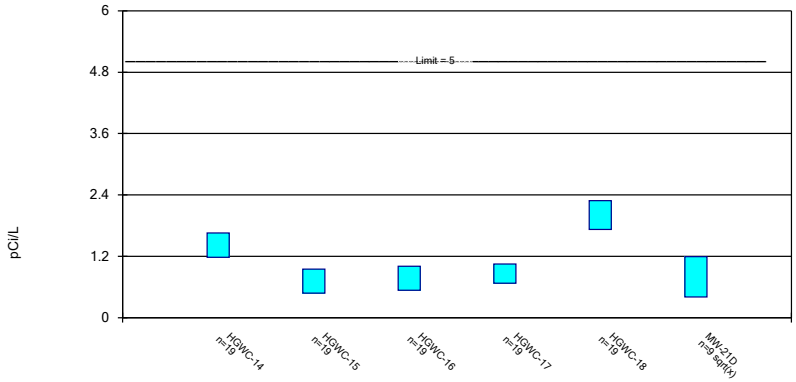
Compliance limit is exceeded.* Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cobalt Analysis Run 5/5/2021 11:23 AM View: Appendix IV - Confidence Intervals
Plant Hammond Client: Southern Company Data: Hammond AP-2

Parametric Confidence Interval

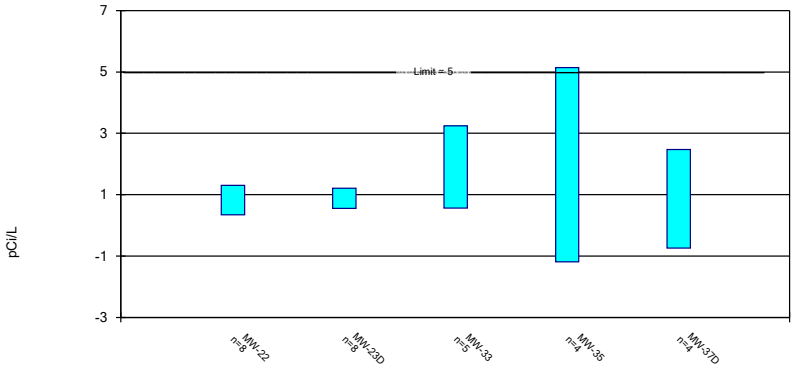
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Combined Radium 226 + 228 Analysis Run 5/5/2021 11:23 AM View: Appendix IV - Confiden
Plant Hammond Client: Southern Company Data: Hammond AP-2

Parametric Confidence Interval

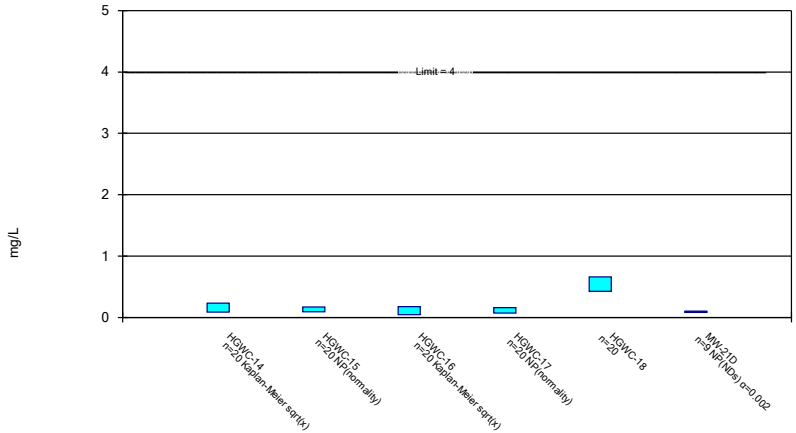
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Combined Radium 226 + 228 Analysis Run 5/5/2021 11:23 AM View: Appendix IV - Confiden
Plant Hammond Client: Southern Company Data: Hammond AP-2

Parametric and Non-Parametric (NP) Confidence Interval

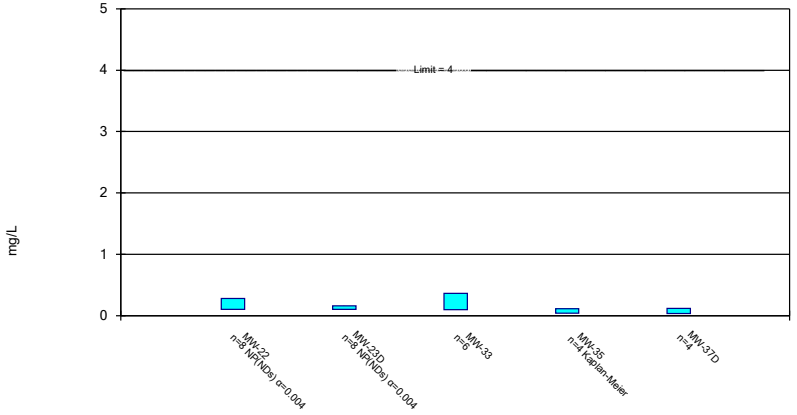
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Fluoride Analysis Run 5/5/2021 11:23 AM View: Appendix IV - Confidence Intervals
Plant Hammond Client: Southern Company Data: Hammond AP-2

Parametric and Non-Parametric (NP) Confidence Interval

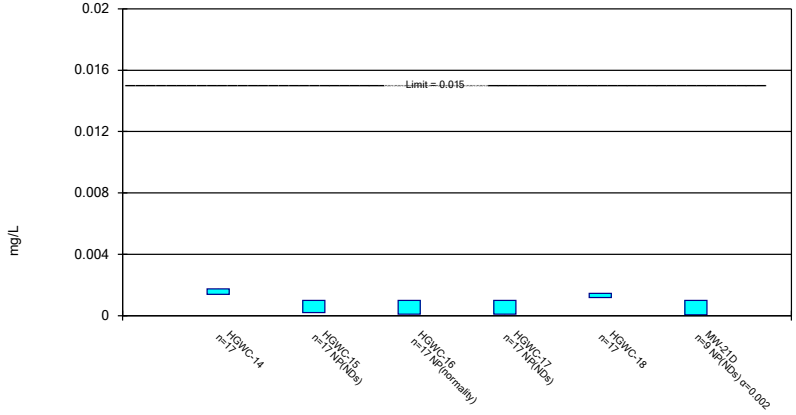
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Fluoride Analysis Run 5/5/2021 11:23 AM View: Appendix IV - Confidence Intervals
Plant Hammond Client: Southern Company Data: Hammond AP-2

Parametric and Non-Parametric (NP) Confidence Interval

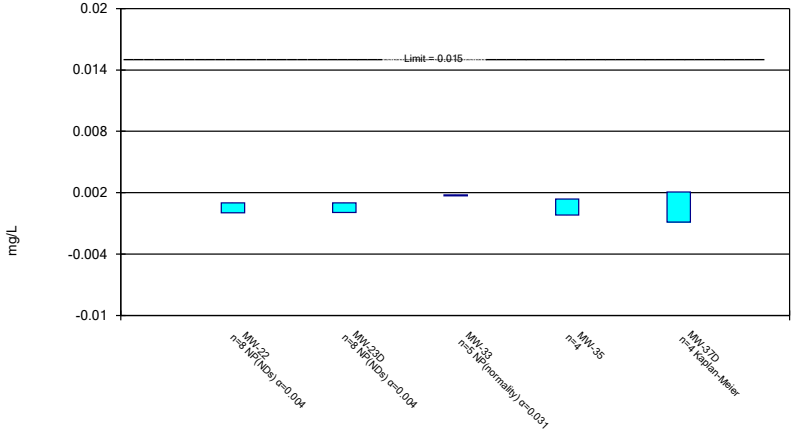
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Lead Analysis Run 5/5/2021 11:23 AM View: Appendix IV - Confidence Intervals
Plant Hammond Client: Southern Company Data: Hammond AP-2

Parametric and Non-Parametric (NP) Confidence Interval

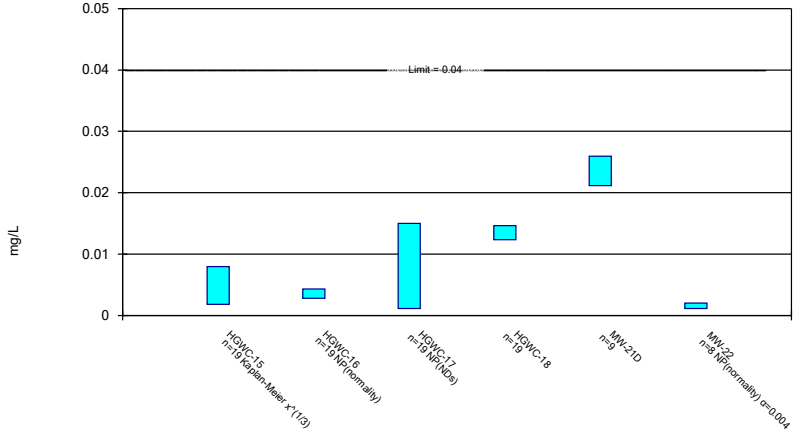
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Lead Analysis Run 5/5/2021 11:23 AM View: Appendix IV - Confidence Intervals
Plant Hammond Client: Southern Company Data: Hammond AP-2

Parametric and Non-Parametric (NP) Confidence Interval

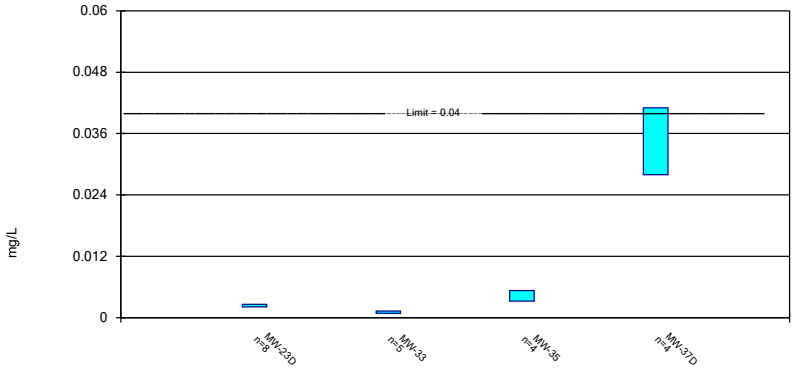
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Lithium Analysis Run 5/5/2021 11:23 AM View: Appendix IV - Confidence Intervals
Plant Hammond Client: Southern Company Data: Hammond AP-2

Parametric Confidence Interval

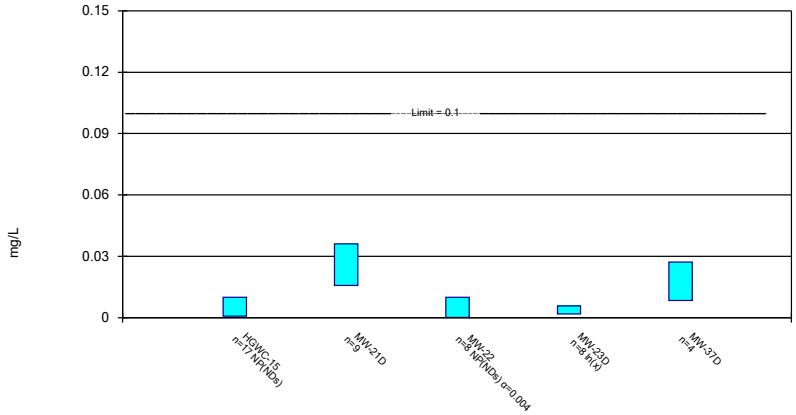
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Lithium Analysis Run 5/5/2021 11:23 AM View: Appendix IV - Confidence Intervals
Plant Hammond Client: Southern Company Data: Hammond AP-2

Parametric and Non-Parametric (NP) Confidence Interval

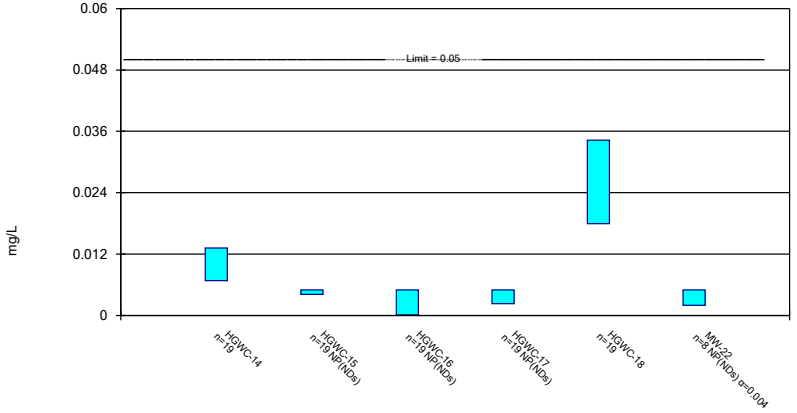
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Molybdenum Analysis Run 5/5/2021 11:23 AM View: Appendix IV - Confidence Intervals
Plant Hammond Client: Southern Company Data: Hammond AP-2

Parametric and Non-Parametric (NP) Confidence Interval

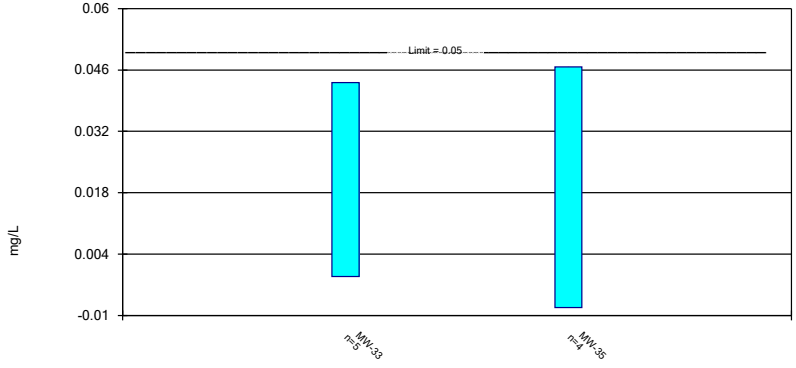
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Selenium Analysis Run 5/5/2021 11:23 AM View: Appendix IV - Confidence Intervals
Plant Hammond Client: Southern Company Data: Hammond AP-2

Parametric Confidence Interval

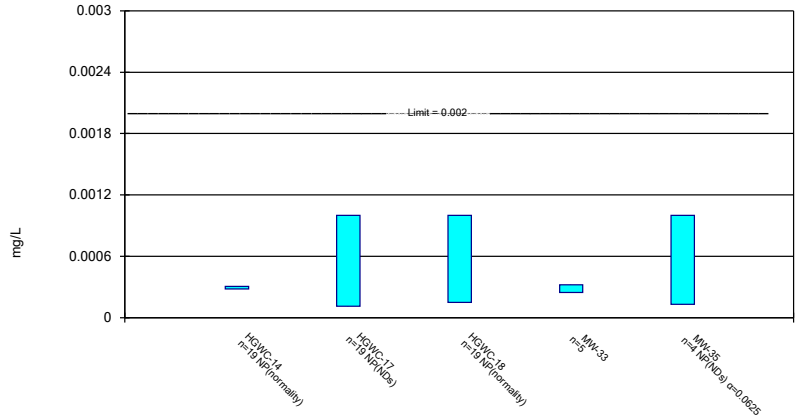
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Selenium Analysis Run 5/5/2021 11:23 AM View: Appendix IV - Confidence Intervals
Plant Hammond Client: Southern Company Data: Hammond AP-2

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Thallium Analysis Run 5/5/2021 11:23 AM View: Appendix IV - Confidence Intervals

Plant Hammond Client: Southern Company Data: Hammond AP-2